PROJECT NOTIFICATION FORM

Allston Yards

ALLSTON, MA

PROPONENT
The Stop & Shop Supermarket Company, LLC

PROPONENT/MASTER DEVELOPER
New England Development

IN PARTNERSHIP WITH
The Bozzuto Group
Southside Investment Partners

MASTER PLANNER
Elkus Manfredi Architects

ARCHITECT
Stantec Architecture

SUBMITTED TO
Boston Redevelopment Authority
d/b/a Boston Planning & Development Agency

PREPARED BY

vhb

JANUARY 2018

ALLSTON YARDS
60 EVERETT STREET
ALLSTON, MA 02134

January 18, 2018

Director Brian P. Golden
Boston Planning & Development Agency
Boston City Hall, 9th Floor
Boston, MA 02201

Re: Allston Yards Project
60 Everett Street, Allston, MA

Dear Director Golden:

Stop & Shop Supermarket Company LLC (Stop & Shop) with New England Development as Master Developer (together, as appropriate, the "Proponent"), working in conjunction with Elkus Manfredi Architects as Master Planner and in collaboration with The Bozzuto Group and Southside Investment Partners, are pleased to submit the enclosed Project Notification Form ("PNF") to initiate review under Article 80 of the Boston Zoning Code for the redevelopment of the existing retail center (the "Proposed Project") located at 60 Everett Street in the Allston neighborhood of Boston (the "Project Site"). On February 10, 2017, a Letter of Intent was submitted indicating the intent to file the PNF.

The Proponent intends to redevelop the existing approximately 10.6-acre Project Site with a phased mixed-use, transit-oriented development consisting of residential, office, a flagship grocery store, as well as other ground-floor retail, restaurant, and fitness uses. In addition, the Proposed Project will include a new approximately 24,000 square foot (half-acre) community green to be activated with programming to enhance use and enjoyment, such as outdoor health and wellness events, public art exhibits, music concerts and holiday festivals.

The Proposed Project will result in significant public benefits, including, without limitation:

- Extensive transportation infrastructure, including new street network, constructed as part of the initial work
- Substantial pedestrian, bicycle, and vehicular improvements
- Open Space, including a new 24,000 square foot (half-acre) Community Green to be programmed for Year-Round Use
- Increased housing options for the community (i.e., varying sizes and price points), including homeownership units and affordable units consistent with the City's Inclusionary Development Program
- Multi-million dollar endowment to fund programs, organizations, groups and/or others that promote wellness, healthy eating, education, public realm and transportation enhancements
- Increased commuter rail ridership to support the viability of the new Boston Landing Station

The Proposed Project's initial phase of development will be located on the northeast parcel of the Project Site and will consist of a mix of uses, including up to 360 residential units, the new grocery store, and new community space (both outside and inside) for Allston-Brighton residents to use as a gathering place for neighborhood meetings, educational, and special events, and ground floor retail uses. In addition, a restaurant is proposed as part of the new approximately half-acre community green. Structured parking will be provided to support this initial phase. During this initial phase, there will also be site-wide improvements, including roadway and utility

infrastructure improvements suitable for the full build-out of the Proposed Project. Upon completion of the initial phase, the remaining buildings are planned to be developed in multiple phases over several years. The current Stop & Shop grocery store will remain open throughout the initial development.

We look forward to continuing to work with the BPDA, Impact Advisory Group, elected officials and the community in the review and implementation of the Allston Yards Project. We are very excited for the opportunity to transform an underutilized urban site into a vibrant mixed-use neighborhood.

Sincerely,

Guy Stutz
Stop & Shop Supermarket Company

Stephen R. Karp
Chairman, Chief Executive Officer, New England Development

cc: Mr. Jonathan Greeley
Ms. Casey Hines
David Manfredi, Elkus Manfredi Architects
John E. Twohig, Esquire

Allston Yards

Allston, Massachusetts

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January 2018

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Executive Summary

Allston Yards

Stop & Shop Supermarket Company LLC ("Stop & Shop") with New England Development as Master Developer (together, as appropriate, the "Proponent"), working in conjunction with Elkus Manfredi Architects as Master Planner and in collaboration with The Bozzuto Group and Southside Investment Partners is pleased to present the Allston Yards project (the "Proposed Project"). The Proposed Project will replace an existing retail center located at 60 Everett Street in the Allston neighborhood of Boston, Massachusetts (the "Project Site") with a vibrant mixed-use, transit-oriented development focused around healthy living, including a walkable street grid, new activated open space and community space, a new state-of-the-art, flagship grocery store, and substantial public benefits.

Anticipated to be built out over several years, the Proposed Project will consist of residential, office, grocery, restaurant, fitness and retail uses, as well as a new approximately 0.5-acre community green, activated with year-round programming to enhance public use and enjoyment.

Initial Phase

The initial phase of the Proposed Project will include construction of a mixed-use building, and site-wide transportation and public realm improvements, including a new approximately 0.5-acre community green located at the corner of Arthur Street and the new Guest Street Extension (described further below under 'Transportation Improvements'). The initial phase is proposed to consist of a mix of uses, including up to 360 residential units, a new flagship urban-style grocery store, new community space (both outside and inside) for Allston-Brighton residents to use as a gathering place for neighborhood meetings, educational, and special events, and ground floor retail uses located on the northeast parcel of the Project Site. In addition, a restaurant is proposed as part of the community green. Structured parking will be provided to support this initial phase.

A phased demolition and construction plan allows the existing Stop & Shop to remain open and continuously serve its neighbors and customers during construction of the initial phase.

Full Build

Upon completion of the initial phase, the remaining buildings are planned to be developed in multiple phases over several years, depending on market conditions or other factors. The Proposed Project can accommodate a variety of phasing

scenarios. In the interim, the area will be stabilized and maintained as the future phases are developed.

Transportation Improvements

To ensure the Proposed Project will operate harmoniously with adjacent and other planned developments, the Proponent studied the Proposed Project's traffic together with the traffic anticipated to be produced by other planned developments. Once studied, the Proponent has proposed on- and off-site transportation improvements that ensure that the Proposed Project's traffic impacts are fully mitigated, but also ensure that traffic from these other projects is also adequately and sufficiently managed to allow for the continued success and vibrancy of this exciting area of the City.

The transportation improvements proposed to support the Proposed Project at full build, and that the Proponent will construct with the initial phase, include:

- Construction of the extension of Guest Street into and through the Project Site ("Guest Street Extension"), including:
  - Connection to the other new and surrounding streets and intersections, including Arthur Street, East Street, and Everett Street;
  - Construction of a new and improved signalized Guest/Everett Street intersection;
  - Construction of a new and improved signalized Guest/Arthur Street intersection; and
  - Pedestrian and bicycle accommodations, as well as on-street parking.
- Construction of the extension of Braintree Street as a new two-way multi-modal roadway that provides for accommodations for pedestrians and bicyclists to access the Boston Landing MBTA commuter rail station, as well as access to service/loading internal to the new buildings ("Braintree Street Extension").
- Intersection improvements, including new signage, striping, and curbing at Braintree Street/Everett Street to provide better definition of the intersection.
- Improved site access and circulation through the creation of new East and West Streets (West Street will be constructed as part of a later phase).
- Pedestrian and bicycle accommodations throughout the Project Site connecting to the surrounding neighborhood and the Boston Landing MBTA commuter rail station.
- Provision of both indoor and outdoor bike parking spaces, as well as potential installation of an additional bike-share station on-site.

Public Benefits

The Proposed Project will bring substantial benefits, including:

- Significant, "up front" transportation and infrastructure improvements totaling at least $6,500,000, which will facilitate redevelopment of the Project Site and surrounding sites with an interconnected, multi-modal street grid. The Proposed Project will connect the benefits realized by Brighton from other projects to Allston and will help connect these neighborhoods through the new street grid.
- Creating substantial net new annual real estate tax revenue for the City, as well as state sales and business tax revenue.
- Creating new construction and permanent jobs. By keeping the existing supermarket open during the initial phase of construction, store employees will have uninterrupted employment.
- Providing for an increase in housing options (i.e., varying sizes and price points), including homeownership units and affordable units consistent with the Inclusionary Development Program. The Proposed Project includes a substantial (over 100 units) homeownership commitment and will comply with the City's Inclusionary Development Policy in addition to the homeownership commitment.
- Providing substantial Development Impact Project exaction payments of approximately $3,000,000.
- Providing a new, modern flagship urban-style grocery store. Stop & Shop has robust sustainability and healthy eating initiatives including those focused on nutrition, healthy eating, education and fighting childhood hunger that will be utilized as part of programming the community gathering space and partnering with area organizations.
- Providing for a community gathering space as part of the initial phase. This community gathering space will be available for use by community groups and organizations and the Proponent also envisions partnering with groups to use the space to offer healthy eating, nutritional and educational classes and programs. The Proponent anticipates working with the community through the Large Project Review process to solicit input and further refine the details of the community gathering space uses and programs.
- Providing an approximately half-acre community green to be actively managed and programmed by the Proponent for community use. The community green has been located to encourage use by the community and neighbors and will be actively programmed year-round with uses, such as food trucks, art festivals, music events, movie nights or other seasonal and holiday events, such as ice cream socials in the summer, or holiday light and snow sculpture events in the winter. The Proposed Project will create a common area management entity to manage and program such areas as the community green and community space.

- Increased connection to the new, recently opened Boston Landing MBTA commuter rail station.
- Supporting the viability of the recently opened Boston Landing MBTA commuter rail station through increased ridership, and by supporting frequency of stops and weekend service at the station.
- Sustainable, transit-oriented development that is consistent with the City of Boston's and community's vision from the Brighton Guest Street Area Planning Study[1] and Smart Growth principles.
- Providing new residents to patronize existing stores, restaurants, bars and amenities of the community, helping small business owners.
- To further the wellness, educational, public realm and transportation enhancement themes of the Proposed Project, the Proponent envisions endowing a "Wellness and Public Realm Fund" to be available to the community including schools, community groups, athletic organizations and others to promote wellness, education and public realm and transportation enhancements. The Wellness and Public Realm Fund is proposed to be funded by each of the four principal buildings as part of the Proposed Project and initially available for payment over a ten-year period, to ensure an extended and continuing fund to benefit the community, with such payments to commence as buildings come online. The Proponent will work through the Large Project Review process to determine the mechanism to administer the Fund to ensure it will provide funds to further recipient organizations' wellness and educational missions and quality of life enhancements to the public realm and transportation infrastructure.
- In total, the Proposed Project will provide substantial mitigation commitments including: (i) significant transportation and infrastructure improvements; (ii) homeownership units; (iii) affordable housing units; (iv) Development Impact Project exaction payments; (v) a new grocery store; (vi) a new community gathering space; (vii) a new half-acre community green, which if considered a development parcel would be valued at approximately $6,000,000, without improvements; (viii) new tax revenues; (ix) new construction and permanent jobs; and (x) Wellness and Public Realm Fund. These commitments total approximately $18,000,000 - $20,000,000 and represent a significant investment in the community.

Conclusion

The Proposed Project, including its significant, "up front" infrastructure improvements and mitigation, provides for the opportunity to transform an underutilized urban area into a vibrant mixed-use neighborhood providing significant benefits while minimizing impacts. The Development Team is committed to working closely with the City and local community to ensure the Proposed Project

1 Boston Planning & Development Agency, Brighton Guest Street Area Planning Study (Boston, Massachusetts), March 2012.

is consistent with both the community's long-term vision of the Guest Street Planning Study and the Mayor's housing plan, as well as complementing adjacent recent development.

1

Project Description

Stop & Shop Supermarket Company LLC ("Stop & Shop") with New England Development as Master Developer (together, as appropriate, the "Proponent"), working in conjunction with Elkus Manfredi Architects as Master Planner, and in collaboration with The Bozzuto Group and Southside Investment Partners is pleased to submit this Project Notification Form ("PNF") to initiate review by the Boston Redevelopment Authority, d/b/a Boston Planning & Development Agency (the "BPDA") under Article 80 of the Boston Zoning Code (the "Code") for the redevelopment of the existing retail center located at 60 Everett Street in the Allston neighborhood of Boston (the "Project Site"). The redevelopment project is referred to as Allston Yards (the "Proposed Project"). Refer to Figure 1.1 for a site location map.

The Proponent intends to redevelop the existing approximately 10.6-acre Project Site with a mixed-use, transit-oriented development ("TOD") consisting of residential, office, restaurant, fitness and retail uses, including a flagship grocery store, and a new approximately 0.5-acre community green, activated with programming to enhance use and enjoyment, such as outdoor health and wellness events, public art exhibits, music concerts and holiday festivals. As described further below, the Proposed Project is anticipated to be built out over several years. Through the redevelopment master plan, the Proponent strives to achieve the following goals:

- Create a mixed-use, TOD project based on community, Impact Advisory Group ("IAG"), and city feedback that is consistent with the vision of the Guest Street Planning Study (defined below) and aligned with Smart Growth principles;
- Continue Stop & Shop's 20-plus year commitment to the Allston-Brighton neighborhood by constructing a new state-of-the-art, flagship grocery store in a location and configuration to allow the existing supermarket to remain open during construction;
- Provide a range of housing options in a variety of sizes and price points, including an opportunity for affordable units and home ownership units;
- Connect the Project Site to the larger surrounding street grid, thereby improving vehicular circulation for the neighborhood;
- Provide new connections for transit, bicycles, and pedestrians;
- Create community space (both outside and inside) for Allston-Brighton residents to use as a gathering place for neighborhood meetings and special events; and
- Incorporate attractive landscaping and publicly-accessible open spaces throughout the Project Site, including a programmed approximately 0.5-acre community green, landscaped plazas, and large sidewalks all activated through

lighting, site furnishings, special paving, wayfinding signage, connectivity to retail/restaurant/café spaces and/or public art.

- Provide Development Impact Project exactions payment estimated at $3 million, subject to final project uses.
- Create approximately 2,500 new construction jobs and more than 1,000 new permanent jobs.
- Create substantial net new annual real estate tax revenue for the City, as well as state sales and business tax revenue.

Over the last 18 months, the Proponent has worked with its development team, abutters, elected officials and BPDA staff to develop the enclosed plans for the Proposed Project. In doing so, the Proponent strived to make the Proposed Project substantially consistent with the Brighton Guest Street Area Planning Study completed in 2012 (the "Guest Street Planning Study").[1]

This PNF presents details about the Proposed Project and provides preliminary analysis of traffic/transportation, potential environmental impacts, and infrastructure needs to inform reviewing agencies and the community about the Proposed Project, its potential impacts, and the mitigation measures proposed to address those potential impacts.

1.1 Project Site History and Background

The history and evolution of the Project Site has been marked by advances in modern transportation and industrial development. It is located immediately adjacent to the Allston-Brighton Stockyards, which were developed along with the construction of the Boston & Worcester Railroad tracks. A line spur veered off the main tracks through the Project Site delivering livestock from all over New England.

Designs from a 1909 City plan show a future street grid for the Project Site that would never be realized due to intervening developments on the Project Site, including smaller parcels and a connection back to North Beacon Street. The Arthur C. Harvey Company ("Harvey Steel") constructed a warehouse in the early 1900's with a floorplate nearly 500 feet by 500 feet for the fabrication and distribution of steel and iron parts and pieces. With a distinct saw-tooth roof and brick façade, the building fronted Everett Street and created internal driveways to ring the building and connect back to Braintree Street. The elimination of two of the four rail lines and the construction of the Massachusetts Turnpike/Interstate 90 (the "Turnpike", or I-90) in the early 1960's paved the way for continued evolution of the Project Site.

In 1997, Stop & Shop purchased the Project Site from the Ryerson Steel Company. After a significant investment of millions of dollars to perform environmental remediation on the site and construct a 100,000-square foot shopping center, a Stop & Shop store opened in 1998. The existing shopping plaza has been serving the

1 Boston Planning & Development Agency, Brighton Guest Street Area Planning Study (Boston, Massachusetts), March 2012.

Allston-Brighton community for nearly 20 years, during which time the Guest Street corridor has evolved from its roots as an industrial district to a mixed-use district.

In 2012, neighborhood stakeholders, local officials, and city planners collaborated to produce the Guest Street Planning Study, providing recommendations for the future development of this corridor, including the creation of a comprehensive street grid, substantial open spaces, a mix of uses and the placement of taller building heights. These planning concepts are consistent with Mayor Walsh's housing plan *Housing A Changing City: Boston 2030*[2] and widely accepted Smart Growth principles, such as creating a TOD with new housing alternatives, walkable neighborhoods, and a live-work-play community. The Proponent seeks to continue to invest in the community by addressing the need for a new state-of-the-art grocery store while realizing the goals and vision provided in the Guest Street Planning Study for the Project Site. Over the last 18 or so months, the development team has worked closely with the BPDA, Boston Transportation Department (BTD), and other city staff, as well as local area elected officials, property abutters, and leaders of local community groups to better ensure the Proposed Project is consistent with the community's vision for the area.

1.2 Site Context and Existing Site Conditions

The Project Site lies within the growing neighborhood of Allston just south of the Turnpike bounded by the Everett Street bridge to the east, Arthur Street, the Boston Volvo Village dealership and a mix of other uses that front on North Beacon Street to the south and the Boston Landing redevelopment project to the west. Refer to Figure 1.2 for the Project Site context.

New, planned or potential development adjacent to the Proposed Project include:

- Boston Landing—a partially complete mixed-use development on an approximately 15-acre site consisting of sport-related facilities, hotel, office space, retail and restaurants, and residential housing, including The Residences at 125 Guest Street currently under construction to be opened in Spring 2018.
- The Boston Landing MBTA commuter rail station—a new, recently opened stop on the Framingham/Worcester line that connects to downtown Boston and points west.
- Boston Volvo Village dealership—planned for redevelopment of an existing car dealership use with future redevelopment opportunities.

Figure 1.3 shows the existing site plan and Figure 1.4 shows photographs of the existing site conditions. The Project Site currently houses approximately 100,000 gross square feet of retail space, including an approximately 65,000-square foot Stop & Shop constructed in 1998 with smaller ancillary retailers in a one-story building with an approximately 450-space surface parking lot. Access to the Project

2 City of Boston, Housing A Changing City: Boston 2030, October 2014. Website: https://www.boston.gov/finance/housing-changing-city-boston-2030

Site, as shown on Figure 5.2, is currently provided by multiple driveways connecting to the surrounding roadway network, including:

- A two-way access to Guest Street;
- A two-way access to Arthur Street;
- A one-way "in-only" access from Braintree Street underneath the Everett Street overpass; and
- A one-way "in-only" access from Everett Street.

Arthur Street is a public way that extends from North Beacon Street to Hichborn Street where it then turns into a private access drive into the Project Site. An internal driveway rings the Project Site with truck delivery to the existing retail center occurring along the Turnpike frontage from Braintree Street.

The existing grocery store layout and circulation pattern are modeled on a suburban prototype where the retail and parking are seen more as an isolated destination. The surface parking and current site design lacks connectivity to the adjacent neighborhood and abutters. Coupled with a lack of program diversity, the existing site lacks the activity and vibrancy found in thriving mixed-use environments; all issues which the Proposed Project addresses.

1.3 Project Description

Consistent with the City's and community's vision from the Guest Street Planning Study and Smart Growth principles, the Proposed Project provides the opportunity to transform an underutilized urban site currently consisting of big box retail with a vast surface parking lot into a vibrant mixed-use neighborhood focused on healthy living and eating. The Proposed Project builds on and complements the newly created Boston Landing development, which promotes the theme of an active lifestyle and physical fitness by providing a connected and walkable community with a mix of uses, as listed below. The Proposed Project will provide direct access to a new commuter rail station and other amenities, such as a flagship grocery store, publicly-accessible, activated open space, and a new street grid with widened sidewalks activated by ground floor retail that connect to the existing neighborhood. As part of the new grocery store, the Proponent plans to expand its healthy eating and living programs to include a publicly-accessible rooftop terrace. The following uses are proposed:

- Residential;
- Office;
- Grocery;
- Retail;
- Restaurant;
- Fitness;
- Open space and programmed open space;

› Community gathering space; and

› Parking.

Figure 1.5 presents the proposed full build conditions plan. A phased demolition and construction plan allows the existing Stop & Shop to remain open and continuously serve its neighbors and customers during construction of the initial development of Building 1. Upon completion of Building 1, the remaining buildings are planned to be developed in one or more phases, depending on market conditions and other factors.

1.3.1 Development Program

Full Build

Table 1-1 summarizes the proposed full build development program for the Proposed Project.

Table 1-1 Proposed Development Program Summary*

Use	Approximate Size
Residential	Up to 1,050 units[1]
Office	300,000 GSF[2,3]
Grocery	67,000 GSF[4]
Retail/Restaurant	50,000 GSF[5]
Community Green	0.5 acres[6]
Parking	Up to 1,300 spaces[7]

* Note: To be developed in multiple buildings each of which can be developed together or independently of the other. Consistent with the uses as detailed above, the mix of uses constructed will be in response to evolving market conditions.

GSF Gross Square Feet including mechanical/unusable space.

1 To consist of a range of housing types, sizes, and price points, including affordable units and home ownership units.

2 Includes amenity space.

3 May be substituted for residential use consisting of approximately 340 units; however, office use is more impactful from a transportation perspective and, therefore, is being analyzed as such under the Article 80 review for the Proposed Project.

4 Includes 3,000 square feet of community space.

5 Includes restaurant space proposed throughout; locations to be determined.

6 May include a restaurant with outdoor seating.

7 Consists of structured and at-grade off-street parking spaces. An additional approximately 30 on-street parking spaces will be provided along Guest Street Extension.

Initial Phase and Site Improvements

The design of Building 1 and site-wide improvements have been further advanced, as it is currently contemplated as the initial phase of development. In summary, the initial development phase will include:

› Up to 360 residential units;

- A new flagship urban-style grocery store;
- Ground floor retail; and
- Community gathering space.
- An approximately 0.5-acre community green, with the potential for a restaurant/café with outdoor seating.
- The roadway and utility network infrastructure, suitable for the full build-out of the Proposed Project and needed to support existing, approved, and proposed projects in the area, such as Boston Landing.
- Construction of the extension of Guest Street into and through the Project Site ("Guest Street Extension"), including:
  - Connection to the other new and surrounding streets and intersections, including Arthur Street, East Street, and Everett Street;
  - Construction of an improved signalized Guest/Everett Street intersection; and
  - Construction of an improved Guest/Arthur Street intersection.
- Construction of the extension of Braintree Street as a new two-way multi-modal roadway that replaces the existing retail service/loading area while also providing for accommodations for pedestrians and bicyclists to access the Boston Landing MBTA commuter rail station, as well as access to Project service/loading internal to the new buildings ("Braintree Street Extension");
- Pedestrian and bicycle accommodations throughout the Project Site connecting to the surrounding neighborhood and the Boston Landing MBTA commuter rail station; and
- Approximately 410 structured parking spaces, as well as on-street parking.

The existing Stop & Shop will remain open during the construction of Building 1.

The location and configuration of the proposed store will allow for the existing supermarket to remain open during construction. Pedestrian access to the new grocery store will be located on the corner of Guest Street Extension and East Street (as shown on Figure 3.7), allowing visibility and convenient access from the adjoining neighborhood. A valet pick-up area internal to the building is also planned to allow for convenient pickup without affecting entry/exit from the parking garage.

Townhouse-style residential units are proposed along East Street in Building 1 to provide an activated street level. An additional 14 stories of apartments set in an 'L-shaped' building is proposed above the grocery podium. Pedestrian access to the residential building will be located off Guest Street Extension in a ground-floor lobby with supporting first floor amenity space, which may include the leasing office and/or concierge. The residential component will contain supporting amenities on the upper floors, such as a roof deck accessible to building residents. There will also be green roof areas, as well as balconies for some units. Resident bicycle storage will be located on the first floor near the garage entrance, within the podium levels, as well as in the parking garage.

The current design of Building 1 provides the opportunity for a public gathering space. The Proponent intends to further define the appearance and planned use of this space with community input through the Article 80 public review process, which may include programming by the Proponent and others.

Later Phase Buildings

The designs for Buildings 2 through 4 have not been as advanced as Building 1; however, the Proposed Project can accommodate a variety of phasing scenarios. Each of the proposed buildings can be developed together with or independently of and in differing sequences with the others and the mix of uses presented in Table 1-1 allows the Proposed Project to remain responsive to evolving market conditions. Depending on market conditions or other factors, uses may be relocated to another building, while remaining consistent with the overall program, site-wide improvements and mitigation commitments, which will be established through the Article 80 review process. The flexibility of sequencing is critical to the Project's ability to respond to market conditions. However, as stated above, the Proponent has committed to the infrastructure as part of the initial phase of development to support the full build program.

1.3.2 Improved Site Access

The new, recently opened Boston Landing MBTA commuter rail station abutting the Project Site directly to the north provides direct access to downtown Boston and points west. The Proposed Project supports the growing Allston neighborhood, through an improved street grid that will help knit together the existing neighborhood to the east and south with the higher-density Boston Landing development to the west along the Guest Street corridor. As described further in Chapter 5, *Transportation*, proposed site access improvements include:

- Guest Street Extension, a new two-way multi-modal roadway that connects existing Guest Street and Everett Street while also providing enhanced accommodations to pedestrians and bicyclists, and on-street parking;
- Braintree Street Extension, a new two-way multi-modal roadway that extends existing Braintree Street into the Project Site replacing the existing retail service/loading area while also providing for accommodations for pedestrians and bicyclists to access the Boston Landing MBTA commuter rail station, as well as access to service/loading internal to the new buildings;
- Improved intersections at Everett Street/Old Everett Street/Guest Street Extension and Arthur Street/Guest Street/Guest Street Extension allowing full access and egress to and from the Project Site;
- Improved Braintree Street/Old Everett Street intersection, including new signage, striping, and curbing at to provide better definition of the intersection;
- Improved site access and circulation through the creation of new East and West Streets providingDirect pedestrian access to the new Boston Landing MBTA commuter rail station (on the Framingham/Worcester Line);

- Pedestrian and bicycle accommodations throughout the Project Site connecting to the surrounding neighborhood; and
- Provision of both indoor and outdoor bike parking spaces (as required by building), as well as potential installation of an additional bike-share station on-site.

1.3.3 Public Realm Improvements

The Proposed Project will create approximately 3 acres of public realm space—site area dedicated to streets, sidewalks, hardscape plazas, and an approximately 0.5-acre community green accessible for all residents and the greater Allston-Brighton community at the corner of Guest and Arthur Streets (Figure 1.5). The community green is in keeping with the Guest Street Planning Study, which plans for a "necklace of open spaces linked together by the Guest Street/Braintree Street spine." As called out in this same study, the community green will be a "leafy pocket park" where "locals and visitors of all ages can enjoy a range of outdoor activities." The community green, as currently planned, will allow for programming by the Proponent in conjunction with the community and may include restaurant/cafe space with an outdoor dining area. The community green has been strategically located to connect the Proposed Project with the Boston Landing neighborhood currently under construction. Refer to Section 3.6 of Chapter 3, *Urban Design* for further detail on the proposed public realm improvements.

1.3.4 Urban Design Approach

Consistent with the Guest Street Planning Study's goal of providing for development parcels in scale with the adjacent neighborhood parcels and block, the Project Site has been divided into five (5) blocks, subject to future phasing and market uses. The development team has worked to incorporate a series of key connections (vehicular, pedestrian, and bicycle) through the Project Site, as described previously in Section 1.3.2. To provide for walkability throughout the Project, publicly-accessible walkways will be provided along all streets within the Project Site. Both sides of Guest Street Extension will have small-scale retailers to support a mix of retail and restaurant uses with active storefronts.

The primary division of the Project Site includes the extension of Guest Street, or Guest Street Extension, which will connect to new and improved intersections at Everett and Arthur Streets consistent with the Guest Street Planning Study guidelines, as described more fully in Section 1.6.1 below. Previous studies conducted on behalf of the Boston Landing Master Plan looked at a new connection of Guest Street to a road aligning south of Harvey Steel Road and requiring demolition of building(s) and removal of surface parking to access Everett Street. The proposed Project Site plan layout and Guest Street Extension aim to simplify this connection and make a more logical link to Everett Street to improve circulation and access for adjacent neighborhoods. The Proposed Project also aims to provide view and pedestrian corridors to the Boston Landing MBTA commuter rail station north of

the Project Site. Refer to Section 3.3.1 of Chapter 3, *Urban Design* for further detail on the proposed site layout.

1.3.5 Project Schedule and Phasing

The Proposed Project is intended to be developed through a long-term multi-phased approach over several years. The Proponent is undertaking a comprehensive review of the Proposed Project's impacts, in accordance with Article 80B of the Code, so that these impacts can best be evaluated and mitigated at the full build condition. As presented in greater detail in Chapter 5, *Transportation* and Chapter 6, *Environmental Protection*, the majority of the impact analysis has been completed, and additional analysis will be included in the Draft Project Impact Report (DPIR).

As noted earlier, the Proposed Project has been designed to accommodate a variety of phasing scenarios, while allowing the development to progress in a thoughtful and responsible manner. Essentially, each of the buildings have the ability to be developed together or independently of the others and the mix of commercial, residential, and retail uses, as detailed in the program summary (Table 1-1), allows the Proposed Project to remain responsive to evolving market conditions. Depending on market conditions or other factors, uses may be relocated to another building, while maintaining the site-wide improvements and mitigation commitments to be established through the Article 80 review process.[3]

Initial Phase

The initial phase of work, or the enabling phase, is anticipated to begin in the second quarter of 2019 and will involve site preparation. As currently anticipated, the initial development phase will include Building 1 and other site-wide improvements, including enabling infrastructure and the community green (detailed previously in Section 1.3.1).

The existing Stop & Shop will remain open during the construction of Building 1. Upon completion of Building 1, the remaining buildings and Project Site are planned to be developed in phases depending on market and other conditions. Under interim conditions, some building areas may be temporarily improved with surface parking areas or open areas.

1.4 Summary of Project Benefits

This section summarizes the many project benefits associated with the Proposed Project. Collectively, the below-mentioned commitments equate to approximately $18,000,000 - $20,000,000 representing a significant investment in the community.

3 The final program and site-wide improvements are subject to change depending on completion of Article 80 review.

Public Benefits

- Significant, "up front" transportation and infrastructure improvements totaling at least $6,500,000 to facilitate redevelopment of the Project Site and surrounding sites with an interconnected, multi-modal street grid.
- Provide Development Impact Project exactions payment estimated at $3 million, subject to final project uses.
- Over the term of the Project, create approximately 2,500 new construction jobs and more than 1,000 new permanent jobs.
- Create substantial net new annual real estate tax revenue for the City, as well as state sales and business tax revenue.
- Increase housing options, including affordable housing consistent with the Inclusionary Development Program.
- Provide a range of housing types (i.e., varying sizes and price points), including homeownership units.
- Deliver a new, modern flagship urban-style grocery store as part of the initial development phase to support the on-site uses, as well as the broader community.
- Continue to operate the existing Stop & Shop while the new store is under construction.
- Provide community gathering space as part of the initial development phase of development for use by neighborhood residents.
- Create a new approximately 0.5-acre programmed community green, with the potential for a restaurant/café with outdoor seating. If the community green were considered a development parcel would be valued at approximately $6,000,000, without improvements.
- Offer a "Wellness and Public Realm Fund" to be available to the community including schools, community groups, athletic organizations and others to promote wellness, education and public realm and transportation enhancements. The Wellness and Public Realm Fund is proposed to be funded by each of the four principal buildings as part of the Proposed Project and initially available for payment over a ten-year period, to ensure an extended and continuing fund to benefit the community, with such payments to commence as buildings come online. The Proponent will work through the Large Project Review process to determine the mechanism to administer the Fund to ensure it will provide funds to further recipient organizations' wellness and educational missions and quality of life enhancements to the public realm and transportation infrastructure.
- Improve access and circulation throughout the Project Site, including a connection to the new, recently opened Boston Landing MBTA commuter rail station.
- Provide new residents to patronize existing stores, restaurants, bars and amenities of the community, helping small business owners.

Public Realm Activation

- Transform an underutilized urban site into a vibrant mixed-use neighborhood.
- Connect the Project Site to the Allston neighborhood.
- Create a sustainable, true TOD project that is consistent with the City of Boston's and community's vision from the Brighton Guest Street Area Planning Study and Smart Growth principles.
- Provide convenient walking routes to public transit, as well as to amenities in the Allston and Brighton neighborhoods.
- Provide a more pedestrian-friendly environment with sidewalks along all roadways within the Project Site.

Transportation Benefits

- Traffic generated by the Proposed Project can be accommodated at the study area intersections through the implementation of planned improvements and signal timing modifications planned as part of the initial phase of the Proposed Project.
- The Project Site's proximity to public transportation, including several bus lines and the new MBTA Boston Landing Station, will help minimize the need for vehicular travel.
- The parking needs for the Proposed Project will be accommodated by a proposed parking supply of up to 1,300 parking spaces.
- Transportation improvements proposed as part of the Proposed Project have been designed to accommodate pedestrian, bicycle, and vehicular traffic.
- The Proposed Project provides a more pedestrian-friendly environment with sidewalks to be constructed along all streets within the Project Site with connections between Market Street, Everett Street, and North Beacon Street.
- The Proposed Project provides an internal roadway network designed to be compatible with bicycle use, including a new separated bike lane on Guest Street Extension, as well as secure interior bicycle storage and at-grade bicycle racks.
- The Proposed Project will include implementation of a Transportation Demand Management ("TDM") Plan with specific measures to promote and encourage residents, employees, and visitors to use alternative transportation modes.
- The Proposed Project supports the viability of the recently opened Boston Landing MBTA commuter rail station through increased ridership, and frequency of stops and weekend service by creating additional housing units (including home ownership) and promoting the use of the adjacent public transit services.

Sustainability/Environmental Benefits

Measures and strategies to help the Proposed Project minimize potential environmental impacts and to achieve its sustainability goals are grouped into the following categories:

Site Location and Design

- Reuse a previously developed site in a dense urban setting as opposed to building on undeveloped open space.
- Comply with all applicable stormwater management standards to the extent practicable to improve water quality.
- Manage stormwater runoff rate and provide infiltration through below-grade re-charge and the incorporation of pervious surfaces.
- Reduce heat island effect by incorporating greenery throughout the Project Site, utilizing reflective roof materials and/or vegetated roofs, and providing the majority of the on-site parking under cover.
- Incorporate sustainable/green building design, construction, and operational measures so that the Proposed Project is LEEDv4 certifiable, in compliance with Article 37, Green Buildings of the Code.[4]
- Incorporate adaptation and resiliency measures to address future impacts associated with climate change.

Energy Conservation/GHG Emissions Reductions

- Reduce overall annual energy consumption through the implementation of energy optimizing building design and systems, which would result in a reduction in stationary source CO_2 emissions when compared to a building design that meets the minimum building code requirements.
- Comply with the Massachusetts Stretch Energy Code requirement to be 10 percent better than ASHARE 90.1-2013.
- Utilize potential energy conservation incentives offered by utility companies.
- Consider providing preferred parking for low-emitting fuel-efficient vehicles and/or electric vehicle charging stations to further reduce GHG emissions associated with vehicles.
- Continue to evaluate building design and alternative energy options throughout design.

Water Conservation

- Target substantial reduction of the annual potable water use for sewage conveyance.
- Reduce potable water for irrigation use through the use of efficient irrigation systems, and drought tolerant trees, shrubs, and groundcover.

Resiliency

4 City of Boston Article 37 submittal requirements require completing a Leadership in Energy and Environmental Design ("LEED™") credit scorecard to demonstrate that a project meets the minimum requirements to achieve a LEED Certified level (all LEED prerequisites and achieve at least 40 points) without requiring the project to be registered with or certified by with the Green Business Certification Inc. ("GBCI").

- Bury all new utilities below ground to reduce the possibility of a localized power outage caused during extreme storm events.
- Incorporate protective plantings throughout and at the edges of the Project Site to mitigate potential wind effects created by open spaces.
- Incorporate natural ventilation into the design of residential units, as appropriate, to mitigate potential rising temperature impacts.

1.5 Community Outreach

The Proponent has conducted early community outreach. Introductory outreach has also been made to members of the Guest Street Corridor Planning group, and meetings with leaders of local community groups have been held. The Proponent has also preliminarily reached out to representatives of adjacent land owners. Additionally, the Proponent has met numerous times with local area elected officials to provide an overview of the Proposed Project. Further outreach efforts, public meetings, and community outreach will be conducted as part of the Article 80 review process.

1.6 Consistency with Applicable Plans & Policies

1.6.1 Brighton Guest Street Area Planning Study

The Proposed Project is located within the area of the Guest Street Planning Study. The Guest Street Planning Study included a 100-acre area extending one-mile along the Turnpike. The Guest Street Planning Study resulted from coordinated efforts of multiple stakeholders and was approved by the BPDA in March 2012.

The long-term vision of the Guest Street Planning Study is to create an urban mixed-use district featuring vibrant community uses and residential development resulting in an area that will become a transit-oriented mixed-use destination with a blend of workplaces, homes, and neighborhood amenities. The Project Site is located within an area of the Guest Street Planning Study in which taller buildings and increased floor area ratio ("FAR") are noted as appropriate. In summary, the goals of the Guest Street Planning Study include:

- Locate greater building heights along the Turnpike with FARs that range from 3.0 to 4.0;
- Provide a diversity of uses;
- Provide increased open space;
- Provide a connected street grid, including:
  - Extending Guest Street from Arthur Street to Everett Street;
  - Completing the Arthur Street/Guest Street intersection;
  - Connecting Guest Street with Braintree Street through the addition of West and East Streets; and

- Maintaining and improving the Braintree Street underpass connection.

The Proposed Project is consistent with the overarching goals of the Guest Street Planning Study. Key attributes include:

› Building Height and Massing

- Height and massing located along Guest Street Extension away from North Beacon Street.
- Screen the Turnpike from nearby residential neighborhoods.
- Provide a building massing varied in height and orientation allowing for interesting views up to the sky.
- Design buildings with low-rise or mid-rise massing components (a base and tower) to optimize views through the Project Site.

› Diversity of Uses

- Provide a live-work-play community, including office, residential, grocery, retail, fitness and restaurant uses.
- Introduce a new flagship grocery store with expanded facilities and community center, including a publicly-accessible rooftop terrace.
- Provide a variety of housing types, including townhouses to activate the street level.
- Create an active mixed-use corridor by locating retail, office entry, and residential lobbies along the Guest Street Extension.

› Open Space

- Provide increased open/pervious space on a site that is currently almost completely impervious.
- Create a new approximately 0.5-acre programmed community green, with the potential for restaurant/café space with outdoor seating.
- Develop a range of street types with a pattern of smaller blocks and public spaces integrated throughout.

› Connected Street Grid

- Create new pedestrian and bicycle accommodations to encourage a healthy, active life-style.
- Complete the Guest Street/Arthur Street intersection.
- Connect to and maintain the underpass at Braintree Street while introducing a more functional two-way operation.
- Link the Project Site back into the adjacent neighborhoods by providing a neighborhood-scale street grid to the Braintree Street neighborhood to the east, and connecting the transportation network to Everett Street.

- Connect Market and Guest Streets with an extension of Guest Street to Everett Street (Guest Street Extension), including a reconstructed and improved Guest Street/Everett Street intersection, with a sidewalk for pedestrians and bicycle accommodations.

1.6.2 Boston Landing Project

As previously mentioned, Boston Landing is a mixed-use development on an approximately 15-acre site located along the Turnpike and adjacent to the Project Site in Boston's Allston-Brighton neighborhood. Formerly an industrial site, at full build out, Boston Landing will provide approximately 650,000 square feet of new office and lab space, a 350,000-square foot sports complex, a 295-unit residential complex, a 175-room hotel, and approximately 65,000 square feet of restaurant and retail space throughout the site.

The Proposed Project looks to complement and reinforce many of the strong design characteristics and planning direction seen at Boston Landing. The Proposed Project extends the vibrant, pedestrian-oriented streetscape of existing Guest Street through its Project Site to Everett Street. With improved access and circulation along a retail-, restaurant- and residential-oriented Guest Street Extension, both sites will benefit from the density and program mix. Buildings lining Guest Street Extension thoughtfully frame the community green to create programmed open space between the two sites as an amenity for those who work and live in the neighborhood. The proposed building heights are consistent with the existing and planned Boston Landing buildings so that the two developments relate while each afford dynamic downtown views. The network of streets created on the Project Site ties into the new Boston Landing MBTA commuter rail station at the end of West Street. Therefore, the Proposed Project will complement and enhance the success of the Boston Landing project by providing a variety of uses and connectivity between the two projects and surrounding street grid.

1.7 Conclusion

The Proposed Project is consistent with both the community's long-term vision of the Guest Street Planning Study and the Mayor's housing plan, and it complements adjacent recent development (Boston Landing) in that it provides a mix of uses, including a variety of housing types, supported by direct access to a new commuter rail station and other amenities, such as a flagship grocery store, a publicly-accessible community green, and a new street grid with widened sidewalks activated by ground-floor retail and restaurants that connect to the existing neighborhood. The Proposed Project, including its significant, "up front" infrastructure improvements and mitigation provides for the opportunity to transform an underutilized urban site currently consisting of big box retail with a vast surface parking lot into a vibrant mixed-use neighborhood while minimizing environmental impacts, as demonstrated herein.

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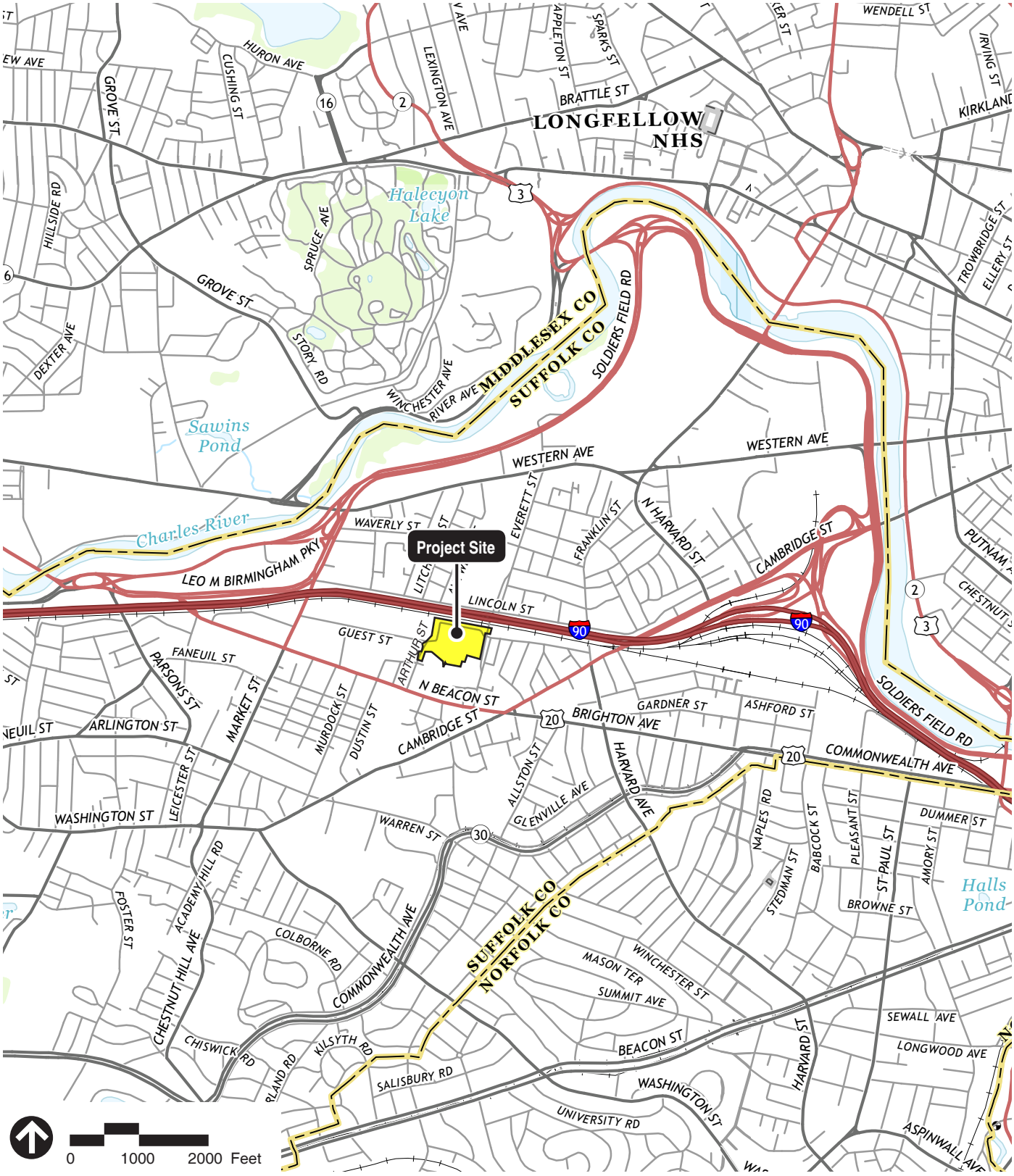


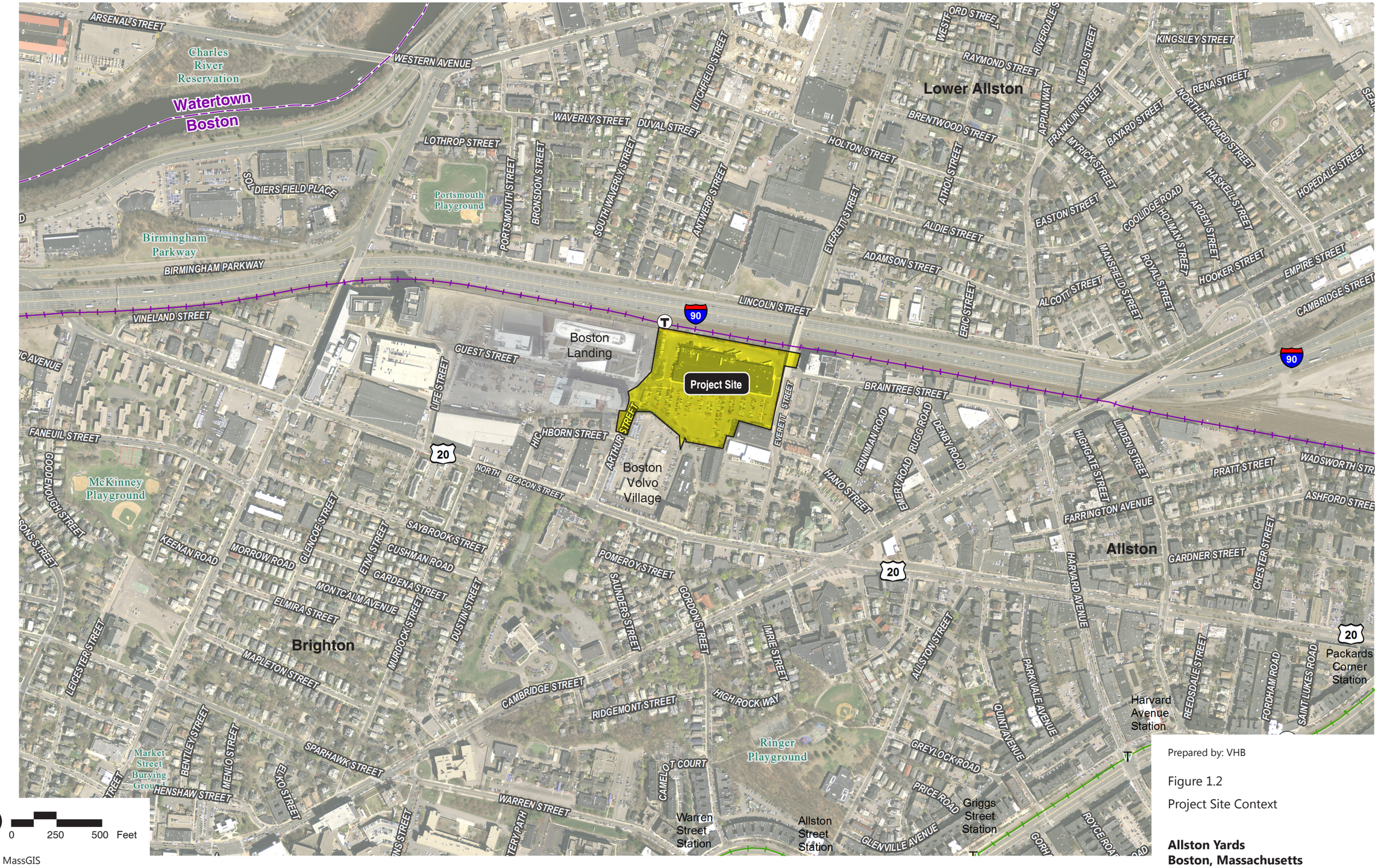
Source 2015 USGS

Prepared By: VHB

Figure 1.1

Site Locus Map

Allston Yards
Boston, Massachusetts



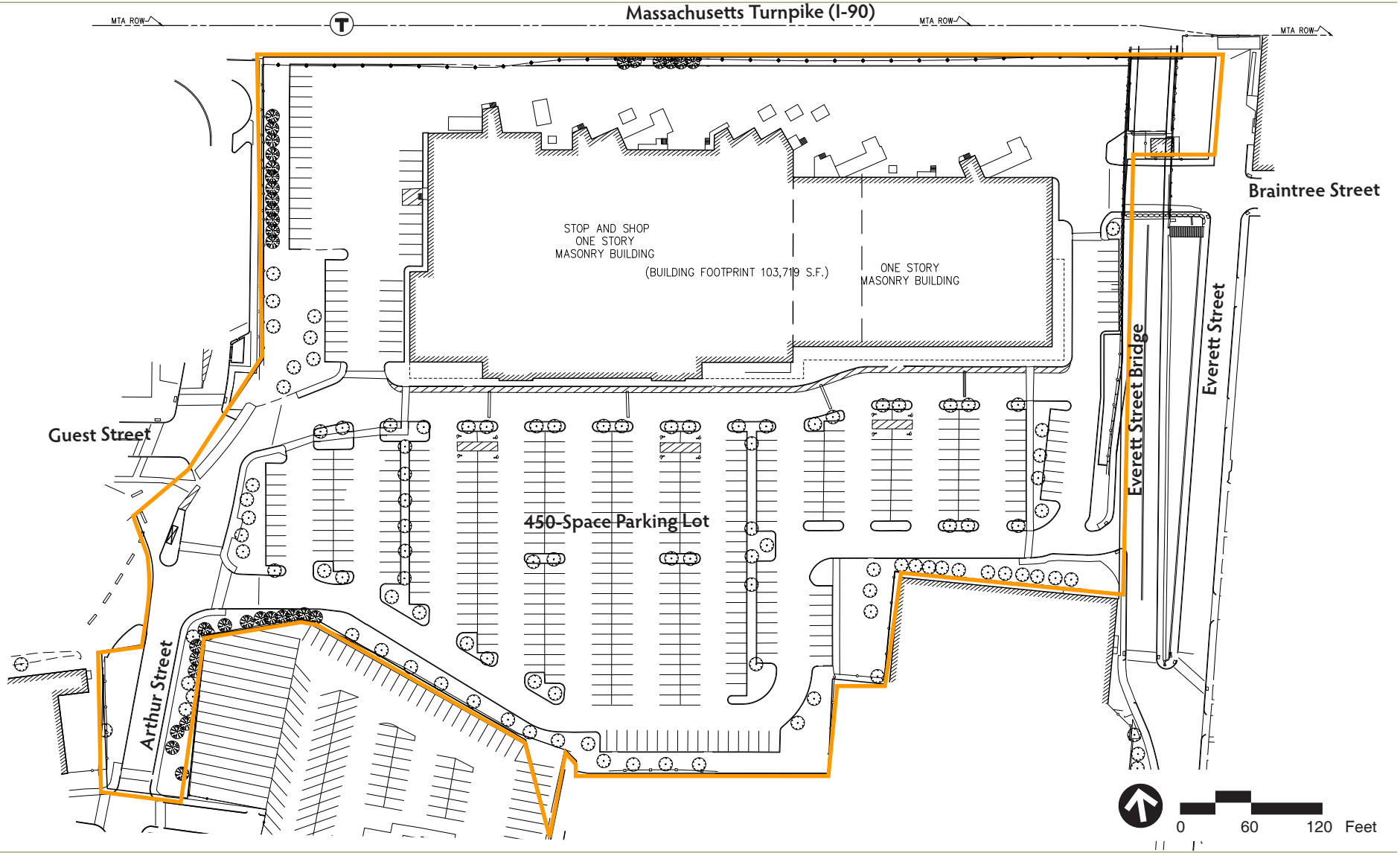
Source: MassGIS

Prepared by: VHB

Figure 1.2

Project Site Context

Allston Yards
Boston, Massachusetts



Source: VHB Survey

Prepared By: VHB

Project Site Boundary

Figure 1.3

Existing Conditions Site Plan

Allston Yards
Boston, Massachusetts

Prepared by: VHB

Figure 1.4

Existing Site Photos

Allston Yards
Boston, Massachusetts

Prepared by: Stantec

Figure 1.5

Proposed Full Build Conditions Site Plan

2

Regulatory Context and General Information

This chapter summarizes the local planning and regulatory controls and anticipated permits and approvals applicable to the Project.

2.1 Planning/Zoning and Regulatory Controls

The Project Site is located within the Guest Street Local Industrial Sub-district (the "Guest Street LI-2 District") within the Allston-Brighton Neighborhood District governed by Article 51 of the Code. While not adopted as zoning, the Project Site is located within the area of the Guest Street Planning Study, discussed above. The Project Site is not within any zoning overlay districts. Zoning relief for the Proposed Project will be required to be obtained through adoption of a Planned Development Area Development Plan (the "PDA Development Plan"), pursuant to Article 80C of the Code. Planned Development Areas are specifically allowed in the Guest Street LI-2 District by Section 51-44 of the Code.

As described further below, the Proposed Project will require Large Project Review pursuant to Article 80B of the Code and adoption of a PDA Development Plan pursuant to Article 80C of the Code. This PNF is filed to commence study of the potential impacts for the entire Proposed Project under Large Project Review. Similarly, the PDA Development Plan to be submitted and adopted for the Proposed Project will include the entire Project Site and Proposed Project. Filing for Large Project Review and a PDA Development Plan for the entire Proposed Project will allow the Proposed Project's impacts, mitigation and program to be studied and reviewed in a comprehensive manner. As the design of the initial phase of the Proposed Project is more advanced, the Proponent will seek approval of the design of Building 1 by the Boston Civil Design Commission ("BCDC") in conjunction with the Proposed Project's Large Project Review, with the design and review of later phase buildings to follow.

2.1.1 Demonstration of Compliance with Zoning

Uses

In the Guest Street LI-2 District, all office uses, open space uses, certain restaurants and local retail uses are allowed by right. General retail uses are allowed by conditional use permit; residential uses are not permitted. As noted above, zoning relief to allow the Proposed Project's uses, as necessary, will be obtained via adoption of a PDA Development Plan. The appropriate number of required off-street

parking spaces and off-street loading facilities for the Proposed Project will be determined through Large Project Review. The Proposed Project's general conformity of proposed parking, including bicycle parking, to Boston Transportation Department guidelines is addressed in Chapter 5, *Transportation*.

Building Dimensions

The Guest Street LI-2 District allows building dimensions of up to 45 feet in building height, a FAR of 2, front yards of 5 feet and rear yards of 12 feet. The Guest Street LI-2 District also requires 50 square feet of open space per dwelling unit. As noted in the Guest Street Planning Study, the majority of the Study area, including the Project Site, is zoned as a local industrial sub-district, a classification that is "somewhat outdated and could limit the range of future development." As the Project Site is located along the Turnpike, the Project Site is located within an area of the Guest Street Planning Study in which a FAR range of 3 to 4 was recommended, as well as taller building heights. The Proposed Project's preliminary FAR based on the total area of the Project Site is approximately 3.1 (excluding below-grade space, parking, ramps, mechanical space and interior bike storage space). The Proposed Project's preliminary building heights, which range from approximately 100 to 235 feet, calculated in accordance with the Code, are consistent with the building heights of the adjacent Boston Landing project.

Notwithstanding the general conformity of the Proposed Project to the Guest Street Planning Study, the Proposed Project will require zoning relief from the building height, FAR and other dimensional requirements of underlying zoning. As noted above, zoning relief will be obtained through adoption of a PDA Development Plan.

2.1.2 List of Anticipated Permits/Approvals

Table 2-1 presents a preliminary list of permits and approvals from governmental agencies that are expected to be required for the Proposed Project, based on currently available information. It is possible that only some of these permits or actions will be required, or that additional permits or actions may be required.

2.1.3 Article 80 Large Project Review

The Proposed Project involves new construction in excess of 50,000 square feet of Gross Floor Area, and as a result, it is subject to Large Project Review pursuant to Article 80B of the Boston Zoning Code (the "Code"). The Proponent filed a Letter of Intent ("LOI") with the BPDA on February 10, 2017 (a copy of which is provided in Appendix A). Under the Mayor's Executive Order dated October 10, 2000, and amended April 3, 2001, regarding mitigation for development projects, the Mayor will appoint an Impact Advisory Group to advise the BPDA on mitigation measures for projects undergoing Large Project Review.

This PNF initiates the development review process and aims to meet requirements of the City of Boston Article 80B, Large Project Review by presenting initial details on the Proposed Project based on its conceptual design, including supporting plans, preliminary

information on sustainability and resiliency, in accordance with Boston Zoning Code Article 37 Green Buildings (Article 37), and the Climate Change Preparedness and Resiliency Policy (Resiliency Policy), respectively, a comprehensive transportation analysis, initial evaluation of potential environmental impacts and descriptions of available infrastructure and nearby historic resources. Upon review of public and agency comments on this PNF, as well as any further responses to comments made by the Proponent, the BPDA will issue a Scoping Determination, which will outline the additional information required as part of the Draft Project Impact Report (DPIR) filing.

Also in connection with the Large Project Review, the Proposed Project will be subject to, among other requirements: (i) BCDC Review; (ii) Development Impact Project Exactions under Section 80B-7 of the Code; and (iii) the green building requirements of Article 37 of the Code.

Table 2-1 Anticipated Project Permits and Approvals

Agency/Department	Permit/Approval/Action
Federal	
Environmental Protection Agency	NPDES General Construction Permit
Federal Aviation Administration	Determination of No Hazard to Air Navigation
Commonwealth of Massachusetts	
Executive Office of Energy and Environmental Affairs	Massachusetts Environmental Policy Act (MEPA) Review
Massachusetts Historic Commission	State Register Review
Department of Environmental Protection	Fossil Fuel Utilization Permit (as required)
	Notice of Demolition/Construction
	M.G.L. 21E actions (as required)
	Brownfields Tax Credits
	Air Quality Permit for heating boilers and emergency generators (as required)
Massachusetts Water Resources Authority	Temporary Construction Dewatering Permit (if necessary)
Massachusetts Department of Transportation	M.G.L. c. 40 s. 54A Consent
	Vehicular Access and/or Non-Vehicular Access Permits (as required)
	Work within highway easement area (as required)
Massachusetts Bay Transit Authority	Various approvals, including related to the connection to the Boston Landing MBTA commuter rail station and/or to construct Braintree Street Extension (as required)
Department of Conservation and Recreation	Non-Vehicular Access Permit (as required)
City of Boston	
Boston Planning & Development Agency	Article 80B Large Project Review
	Article 80C Planned Development Area (PDA) Review
	Cooperation Agreement
	Development Impact Project Agreement
	Affordable Housing Agreement
	Certification of Consistency and Compliance
Boston Zoning Commission	PDA Development Plan Approval
Boston Civic Design Commission	Design Review
Boston Employment	Boston Residents Construction Employment Agreement
Boston Landmarks	Article 85 Demolition Delay Review (as required)
Boston Water and Sewer Commission	Site Plan Review
	Water and Sewer Connection Permits
	Cross Connection Backflow Prevention Approval (as required)
	Temporary Construction Dewatering Permit
	Easement Relocation (as required)
Public Improvements Commission	Pedestrian Easement Acceptance
	Specific Repair Plan
	Permit/Agreement for Temporary Earth Retention Systems, Tie-back Systems and Temporary Support of Subsurface Construction (as required)
	Vertical Discontinuance (as required)
	Permit for Sign, Awning, Hood, Canopy or Marquee (as required)
	Easement Relocation (as required)
Boston Transportation Department	Construction Management Plan
	Transportation Access Plan Agreement
Boston Public Works Department	Curb Cut Permit(s)
	Street Opening Permit (as required)
	Street/Sidewalk Occupancy Permit (as required)
Public Safety Commission Committee on Licenses	Permit to Erect and Maintain Garage
	Inflammable Storage License
Boston Inspection Services Department	Demolition Permits
	Building Permits

2.1.4 Boston Civic Design Commission

The Proposed Project will comply with the provisions of Article 28 of the Boston Zoning Code. This PNF, along with other design-specific materials prepared in accordance with the applicable provisions of Article 28, will be submitted to the BCDC for review. Building 1 constitutes the initial phase of the long-term multi-phased redevelopment project. Therefore, the Proponent is seeking BCDC approval of Building 1 at this time and will provide the appropriate level of detailed plans to obtain the necessary approval.

2.1.5 Architectural Access Board Requirements

The Proposed Project will comply with the requirements of the Massachusetts Architectural Access Board and will be designated to comply with the standards of the Americans with Disabilities Act. See Appendix B for the Accessibility Checklist.

2.1.6 MEPA Review

The Proponent anticipates the Proposed Project will require review by the Massachusetts Environmental Policy Act (MEPA) Office of the Massachusetts Executive Office of Energy and Environmental Affairs (EEA).

The Proponent plans to submit a separate Environmental Notification Form (ENF) to initiate MEPA review.

2.1.7 Massachusetts Historical Commission

If the Proposed Project requires any state or federal licenses, permits or approvals, review by the Massachusetts Historical Commission (MHC) is required. The filing of an ENF for review under MEPA will initiate MHC review of the Proposed Project.

2.2 Agency Coordination

The Proponent has met with members of the BPDA, including development review and design review staff, as well as other key city staff to review the Proposed Project. The Proponent, along with its development team, has also met with the BTD to discuss site access and circulation, as well as connections to adjacent properties.

2.3 Development Team

Stop & Shop Supermarket Company

The Stop & Shop Supermarket Company opened its very first supermarket in 1914 in Somerville, MA. Today, Stop & Shop operates 132 stores in the Commonwealth, nine of those stores are located within the City of Boston and approximately 1,300 associates are employed.

Stop & Shop has a long commitment to supporting organizations that help end hunger and recognizes the important role it plays in providing food to those in need throughout New England. In addition, Stop & Shop is committed to improving the quality of life for children and is a charter sponsor of Family Aid and Bottom Line organizations.

In 2016, Stop & Shop donated a total of $23 million in combined cash and product donations, including contributions from customers, vendors, and associates. Donations served to:

- Fight hunger through cash and product donations to regional food banks and local hunger relief organizations. In 2016, Stop & Shop donated more than $14 million in cash and product to regional food bank partners and local hunger relief organizations through various programs.
- Through a 26-year partnership with the Dana-Farber Cancer Institute, customers, associates and vendors have come together to raise millions for pediatric cancer research and care at the Dana-Farber Cancer Institute.
- Fund scholarship programs and educational needs through Stop & Shop's A+ Rewards Program.
- Support the U.S. military members and their families by raising money for the USO of New England.
- Support non-profit organizations around New England, including Boys & Girls Club, United Way, and YMCA.

Stop & Shop has been operating in the Allston-Brighton community for over 20 years and the proposed redevelopment of the Project Site further deepens Stop & Shop's commitment to the community by providing a modern grocery store facility with expanded offerings, the latest energy efficient and sustainable green building design while also creating a dynamic and lively project as an extension of the established neighborhood.

As demonstrated in the list of key development team members below, Stop & Shop has partnered with a development team experienced in delivering mixed-use projects with a variety of housing types and exciting retail uses.

New England Development

For nearly 40 years, New England Development, based in Boston, has taken a creative, entrepreneurial approach to real estate development and management—delivering and sustaining successful projects across a wide range of property types. These projects transform complex challenges into preferred locations, generate long-term value to communities, afford compelling opportunities for local and national businesses, and offer sought-after experiences to a wide range of consumers. New England Development has more than 50 million square feet of retail and commercial space to its credit.

New England Development is acclaimed for creating some of the country's most widely recognized and successful regional centers, as well as multifaceted developments that combine retail, residential, hotel, and office uses.

For example, in Boston, New England Development planned and permitted Pier 4, Boston's most iconic waterfront address, to include over 1 million square feet of residential, office, retail and civic uses on approximately 9.5 acres, and will soon commence the redevelopment of the Taj Hotel on Newbury/Arlington Streets overlooking the Boston Public Garden.

New England Development prides itself on an all-inclusive approach to development, seeking input from community leaders and partnering with state and city entities, neighborhoods, residents, and tenants.

New England Development is acclaimed for creating some of the country's most widely recognized and successful regional centers, as well as multifaceted developments that combine retail, residential, hotel, and office uses, and often require significant master planning and permitting efforts.

Highlights of New England Development's master-planned projects in Massachusetts include:

- CambridgeSide, Cambridge, Massachusetts Developed by New England Development on the site of the original Lechmere store, this one million square foot project on 11 acres in East Cambridge includes the CambridgeSide Galleria Mall, a parking garage, two office buildings, and the Hotel Marlowe, a Kimpton property. A prime example of a large-scale mixed-use urban project completed in phases over several years, the shopping mall opened in 1990, the office buildings were completed in 1995 and 1998, and the hotel opened in 2003. New England Development is in the process of a $30 million renovation of the shopping center. CambridgeSide exemplifies New England Development's development acumen, spirit of partnership with city officials, and sensitivity to the existing architectural environment.
- University Station, Westwood, Massachusetts: University Station is a transit-oriented, mixed-use development in Westwood, Massachusetts adjacent to the Route 128 MBTA/Amtrak Station. Combining unique retail, restaurant, fitness, hotel, office, and residential uses, the 125-acre property is zoned for mixed use and allows 750,000 SF of retail and restaurant uses. The 2.1 million SF master plan transformed formerly vacant industrial property into a destination for commercial and residential uses in greater Boston, creating economic drivers for the Town of Westwood and the region.

The Bozzuto Group

The Bozzuto Group is an experience-focused real estate company that is continually celebrated for its developments, customer service, and workplace culture. [1] With an expertise in homebuilding, multifamily development, construction and management for itself and its clients, Bozzuto is devoted to crafting extraordinary experiences.

1 For more information visit www.bozzuto.com.

This commitment is applied to creating communities that mix belonging and inspiration with the promise of adventure and discovery.

Founded in 1988, Bozzuto has developed, acquired and built more than 42,000 homes and apartments. Currently, it manages more than 60,000 apartments and 2 million square feet of retail space along the East Coast between Miami and Boston, in the Northeast and Chicago.

Southside Investment Partners

Southside Investment Partners is a developer and owner of retail and mixed-use properties throughout the Mid-Atlantic and New England.[2] Based in Baltimore, Maryland (MD) with a second office in Bethesda, MD, the company pursues new investment opportunities – either through new development, or by investing in assets in need of redevelopment.

2.3.1 List of Development Team Members

The following provides a list of the members of the Development Team with contact information.

Proponent	The Stop & Shop Supermarket Company, LLC 1385 Hancock Street Quincy, MA 02467 (781) 380-8000 *Contacts:* Guy Stutz, Vice President Real Estate Linda Costanzo, Director Real Estate
Proponent/Master Developer	New England Development 75 Park Plaza Boston, MA 02116 617-965-8700 *Contacts:* Stephen Karp, Chairman John Twohig, Executive Vice President William O'Brien, Vice President Director of Construction
In Partnership with:	The Bozzuto Group 60 Mall Road Burlington, MA 01803 857-301-7018 *Contact:* Lauren Jezienicki, Vice President Southside Investment Partners 2800 Quarry Lake Drive, Suite 320 Baltimore, MD 21209 410-308-6373 *Contact:* Ben Hoskins, President

2 For more information visit www.southsidellc.com.

Master Planner	Elkus Manfredi Architects 25 Drydock Avenue Boston, MA 02210 617-426-1300 *Contact:* David Manfredi, FAIA, LEED AP, Founding Principal
Architect	Stantec Architecture 311 Summer Street Boston, MA 02210 617-234-3100 *Contacts:* James Gray, Senior Principal Eric Weyant, Principal
Legal Counsel	Goulston & Storrs 400 Atlantic Avenue Boston, MA 02110 617-482-1776 *Contact:* Christian Regnier Sherin & Lodgen 101 Federal Street Boston, MA 02110 617-646-2000 *Contact:* Ronald W. Ruth, Partner
Permitting Consultant, Transportation, Site Civil Engineering, Cultural Resources	VHB 99 High Street, 10th Floor Boston, MA 02110 617-728-7777 *Contacts:* Michael McNeice, Principal-In-Charge Elizabeth Grob, Director of Urban Permitting Lauren DeVoe, Senior Environmental Planner Rick Dupuis, Civil Engineer/Project Manager Pat Dunford, Transportation/Traffic Engineer Alisa Augenstein, Preservation Planner
Landscape Architect	Copley Wolff Design Group 160 Boylston Street, 3rd Floor Boston, MA 02116 617-654-9000 *Contacts:* John Copley, ASLA, Principal James A. Heroux, ASLA, Senior Landscape Architect
Geotechnical Services	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129 617-886-7389 *Contacts:* Mark Balfe, P.E., Senior Associate Jesse Siegel, P.E., Project Manager/Senior Technical Specialist

Sustainable Design Consultant	The Green Engineer, Inc. 54 Junction Square Dr. Concord, MA 01742 978-369-8978 *Contact:* Sarah Michelman, RA, LEED AP BD+C, Principal
Wind & Solar Glare Technical Expert	RWDI Consulting Engineers and Scientists 600 Southgate Drive Guelph, Ontario, Canada N1G4P6 519-823-1311 *Contact:* Bill Smeaton, Principal/Senior Project Manager
Mechanical, Electrical, and Plumbing Engineer	WSP USA 88 Black Falcon Avenue, Suite 210 Boston, MA 02210 617-210-1600 *Contacts:* Michael F. Brown, Senior Vice President Nancy Gould, PE, LEED AP, Associate David Venturoso, PE, CEM, Associate Commissioning
Structural Engineer	Odeh Engineers 1223 Mineral Spring Avenue North Providence, RI 02904 51 Sleeper Street Boston, MA 02210 401-724-1771 *Contact:* David J. Odeh, Principal

2.4 Legal Information

2.4.1 Legal Judgments or Actions Pending Concerning the Proposed Project

To the Proponent's knowledge, there are no legal judgments or actions pending concerning the Project.

2.4.2 History of Tax Arrears on Property Owned in Boston by the Applicant

There are no known tax arrears on property in Boston owned by the Proponent.

2.4.3 Evidence of Site Control

The Proponent's affiliate, WJG Realty Company, LLC, owns the Project Site pursuant to (i) a Deed filed with the Suffolk Registry District of the Land Court (the "Land Court") as Document No. 552632 and (ii) a Deed recorded with the Suffolk County Registry of Deeds (the "Registry") in Book 21464, Page 129 and filed with the Land

Court as Document No. 552707 and by virtue of conversion of WJG Realty Trust into WJG Realty Company LLC, a Certificate of which is recorded at the Registry in Book 41927, Page 269 and filed with the Land Court as Document No. 753764.

2.4.4 Site Control/Public Easements

The Project Site is benefited by easements for access across adjacent properties and is burdened by access easements and by water, sewer and drainage easements, as well as easements for maintaining the Everett Street bridge. Certain of the water, sewer and drainage easements will be relocated or released as part of construction of the Proposed Project.

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Urban Design

This chapter provides detailed descriptions of the design of the Proposed Project, including its substantial public realm improvements. Consistent with the City's and community's vision from the Guest Street Planning Study and Smart Growth principles, the Proposed Project provides the opportunity to transform an underutilized site currently consisting of big box retail with a vast surface parking lot into a vibrant urban mixed-use neighborhood. The Proposed Project builds on and complements the newly created Boston Landing development by constructing new residential, office, and retail uses with direct access to a new commuter rail station and other amenities, including a flagship grocery store, community green, and widened sidewalks with ground floor retail and restaurants that connect to the existing neighborhood.

3.1 Summary of Key Findings and Benefits

The key findings and benefits of the Proposed Project related to urban design include:

- Transform an underutilized urban site into a vibrant mixed-use neighborhood that will connect the Project Site to the Allston neighborhood;
- Complement the architectural characteristics of the surrounding neighborhood by providing articulated massing and striking architecture;
- Provide convenient walking paths to the adjacent Boston Landing MBTA commuter rail station, nearby MBTA bus stops, office buildings and other amenities, including shops and restaurants in the Allston-Brighton neighborhood;
- Create a walkable development in a TOD location with a Walk Score® of 91[1];
- Provide publicly-accessible walkways along all streets with complete pedestrian accessibility to and from the Project Site; and
- Create approximately three (3) acres of public realm space—site area dedicated to streets, sidewalks, hardscape plazas, and an approximately 0.5-acre community green at the corner of Guest and Arthur Street accessible for all residents and the greater Allston-Brighton community.

1 Walk Score® is a numerical evaluation of walkability and access to transportation for choosing where to live to promote walkable neighborhoods. Walk Score uses a number rating system between 0 and 100 to measure the walkability of any address. For further information visit: https://www.walkscore.com/how-it-works/

3.2 Neighborhood Context

As shown on Figure 3.1a, the Project Site is located in between the Brighton and Allston neighborhoods of Boston. The existing Project Site and immediate building adjacencies are varied in height, scale, use and materiality, as the area is transitioning from lower-scale uses to a denser, mixed-use area. The Project Site is favorably positioned adjacent to the new mixed-use Boston Landing development directly to the west, and railroad tracks with a new MBTA commuter rail station to the north. Just beyond the railroad tracks lies the Turnpike with eight lanes of travel. Some industrial low- to mid-rise uses and an established small-scale residential area lie to the east of the Project Site. The area's architectural language is diverse with a mixture of brick and masonry structures, glass and metal panel buildings, and wood shingle and clapboard residences. The Project Site is in close proximity to the arts, restaurants, and shopping destinations of the neighborhood to the south in Union Square, along Cambridge Street, and North Beacon Street.

3.3 Planning Principles and Design Goals

The Proposed Project's key goals are to:

- Create a mixed-use neighborhood;
- Provide a range of housing types (i.e., varying sizes and price points), including homeownership units;
- Connect the Project Site to the Allston neighborhood, and MBTA Station with multi-modal transportation routes;
- Transform a single large big-box site into smaller-scale development blocks in scale of the adjacent recent Boston Landing development;
- Concentrate density along Guest Street Extension;
- Create a new publicly-accessible community green that connects to local roadways and adjacent properties, such as Boston Landing; and
- Provide differentiated architecture, active open spaces, plazas, and sidewalks.

Consistent with Smart Growth principles, a key goal of the Project is to introduce a variety of uses to the Project Site, including a range of housing opportunities, offer multi-modal transportation choices, and create a neighborhood with a strong sense of place. The Project is modeled on the framework developed in the Guest Street Planning Study coupled with the scale and vibrancy of the adjacent Boston Landing development and surrounding context.

3.3.1 Site Planning Strategy

Consistent with the goal of providing development blocks in keeping with the scale of the adjacent recent development, the Project Site has been divided into distinct development blocks, as illustrated in Figure 1.5. As discussed in Section 1.3.5, upon completion of Building 1, the remaining buildings are planned to be developed depending on market conditions or other factors.

The development team has worked extensively to incorporate the Guest Street Planning Study's recommendation for a connected street grid by including a series of key connections through the Project Site. Previous studies on behalf of the Boston Landing Master Plan have looked at a new connection of an extended Guest Street to a road aligning south of Harvey Steel Road and requiring demolition of building(s) and removal of surface parking to connect to and access Everett Street. The Proposed Project aims to simplify this connection between existing Guest and Everett Streets, and make an efficient link to improve circulation and access for adjacent neighborhoods.

The proposed site plan layout, as shown in Figure 3.1b, is organized around four distinct connections:

- The new multi-modal Guest Street and Braintree Street Extensions are the primary east-west links across the Project Site from Everett Street to Arthur Street;
- The connection along Guest Street Extension will ultimately tie back to Market Street across Boston Landing; and
- The Braintree Street Extension fronting the train tracks and Turnpike will be predominately a service-oriented street while providing for pedestrian and bicycle access, and, in coordination with the MBTA, a proposed pedestrian connection to the Boston Landing commuter rail station.

Two new north-south links, temporarily identified as East and West Streets, will connect the Guest Street and Braintree Street Extensions (Figure 1.5). The location of East Street will create a development parcel for and access to the new grocery store without disruption to the existing supermarket and its customers. West Street will lead pedestrians through the Project Site to the Boston Landing MBTA commuter rail station. The southerly termination of West Street at Guest Street Extension connects across to the new community green as a welcoming gateway into the Project Site and Guest Street corridor. The proposed access and circulation network aims to expand street connections through the Project Site while creating a mixed-use destination anchored by the community green. Location of the connection to the community green may be refined in the future as building design advances.

3.4 Building Design Concept and Development

Given the new construction in the immediate neighborhood, the development team aimed to design and set a tone for a new mixed-use neighborhood. Figures 3.2a through 3.2g present the currently proposed building floor plans, and Figure 3.3 provides a massing diagram for the Project. Building elevations are shown in Figures 3.4a through 3.4c, and currently proposed building sections are shown in Figure 3.5.

From a conceptual standpoint, the architecture is influenced by the Project Site's industrial past. Across the Project Site, the buildings transition from a more literal representation of "industrial architecture" (Building 1) to a more abstracted notion (future Buildings 2, 3, and 4). The goal is to create a familiar language of forms and

patterns and reinforce a neighborhood feel, while allowing each building to have its own presence. The design of the future proposed buildings has not advanced as far as Building 1, but is anticipated to intentionally differ from the adjacent development in the use of materials and massing. Each of the proposed buildings can be developed together with or independently of the others and the mix of uses presented in Table 1-1 allows the Proposed Project to remain responsive to evolving market conditions.

3.4.1 Height and Massing

The building heights and massing follow the guidelines outlined in the Guest Street Planning Study and are consistent with the existing and planned Boston Landing buildings so that the two developments relate while each are afforded dynamic downtown views. The Proposed Project concentrates massing along the north side of Guest Street Extension allowing the community green to receive maximum sun. All the proposed buildings' massing has been set back from the pedestrian edges along Guest Street Extension, Everett Street, and Braintree Street Extension. The massing of Buildings 1 through 3 step back from Braintree Street Extension to allow for views from the neighboring properties towards Boston, and to set back from the Boston Landing MBTA commuter train station and Turnpike. The ground-oriented residential units alongside West Street, East Street, and Everett Street place street-side human-scaled elements, including terraces and garden space, at eye-level to activate the sidewalks. Arthur Street has the least amount of building massing along it, as most its frontage is lined with the community green and proposed single-story restaurant.

3.4.2 Character and Exterior Materials

Influenced by the Project Site's industrial past, Building 1 is designed as an interlocked expression of two distinct programs. The podium, anchored by the new grocery store on the first and second floors, is articulated primarily with masonry, and perforated metal and glass. Its form, reminiscent of a warehouse or factory building, is simple and undecorated. The upper levels of Building 1 consist of residential units and will be defined by ribbed metal panel and precast in tones of grey and tan, and accented by dark window frames and hung balconies. Both forms engage at street level to create a clarity of entry and program.

The character and exterior materials of the remaining proposed buildings has not yet been determined and will be advanced at a later time.

3.4.3 Signage

Major corners of pedestrian transition areas will receive illuminated wayfinding signage with site context and directional content. Wayfinding pylons are proposed at the intersections of Guest Street Extension and Arthur Street, West Street, and East Street. Retail and restaurant tenant, office tenant, and residential building signage will be visible along all interior streets and the Turnpike.

3.5 Public Realm Improvements

3.5.1 Pedestrian Access and Circulation

The Project Site is effectively flat along the south, west and northern property line along which there is complete pedestrian accessibility off-site and to the proposed program within the Project Site limits. The proposed public accessible walkways along all streets will have pedestrian accessibility to and from the Project Site. Figure 3.6 provides details regarding pedestrian access and circulation.

Accessibility

The Proposed Project will improve accessibility around the Project Site. All site conditions will provide a smooth paved accessible path-of-travel to building entrances and egresses as required by the Massachusetts Architectural Access Board (MAAB) and City of Boston's Commission of Person with Disabilities Advisory Boards. All proposed buildings will have an outdoor amenity component that will be accessible via elevators for building users. A portion of the upper level outdoor space proposed to be constructed as part of Building 1 will be accessible to the public. The Proposed Project includes a total of approximately 1,050 residential units; approximately 53 of the total units proposed will be accessible Group 2A units, and approximately 21 will be hearing impaired units, per MAAB. Refer to the BPDA Accessibility Checklist in Appendix B for more details.

3.6 Landscaping and Open Space

Different types of public realm space will be provided on-site in the form of both green/pervious and hardscape spaces totaling approximately three (3) acres, including site area dedicated to streets, sidewalks, hardscape plazas, and the new 0.5-acre community green accessible for all residents and the greater Allston-Brighton neighborhood.

3.6.1 Pedestrian Realm/Streetscape Improvements

Figure 3.7 presents the overall open space and streetscape improvement plan for the Proposed Project. The public realm improvements will include accessible concrete pavement with a permeable paver edge located at the back of the curb, per the City's requirements. Permeable pavers along Guest Street Extension will be similar to the materials and patterns established at the Boston Landing portion of Guest Street. Street lights along Guest Street Extension will continue the established patterns; Arthur Street and Braintree Street Extension will maintain Boston standards for light levels and ground cut-off.

The proposed walk widths allow for flexible retail and restaurant seating. Some street corners are anticipated to include wayfinding focal-points that are illuminated and include interpretive information for residents and visitors.

Figure 3.8 presents the conceptual landscape plan for the Proposed Project. The streetscape improvements will consist of indigenous urban-tested street trees selected from the Boston Parks & Recreation Department-approved list and set in a sand-based structural soil with tree grates and/or raised curbs to minimize compaction of soils within the tree pits and a raised edging at the tree pits to minimize direct infiltration of winter snow melt products into the plant bed. Street corners will receive raised stone edge planters where appropriate to provide green transitions from the streetscape and provide run-off mitigation.

3.6.2 Urban Open Space

The pedestrian public realm space along Guest Street Extension is expected to include such elements as unit pavers and concrete pavement, raised seat walls, specialty lighting, informational signage, raised planters for perennial and annual display, and tree planting to provide shade and scale to the proposed outdoor retail/restaurant areas while providing a transitional edge along the public accessible walkways. These open spaces parallel pedestrian and bicycling corridors through the Project Site and will provide continuity between the existing Guest Street streetscape at Boston Landing and Guest Street Extension. Street bicycle racks are provided throughout the Project Site concentrated most along retail and restaurant areas while allowing for the placement of public bike-sharing opportunities closest to the Boston Landing MBTA commuter train station.

As part of the new grocery store, the Proponent plans to expand its healthy eating and living programs to include a publicly-accessible rooftop terrace.

3.6.3 Community Green

The approximately 0.5-acre community green proposed at the corner of Arthur Street and Guest Street Extension, as shown on Figure 3.8, has been designed to be able to host night and day community and neighborhood activities. Conceptual landscape design features being considered include such elements as a pergola shade structure, specialty pavements, permanent seat walls, raised plant beds, as well as a combination of soft (lawn) and hard (paving) surfacing. The anticipated 14-foot high steel and wood pergola design will combine permanent seating and planting to provide shade and create a visually transparent edge between the green space and daily activity along Guest Street Extension and will be illuminated with special lighting to celebrate events and special times of the year.

Lighting is expected to consist of a combination of feature lighting associated with specialty improvements, such as the pergola and low lighting along pathways. Lighting at retail and restaurant edges is expected to have a combination of specialty overhead lighting and building lighting. Street edges will follow established Boston and the existing Guest Street standards. Anticipated plantings for the community green include a combination of indigenous and urban tested large shade trees, evergreen edges, and ornamental seasonal feature trees, shrubs, ground covers and perennials.

3.6.4 Green Buffers and Townhouse Green Space

Green buffers along the Project Site boundary, as identified on Figure 3.8, are expected to include selective appropriate trees and shrubs that will provide screening and a green edge. The green buffer proposed along the MBTA commuter rail tracks is expected to consist of upright deciduous trees spaced between 25 to 30 feet to mediate the open area between the train tracks and Braintree Street Extension while providing a sense of scale to the street edge. The green buffer proposed along the southern edge of Building 4 and the southern Project Site edge is expected to provide a green border to mediate the change in scale between the existing and proposed buildings.

The townhouse green spaces along West Street and East Street will be private, as they are associated with the individual residential program adjacent to them, but publicly viewed to reflect entrance gardens found in Boston neighborhoods (Figure 3.8).

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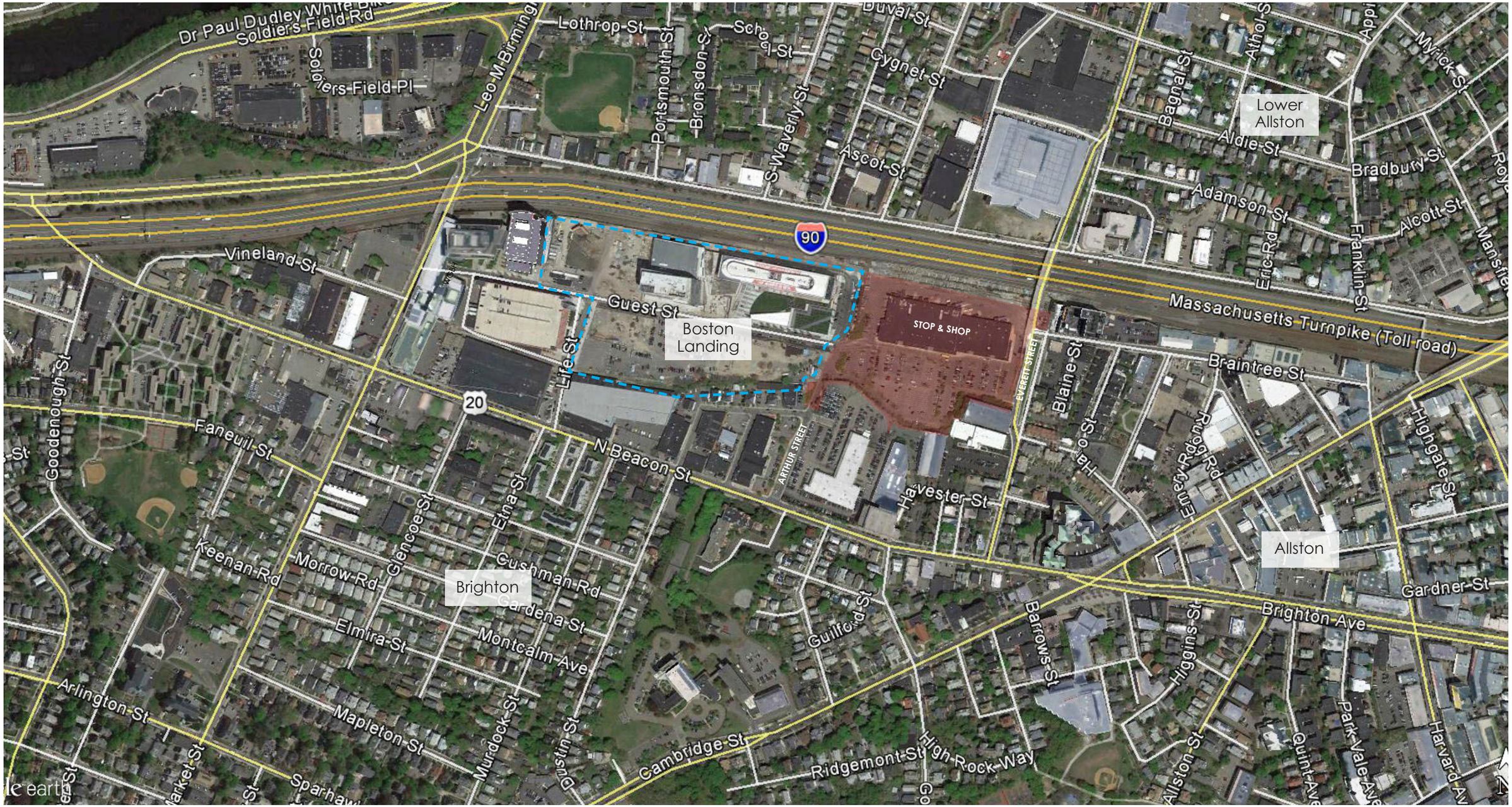


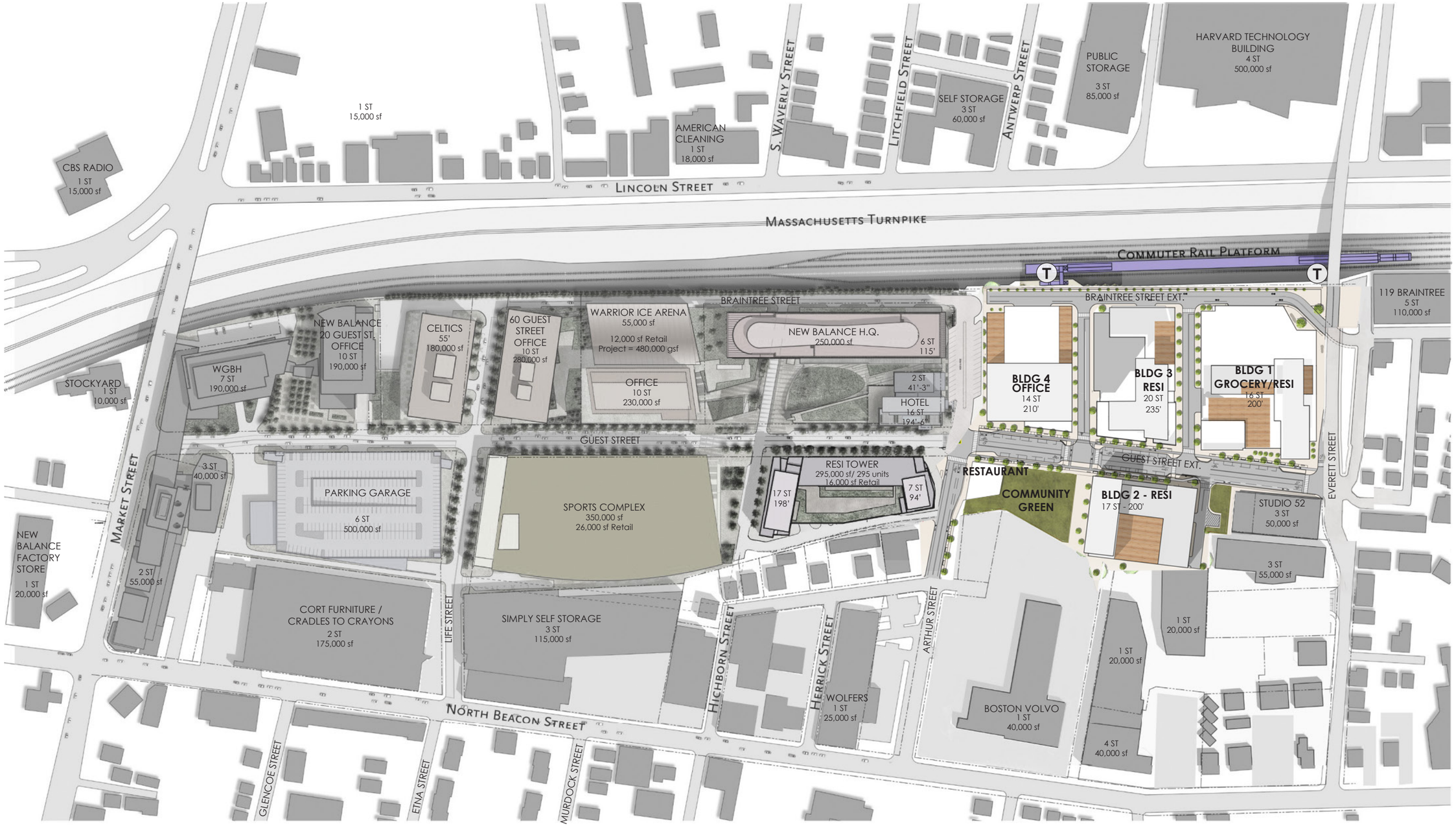
ALLSTON YARDS SITE

BOSTON LANDING SITE

Prepared by: Stantec

Figure 3.1a

Neighborhood Context Plan - Existing



*BUILDING AREAS ARE APPROXIMATE

Prepared by: Stantec

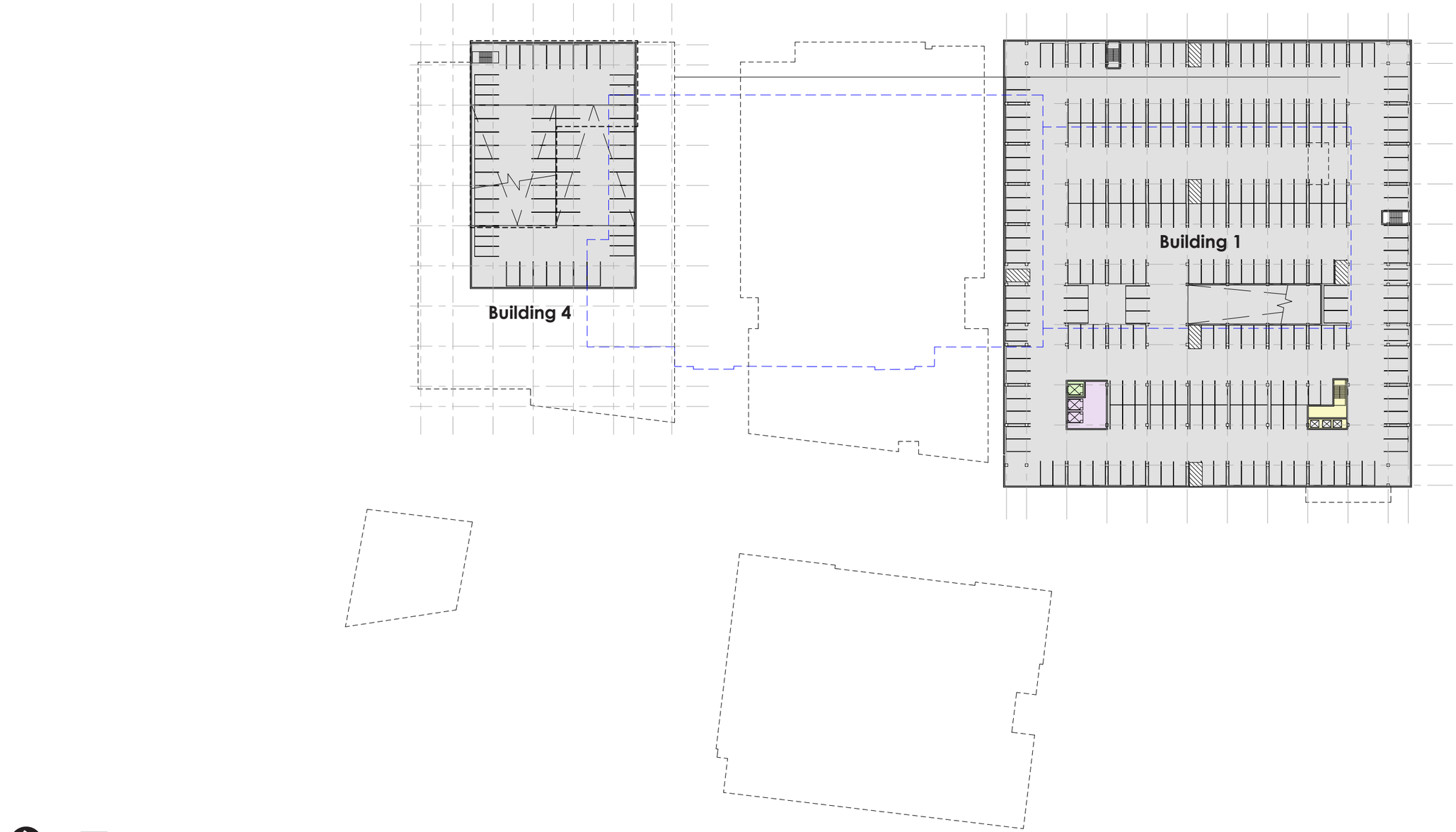
Figure 3.1b

Neighborhood Context Plan - Proposed

Prepared by: Stantec

Figure 3.2a

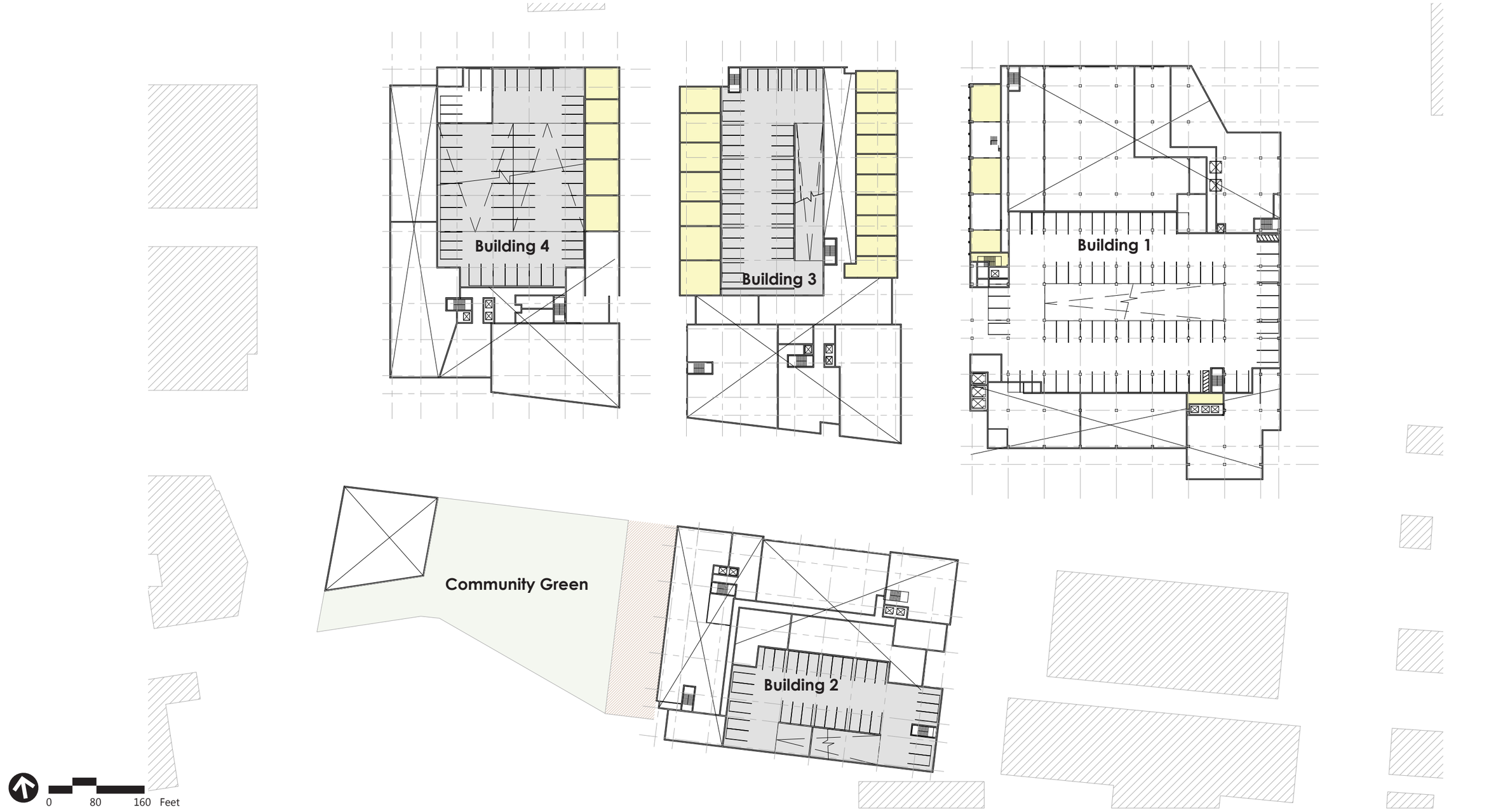
Ground Level Floor Plan



Prepared by: Stantec

Figure 3.2b

Below-Grade Parking Level 1 Floor Plan

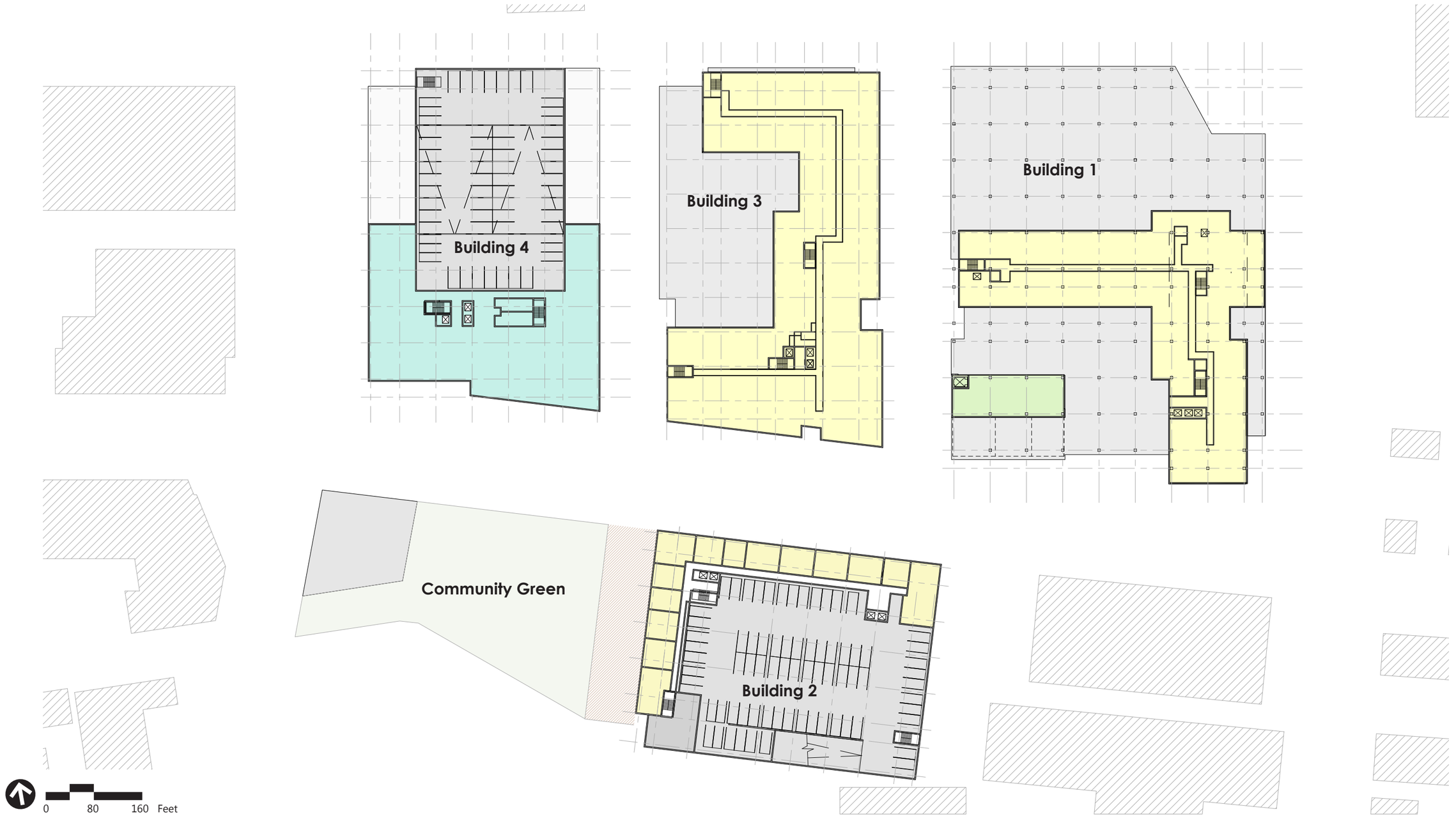


Prepared by: Stantec

Figure 3.2c
Structured Parking Mezzanine Level
Floor Plan

Prepared by: Stantec

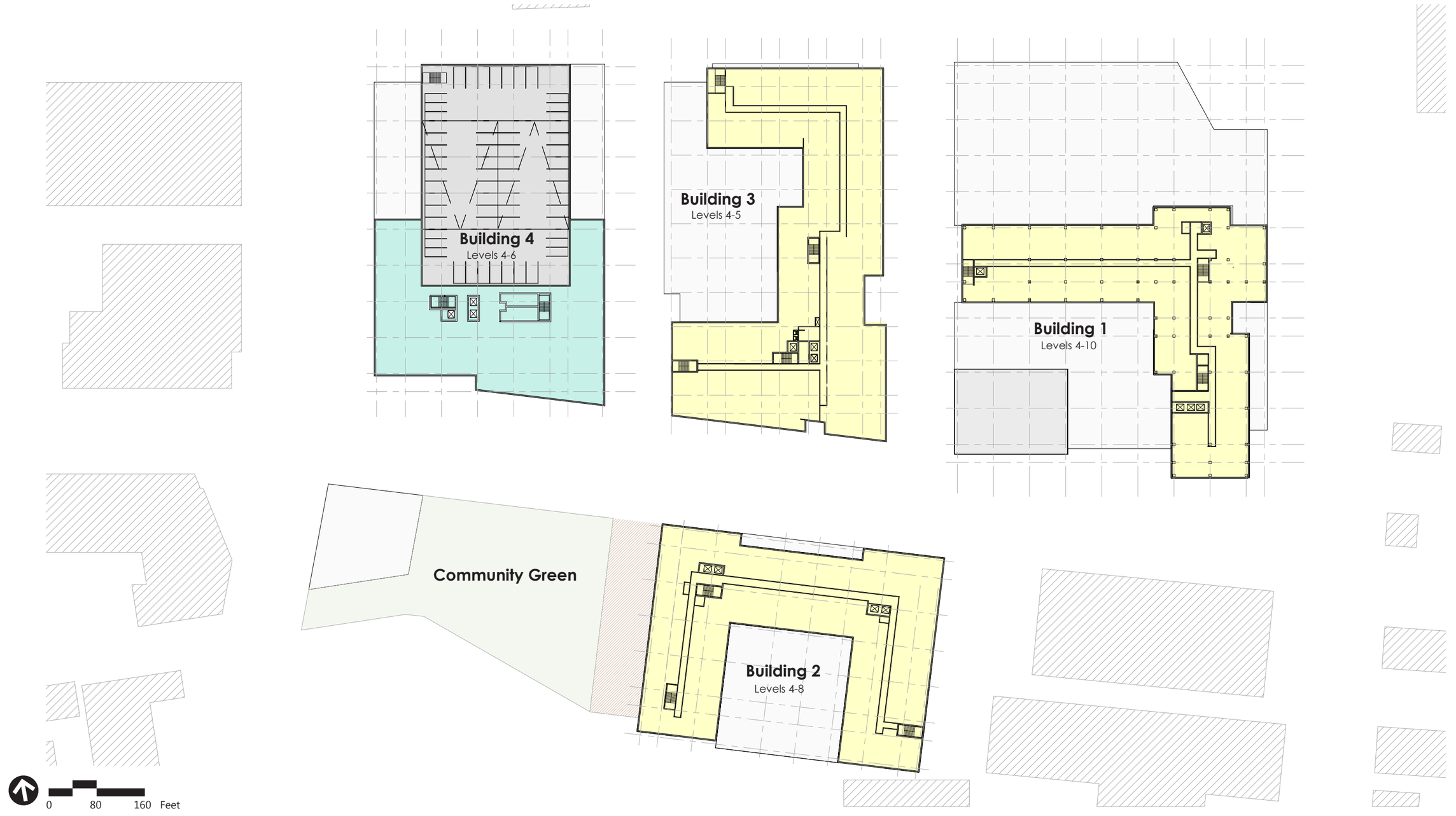
Figure 3.2d
Level 2 Floor Plan



Prepared by: Stantec

Figure 3.2e

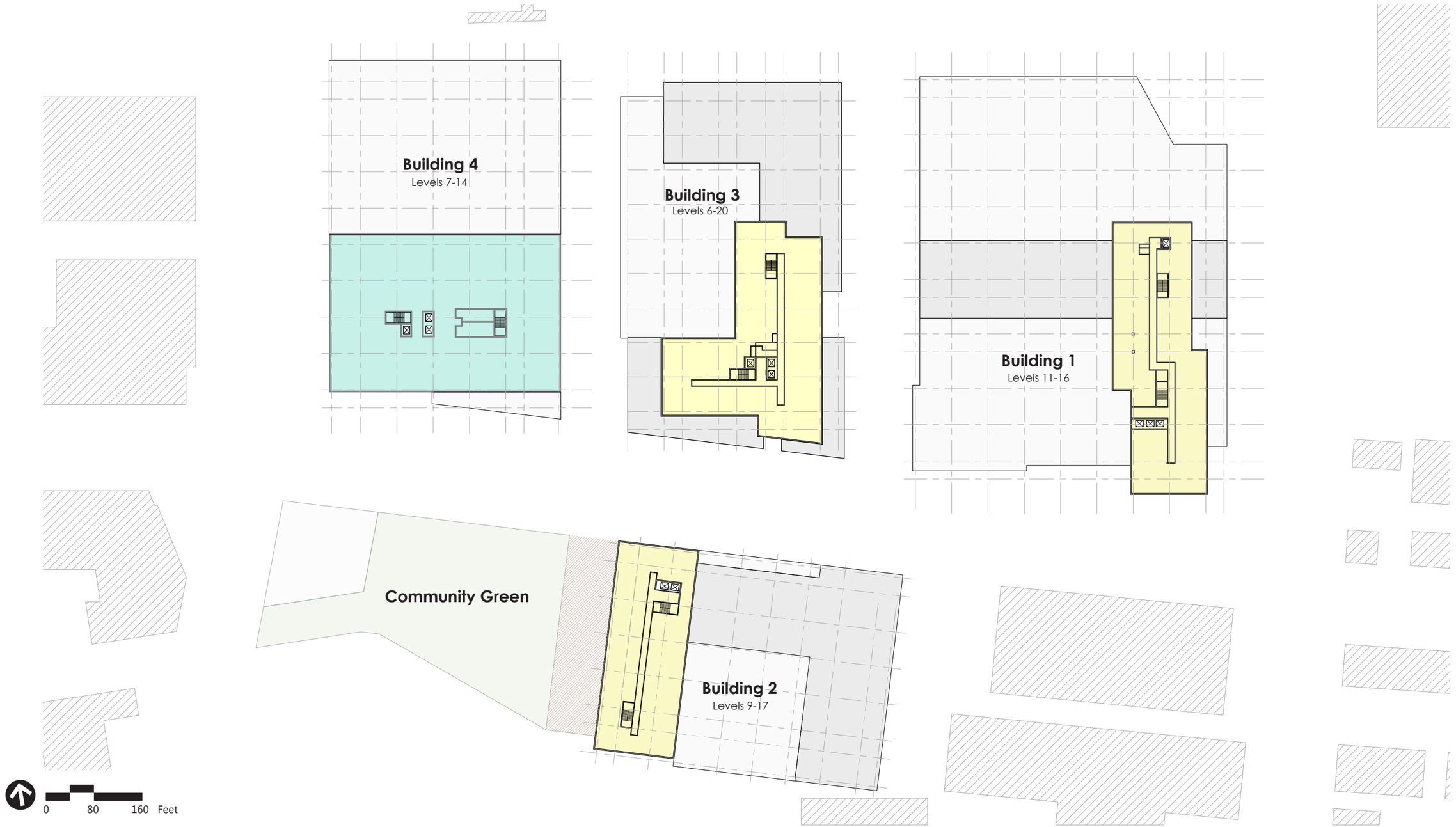
Level 3 Floor Plan



Prepared by: Stantec

Figure 3.2f

Typical Lower Level Floor Plan



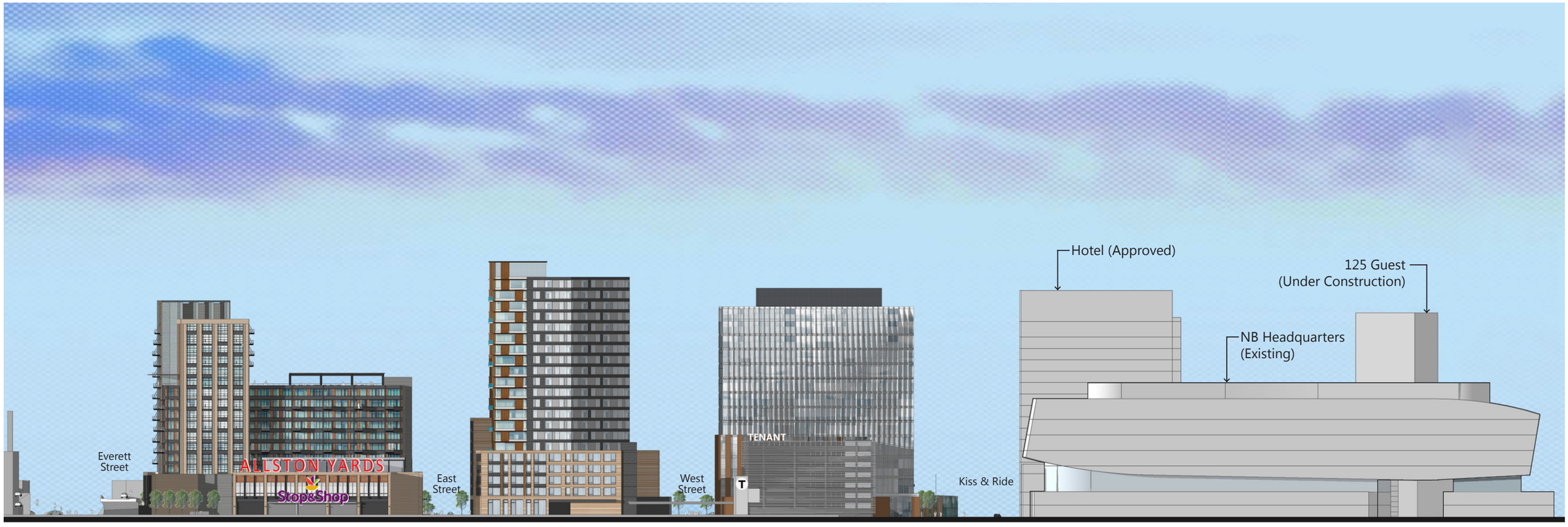
Prepared by: Stantec

Figure 3.2g

Typical Upper Level Floor Plan

Prepared by: Stantec

Figure 3.3
Project Massing Diagram



Building 1 - Grocery/Residential

Building 3 - Residential

Building 4 - Office

Boston Landing Project

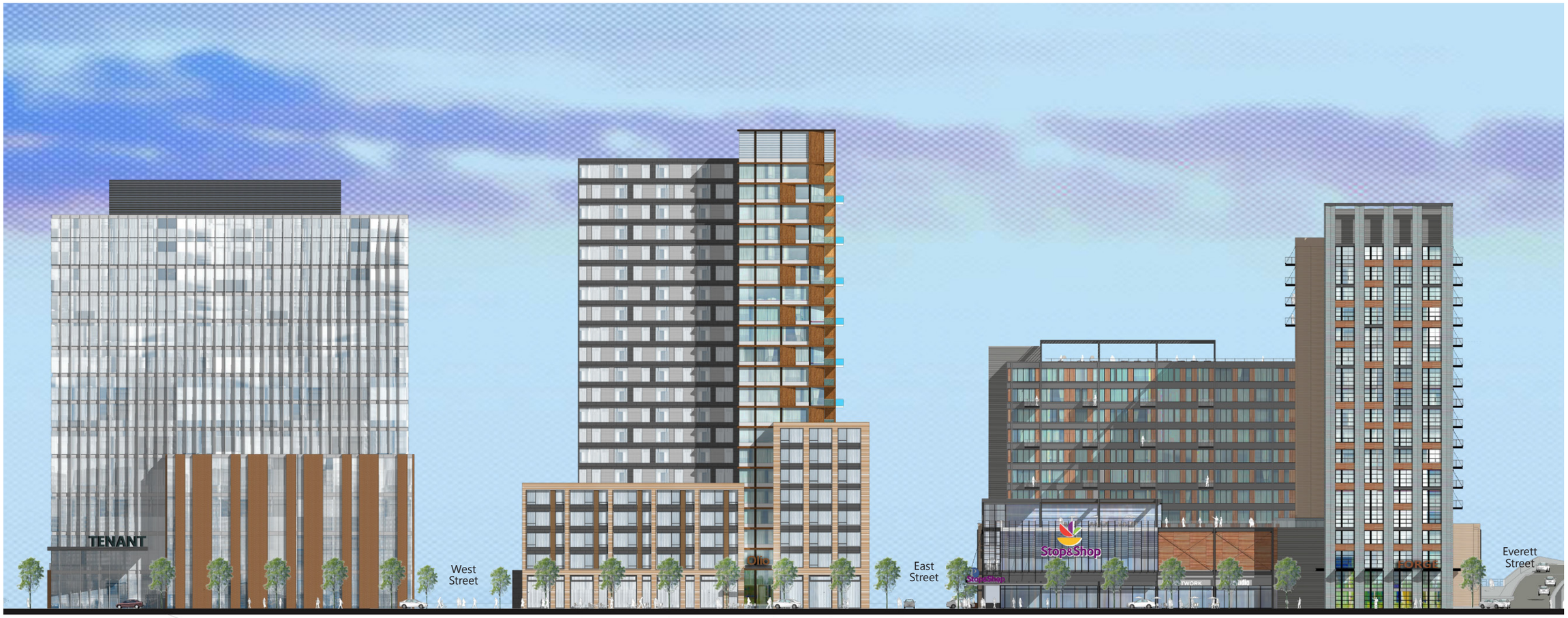
Elevation A - Massachusetts Turnpike Elevation

*NOTE: BUILDING EXTERIORS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY AND SUBJECT TO CHANGE

Prepared by: Stantec

Figure 3.4a

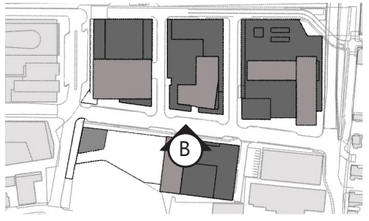
Building Elevations*



Building 4 - Office

Building 3 - Residential

Building 1 - Grocery/Residential



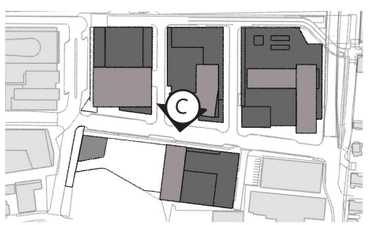
Elevation B - Guest Street Elevation - North

*NOTE: BUILDING EXTERIORS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY AND SUBJECT TO CHANGE

Prepared by: Stantec

Figure 3.4b

Building Elevations*



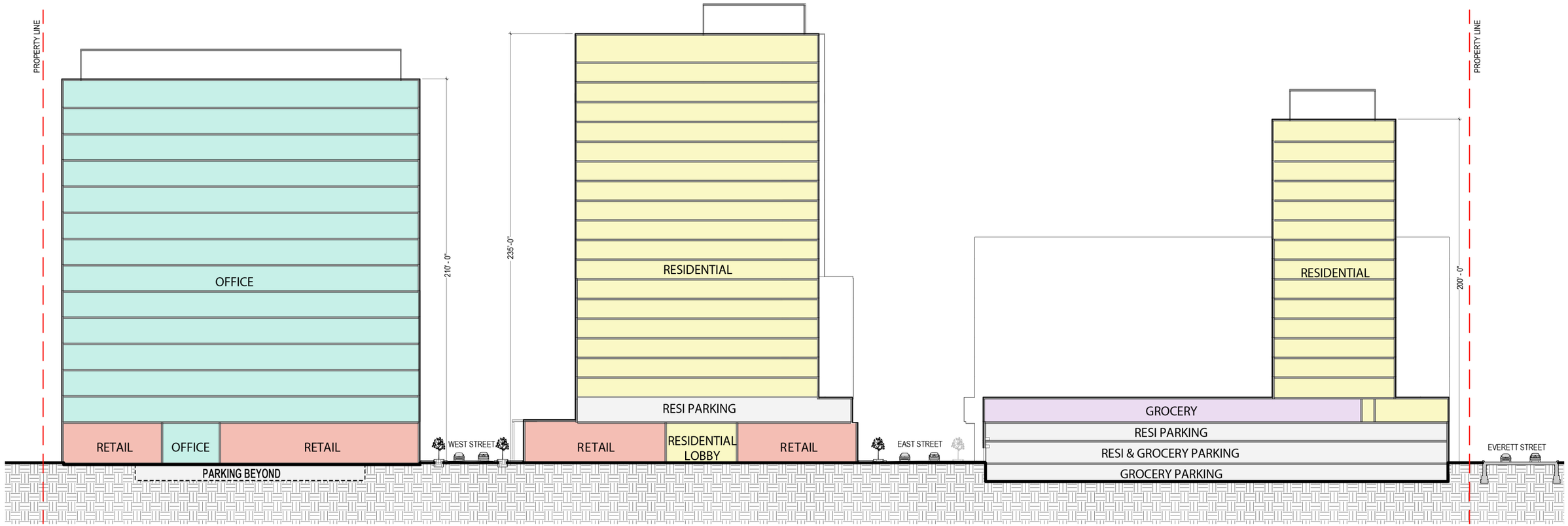
Elevation C - Guest Street Elevation - South

*NOTE: BUILDING EXTERIORS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY AND SUBJECT TO CHANGE

Prepared by: Stantec

Figure 3.4c

Building Elevations*



Building 4 - Office

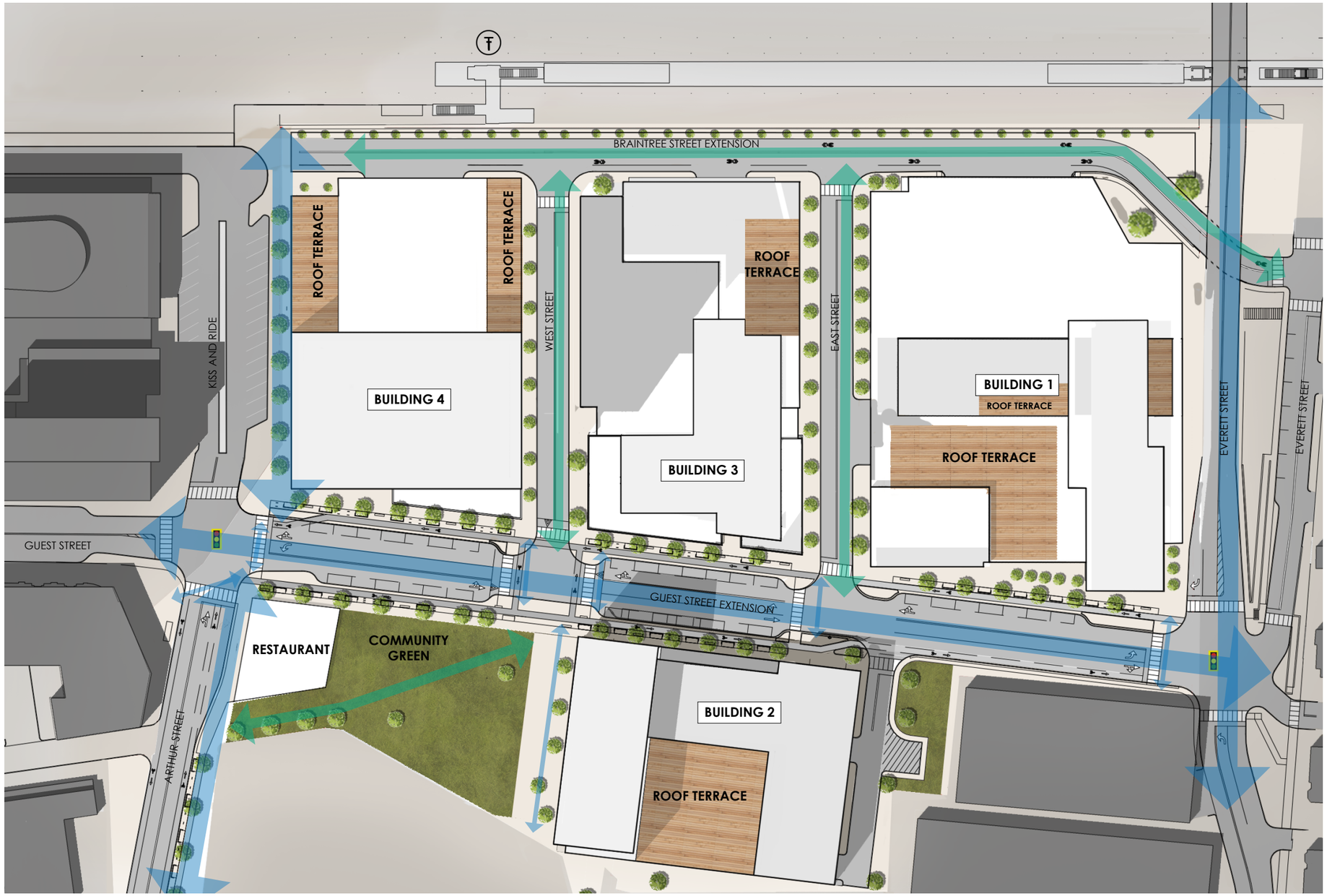
Building 3 - Residential

Building 1 - Grocery/Residential

NOTE: Subject to change and refinement

Prepared by: Stantec

Figure 3.5
Building Section



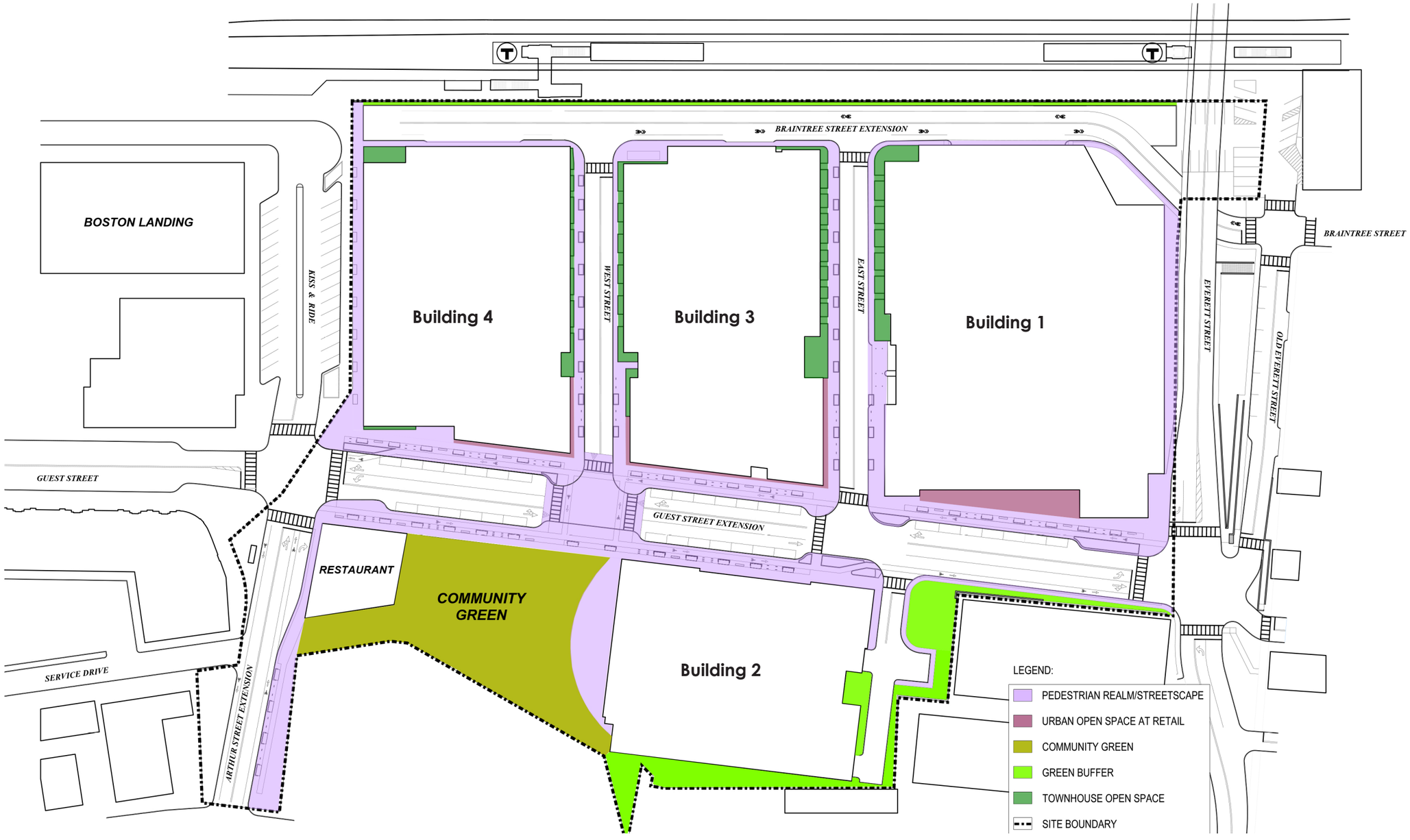
MAIN PEDESTRIAN PATHS

SECONDARY PEDESTRIAN PATHS

Prepared by: STANTEC

Figure 3.6

Pedestrian Access and Circulation



Prepared by: COPLEY WOLFF

Figure 3.7
Open Space and Streetscape Improvement Plan

Allston Yards
Allston, Massachusetts

Prepared by: COPLEY WOLFF

Figure 3.8

Conceptual Landscape Plan
Illustrative purposes only, subject to change

Allston Yards
Allston, Massachusetts

4

Sustainability/Green Building and Climate Change Resiliency

The following chapter describes the overall approach to sustainable design, construction, and operation for the Proposed Project. Included is a preliminary assessment of green building design, in compliance with the requirements of Article 37 of the Boston Zoning Code relative to the City's Green Building policies and procedures (Article 37). This chapter also discusses the approach to preparing for predicted climate change, in accordance with the BPDA Climate Change Preparedness and Resiliency Policy (the "Resiliency Policy"). The required Climate Change Preparedness and Resiliency Checklist (the "Resiliency Checklist") has been completed for the Proposed Project and is provided in Appendix B.

4.1 Summary of Key Findings and Benefits

The key findings related to sustainability and climate change include:

- Reuse of a previously developed site in a dense urban setting as opposed to building on undeveloped open space.
- Provide increased density with a mix of uses, including commercial office, residential, and retail in close proximity to public transit and walkable to the established Brighton-Allston neighborhood consistent with Smart Growth principles.
- Provide an efficient redevelopment plan that includes structured parking and increases open space, including a new 0.5-acre publicly-accessible community green.
- Target a high level of sustainability by designing the Project Site and each building using the LEEDv4 rating system to demonstrate compliance with Article 37, Green Buildings, of the Code.
- Reduce overall annual energy consumption through the implementation of energy optimizing building design and systems, which would result in a reduction in stationary source CO_2 emissions when compared to a building design that meets the minimum building code requirements.
- Comply with the Massachusetts Stretch Energy Code requirement to be 10 percent better than ASHARE 90.1-2013.
- Incorporate adaptation and resiliency measures to address future impacts associated with climate change.
- Utilize potential energy conservation incentives offered by utility companies.
- Consider incorporation of alternative energy options.

4.2 Regulatory Context

4.2.1 Stretch Energy Code

As part of the Green Communities Act of 2008, Massachusetts developed the optional Stretch Energy Code that gives municipalities the option to enact a more strenuous energy performance code for buildings than the conventional state building code. The Stretch Energy Code increases the energy efficiency code requirements for new construction (both residential and commercial) and for major residential renovations or additions in municipalities that adopt it.

Effective January 1, 2017 the current Stretch Energy Code, as adopted by the City, requires projects to achieve, at minimum, a 10 percent energy efficiency improvement when compared to the state's base energy code (the "Base Energy Code"). Projects may demonstrate the energy use savings by either meeting the performance standard of 10 percent better than ASHRAE 90.1-2013, or using a prescriptive methodology based on IECC 2015.

4.2.2 Article 37 – Green Buildings

Article 37 submittal requirements include completing a LEED scorecard to demonstrate that a project meets the minimum requirements to achieve a LEED Certified level (all LEED prerequisites and achieve at least 40 points) ("LEED certifiable"). With the LEED version 4, or "v4," rating system effective as of October 31, 2016, the BPDA requires initial Article 80 Large Project Review submissions on or after November 1, 2016 to demonstrate LEED certifiable status using LEEDv4. This latest iteration of the LEED rating system standards is measurably higher and more stringent in many categories.

The Boston Interagency Green Building Committee ("IGBC") advises the BPDA on a proposed project's compliance with the provisions of the article. The Committee consists of representatives of city agencies including the BPDA, BED, BTD, the Inspectional Services Department and the Mayor's Office.

Boston Green Building Credits

Appendix A of Article 37 lists Boston Green Building Credits, which are credits that may be included in the calculation toward achieving a LEED certifiable project. These credits were developed by the City and are intended to address local issues unique to development within Boston. The credits include the following categories: Modern Grid, Historic Preservation, Groundwater Recharge, and Modern Mobility.

4.2.3 BPDA Climate Change Preparedness and Resiliency Policy

In conformance with the Mayor's 2011 Climate Action Leadership Committee's recommendations, the BPDA requires projects subject to Boston Zoning Article 80 Large Project Review to complete the Resiliency Checklist to assess potential adverse impacts that might arise under future climate conditions, and any project resiliency,

preparedness, and/or mitigation measures identified early in the design stage. The Resiliency Checklist is reviewed by the IGBC.

4.3 Sustainability/Green Building Design

4.3.1 Proposed Project Approach to Sustainability/Green Building Design

The Proposed Project supports Smart Growth objectives. It is located on a previously developed site in the Brighton-Allston neighborhood of the City of Boston and in close proximity to the new, recently opened Boston Landing MBTA commuter rail station and multiple bus routes, as well as vehicular access to the Turnpike which connects to major highway routes. Furthermore, the Proponent seeks to include environmentally conscious features and strategies that will benefit tenants, residents, and owners. The development team is exploring opportunities in energy conservation and sustainable design throughout the Proposed Project, and will determine appropriate energy conservation and sustainable design approaches suited for integration into the development and buildings. Building design will include high-efficiency building systems, (mechanical, plumbing and electrical) and a high-performance building envelope. Sustainable design measures such as LED lighting, low flow plumbing fixtures, building energy management systems and healthy interior environments are a few of the features the development team anticipates including in the design of each of the buildings.

4.3.2 Stop & Shop Corporate Commitment to Sustainability

Stop & Shop is very focused on sustainability through its store planning, design, and operations, as well as through customer wellness educational outreach efforts. The company's webpage provides information on its stores' sustainable features and food services, including green energy and energy conservation, responsible product promises, sustainable seafood, and waste reduction.[1] In 2016, Stop & Shop put into operation an anaerobic digester at its Distribution Center in Freetown, Massachusetts. As part of these sustainability efforts, Stop & Shop has set a target of diverting 90 percent of unsold food from landfills. Food from stores that goes unsold, or is unable to be donated to regional food banks or local farms, is transported to a state-of-the-art anaerobic digester converts organic material into clean, sustainable power.

4.3.3 Compliance with Article 37

Article 37 of the Code requires new building projects to be designed to meet the compliance level of LEED certifiable using the LEEDv4 rating system as a guide. The proposed buildings will strive to meet or exceed this requirement. Specifically, the new grocery store component of Building 1 will meet or exceed the compliance level

1 Refer to the Stop & Shop website for descriptions of their existing corporate healthy living and wellness programs: http://stopandshop.com/live-well/community/environment/

of LEED certifiable using the LEEDv4 for Commercial Interiors (CI) rating system. Figures 4.1, 4.2, and 4.3 present the preliminary LEEDv4 rating system checklists for each of the project types included in the Proposed Project. Due to the varying use/building types, the following USGBC LEEDv4 rating systems are being used as guidance and to demonstrate compliance with Article 37, or LEED certifiable:

- LEED for New Construction (BD+C) for Buildings 1, 2, and 3 (Figure 4.1);
- LEED for Core & Shell for Building 4 (Office) (Figure 4.2); and
- LEED for Commercial Interior (CI) for the new grocery store (Figure 4.3).

The checklists indicate the targeted LEEDv4 credits and the associated points. The narrative below summarizes the sustainable design compliance approach for each of the project types planned for the Proposed Project, in compliance with Article 37.

The LEED certifiable compliance approach for the Proposed Project includes an overall LEED Master Site that identifies and addresses applicable site-wide credits across the proposed buildings. Each building, including the grocery store, would then automatically achieve the site-wide credits, as applicable to the building-specific rating system. The LEED Master site and each of the buildings have been registered with the USGBC/GBCI should the Proponent, or future tenants, elect to pursue certification in the future.

LEED Master Site Credit Approach

The Proposed Project includes multiple new buildings with shared infrastructure, pedestrian-oriented circulation and extensive open space. Due to the arrangement of multiple buildings on a shared site, a Master Site LEED documentation approach is proposed.

The USGBC provides sites with multiple buildings the opportunity to pursue several the prerequisites and credits under the Location and Transportation and Sustainable Sites credit category for the entire Project Site using a Master Site documentation approach. This approach streamlines the documentation process where applicable LEED prerequisites and credits are documented only one time under the Master Site project. Each building or fit-out project associated within the Master Site can demonstrate and document it meets the compliance level of LEED certifiable using the most appropriate LEEDv4 rating system, such as Core and Shell, New Construction, or Commercial Interiors. The Proponent has pro-actively registered a LEED Master Site for the Proposed Project should one or more of the individual buildings or fit-out projects elect to pursue LEED Certification.

The LEED Prerequisites and Credits available to be documented through the Master Site process are listed below:

- Sustainable Sites (SS) Credit 1 – Site Selection
- LT High Priority Site
- LT Bicycle Facilities
- LT Reduced Parking Footprint

- LT Green Vehicles
- SS Environmental Site Assessment
- SS Site Assessment
- SS Open Space
- SS Rainwater Management
- SS Heat Island Reduction
- WE Outdoor Water Use Reduction
- EA Fundamental Refrigerant Management
- MR Construction and Demolition Waste Management Planning
- IEQ Environmental Tobacco Smoke Control
- Innovation in Design (ID) Credit(s) (where applicable to the Master Site)

Integrative Process (IP)

The development team meets regularly to ensure the team members from the various disciplines involved are all known to each other and collectively communicating. Sustainable design focused workshops were held early on to assist the development team in establishing shared sustainable design and energy efficiency goals for the development. As the Proposed Project progresses, there will be multiple sustainable design-focused workshops to ensure the entire development team is engaged throughout the design and construction process.

The development team met with Eversource and National Grid to discuss the incentive programs and potential Energy Conservation Measures for the Proposed Project.

Location and Transportation (LT)

The Project Site sits on the border between the Allston and Brighton neighborhoods of Boston. It abuts the new, recently opened Boston Landing MBTA commuter rail station. Local MBTA bus routes 64 and 86 pass through the neighborhood; there are stops located within ¼-mile of the Project Site. Additionally, the MBTA Green line 'B' route is approximately ¾-mile walking distance from the Project Site.

The Proponent will consider providing preferred parking for low-emitting fuel-efficient vehicles and/or electric vehicle charging stations to further reduce GHG emissions associated with vehicles. There will also be some parking at-grade, as well as on-street parking provided at designated locations throughout the Project Site.

The Proposed Project includes wide sidewalks and bike lanes to support pedestrian and cyclist safety. Exterior short-term bike storage for visitors and retail patrons will be provided at multiple exterior locations within the Proposed Project. Residents and employees will have access to enclosed secure bike storage areas within the parking structures. The new bike paths within the footprint of the Proposed Project will link with the established bike paths or marked bike lanes on the adjacent roadways in the neighborhood. Changing room and shower facilities are planned for

inclusion in the core and shell office building to accommodate the employees of the office and retail tenants.

The immediate neighborhood provides a variety of services with pedestrian and cyclist access including restaurants, grocery stores, banks, and a post office. The Project Site currently has a Walk Score of 91.

Sustainable Sites (SS)

The Project Site is a previously developed industrial parcel in a densely developed Boston neighborhood. A site assessment was completed; it was determined there are urban fill type soils that require management. A compliant plan will be drafted, submitted and implemented to ensure the soils are managed appropriately.

The Proposed Project has been designed to incorporate pervious and open spaces through landscaping, a 0.5-acre community green, pedestrian-oriented streetscapes and green roofs. The addition of these permeable areas helps reduce rainwater run-off.

A Proposed Project-wide rain water management plan will be developed to address the rate, run off and quality of the site rainwater. As described more fully in Chapter 7, *Infrastructure*, the Proposed Project will meet BWSC and MassDEP stormwater management requirements by significantly reducing the rainwater runoff by directing it into a below-grade re-charge/collection system sized to treat 1-inch of rain over all impervious areas of the Project Site, including proposed streets and sidewalks. Additionally, the rainwater will be absorbed through surface on-grade landscaping and green roofs. Rainwater directed to the municipal system will be treated to remove suspended solids prior to being released into the City system.

Water Efficiency (WE)

The Proposed Project will reduce potable water use for both sewage conveyance and irrigation needs. The development team plans to specify low-flow/high-efficiency domestic and commercial plumbing fixtures including the following:

- Residential: 1.28 gallons per flush (gpf) Water Closet (WC), 1.5 gallons per minute (gpm) Lavatory faucet; 1.5 gpm shower head; 1.5 gpm kitchen faucet.
- Commercial: 1.28 gpf WC; 0.125gpf urinal; 0.5 gpm Lavatory faucet (metered); 1.5 gpm shower head.

Through the use of low-flow and high-efficiency plumbing fixtures, the proposed buildings are expected to reduce interior potable water use and sewage conveyance.

The on-grade landscape design and the vegetated park area will use a mixture of drought tolerant trees, shrubs, and groundcover that grow well in an urban environment. The irrigation system will be designed to be efficient and use significantly less potable water when compared to a conventional irrigation system (at a mid-summer baseline, per LEED requirements).

Energy & Atmosphere (EA)

The proposed buildings will be designed with high-efficiency building systems and a high-performance building envelope. There are some alternative energy strategies that may be considered for further investigation, such as photovoltaic arrays, geo-thermal and co-generation, as discussed in Section 4.4.2 below.

The proposed HVAC system designs for the residential buildings include vertical stack water source heat pumps, and a central plant for ventilation air and hot/chilled water distribution. The proposed HVAC system design for the core and shell office building includes an energy efficient central plant with cooling towers, chillers, and condensing boilers. Heat recovery ventilation AHUs will deliver 100 percent outside air. The design will include a DDC Building Automation system that is expandable to accommodate tenant systems and equipment.

Aligned with its corporate sustainability goals and commitments, Stop & Shop typically implements energy efficiency measures for its store systems design, including measures, such as a heat reclaim system that uses the waste heat from the refrigeration compressors, high-efficiency gas boilers, and LED lighting. Additionally, Stop & Shop is currently investigating the use of fuel cells as means to help reduce its new grocery store's demand on the electrical grid.

Only refrigerants with low global warming and ozone depleting potential will be specified for use in building systems equipment. Each of the buildings, including the parking structures, will target lighting power densities 10 to 20 percent below code requirements through the use of LED lighting and lighting control systems.

The preliminary energy use assessment was conducted using whole building energy modeling. The proposed building designs currently meet both the Stretch Energy Code and LEEDv4 prerequisite criteria.[2]

Additionally, the Proponent plans to engage a Commissioning Agent (CxA) to perform both fundamental and enhanced commissioning services including providing reviews of design documents. The CxA will continue through construction and ultimately confirm the building systems are installed and function as intended and desired.

Materials and Resources (MR)

The Proposed Project will specify materials and products that are environmentally responsible and are transparent regarding the harvest and extraction of raw materials and the manufacturing processes. The development team will endeavor to specify materials and products with environmental and health product declarations to help support a reduced impact of the development on the environment.

Waste management will be addressed both during construction and post occupancy. The construction manager (CM) will provide a construction waste

2 The Stretch Energy Code compliance model is compared to an ASHRAE 90.1-2013 baseline and the LEED model is compared to the ASHRAE 90.1-2010 baseline.

management plan to divert a minimum 75 percent of the construction and demolition debris comprised of multiple waste streams.

Post occupancy, collected recyclables will be accommodated on the ground floor of the each of the buildings in an area near the loading docks. Core and shell tenants and residents will bring their recyclables to a central storage room. The residential buildings may incorporate trash and recycling chutes on each floor. A contracted waste management company will pick up the collected recyclables on a regular basis.

Indoor Environmental Quality (IEQ)

The buildings will have a healthy interior environment generated through the use of low-VOC containing interior construction and finish materials and maintained through an efficient ventilation system in compliance with ASHRAE 62.1-2010. In compliance with local regulations, each building will be non-smoking and no smoking will be allowed within 25 feet of the building including on residential terraces and in building courtyards.

Additionally, during construction, the CM will develop and implement a compliant Indoor Air Quality Management Plan for the construction and pre-occupancy phases of the Proposed Project.

The conceptual building envelope design for the proposed buildings includes large areas of vision glazing with ample access to daylight and views for the anticipated regularly occupied spaces in both the residences and on a typical office floor.

Both the core and shell office and the residential building thermal comfort systems and controls will be designed to meet the requirements of ASHRAE 55-2010 for all applicable mechanically ventilated regularly occupied spaces.

Innovation in Design (ID)

The Proponent will explore innovative approaches to design, construction, and operations and maintenance, including considering specifying low-mercury lighting, integrating public green education, and implementing an integrated pest management plan, and/or a green housekeeping plan.

Regional Priority Credits (RPC)

Applicable regional priority credits for the Project Site may include:

- EA Renewable Energy Production (2pt threshold)
- EA Optimize Energy Performance (8pt threshold)
- SS High Priority Site
- SS Rainwater Management
- Indoor Water Use Reduction (4pt threshold)

Boston Green Building Credits

At this preliminary design stage, the Proposed Project will evaluate achieving two of the four available Boston Green Building credits (Appendix A of Article 37):

Groundwater Recharge

The Proponent intends to assess if the site-wide rain water management plan meets the requirements of this Green Building credit once it is further developed.

At a minimum, the BWSC requirements will be met, but at this time the infiltration rates, seasonal high groundwater elevations, and locations of soil and/or groundwater contamination have not been evaluated. These factors may limit the Proposed Project from infiltrating in certain areas.

Modern Mobility

The Proponent plans to pursue the Boston Green Building Modern Mobility credit through implementation of a comprehensive TDM Plan, as described further in Section 5.7 of Chapter 5, *Transportation*. As part of the transportation mitigation strategy, the Proposed Project includes significant short- and long-term bicycle storage locations, in compliance with BTD's guidelines, and including a public bike-share station, if desired by the City, as well as access to public transportation. The Proponent will consider providing preferred parking for low-emitting fuel-efficient vehicles and/or electric vehicle charging stations within each of the garages serving the buildings comprising the Proposed Project.

USGBC LEED Certification

The Proposed Project has been registered with USGBC through LEED Online as a LEED Master Site. Each of the proposed buildings is registered with USGBC through LEED Online in association with the LEED Master Site.

4.4 Energy Conservation Approach

The development team evaluated the possibility of establishing a central plant to provide steam for the Project. However, due to the phased nature of the Project, a central plant is not practical. It would need to be on-line for Building 1, but it could be years before the final building is complete limiting the practicality of a central plant.

The Proposed Project buildings will be designed to be energy efficient to the extent possible. Buildings will include a high-performance envelope designed specifically for the building use and orientation. Buildings will have a central plant with high-efficiency cooling tower equipment and condensing boilers. Ventilation air will be provided through ERUs. The residences will have water source heat pump units. The core and shell office tenants will provide their own run ducts and terminal units. The Proponent

plans to register the proposed buildings with the ENERGY STAR Portfolio Manager® program to record and monitor whole-building electricity, gas, and water use.[3]

As Stop & Shop is intending to make the new grocery store a flagship, the current design for building systems will aim to achieve innovative energy conservation measures, including high-efficiency systems and capturing the rejected heat from the refrigeration for heating hot water. Additionally, the Proponent is exploring opportunities for renewable energy, such as a photovoltaic array and the use of fuel cells.

4.4.1 Preliminary Energy Model Results/GHG Emissions Reductions

In alignment with its regional efforts to reduce Greenhouse Gas ("GHG") emissions and in support of Boston's specific GHG emissions reduction targets, the Proponent will continue to evaluate energy efficiency measures ("EEMs") for possible inclusion in select portions of the Proposed Project. The EEMs may include high-performance glazing, increased insulation, low lighting power densities, low flow plumbing fixtures, high-efficiency mechanical and ventilation systems equipment and alternative energy sources. Whole building energy modeling was used for a preliminary analysis of possible energy efficient measures.

Through the implementation of energy-optimizing building design and systems, the proposed design for the initial phase, Building 1, is targeting a reduction in overall energy usage by over 20 percent compared to a conventional design (the ASHRAE 90.1-2013 baseline) resulting in an approximately 10 percent reduction in stationary source GHG emissions (accounted for in Carbon Dioxide, or CO_2). (Note, the percentages of energy use are different than CO_2 emission reductions due to emissions conversion factors.) The future residential buildings, and core and shell of the office building and retail spaces are anticipated to also meet the current Stretch Energy Code requirement to be a minimum of 10 percent below the baseline. The estimated stationary source GHG emissions reductions for the residential buildings is 9 percent, and core and shell office building is 11 percent. The energy usage savings and associated GHG emissions reductions will be further defined for later buildings as design advances and approvals are sought.

Estimated energy use demand and costs are preliminary and subject to change upon further design of the Proposed Project.

4.4.2 Clean and Renewable Energy

Combined Heat and Power

CHP systems are most efficient when there is a hot water demand all year round, making it applicable for the residential projects and possibly the grocery store. The development team will continue to explore the benefits of implementing CHP for

3 EPA created the ENERGY STAR Portfolio Manager®, an online tool that measures and tracks energy and water consumption, as well as greenhouse gas emissions. For additional information visit: https://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/use-portfolio-manager

each of the residential buildings for use in heating domestic hot water. Due to the lack of a significant domestic hot water demand, the benefits of CHP are minimal for the core and shell office building.

The development team studied the additional energy savings that the installation of a small CHP systems could provide for the residential buildings. For this initial study, it was assumed that each residential building would have a 75-kW CHP system, which would provide all of the heating hot water and domestic hot water throughout the year. The preliminary findings indicate the annual energy use savings for the individual residential towers do not significantly change; however, the annual energy cost savings increase by approximately 8 to 9 percent each.

Overall, if considering the impact of the inclusion of the CHP on a Project-wide-scale, the annual energy cost savings and CO_2 emissions reduction is approximately 20 percent.

As design advances, the development team will continue to assess the viability of including small-scale CHP systems for each of the residential projects.

Solar Photovoltaic (PV) Systems

A preliminary evaluation of incorporating both roof-mounted and building integrated solar PV systems has been conducted for the Proposed Project. The results of this study show the initial payback assessment is 20 years for the roof mounted arrays and 34 years for the building integrated approach. As the design progresses, the development team will re-evaluate the possibility of a solar PV array installation once there is more detail regarding the available roof area and a better understanding of any possible incentive or grant programs to help offset the initial investment. At a minimum, the proposed buildings will be solar ready in order to accommodate a possible future solar installation. This will give the Proponent flexibility to install solar at a later date. The development team will consider how the roof structure, roof space, and building orientation will affect a future installation. The necessary infrastructure will be included as the building design evolves and solidifies.

Solar Thermal

Solar thermal systems are dependent on available roof area, whereas solar PV systems can be installed in a several locations including vertically along the façade. Solar thermal and solar PV systems have similar paybacks; however, there are additional maintenance costs associated with solar thermal.

As noted above, the Proponent is committed to investigating the benefits of a small CHP system for each of the residential buildings. A CHP system should provide hot water to satisfy most of the domestic hot water load for the building. Therefore, there would be no need for additional capacity from a solar thermal system.

Architectural Wind

The development team evaluated the merits of building mounted mini-turbines and determined they would not provide enough power to make the installation economically feasible. A mini-turbine will produce less electricity than a solar PV system, but will likely cost more to install. Wind turbines also have additional ongoing operation and maintenance costs to consider since they contain moving parts.

Geothermal

The Proponent will explore the application of geothermal systems for the Proposed Project. The existing soils and sub-surface conditions will impact the type of system and the layout, therefore, further investigation is necessary.

4.4.3 Energy Efficiency Utility Assistance

The development team held initial meetings with representatives of local utility companies serving the area to discuss the potential utility incentives programs available for each building. By continuing to work with these utilities throughout the design process, the Proponent will evaluate additional energy conservation strategies and, therefore, additional energy savings and associated GHG emissions reductions may be achieved. The Proposed Project will participate in the MassSave New Construction Program, which is designed to target energy efficiency opportunities in new commercial facilities.

To determine the incentive levels, a whole building energy model will be created using DOE-2 based eQuest Version 3.65. The analysis will be performed through the Mass Save Whole Building Program, Large Building Path. The baseline energy model will be based on ASHRAE 90.1-2013. The proposed model will incorporate energy conservation measures proposed by the development team. The proposed model will accurately reflect the whole building, per its design.

4.5 Climate Change Preparedness and Resiliency

As required by the BPDA for Large Project Review, the Proponent has begun to consider the projected impacts related to climate change in early stages of planning and design by completing the Resiliency Checklist (Appendix B). Climate change is expected to result in rising sea levels, more frequent extreme storms, and more extreme weather events. The following sections describe what has been considered as it relates to climate change impacts as part of the early stages of project design

4.5.1 Sea Level Rise and Extreme Storms/Flooding

The Project Site is located outside of the 100-year flood zone and approximately 2,510 feet from the closest open body of water; therefore, extreme flooding and sea level rise are not anticipated to impact the Proposed Project.

4.5.2 Extreme Weather Conditions/Events

In addition to sea level rise, additional climate change issues predicted for Massachusetts, per the 2011 Massachusetts Climate Change Adaptation Report, include an increase in extreme weather events which could consist of drought, tropical rainfall patterns (i.e., increased precipitation) and extreme heat and cold stretches, increase in the number of days with extreme heat (i.e., temperatures greater than 90°F and 100°F) and/or fewer days of snow yet increased winter precipitation.[4] Project-related resiliency measures aimed at addressing these potential events are discussed below.

4.5.3 Potential Resiliency Measures

Site Design

To manage stormwater, the Proposed Project will provide infiltration that retains site runoff while providing treatment and peak flow mitigation in accordance with municipal stormwater standards. Additionally, the Project Site will grade away from the proposed buildings and on-site drainage will be picked up by area drains or infrastructure in the surrounding streets.

At the street level, the Proponent aims to reduce the heat island effect through the use of use of light-colored paving materials and integration of greenery, such as tree canopy cover and several landscape features along the streetscape and common green space.

Any new utilities (i.e., gas, electrical) will be buried below ground to reduce the possibility of a localized power outage caused during extreme storm events. Protective plantings throughout and at the edges of the Project Site will mitigate potential wind effects created by open spaces. Additionally, the proposed community green located at the corner of Guest Street Extension and Arthur Street will have a dense tree canopy at the periphery to mitigate potential wind effects created by the adjacent architecture.

Building Design and Operations

The Project Site location was assessed for its vulnerability to sea level rise and/or extreme flooding. It was determined the Proposed Project does not fall within the projected 100-Year Floodplain.

The following design and planning measures will be explored to mitigate for rising temperature impacts:

- Employing reflective roof materials and/or vegetated roofs;
- Designing the residential units for natural ventilation (i.e., operable windows), which help mitigate power disruptions by reducing the reliance on mechanical

4 Executive Office of Energy and Environmental Affairs and Adaptation Advisory Committee, Massachusetts Climate Change Adaptation Report, September 2011.

ventilation systems windows by providing fresh air when mechanical systems are down; and

- As part of the energy modeling process, climate files that reflect the predicted increase in temperature may be used to better understand how the buildings and their systems would perform under different climate conditions. (This understanding may then be considered when designing major plant and overall HVAC systems.)

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LEED v4 for BD+C: New Construction and Major Renovation

Project Checklist

Project Name: Allston Yards Buildings 1, 2 + 3
Date: May 18, 2017

Y	?	N			
1			Credit	Integrative Process	1

10	4	1		**Location and Transportation**	**16**
		x	Credit	LEED for Neighborhood Development Location	16
1			Credit	Sensitive Land Protection	1
2			Credit	High Priority Site	2
4	1		Credit	Surrounding Density and Diverse Uses	5
1	2	1	Credit	Access to Quality Transit	5
1			Credit	Bicycle Facilities	1
	1		Credit	Reduced Parking Footprint	1
1			Credit	Green Vehicles	1

3	4	3		**Sustainable Sites**	**10**
Y			Prereq	Construction Activity Pollution Prevention	Required
1			Credit	Site Assessment	1
		2	Credit	Site Development - Protect or Restore Habitat	2
1			Credit	Open Space	1
	2	1	Credit	Rainwater Management	3
1	1		Credit	Heat Island Reduction	2
	1		Credit	Light Pollution Reduction	1

5	2	4		**Water Efficiency**	**11**
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
1	1		Credit	Outdoor Water Use Reduction	2
2	1	3	Credit	Indoor Water Use Reduction	6
1		1	Credit	Cooling Tower Water Use	2
1			Credit	Water Metering	1

10	6	17		**Energy and Atmosphere**	**33**
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
3	2	1	Credit	Enhanced Commissioning	6
4	2	12	Credit	Optimize Energy Performance	18
1			Credit	Advanced Energy Metering	1
		2	Credit	Demand Response	2
	1	2	Credit	Renewable Energy Production	3
	1		Credit	Enhanced Refrigerant Management	1
2			Credit	Green Power and Carbon Offsets	2

3	5	5		**Materials and Resources**	**13**
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
	3	2	Credit	Building Life-Cycle Impact Reduction	5
1		1	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
	1	1	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
1		1	Credit	Building Product Disclosure and Optimization - Material Ingredients	2
1	1		Credit	Construction and Demolition Waste Management	2

7	4	5		**Indoor Environmental Quality**	**16**
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
2			Credit	Enhanced Indoor Air Quality Strategies	2
1	1	1	Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
	1	1	Credit	Indoor Air Quality Assessment	2
1			Credit	Thermal Comfort	1
1	1		Credit	Interior Lighting	2
		3	Credit	Daylight	3
1			Credit	Quality Views	1
	1		Credit	Acoustic Performance	1

4	2	0		**Innovation**	**6**
3	2		Credit	Innovation	5
1			Credit	LEED Accredited Professional	1

1	2	1		**Regional Priority**	**4**
1			Credit	Regional Priority: High Priority Site	1
	1		Credit	Regional Priority: Rainwater management (2 pt threshold)	1
	1		Credit	Regional Priority: Optimize Energy (8 pt threshold)	1
		1	Credit	Regional Priority: Renewable Energy (2 pt threshold)	1

44	29	36	**TOTALS**	Possible Points:	**110**

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

Source: TGE

Prepared By: VHB

Figure 4.1

Preliminary LEED-New Construction Scorecard

Allston Yards
Allston, Massachusetts

LEED v4 for BD+C: Core and Shell

Project Checklist

Project Name: Allston Yards Building 4
Date: May 18, 2017

Y	?	N			
1			Credit	Integrative Process	1

14	6	0	**Location and Transportation**		20
		x	Credit	LEED for Neighborhood Development Location	20
2			Credit	Sensitive Land Protection	2
3			Credit	High Priority Site	3
4	2		Credit	Surrounding Density and Diverse Uses	6
3	3		Credit	Access to Quality Transit	6
1			Credit	Bicycle Facilities	1
	1		Credit	Reduced Parking Footprint	1
1			Credit	Green Vehicles	1

4	4	3	**Sustainable Sites**		11
Y			Prereq	Construction Activity Pollution Prevention	Required
1			Credit	Site Assessment	1
		2	Credit	Site Development - Protect or Restore Habitat	2
1			Credit	Open Space	1
	2	1	Credit	Rainwater Management	3
1	1		Credit	Heat Island Reduction	2
	1		Credit	Light Pollution Reduction	1
1			Credit	Tenant Design and Construction Guidelines	1

5	2	4	**Water Efficiency**		11
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
1	1		Credit	Outdoor Water Use Reduction	2
2	1	3	Credit	Indoor Water Use Reduction	6
1		1	Credit	Cooling Tower Water Use	2
1			Credit	Water Metering	1

12	6	14	**Energy and Atmosphere**		33
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
3	2	1	Credit	Enhanced Commissioning	6
6	2	10	Credit	Optimize Energy Performance	18
1			Credit	Advanced Energy Metering	1
		1	Credit	Demand Response	2
	1	2	Credit	Renewable Energy Production	3
	1		Credit	Enhanced Refrigerant Management	1
2			Credit	Green Power and Carbon Offsets	2

3	4	7	**Materials and Resources**		14
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
	3	3	Credit	Building Life-Cycle Impact Reduction	6
1		1	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
		2	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
1		1	Credit	Building Product Disclosure and Optimization - Material Ingredients	2
1	1		Credit	Construction and Demolition Waste Management	2

5	2	1	**Indoor Environmental Quality**		10
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
2			Credit	Enhanced Indoor Air Quality Strategies	2
1	1	1	Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
	1		Credit	Daylight	3
1			Credit	Quality Views	1

4	2	0	**Innovation**		6
3	2		Credit	Innovation	5
1			Credit	LEED Accredited Professional	1

1	2	1	**Regional Priority**		4
1			Credit	Regional Priority: High Priority Site	1
	1		Credit	Regional Priority: Rainwater management (2 pt threshold)	1
	1		Credit	Regional Priority: Optimize Energy (8 pt threshold)	1
		1	Credit	Regional Priority: Renewable Energy (2 pt threshold)	1

49	28	30	**TOTALS**	Possible Points:	110

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

Source: TGE

Prepared By: VHB

Figure 4.2

Preliminary LEED-Core & Shell Scorecard

Allston Yards
Allston, Massachusetts

LEED v4 for ID+C: Commercial Interiors

Project Checklist

Project Name: Grocery Store
Date: November 3, 2016

Y	?	N			
2			Credit	Integrative Process	2

8	8	2	**Location and Transportation**		18
		x	Credit	LEED for Neighborhood Development Location	18
5	3		Credit	Surrounding Density and Diverse Uses	8
2	3	2	Credit	Access to Quality Transit	7
1			Credit	Bicycle Facilities	1
	2		Credit	Reduced Parking Footprint	2

4	2	6	**Water Efficiency**		12
Y			Prereq	Indoor Water Use Reduction	Required
4	2	6	Credit	Indoor Water Use Reduction	12

14	11	13	**Energy and Atmosphere**		38
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Fundamental Refrigerant Management	Required
4	1		Credit	Enhanced Commissioning	5
8	6	11	Credit	Optimize Energy Performance	25
2			Credit	Advanced Energy Metering	2
	1	2	Credit	Renewable Energy Production	3
	1		Credit	Enhanced Refrigerant Management	1
	2		Credit	Green Power and Carbon Offsets	2

3	3	7	**Materials and Resources**		13
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
1			Credit	Long-Term Commitment	1
		4	Credit	Interiors Life-Cycle Impact Reduction	4
1		1	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
	1	1	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
	1	1	Credit	Building Product Disclosure and Optimization - Material Ingredients	2
1	1		Credit	Construction and Demolition Waste Management	2

7	5	5	**Indoor Environmental Quality**		17
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
2			Credit	Enhanced Indoor Air Quality Strategies	2
1	1	1	Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
1	1		Credit	Indoor Air Quality Assessment	2
1			Credit	Thermal Comfort	1
1		1	Credit	Interior Lighting	2
	2	1	Credit	Daylight	3
	1		Credit	Quality Views	1
		2	Credit	Acoustic Performance	2

4	2	0	**Innovation**		6
3	2		Credit	Innovation	5
1			Credit	LEED Accredited Professional	1

2	2	0	**Regional Priority**		4
1			Credit	Regional Priority: LT Bicycle Facilities	1
	1		Credit	Regional Priority: LT Reduced Parking Footprint	1
1			Credit	Regional Priority: MR BPDO EPDs	1
	1		Credit	Regional Priority: EA Renewable Energy OR Optimize Energy Pe	1

44	33	33	**TOTALS**	Possible Points:	110

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80+

Source: TGE

Prepared By: VHB

Figure 4.3

Preliminary LEED-Commercial Interior Scorecard

Allston Yards
Allston, Massachusetts

5

Transportation

This chapter provides a detailed and comprehensive evaluation of the existing and proposed transportation conditions, and identifies potential traffic impacts and resulting mitigation as a result of the Proposed Project. The analysis has been conducted using standard methodologies of the Boston Transportation Department (BTD). Based on the findings of this analysis, the Proposed Project meets BTD's traffic impact criteria and complies with the required BTD standards for automobile and bicycle parking. In addition, the Proposed Project's traffic analysis was reviewed by two separate independent traffic peer reviews.

The Proposed Project will provide for the following area-wide improvements/benefits:

- **Advances the Proposed Project's transportation improvements and mitigation together with the initial phase of development;**
- **Advances the goals of Guest Street Planning Study;**
- **Provides a lotting plan that allows for enhanced vehicular and pedestrian connections, including the new Guest Street and Braintree Street Extensions, which would otherwise not be achievable without the Proposed Project;**
- **Addresses existing deficiencies and improves conditions of Everett Street, resulting in an overall LOS C at the Guest Street Extension/Everett Street intersection;**
- **Dedicates substantial land area to public streets and ways promoting the long-term success of previously approved projects;**
- **Addresses existing deficiencies and fulfills the long-term need to align the Arthur Street/Guest Street intersection;**
- **Minimizes impacts at key locations, including the North Beacon Street/ Market Street intersection, Everett Street/North Beacon Street intersection, Union Square, and other locations; and**
- **Reduces vehicular traffic by locating density immediately adjacent to the recently-opened Boston Landing MBTA commuter rail station and providing ample accommodations for pedestrians and bicyclists.**

The transportation infrastructure improvements to be implemented as part of the Proposed Project have been designed to accommodate traffic from the potential redevelopment of surrounding properties, including Boston Landing, Boston Volvo Village dealership, and others, as well as the traffic anticipated to be generated by the Proposed Project. By providing transportation improvements as part of the initial

phase, the Proposed Project "unlocks" the potential for redevelopment of these surrounding properties.

Overall, the additional new traffic generated by the Proposed Project can be accommodated on the surrounding roadway network and, with the Proposed Project's transportation infrastructure improvements, minimal impacts are expected from the Proposed Project.

5.1 Summary of Key Findings and Benefits

The following are key findings and benefits related to transportation in conjunction with the Proposed Project:

- Traffic generated by the Proposed Project can be accommodated at the study area intersections through the implementation of planned improvements and signal timing modifications planned as part of the initial phase of the Proposed Project.
- The Project Site's proximity to public transportation, including several bus lines and the new MBTA Boston Landing Station, will help minimize the need for vehicular travel.
- The parking needs for the Proposed Project will be accommodated by a proposed parking supply of up to 1,300 parking spaces.
- Transportation improvements proposed as part of the Proposed Project have been designed to accommodate pedestrian, bicycle, and vehicular traffic.
- The Proposed Project provides a more pedestrian-friendly environment with sidewalks to be constructed along all streets within the Project Site with connections between Market Street, Everett Street, and North Beacon Street.
- The Proposed Project provides an internal roadway network designed to be compatible with bicycle use, including a new separated bike lane on Guest Street Extension, as well as secure interior bicycle storage and at-grade bicycle racks.
- The Proposed Project will include implementation of a Transportation Demand Management ("TDM") Plan with specific measures to promote and encourage residents, employees, and visitors to use alternative transportation modes.
- The Proposed Project supports the viability of the recently opened Boston Landing MBTA commuter rail station through increased ridership, and frequency of stops and weekend service by creating additional housing units (including home ownership) and promoting the use of the adjacent public transit services.

While the Project Site access enhancements all are designed to accommodate the full Project development, as well as the ongoing development of other nearby projects, these improvements all will be constructed in conjunction with the initial phase of the Project.

5.2 Project Description

As described previously in Chapter 1, *Project Description*, the Proposed Project involves the redevelopment of a 10.6-acre Project Site currently occupied by a supermarket and adjoining retail stores. The development program for the Proposed Project is presented in Table 5-1.

Table 5-1 Proposed Development Program Summary*

Use	Approximate Size
Residential	Up to 1,050 units[1]
Office	300,000 GSF[2,3]
Grocery	67,000 GSF[4]
Retail/Restaurant	50,000 GSF[5]
Community Green	0.5 acres[6]
Parking	Up to 1,300 spaces

*Note: To be developed in multiple buildings, each of which can be developed together or independently of the other with a mix of uses, consistent with the uses and use intensities above, in response to evolving market conditions.
GSF Gross Square Feet including mechanical/unusable space.
1 To consist of a range of housing types, sizes, and price points, including affordable units and home ownership units.
2 Includes amenity space.
3 May be substituted for residential use consisting of approximately 340 units; however, office use is more impactful from a transportation perspective and, therefore, is being analyzed as such under the Article 80 review for the Proposed Project.
4 Includes 3,000 square feet of community space.
5 Includes restaurant space proposed throughout; locations to be determined.
6 May include a restaurant with outdoor seating.

The Proposed Project is intended to be developed through a long-term, multi-phased approach over several years. As currently anticipated, the initial phase will include Building 1 and certain other site-wide improvements while keeping the existing supermarket open and operational. Refer to Section 1.3.5 of Chapter 1, *Project Description* for the components of the initial phase as currently contemplated. **Access improvements involving the Guest Street Extension to the other new/surrounding streets and intersections (East Street, and the new Guest Street Extension/Everett Street and Guest Street/Arthur Street intersections) will be implemented as part of the initial phase of development.**

The Proposed Project has been designed to accommodate a variety of phasing scenarios. The proposed development program presented above in Table 5-1 is to be developed in individual buildings, each of which can be developed together or independently of the other with a mix of uses, consistent with the uses and use intensities above, in response to evolving market conditions.

To provide a conservative analysis, the transportation analysis for the Proposed Project was based on a slightly larger development program which has since been modified to that presented in Table 5-1. Therefore, the results presented herein are

conservative in nature, with the likely traffic generation and associated impacts being overestimated, which results in a conservative analysis that confirms that the Proposed Project's traffic generation can be appropriately accommodated.

5.3 Study Methodology

The following transportation analysis has been performed in conformance with the Massachusetts Executive Office of Energy and Environmental Affairs (EEA)/Executive Office of Transportation (EOT) guidelines. It also follows standard methodologies used by BTD, including the projection of Proposed Project-related trips based on Institute of Transportation Engineers (ITE) trip rates and the application of local travel characteristics established through the *Access Boston 2000-2010* initiative. *Synchro 8* software was used to facilitate the evaluation of traffic operations based on Highway Capacity Manual[1] (HCM) methodologies.

The transportation analysis considers the following primary analysis scenarios:

- **2016 Existing Conditions** – based on traffic data collection conducted within the study area in May 2016 and October 2016 supplemented with counts from March 2017.
- **2023 No-Build Conditions** – Future conditions for a seven-year time horizon as expected to occur if the Proposed Project was not constructed.
- **2023 Build Conditions** – Future conditions for a seven-year time horizon assuming the construction of the Proposed Project.

5.3.1 Study Area

Based on a review of traffic studies prepared for other nearby development projects and familiarity with the surrounding area, vehicular traffic associated with the Proposed Project will be widely dispersed throughout the nearby street network. Based on this analysis, an initial study area was identified and sent to BTD for review and approval. Following meetings over the course of the summer of 2016, the study area was expanded to include additional locations in the Allston neighborhood to the east of the Project Site, and to include additional locations further to the south and west. Considering these and other factors, the following intersections, as shown in Figure 5.1, were included in the study area for the Traffic Impact and Access Study:

- Market Street at Leo M. Birmingham Parkway/Lincoln Street
- Market Street at Guest Street/Stockyard Driveway
- Market Street at Vineland Street
- Market Street at North Beacon Street
- Market Street at Faneuil Street
- Market Street at Sparhawk Street/Arlington Street

1 Highway Capacity Manual; Transportation Research Board; Washington D.C.; 2010.

- North Beacon Street at Life Street/Etna Street
- North Beacon Street at Murdock Street/Self-Storage Driveway
- North Beacon Street at Hichborn Street/ Dustin Street
- North Beacon Street at Arthur Street/Wingate Driveway
- North Beacon Street at Saunders Street
- North Beacon Street at Gordon Street
- North Beacon Street at Everett Street/KFC Driveway
- North Beacon Street/Brighton Avenue at Cambridge Street
- Cambridge Street at Hano Street
- Cambridge Street at Denby Road
- Cambridge Street at Harvard Avenue/Franklin Street
- Braintree Street at Rugg Road
- Everett Street at Western Avenue
- Everett Street at "Old" Everett Street (north)
- Everett Street at Stop and Shop Driveway
- Everett Street at "Old" Everett Street (south)
- "Old" Everett Street at Blaine Street
- "Old" Everett Street at Braintree Street
- Guest Street at Life Street
- Guest Street/Stop and Shop Driveway at Arthur Street

5.3.2 Consistency with Area Planning

As described in Section 1.6.1 of Chapter 1, *Project Description*, in 2012, neighborhood stakeholders, local officials, and city planners collaborated to produce the Guest Street Planning Study. The study provides recommendations for the future development of the area surrounding the Project Site, including approximately 100 acres of land located between the Turnpike, Cambridge Street, North Beacon Street, and Market Street. The stated goals of this planning study were to create a 2040 vision for the area to help set the framework for future development and identify how this area can be transformed into a more vibrant, mixed-use environment with an active "18-hour vital urban center" atmosphere.

Consistent with the Guest Street Planning Study, the area surrounding the Project Site has been transforming from a general manufacturing/warehousing environment to one that will be predominantly mixed-use. Through this change, there should continue to be an increase in pedestrian and bicyclists in the study area. The Proposed Project is highly consistent with this trend; a more pedestrian-friendly environment will be provided within the Project Site limits by way of dedicated bicycle facilities and sidewalks along the new Guest Street Extension to be constructed as part of the Proposed Project, and other new pedestrian and bicycle improvements within the

Proposed Project. The Proposed Project will also reinforce pedestrian connectivity between Market Street, Everett Street, and North Beacon Street.

As noted earlier, the development proposal for the Project Site is consistent with the Guest Street Planning Study. This chapter also contains analysis and discussion of how the Proposed Project is consistent with the vision of the Guest Street Planning Study for the improved transportation network that will be created in conjunction with the Proposed Project.

5.4 Existing Transportation Conditions

Evaluation of the transportation impacts associated with the Proposed Project requires a thorough understanding of the existing transportation system in the study area. Therefore, a complete inventory and evaluation of the existing transportation system in the study area was conducted. The analysis of existing transportation conditions is based on the existing network, roadway and intersection geometry, traffic control, existing daily and peak hour traffic volumes, traffic safety conditions, and existing public transportation and pedestrian facilities.

This section describes existing transportation conditions, including an overview of roadway conditions, transit, pedestrian and bicycle facilities, and general site conditions. A discussion of the existing on-street parking supply also is provided.

5.4.1 Existing Site Uses and Access

As discussed previously in Section 1.2 of Chapter 1, *Project Description*, the Project Site currently houses approximately 100,000 gross square feet of retail space, including an approximately 65,000-square foot supermarket. This development was constructed in 1998 with smaller ancillary retailers in a one-story building, and an approximately 450-space surface parking lot.

Access to the Project Site is currently provided by multiple driveways connecting to the surrounding roadway network, though there are various restrictions associated with some of these driveways. The existing Project Site vehicular access and circulation is shown on Figure 5.2. Primary access to the Project Site is currently provided via a driveway extending from Arthur Street to the south. Arthur Street is a public way that extends from its signalized intersection with North Beacon Street (Route 20) to Hichborn Street where it then turns into a private access drive into the Project Site. An internal driveway rings the Project Site with truck delivery to the existing grocery store occurring along the Turnpike frontage from Braintree Street. The Project Site also connects to the west to Guest Street, which leads to and from Market Street further to the west through the adjacent Boston Landing development. The existing Site currently also has a right-turn, enter-only driveway on Everett Street. While there is signage restricting that driveway to entering right-turns only, exiting traffic and entering left-turn movements also were observed to occur at this driveway. Finally, an enter-only driveway is located at the northeasterly end of the Project Site connecting to Braintree Street underneath the Everett Street overpass.

5.4.2 Existing Roadways

Market Street

Market Street is located approximately 2,000 feet to the west of the Project Site and traverses the study area in a general north-south direction between Birmingham Parkway and Sparhawk Street. Market Street is currently a four-lane roadway between Birmingham Parkway and North Beacon Street and a two-lane roadway between North Beacon Street and Sparhawk Street with additional turning lanes provided at major intersections. On-street parking is provided on both sides of Market Street between Faneuil Street and Sparhawk Street and on the east side of the roadway between Faneuil Street and North Beacon Street. Sidewalks are provided on both sides of Market Street and crosswalks are provided at major intersections. Bike lanes are provided in both directions on Market Street between Birmingham Parkway and Guest Street and between Faneuil Street and Sparhawk Street. Land use along Market Street consists of a mix of commercial and residential uses.

North Beacon Street

North Beacon Street is located approximately 700 feet to the south of the Project Site and traverses the study area in a general east-west direction between Market Street and Cambridge Street. North Beacon Street is currently a two-lane roadway with additional turning lanes provided at major intersections. On-street parking is provided on both sides of North Beacon Street. Sidewalks are provided on both sides of North Beacon Street and crosswalks are provided at most intersections. Land use along North Beacon Street consists of a mix of commercial, industrial, and residential uses.

Everett Street

Everett Street is located to the east of the Project Site and traverses the study area in a general north-south direction between Western Avenue and North Beacon Street. Everett Street is currently a two-lane roadway. On-street parking is prohibited on both sides of Everett Street. Sidewalks are provided on both sides of Everett Street and crosswalks are provided at the intersections with North Beacon Street and Old Everett Street (south). Land use along Everett Street consists of a mix of commercial and residential uses.

5.4.3 Existing Intersections

Intersection geometry and physical characteristics are presented below. Traffic operations and LOS analysis are presented later in this chapter.

Market Street at Leo M. Birmingham Parkway/Lincoln Street

Market Street, Leo M. Birmingham Parkway, and Lincoln Street intersect at a four-way signalized intersection. The Leo M. Birmingham Parkway eastbound approach consists

of two general purpose travel lanes. Lincoln Street is one-way in the westbound direction and the approach consists of one left-turn lane and one general purpose travel lane. The Market Street northbound approach consists of two general purpose travel lanes. The Leo M. Birmingham Parkway southbound approach consists of two through lanes and one right-turn lane. Sidewalks are provided on both sides of Market Street south of the intersection, the east side of Leo M. Birmingham Parkway north of the intersection and the north side of Lincoln Street east of the intersection. Crosswalks are provided across the Market Street northbound approach and the Lincoln Street westbound approach. Bike lanes are provided in both directions on Market Street south of the intersection. On-street parking is provided on both sides of Lincoln Street east of the intersection. MBTA bus stops are located on both sides of Leo M. Birmingham Parkway north of the intersection.

Market Street at Guest Street/Stockyard Driveway

Market Street and Guest Street/Stockyard driveway intersect at a four-way signalized intersection. The Stockyard restaurant driveway eastbound approach consists of one general travel lane and provides access to/from the parking lot for the Stockyard restaurant. The Guest Street westbound approach consists of one left-through lane and one right-turn lane. The Market Street northbound and southbound approaches consist of two general purpose travel lanes. Sidewalks are provided on both sides of the Guest Street westbound approach and the Market Street northbound and southbound approaches. Crosswalks are provided across the Guest Street westbound approach and the Market Street northbound approach. Bike lanes are provided in both directions on Market Street north of the intersection. On-street parking is prohibited on both sides of all approaches. An MBTA bus stop is located on the east side of Market Street south of the intersection.

Market Street at Vineland Street

Market Street and Vineland Street intersect at a three-way unsignalized intersection. Vineland Street is one-way in the eastbound direction, consists of one general travel lane, and is under stop control. The Market Street northbound and southbound approaches consist of two general purpose travel lanes. Sidewalks are provided on both sides of all approaches. There are no crosswalks provided at this intersection. On-street parking is provided on both sides of Vineland Street. An MBTA bus stop is located on the west side of Market Street south of the intersection.

Market Street at North Beacon Street

North Beacon Street and Market Street intersect at a four-way signalized intersection. All four approaches consist of two general purpose travel lanes. Sidewalks are provided on both sides of all approaches and crosswalks are provided across all approaches. On-street parking is prohibited on both sides of North Beacon Street and Market Street. MBTA bus stops are located on both sides of North

Beacon Street east of the intersection and on the east side of Market Street south of the intersection.

Market Street at Faneuil Street

Market Street and Faneuil Street intersect at a three-way signalized intersection. The Faneuil Street eastbound approach and the Market Street northbound approach consist of one general travel lane. The Market Street southbound approach consists of one through lane and one right-turn lane. Sidewalks are provided on both sides of all approaches and crosswalks are provided across all approaches. Bike lanes are provided in both directions on Market Street south of the intersection and in the southbound direction on Market Street north of the intersection. On-street parking is provided on both sides of Faneuil Street and on the east side of Market Street.

Market Street at Sparhawk Street/Arlington Street

Market Street and Sparhawk Street/Arlington Street intersect at a four-way signalized intersection. The Arlington Street eastbound approach, Sparhawk Street westbound approach, and Market Street northbound approach consist of one general travel lane. The Market Street southbound approach consists of one left-turn lane and one through-right lane. Sidewalks are provided on both sides of all approaches and crosswalks are provided across all approaches. Bike lanes are provided in both directions on Market Street with "bike boxes" also provided on both approaches. On-street parking is provided on both sides of Arlington Street. MBTA bus stops are located on the west side of Market Street south of the intersection and on the east side of Market Street north of the intersection.

North Beacon Street at Life Street/Etna Street

North Beacon Street and Life Street/Etna Street intersect at a four-way signalized intersection with offset approaches on Life Street and Etna Street. The North Beacon Street eastbound and westbound approaches and the Life Street southbound approach consist of one general purpose travel lane. Etna Street is one-way in the southbound direction away from the intersection. Sidewalks are provided on both sides of all approaches and crosswalks are provided across the northbound Etna Street approach, the southbound Life Street approach, and on North Beacon Street between Etna Street and Life Street. On-street parking is provided on both sides of Etna Street, the west side of Life Street, and the south side of North Beacon Street. MBTA bus stops are located on both sides of North Beacon Street west of the intersection.

North Beacon Street at Murdock Street/Simply Self-Storage Driveway

North Beacon Street and Murdock Street/Simply Self-Storage driveway intersect at a four-way unsignalized intersection. The North Beacon Street eastbound and westbound approaches and the Self-Storage driveway southbound approach consist of one general purpose travel lane. Murdock Street is one-way in the southbound direction away from the intersection. The Self-Storage driveway southbound

approach provides access to/from the parking lot for a Self-Storage facility and is under stop control. Sidewalks are provided on both sides of the North Beacon Street eastbound and westbound approaches and the Murdock Street northbound approach. No crosswalks are provided at this intersection. On-street parking is provided on both sides of North Beacon Street and the east side of Murdock Street.

North Beacon Street at Dustin Street/Hichborn Street

North Beacon Street and Dustin Street/Hichborn Street intersect at a four-way unsignalized intersection. All approaches consist of one general purpose travel lane. Dustin Street is one-way in the northbound direction towards the intersection. The Dustin Street northbound and Hichborn Street southbound approaches are under stop control. Sidewalks are provided on both sides of all approaches and crosswalks are provided across all approaches. On-street parking is provided on both sides of Dustin Street.

North Beacon Street at Arthur Street/Wingate Driveway

North Beacon Street and Arthur Street intersect at a four-way signalized intersection with offset approaches on Arthur Street and the former Wingate nursing home driveway. The North Beacon Street eastbound approach consists of one left-turn lane and one through-right lane. The North Beacon Street westbound approach consists of one left-through lane and one right-turn lane. The Arthur Street southbound approach consists of one left-turn lane and one right-turn lane. The former Wingate driveway northbound approach consists of one general purpose lane. While this driveway previously provided access to/from the Wingate at Brighton assisted living facility, that facility closed in early 2016. Sidewalks are provided on both sides of the North Beacon Street eastbound and westbound approaches and the Arthur Street southbound approach. Crosswalks are provided across the North Beacon Street eastbound approach and the Arthur Street southbound approach. On-street parking is prohibited on both sides of all approaches.

North Beacon Street at Saunders Street

North Beacon Street and Saunders Street intersect at a three-way unsignalized intersection. All approaches consist of one general purpose travel lane. Saunders Street is one-way in the northbound direction towards the intersection and is under stop control. Sidewalks are provided on the both sides of all approaches and crosswalks are provided across the North Beacon Street westbound approach and the Saunders Street northbound approach. On-street parking is provided on both sides of Saunders Street. MBTA bus stops are located on both sides of North Beacon Street east of Saunders Street.

North Beacon Street at Gordon Street

North Beacon Street and Gordon Street intersect at a three-way unsignalized intersection. All approaches consist of one general purpose travel lane. The Gordon

Street northbound approach is under stop control. Sidewalks are provided on both sides of all approaches and a crosswalk is provided across the Gordon Street northbound approach. On-street parking is provided on the north side of North Beacon Street and the west side of Gordon Street.

North Beacon Street at Everett Street/KFC Driveway

North Beacon Street and Everett Street/KFC driveway intersect at a four-way signalized intersection with offset approaches on Everett Street and the KFC Driveway. The North Beacon Street eastbound approach consists of two general purpose lanes. The North Beacon Street westbound approach consists of one through lane and one right-turn lane. All left turns from the westbound approach of North Beacon Street into the KFC driveway are prohibited via signage. The Everett Street southbound approach consists of one general purpose lane. The KFC Driveway is one-way southbound away from the intersection, only providing access for vehicles entering the KFC parking lot. Sidewalks are provided on both sides of the North Beacon Street eastbound and westbound approaches and the Everett Street southbound approach. Crosswalks are provided across the North Beacon Street eastbound approach and the Everett Street southbound approach. On-street parking is provided on the north side of North Beacon Street west of the intersection.

North Beacon Street/Brighton Avenue at Cambridge Street

North Beacon Street/Brighton Avenue and Cambridge Street intersect at a four-way signalized intersection known locally as Union Square. The North Beacon Street eastbound approach consists of two general purpose lanes. The Brighton Avenue westbound approach consists of one left-turn lane, one left-through lane, and one through lane. Right-turning traffic exits the westbound Brighton Avenue approach prior to the intersection via a channelized right-turn slip-ramp. The Cambridge Street northeast-bound approach consists of two through lanes and one right-turn lane. All left turns from the northeast-bound approach of Cambridge Street onto North Beacon Street are prohibited via signage. The Cambridge Street southwest-bound approach consists of one left-through lane, one through lane, and one right-turn lane. Sidewalks are provided on both sides of all approaches and crosswalks are provided across all approaches. On-street parking is provided on the north side of Cambridge Street. MBTA bus stops are located on both sides of North Beacon Street west of the intersection, the south side of Brighton Avenue east of the intersection, and the north side of Cambridge Street southwest of the intersection.

Cambridge Street at Hano Street

Cambridge Street and Hano Street intersect at a three-way unsignalized intersection. All approaches consist of one general travel lane. The Hano Street southbound approach is under stop control. Sidewalks are provided on both sides of all approaches and crosswalks are provided across the Hano Street southbound approach and the Cambridge Street westbound approach. A bike lane is provided in the

westbound direction on Cambridge Street east of the intersection. The westbound movement through the intersection is marked with standard cross-hatched "Do not block intersection" pavement markings. On-street parking is provided on the west side of Hano Street and the north side of Cambridge Street. MBTA bus stops are located on the north side of Cambridge Street east of the intersection and on the south side of Cambridge Street across from the Hano Street approach.

Cambridge Street at Denby Road

Cambridge Street and Denby Road intersect at a three-way signalized intersection. All approaches consist of one general travel lane. Sidewalks are provided on both sides of all approaches and crosswalks are provided across the Denby Road southbound approach and the Cambridge Street westbound approach. Bike lanes are provided in both directions on Cambridge Street. The westbound and eastbound movements through the intersection are marked with standard cross-hatched "Do not block the intersection" pavement markings. On-street parking is provided on both sides of Cambridge Street and on the east side of Denby Road.

Cambridge Street at Harvard Avenue/Franklin Street

Cambridge Street and Harvard Avenue/Franklin Street intersect at a four-way signalized intersection. The Cambridge Street eastbound approach consists of two general purpose travel lanes. The Cambridge Street westbound approach consists of one left-turn lane, one through lane, and one right-turn lane. The Harvard Avenue northbound approach consists of one left-through lane and one right-turn lane. The Franklin Street southbound approach consists of one general purpose travel lane. Sidewalks are provided on both sides of all approaches and crosswalks are provided across all approaches. Bike lanes are provided in the westbound direction on Cambridge Street west of the intersection and in the southbound direction on Harvard Avenue south of the intersection. On-street parking is provided on the west side of Harvard Avenue south of the intersection and on the west side of Franklin Street north of the intersection. MBTA bus stops are located on both sides of Cambridge Street west of the intersection.

Braintree Street at Rugg Road

Braintree Street and Rugg Road intersect at a three-way unsignalized intersection. All approaches consist of one general purpose travel lane. The Rugg Street northbound approach is under stop control. Sidewalks are provided on both sides of all approaches. No crosswalks are provided at this intersection. On-street parking is provided on the south side of Braintree Street and on the west side of Rugg Road.

Everett Street at Western Avenue

Everett Street and Western Avenue intersect at a four-way signalized intersection approximately one-half mile to the north of the Project Site. The Western Avenue eastbound approach consists of one shared left-turn/through lane and one right-

turn lane. The Western Avenue westbound approach consists of a single left-turn lane and one shared through/right lane. The Everett Street northbound approach consist of one left-turn lane and one shared through/right-turn lane. The Everett Street southbound approach consists of one general purpose travel lane. Sidewalks are provided on both sides of all approaches and crosswalks are provided across all approaches. Bike lanes are provided in both directions on Western Avenue to the west of the intersection and in the westbound direction only on Western Avenue east of the intersection. On-street parking is provided on the south side of Western Avenue east of the intersection. MBTA bus stops are located on both sides of Western Avenue west of the intersection.

Everett Street at "Old" Everett Street (north)

Everett Street and "Old" Everett Street (north) intersect at a four-way unsignalized intersection to the north of the Turnpike. "Old" Everett Street provides local access to Lincoln Street while Everett Street carries traffic over the Turnpike. All approaches consist of one general purpose travel lane. The northeast-bound and southbound approaches on Everett Street are under yield control and the northbound approach on Old Everett Street and the eastbound approach from the local driveway are under stop control. Sidewalks are provided on both sides of all approaches. A crosswalk is provided across the northbound approach of Everett Street. On-street parking is prohibited along all approaches.

Everett Street at Stop and Shop Driveway

Everett Street and the Stop & Shop Driveway intersect at a three-way unsignalized intersection. The Everett Street northbound approach consists of one through travel lane. All left turns from the northbound approach of Everett Street into the Stop and Shop driveway are prohibited via signage. The Everett Street southbound approach consists of one general purpose travel lane. The Stop and Shop driveway is one-way westbound away from the intersection only providing access for vehicles entering the Stop and Shop Parking Lot. Sidewalks are provided on both sides of Everett Street and on the south side of the Stop and Shop driveway. No crosswalks are provided at this intersection. On-street parking is prohibited on all approaches.

Everett Street at Old Everett Street (south)

Everett Street and Old Everett Street (south) intersect at a four-way unsignalized intersection east of the Project Site and south of the Turnpike. Old Everett Street provides local access to Braintree Street while Everett Street carries traffic over the Turnpike. The easterly leg of the intersection consists of a driveway providing access and egress to a small residential complex. All approaches consist of one general purpose travel lane. The southbound approach on Old Everett Street and the westbound approach on the driveway are under stop control while the southeast-bound and northbound approaches on Everett Street are under no control. Sidewalks are provided on both sides of all approaches. A crosswalk is provided

across the southbound approach of Old Everett Street and the southeast-bound approach of Everett Street. On-street parking is provided along the west side of the southbound approach of Old Everett Street.

Old Everett Street at Blaine Street

Old Everett Street and Blaine Street intersect at a three-way unsignalized intersection. Single travel lanes are provided in both directions on Old Everett Street and there is a single entering and exiting lane on Blaine Street, with the westbound approach being under stop control. Blaine Street is signed as a private way with no through-traffic allowed and parking only permitted for residents. Sidewalks are provided on both sides of Old Everett Street. A crosswalk is provided across the Blaine Street westbound approach. On-street parking is provided on the west side of Old Everett Street and on both sides of Blaine Street.

Old Everett Street at Braintree Street

Old Everett Street and Braintree Street intersect at a four-way unsignalized intersection at the northeast end of the Project Site. The Old Everett Street northbound approach and the Braintree Street westbound approach consist of one general purpose travel lane and are under stop control. The northerly leg of this intersection serves a 20+ space parking area primarily used by the adjacent commercial building located at 119 Braintree Street. The curb cut to this parking area is wide enough to allow for single entering and exiting lanes. While no signs or pavement markings are provided, the exiting approach was observed to function as if it were under stop-sign control. The westerly leg of the intersection is a one-way westbound, enter-only driveway to the existing Project Site, though some level of exiting traffic was regularly observed. Sidewalks are provided on both sides of Old Everett Street south of the intersection and on both sides of Braintree Street east of the intersection. No crosswalks are provided at this intersection. On-street parking is provided on the south side of Braintree street east of the intersection, and the west side of Old Everett Street south of the intersection. Regular parking activity also was observed on both sides of Braintree Street to the west of the intersection, though no signage is present concerning parking.

Guest Street at Life Street

Guest Street and Life Street intersect at a three-way unsignalized intersection. All approaches consist of one general purpose travel lane and are under stop control. Sidewalks are currently provided on both sides of Life Street and on the south side of Guest Street. A crosswalk currently is provided across the Life Street northbound approach. On-street parking is provided on both sides of Guest Street. The intersection of Guest Street and Life Street is currently being reconstructed as part of the adjacent Boston Landing project.

Guest Street/Project Site Driveway at Arthur Street/Arthur Street Extension

Approximately 725 feet to the north of North Beacon Street (Route 20), Arthur Street is intersected by Guest Street from the west at a four-way unsignalized intersection. The easterly leg of this intersection is the driveway to the existing Project Site just west of the Stop & Shop building space. The northerly leg of this intersection is Arthur Street Extension. All approaches to this intersection currently consist of single lanes which are under stop control. The Arthur Street and Site driveway legs of the intersection are located on the Project Site property. The westerly Guest Street segment extends to Market Street as a public roadway while Arthur Street Extension extends to and from the north within Boston Landing. A new residential building located at 125 Guest Street currently is under construction at the southwest corner of this intersection.

Arthur Street Extension provides access (by passing through the Project Site) to both structured parking for Boston Landing, as well as access to a "kiss and ride" area for the recently opened MBTA Boston Landing commuter rail station. Sidewalks currently are provided on both sides of Arthur Street, both sides of Guest Street, and the south side of the Site Driveway. Crosswalks are provided across the Guest Street eastbound approach and the Arthur Street southbound approach. On-street parking is provided on both sides of Guest Street. MBTA bus stops are located on both sides of Arthur Street south of the intersection.

As discussed later in Section 5.5.4, this intersection will be reconfigured as part of the Proposed Project's initial construction, and will be signalized in conjunction with the continued advancement of the surrounding developments. In addition to addressing long-standing issues associated with the current non-standard configuration, these improvements will accommodate the Proposed Project's traffic while also allowing the adjacent Boston Landing project to move forward to its Full Build configuration. The construction of the planned Guest Street Extension within the Project Site and accompanying full-access signalized intersection with Everett Street also will be discussed in detail later in this chapter.

5.4.4 Existing Traffic Volumes

Traffic volumes for the study area roadways and intersections were collected by VHB in May, October, and November 2016, and in March 2017. Peak-period turning movement and classification (TMC) counts were collected at the study area intersections on a typical weekday from 7:00 to 9:00 AM and 4:00 to 6:00 PM, and on, a typical Saturday from 11:00 AM to 2:00 PM. These time periods were selected so that the combined peak periods for the roadway and Project Site activity would be evaluated.

In addition, VHB conducted automatic traffic (ATR) counts for a continuous 72-hour period, including a typical weekday and Saturday. These counts were conducted on

Market Street, Arthur Street, North Beacon Street, and Everett Street. The observed traffic volumes are summarized in Table 5-2.

Table 5-2 Observed Traffic Volumes

	Weekday							Saturday			
	Daily[a]	Morning Peak Hour			Evening Peak Hour			Daily	Midday Peak Hour		
Location		Vol[b]	K Factor[c]	Dir. Dist.[d]	Vol[b]	K Factor[c]	Dir. Dist.[d]		Vol[b]	K Factor[c]	Dir. Dist.[d]
Market Street, north of North Beacon Street:											
Northbound	8,575	680			605			7,480	600		
Southbound	10,445	570			840			9,810	715		
Total	**19,020**	**1,250**	**6.6%**	**54%WB**	**1,445**	**7.6%**	**58%SB**	**17,290**	**1,315**	**7.6%**	**57%SB**
Arthur Street, north of North Beacon Street:											
Northbound	2,145	145			205			2,180	215		
Southbound	2,935	240			340			2,990	345		
Total	**5,060**	**385**	**7.6%**	**62%SB**	**545**	**10.7%**	**63%NB**	**5,170**	**560**	**10.8%**	**62%SB**
Everett Street, north of North Beacon Street:											
Northbound	5,495	525			420			4,775	480		
Southbound	3,905	245			360			3,275	240		
Total	**9,400**	**770**	**8.2%**	**68%NB**	**780**	**8.3%**	**54%NB**	**8,050**	**720**	**8.9%**	**67%NB**
North Beacon Street (Route 20), west of Gordon Street:											
Eastbound	9,280	635			645			8,570	690		
Westbound	6,860	440			485			6,170	385		
Total	**16,140**	**1,075**	**6.7%**	**59%EB**	**1,130**	**7.0%**	**57%EB**	**14,740**	**1,075**	**7.3%**	**64%EB**

Source: Based on automatic traffic recorder counts conducted on Market Street in October 2016, Arthur Street in November 2016, and Everett Street and North Beacon Street in May 2016.

a Average Daily Traffic volume, expressed in vehicles per day

b Represents the percent daily traffic which occurs during the peak hour

c Directional distribution of peak hour traffic

Note: Peak hours do not necessarily coincide with the peak hours of turning movement counts.

As noted earlier, intersection turning movement counts (TMCs) also were conducted in conjunction with the traffic counts summarized above. The TMCs were used to establish the study area network peak hour volumes for the existing conditions analysis. The weekday morning peak hour was determined to be from 8:00 AM to 9:00 AM while the evening peak hour was from 5:00 PM to 6:00 PM. The Saturday peak hour occurred 12:45 PM and 1:45 PM. No seasonal adjustments were required based on VHB's research of this area. The existing weekday morning, weekday evening, and Saturday peak hour traffic volumes are shown in Figures 5.3, 5.4, and 5.5, respectively. The raw count data are included in Appendix C.

5.4.5 Pedestrians and Bicycles

Pedestrian volumes observed during the same weekday morning, weekday evening, and Saturday morning peak hours identified earlier are summarized in Figures 5.6 through 5.8. Currently observed bicycle volumes throughout the traffic study area also are highlighted in Figures 5.9 through 5.11 for the weekday morning, weekday evening, and Saturday midday peak hours, respectively. While nominal bicycling activity was observed within the study area, there is increased attention in providing improved bicycle amenities within this area. As part of city-wide efforts to promote biking, the City of Boston created the "Boston Bikes" program in 2007 to focus on improvements in engineering, enforcement, education, encouragement, and evaluation of biking. Through this program, the city has categorized most of the roadways within the traffic study area as being suitable for intermediate to advanced bicyclists.

In the fall of 2013, BTD published its *Boston Bike Network Plan*[2] which laid out a plan for creating safer streets for bicycling. The five-year action plan in that report calls for Guest Street to the west of the Project Site to have protected bicycle lanes. That treatment also is specified for Cambridge Street to the northwest of the Franklin Street/Harvard Street intersection. For the segment of Cambridge Street between this intersection and Union Square to the southwest, exclusive bike lanes are anticipated. Likewise, the plan also envisions exclusive bike lanes being provided for North Beacon Street within the study area. On a longer-term basis, the 30-year vision presented in that plan identifies Guest Street between Market Street and the Project Site as being part of a primary route connecting neighborhoods and employment centers as part of the overall bicycle network. As discussed later in greater detail, the Guest Street Extension to be constructed through the Project Site will be entirely consistent with this vision and will feature separated bike lanes on both sides of the road. These new bike facilities will connect to the existing exclusive bicycle lanes already in place on Guest Street further to the west. In addition, all other internal roadways within the Site are being designed to be bicycle friendly.

The City of Boston is also continuing to advance the city-wide bike-sharing program known as "Hubway", under which there are currently 180 bike-sharing stations provided in the greater Boston area for over 1,600 bicycles. This program began operating in July 2011 and the goal is for it to continue expanding with accommodations for over 5,000 bikes at 300 bike-sharing stations.

5.4.6 Existing Public Transit

Buses

The study area is currently well served by five MBTA bus routes within a half mile of the Project Site, as shown in Figure 5.12. Direct access to the Project Site is provided by Route 64, with a stop located adjacent to the Project Site at Guest Street and Arthur Street. Routes 57, 66, 86, and 70/70A all operate within a half mile of the Project Site. The nearest stops on Routes 57 and 66 are located at Union Square. The

2 Boston Bike Network Plan – Boston Transportation Department (Boston, Massachusetts) Fall 2013.

nearest stop on Route 86 is located on Market Street and the nearest stop on Route 70/70A is located on Western Avenue. The B Branch of the MBTA Green Line at the Warren Street station also is located slightly over one-half mile from the Project Site. Peak period frequencies/headways for MBTA bus services are summarized in Table 5-3.

Table 5-3 Project Area MBTA Service

Service	Origin / Destination	Peak-Hour Frequency (minutes)
Route 64	Oak Square – Kendall/MIT	13-30
Route 57	Watertown Yard – Kenmore Station	5-12
Route 66	Harvard Square – Dudley Station	9-11
Route 86	Sullivan Square – Reservoir	10-18
Route 70/70A	Waltham/North Waltham – Central Square/ University Park	9-18
B Branch Green Line	Park Street – Boston College	6

Source: MBTA

Commuter Rail

Construction of the Boston Landing MBTA commuter rail station next to the Project Site recently was completed and the station became operational in late May 2017. The new commuter rail station serves the MBTA Framingham/Worcester Commuter Rail Line, which operates between Union Station in Worcester and South Station in Boston. This new station provides commuter rail access to the Project Site to and from the Back Bay and downtown Boston, as well as points to the west. The new Boston Landing MBTA commuter rail station has the same general frequency of service as most of the other stations along this line, including the nearby Auburndale, West Newton, and Newtonville stops. Specifically, the first of six-weekday morning peak-period inbound stops occurs at 6:42 AM, with subsequent trains arriving at approximate 35-minute intervals. Eight additional stops are scheduled throughout the day with the last train arriving at 7:42 PM. In the outbound direction, there are eleven total stops over the course of the day, with six occurring in the afternoon peak-period. The headways between trains during the weekday afternoon peak period ranges from 25- to 60-minutes. Weekend service also is offered at the Boston Landing MBTA commuter rail station with the same number of stops and headways found at other stations along this line. The complete Framingham/Worcester Line schedule is provided for reference in Appendix C.

5.4.7 Public Parking

The parking accommodations associated with the Proposed Project are discussed in detail in the Future Conditions section of this chapter. The Proposed Project has been designed so that its parking needs can fully be accommodated within the

Project Site without affecting the availability of existing public parking in the surrounding area. That section also summarizes an inventory, which was conducted of the existing on-street public parking within the study area. This existing parking currently serves the various commercial and residential uses in the area. In conjunction with the recent reconstruction of Guest Street within the adjacent Boston Landing site, on-street parallel parking is now provided on that roadway between Life Street and Arthur Street. In total, there are currently almost forty parking spaces in this area with accompanying signage indicating a two-hour limit for parking between 8 AM and 6 PM, Monday through Saturday. On-street parallel parking with various time-of-day restrictions also is provided along North Beacon Street throughout the study area. The overall existing on-street parking within the traffic study area is shown in Figure 5.13.

5.4.8 Crash Analysis

A detailed crash analysis was conducted to identify potential vehicle accident trends and/or roadway deficiencies in the traffic study area. The most current vehicle accident data for the traffic study area intersections were obtained from MassDOT for the years 2010 to 2014. The MassDOT database is comprised of crash data from the Massachusetts Registry of Motor Vehicles (RMV) Division primarily for use in traffic studies and safety evaluations. Data files are provided for an entire city or town for an entire year, though it is possible that some crash records may be omitted either due to individual crashes not being reported, or the city crash records not being provided in a compatible format for RMV use. It also should be noted that the location for some accidents cannot be precisely determined from the database. These locations typically involve interchange intersections. A summary of the study intersections vehicle accident history based on the available RMV data is presented in Table 5-4 and the detailed crash data is provided in Appendix C.

Crash rates are calculated based on the number of accidents at an intersection and the volume of traffic traveling through that intersection on a daily basis. Rates that exceed MassDOT's average for accidents at intersections in the district in which the town or city is located could indicate safety or geometric issues for a particular intersection. As Boston is in MassDOT's District 6, the calculated crash rates were compared to those of MassDOT District 6, which are 0.70 for signalized intersection and 0.53 for unsignalized intersections. These rates imply that, on average, 0.70 accidents occurred per million vehicles entering signalized intersections throughout District 6, and 0.53 accidents occurred per million vehicles entering unsignalized intersections.

Review of the accident data indicates that all the study area intersections are below the district crash rate averages. The intersections of North Beacon Street/Brighton Avenue at Cambridge Street and Market Street at Leo M. Birmingham Parkway/ Lincoln Street had the highest number of crashes in the study area with a total of fifteen crashes occurring at each intersection over the five-year period. The most common type of crashes at the two intersections were angle crashes and single vehicle crashes. Six of the fifteen crashes at the intersection of North Beacon Street/Brighton Avenue at Cambridge Street involved non-motorists (pedestrians,

bicyclists) while none of the crashes at the intersection of Market Street at Leo M. Birmingham Parkway/Lincoln Street involved non-motorists.

While some of the study area intersections may experience general congestion and other operational issues, based on the analysis summarized above there are no prevalent crash issues requiring further evaluation. However, as noted earlier, improvements to key locations will be implemented as part of the Proposed Project.

Table 5-4 Vehicular Crash Summary (2010-2014)

	Market Street at Birmingham Parkway/ Lincoln Street	Market Street at Guest Street/ Stockyard Driveway	Market Street at Vineland Street	Market Street at North Beacon Street	Market Street at Faneuil Street	Market Street at Sparhawk Street/ Arlington Street	North Beacon Street at Life Street/Etna Street	North Beacon Street at Murdock Street/ Self-Storage Driveway	North Beacon Street at Hichborn Street/ Dustin Street	North Beacon Street at Arthur Street/ Wingate Driveway	North Beacon Street at Saunders Street	North Beacon Street at Gordon Street
Signalized?	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes	No	No
MassDOT Average Crash Rate	0.70	0.70	0.53	0.70	0.70	0.70	0.70	0.53	0.53	0.70	0.53	0.53
Calculated Crash Rate	0.27	0.04	0.03	0.13	0.14	0.17	0.15	0.03	0.00	0.06	0.04	0.03
Exceeds Average?	No	No	No	No	No	No	No	No	No	No	No	No
Year												
2010	3	2	0	0	0	2	2	0	0	0	0	1
2011	4	0	0	1	3	1	0	0	0	1	0	0
2012	2	0	0	1	1	1	0	0	0	1	1	0
2013	3	0	0	4	1	2	2	0	0	0	0	0
2014	3	0	1	1	0	0	0	1	0	0	0	0
Total	15	2	1	7	5	6	4	1	0	2	1	1
Collision Type												
Angle	6	0	1	4	3	3	1	0	0	2	0	1
Head-on	0	1	0	0	0	1	0	0	0	0	0	0
Rear-end	3	1	0	1	1	0	1	0	0	0	0	0
Rear-to-rear	0	0	0	0	0	0	0	0	0	0	0	0
Sideswipe, opposite direction	1	0	0	0	0	2	0	0	0	0	0	0
Sideswipe, same direction	2	0	0	1	0	0	0	0	0	0	0	0
Single Vehicle Crash	3	0	0	1	0	0	1	1	0	0	1	0
Not reported	0	0	0	0	1	0	1	0	0	0	0	0
Severity												
Fatal Injury	0	0	0	0	0	0	0	0	0	0	0	0
Non-Fatal Injury	8	1	0	3	2	3	1	0	0	1	0	0
Property Damage Only	6	0	1	3	2	1	0	1	0	0	0	0
Not Reported	1	1	0	1	1	2	3	0	0	1	1	1
Time of day												
Weekday ,7:00 AM - 9:00 AM	1	0	0	3	1	0	0	0	0	0	0	0
Weekday, 4:00 – 6:00 PM	3	0	0	0	1	0	0	0	0	0	0	0
Saturday 11:00 AM – 2:00 PM	2	0	0	0	3	0	1	0	0	0	0	0
Weekday, other time	7	2	1	4	0	1	2	0	0	2	1	1
Weekend, other time	2	0	0	0	0	5	1	1	0	0	0	0
Pavement Conditions												
Dry	9	1	1	3	4	6	4	1	0	2	1	1
Wet	6	1	0	4	1	0	0	0	0	0	0	0
Snow	0	0	0	0	0	0	0	0	0	0	0	0
Ice	0	0	0	0	0	0	0	0	0	0	0	0
Slush	0	0	0	0	0	0	0	0	0	0	0	0
Not reported	0	0	0	0	0	0	0	0	0	0	0	0
Non-Motorist (Bike, Pedestrian)	0	0	0	1	1	1	1	1	0	1	0	0

Source: Crash data was obtained from MassDOT

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Table 5-4 Vehicular Crash Summary (2010-2014) (continued)

	North Beacon Street at Everett Street/ KFC Driveway	North Beacon Street/ Brighton Avenue at Cambridge Street	Cambridge Street at Hano Street	Cambridge Street at Denby Road	Cambridge Street at Harvard Avenue/ Franklin Street	Braintree Street at Rugg Road	Everett Street at Western Avenue	Everett Street at Everett Street (north)	Everett Street at Stop & Shop Driveway	Everett Street at Everett Street (south)	Everett Street at Blaine Street	Everett Street at Braintree Street	Guest Street at Life Street	Guest Street/ Stop & Shop Driveway at Arthur Street
Signalized?	Yes	Yes	No	Yes	Yes	No	Yes	No	No	No	No	No	No	No
MassDOT Average Crash Rate	0.70	0.70	0.53	0.70	0.70	0.53	0.70	0.53	0.53	0.53	0.53	0.53	0.53	0.53
Calculated Crash Rate	0.11	0.29	0.22	0.09	0.15	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.18	0.00
Exceeds Average?	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Year														
2010	1	4	1	1	3	0	1	0	0	0	0	0	1	0
2011	1	3	1	0	0	0	0	0	0	0	0	0	0	0
2012	1	4	2	0	0	0	1	0	0	0	0	0	1	0
2013	1	3	1	0	1	0	2	0	0	0	0	0	0	0
2014	0	1	0	1	2	0	1	0	0	0	0	0	0	0
Total	4	15	5	2	6	0	5	0	0	0	0	0	2	0
Collision Type														
Angle	0	1	2	1	3	0	2	0	0	0	0	0	0	0
Head-on	1	1	0	0	0	0	1	0	0	0	0	0	0	0
Rear-end	0	1	2	0	2	0	1	0	0	0	0	0	1	0
Rear-to-rear	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sideswipe, opposite direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sideswipe, same direction	0	3	0	0	1	0	0	0	0	0	0	0	1	0
Single Vehicle Crash	1	5	1	0	0	0	1	0	0	0	0	0	0	0
Not reported	2	4	0	1	0	0	0	0	0	0	0	0	0	0
Severity														
Fatal Injury	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Non-Fatal Injury	1	7	2	0	4	0	2	0	0	0	0	0	1	0
Property Damage Only	2	5	2	0	1	0	0	0	0	0	0	0	1	0
Not Reported	1	3	0	2	1	0	3	0	0	0	0	0	0	0
Time of day														
Weekday ,7:00 AM - 9:00 AM	1	0	1	0	1	0	0	0	0	0	0	0	1	0
Weekday, 4:00 – 6:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	1	0
Saturday 11:00 AM – 2:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Weekday, other time	2	9	4	2	3	0	4	0	0	0	0	0	0	0
Weekend, other time	1	3	0	0	1	0	1	0	0	0	0	0	0	0
Pavement Conditions														
Dry	3	9	4	0	3	0	4	0	0	0	0	0	2	0
Wet	0	5	1	1	1	0	1	0	0	0	0	0	0	0
Snow	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ice	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Slush	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not reported	1	1	0	0	1	0	0	0	0	0	0	0	0	0
Non-Motorist (Bike, Pedestrian)	2	6	2	0	0	0	1	0	0	0	0	0	0	0

Source: Crash data was obtained from MassDOT

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5.5 Future Conditions

5.5.1 2023 No-Build Condition

The 2023 No-Build Condition was developed to evaluate future transportation conditions in the traffic study area without consideration of the Proposed Project. In accordance with MassDOT guidelines, this future analysis year represents a seven-year horizon from 2016 existing conditions. The No-Build Condition provides insight to future traffic conditions caused by regional growth, as well as specific planned projects that are expected to affect the local roadway network.

A background growth rate of one-percent per year was applied to the traffic volumes. This growth rate is consistent with (and in some cases, higher than) growth rates utilized in other recent traffic studies for other developments in this area. Use of the one-percent growth rate is appropriate in this instance, as it will help to account for traffic generated by multiple other smaller developments in the area not included in this listing of larger development project provided below.

In addition to the background growth rate, traffic projections for several specific projects were incorporated in the development of the No-Build Condition. These include the following development projects:

- **Boston Landing** – involves the ongoing construction of approximately 1.4 million square feet (sf) of new development. Boston Landing is located directly west of the Project Site on both the north and south sides of Guest Street. This project includes the construction of a new world headquarters for New Balance, practice facilities for the Boston Bruins and the Boston Celtics, a track and field complex, a hotel, office space and retail/restaurant space. Boston Landing will also include up to 1,750 parking spaces. Overall, Boston Landing consists of approximately 900,000 sf of office space (including the 250,000 sf New Balance headquarters building), 175 hotel rooms, 64,000 sf of retail, a 275,000-sf sports facility building, and a new Boston Bruins practice facility. In May 2016, the Boston Landing project proponent reduced the planned building at 40 Guest Street to include approximately 90,000 sf of office space as compared to its originally proposed 225,000 sf size. The Boston Landing project also now includes a residential component, which is discussed under the "125 Guest Street" heading in the following section. As noted earlier, the new Boston Landing MBTA commuter rail station opened at the end of May 2017 with full service to the Framingham/Worcester commuter rail line now being provided.

  While the Boston Landing development has been permitted, it has not yet been fully constructed. Accordingly, traffic associated with that project was assigned to the study area roadway network considering the projected volumes associated with that development as compared to the current volume of traffic generated by that site at the time of the traffic data collection for this study. As of September 2015, approximately 700 employees had moved into the new 250,000 sf New Balance headquarters building on the Boston Landing site. That

translated into roughly 25-percent of the total office space on that site being occupied at the time of the traffic counts used for this assessment. Accordingly, the volume of that traffic associated with the occupied office use was subtracted from the overall Boston Landing trip assignment to the study area roadway network. The approximately 600-seat practice arena for the Boston Bruins also opened in fall 2016 prior to some of the traffic data collection for this assessment. While some of the traffic counts for this current traffic evaluation were conducted after that facility was open, this assessment was conducted in a conservative manner without taking credit for traffic associated with the practice facility that already is traveling through some of the study area intersections.

- **125 Guest Street** – involves the construction of 295 residential units and 16,000 sf of ground-floor retail, which was permitted by the Third Amendment to the Boston Landing Master Plan approved in 2014. This site is located directly west of the Project Site on Guest Street across from the New Balance World Headquarters, with construction ongoing.
- **31 North Beacon Street** – involves the construction of 20 residential units and 2,170 sf of ground-floor retail to be located adjacent to the intersection of North Beacon Street and Everett Street, south of the Project Site.
- **61 – 83 Braintree Street** – involves the construction of 80 residential units and 2,550 square feet of ground-floor retail to be located east of the Project Site on Braintree Street adjacent to the Turnpike and MBTA commuter rail tracks. This project has recently been completed with residents now occupying this building.
- **26 Hi̓chborǹ Street** – consists of 20 residential units and 1,774 sf of ground-floor retail. This site is located southwest of the Project Site on Hichborn Street.
- **159 – 201 Washington Street** – involves the construction of 680 residential units on an 11.6-acre site currently occupied by St. Gabriel's Church and Monastery, a cemetery, and a Shrine to Our Lady Fatima, among other uses. This project will preserve and rehabilitate the Monastery and shrine while demolishing the rest of the site. This site is located south of the Project Site adjacent to St. Elizabeth's Medical Center.
- **139 – 149 Washington Street** – consists of approximately 250 apartments and 30 condominiums. This site is located south of the Project Site adjacent to the proposed development at 159-201 Washington Street.
- **Western Ave. Residences** – involves the construction of 132 residential units and 5,180 sf of ground-floor retail. This site is located northwest of the Project Site on the corner of Western Avenue and Leo M. Birmingham Parkway.
- **61 North Beacon Street** – as part of it original "District 9 at 61 North Beacon Street" development proposal, this site was approved to consist of 71 condominium units to be located within an historic five-story, 71,000 sf building. The building program has since been modified to include the relocation of the existing Boston Volvo Village dealership to the west, with approximately 28,000 sf of office and/or research and development space.
- **Boston Volvo Village Dealership Site Redevelopment** – The Boston Volvo Village dealership site is located directly south of the Project Site on Arthur Street and North

Beacon Street. While there is no definitive development program, the site has the potential for redevelopment beyond the 61 North Beacon Street development identified above. Therefore, this potential redevelopment of the existing dealership site also has been included as a background project because of its vicinity to the Project Site and its potential impact on the surrounding roadway network to provide a conservative analysis. Due to the potential status of the Boston Volvo Village dealership redevelopment project, it has only been included in the "Post-Build" analysis of this Transportation Study and not in the "No-Build" analysis. This analysis was conducted using an assumed development program solely for the purposes of this study. The capacity analysis worksheets and overall summary for the analysis is provided for reference in Appendix C. However, traffic generated by the approved "District 9 at 61 North Beacon Street" development, which is the initial phase of this overall redevelopment project, has been included in the No-Build analysis as noted above.

- **40 Rugg Road** – A proposed residential development is planned on a 1.89-acre site located between Rugg Road, Penniman Road, and Braintree Street to the east of the Project Site. A 262-unit development is proposed, with 3,485 sf of supporting retail space. A traffic study for that planned development was not available at the time the Transportation Study for the Proposed Project was prepared. Therefore, the 40 Rugg Road background traffic assignment was estimated for the Proposed Project Transportation Study and included in the Post-Build analysis noted above. This analysis is provided for reference in Appendix C. A traffic study subsequently was prepared for the proposed 40 Rugg Road development, with traffic generation assumptions similar to those used for the Proposed Project background traffic projections.

In addition to the projects listed above, additional development sites recently have been proposed within the study area since the development of this study. These include a new automobile dealership replacing the former Martignetti's liquor store, an 82-unit condominium building at 70 Leo Birmingham Parkway, a 29-unit apartment building at 212-214 Market Street, and a 46-unit condominium building at 46 Hichborn Street. These developments mostly are replacing existing land uses already generating traffic volumes similar to those projected with the new developments. Accordingly, the studies for these projects reveal that any associated traffic increases should be limited to ten or fewer additional peak-hour trips. That nominal level of increased traffic is sufficiently accounted for through the annual growth rate used in this study.

The 2023 No-Build Condition peak-hour traffic volumes were developed by increasing the 2016 Existing Condition volumes to include general background traffic growth as previously described, and adding traffic volumes associated with known traffic forecasts projected for other development projects in the area. As summarized above, this background traffic includes both the adjacent Boston Landing development as well as the other nearby projects described above.

Figures 5.14, 5.15, and 5.16 present the 2023 No-Build Condition traffic volumes for the weekday morning, weekday evening, and Saturday midday peak hours, respectively.

Future Roadway Improvements

In the Proponent's meetings to date with the BPDA and BTD there were not any definitive planned municipal roadway improvement projects identified within the traffic study area. The only exception to this is a recently-implemented bicycle improvement project discussed in the section below.

While the Guest Street Planning Study identified various potential changes to the surrounding roadway network, none of those changes are expected to be implemented in the immediate future. However, the traffic studies prepared to date for the adjacent Boston Landing development have proposed an extension of Guest Street from Arthur Street to Everett Street, similar to what is currently proposed in conjunction with the Proposed Project. The prior Guest Street extension proposal (by the Boston Landing development) involved that roadway extension diverting in a southeasterly direction from Arthur Street and extending along the southerly Project Site property line. The connecting point to Everett Street was proposed to be located just south of the existing office building located at 38 Everett Street, which would have required the parking lot serving that building to be reconfigured. As discussed in detail later in this Chapter, the Proposed Project's Guest Street Extension is a straight, direct link to Everett Street between the northerly and southerly sides of the development.

The Proposed Project allows for this essential piece of roadway infrastructure (the Guest Street Extension) to be implemented as part of the initial construction of the Project Site. If the Project Site was not proposed to be redeveloped, then this connection would not be feasible, which in turn would not allow for the full development potential of the surrounding development sites to be achieved.

Everett Street Bicycle Improvements

As part of its regular efforts to undertake neighborhood bike projects, BTD recently added bike lanes and shared-lane pavement markings on Everett Street, including the portion of this roadway adjacent to the Project Site. This project was constructed in the spring of 2017 and involved improved bicycle accommodations from North Beacon Street extending to Western Avenue to the north. As part of the Proposed Project, the newly signalized Everett Street/Guest Street/Old Everett Street intersection will be designed to tie into these newly installed amenities, in addition to those being provided within the Project Site.

5.5.2 Future Trip Generation

Proposed Project-generated Trips

To assess the traffic impacts of the Proposed Project, trip estimates were based on standard data from the Institute of Transportation Engineers (ITE) Trip Generation.[3] Trip generation for the proposed mixed-use development was estimated based on ITE Land Use Codes (LUC) for the primary Project Site components. The rate at which

3 Trip Generation; Ninth Edition; Institute of Transportation Engineers; Washington, D.C.; 2012.

any development generates traffic is dependent upon several factors such as size, location and concentration of surrounding development.

Estimating the traffic associated with the Proposed Project is a complicated exercise due to the variety of uses involved, recent changes in transit service in the area, and other factors. Accordingly, trip generation for each of the major proposed uses are discussed below in separate sections. The effect of shared trips, transit amenities, pedestrian/bicycle travel, and other factors are also noted and incorporated into the overall analysis where appropriate.

The following sections summarize the anticipated trip generation for each of the major proposed uses, as presented in Table 5-1.

Table 5-5 Trip Generation Land Use Codes

Land Use	ITE Land Use Code (LUC)	Independent Variable	Component Size[1]
Residential	220 – Apartments	Dwelling units	Up to 1,050 units
Office	710 – General Office Building	Square feet (sf)	300,000 GSF
Retail/ Restaurant	820 – Shopping Center	Square feet	50,000 GSF
Supermarket	850 – Supermarket	Square feet	67,000 GSF

GSF Gross Square Feet including mechanical/unusable space.

1 Proposed Project trip generation based on prior development proposal (which has since been reduced) including 1,017 residential units, 316,000 sf of office space, 52,000 sf of retail space, and a 62,000 sf supermarket.

As noted above, trip generation for the Proposed Project was estimated based on an earlier development program which has been modified as presented in Table 5-5. As these changes involve reductions to the amount of building space (and associated traffic generation) the results presented in this Chapter are slightly overstated, which results in a conservative analysis.

› **Apartments** – ITE LUC 220 "Apartment." ITE provides data for alternate residential land use codes (such as "Mid-Rise Apartment" and "High-Rise Apartment") that closely match the definition of the apartments proposed. However, this study was conducted using ITE data for standard apartments. This approach was taken due to both the greater number of data points in the "Apartment" database, along with the resulting higher overall trip generation. Therefore, by using the higher-generating apartment use, the analysis results presented in this assessment are somewhat conservative.

› **Office space** – ITE LUC 710 "General Office Building." Traffic generated by the proposed office component of the Project Site was estimated utilizing standard ITE data for general office space.

› **Grocery store** – ITE LUC 850 "Supermarket." The proposed 67,000 sf of grocery store space will accommodate the new grocery store which will replace the existing facility on the Project Site. Accordingly, as this existing store has a

similar total size and already has an established customer base, it is expected that the same existing customer base will continue to visit the store, regardless of the slight reduction in the actual internal grocery space size compared to existing conditions. Any increase in grocery activity likely will be limited to walk-in trips by residents and workers within the Project Site, and not additional off-site vehicle trips. Accordingly, the grocery store trip generation (as calculated using the ITE Supermarket data for the existing slightly larger total store size) is expected to be maintained under future conditions with development of the Proposed Project. While the proposed Building 1 also will include community gathering space, that new use is not expected to generate noticeable volumes of traffic during the critical peak hours studied. Instead, activity within that space should be more ancillary in nature and not result in notable volumes of vehicular traffic being drawn to the Project Site.

- **Retail shops/restaurants** – ITE LUC 820 "Shopping Center." While the proposed street-oriented retail shops and restaurants more closely match ITE's definition of a "Specialty Retail Center", there are only limited data available for that land use code (LUC 826). Accordingly, initial trip generation estimates for the 50,000 sf of general retail/restaurant space were conducted using ITE's shopping center trip generation data. Calculating trip generation in this manner also accounts for the likely occurrence of internal shared trips between the retail, restaurant, and grocery uses.

The resulting "base" trip generation estimates are provided in Table 5-6.

Table 5-6 Unadjusted Trip Generation Summary

Use	Apartments	Office	Retail/ Restaurants	Grocery	Unadjusted Total
Size[1]	**1,050 units**	**300,000 sf**	**50,000 sf**	**67,000 sf**	
Unadjusted Vehicle Trips					
Weekday					
Daily (vpd)	6,285	3,150	3,225	6,600	**19,260**
Morning Peak (vph)					
Enter	100	425	45	165	**735**
Exit	400	60	30	100	**590**
Total	500	485	75	265	**1,325**
Evening Peak (vph)					
Enter	375	75	135	330	**915**
Exit	200	360	150	315	**1,025**
Total	575	435	285	645	**1,940**
Saturday					
Daily (vpd)	7,725	675	4,365	13,810	**26,575**
Midday Peak (vph)					
Enter	220	75	215	400	**910**
Exit	220	65	200	385	**870**
Total	440	140	415	785	**1,780**

Source: Trip Generation Manual – 9th Edition, Institute of Transportation Engineers (ITE), Washington D.C. (2012). Land Use Codes (LUC) 220 (Apartment), LUC 701 (General Office Building), LUC 820 (Shopping Center) and LUC 850 (Supermarket) used to estimate trip generation for the individual site components based on components size. The base trip generation estimates were subsequently categorized into transit, walk, bike or vehicular trips following BTD's guidelines for Zone 17.

1 Proposed Project trip generation based on prior development proposal (which has since been reduced) including 1,017 residential units, 316,000 sf of office space, 52,000 sf of retail/restaurant space, and a 62,000 sf Stop & Shop Supermarket. Base trip generation for proposed grocery store assumed to remain unchanged from current levels at larger (77,764 sf) total store size (including non-sales mezzanine area).

vpd = vehicles per day

vph = vehicles per hour

Following this calculation of the "base" trip generation estimates, the volumes summarized in Table 5-6 were further categorized into internal/shared trips, transit trips, and trips made by bicycle or walking. The following section discusses the methodology used for this analysis.

Mode Share and Vehicle Occupancy Rates

After the initial calculation of the "base" Proposed Project trip generation using ITE data, further adjustments were made to account for local mode share following

guidelines provided by BTD for individual city zones. This mode-shared calculation is critical to the evaluation of overall Proposed Project-related traffic impacts, as there will be a mixture of automobile travel to the Project Site, along with residents and customers that utilize public transit or walk and/or bike. As the Proposed Project Site falls within Zone 17 (the Allston-Brighton neighborhood), data for this area were used for the assignment of Proposed Project trips to the study area roadway network. This methodology is consistent with that used in the traffic studies prepared for the adjacent Boston Landing development.

Transit and bike/pedestrian activity was further evaluated by considering local vehicle occupancy rates (VOR) derived from the 2001 National Household Travel Survey based on Census Tract data.

Based on BTD data for the surrounding neighborhood, a substantial portion of the Proposed Project-generated trips is expected to use the MBTA transit system, either in the form of MBTA bus trips or trips associated with the adjacent MBTA commuter rail stop which recently opened in May 2017.

Trip Generation Summary

The increased automobile traffic generated by the overall Proposed Project is summarized in Table 5-7, along with the expected cumulative breakdown of trips by transits, biking, walking, and internal shared traffic.

Table 5-7 Adjusted Trip Generation Summary

Time Period	Total Unadjusted Trips	Existing Trips	Shared Trips [1]	Transit/Bike/ Walk Credit [2]	Pass-by Trips [3]	Total Adjusted Trips
Weekday						
Daily (vpd)	19,260	3,635	1390	9,590	175	**4,470**
Morning Peak (vph)						
Enter	735	60	15	420	0	**240**
Exit	590	40	15	340	0	**195**
Total	1,325	100	30	760	0	**435**
Evening Peak (vph)						
Enter	915	155	50	535	0	**175**
Exit	1,025	145	50	620	0	**210**
Total	1,940	300	100	1,155	0	**385**
Saturday						
Daily (vpd)	26,575	6,210	2015	13,565	515	**4,270**
Midday Peak (vph)						
Enter	910	245	55	445	10	**155**
Exit	870	225	55	435	10	**145**
Total	1,780	470	110	880	20	**300**

1 Shared-trips calculated using guidelines recommended by ITE's Trip Generation Handbook, 2nd Edition (2012).

2 The base trip generation estimates were subsequently categorized into transit, walk, bike or vehicular trips following BTD's guidelines for Zone 17.

3 25-percent pass-by rate assumed for retail and supermarkets uses.

vpd = vehicles per day

vph = vehicles per hour

As shown in Table 5-7, compared to the existing Project Site, the Proposed Project will result in an additional 435 and 385 new vehicle trips during the weekday morning and evening peak hours, respectively, compared to existing conditions after appropriate adjustments for transit use, biking, walking, and internal shared trips. There also is expected to be an increase of 300 adjusted new vehicle trips during the Saturday midday peak hour following these same adjustments. These "new" trips represent the additional traffic that will be traveling to and from the Site after appropriate deductions for transit use, and travel by walking or biking.

With the Proposed Project, both the total size of the grocery store and retail space will be changing, within a new mixed-use setting. Specifically, there will be approximately 114,000 sf of total building space devoted to grocery store, retail, or restaurant uses compared to the existing 112,348 sf of combined grocery/retail space. When considering the internal trip-sharing and transit use associated with the Proposed Project there will be a negligible change in the amount of combined retail/grocery traffic generated by the Proposed Project. Accordingly, there should also be a negligible change in the amount of impulse/pass-by traffic drawn to the Project Site. Instead, the increased volumes shown in Table 5-7 will be more closely associated with the new residential and office uses.

The trip generation projections presented above assume internal traffic is being "captured" between the various uses proposed within the Project Site. For example,

some of the future office workers may also live on-site. Likewise, some office workers may choose to walk to one of the supporting on-site retail shops or restaurants as opposed to having to drive off-site for this purpose. Based on standard ITE procedures, the level of this trip-sharing will range between 5- and 12-percent of the total Project Site's peak-hour traffic. Ordinarily, these shared trips would involve drivers visiting one use within the Project Site also driving to another use as part of the same visit. In this instance, most of these trips should be in the form of people walking to a second use after initially driving to the Project Site. Accordingly, the overall Proposed Project trip generation was adjusted to reflect the shared trips between these uses, but without additional vehicle traffic resulting from people driving from one internal use to another.

Initial Project Development – Building 1 Trip Generation

As noted earlier, the Proposed Project will be developed through a long-term multi-phased approach over several years. With the initial construction of Building 1, the supermarket will move from its current location to the new building, along with approximately 360 newly constructed residential units. The total external vehicle trips associated with the Building 1 construction will not differ significantly from the current Project Site development due to the changes in the amount of retail space. With the changes in the amount of retail space, there should be a negligible change in external traffic during the weekday evening and Saturday midday peak hours. Even with the additional of the 360 new residential units there should only be a 50-trip increase during the weekday morning peak hour following the construction of Building 1.

Regardless of the negligible change in Site traffic generation during this initial phase of work, Guest Street Extension will be constructed connecting Arthur Street to Everett Street. As part of this work, a new full-access signalized intersection will be constructed at Guest Street's intersection with Everett Street and Old Everett Street. Likewise, the Arthur Street/Guest Street intersection at the west end of the Project Site also will be reconfigured as part of this initial phase. Work at this intersection will include the installation of a new traffic signal with associated physical improvements to address long-standing geometric deficiencies. As part of the initial phase of the Project, the Proponent will install the necessary underground infrastructure needed for the new signal. The Proponent's installation of these loop detectors and other associated equipment in conjunction with the 125 Guest Street project will minimize any future construction impacts on this area during the subsequent signal installation. These improvements are being designed to, and are sufficient to, accommodate both the Proposed Project traffic, as well as vehicle trips estimated to be generated by the adjacent Boston Landing project and other nearby projects. The benefits associated with these improvements are discussed in greater detail in Section 5.5.4.

5.5.3 Traffic Distribution

While the mode-share splits are largely dependent on existing land uses within a given BTD city section, the arrival/departure patterns are more closely associated

with the existing roadway infrastructure. Accordingly, trip distribution was based on BTD's guidelines for Zone 17 (where the Project Site is located). These guidelines, based on 2000 census data, provide information on where area residents work and where area employees live. Using these data, vehicle trips can then be assigned to the roadway network. Trip distribution patterns were established separately for the residential and the retail/commercial uses. A summary of the primary roadways of origin of vehicles traveling to the Proposed Project is summarized in Table 5-8 and shown in Figure 5.17.

Table 5-8 Geographic Trip Distribution

	Trip Distribution	
Corridor	**Residential**	**Commercial**
Market Street (to/from north)	5%	9%
North Beacon Street (to/from west)	10%	12%
Faneuil Street (to/from west)	4%	4%
Sparhawk Street (to/from west)	2%	2%
Market Street (to/from south)	16%	17%
Dustin Street/Murdock Street (to/from south)	3%	3%
Cambridge Street (to/from southwest)	3%	2%
Brighton Avenue (to/from east)	4%	3%
Cambridge Street (to/from northeast)	29%	26%
Harvard Avenue (to/from south)	4%	3%
Everett Street (to/from north)	20%	19%
Total	**100%**	**100%**

The net-new Proposed Project-generated vehicle trips were added to the No-Build traffic networks using the distribution patterns summarized in Table 5-8 above. Traffic volume network worksheets are provided in the Appendix C. The resulting 2023 Build Condition networks are shown in Figures 5.18, 5.19, and 5.20 for the weekday morning, weekday evening, and Saturday midday peak hours, respectively.

A comprehensive operational and capacity analysis of the study area intersections is presented later in this chapter.

5.5.4 Proposed Site Access Plan

Existing Site Access

While the Project Site abuts, or is near multiple prominent local roadways, existing access is constrained through restrictions at some of the existing driveways. Specifically, while the Project Site directly abuts Everett Street, only entering right-turn movements currently are allowed at the existing Project Site driveway. The

traffic counts conducted as part of this evaluation indicated that between 5 and 25 vehicles per hour still were turning left from Everett Street to enter the Project Site at this location. Furthermore, during these same peak hours, between 10- and 25 vehicles per hour were observed to use this right-turn, enter-only driveway to exit the Project Site. With the additional development proposed on Project Site, the need for full access to and from Everett Street will become even more critical.

The existing northerly access driveway to the Project Site is located opposite Braintree Street at its intersection with the lower portion of Everett Street. Similar to the existing Everett Street intersections, this driveway currently is restricted to entering traffic only. However, the traffic data collection for this study revealed that between 15 to 45 vehicles per hour were using this driveway to exit the Project Site.

Primary access to the Project Site currently is provided by way of the North Beacon Street (Route 20)/Arthur Street intersection. Access to/from the west is provided by Guest Street, which connects to Market Street. Both access/egress connections will remain in place as part of this Proposed Project. However, they will be improved and formalized through the reconstruction, and eventual signalization, of the Guest Street/ Arthur Street intersection.

Proposed Project Site Access

The Proposed Project will involve new enhanced connections being provided to Everett Street, Arthur Street, and Braintree Street. The new West Street and East Street roadways within the Project Site will enhance the use of these new connections by providing multiple options for internal traffic to circulate within this area. With these new full access/egress connections, along with the existing Market Street and North Beacon Street connections being maintained, Project traffic will have multiple options to enter and exit the Project Site. This improved Site access and egress will not be limited to just automobile traffic, but also will involve significant improvements to bicycle and pedestrian accommodations, as well as the potential for new MBTA bus stops along Guest Street Extension. These enhancements to the Project Site are highlighted in Figure 5.21. Additional discussion regarding the details of these improvements are provided in the following sections.

<u>Guest Street Extension</u>

In conjunction with the development of Building 1, Guest Street Extension will be constructed. This new roadway will be consistent with the vision of the Guest Street Planning Study, and will provide a new connection between existing Guest Street and Everett Street. The road is being designed to provide a full multi-modal environment consistent with the City of Boston's goals for this area. The Proposed Project allows for this essential piece of roadway infrastructure to be implemented as part of the initial construction of the Project Site. If the Project Site was not proposed to be redeveloped, then this connection would not be feasible, which in turn would not allow for the full development potential of the adjacent Boston Landing development site, or other sites, to be achieved.

Figure 5.22 presents the proposed construction of the Guest Street Extension and other associated improvements. Guest Street Extension will be almost 800 feet in length extending between Arthur Street and Everett Street. The general roadway cross-section will consist of single 11-foot wide through-lanes in each direction, along with an 11-foot wide center width to be used for either left-turn lanes at key intersections, or as a raised median. Eight-foot wide parallel parking spaces also will be provided along both sides of the road for most of its length, except for in the immediate vicinity of intersections. In addition to automobile traffic, the roadway has been designed to provide enhanced accommodations for both pedestrians and bicyclists. Five-foot wide separated bicycle lanes will be provided along both sides of the length of the newly constructed roadway. The bike lanes will be designed to follow current City- and industry standards, and will involve a 3-foot physical separation being provided between the bike lane and adjacent parking lane. Ample sidewalk space will be provided along both sides of the roadway between the new bike lane and the new buildings.

The Proponent also has initiated discussions with the MBTA regarding bus service currently provided at the Site. Guest Street Extension may provide opportunities for enhanced bus service to be provided beyond the current bus stop location on Arthur Street. This potential modified bus service was discussed at meetings with the Proponent and the MBTA held in December 2016, February 2017, and April 2017. Potential enhancements that were discussed included new bus stops being provided on both sides of Guest Street Extension near the midpoint of the Project Site to help accommodate the demand associated with both the existing grocery customer base, as well as new Site residents and workers. This potential new service and other aspects of the Project Site will continue to be discussed as part of the ongoing dialogue between the Project team and the MBTA.

Everett Street/Old Everett Street/Guest Street Extension Intersection

One of the key benefits of the Guest Street Extension will be the new full access and egress provided for the Project Site and other nearby developments. This will provide improved connectivity between the Project Site and the surrounding area, while helping to disperse traffic generated by the Project and other nearby planned or potential development. The improvements to this location will involve both geometric changes and the installation of a traffic signal. The following sections discuss the existing, deficient conditions which will be addressed by these improvements, and the general nature of these access improvements.

Existing Conditions

As noted earlier, the existing Project Site driveway on Everett Street allows only for entering right-turn movements. This restriction is enforced through both signage on the northbound Everett Street approach to the intersection, and "Do Not Enter" signs facing traffic that might wish to exit the Project Site onto Everett Street.

The existing Project Site driveway is located approximately 100 feet to the north of Everett Street's intersection with "Old" Everett Street, which is the lower roadway connection extending to the north to Braintree Street. That intersection currently

features a wide expanse of pavement, with the Old Everett Street southbound approach to the intersection operating under Stop-sign control. Signalizing the modified Everett Street/Old Everett Street/Guest Street Extension intersection also will allow for additional improvements to address existing deficient conditions at this intersection. Specifically, these improvements will help to address the current difficult unsignalized maneuvering of vehicles from Old Everett Street southbound to Everett Street northbound.

The newly constructed Guest Street Extension will intersect Everett Street at the same general location of this existing intersection. However, the new intersection now will allow full access and egress to and from the Site under signal control as discussed below.

Physical Geometric Improvements

The proposed intersection improvements will involve realigning Old Everett Street to intersect Everett Street, opposite Guest Street Extension. To do this, an approximately 100-foot section of the existing median separating Everett Street from Old Everett Street will need to be removed. This will allow for the grade of Old Everett Street to be modified to meet the existing Everett Street grade without impacting the residential properties to the east of Old Everett Street.

At this newly reconstructed intersection, Guest Street Extension will feature an exclusive left-turn lane with a shared through-/right-turn lane. The eastbound separated bike lane also will be transitioned from the west to a standard bike lane to be located between these two lanes to allow bicyclists to pass through the intersection. A single entering lane will be provided from Everett Street heading westbound into the Project Site. The northbound Everett Street approach will consist of a single shared through-/right-turn lane, and an exclusive left-turn lane. The southbound approach will be comprised of a shared left-/through-lane and a short exclusive right-turn lane. The realigned Old Everett Street to the east still will provide single travel lanes in each direction. However, the new intersection will provide improved delineation compared to the poorly defined, wide-open configuration of the existing intersection with Everett Street. Graphics depicting the newly reconfigured intersection superimposed upon an aerial photograph of existing conditions is provided in Figure 5.23.

With the geometric changes shown in Figure 5.23, changes to the grading of Old Everett Street and Everett Street also will be required as noted earlier in this section. Currently, the southbound Old Everett Street approach to its intersection with Everett Street is at a generally flat grade. When the existing median is cut back, the grade of Old Everett Street will be raised to meet Everett Street further to the north of where that intersection occurs today. The grade of the private roadway at the southeast corner of this intersection also will be raised to meet Everett Street at the new intersecting point. That existing residential driveway is located roughly 50 feet to the north of the Everett Street/Old Everett Street intersection. This driveway extends 100 feet to the east of this intersection to where it meets Blaine Street, a public, residential roadway extending 350 feet to the north to its terminus

at Braintree Street. The driveway will be realigned within the existing right of way as part of the intersection construction so that it intersects Everett Street just south of the Old Everett Street approach. This will result in a fifth leg being created to the intersection. A graphic depicting the resulting grading at this intersection is shown in Figure 5.24, and street-level renderings of this location also are discussed and presented later in this section. The newly reconstructed intersection geometry will be a notable improvement over the deficient existing conditions, and will operate efficiently with the signal operations described in the following section.

Signal Installation

Traffic at the newly-created, full-access intersection will be under traffic signal control. The signal phasing will involve an initial phase with a northbound "lead" phase on Everett Street during which opposing southbound traffic will be stopped. This will be followed by an Everett Street northbound/southbound phase during which left-turns still will be allowed into the Site permissively. The next phase in the sequence will be for the Guest Street Extension approach. With its minimal volume, the opposing westbound approach extending from Blaine Street also will run during this same signal phase. Finally, Old Everett Street traffic will operate under its own exclusive phase.

The access improvements will provide improved pedestrian accommodations. Specifically, new crosswalks will be provided across each intersecting leg of the intersection. The pedestrian crossings will occur as part of a concurrent operation under which pedestrians will be able to cross a roadway during an appropriate vehicular phase of the signal operation. New AAB-compliant sidewalks also will be constructed connecting to each of these newly created crosswalks.

The existing residential driveway extending from Blaine Street noted above also will be included in the new signal operation. However, the signal phase for this newly created fifth leg to the intersection will be called infrequently due to the low volume of traffic currently utilizing that street. The reconstructed and improved Everett Street/Old Everett Street/Guest Street Extension improvements can be implemented within the limits of the existing right-of-way and land within the Project Site. The resulting intersection operations are discussed in detail in Section 5.6.

Graphics depicting the northbound view from Everett Street looking towards this intersection are shown for existing and proposed conditions in Figure 5.25 and 5.26, respectively. As shown in these graphics, the proposed improvements will help reduce the excessive pavement width that currently exists at this location. This will allow for improved pedestrian crossings and also will result in additional green space along the easterly side of the intersection.

Through the combination of the geometric improvements and signal installation, this newly created intersection will provide new access/egress opportunities for the Project Site and other nearby developments. These improvements will address notable existing deficiencies at the Everett Street/Old Everett Street intersection while also accommodating traffic generated by the Proposed Project, and expected

traffic growth which could occur due to known development projects and regular traffic growth.

Braintree Street/Old Everett Street

The existing driveway at the northeasterly end of the Project Site currently intersects Old Everett Street directly opposite Braintree Street. As noted earlier, this driveway is restricted to westbound, entering traffic, only. Both the westbound Braintree Street and northbound Everett Street approaches to the intersection currently operate under Stop-sign control. A paved approach from the north currently used by 119 Braintree Street at the northeast corner of the intersection form the northerly leg of this four-way intersection. While signage is not provided on that approach, it was observed to function as if it also was under Stop-control.

As part of the initial phase of the Proposed Project, this four-way intersection will remain in its same current configuration, but with improved signage, striping, and curbing to provide better definition of the intersection. Within the Site, the alignment of Braintree Street Extension will be shifted to the north. Approximately 150 feet to the west of Old Everett Street this gentle curved roadway segment will connect to the newly constructed Braintree Street Extension that will run along the northerly property line of the Project Site. That section of the roadway will feature single travel lanes in both directions with 5-foot-wide shoulders on both sides of the road for bicycle use, and a sidewalk along its southerly edge. The general connections resulting from the Braintree Street driveway now being available for use by both entering and exiting Project Site traffic is shown in the previously presented Figure 5.21.

Braintree Street Extension

As noted earlier, the existing Braintree Street enter-only driveway will be modified to allow for both entering and exiting traffic. The details of the configuration of the Braintree Street/Old Everett Street/Project Site driveway intersection are discussed later in this section. The new Braintree Street Extension will provide a clearly defined roadway accommodating automobile, bicycle, and pedestrian traffic in a multi-modal setting. The roadway will extend Braintree Street westerly through the Project Site with intersections located at East Street and West Street, which will provide connections to Guest Street Extension. A pedestrian connection to the adjacent Boston Landing development and new MBTA Boston Landing Station will be provided at the western terminus of this roadway just east of the property line for these two sites.

Arthur Street/Guest Street/Guest Street Extension

The existing four-way intersection of Arthur Street with Guest Street and the Stop & Shop driveway will be reconstructed as part of the initial Project Site development. A conceptual improvement plan is provided in Figure 5.27. This work will entail reconstructing the intersection to include the new easterly leg of the intersection (Guest Street Extension) which will be constructed from this location heading easterly to Everett Street. The reconstruction of this intersection will involve providing a more standard four-way intersection configuration and the installation of a traffic signal. To minimize future construction work in this area, the initial intersection reconstruction will include

the installation of underground signal conduit and other associated infrastructure in anticipation of the future signal. The westbound Guest Street Extension approach will feature an exclusive left-turn lane with a shared through-/right-turn lane. The opposing eastbound Guest Street approach will initially feature a single shared-lane, but that approach will be modified to provide a shared left-/through-lane and an exclusive right-turn lane in conjunction with the signal installation. The northbound Arthur Street approach will feature a shared left-/through-lane with an adjacent exclusive right-turn lane, while the opposing southbound approach will feature a single shared lane.

5.5.5 Parking

The parking needs for the Proposed Project will be accommodated by approximately 1,300 new spaces. With the proposed combination of retail, restaurant, grocery, residential, and office uses, the combined peak parking demand for the Project will occur on a typical weekday, with weekend activity being lower due to the minimal office activity. Due to the various land uses proposed within the Project Site, the peak parking demand for the overall Project differs from that of the various individual uses within the Proposed Project Site. The parking needs for the Project will be lessened due to the nearby availability of public bus and train service, and amenities within the Project Site that will promote bicycle and pedestrian travel. With the Project being continuously developed over a several-year period there should continue to be less reliance by residents and workers on private automobile ownership. This ongoing trend is the result of increased transit usage, and improved accommodations for bicycle and pedestrian travel throughout the City of Boston. Alternate means of travel, such as taxi, private ride services (Uber, Lyft, and others) should continue to reduce the parking needs for this area.

There also will be extensive internal trip-sharing between the various uses within the Project Site. As an example, some residents of the Project Site may choose to walk to the various on-site retail uses that will be available. Because of that, there will not be any parking activity associated with that type of activity. Based on the trip generation estimates discussed earlier, up to 14 percent of the overall Project Site daily traffic and associated parking activity may be in the form of shared trips. This demand can readily be accommodated by the proposed approximately 1,300-space parking supply (with an additional approximately 30 on-street spaces), leaving sufficient open spaces to accommodate fluctuations in demand.

As the Proposed Project design continues to advance, a shared-parking approach will be explored to minimize the number of parking spaces that will be needed from a functional perspective. Due to the varying peak times for the office and residential uses, there may be opportunities for some parking spaces to be shared between residents and workers. For example, the peak residential parking demand should occur outside of normal office working hours. Due to these offsetting peak times, there should be ample opportunity for shared parking between the residential and office uses. This type of shared-parking activity is preferable to providing excessive parking for each use within the Project Site. The excess of parking would discourage alternate means of transportation such as MBTA bus or train services, biking, taxi, or

other ride services. With this approach, an overall residential parking ratio of 0.5 spaces per unit is proposed, along with a 2.0 spaces per 1,000 sf of office parking ratio for the planned office space. In addition to the designated Building 1 retail/grocery parking, retail customers will be able to utilize the proposed on-street parking that will be provided along both sides of Guest Street. With the most of the 50,000 sf of retail spaces being provided as small shops within each of the four buildings, most of the customer traffic should be in the form of residents, office workers, or grocery customers already on-site as opposed to destination retail traffic.

The initial development phase will involve the construction of the grocery store and 360 residential units within Building 1. In total, 410 parking spaces will be provided within this building. This translates into a 0.5 space per unit ratio for the residential units and the remaining 230 spaces being available for the grocery store and accompanying retail space at an approximately 3.0 space per square foot ratio.

5.5.6 Pedestrian Access

The Project Site is effectively flat along the south, west and northern property line, along which there is complete pedestrian accessibility off-site and to the proposed program within the Project Site limits. The eastern edge of the Project Site follows the slope of Everett Street and there is no direct access from the building program to the public walk along the street edge. The proposed public accessible walkways along all streets will have complete pedestrian accessibility to and from the Project Site. Refer to Section 3.5.1 of Chapter 3, *Urban Design* and the completed BPDA Accessibility Checklist in Appendix B for information on accessibility.

5.5.7 Bicycle Accommodations

The potential bicycle parking needs for the Proposed Project were evaluated based on BTD guidelines, as presented in its "Off-Street Bicycle Parking Guidelines"[4]. The resulting bicycle parking accommodations have been designed to meet these standards. These requirements will be memorialized as part of the subsequent Transportation Access Plan Agreement (TAPA) for the Proposed Project, or individual phases as appropriate.

Bike-Sharing Stations

In addition to the on-site bicycle parking specified above, bike-share stations may be required in conjunction with the Proposed Project. These requirements can be waived if another bike share station is located within 200 yards. In this instance, the nearest "Hubway" bike share station is located at 20 Guest Street approximately ¼ mile to the west. While this is beyond the 200-yard standard, the Proponent will engage with the BTD bicycle staff regarding whether an additional station still is

4 Off-Street Bicycle Parking Guidelines, Boston Transportation Department, Boston, MA (2010).

appropriate given the proximity of the 20 Guest Street facility. The Proponent is committed to installing at new station at the Proposed Project if desired by the City.

5.5.8 Service and Loading

The Project Site has been designed so that truck deliveries can be made via the new Guest Street Extension either to or from Arthur Street or Guest Street. As with current conditions for the grocery store, the new store will receive a variety of truck deliveries throughout the week. The exact number and timing of deliveries will vary depending on volume and seasonal demand. Currently, Stop & Shop is anticipating that there will be roughly ten to twelve dry-good deliveries made by tractor trailer per week. These are expected to occur in the early evening hours. Perishable food deliverables are scheduled to occur between 6 AM and 2 PM daily. There also will be various deliveries made to the Project Site daily between 6 AM and 10 AM, but those deliveries will be made by smaller, single-unit trucks. These are the same types of vehicles, which are typically seen on a daily basis in Allston-Brighton making deliveries to other retail businesses and restaurants. Smaller single-unit trucks can easily be accommodated and are typically on Site for only a short time.

The grocery store delivery trucks are expected to follow the same delivery route used under existing conditions to travel to and from the Site. Specifically, trucks will use Arthur Street to enter the Site from North Beacon Street. After entering the Project Site, the largest Stop & Shop trucks will proceed to the loading area at the rear northeast corner of the store. To access this area, trucks will turn right from Arthur Street onto the newly constructed Guest Street Extension. The trucks will follow the roadway and turn left onto East Street (the north/south internal roadway to be located immediately adjacent to Building 1). The trucks then will turn right onto Braintree Street Extension. An extended pavement area will be provided to the northeast of this new internal site roadway under the Everett Street overpass to help allow trucks to easily maneuver into the loading area without the need for excessive, multiple-point turns. After delivering goods, these trucks will use the same delivery path that was used to reach the Project Site to exit.

Deliveries to the other proposed uses are expected to follow the same general route to travel to and from the Project Site. Instead of using East Street, delivery trucks traveling to either Building 2 or Building 3 will use West Street to reach the newly constructed east/west extension of Braintree Street. Due to the nature of the office, small retail, and residential uses, deliveries to these buildings should be less frequent, and should involve smaller trucks than the larger tractor trailers visiting the grocery store. Likewise, deliveries to Building 4 will occur by way of the same driveway to be used by residents of that building. The loading bay for that building will be located just north of the resident garage access. A small paved area also will be provided to the east of the access drive to aid maneuvers in and out of the loading area.

5.6 Traffic Operations Analysis

Measuring existing traffic volumes and projecting future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, roadway capacity analyses were conducted with respect to Existing and projected No-Build and Build traffic volumes for both the roadway peak hours and the Proposed Project peak hours. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them. Roadway operating conditions are classified by calculated levels of service.

5.6.1 Level-of-Service Criteria

The evaluation criteria used to analyze area intersections in this traffic study are based on the 2010 Highway Capacity Manual (HCM)[5]. The term "Level-of-Service", or LOS, is used to denote the different operating conditions that occur on a given roadway segment under various traffic volume loads. It is a qualitative measure that considers several factors including roadway geometry, speed, travel delay and freedom to maneuver. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

In addition to LOS, two other measures of effectiveness (MOEs) are typically used to quantify the traffic operations at intersections; volume-to-capacity ratio (v/c) and delay (expressed in seconds per vehicle). For example, an existing v/c ratio of 0.9 for an intersection indicates that the intersection is operating at 90 percent of its available capacity. A delay of 15 seconds for a vehicular movement or approach indicates that vehicles on the movement or approach will experience an average additional travel time of 15 seconds. For a given LOS letter designation there may be a wide range of values for both v/c ratios and delay. Comparison of intersection capacity results therefore requires that, in addition to the LOS, the other MOEs should also be considered.

The LOS designations, which are based on delay, are reported differently for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of all traffic entering the intersection and the LOS designation is for overall conditions at the intersection. For unsignalized intersections, however, the analysis assumes that traffic on the mainline is not affected by traffic on the side streets. Thus, the LOS designation is for the critical movement exiting the side street, which is generally the left turn out of the side street or site driveway. Table 5-9 shows the LOS criteria for both signalized intersections and unsignalized intersections.

5 HCM 2010 - Highway Capacity Manual; Transportation Research Board (Washington, D.C.), 2010.

Table 5-9 Level-of-Service Criteria

Level of Service	Signalized Intersection	Unsignalized Intersection
A	0 to 10 seconds	0 to 10 seconds
B	10 to 20 seconds	10 to 15 seconds
C	20 to 35 seconds	15 to 25 seconds
D	35 to 55 seconds	25 to 35 seconds
E	55 to 80 seconds	35 to 50 seconds
F	Greater than 80 seconds	Greater than 50 seconds

Source: 2010 Highway Capacity Manual Exhibits 18-4 and 19-1

In general traffic engineering practices, conditions of LOS D or better are generally considered acceptable for signalized intersections. However, in balancing the needs of vehicular traffic with those of pedestrians this can be difficult to achieve in all instances in an urban setting. The analytical methodologies typically used for the analysis of unsignalized intersections use conservative analysis parameters, such as long critical gaps. Actual field observations indicate that drivers on minor streets generally accept shorter gaps in traffic than those used in the analysis procedures and therefore experience less delay than reported by the analysis software. The analysis methodologies also do not fully consider the beneficial grouping effects caused by nearby signalized intersections. The net effect of these analysis procedures is the over-estimation of calculated delays at unsignalized intersections in the study area. Cautious judgment should therefore be exercised when interpreting the capacity analysis results at unsignalized intersections.

Signalized Capacity Analysis

The LOS analysis was conducted for the 2016 Existing, 2023 No-Build, and 2023 Build conditions for the study-area intersections during the weekday morning, weekday evening, and Saturday midday peak hours. The results of this analysis are summarized in Table 5-10 for the signalized study area intersections. The capacity analysis worksheets are provided in Appendix C.

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Table 5-10 Signalized Intersection Capacity Analysis

			2016 Existing Conditions					2023 No-Build Conditions					2023 Build Conditions with Mitigation				
		Movement	v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
Market Street at Leo M. Birmingham Parkway/Lincoln Street																	
Weekday Morning	Birmingham Parkway	EB L/R	0.71	44	D	111	153	0.75	45	D	125	172	0.75	45	D	125	172
	Lincoln Street	WB L	0.53	40	D	80	141	0.56	40	D	86	150	0.56	40	D	86	150
		WB T/R	0.86	64	E	138	#265	0.90	70	E	147	#287	0.90	70	E	147	#287
	Market Street	NB L/T	0.54	21	C	150	213	0.71	26	C	191	259	0.70	25	C	189	257
	Birmingham Parkway	SB T	0.94	57	E	247	#364	1.19	>120	F	~372	#497	1.13	113	F	~342	#465
		SB R	0.06	18	B	0	10	0.06	18	B	0	11	0.06	18	B	0	11
		OVERALL	**0.77**	**42**	**D**			**0.92**	**70**	**E**			**0.89**	**62**	**E**		
Weekday Evening	Birmingham Parkway	EB L/R	0.59	44	D	69	103	0.62	44	D	75	110	0.62	44	D	75	110
	Lincoln Street	WB L	0.49	38	D	82	143	0.53	39	D	89	153	0.53	39	D	89	153
		WB T/R	0.98	88	F	179	#349	1.06	110	F	~212	#383	1.06	110	F	~212	#383
	Market Street	NB L/T	0.90	34	C	249	#332	1.02	56	E	~314	#464	0.97	43	D	277	#414
	Birmingham Parkway	SB T	1.15	118	F	~331	#452	>1.20	>120	F	~472	#599	>1.20	>120	F	~455	#583
		SB R	0.34	23	C	35	60	0.40	23	C	43	70	0.40	23	C	43	69
		OVERALL	**0.96**	**63**	**E**			**1.14**	**>120**	**F**			**1.09**	**110**	**F**		
Saturday Midday	Birmingham Parkway	EB L/R	0.37	44	D	29	50	0.38	44	D	30	55	0.38	44	D	30	55
	Lincoln Street	WB L	0.42	42	D	51	93	0.43	41	D	55	99	0.43	41	D	55	99
		WB T/R		46	D	77	134	0.66	48	D	85	146	0.66	48	D	85	146
	Market Street	NB L/T	0.38	12	B	101	162	0.53	15	B	141	216	0.52	14	B	137	212
	Birmingham Parkway	SB T	0.84	45	D	223	#316	1.08	92	F	~336	#460	1.08	91	F	~335	#459
		SB R	0.05	23	C	0	9	0.05	23	C	0	12	0.05	23	C	0	12
		OVERALL	**0.57**	**32**	**C**			**0.72**	**51**	**D**			**0.71**	**51**	**D**		
Market Street at Guest Street/Stockyard Driveway																	
Weekday Morning	Stockyard Driveway	EB L/T/R	0.06	37	D	6	14	0.03	35	D	4	16	0.03	33	C	3	15
	Guest Street	WB L/T	0.29	38	D	20	43	0.46	38	D	36	73	0.66	43	D	65	120
		WB R	0.08	21	C	0	28	0.16	20	B	15	52	0.15	19	B	14	52
	Market Street	NB L/T/R	0.46	3	A	36	m40	0.59	4	A	65	m40	0.63	5	A	71	m40
		SB L/T/R	0.63	6	A	61	130	0.93dl	9	A	86	154	0.99dl	10	B	107	162
		OVERALL	**0.60**	**6**	**A**			**0.71**	**8**	**A**			**0.74**	**10**	**B**		

a volume to capacity ratio
b average delay in seconds per vehicle
c LOS = level-of-service
d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ volume exceeds capacity; queue is theoretically infinite
dl Defacto left lane

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Table 5-10 Signalized Intersection Capacity Analysis (Continued)

				2016 Existing Conditions					2023 No-Build Conditions					2023 Build Conditions with Mitigation				
		Movement		v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
Market Street at North Beacon Street																		
	Weekday Morning	North Beacon Street	EB L/T/R	0.41	24	C	104	137	0.59	27	C	134	#212	0.69	31	C	147	#250
			WB L/T/R	0.57	26	C	161	211	0.63	28	C	171	#263	0.70	30	C	178	#284
		Market Street	NB L/T/R	>1.20	>120	F	~371	#353	>1.20	>120	F	~326	m#595	>1.20	>120	F	~514	m#561
			SB L/T/R	0.86	32	C	140	#226	0.99	50	D	178	#296	1.04	65	E	~208	#334
			OVERALL	**0.84**	**110**	**F**			**1.02**	**>120**	**F**			**1.11**	**>120**	**F**		
	Weekday Evening	North Beacon Street	EB L/T/R	0.56	31	C	152	186	0.68	34	C	166	232	0.85	44	D	187	#303
			WB L/T/R	0.94	46	D	~258	#293	1.11	95	F	~266	#444	1.16	113	F	~284	#456
		Market Street	NB L/T/R	0.93	53	D	146	#300	>1.20	>120	F	~347	m#295	>1.20	>120	F	~373	m#251
			SB L/T/R	1.11	98	F	~328	#508	>1.20	>120	F	~584	#719	>1.20	>120	F	~624	#761
			OVERALL	**0.87**	**63**	**E**			**1.11**	**>120**	**F**			**1.16**	**>120**	**F**		
	Saturday Midday	North Beacon Street	EB L/T/R	0.40	27	C	91	135	0.62	32	C	128	185	0.74	36	D	141	#222
			WB L/T/R	0.64	32	C	145	207	0.89	47	D	203	#324	0.92	50	D	206	#331
		Market Street	NB L/T/R	0.96	56	E	~251	#370	>1.20	>120	F	~422	#548	>1.20	>120	F	~455	#583
			SB L/T/R	0.90	37	D	~212	#352	1.13	102	F	~368	#547	1.18	119	F	~400	#572
					798													
			OVERALL	**0.72**	**40**	**D**			**1.01**	**115**	**F**			**1.07**	**>120**	**F**		
Market Street at Faneuil Street																		
	Weekday Morning	Faneuil Street	EB L/R	0.83	46	D	174	#345	0.78	36	D	195	#419	0.77	34	C	198	#434
		Market Street	NB L/T	0.68	23	C	225	m352	0.90	37	D	413	m290	1.04	63	E	458	m258
			SB T	0.46	5	A	12	m92	0.60	7	A	54	m100	0.66	8	A	65	m108
			SB R	0.06	1	A	0	m0	0.07	1	A	0	m0	0.08	1	A	0	m0
			OVERALL	**0.69**	**21**	**C**			**0.82**	**26**	**C**			**0.90**	**37**	**D**		
	Weekday Evening	Faneuil Street	EB L/R	0.78	49	D	156	191	0.79	48	D	164	235	0.79	49	D	167	237
		Market Street	NB L/T	0.71	15	B	223	m153	>1.20	>120	F	~607	m#178	>1.20	>120	F	~704	m#336
			SB T	0.69	6	A	108	m200	0.82	7	A	247	m195	0.87	8	A	267	m221
			SB R	0.21	1	A	0	m0	0.24	1	A	0	m0	0.24	1	A	0	m0
			OVERALL	**0.64**	**14**	**B**			**1.00**	**57**	**E**			**1.17**	**99**	**F**		
	Saturday Midday	Faneuil Street	EB L/R	0.71	32	C	69	183	0.80	38	D	95	#266	0.81	39	D	98	#273
		Market Street	NB L/T	0.64	15	B	100	#476	1.13	94	F	248	#803	>1.20	>120	F	~360	#868
			SB T	0.61	14	B	96	#451	0.80	21	C	169	#646	0.84	24	C	186	#687
			SB R	0.10	3	A	0	16	0.14	3	A	0	18	0.14	3	A	0	19
			OVERALL	**0.59**	**16**	**B**			**0.94**	**49**	**D**			**1.03**	**74**	**E**		

a volume to capacity ratio
b average delay in seconds per vehicle
c LOS = level-of-service
d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ volume exceeds capacity; queue is theoretically infinite
dl Defacto left lane

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Table 5-10 Signalized Intersection Capacity Analysis (Continued)

			2016 Existing Conditions					2023 No-Build Conditions					2023 Build Conditions with Mitigation				
		Movement	v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
Market Street at Sparhawk Street/ Arlington Street																	
Weekday Morning	Arlington Street	EB L/T/R	0.95	64	E	203	#377	0.86	42	D	234	#429	0.83	37	D	238	#435
	Sparhawk Street	WB L/T/R	0.84	42	D	199	#352	0.75	31	C	214	#381	0.71	28	C	214	#381
	Market Street	NB L/T/R	>1.20	>120	F	~292	#478	>1.20	>120	F	~502	#700	>1.20	>120	F	~592	#796
		SB L	0.28	32	C	46	m#100	0.40	37	D	46	m#108	0.46	40	D	45	m#94
		SB T/R	0.59	34	C	206	m302	0.78	44	D	226	m#359	0.89	54	D	217	m#420
		OVERALL	**0.81**	**72**	**E**			**1.09**	**>120**	**F**			**>1.20**	**>120**	**F**		
Weekday Evening	Arlington Street	EB L/T/R	0.96	66	E	203	#404	0.97	66	E	262	#461	0.98	69	E	270	#475
	Sparhawk Street	WB L/T/R	0.85	44	D	252	#378	0.84	41	D	274	#448	0.82	39	D	274	#448
	Market Street	NB L/T/R	>1.20	>120	F	~418	#604	>1.20	>120	F	~569	#769	>1.20	>120	F	~611	#815
		SB L	0.26	41	D	53	m81	0.36	46	D	56	m73	0.38	46	D	57	m69
		SB T/R	0.89	59	E	0	#605	1.17	>120	F	~592	#821	>1.20	>120	F	~653	m#847
		OVERALL	**1.17**	**>120**	**F**			**>1.20**	**>120**	**F**			**>1.20**	**>120**	**F**		
Saturday Midday	Arlington Street	EB L/T/R	0.75	34	C	144	218	0.74	35	C	137	#234	0.78	38	D	141	#259
	Sparhawk Street	WB L/T/R	0.87	45	D	208	#274	0.84	42	D	187	#326	0.84	42	D	187	#326
	Market Street	NB L/T/R	0.99	64	E	~322	#513	>1.20	>120	F	~602	#806	>1.20	>120	F	~654	#771
		SB L	0.22	18	B	24	52	0.29	19	B	27	55	0.30	20	B	27	55
		SB T/R	0.76	28	C	281	#451	0.95	46	D	~450	#671	1.00	55	D	~490	#713
		OVERALL	**0.78**	**42**	**D**			**>1.20**	**>120**	**F**			**>1.20**	**>120**	**F**		
North Beacon Street at Life Street/ Etna Street																	
Weekday Morning	North Beacon Street	EB L/T/R	0.46	4	A	26	m275	0.58	5	A	11	m285	0.58	4	A	3	m270
		WB L/T/R	0.40	4	A	54	253	0.48	6	A	67	341	0.47	6	A	66	333
	Life Street	SB L/T/R	0.35	42	D	14	40	0.38	41	D	22	59	0.34	41	D	19	55
		OVERALL	**0.43**	**5**	**A**			**0.54**	**7**	**A**			**0.54**	**6**	**A**		
Weekday Evening	North Beacon Street	EB L/T/R	0.54	14	B	192	m413	0.73	19	B	302	m440	0.70	17	B	289	m417
		WB L/T/R	0.55	10	A	114	428	0.69	16	B	202	#720	0.68	15	B	192	#701
	Life Street	SB L/T/R	0.65	48	D	78	119	0.78	50	D	140	210	0.77	50	D	133	202
		OVERALL	**0.52**	**16**	**B**			**0.68**	**22**	**C**			**0.66**	**21**	**C**		
Saturday Midday	North Beacon Street	EB L/T/R	0.54	5	A	0	283	0.72	10	B	105	521	0.72	10	A	93	487
		WB L/T/R	0.50	5	A	0	251	0.64	8	A	91	444	0.63	8	A	80	412
	Life Street	SB L/T/R	0.33	19	B	1	33	0.50	23	C	25	119	0.42	22	C	18	101
		OVERALL	**0.50**	**6**	**A**			**0.65**	**10**	**B**			**0.63**	**10**	**A**		

a volume to capacity ratio
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e 95th percentile queue length, measured in feet
\# 95th percentile volume exceeds capacity, queue may be longer
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Table 5-10 Signalized Intersection Capacity Analysis (Continued)

				2016 Existing Conditions					2023 No-Build Conditions					2023 Build Conditions with Mitigation				
		Movement		v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
North Beacon Street at Arthur Street/Wingate Driveway																		
	Weekday Morning	North Beacon Street	EB L	0.14	4	A	7	41	0.23	7	A	15	66	0.31	6	A	20	90
			EB T/R	0.48	4	A	72	324	0.56	6	A	114	420	0.51	5	A	93	375
			WB L/T	0.47	17	B	139	#313	0.66	33	C	251	m#451	0.56	26	C	190	#451
			WB R	0.09	23	C	2	35	0.23	59	E	53	m90	0.20	43	D	36	m86
		Wingate Driveway	NB L/T/R	0.00	0	A	0	0	0.00	0	A	0	0	0.00	0	A	0	0
		Arthur Street	SB L/T	0.59	49	D	49	83	0.69	49	D	91	150	0.63	47	D	77	130
			SB R	0.05	42	D	0	0	0.05	38	D	0	2	0.08	39	D	0	30
			OVERALL	**0.51**	**14**	**B**			**0.65**	**27**	**C**			**0.57**	**21**	**C**		
	Weekday Evening	North Beacon Street	EB L	0.25	7	A	18	74	0.53	21	C	81	159	0.54	19	B	81	183
			EB T/R	0.45	6	A	90	316	0.70	19	B	316	452	0.61	14	B	226	396
			WB L/T	0.55	23	C	178	#449	1.00	73	E	322	m#563	0.89	54	D	297	m#498
			WB R	0.07	43	D	9	m21	0.18	70	E	43	m62	0.15	67	E	36	m56
		Wingate Driveway	NB L/T/R	0.00	0	A	0	0	0.00	0	A	0	0	0.00	0	A	0	0
		Arthur Street	SB L/T	0.71	53	D	113	175	0.89	55	D	273	#607	0.83	51	D	229	#463
			SB R	0.12	42	D	0	58	0.33	31	C	47	150	0.34	34	C	34	134
			OVERALL	**0.55**	**22**	**C**			**0.88**	**45**	**D**			**0.78**	**37**	**D**		
	Saturday Midday	North Beacon Street	EB L	0.22	6	A	10	54	0.48	9	A	29	96	0.52	9	A	34	110
			EB T/R	0.50	6	A	65	284	0.62	10	A	131	398	0.58	9	A	115	347
			WB L/T	0.58	15	B	103	286	0.64	18	B	160	370	0.61	18	B	138	320
			WB R	0.06	11	B	0	10	0.19	13	B	0	43	0.17	13	B	0	40
		Wingate Driveway	NB L/T/R	0.00	0	A	0	0	0.00	0	A	0	0	0.00	0	A	0	0
		Arthur Street	SB L/T	0.48	26	C	48	147	1.07	103	F	~207	#471	0.80	42	D	122	#356
			SB R	0.09	23	C	0	52	0.30	28	C	27	110	0.21	26	C	8	85
			OVERALL	**0.58**	**13**	**B**			**0.77**	**28**	**C**			**0.69**	**18**	**B**		

a volume to capacity ratio
b average delay in seconds per vehicle
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d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
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dl Defacto left lane

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Table 5-10 Signalized Intersection Capacity Analysis (Continued)

			2016 Existing Conditions					2023 No-Build Conditions					2023 Build Conditions with Mitigation				
		Movement	v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
North Beacon Street at Everett Street/KFC Driveway																	
Weekday Morning	North Beacon Street	EB L/T/R	1.18dl	44	D	262	#394	>1.20dl	>120	F	~430	#559	>1.20dl	>120	F	~395	#525
		WB T	0.55	23	C	196	276	0.87	37	D	379	#597	0.77	31	C	317	461
		WB R	0.18	17	B	0	38	0.18	17	B	0	43	0.22	18	B	0	47
	Everett Street	SB L/T/R	0.47	28	C	143	216	0.47	27	C	142	232	0.55	29	C	175	279
		OVERALL	**0.66**	**32**	**C**			**0.82**	**86**	**F**			**0.83**	**73**	**E**		
Weekday Evening	North Beacon Street	EB L/T/R	0.88dl	31	C	228	306	>1.20dl	>120	F	~521	m#647	>1.20dl	93	F	~398	#531
		WB T	0.63	10	A	93	m90	0.86	14	B	151	m326	0.77	12	B	285	m117
		WB R	0.17	1	A	0	m0	0.20	2	A	2	m1	0.21	5	A	1	m0
	Everett Street	SB L/T/R	0.77	40	D	#475	437	0.77	40	D	319	#527	0.88	50	D	~423	m#641
		OVERALL	**0.71**	**24**	**C**			**0.98**	**84**	**F**			**0.92**	**50**	**D**		
Saturday Midday	North Beacon Street	EB L/T/R	0.71	15	B	60	181	>1.20dl	80	F	141	#420	0.90	24	C	100	#336
		WB T	0.62	13	B	78	248	0.83	19	B	150	#526	0.73	15	B	123	#438
		WB R	0.16	10	A	0	36	0.17	9	A	0	37	0.20. 0.21	9	A	0	41
	Everett Street	SB L/T/R	0.58	21	C	57	#219	0.70	30	C	76	#246	0.84	40	D	98	#317
		OVERALL	**0.59**	**15**	**B**			**0.88**	**46**	**D**			**0.79**	**22**	**C**		

a	volume to capacity ratio	d	50th percentile queue length, measured in feet	m	Volume for 95th percentile queue is metered by upstream signal
b	average delay in seconds per vehicle	e	95th percentile queue length, measured in feet	~	volume exceeds capacity; queue is theoretically infinite
c	LOS = level-of-service	#	95th percentile volume exceeds capacity, queue may be longer	dl	Defacto left lane

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Table 5-10 Signalized Intersection Capacity Analysis (Continued)

			2016 Existing Conditions					2023 No-Build Conditions					2023 Build Conditions with Mitigation				
		Movement	v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
North Beacon Street/Brighton Avenue at Cambridge Street																	
Weekday Morning	North Beacon Street	EB L/T/R	0.84	49	D	216	277	0.93	57	E	266	#374	0.92	56	E	264	#369
	Brighton Avenue	WB L	0.46	46	D	89	156	0.50	47	D	97	168	0.50	47	D	97	168
		WB L/T/R	0.96	74	E	209	#328	1.14	>120	F	~292	#416	1.14	>120	F	~296	#420
	Cambridge Street	NB T	0.40	37	D	97	140	0.50	40	D	125	175	0.50	40	D	125	175
		NB R	0.14	35	C	0	40	0.15	35	D	0	50	0.15	35	D	0	50
		SB L/T	0.55	30	C	97	192	0.66	37	D	150	202	0.64	36	D	146	197
		SB R	0.44	40	D	53	129	1.13	>120	F	~272	#451	1.05	110	F	~240	#414
		OVERALL	**0.75**	**48**	**D**			**1.03**	**73**	**E**			**1.00**	**71**	**E**		
Weekday Evening	North Beacon Street	EB L/T/R	0.92	43	D	295	#368	>1.20	>120	F	~507	m#413	>1.20	>120	F	~479	m#475
	Brighton Avenue	WB L	0.58	49	D	118	197	0.63	52	D	131	216	0.63	52	D	131	216
		WB L/T/R	1.07	104	F	~269	#393	>1.20	>120	F	~378	#508	>1.20	>120	F	~378	#508
	Cambridge Street	NB T	0.42	38	D	101	145	0.49	39	D	122	170	0.48	39	D	120	167
		NB R	0.15	35	C	0	36	0.16	35	D	0	47	0.16	35	D	0	47
		SB L/T	0.72	22	C	63	122	0.93	72	E	261	#375	0.92	66	E	261	#375
		SB R	0.10	34	C	6	12	0.30	>120	F	95	176	0.20	>120	F	93	m150
		OVERALL	**0.88**	**52**	**D**			**1.14**	**120**	**F**			**1.13**	**114**	**F**		
Saturday Midday	North Beacon Street	EB L/T/R	0.82	42	D	191	274	1.06	85	F	~366	#498	1.02	74	E	~346	#477
	Brighton Avenue	WB L	0.57	42	D	112	184	0.58	46	D	116	196	0.58	46	D	116	196
		WB L/T/R	0.97	67	E	203	#312	1.12	175	F	~287	#413	1.13	120	F	~291	#417
	Cambridge Street	NB T	0.50	36	D	93	135	0.56	38	D	116	163	0.56	38	D	116	163
		NB R	0.13	33	C	0	20	0.13	35	C	0	26	0.13	35	C	0	26
		SB L/T	0.62	34	C	102	150	0.74	40	D	130	177	0.75	40	D	130	177
		SB R	0.11	33	C	0	0	0.51	38	D	42	147	0.37	37	D	22	109
		OVERALL	**0.79**	**45**	**D**			**0.96**	**70**	**E**			**0.95**	**67**	**E**		

a volume to capacity ratio
b average delay in seconds per vehicle
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d 50th percentile queue length, measured in feet
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dl Defacto left lane

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Table 5-10 Signalized Intersection Capacity Analysis (Continued)

			2016 Existing Conditions					2023 No-Build Conditions					2023 Build Conditions with Mitigation				
		Movement	v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
Cambridge Street at Denby Road																	
Weekday Morning	Cambridge Street	EB L/T	0.30	3	A	63	m126	0.46	5	A	106	207	0.48	7	A	135	266
		WB T/R	0.41	8	A	302	493	0.60	4	A	28	68	0.61	5	A	29	47
	Denby Road	SB L/R	0.12	49	D	8	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		SB L	n/a	n/a	n/a	n/a	n/a	0.67	47	D	100	160	0.74	46	D	150	215
		SB R	n/a	n/a	n/a	n/a	n/a	0.02	38	D	1	23	0.02	34	C	1	22
		OVERALL	**0.39**	**7**	**A**			**0.61**	**9**	**A**			**0.64**	**12**	**B**		
Weekday Evening	Cambridge Street	EB L/T	0.31	3	A	71	m250	0.62	15	B	470	m466	0.65	19	B	458	m477
		WB T/R	0.43	2	A	22	m100	0.66	9	A	62	796	0.71	15	B	546	773
	Denby Road	SB L/R	0.20	49	D	14	22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		SB L	n/a	n/a	n/a	n/a	n/a	0.79	52	D	203	m275	0.83	48	D	276	m345
		SB R	n/a	n/a	n/a	n/a	n/a	0.02	39	D	1	m21	0.02	31	C	0	m18
		OVERALL	**0.41**	**3**	**A**			**0.69**	**18**	**B**			**0.74**	**24**	**C**		
Saturday Midday	Cambridge Street	EB L/T	0.44	3	A	0	184	0.55	7	A	153	312	0.57	9	A	186	349
		WB T/R	0.45	3	A	0	192	0.54	8	A	52	571	0.56	11	B	372	554
	Denby Road	SB L/R	0.09	14	B	1	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		SB L	n/a	n/a	n/a	n/a	n/a	0.71	44	D	102	m161	0.80	46	D	149	m219
		SB R	n/a	n/a	n/a	n/a	n/a	0.03	31	C	0	m0	0.03	28	C	0	m1
		OVERALL	**0.40**	**3**	**A**			**0.58**	**12**	**B**			**0.63**	**16**	**B**		

a volume to capacity ratio
b average delay in seconds per vehicle
c LOS = level-of-service
d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ volume exceeds capacity; queue is theoretically infinite
dl Defacto left lane

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Table 5-10 Signalized Intersection Capacity Analysis (Continued)

			2016 Existing Conditions					2023 No-Build Conditions					2023 Build Conditions with Mitigation				
		Movement	v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
Cambridge Street at Harvard Avenue/Franklin Street																	
Weekday Morning	Cambridge Street	EB L/T/R	0.54	40	D	153	243	>1.20	>120	F	~346	#514	>1.20	>120	F	~397	#545
		WB L	0.80	28	C	192	#360	0.79	29	C	222	#484	0.85	36	D	229	#488
		WB T	0.67	24	C	296	455	0.78	21	C	365	#692	0.78	22	C	358	#662
		WB R	0.09	16	B	10	41	0.15	11	B	25	67	0.26	12	B	41	102
	Harvard Avenue	NB L/T	0.26	41	D	34	69	0.32	42	D	36	71	0.39	41	D	46	86
		NB R	0.39	42	D	0	114	0.38	18	B	8	76	0.43	42	D	0	#170
	Franklin Street	SB L/T/R	0.76	60	E	92	142	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		OVERALL	**0.62**	**35**	**C**			**0.83**	**78**	**E**			**0.84**	**82**	**F**		
Weekday Evening	Cambridge Street	EB L/T/R	0.51	35	C	151	200	>1.20	>120	F	~556	#524	>1.20	>120	F	~604	#747
		WB L	0.89	44	D	~206	#428	0.86	43	D	237	#402	0.85	42	D	~236	#401
		WB T	0.75	30	C	349	491	0.76	21	C	393	555	0.74	20	B	371	522
		WB R	0.05	18	B	0	26	0.11	11	B	18	44	0.18	12	B	32	66
	Harvard Avenue	NB L/T	0.48	39	D	70	127	0.73	61	E	84	#171	0.77	66	E	92	#191
		NB R	0.25	37	D	0	76	0.22	23	C	0	55	0.22	22	C	0	55
	Franklin Street	SB L/T/R	0.93	81	F	163	#310	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		OVERALL	**0.71**	**40**	**D**			**0.86**	**82**	**F**			**0.91**	**98**	**F**		
Saturday Midday	Cambridge Street	EB L/T/R	0.70	36	D	156	213	0.99	52	D	~265	#486	1.04	64	E	~312	#523
		WB L	0.74	29	C	132	#201	0.77	24	C	125	#260	0.81	32	C	136	#277
		WB T	0.61	25	C	210	303	0.68	17	B	281	416	0.65	17	B	263	390
		WB R	0.04	19	B	0	20	0.10	11	B	11	39	0.17	11	B	23	60
	Harvard Avenue	NB L/T	0.45	33	C	63	125	0.60	42	D	63	117	0.64	43	D	69	#134
		NB R	0.28	31	C	0	75	0.25	21	C	0	58	0.25	21	C	0	58
	Franklin Street	SB L/T/R	0.70	40	D	121	159	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		OVERALL	**0.56**	**31**	**C**			**0.72**	**32**	**C**			**0.75**	**37**	**D**		

a volume to capacity ratio
b average delay in seconds per vehicle
c LOS = level-of-service
d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ volume exceeds capacity; queue is theoretically infinite
dl Defacto left lane

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Table 5-10 Signalized Intersection Capacity Analysis (Continued)

			2016 Existing Conditions					2023 No-Build Conditions					2023 Build Conditions with Mitigation				
		Movement	v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
Everett Street at Western Avenue																	
Weekday Morning	Western Avenue	EB L/T	0.73	19	B	158	#605	0.80	23	C	183	#670	0.80	23	C	183	#670
		EB R	0.09	9	A	3	42	0.09	9	A	4	46	0.09	9	A	4	46
		WB L	0.47	18	B	25	#146	0.57	22	C	28	#171	0.76	36	D	44	#231
		WB T/R	0.51	14	B	98	#375	0.54	14	B	107	#442	0.54	14	B	107	#442
	Everett Street	NB L	0.41	25	C	39	79	0.46	26	C	39	86	0.58	30	C	40	#104
		NB T/R	1.01	77	E	~225	#387	1.06	89	F	~257	#440	1.20	>120	F	~321	#512
		SB L/T/R	0.97	85	F	98	#234	>1.20	>120	F	~161	#304	>1.20	>120	F	~258	#415
		OVERALL	**0.76**	**37**	**D**			**0.89**	**55**	**E**			**1.16**	**>120**	**F**		
Weekday Evening	Western Avenue	EB L/T	0.44	12	B	101	330	0.55	15	B	125	#452	0.55	15	B	125	#452
		EB R	0.14	9	A	10	67	0.17	10	B	14	79	0.17	10	B	14	79
		WB L	0.35	12	B	35	144	0.46	16	B	41	#195	0.52	17	B	48	#228
		WB T/R	0.61	15	B	169	#597	0.69	18	B	194	#674	0.69	18	B	194	#674
	Everett Street	NB L	0.76	53	D	49	#129	0.80	60	E	55	#148	0.92	91	F	57	#158
		NB T/R	0.64	33	C	129	213	0.75	37	D	177	#307	1.04	88	F	~293	#486
		SB L/T/R	0.92	62	E	176	#327	1.09	108	F	~242	#419	>1.20	>120	F	~383	#565
		OVERALL	**0.66**	**25**	**C**			**0.77**	**36**	**D**			**1.10**	**>120**	**F**		
Saturday Midday	Western Avenue	EB L/T	0.43	10	B	84	#386	0.59	12	B	112	#443	0.50	13	B	125	#443
		EB R	0.10	7	A	6	56	0.11	8	A	9	61	0.12	9	A	10	61
		WB L	0.26	9	A	19	102	0.31	11	B	25	121	0.37	13	B	33	#154
		WB T/R	0.39	10	A	74	292	0.42	11	B	93	337	0.43	12	B	105	337
	Everett Street	NB L	0.35	32	C	32	63	0.37	31	C	31	68	0.35	29	C	30	68
		NB T/R	0.67	38	D	122	181	0.75	40	D	148	230	0.84	46	D	182	#317
		SB L/T/R	0.61	36	D	86	129	0.71	40	D	107	178	0.84	51	D	122	#243
		OVERALL	**0.46**	**18**	**B**			**0.52**	**20**	**B**			**0.56**	**24**	**C**		

a volume to capacity ratio
b average delay in seconds per vehicle
c LOS = level-of-service
d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
\# 95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ volume exceeds capacity; queue is theoretically infinite
dl Defacto left lane

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Table 5-10 Signalized Intersection Capacity Analysis (Continued)

			2016 Existing Conditions					2023 No-Build Conditions					2023 Build Conditions with Mitigation				
		Movement	v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
Everett Street at Guest Street Extension/Old Everett Street/Blaine Street																	
	Weekday Morning	Guest Street	EB L										0.41	32	C	37	78
			EB T/R										0.56	35	C	53	103
		Blaine Street	WB L/T/R										0.01	29	C	1	9
		Everett Street	NB L	Intersection does not exist	Intersection does not exist	0.13	11	B	13	34							
			NB T/R										0.63	15	B	197	350
			SB L/T										0.52	20	B	119	217
			SB R										0.28	16	B	56	111
		"Old" Everett Street	SWB L/T/R										0.91	79	E	75	#196
			OVERALL										**0.71**	**24**	**C**		
	Weekday Evening	Guest Street	EB L										0.66	39	D	96	164
			EB T/R										0.71	41	D	106	178
		Blaine Street	WB L/T/R										0.06	29	C	5	19
		Everett Street	NB L	Intersection does not exist	Intersection does not exist	0.25	16	B	20	52							
			NB T/R										0.54	17	B	180	333
			SB L/T										0.79	33	C	249	#488
			SB R										0.41	22	C	90	178
		"Old" Everett Street	SWB L/T/R										0.92	83	F	95	#241
			OVERALL										**0.78**	**32**	**C**		
	Saturday Midday	Guest Street	EB L										0.46	32	C	51	98
			EB T/R										0.65	38	D	77	138
		Blaine Street3	WB L/T/R										0.04	28	C	4	17
		Everett Street	NB L	Intersection does not exist	Intersection does not exist	0.19	13	B	22	53							
			NB T/R										0.47	14	B	136	247
			SB L/T										0.42	20	C	106	193
			SB R										0.34	19	B	67	134
		"Old" Everett Street	SWB L/T/R										0.80	54	D	81	#199
			OVERALL										**0.60**	**24**	**C**		

a volume to capacity ratio
b average delay in seconds per vehicle
c LOS = level-of-service
d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ volume exceeds capacity; queue is theoretically infinite
dl Defacto left lane

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As shown in Table 5-10 several of the signalized study area intersections currently function with long delays and queues under peak-hour conditions. These same general operations are expected to continue in the future both with and without the Proposed Project. However, with the access enhancements implemented as part of the Project, existing congestion at some of these locations will be alleviated. Specifically, the new Guest Street Extension and Braintree Street Extension both will provide additional options for access and egress at the Project Site. These benefits will not only be limited to the Project but, instead, also will provide improved circulation for other nearby existing and planned developments. For example, with exiting traffic being allowed onto both Everett Street and Braintree Street, the amount of new traffic added to North Beacon Street will be limited compared to what otherwise would occur. Some degree of existing traffic currently using Arthur Street to exit onto North Beacon Street and head to points to the east may now choose to use either the new Everett Street or Braintree Street connections. With this improved connectivity, the resulting reassignment of traffic from constrained locations along North Beacon Street (such as Market Street, Everett Street, and Cambridge Street) should help address existing periodic congestion along this corridor.

The key component of the proposed Project Site access plan involves a new signalized intersection being created at the newly created intersection of Guest Street Extension with Everett Street/Old Everett Street. As shown in Table 5-10, this intersection is projected to operate at LOS C or better during the critical peak hours analyzed. As noted earlier, LOS D conditions generally are considered to be acceptable, and that LOS can be very difficult to achieve in urban areas due to the combination of vehicular and pedestrian traffic. In the surrounding urban setting, this represents very good operations for an intersection serving multiple roadways and developments under signal control. This new signalized intersection will be located over 700 feet to the north of the North Beacon Street/Everett Street intersection. The primary roadway at that intersection is North Beacon Street, while Everett Street functions as the main roadway. With different major roadways and over 700 feet of separation between the two intersections, coordinated operation is not necessary or appropriate for these two signals. However, the Proponent will work with the City of Boston to have this new signalized intersection added to BTD's central signal system. A similar condition will exist with the new Guest Street/Arthur Street intersection. That intersection will be located roughly 700 feet to the north of North Beacon Street. If desired by BTD, this new signalized intersection also can be added to BTD's central signal management system.

As noted above, the analysis of future conditions reveals that some existing signalized intersections are expected to operate with increased delays. To help offset Project-related traffic impacts at these locations, the Proponent will implement signal timing adjustments at the following locations:

- Market Street at North Beacon Street
- Market Street at Faneuil Street
- Market Street at Arlington Street/Sparhawk Street

- North Beacon Street at Everett Street
- Cambridge Street at Harvard Street/Franklin Street

The details of the signal timing plans will be coordinated with BTD. With these planned signal timing adjustments, operating conditions at these locations will be improved from that shown in Table 5-10. The resulting expected operations for these intersections are summarized in Table 5-11, as compared to both the 2023 No-Build conditions and 2023 Build conditions without mitigation.

Table 5-11 Signalized Intersection Capacity Analysis – Signal Timing Mitigation

				2023 No-Build Conditions					2023 Build Conditions					2023 Build Conditions with Timing Mitigation				
			Movement	v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
Market Street at North Beacon Street																		
	Weekday Morning	North Beacon Street	EB L/T/R	0.59	27	C	134	#212	0.69	31	C	147	#250	1.05	88	F	~225	#328
			WB L/T/R	0.63	28	C	171	#263	0.70	30	C	178	#284	1.08	98	F	~258	#372
		Market Street	NB L/T/R	>1.20	>120	F	~326	m#595	>1.20	>120	F	~514	m#561	>1.20	>120	F	~301	m#503
			SB L/T/R	0.99	50	D	178	#296	1.04	65	E	~208	#334	0.89	30	C	165	#239
			OVERALL	**1.02**	**186**	**F**			**1.11**	**217**	**F**			**1.03**	**105**	**F**		
	Weekday Evening	North Beacon Street	EB L/T/R	0.68	34	C	166	232	0.85	44	D	187	#303	0.98	69	E	~224	#335
			WB L/T/R	1.11	95	F	~266	#444	1.16	113	F	~284	#456	>1.20	>120	F	~374	#484
		Market Street	NB L/T/R	>1.20	>120	F	~347	m#295	>1.20	>120	F	~373	m#251	>1.20	>120	F	~355	m#283
			SB L/T/R	>1.20	>120	F	~584	#719	>1.20	>120	F	~624	#761	>1.20	>120	F	~592	#728
			OVERALL	**1.11**	**174**	**F**			**1.16**	**202**	**F**			**1.15**	**182**	**F**		
	Saturday Midday	North Beacon Street	EB L/T/R	0.62	32	C	128	185	0.74	36	D	141	#222	1.02	82	F	~177	#282
			WB L/T/R	0.89	47	D	203	#324	0.92	50	D	206	#331	>1.20	>120	F	~272	#387
		Market Street	NB L/T/R	>1.20	>120	F	~422	#548	>1.20	>120	F	~455	#583	1.08	83	F	~375	#504
			SB L/T/R	1.13	102	F	~368	#547	1.18	119	F	~400	#572	1.03	61	E	~310	#483
			OVERALL	**1.01**	**115**	**F**			**1.07**	**135**	**F**			**0.99**	**89**	**F**		
Market Street at Faneuil Street																		
	Weekday Morning	Faneuil Street	EB L/R	0.78	36	D	195	#419	0.77	34	C	198	#434	0.83	41	D	197	#565
		Market Street	NB L/T	0.90	37	D	413	m290	1.04	63	E	458	m258	0.97	21	C	268	m260
			SB T	0.60	7	A	54	m100	0.66	8	A	65	m108	0.63	7	A	74	m80
			SB R	0.07	1	A	0	m0	0.08	1	A	0	m0	0.08	0	A	0	m0
			OVERALL	**0.82**	**26**	**C**			**0.90**	**37**	**D**			**0.87**	**19**	**B**		
	Weekday Evening	Faneuil Street	EB L/R	0.79	48	D	164	235	0.79	49	D	167	237	0.91	68	E	175	#331
		Market Street	NB L/T	>1.20	>120	F	~607	m#178	>1.20	>120	F	~704	m#336	>1.20	>120	F	~660	m147
			SB T	0.82	7	A	247	m195	0.87	8	A	267	m221	0.83	13	B	619	m281
			SB R	0.24	1	A	0	m0	0.24	1	A	0	m0	0.24	3	A	0	m0
			OVERALL	**1.00**	**57**	**E**			**1.17**	**99**	**F**			**1.06**	**61**	**E**		
	Saturday Midday	Faneuil Street	EB L/R	0.80	38	D	95	#266	0.81	39	D	98	#273	1.02	88	F	116	#356
		Market Street	NB L/T	1.13	94	F	248	#803	>1.20	>120	F	~360	#868	0.98	42	D	218	#745
			SB T	0.80	21	C	169	#646	0.84	24	C	186	#687	0.76	18	B	163	#601
			SB R	0.14	3	A	0	18	0.14	3	A	0	19	0.14	3	A	0	19
			OVERALL	**0.94**	**49**	**D**			**1.03**	**74**	**E**			**0.89**	**36**	**D**		

a volume to capacity ratio
b average delay in seconds per vehicle
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e 95th percentile queue length, measured in feet
95th percentile volume exceeds capacity, queue may be longer
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dl Defacto left lane

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Table 5-11 Signalized Intersection Capacity Analysis – Signal Timing Mitigation (Continued)

			2023 No-Build Conditions					2023 Build Conditions					2023 Build Conditions with Timing Mitigation				
		Movement	v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
Market Street at Sparhawk Street/ Arlington Street																	
Weekday Morning	Arlington Street	EB L/T/R	0.86	42	D	234	#429	0.83	37	D	238	#435	1.09	104	F	~358	#544
	Sparhawk Street	WB L/T/R	0.75	31	C	214	#381	0.71	28	C	214	#381	0.86	43	D	~302	#488
	Market Street	NB L/T/R	>1.20	>120	F	~502	#700	>1.20	>120	F	~592	#796	1.14	113	F	~391	#600
		SB L	0.40	37	D	46	m#108	0.46	40	D	45	m#94	0.50	46	D	52	m87
		SB T/R	0.78	44	D	226	m#359	0.89	54	D	217	m#420	0.76	50	D	284	m353
		OVERALL	**1.09**	**181**	**F**			**1.33**	**291**	**F**			**0.93**	**78**	**E**		
Weekday Evening	Arlington Street	EB L/T/R	0.97	66	E	262	#461	0.98	69	E	270	#475	>1.20	>120	F	~397	#592
	Sparhawk Street	WB L/T/R	0.84	41	D	274	#448	0.82	39	D	274	#448	0.99	72	E	~369	#572
	Market Street	NB L/T/R	>1.20	>120	F	~569	#769	>1.20	>120	F	~611	#815	>1.20	>120	F	~544	#752
		SB L	0.36	46	D	56	m73	0.38	46	D	57	m69	0.38	45	D	57	m70
		SB T/R	1.17	>120	F	~592	#821	>1.20	>120	F	~653	m#847	1.10	105	F	536	m#755
		OVERALL	**1.41**	**282**	**F**			**1.48**	**321**	**F**			**1.33**	**196**	**F**		
Saturday Midday	Arlington Street	EB L/T/R	0.74	35	C	137	#234	0.78	38	D	141	#259	>1.20	>120	F	~227	#388
	Sparhawk Street	WB L/T/R	0.84	42	D	187	#326	0.84	42	D	187	#326	>1.20	>120	F	~278	#455
	Market Street	NB L/T/R	>1.20	>120	F	~602	#806	>1.20	>120	F	~654	#771	1.12	99	F	~465	#678
		SB L	0.29	19	B	27	55	0.30	20	B	27	55	0.22	14	B	22	44
		SB T/R	0.95	46	D	~450	#671	1.00	55	D	~490	#713	0.82	26	C	358	#584
		OVERALL	**1.34**	**197**	**F**			**1.56**	**265**	**F**			**1.00**	**104**	**F**		
North Beacon Street at Everett Street/KFC Driveway																	
Weekday Morning	North Beacon Street	EB L/T/R	>1.20dl	>120	F	~430	#559	>1.20dl	>120	F	~395	#525	>1.20dl	36	D	271	#430
		WB T	0.87	37	D	379	#597	0.77	31	C	317	461	0.63	18	B	244	356
		WB R	0.18	17	B	0	43	0.22	18	B	0	47	0.22	12	B	0	36
	Everett Street	SB L/T/R	0.47	27	C	142	232	0.55	29	C	175	279	0.77	48	D	~222	#399
		OVERALL	**0.82**	**86**	**F**			**0.83**	**73**	**E**			**0.80**	**30**	**C**		
Weekday Evening	North Beacon Street	EB L/T/R	>1.20dl	>120	F	~521	m#647	>1.20dl	93	F	~398	#531	1.10dl	48	D	346	#481
		WB T	0.86	14	B	151	m326	0.77	12	B	285	m117	0.70	10	B	285	m111
		WB R	0.20	2	A	2	m1	0.21	5	A	1	m0	0.21	5	A	1	m0
	Everett Street	SB L/T/R	0.77	40	D	319	#527	0.88	50	D	~423	m#641	1.01	79	E	~481	#698
		OVERALL	**0.98**	**84**	**F**			**0.92**	**50**	**D**			**0.90**	**39**	**D**		
Saturday Midday	North Beacon Street	EB L/T/R	>1.20dl	80	F	141	#420	0.90	24	C	100	#336	0.82	17	B	91	#320
		WB T	0.83	19	B	150	#526	0.73	15	B	123	#438	0.68	13	B	116	#422
								0.20.									
		WB R	0.17	9	A	0	37	0.21	9	A	0	41	0.21	8	A	0	39
	Everett Street	SB L/T/R	0.70	30	C	76	#246	0.84	40	D	98	#317	0.94	57	E	108	#341
		OVERALL	**0.88**	**46**	**D**			**0.79**	**22**	**C**			**0.77**	**21**	**C**		

a volume to capacity ratio
b average delay in seconds per vehicle
c LOS = level-of-service
d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ volume exceeds capacity; queue is theoretically infinite
dl Defacto left lane

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Table 5-11 Signalized Intersection Capacity Analysis – Signal Timing Mitigation (Continued)

			2023 No-Build Conditions					2023 Build Conditions					2023 Build Conditions with Timing Mitigation				
		Movement	v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
Cambridge Street at Harvard Street/Franklin Street																	
Weekday Morning	Cambridge Street	EB L/T/R	>1.20	>120	F	~346	#514	>1.20	>120	F	~397	#545	1.18	>120	F	~372	#330
		WB L	0.79	29	C	222	#484	0.85	36	D	229	#488	0.88	40	D	~277	#473
		WB T	0.78	21	C	365	#692	0.78	22	C	358	#662	0.76	20	C	373	547
		WB R	0.15	11	B	25	67	0.26	12	B	41	102	0.25	11	B	38	84
	Harvard Avenue	NB L/T	0.32	42	D	36	71	0.39	41	D	46	86	0.43	42	D	46	92
		NB R	0.38	18	B	8	76	0.43	42	D	0	#170	0.44	43	D	0	#185
	Franklin Street	SB L/T/R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		OVERALL	**0.83**	**78**	**E**			**0.84**	**82**	**F**			**0.80**	**58**	**E**		
Weekday Evening	Cambridge Street	EB L/T/R	>1.20	>120	F	~556	#524	>1.20	>120	F	~604	#747	1.09	82	F	~455	#597
		WB L	0.86	43	D	237	#402	0.85	42	D	~236	#401	1.05	93	F	~332	#532
		WB T	0.76	21	C	393	555	0.74	20	B	371	522	0.74	20	C	371	522
		WB R	0.11	11	B	18	44	0.18	12	B	32	66	0.18	12	B	32	66
	Harvard Avenue	NB L/T	0.73	61	E	84	#171	0.77	66	E	92	#191	0.77	66	E	92	#191
	Franklin Street	NB R	0.22	23	C	0	55	0.22	22	C	0	55	0.22	26	C	0	66
		SB L/T/R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		OVERALL	**0.86**	**82**	**F**			**0.91**	**98**	**F**			**0.85**	**56**	**E**		
Saturday Midday	Cambridge Street	EB L/T/R	0.99	52	D	~265	#486	1.04	64	E	~312	#523	0.98	47	D	~256	#488
		WB L	0.77	24	C	125	#260	0.81	32	C	136	#277	0.84	34	C	134	#297
		WB T	0.68	17	B	281	416	0.65	17	B	263	390	0.65	17	B	263	390
		WB R	0.10	11	B	11	39	0.17	11	B	23	60	0.17	11	B	23	60
	Harvard Avenue	NB L/T	0.60	42	D	63	117	0.64	43	D	69	#134	0.64	43	D	69	#134
		NB R	0.25	21	C	0	58	0.25	21	C	0	58	0.25	22	C	0	62
	Franklin Street	SB L/T/R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		OVERALL	**0.72**	**32**	**C**			**0.75**	**37**	**D**			**0.74**	**32**	**C**		

a volume to capacity ratio
b average delay in seconds per vehicle
c LOS = level-of-service
d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ volume exceeds capacity; queue is theoretically infinite
dl Defacto left lane

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With the signal timing changes proposed to be implemented by the Project, operating conditions can be improved to that shown in Table 5-11. The intersection of North Beacon Street at Market Street is expected to experience either reduced or similar delays to those projected under the 2023 No-Build condition without the Project. As noted earlier, the access enhancements provided as part of the Project also should divert some existing traffic from this location to the new Guest Street Extension. This reallocation of existing traffic is reflected in the results shown in Table 5-11 and will help to address existing congestion in this area. Similar benefits also should be realized at Market Street's intersections with Faneuil Street and Arlington Street/Sparhawk Street through timing plan changes at those locations.

The North Beacon Street/Everett Street intersection is expected to improve notably through the proposed timing changes. Overall, this intersection will operate at LOS D or better during the critical peak hours studied, with the LOS improving during each peak hour compared to the 2023 No-Build condition. North Beacon Street traffic flow in the eastbound direction will improve through this retiming. These benefits will be in addition to those resulting from the new connections to Everett Street and Braintree Street. Both connections will provide new options for exiting Project Site traffic or traffic from further west on Guest Street, which otherwise would need to turn left from Arthur Street onto North Beacon Street, and then pass through the Everett Street intersection to reach destinations further to the east.

At the Cambridge Street/Harvard Avenue/Franklin Street intersection, the proposed timing changes will eliminate the projected LOS F conditions during the weekday morning and evening peak hours. During both of these peak hours the intersection now will operate at LOS E with lower delays than those experienced under the 2023 No-Build condition. The LOS C conditions projected for the Saturday midday peak hour under the 2023 No-Build condition also will be maintained under the 2023 Build condition.

Unsignalized Capacity Analysis

Capacity analyses also were conducted for the unsignalized study area intersections for the 2016 Existing, 2023 No-Build, and 2023 Build conditions during the weekday morning, weekday evening, and Saturday midday peak hours. The results of this analysis are summarized in Table 5-12. The capacity analysis worksheets are provided in Appendix C.

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Table 5-12 Unsignalized Intersection Capacity Analysis

				2016 Existing Conditions				2023 No-Build Conditions				2023 Build Conditions with Mitigation			
			Movement	v/c[a]	Delay[b]	LOS[c]	95th % Queue[d]	v/c	Delay	LOS	95th % Queue	v/c	Delay	LOS	95th % Queue
Market Street at Vineland Street															
	Weekday Morning	Vineland Street	EB L/R	0.14	17	C	13	0.17	22	C	15	0.18	23	C	18
	Weekday Evening	Vineland Street	EB L/R	0.09	18	C	8	0.10	23	C	8	0.11	25	C	10
	Saturday Midday	Vineland Street	EB L/R	0.08	16	C	8	0.08	19	C	5	0.08	19	C	8
North Beacon Street at Murdock Street/Self-Storage Driveway															
	Weekday Morning	North Beacon Street	EB L	0.00	9	A	0	0.00	9	A	0	0.00	9	A	0
			WB L	0.06	9	A	5	0.07	10	A	5	0.08	10	A	5
		Self-Storage Driveway	SB L/T/R	0.01	20	C	0	0.01	24	C	0	0.01	24	C	0
	Weekday Evening	North Beacon Street	EB L	0.00	9	A	0	0.00	9	A	0	0.00	9	A	0
			WB L	0.15	10	A	13	0.24	12	B	23	0.24	11	B	23
		Self-Storage Driveway	SB L/T/R	0.13	34	D	10	0.20	75	F	18	0.20	73	F	18
	Saturday Midday	North Beacon Street	EB L	0.03	9	A	3	0.03	9	A	3	0.03	9	A	3
			WB L	0.07	9	A	5	0.14	10	A	13	0.15	10	A	13
		Self-Storage Driveway	SB L/T/R	0.08	26	D	8	0.11	52	F	10	0.11	49	E	8
North Beacon Street at Hichborn Street/Dustin Street															
	Weekday Morning	North Beacon Street	EB L	0.01	8	A	0	0.01	9	A	0	0.01	9	A	0
		Dustin Street	NB L/T/R	0.85	62	F	180	1.17	>120	F	323	1.20	>120	F	338
		Hichborn Street	SB L/R	0.09	22	C	8	0.10	29	D	8	0.10	30	D	8
	Weekday Evening	North Beacon Street	EB L	0.01	9	A	0	0.01	10	A	0	0.01	10	A	0
		Dustin Street	NB L/T/R	0.74	63	F	120	>1.20	>120	F	303	>1.20	>120	F	300
		Hichborn Street	SB L/R	0.30	31	D	30	0.49	66	F	55	0.49	64	F	55
	Saturday Midday	North Beacon Street	EB L	0.01	9	A	0	0.01	9	A	0	0.01	9	A	0
		Dustin Street	NB L/T/R	0.42	28	D	50	0.86	79	F	163	0.82	69	F	153
North Beacon Street at Saunders Street															
	Weekday Morning	Saunders Street	NB L/R	0.26	18	C	25	0.33	24	C	35	0.29	21	C	30
	Weekday Evening	Saunders Street	NB L/R	0.16	18	C	15	0.21	30	D	20	0.17	24	C	15
	Saturday Midday	Saunders Street	NB L/R	0.16	17	C	15	0.24	28	D	23	0.20	23	C	18
North Beacon Street at Gordon Street															
	Weekday Morning	North Beacon Street	WB L	0.10	10	A	8	0.11	11	B	10	0.12	10	B	10
		Gordon Street	NB L/R	0.97	88	F	238	>1.20	>120	F	453	>1.20	>120	F	398
	Weekday Evening	North Beacon Street	WB L	0.16	10	A	13	0.24	13	B	23	0.22	12	B	20
		Gordon Street	NB L/R	0.96	102	F	198	>1.20	>120	F	423	>1.20	>120	F	350
	Saturday Midday	North Beacon Street	WB L	0.08	10	A	8	0.11	12	B	10	0.10	11	B	8
		Gordon Street	NB L/R	0.55	31	D	75	1.00	>120	F	193	0.80	69	F	143

a v/c = volume to capacity ratio
b delay = average intersection delay, measured in seconds
c LOS = level-of-service
d 95th Percentile queue measured in feet

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Table 5-12 Unsignalized Intersection Capacity Analysis (Continued)

			2016 Existing Conditions				2023 No-Build Conditions				2023 Build Conditions with Mitigation			
		Movement	v/c[a]	Delay[b]	LOS[c]	95th % Queue[d]	v/c	Delay	LOS	95th % Queue	v/c	Delay	LOS	95th % Queue
Cambridge Street at Hano Street														
	Weekday Morning	Cambridge Street	EB L	0.05	9	A	5	0.07	10	B	5	0.07	10	B	5
		Hano Street	SB L/R	0.12	14	B	10	0.10	19	C	8	0.11	19	C	8
	Weekday Evening	Cambridge Street	EB L	0.05	9	A	5	0.07	11	B	5	0.07	11	B	5
		Hano Street	SB L/R	0.10	20	C	18	0.16	35	E	13	0.14	33	D	13
	Saturday Midday	Cambridge Street	EB L	0.05	9	A	5	0.07	10	B	5	0.06	10	B	5
		Hano Street	SB L/R	0.18	24	C	15	0.22	42	E	20	0.20	39	E	18
Braintree Street at Rugg Road														
	Weekday Morning	Braintree Street	EB L	n/a	n/a	n/a	n/a	0.00	8	A	0	0.00	8	A	0
			WB L	0.00	8	A	0	0.01	8	A	0	0.01	8	A	0
		Rugg Road	NB L/T/R	0.08	10	B	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		61-83 Braintree Street Driveway	SB L/T/R	n/a	n/a	n/a	n/a	0.02	9	A	3	0.02	10	A	3
	Weekday Evening	Braintree Street	EB L	n/a	n/a	n/a	n/a	0.00	8	A	0	0.00	8	A	0
			WB L	0.01	8	A	0	0.03	8	A	3	0.03	8	A	3
		Rugg Road	NB L/T/R	0.07	10	B	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		61-83 Braintree Street Driveway	SB L/T/R	n/a	n/a	n/a	n/a	0.02	9	A	0	0.02	10	A	3
	Saturday Midday	Braintree Street	EB L	n/a	n/a	n/a	n/a	0.00	8	A	0	0.00	8	A	0
			WB L	0.01	8	A	0	0.03	8	A	3	0.03	8	A	3
		Rugg Road	NB L/T/R	0.08	10	B	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		61-83 Braintree Street Driveway	SB L/T/R	n/a	n/a	n/a	n/a	0.01	9	A	0	0.02	9	A	0
Everett Street at "Old" Everett Street (north)														
	Weekday Morning	Driveway	EB L/T/R	0.03	14	B	3	0.02	15	B	3	0.02	17	C	3
		"Old" Everett Street	WB L/T/R	0.27	21	C	28	0.29	23	C	30	0.37	30	D	40
		Everett Street	NB L	0.00	8	A	0	0.01	8	A	0	0.01	8	A	0
			SB L	0.07	9	A	5	0.07	9	A	5	0.08	9	A	8
	Weekday Evening	Driveway	EB L/T/R	0.05	13	B	5	0.04	13	B	3	0.04	14	B	3
		"Old" Everett Street	WB L/T/R	0.63	41	E	95	0.74	59	F	123	0.98	>120	F	185
		Everett Street	NB L	0.02	9	A	3	0.02	9	A	3	0.02	9	A	3
			SB L	0.04	9	A	3	0.05	9	A	5	0.05	9	A	5
	Saturday Midday	Driveway	EB L/T/R	0.04	14	B	3	0.03	16	C	3	0.04	18	C	3
		"Old" Everett Street	WB L/T/R	0.17	15	B	15	0.21	17	C	20	0.24	19	C	23
		Everett Street	NB L	0.01	8	A	0	0.01	8	A	0	0.01	8	A	0
			SB L	0.03	8	A	3	0.03	8	A	3	0.03	9	A	3

a v/c = volume to capacity ratio
b delay = average intersection delay, measured in seconds
c LOS = level-of-service
d 95th Percentile queue measured in feet

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Table 5-12 Unsignalized Intersection Capacity Analysis (Continued)

			2016 Existing Conditions				2023 No-Build Conditions				2023 Build Conditions with Mitigation			
		Movement	v/c[a]	Delay[b]	LOS[c]	95th % Queue[d]	v/c	Delay	LOS	95th % Queue	v/c	Delay	LOS	95th % Queue
Everett Street at Stop and Shop Driveway														
	Weekday Morning	Stop and Shop Driveway	EB L/R	0.06	15	B	5	0.03	15	B	3				
		Everett Street	NB L	0.01	8	A	0	0.01	8	A	0				
	Weekday Evening	Stop and Shop Driveway	EB L/R	0.15	18	C	13	0.10	19	C	8	*Intersection does not exist*			
		Everett Street	NB L	0.02	9	A	3	0.02	9	A	3				
	Saturday Midday	Stop and Shop Driveway	EB L/R	0.08	13	B	8	0.05	14	B	5				
		Everett Street	NB L	0.02	8	A	3	0.03	8	A	3				
Everett Street at "Old" Everett Street (south)														
	Weekday Morning	"Old" Everett Street	SB T/R	0.13	18	C	13	0.17	20	C	15				
		Everett Street	SEB L	0.05	9	A	5	0.06	9	A	5				
	Weekday Evening	"Old" Everett Street	SB T/R	0.26	19	C	25	0.29	22	C	30	*Intersection does not exist*			
		Everett Street	SEB L	0.05	9	A	5	0.06	9	A	5				
	Saturday Midday	"Old" Everett Street	SB T/R	0.17	15	C	15	0.17	16	C	15				
		Everett Street	SEB L	0.03	9	A	3	0.03	9	A	3				
"Old" Everett Street at Blaine Street														
	Weekday Morning	Blaine Street	SB L	-	0	A	0	-	0	A	0				
		"Old" Everett Street	WB L/R	0.01	9	A	0	0.00	9	A	0				
	Weekday Evening	Blaine Street	SB L	-	0	A	0	-	0	A	0	*Intersection does not exist*			
		"Old" Everett Street	WB L/R	0.02	10	A	3	0.01	10	A	0				
	Saturday Midday	Blaine Street	SB L	0.00	7	A	0	0.00	7	A	0				
		"Old" Everett Street	WB L/R	0.02	9	A	3	0.02	9	A	0				
"Old" Everett Street at Braintree Street														
	Weekday Morning	Braintree Street	EB L/T/R	0.03	7	A	3	0.03	7	A	3	0.05	8	A	5
			WB L/T/R	0.06	8	A	5	0.09	8	A	8	0.24	9	A	23
		"Old" Everett Street	NB L/T/R	0.14	7	A	13	0.14	7	A	13	0.22	8	A	20
			SB L/T/R	0.03	7	A	3	0.01	7	A	0	0.02	8	A	0
	Weekday Evening	Braintree Street	EB L/T/R	0.06	8	A	5	0.11	8	A	10	0.12	8	A	10
			WB L/T/R	0.17	8	A	15	0.19	8	A	18	0.31	10	A	33
		"Old" Everett Street	NB L/T/R	0.12	8	A	10	0.13	8	A	13	0.27	9	A	28
			SB L/T/R	0.04	8	A	3	0.03	8	A	3	0.03	8	A	3
	Saturday Midday	Braintree Street	EB L/T/R	0.04	7	A	3	0.06	7	A	5	0.07	8	A	5
			WB L/T/R	0.12	8	A	10	0.16	8	A	15	0.28	9	A	28
		"Old" Everett Street	NB L/T/R	0.09	7	A	8	0.11	7	A	8	0.21	8	A	20
			SB L/T/R	0.00	8	A	0	0.00	7	A	0	0.00	8	A	0

a v/c = volume to capacity ratio
b delay = average intersection delay, measured in seconds
c LOS = level-of-service
d 95th Percentile queue measured in feet

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Table 5-12 Unsignalized Intersection Capacity Analysis (Continued)

				2016 Existing Conditions				2023 No-Build Conditions				2023 Build Conditions with Mitigation			
			Movement	v/c[a]	Delay[b]	LOS[c]	95th % Queue[d]	v/c	Delay	LOS	95th % Queue	v/c	Delay	LOS	95th % Queue
Guest Street at Life Street															
	Weekday Morning	Guest Street	EB L/T/R	0.23	9	A	23	0.50	13	B	70	0.72	20	C	155
			WB L/T/R	0.25	9	A	25	0.30	10	B	33	0.53	14	B	78
		Life Street	NB L/T/R	0.06	8	A	5	0.19	10	A	18	0.21	11	B	20
			SB L/T/R	0.02	8	A	3	0.10	9	A	8	0.11	10	B	10
	Weekday Evening	Guest Street	EB L/T/R	0.29	9	A	30	0.63	18	C	110	1.00	67	F	370
			WB L/T/R	0.43	11	B	55	0.69	21	C	138	1.00	66	F	363
		Life Street	NB L/T/R	0.03	8	A	3	0.16	11	B	15	0.18	13	B	15
			SB L/T/R	0.03	8	A	3	0.51	15	C	73	0.58	20	C	93
	Saturday Midday	Guest Street	EB L/T/R	0.13	8	A	10	0.51	14	B	73	0.69	21	C	140
			WB L/T/R	0.28	9	A	28	0.46	13	B	58	0.61	18	C	105
		Life Street	NB L/T/R	0.05	8	A	5	0.20	11	B	18	0.20	11	B	18
			SB L/T/R	0.01	8	A	0	0.36	13	B	40	0.37	14	B	43
Guest Street/Stop and Shop Driveway/Guest Street Extension at Arthur Street															
	Weekday Morning	Guest Street	EB L/T/R	0.24	9	A	23	0.34	12	B	38	0.72	27	D	138
		Stop and Shop Driveway	WB L/T/R	0.23	9	A	23	0.33	11	B	38	n/a	n/a	n/a	n/a
		Guest Street Extension	WB L	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.15	12	B	13
			WB T/R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.81	33	D	195
		Arthur Street	NB L/T/R	0.20	9	A	18	0.60	17	C	100	n/a	n/a	n/a	n/a
			NB L/T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.68	26	D	125
			NB R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.18	11	B	15
			SB L/T/R	0.03	9	A	3	0.16	11	B	13	0.23	15	B	23
	Weekday Evening	Guest Street	EB L/T/R	0.19	9	A	18	0.42	15	C	53	1.11	86	F	300
		Stop and Shop Driveway	WB L/T/R	0.30	10	B	30	0.51	18	C	73	n/a	n/a	n/a	n/a
		Guest Street Extension	WB L	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.38	19	C	38
			WB T/R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1.00	63	F	243
		Arthur Street	NB L/T/R	0.17	9	A	15	0.62	20	C	105	n/a	n/a	n/a	n/a
			NB L/T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.75	34	D	123
			NB R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.22	15	B	18
			SB L/T/R	0.27	9	A	28	0.86	36	E	233	>1.20	>120	F	515
	Saturday Midday	Guest Street	EB L/T/R	0.15	8	A	13	0.30	12	B	33	0.68	27	D	123
		Stop and Shop Driveway	WB L/T/R	0.21	9	A	20	0.41	13	B	50	n/a	n/a	n/a	n/a
		Guest Street Extension	WB L	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.27	14	B	28
			WB T/R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.70	27	D	135
		Arthur Street	NB L/T/R	0.13	8	A	10	0.62	17	C	105	n/a	n/a	n/a	n/a
			NB L/T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.69	28	D	130
			NB R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.17	12	B	15
			SB L/T/R	0.01	7	A	0	0.42	13	B	53	0.61	24	C	100

a v/c = volume to capacity ratio
b delay = average intersection delay, measured in seconds
c LOS = level-of-service
d 95th Percentile queue measured in feet

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Table 5-12 Unsignalized Intersection Capacity Analysis (Continued)

				2016 Existing Conditions				2023 No-Build Conditions				2023 Build Conditions with Mitigation			
			Movement	v/c[a]	Delay[b]	LOS[c]	95th % Queue[d]	v/c	Delay	LOS	95th % Queue	v/c	Delay	LOS	95th % Queue
Guest Street at West Street															
	Weekday Morning	Guest Street	EB L									0.05	2	A	5
		West Street	SB L/R									0.07	11	B	5
	Weekday Evening	Guest Street	EB L									0.03	8	A	3
		West Street	SB L/R									0.18	15	B	15
	Saturday Midday	Guest Street	EB L									0.03	8	A	3
		West Street	SB L/R									0.09	13	B	8
Guest Street at East Street															
	Weekday Morning	Guest Street	EB L									0.05	8	A	4
			WB L									0.00	8	A	0
		Building 4 Driveway	NB L/T/R									0.12	14	B	10
		East Street	SB L/T/R									0.22	16	C	20
	Weekday Evening	Guest Street	EB L									0.03	8	A	3
			WB L									0.02	8	A	0
		Building 4 Driveway	NB L/T/R									0.09	18	C	8
		East Street	SB L/T/R									0.30	19	C	30
	Saturday Midday	Guest Street	EB L									0.03	8	A	3
			WB L									0.01	8	A	0
		Building 4 Driveway	NB L/T/R									0.09	16	C	8
		East Street	SB L/T/R									0.19	16	C	18

Intersection does not exist

Intersection does not exist

Intersection does not exist

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As shown in Table 5-12, several of the unsignalized study area intersections are expected to have critical movements that operate at LOS F under the 2023 Build condition with the Proposed Project. However, each of these critical movements also operate at a LOS F during their corresponding No-Build conditions and, therefore, these deficiencies are largely unrelated to Proposed Project. Furthermore, at several of the unsignalized intersections, the *demand* along the side street remains unchanged from the No-Build to the Build conditions. The proposed development is not expected to add significant amounts of traffic to the critical side-street movements. Instead, most Proposed Project-generated traffic is expected mostly to utilize primary roadways whose intersections are generally under signal control. Under the future conditions analyses, the stop-controlled approaches at these intersections would continue to experience lengthy delays, *with or without* the proposed development. It should be noted that these operations are projected for the "STOP" controlled approaches only and not the mainline free movements.

Besides enhancing access to the Project Site and other existing and proposed developments, the proposed signalized intersection of Everett Street with Old Everett Street and Guest Street Extension will help nearby residents to the south on Everett Street to exit and enter their driveways by creating gaps in the Everett Street traffic stream which currently do not exist. Most importantly, this new signalized intersection allows for the continued advancement of the adjacent Boston Landing developments and other nearby planned or potential development sites.

5.7 Transportation Demand Management

Transportation Demand Management (TDM) measures are most often directed at commuter travel and implemented at office sites. However, due to the mixed-use and transit-orientated nature of the Proposed Project, there are opportunities to bring TDM programs to the Proposed Project's other land uses, including the grocery store, retail stores, and residential housing.

The Proposed Project is being developed with the goal of achieving Boston Green Building Credits as outlined under Appendix A of Article 37 of the City of Boston Code. Specifically, the TDM program summarized in this section has been developed to include key components of the "Modern Mobility" Boston Green Building Credit, per Appendix A of Article 37. In addition to complying with the required BTD standards for automobile parking and bicycle parking accommodations, the Proposed Project also will provide multiple accommodations beyond the required prerequisites.

The following sections discuss the land use types for which TDM measures will be implemented. A description of the TDM elements is presented in this section along with information on how those elements aid shoppers, employees, visitors, and residents getting to and from the Project Site.

The following plan first addresses general TDM measures that apply to the whole Project Site, then special programs for the residents, the future office building, the grocery store, and retail shops and restaurants.

5.7.1 General Measures

A Better City – TMA involvement

The Proponent will become a member of "A Better City", which is the local Transportation Management Association (TMA) in this area. The mission of the TMA is to enhance quality of life through focusing on Transportation and Infrastructure, Land Use and Development, and Energy and the Environment. As an active member of this organization, the Proponent will support the TMA's efforts in improving and expanding public transportation in the area. Through its involvement in the TMA, the details of the site design, internal roadway networks, and overall transportation infrastructure all will be advanced consistent with the goals of the TMA's "Go Boston 2030" vision. Participation in the TMA also will help to provide a framework to offer alternative transportation services, and ensure the provision of the multiple TDM strategies and programs outlined in this plan. Monitoring and evaluation of TDM programs will also be the responsibility of the TMA and its staff.

Transportation Coordinator

In conjunction with the initial phase of development, an overall on-site TDM coordinator will be designated to oversee all TDM programs for each building of the Proposed Project, and the Project Site in its entirety. The person(s) in this role will coordinate with organizations within the area evaluated in the Guest Street Planning Study to help promote a reduced reliance on single-occupant motor-vehicle travel to the Project Site. To that end, the TDM measures identified in the following sections will be implemented under the direction and supervision of this person.

The final job description for this role will be determined by the TMA upon its inception. The duties of the on-site TDM coordinator may include, but not be limited to:

- Acting as a liaison with site employers and MassRIDES.
- Assisting site employees and residents with ride matching and transportation planning.
- Developing and implementing appropriate TDM measures.
- Disseminating information on alternate modes of transportation and developing transportation related marketing and education materials, including a website.
- Developing and maintaining information pertaining to pedestrian and cycling access to and from the Project Site.
- Hosting occasional transportation-related events to promote the use of commuting alternatives.
- Distributing transit maps and passes.
- Advocating with the state and local governments to improve transportation infrastructure and services.
- Monitoring the effectiveness of TDM measures through surveys and other tools.
- Completing regulatory reports to state and city agencies.
- Implementing a website providing travel-related information, and promoting awareness of the items listed above.

Promote Transit Use

Access to public transportation will significantly reduce demand for vehicular travel and parking spaces. This should be particularly effective in relation to the new Boston Landing MBTA commuter rail station, which opened in May 2017. To serve visitors, employees, and residents, the Proponent and the TMA will work with the MBTA to identify appropriate locations for new or relocated bus stops within the Project Site and other possible amenities, including bus shelters and real-time transit information. Multiple meetings have been held with the MBTA to date, and this dialogue will continue to work out these and other details. Potential bus stop locations are shown in the Guest Street Extension plan referenced earlier (Figure 5.21).

Currently the northerly and westerly ends of the Project Site are bound by fencing which does not allow for convenient travel to and from the new MBTA station. The Proponent has met with the Boston Landing development team on multiple occasions to discuss the Proposed Project. While a direct vehicular connection will not be provided between the two properties at the northern boundary, it was mutually agreed that the fencing along the westerly end of both properties will be modified to allow for a direct pedestrian connection between the Project Site and the Boston Landing site to provide more direct access to the new MBTA commuter rail station.

The on-site TDM coordinator will provide a central commuter information center within the Project Site near the entrance to the Boston Landing MBTA commuter rail station. This will provide employees, residents, visitors with transit maps and schedules and route information for pedestrians and cyclists. One or two smaller centers also may be provided at central locations within the overall development, or possibly within each building. This could include one of the lobbies of a residential building, or at the entrance of the planned office building among other possible locations that would be identified by the on-site TDM coordinator in consultation with the TMA.

Facilitate Bicycle and Pedestrian Travel

A variety of constraints currently exist that limit pedestrian and bicycle travel to, from, and throughout the Project Site. Travel to the Project Site by cycling or walking will be promoted by the Proponent through the provision of improved bicycle and pedestrian connections within the Project Site, including a new separated bike lane to be provided within the new Guest Street Extension between Arthur Street and Everett Street. In addition to secured, covered bike storage within each building, bicycle racks also will be provided at locations near various buildings within the overall development. The exact location will be determined through the City of Boston Article 80 permitting process. Walking to and from, and throughout the Project Site will be encouraged by the provision of a pedestrian-friendly site layout, which features sidewalks and crosswalks at key points both within the site and connecting to adjacent planned developments. The bicycle and pedestrian infrastructure improvements will help to promote non-vehicular travel to the Project Site.

5.7.2 Grocery Store

Stop & Shop will build upon existing TDM programs which are already in place at the Project Site as established during the initial permitting of the grocery store and adjacent retail uses in the 1990s. With this new and expanded TDM program, the following measures will be implemented:

Employees

Stop & Shop will designate an Employee Transportation Coordinator who will work with store employees to assist with ride matching, transit pass sales and schedules, and the management of all on-site TDM features and transportation programs.

To discourage employee vehicle trips to the Project Site, Stop & Shop will provide a 50-percent subsidy for MBTA transit passes for its employees. For employees that must drive to the Project Site, Stop & Shop will work with MassRIDES to offer carpool and vanpool incentives, including discount tolls, insurance, and registration to discourage single-occupancy vehicle trips from employees. MassRIDES also offers a program for leasing vans for vanpools and to cover some of the administrative and operational costs of the vanpool.

The Stop & Shop Employee Transportation Coordinator will be responsible for coordinating these benefits and will work with MassRIDES to offer ride-matching and other services. While not a requirement, the Stop & Shop Employee Transportation Coordinator may also be the on-site TDM coordinator for the overall Project Site. If a different person fills that role for the overall Project Site, the Stop & Shop Employee Transportation Coordinator also will coordinate with the on-site TDM coordinator described previously. The Employee Transportation Coordinator will help ensure that transit information is available to all employees during orientation, in lunchrooms, building lobbies, and at the on-site transportation center.

Stop & Shop, through MassRIDES, will offer an "Emergency Ride Home Program" (i.e., Guaranteed Ride Home) for employees who normally take transit, carpool, vanpool, bike, or walk to work. This ride, provided by taxi, rental car, or company vehicle, is offered to employees who have a personal or family illness or emergency that requires them to leave work during the day, and to employees who are unexpectedly required to work late. To use the program, employees must pre-register and must commit to using alternate modes of transportation for an agreed upon number of days per week. A cap on the number of times an employee can use the service would be set. Those who bike or walk regularly will also be eligible for the program in adverse weather conditions. Building 1 also will include secure, covered bicycle parking, as discussed previously in Section 5.5.7.

To limit trips off-site for Stop & Shop employees during work breaks, a variety of convenient meal options will be available, including restaurants and café either within the building, or within short walking distance within the overall Project Site. A refrigerator and microwave will also be available for employee use. Other services, like an on-site automated teller machine and direct deposit of paychecks will help reduce trips.

Customers

Stop & Shop will have parking spaces dedicated to a shared vehicle service, such as Zipcar, in a prominent location with visible signage. The Zipcar spaces will provide convenient parking to customers who travel to the Project Site via a Zipcar vehicle. Additional Zipcars are anticipated to be based on the Project Site to serve residents and office workers.

The Proponent will consider providing preferred parking for low-emitting fuel-efficient vehicles and/or electric vehicle charging stations within the garage serving Building 1 for use by customers.

As noted above, the Proponent will coordinate with the MBTA to determine if either new or relocated MBTA bus stops can be provided along Guest Street Extension, which could further help promote the use of public transportation, by employees and customers.

5.7.3 Offices

Office employers within the Project Site will be encouraged to implement appropriate TDM measures by the on-site TDM coordinator. As not every TDM program will be suitable for every type of employer, such as telecommuting or flexible work hours, the TMA and on-site TDM coordinator will offer technical assistance to employers to evaluate potential programs and implement them when appropriate. Employer-based TDM measures may include the following programs:

- Preferential carpool and vanpool parking within the parking garage and spaces near office building entrances within the parking garage as a convenience to commuters and to promote ride-sharing.
- Ride matching assistance managed by the on-site TDM coordinator or by MassRIDES so that employees find appropriate carpool and vanpool partners.
- Disseminating information on alternate modes of transportation and developing transportation.
- Sponsored vanpools and subsidized expenses.
- Employees can use pre-tax dollars for the purchase of MBTA passes. The pre-tax purchase is free from both federal and state income and payroll taxes.
- Provide telecommuting options for employees in appropriate jobs.
- Provide incentives for bicycle and pedestrian commutes, like covered bicycle storage, changing rooms, and shower facilities.
- Hold promotional events for transit-riders, cyclists, and pedestrians.
- Offer direct deposit to employees.
- The Proponent will consider providing preferred parking for low-emitting fuel-efficient vehicles and/or electric vehicle charging stations within each of the garages serving the buildings comprising the Proposed Project.

5.7.4 Retail/Restaurants

The Proponent will seek to attract a variety of retail shops, restaurants, and service tenants on the ground floor of each building. These shops will potentially include restaurants, apparel, furnishings, general merchandise, and service uses like banks and office supplies. As most of these businesses will be small shops, there will not be the same levels of TDM opportunities internal to each individual business as will be available with larger employers, but employees who work on the Project Site will be able to take advantage of the transportation guidance and programs coordinated by the transportation coordinator.

The suite of TDM measures to be implemented in association with the retail shops are fewer than for traditional offices, but will still have an impact in reducing single-occupant vehicle travel. The retail TDM program may include the following:

- Improved site amenities, like cycling paths and pedestrian crossings which enhance the ability of employees to walk or cycle to work.
- Ride matching services and transit information provided by the on-site TDM coordinator or MassRIDES.
- Hold promotional events for cyclists, pedestrians, and transit-riders.
- Offer direct deposit to employees.
- As noted earlier, the Proponent will consider providing preferred parking for low-emitting fuel-efficient vehicles and/or electric vehicle charging stations within each of the garages serving the buildings comprising the Proposed Project.

5.7.5 Residential

In addition to providing a pedestrian friendly, mixed-use transit-orientated environment, the Proponent will enact a variety of additional strategies to reduce the need for auto trips by residents. This will include working with a car-sharing service (such as Zipcar) to provide cars for periodic use by residents.

Several of the TDM measures to be implemented for the entire Project Site will be attractive to new residents. Specifically, the provision of secured bicycle storage, bicycle racks, pedestrian walkways, and proximity to public transportation, including several bus lines and the new Boston Landing MBTA commuter rail station should help to minimize the need for vehicular travel and parking spaces. As noted earlier, the Proponent will consider providing preferred parking for low-emitting fuel-efficient vehicles and/or electric vehicle charging stations within each of the garages serving the buildings comprising the Proposed Project.

5.8 Conclusion

The Proposed Project is consistent with the City of Boston's transportation-related goals outlined in the Guest Street Planning Study and has been designed to accommodate Project-generated traffic, as well as traffic other nearby planned or

potential developments, such as Boston Landing, which is currently under construction. The transportation improvements will be provided **as part of the initial phase**. While these access enhancements are designed to accommodate the full build-out of the Project, implementing them with the initial phase will help address existing deficiencies in the area while also allow other nearby planned or potential developments to advance. In summary, these improvements provide the following benefits:

- The new Guest Street Extension, a multi-modal roadway, will provide a new connection between the existing Guest Street/Arthur Street intersection at the west end of the Project Site and Everett Street.
- The installation of a new full-access traffic signal at Everett Street's intersection with Old Everett Street and the newly constructed Guest Street Extension will help accommodate Project-generated traffic while also enhancing access and egress options for other planned developments in the area.
- The conversion of the existing Braintree Street enter-only driveway also will help to dissipate Project-related traffic while helping to avoid other access/egress points from being overburdened.
- The new Arthur Street/Guest Street signalized intersection will address long-standing deficiencies.
- Signal timing improvements to be implemented at five key study area intersections will allow these intersections to operate at similar, or even improved, conditions compared to future conditions without the Project in place.
- The new pedestrians and bicycle accommodations, including direct connections to the new Boston Landing MBTA commuter rail station will not only reduce vehicle trips, but generate new ridership, thus, further ensuring the success of the new station.

Overall, the additional new traffic generated by the Proposed Project can be accommodated on the surrounding roadway network and, with the Proposed Project's transportation infrastructure improvements, minimal impacts are expected from the Proposed Project.

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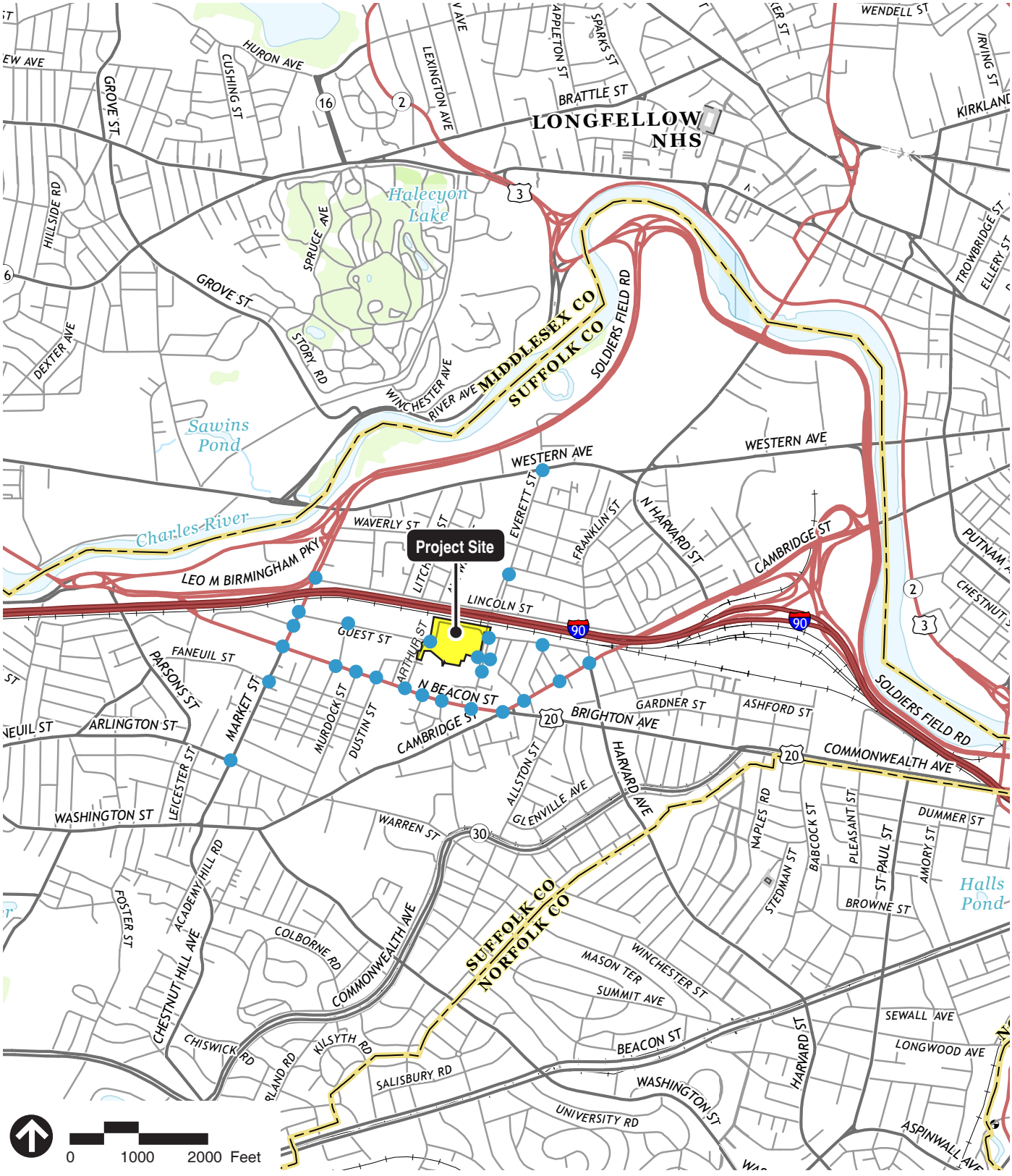


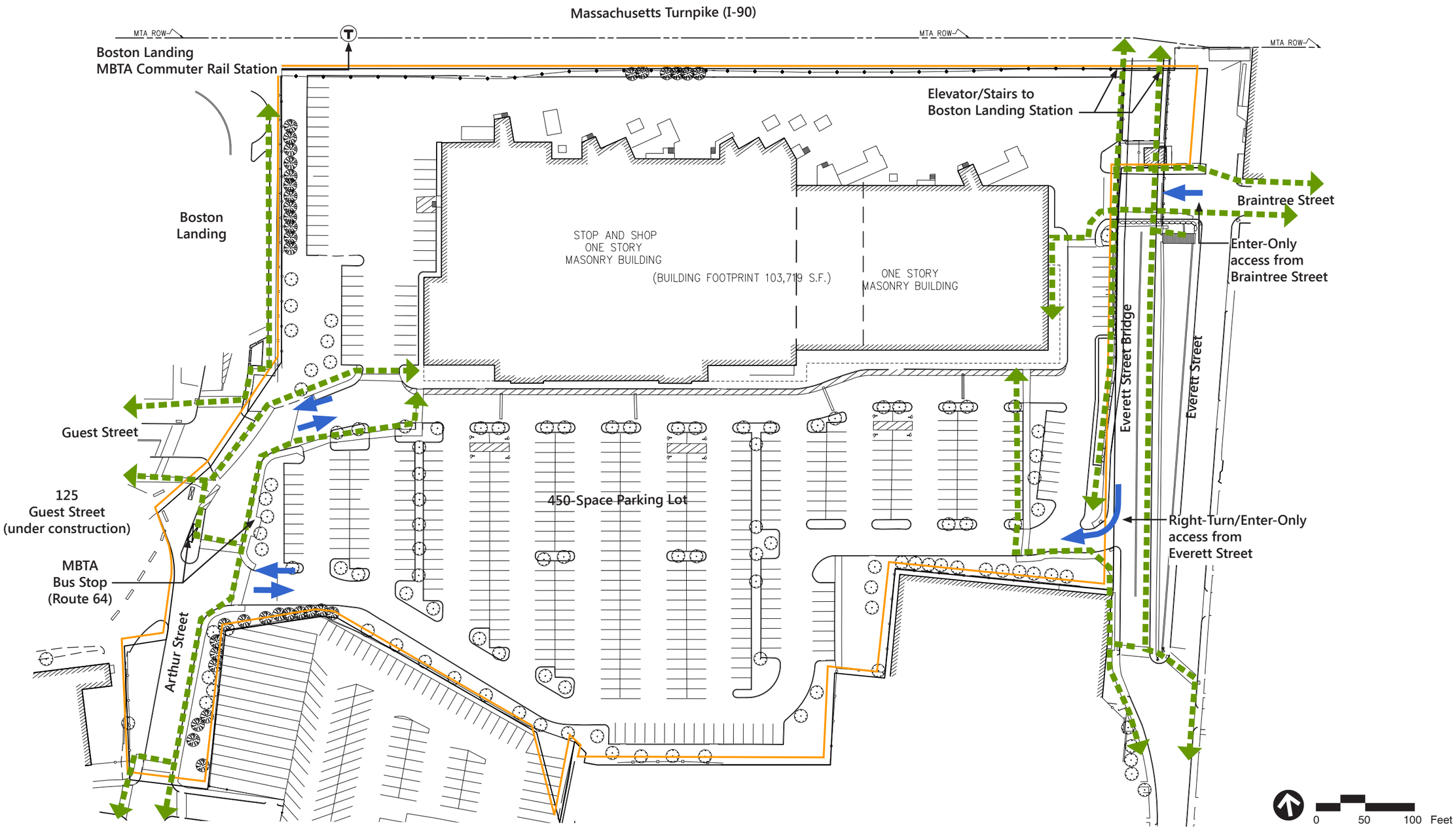
Source 2015 USGS

● Study Area Intersection

Figure 5.1

Traffic Study Area

Allston Yards
Boston, Massachusetts



Source: VHB Survey

Prepared By: VHB

Project Site Boundary

Pedestrian Path/Sidewalk

Vehicular Access/Egress

Figure 5.2

Site Access and Circulation

Allston Yards
Boston, Massachusetts

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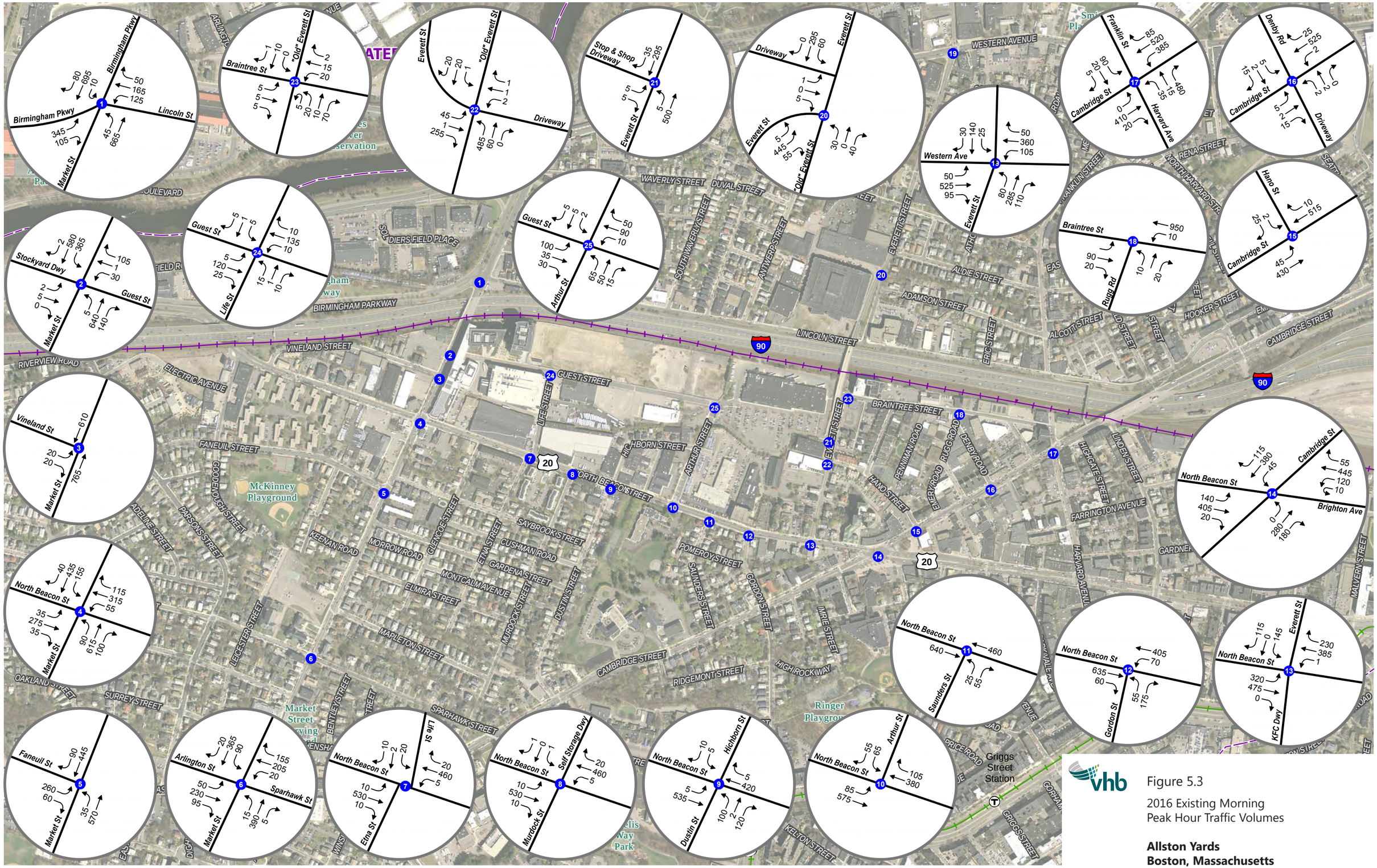

Figure 5.3

2016 Existing Morning Peak Hour Traffic Volumes

Allston Yards
Boston, Massachusetts

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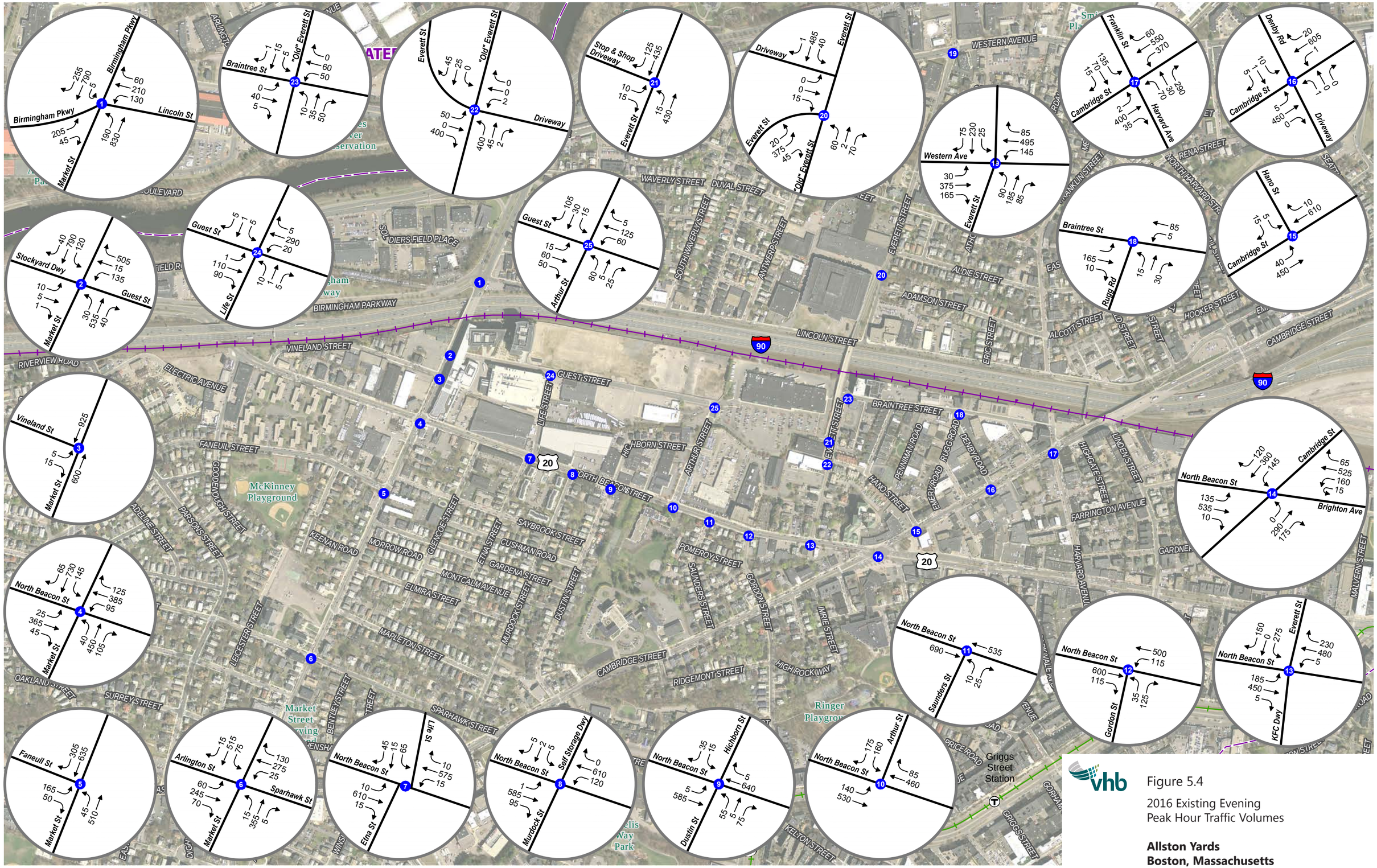

Figure 5.4

2016 Existing Evening
Peak Hour Traffic Volumes

Allston Yards
Boston, Massachusetts

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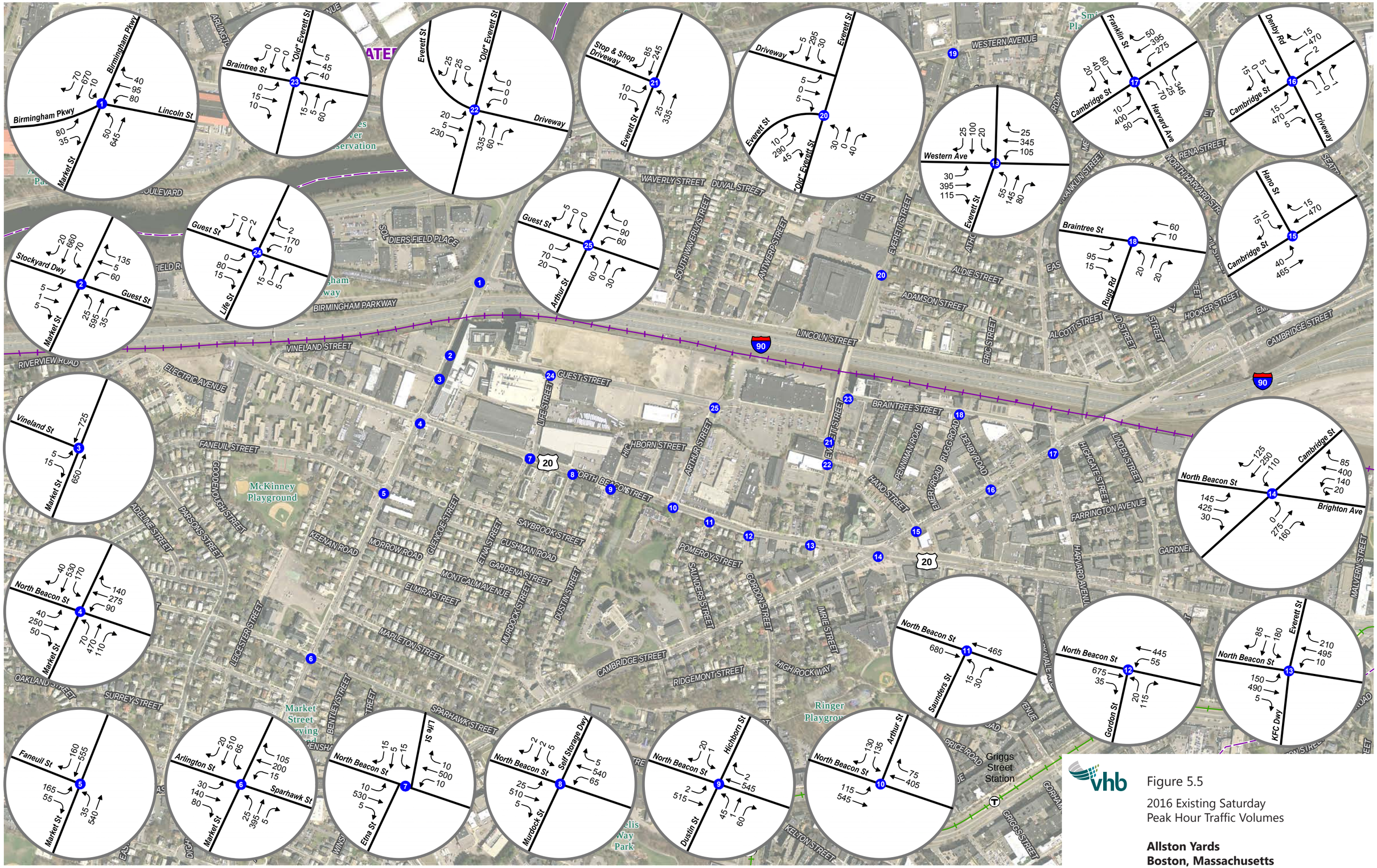

Figure 5.5

2016 Existing Saturday
Peak Hour Traffic Volumes

Allston Yards
Boston, Massachusetts

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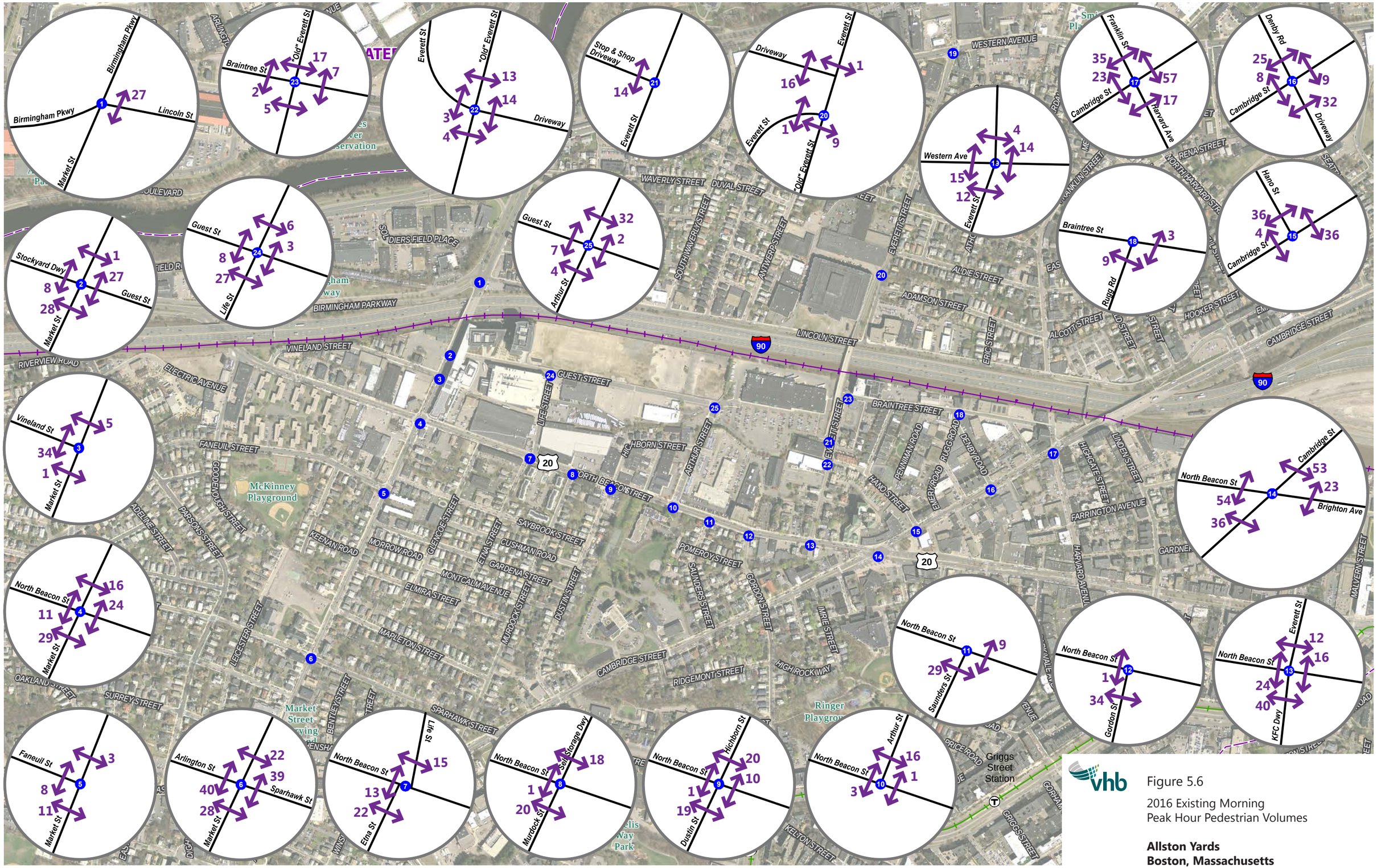

Figure 5.6

2016 Existing Morning
Peak Hour Pedestrian Volumes

Allston Yards
Boston, Massachusetts

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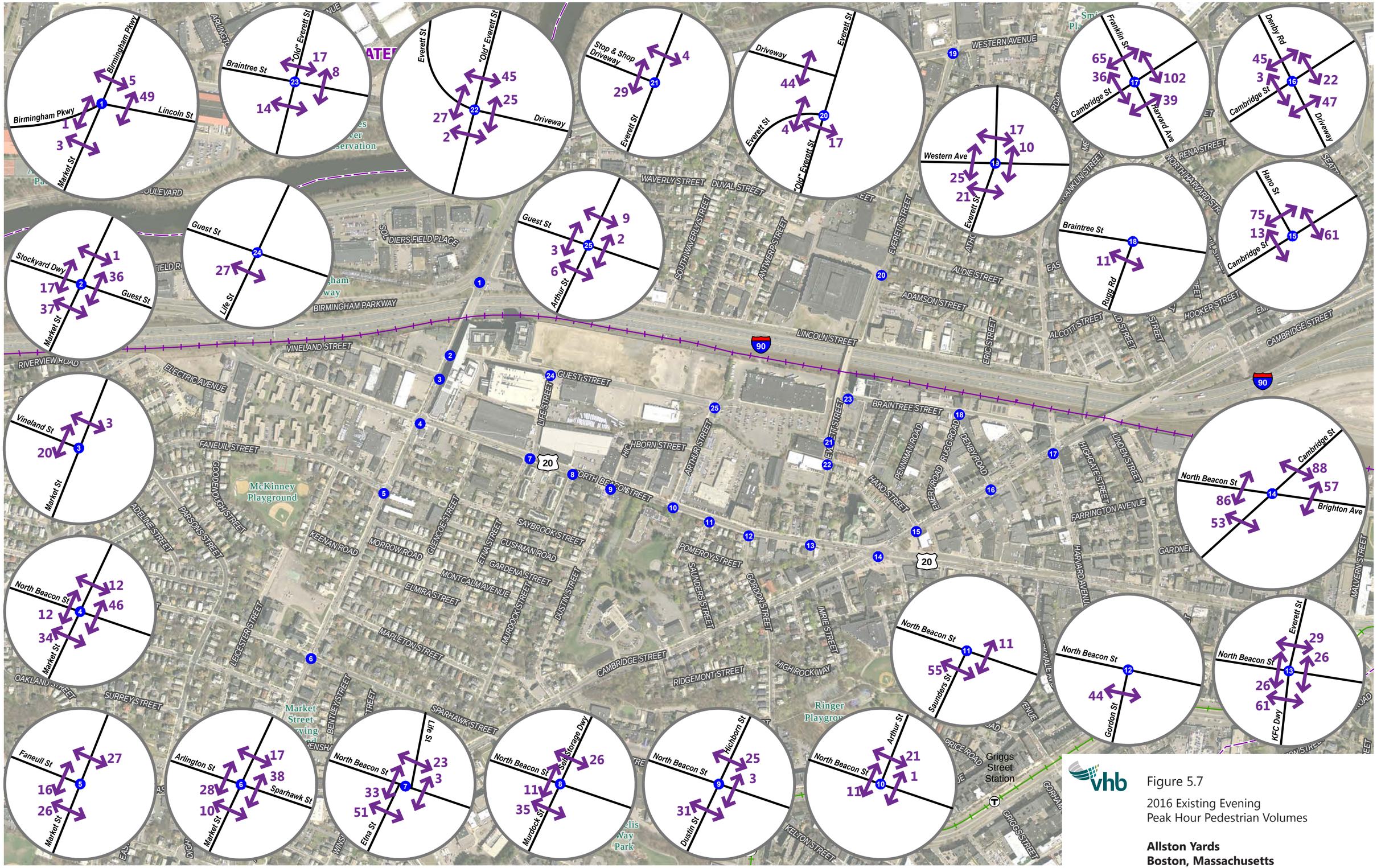

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Figure 5.7

2016 Existing Evening
Peak Hour Pedestrian Volumes

Allston Yards
Boston, Massachusetts

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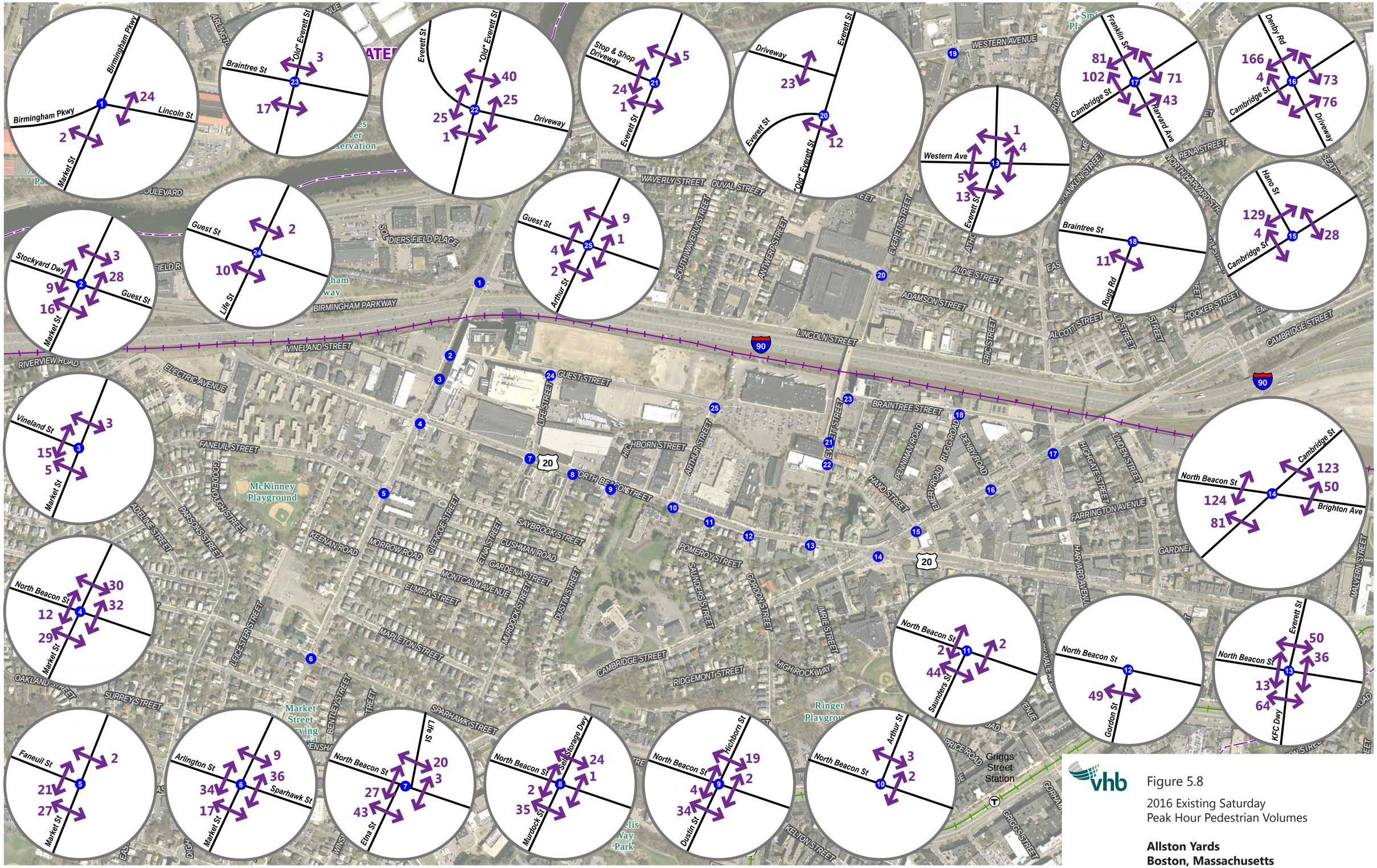

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Figure 5.8

2016 Existing Saturday
Peak Hour Pedestrian Volumes

Allston Yards
Boston, Massachusetts

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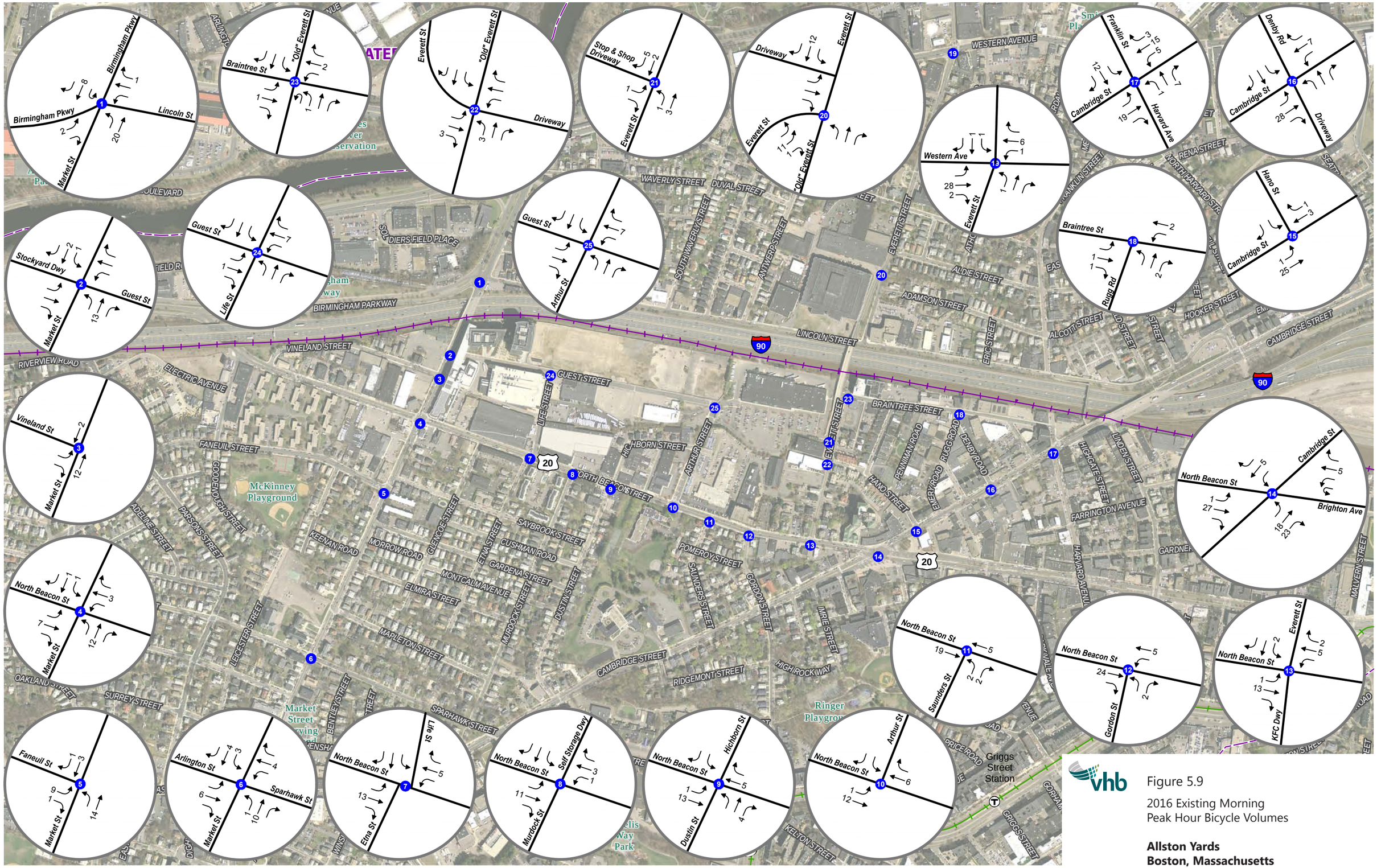

Figure 5.9

2016 Existing Morning Peak Hour Bicycle Volumes

Allston Yards
Boston, Massachusetts

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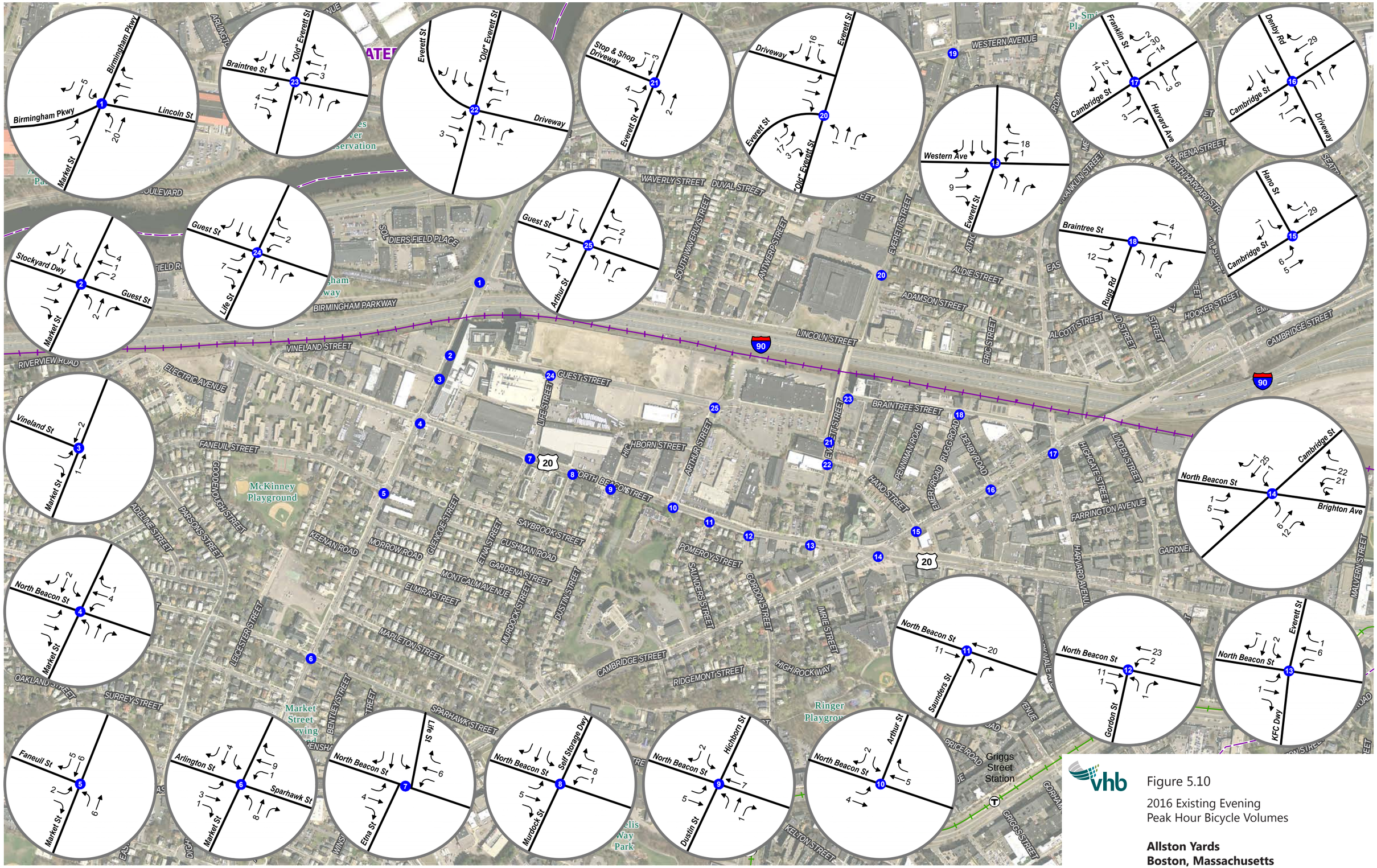

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Figure 5.10

2016 Existing Evening Peak Hour Bicycle Volumes

Allston Yards
Boston, Massachusetts

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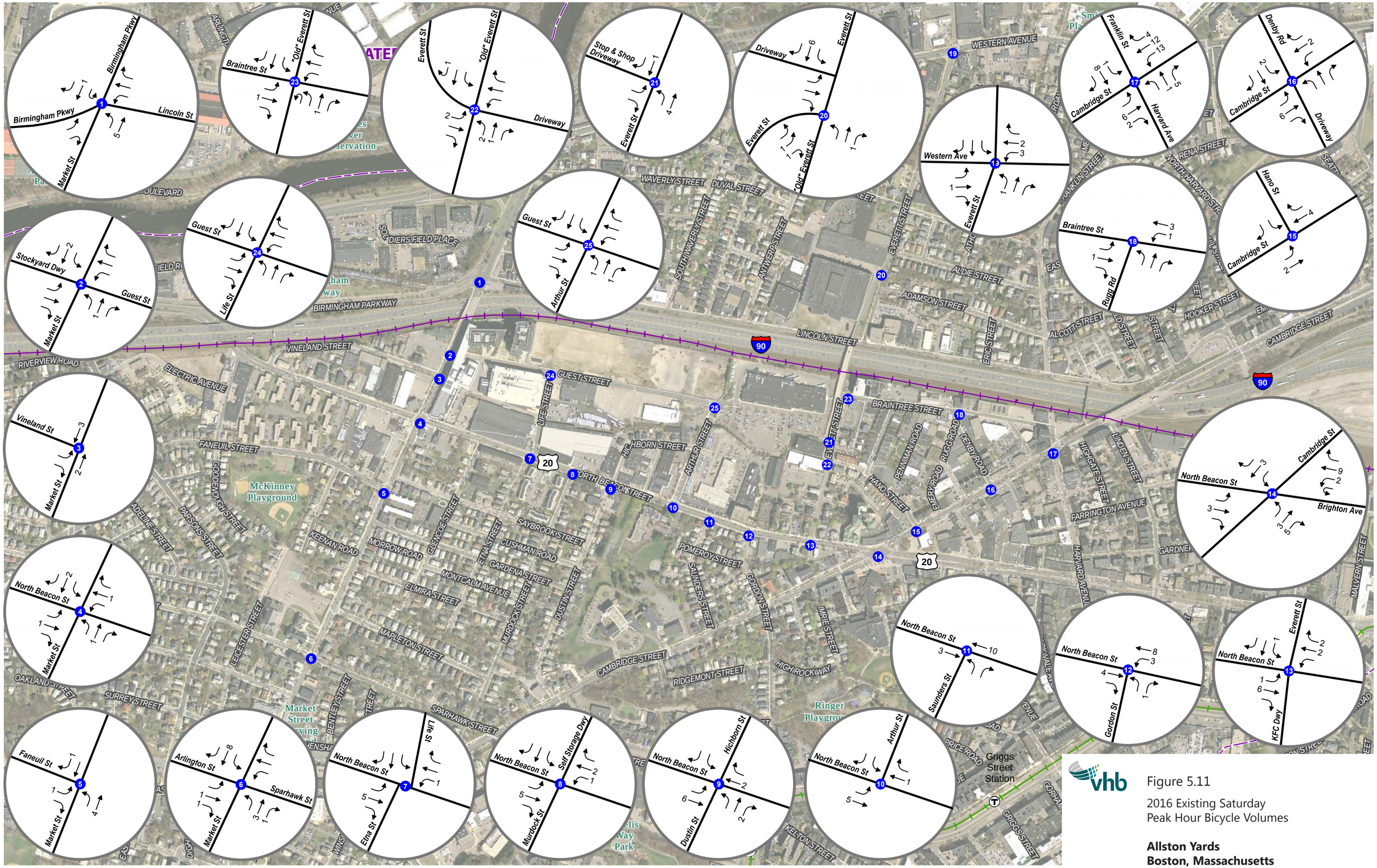

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Figure 5.11

2016 Existing Saturday
Peak Hour Bicycle Volumes

Allston Yards
Boston, Massachusetts

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Bus Stop

Bus Route Number

WATERTOWN

Charles River Reservation

Smith Playground

Arsenal Park

Portsmouth Playground

Birmingham Parkway

Boston Landing

McKinney Playground

Market Street Burying Ground

Ringer Playground

Fidelis Way Park

Packards Corner Station

Harvard Avenue Station

Griggs Street Station

Allston Street Station

Warren Street Station

ARLINGTON STREET, COOLIDGE AVENUE, ARSENAL STREET, GREENOUGH BOULEVARD, SOLDIERS FIELD ROAD, SOLDIERS FIELD PLACE, BIRMINGHAM PARKWAY, VINELAND STREET, RIVERVIEW ROAD, BROOKSDALE ROAD, ELECTRIC AVENUE, FALKLAND STREET, CRESTHILL ROAD, FANEUIL STREET, GOODENOUGH STREET, MADELINE STREET, PARSONS STREET, HARRIET STREET, ARLINGTON STREET, SOUTH HOBART STREET, BENNETT STREET, OAKLAND STREET, SURREY STREET, LEICESTER STREET, KEENAN ROAD, MORROW ROAD, GLENCOE STREET, ETNA STREET, SAYBROOK STREET, CUSHMAN ROAD, GARDENA STREET, MONTCALM AVENUE, ELMIRA STREET, MAPLETON STREET, SPARHAWK STREET, HENSHAW STREET, BENTLEY STREET, MENLO STREET, EXMOOR STREET, MARKET STREET, WASHINGTON STREET, ALDEN ROAD, MALBERT ROAD, DIGHTON STREET, ACADEMY HILL ROAD, WINSHIP STREET, NEVINS STREET, MONASTERY PATH, WARREN STREET, CAMELOT COURT, KELTON STREET, GLENVILLE AVENUE, GRIGGS STREET, PRICE ROAD, GREYLOCK ROAD, QUINT AVENUE, PARKVALE AVENUE, ALLSTON STREET, IMRIE STREET, GORDON STREET, SAUNDERS STREET, POMEROY STREET, NORTH BEACON STREET, NICHOLS AVENUE, ARTHUR STREET, HANO STREET, PENNIMAN ROAD, EMERY ROAD, RUGG ROAD, DENBY ROAD, EVERETT STREET, LIFE STREET, GUEST STREET, LINCOLN STREET, BRAINTREE STREET, HIGHGATE STREET, LINDEN STREET, HARVARD AVENUE, CHESTER STREET, FORDHAM ROAD, SAINT LUKES ROAD, REEDSDALE STREET, MALVERN STREET, ASHFORD STREET, PRATT STREET, WADSWORTH STREET, GARDNER STREET, HAMILTON ROAD, RIDGEMONT STREET, HIGHROCK WAY, CAMBRIDGE STREET, ADAMSON STREET, ALDIE STREET, ATHOL STREET, HOLTON STREET, EVERETT STREET, ANTWERP STREET, SOUTH WAVERLY STREET, BRONSDON STREET, PORTSMOUTH STREET, LOTHROP STREET, WAVERLY STREET, DUVAL STREET, LITCHFIELD STREET, BRENTWOOD STREET, RAYMOND STREET, WEST ORD STREET, RIVERDALE STREET, APPIAN WAY, FRANKLIN STREET, MYRICK STREET, MEAD STREET, BAYARD STREET, NORTH HARVARD STREET, KINGSLEY STREET, RENA STREET, SEATTLE STREET, HOPEDALE STREET, HASKELL STREET, ARDEN STREET, HOLMAN STREET, COOLIDGE ROAD, EASTON STREET, ALCOTT STREET, MANSFIELD STREET, ROYAL STREET, HOOKER STREET, EMPIRE STREET, CAMBRIDGE STREET, SPURR STREET, WESTERN AVENUE

0 300 600 Feet

Figure 5.12
Public Transportation

Allston Yards
Boston, Massachusetts

\\vhb\proj\Boston\12305.01 S&S Allston\graphics\FIGURES\Parking.indd

- No Parking
- Unrestricted Parking
- No Parking 4 PM - 6 PM
- Parking 2 Hour Limit 8 AM - 6 PM Mon - Sat
- Allston/Brighton Residential Permit Parking 6 PM - 8 AM
- Drop-off Only - 5-minute Limit
- Parking 30-minute Limit Mon - Sat
- No Stopping Weekdays 7 AM - 9:30 AM
- No Parking 8 AM - 6 PM Except Sat and Sun
- Allston/Brighton 2 Hour Parking Limit (Except Residential Permit) 8 AM - 6 PM Mon - Fri

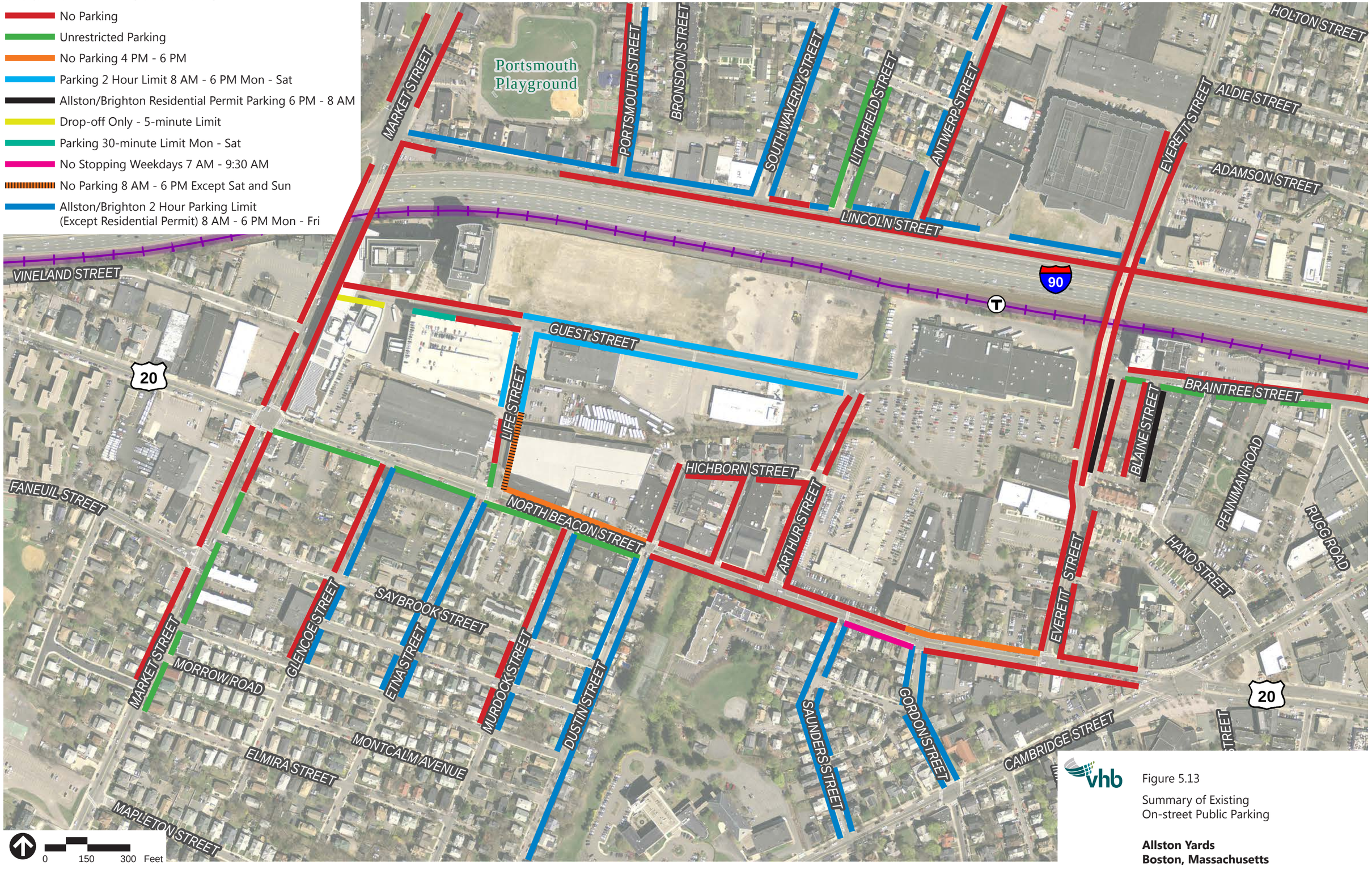

Figure 5.13

Summary of Existing
On-street Public Parking

Allston Yards
Boston, Massachusetts

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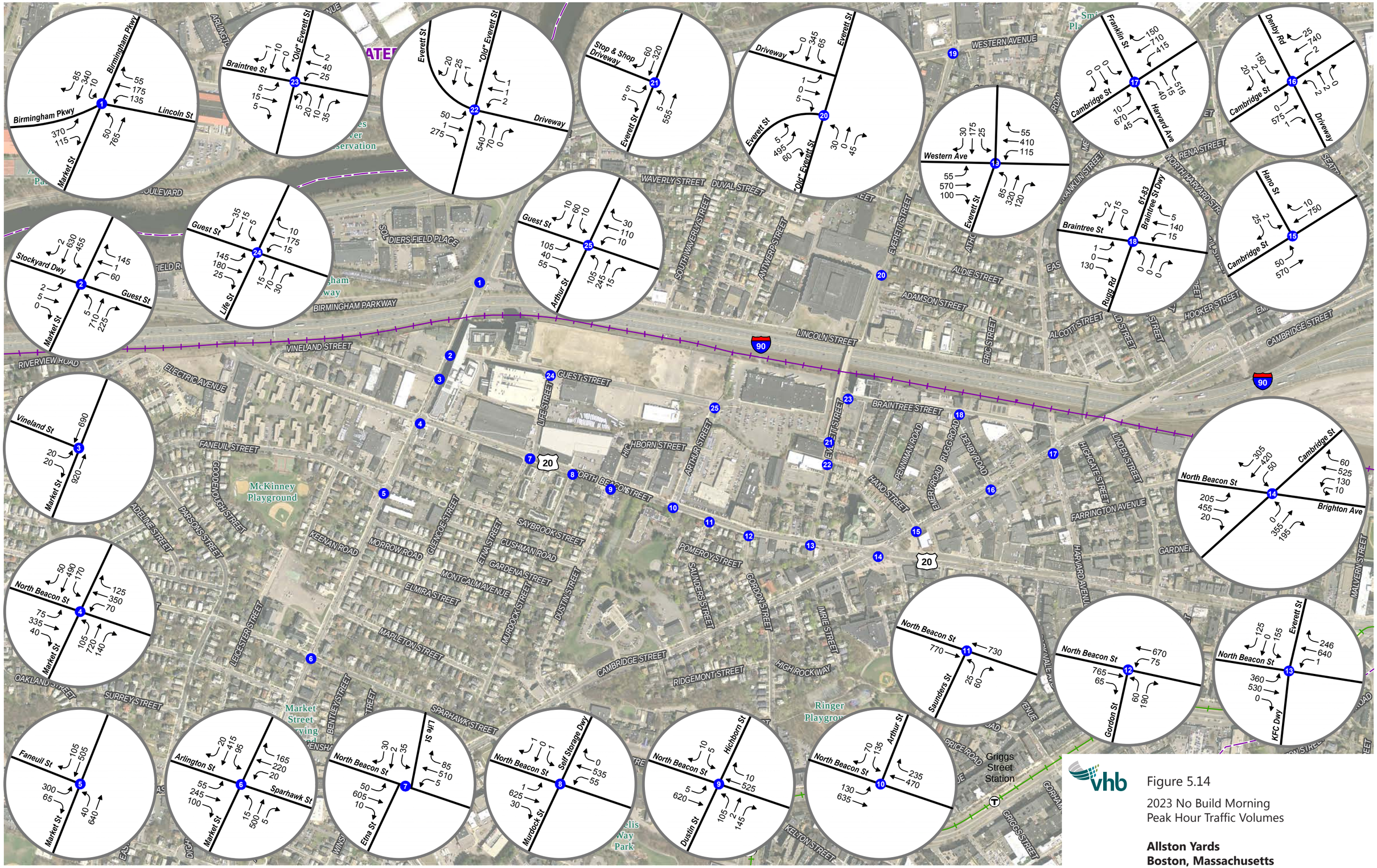

Figure 5.14

2023 No Build Morning Peak Hour Traffic Volumes

Allston Yards
Boston, Massachusetts

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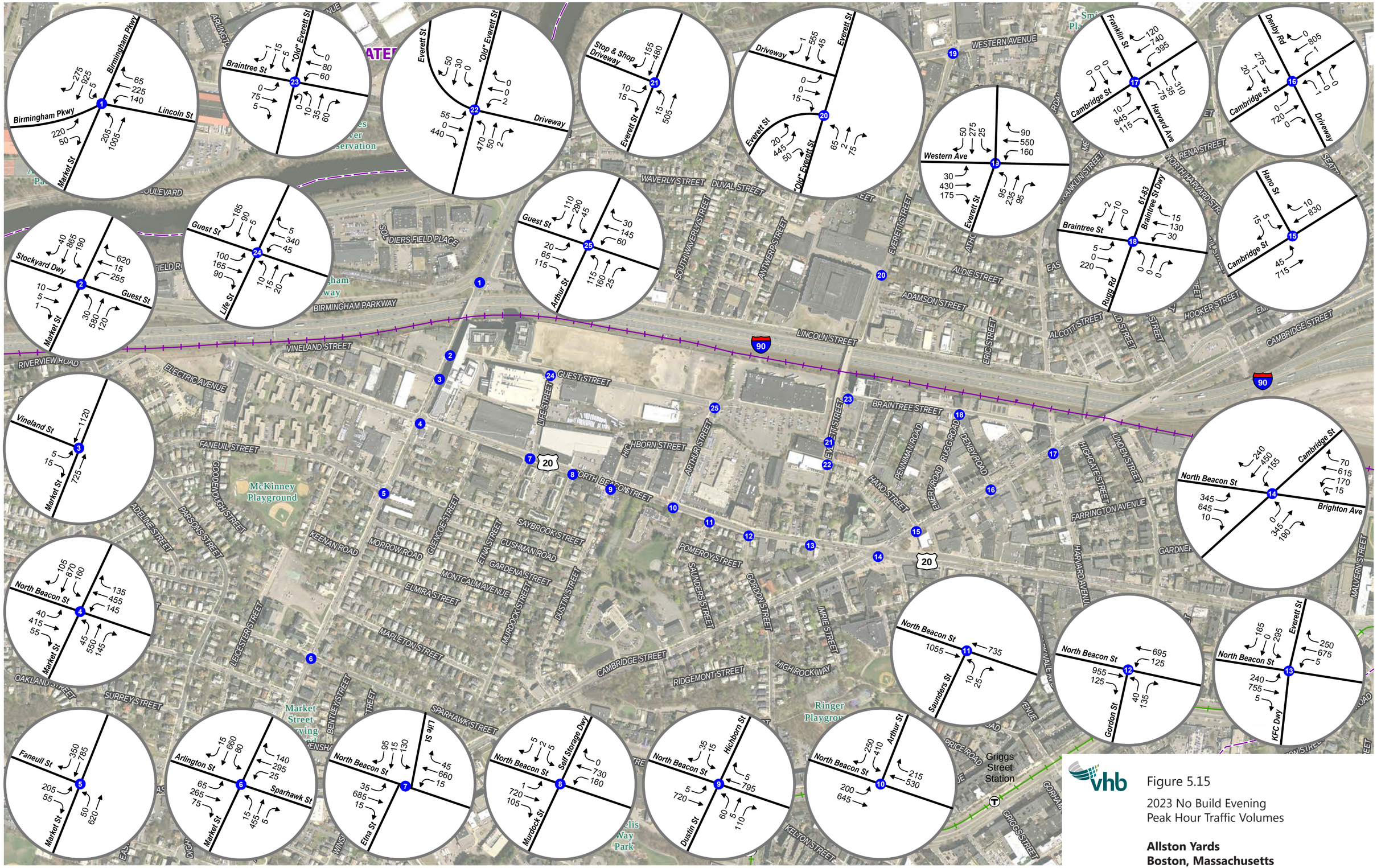

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Figure 5.15

2023 No Build Evening
Peak Hour Traffic Volumes

Allston Yards
Boston, Massachusetts

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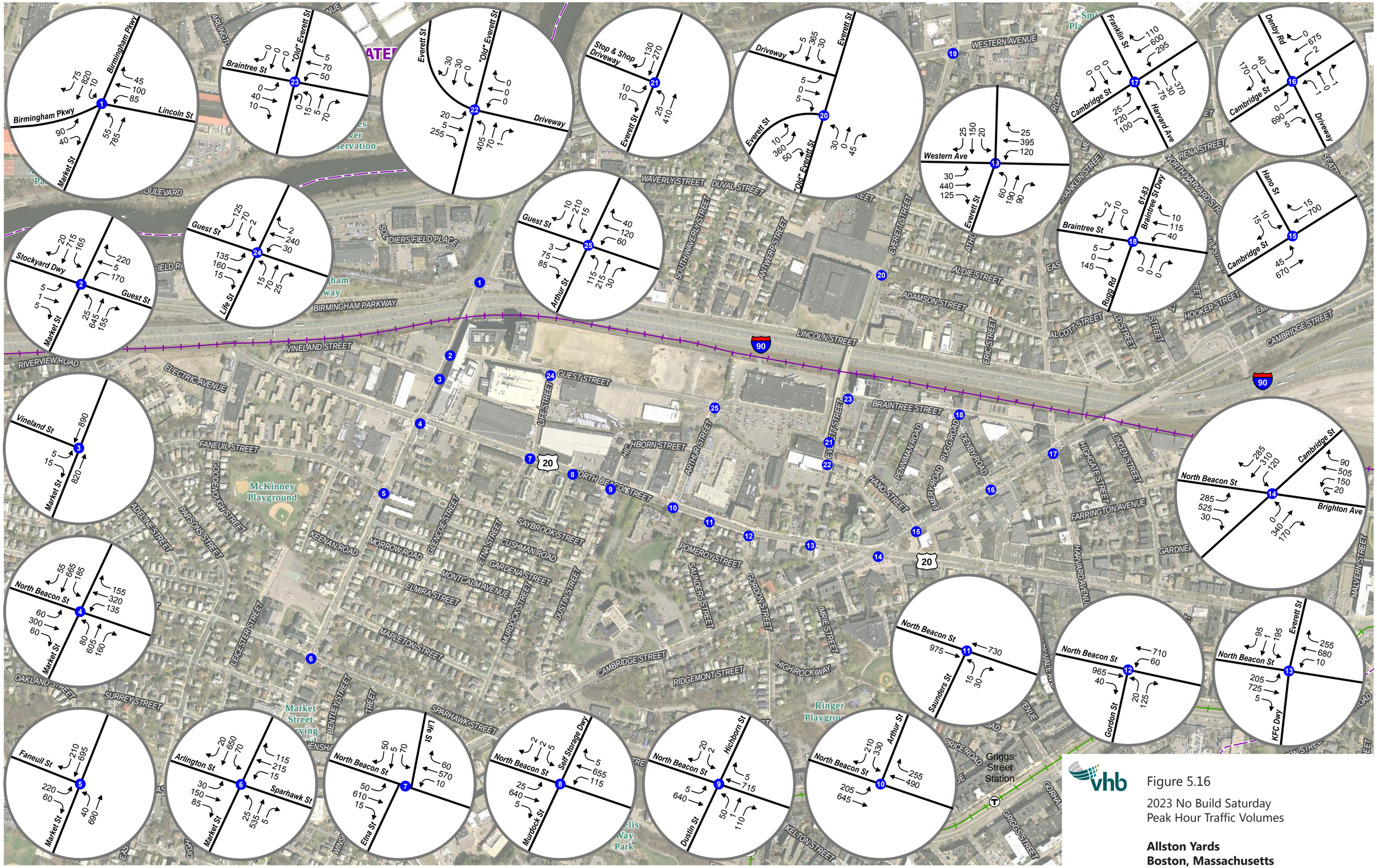

Figure 5.16

2023 No Build Saturday
Peak Hour Traffic Volumes

Allston Yards
Boston, Massachusetts

\\vhb\proj\Boston\12305.01S&SAllston\graphics\FIGURES\Allston_networks.indd

XX% Residential

XX% Commercial

WATERTOWN

Charles River Reservation

Arsenal Park

Portsmouth Playground

Birmingham Parkway

McKinnen Playground

Ringer Playground

Fidelis Way Park

Warren Street Station

Allston Street Station

Griggs Street Station

Harvard Avenue Station

Packards Corner Station

12%	11%	8% / 8%
5%	9%	
10%	12%	
4%	4%	
3%	3%	
3%	3%	
2%	3%	
2%	2%	
16%	17%	
4%	3%	
29%	26%	

0 300 600 Feet

vhb

Figure 5.17

Trip Distribution

Allston Yards
Boston, Massachusetts

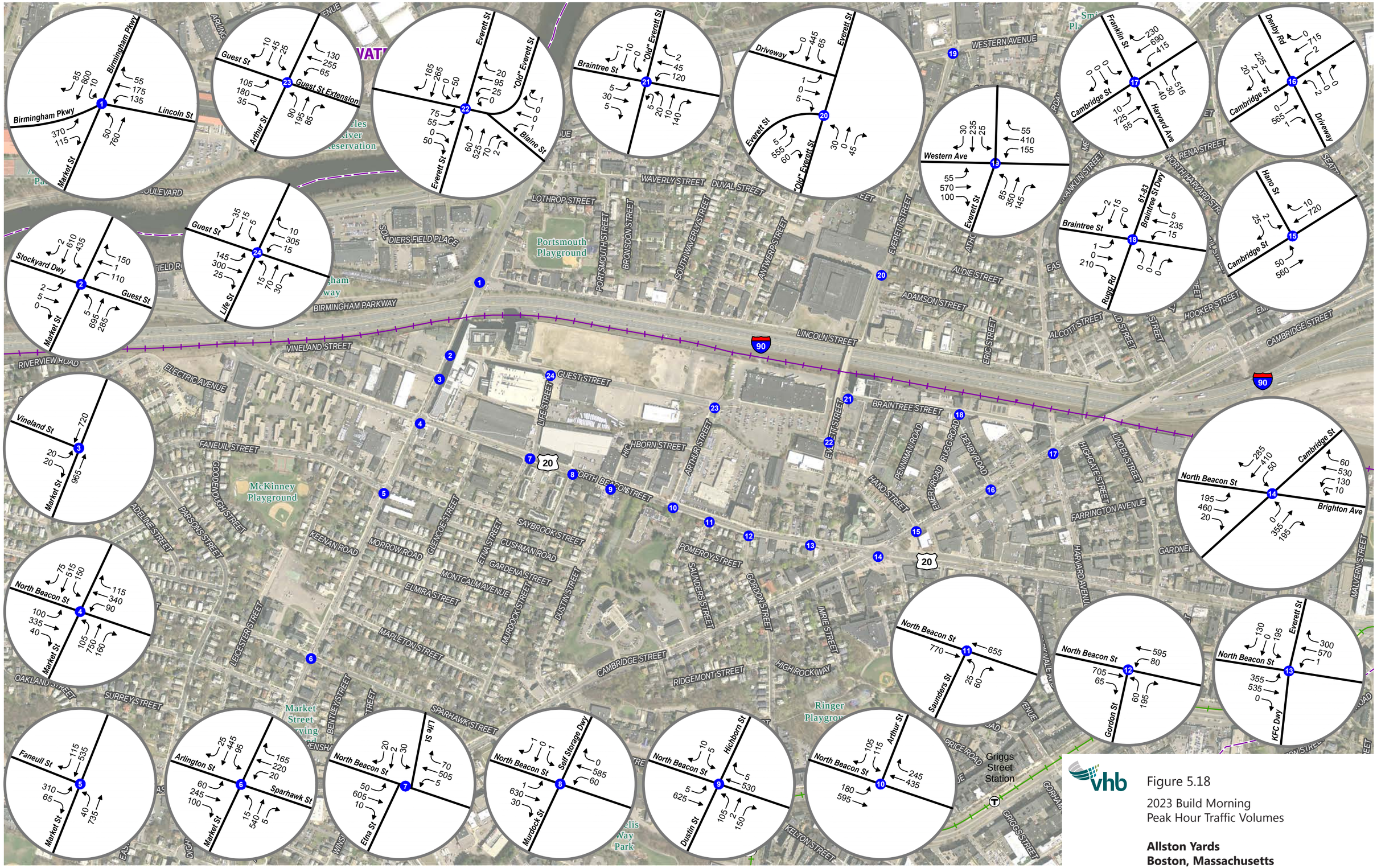

Figure 5.18

2023 Build Morning
Peak Hour Traffic Volumes

Allston Yards
Boston, Massachusetts

\\vhb\proj\Boston\12305.01S&SAllston\graphics\FIGURES\Allston_networks.indd

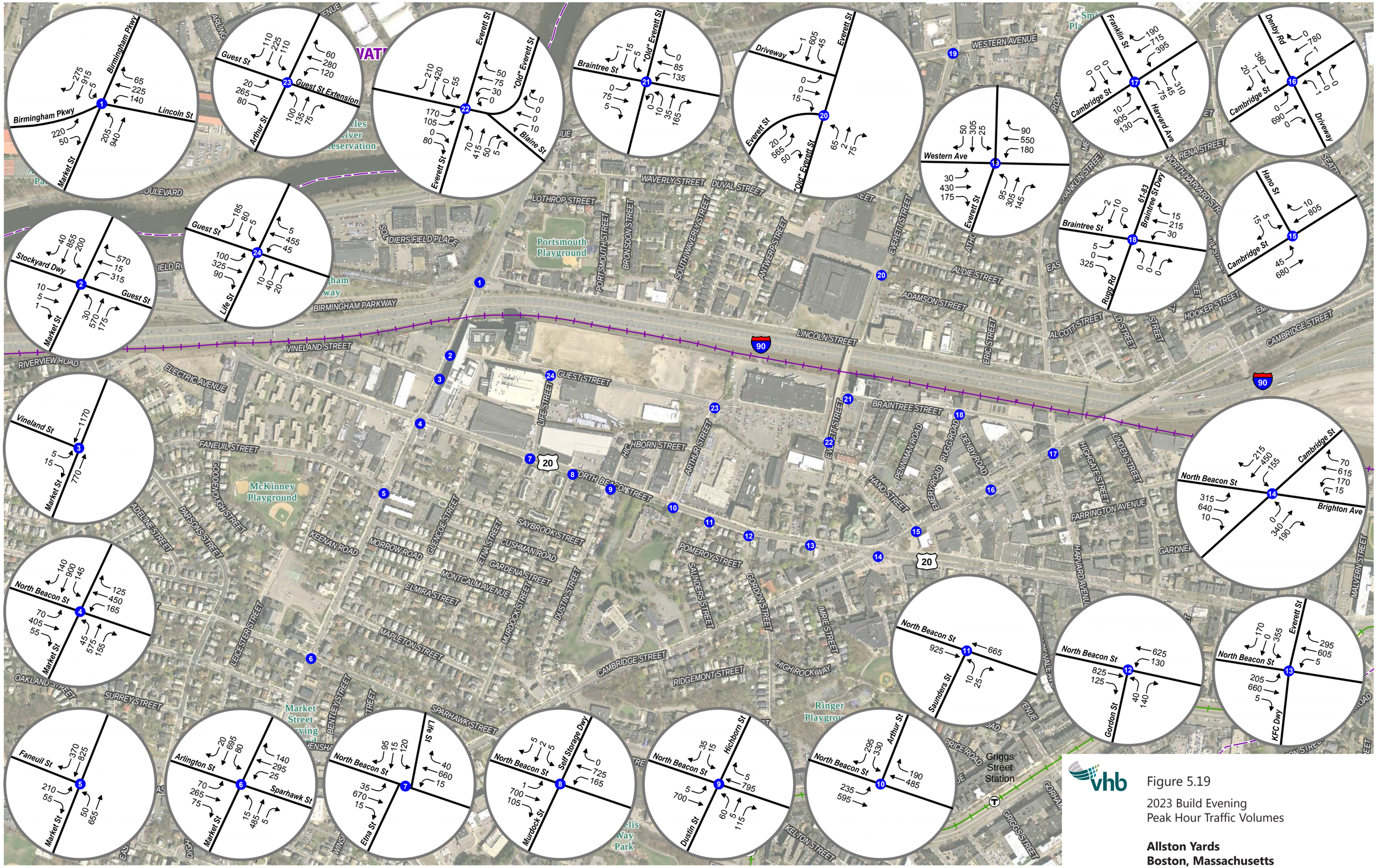

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Figure 5.19

2023 Build Evening
Peak Hour Traffic Volumes

Allston Yards
Boston, Massachusetts

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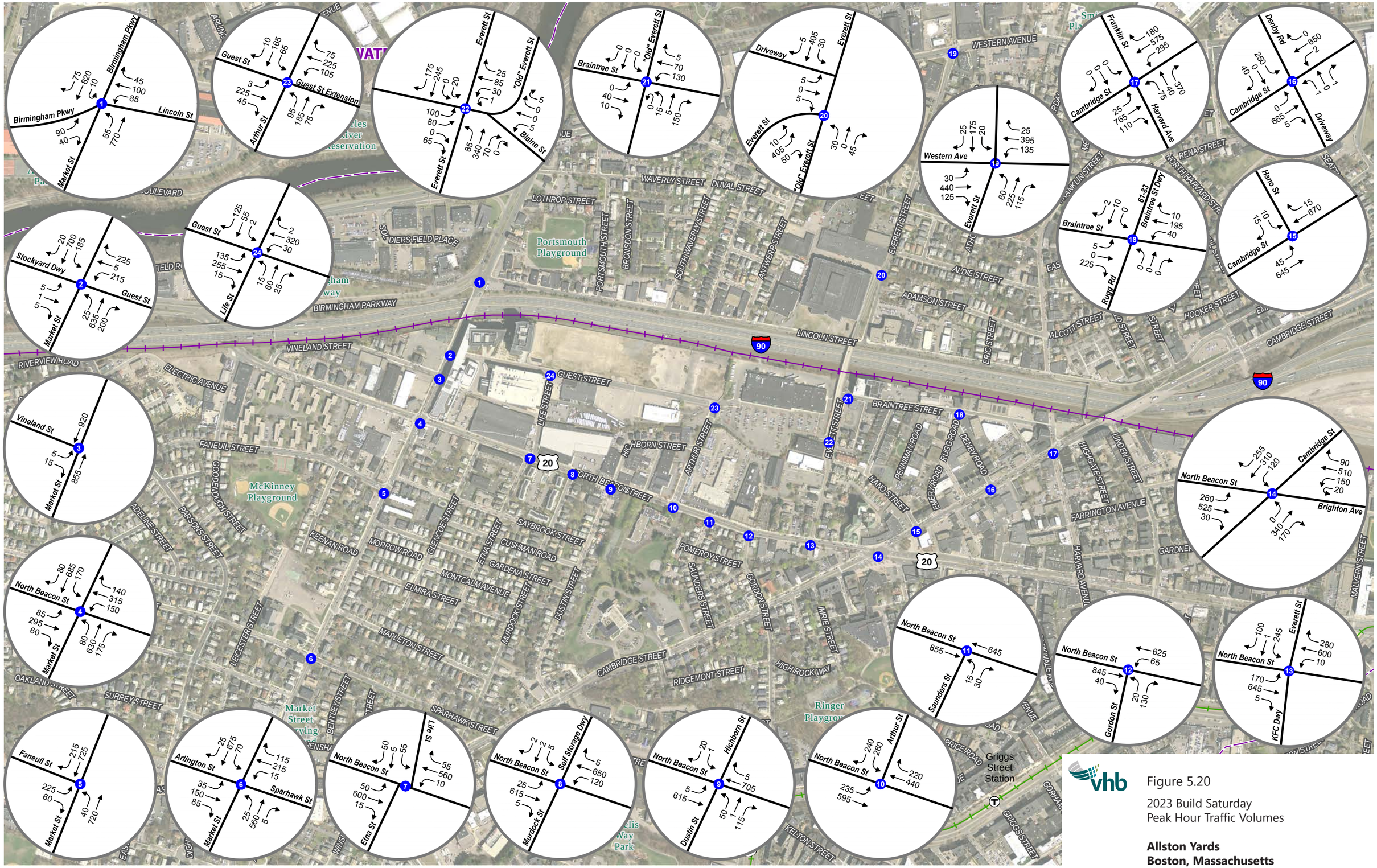

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Figure 5.20

2023 Build Saturday
Peak Hour Traffic Volumes

Allston Yards
Boston, Massachusetts

Project Site Boundary

Traffic Signal

Pedestrian Path/Sidewalk

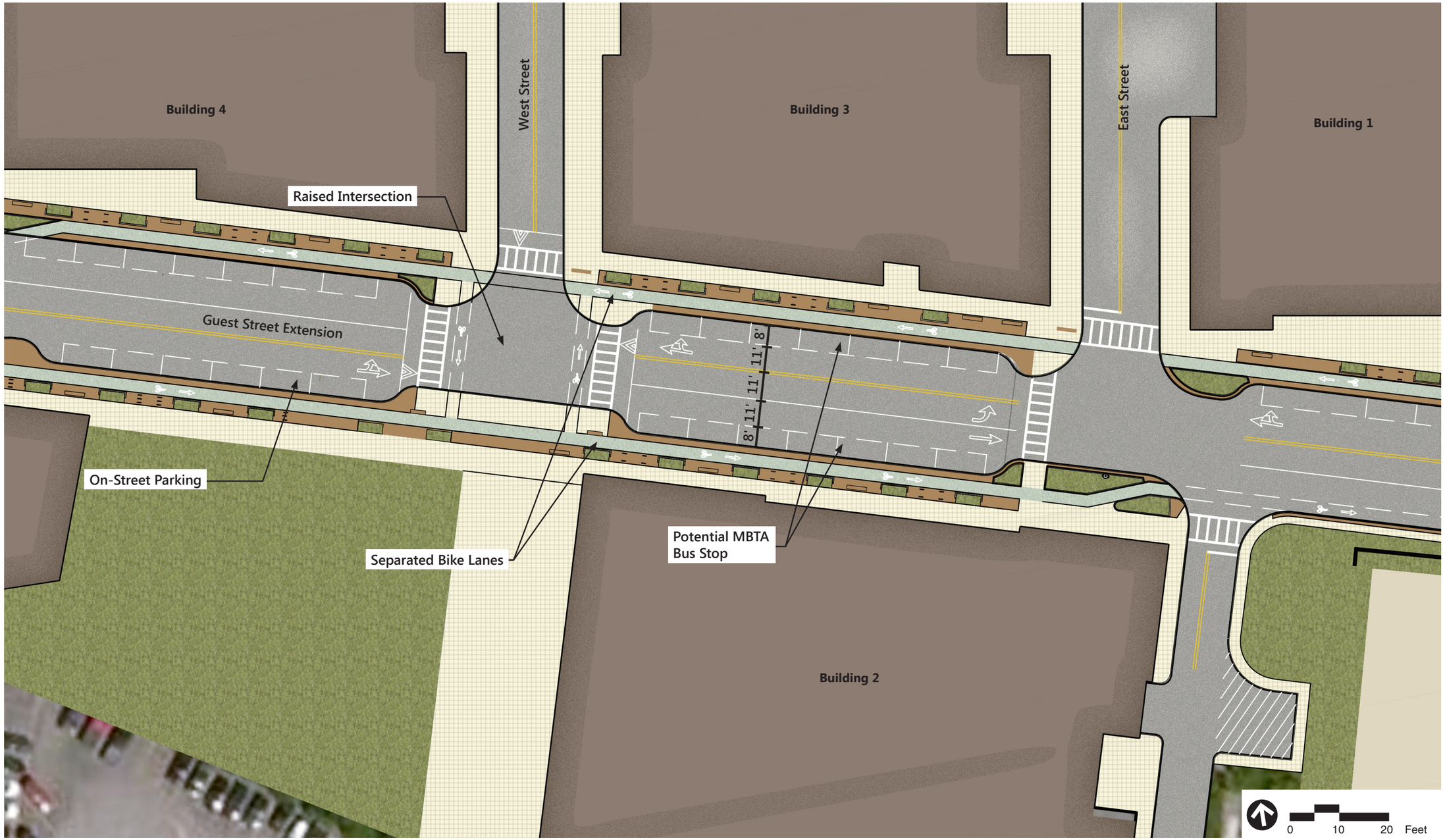
Vehicular Access/Egress

Prepared By: VHB

Figure 5.21

Proposed Site Transportation and Access Improvements

Allston Yards
Boston, Massachusetts

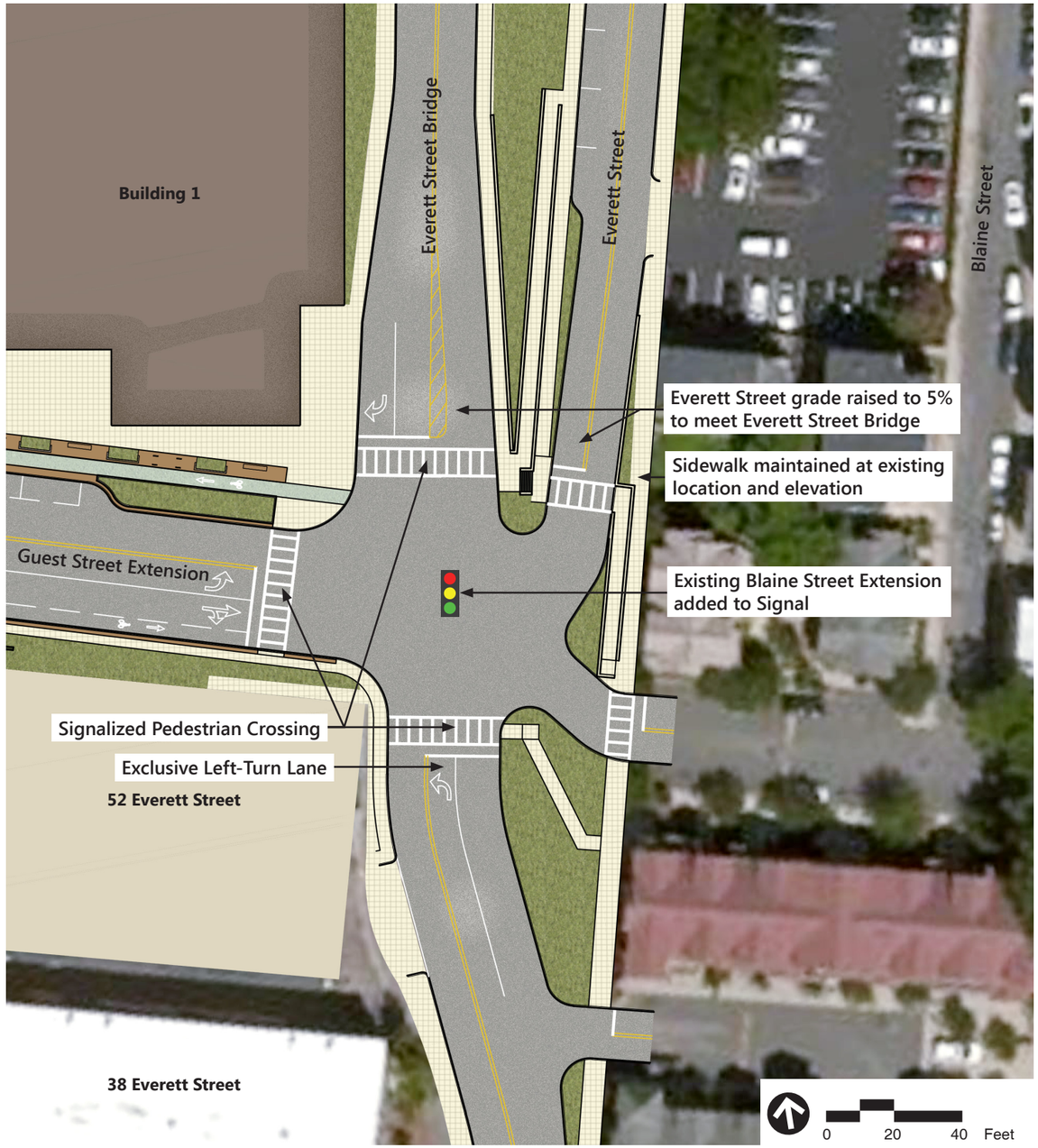


Prepared By: VHB

Figure 5.22

Proposed Guest Street Extension

Allston Yards
Boston, Massachusetts

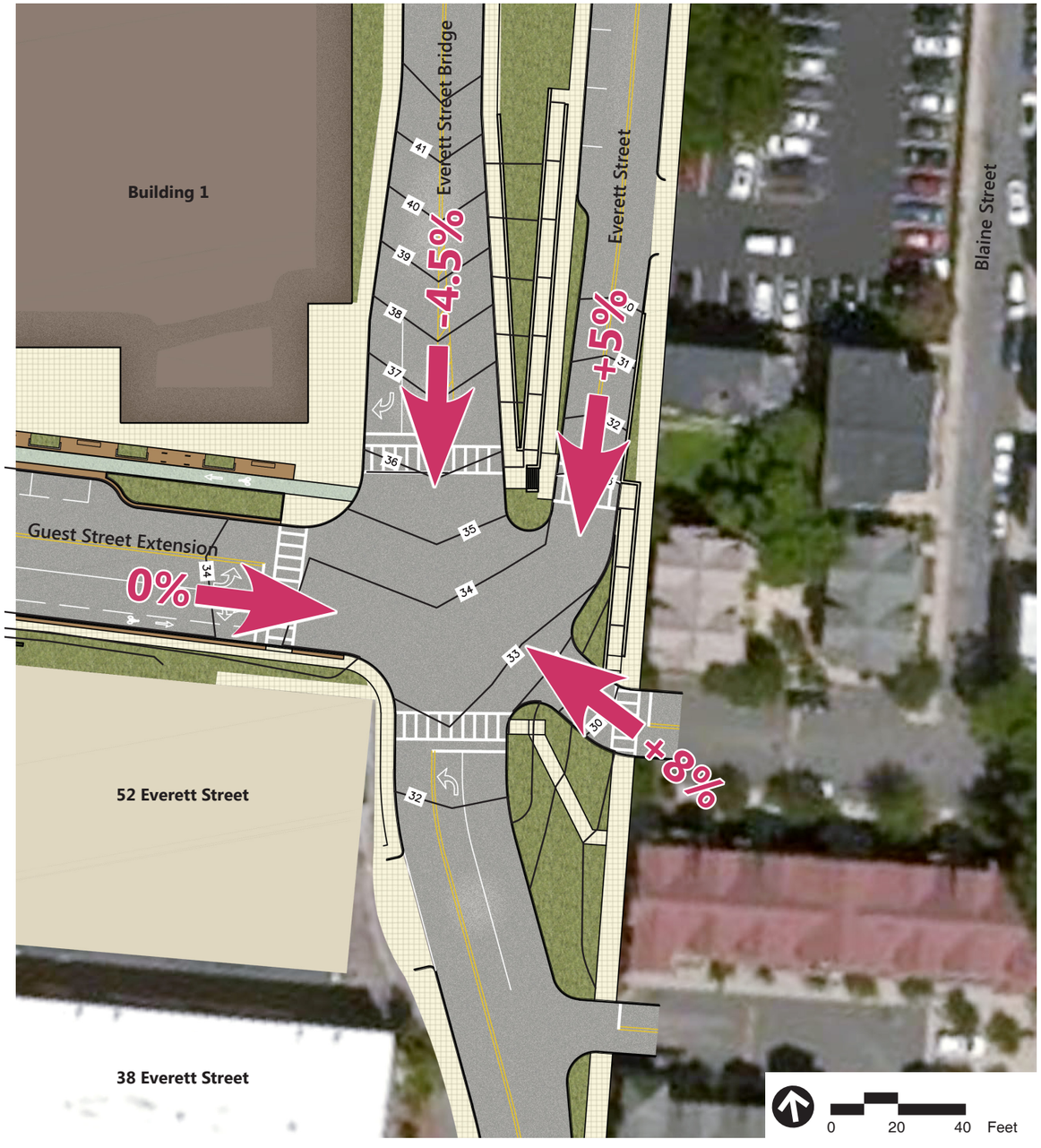


Prepared By: VHB

Figure 5.23

Guest Street/Everett Street Old Everett Street Improvements

Allston Yards
Boston, Massachusetts



Prepared By: VHB

Figure 5.24

Guest Street/Everett Street Old Everett Street Grading Improvements

Allston Yards
Boston, Massachusetts

Prepared By: VHB

Figure 5.25

Proposed Guest Street/Everett Street/
Old Everett Street Improvements -
Existing Northbound View

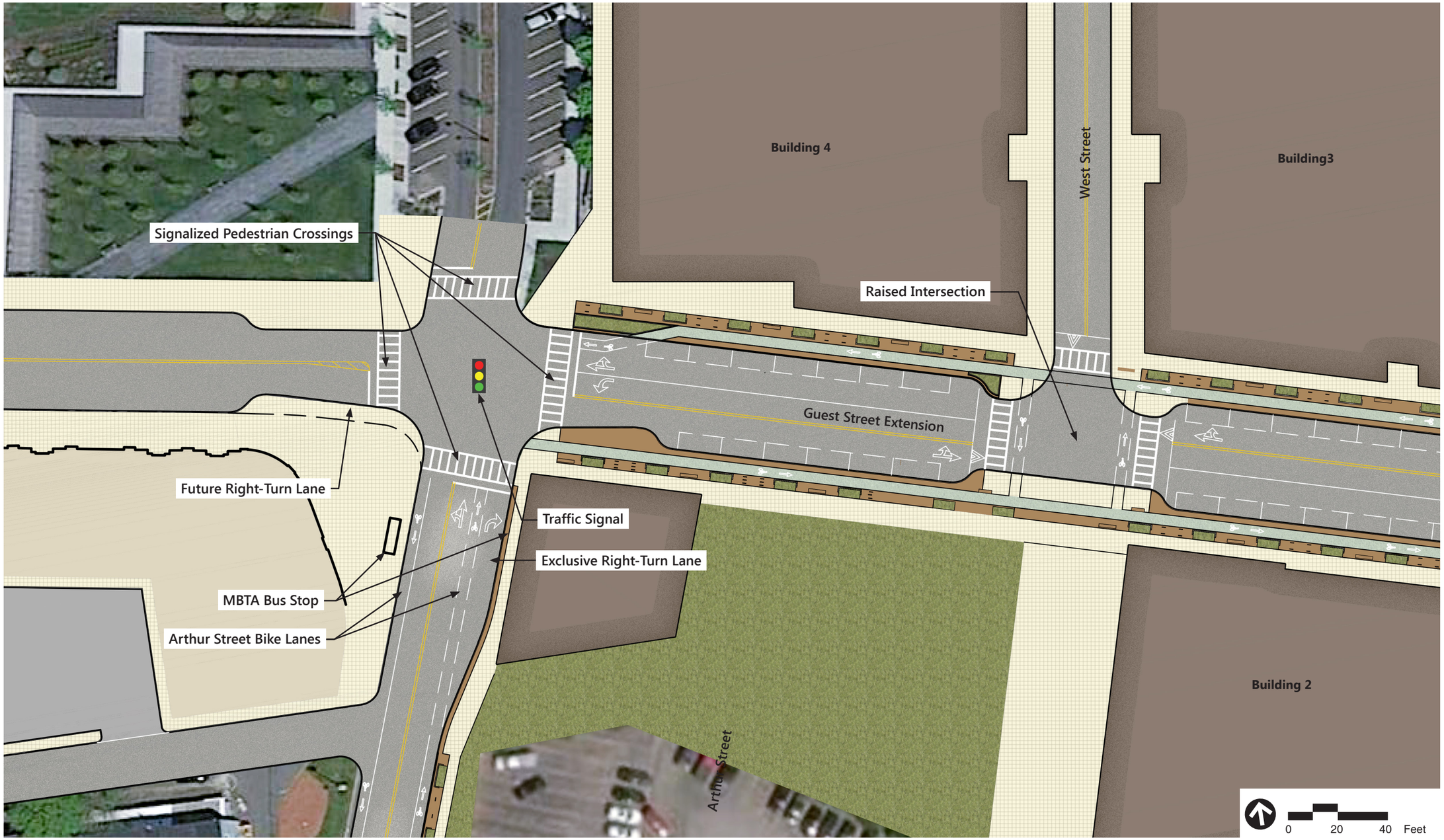
Allston Yards
Boston, Massachusetts

Prepared By: VHB

Figure 5.26

Proposed Guest Street/Everett Street/
Old Everett Street Improvements -
Proposed Northbound View

Allston Yards
Boston, Massachusetts



Prepared By: VHB

Figure 5.27

Arthur Street/Guest Street Improvements

Allston Yards
Boston, Massachusetts

6

Environmental Protection

This chapter describes the existing environmental conditions on and near the Project Site and the potential changes that may occur as a result of the Proposed Project. A goal of the Proposed Project is to better utilize the Project Site and complement adjacent uses while avoiding, minimizing, and/or mitigating potential adverse environmental impacts to the surrounding area to the greatest extent feasible. As discussed in more detail below, the Proposed Project-related environmental impacts, which are to be expected in any development of this scale, are counterbalanced by the significant benefits for the adjacent neighborhoods, the City, and the region. Temporary construction period impacts will be managed to minimize disruption to the surrounding neighborhoods. A Construction Management Plan (CMP) will be developed and submitted to the BPDA for approval prior to the start of construction of each phase of the Proposed Project.

In compliance with the Article 80 Large Project Review guidelines of the Code, the Proposed Project will address potential environmental impacts in the following categories:

- Wind
- Shadow
- Daylight
- Solar Glare
- Air Quality
- Water Quality
- Flood Hazard
- Groundwater
- Geotechnical
- Solid & Hazardous Waste
- Noise
- Construction
- Rodent Control Post-Construction

Where the current state of the design allows, this PNF provides a full assessment of Proposed Project impacts; however, where additional information is needed, initial assessments are provided with an outline of the more detailed analyses to be addressed in the DPIR or other reviews as public and agency input is received and the design further develops.

6.1 Summary of Key Findings and Benefits

The key findings related to environmental protection include:

- **Shadow** – The incremental shadows produced are consistent with the existing urban shadow pattern, and are not expected to have any noticeable effect on pedestrian use or enjoyment.
- **Water Quality** – The Project represents an opportunity to improve the quality and reduce the quantity of site stormwater runoff compared to existing conditions through the implementation of improved stormwater management

practices. The Proponent will also assist in educating the public and further improving the water quality of local water bodies by permanently installing plaques that bear the warning "Don't Dump - Drains to Charles River" adjacent to all existing, modified, and new catch basins.

- **Flood Hazard** – The Project is not located in a designated flood hazard zone as indicated by a review of the most recent flood insurance rate maps (FIRMs) available from the Federal Emergency Management Agency (FEMA) (dated September 25, 2009).
- **Groundwater** – The Project Site is located outside the limits of the Groundwater Conservation Overlay District (GCOD) and therefore is not required to comply with Article 32; however, as noted elsewhere, the Proposed Project will capture and infiltrate stormwater.
- **Geotechnical** – The type and design of both the temporary earth support system and foundation system will provide for adequate support of the structures and utilities and be compatible with the subsurface conditions.
- **Solid and Hazardous Waste** – Management of soil will be in accordance with applicable local, state, and federal laws and regulations.
- **Noise** – The sound levels associated with the Project's mechanical equipment are expected to have no adverse noise impacts at nearby sensitive receptor locations.
- **Construction** – The Project will develop a detailed Construction Management Plans (CMP) for each phase of work for approval by Boston Transportation Department (BTD) prior to construction.

6.2 Wind

Due to the preliminary nature of project design, a wind study is not included in this PNF. Pursuant to Section B.1 of the BPDA Development Review Guidelines, a pedestrian wind tunnel study will be conducted and its results provided in the subsequent DPIR filing. The wind study will assess the potential effect of the Proposed Project on pedestrian-level wind conditions around the Project Site and will provide recommendations for minimizing any potential adverse effects, if any. The following conditions will be simulated:

- **No-Build Condition**: includes all existing buildings and BPDA-approved buildings within the project area; and
- **Build Condition:** the No-Build Condition plus the Proposed Project.

A scale model will be utilized with specially designed wind speed sensors at grade-level locations, to be chosen in consultation with the BPDA (refer to Section 6.2.2 below), which will estimate the mean and fluctuating components of wind speed at a full-scale height of five feet above grade in pedestrian areas throughout the Project Site. The results will be combined with long-term meteorological data, recorded during the years 1991 to 2015 at Boston's Logan International Airport, in order to estimate full scale wind conditions. Meteorological data summarizing the annual and seasonal wind climates in the Boston area is based on the data from Logan Airport.

6.2.1 Pedestrian Wind Criteria

The BPDA has adopted two standards for assessing the relative wind comfort of pedestrians. First, the BPDA wind design guidance criterion indicates that an effective gust velocity (hourly mean wind speed plus 1.5 times the root mean square wind speed) of 31 miles per hour should not be exceeded more than one percent of the time. The second set of criteria used by the BPDA to determine the acceptability of specific locations is based on the work of Melbourne.[1] This set of criteria is used to determine the relative level of pedestrian wind comfort for activities, such as sitting, standing, or walking. The criteria, as listed in Table 6-1 below, are expressed in terms of benchmarks for the one-hour mean wind speed exceeded one percent of the time (i.e., the 99-percentile mean wind speed).

Table 6-1 BPDA Mean Wind Criteria*

Dangerous	> 27 mph
Uncomfortable for Walking	> 19 and ≤ 27 mph
Comfortable for Walking	> 15 and ≤ 19 mph
Comfortable for Standing	> 12 and ≤ 15 mph
Comfortable for Sitting	< 12 mph

* Applicable to the hourly mean wind speed exceeded one percent of the time.

The wind climate in a typical densely populated location of Boston, such as Allston, is generally comfortable for the pedestrian use of sidewalks and thoroughfares; thereby, meeting the BPDA effective gust velocity criterion. However, without any mitigation measures, this typical urban wind climate is likely to be frequently uncomfortable for more passive activities, such as sitting.

6.2.2 Proposed Wind Sensor Locations

The proposed wind sensor locations for the future pedestrian wind study are presented in Figure 6.1 for review and concurrence by the BPDA staff prior to completion of the wind study to be included in the DPIR.

6.3 Shadow

A preliminary shadow impact assessment was conducted for the Proposed Project, as required by Section 80B-2(c) of the Code. It should be noted that the architecture will be refined and will likely change as project design progresses; therefore, the results of this shadow analysis are preliminary and approximate and subject to update.

1 Melbourne, W.H., 1978, "Criteria for Environmental Conditions," Journal of Industrial Aerodynamics, 3 (1978) 241-249.

6.3.1 Methodology

The shadow analysis, which provides a comparison of the No-Build and Build Conditions, was prepared in accordance with the requirements of Section B.2 of the BPDA Development Review Guidelines. The analysis is based on the BPDA's 3D massing model for the project area neighborhood, and includes planned and currently approved projects. Using "clear sky" solar data at Boston's Logan International Airport (meaning the assumption that no cloud cover ever occurs; therefore, providing a "worst case" scenario showing the full extent of when and where shadow could occur), the shadow study was completed using standard sun altitude and azimuth data for each study date estimated to occur at N 42 degrees 21'23.05" latitude and W 71 degrees 8'21.709" longitude. Shadows cast by the proposed buildings have been plotted for three time intervals (9:00AM, 12:00PM, 3:00PM) and are represented for the Vernal Equinox (March 21st), Summer Solstice (June 21st), Autumnal Equinox (September 21st) and Winter Solstice (December 21st), and 6:00PM for June 21st and September 21st. These shadows are compared to shadows from all surrounding existing buildings and permitted projects (shown in gray) at the same times to create illustrations of net new shadow (shown in blue) on Figures 6.2a through 6.2d. The analysis focuses on the net new shadow cast onto public ways, open space, above-grade public transit stops/stations and historic resources adjacent to and in the vicinity of the Project Site. (Note: Nearby historic properties are listed on the Inventory of Historic and Archaeological Assets of the Commonwealth. None of the resources are listed on the National or State Registers of Historic Places.)

6.3.2 Shadow Analysis Findings

The shadow study results are presented in Figures 6.2a through 6.2d. The incremental shadows produced are consistent with the existing urban shadow pattern, and are not expected to have any noticeable effect on pedestrian use or enjoyment. A summary of the shadow analysis results for each respective period is provided below.

March 21

As shown on Figure 6.2a, at 9AM on March 21 Building 4 would create shadow over the community green proposed at the corner of Guest Street Extension and Arthur Street. By 12PM the shadow would move off the community green over portions of the northern edge of the Project Site and over Guest Street Extension and Braintree Street Extension. At 3PM, the net new shadow associated with the Proposed Project would extend northeast towards the Turnpike edge of the Project Site over Guest Street Extension, Building 1, and Everett Street.

June 21

Shadows are generally shorter during the summer months. As shown on Figure 6.2b, at 9AM and 12PM net new shadow from the Proposed Project would remain mostly

on-site, including on a portion of the community green from Building 4 in the morning. By 3PM and 6PM, net new shadow would extend east over Everett Street.

September 21

As shown on Figure 6.2c, similar to March 21, net new shadow from Building 4 would extend over the community green proposed at the corner of Guest Street Extension and Arthur Street. By 12PM, the net new shadow would move off the community green and extend over portions of the northern edge of the Project Site, and over Guest Street Extension and Braintree Street Extension. At 3PM, the net new shadow would extend northeast towards the Turnpike edge of the Project Site, over Guest Street Extension, Building 1, and Everett Street. At 6PM, due to the context and, especially the taller Boston Landing buildings, the Project Site would be in shadow due to the existing buildings.

December 21

Shadows are generally longest during the winter months. As shown on Figure 6.2d, net new shadow would extend northwest over the commuter train tracks and Boston Landing station, and the Turnpike. By 12PM, net new shadow would extend north over portions of the commuter train tracks and Turnpike. At 3PM, net new shadow would extend northeast over and beyond the commuter train tracks, Boston Landing Station, and Turnpike.

6.4 Daylight

Due to the preliminary nature of project design, a daylight study is not included in this PNF. The daylight analysis will be prepared and its results, including analysis of the percentage of daylight, or skydome, obstructed under the Build and No-Build Conditions, will be provided in the subsequent DPIR filing in accordance with the requirement of Section 80B-2(c) of the Code. Given the planning goals for the area (e.g., mixed-use development of higher densities), the Project is expected to result in some impact to daylight levels where a low-rise supermarket building and open parking lot are being replaced with multiple taller buildings.

The daylight analysis will be prepared using the BPDA's Daylight Analysis program developed in 1985 by the Massachusetts Institute of Technology to estimate the pedestrian's view of the skydome taking into account the massing and building materials used. The software approximates a pedestrian's view of a site based on input parameters such as: location of viewpoint, length, and height of buildings as well as the relative reflectivity of the building façades. The model typically uses the midpoint of an adjacent right-of-way or sidewalk as the analysis viewpoint. Based on these data, the model calculates the perceived skydome obstruction and provides a graphic depicting the analysis conditions.

The daylight model inputs to be used for the study will be from a combination of the BPDA's City of Boston model data, an existing conditions survey, and schematic design plans prepared by the project architect. The daylight analysis will represent

existing and proposed building façades viewed from the adjacent public way. Because Guest and Everett Streets are the only public ways within or adjacent to the Project Site, the daylight obstruction will be evaluated at the centerline of each of the four buildings along Guest Street and at the centerline of Building 1 along Everett Street.

6.5 Solar Glare

Given the proximity to the Turnpike, Proposed Project-related solar glare impacts will be studied as part of subsequent filings because exterior building materials have not yet been selected. The objective of the solar glare study is to assess the impact of solar reflections emanating from the building façades on the surrounding key roadways, urban terrain and buildings. This study will also evaluate the potential for summer heat gain at the facades of nearby buildings that can be caused by the selective reflection of infrared frequencies of the sun's light by a building's glazing. Heat gain is most associated with south and southwest facing facades and can be mitigated through design.

Specific solar glare and heat gain impacts for the initial phase of development, as currently contemplated (Building 1) will be studied as part of the subsequent filing (DPIR). For future phases, solar glare impacts will be studied as part of the Design Review of each individual building when the exterior design and potential façade details are further defined.

6.6 Air Quality

This section presents an overview of and the results for the preliminary mobile source assessment conducted for this PNF filing of the Project. The purpose of the air quality assessment is to demonstrate that the Project satisfies applicable regulatory requirements, and whether it complies with the 1990 Clean Air Act Amendments (CAAA) following the local and the U.S. Environmental Protection Agency (EPA) policies and procedures.

The air quality assessment conducted for this Project includes a qualitative localized (microscale), or "hot spot", analysis of carbon monoxide ("CO") concentrations in accordance with BPDA screening guidance. The microscale analysis evaluated potential CO impacts from vehicles traveling through congested intersections in the project area under the existing conditions, as well as considering site-specific impacts under the future conditions. The results from this evaluation are subject to the National Ambient Air Quality Standards (NAAQS).

6.6.1 Background and Methodology

The CAAA resulted in states being divided into attainment and non-attainment areas, with classifications based upon the severity of their air quality problems. Air quality control regions are classified and divided into one of three categories: attainment, non-attainment and maintenance areas depending upon air quality data

and ambient concentrations of pollutants. Attainment areas are regions where ambient concentrations of a pollutant are below the respective NAAQS; non-attainment areas are those where concentrations exceed the NAAQS. A maintenance area is an area that used to be non-attainment, but has demonstrated that the air quality has improved to attainment. After 20 years of clean air quality, maintenance areas can be re-designated to attainment. Projects located in a CO maintenance area are required to evaluate their CO concentrations with the NAAQS.

The Project is located in the City of Boston, which under the EPA designation is a CO maintenance area. As such, CO concentrations need to be considered for this Project.

Air Quality Standards

The EPA has established the NAAQS to protect the public health. Massachusetts has adopted similar standards as those set by the EPA for CO. Table 6-2 presents the NAAQS for carbon monoxide.

Table 6-2 National Ambient Air Quality Standards

	Primary Standards		
Pollutant	**Level**	**Averaging Time**	**Form**
Carbon Monoxide	9 ppm (10 mg/m3)	8-hour	Not to be exceeded more than once per year
	35 ppm (40 mg/m3)	1-hour	

The Massachusetts Department of Environmental Protection (MassDEP) maintains a network of air quality monitors to measure background CO concentrations. Background concentrations are ambient pollution levels from all stationary, mobile, and area sources. Background CO concentrations are determined by choosing the maximum of the 2nd-high annual values from the previous three years. Looking at the air quality monitor closest to the Project Site (Kenmore Square) for the years 2013-2015, the CO background values are 1.3 ppm for the 1-hour averaging time and 0.9 ppm for the 8-hour averaging time. These values are much less than the 1-hour and 8-hour NAAQS. The background values are presented in Table 6-3.

Table 6-3 Air Quality Background Concentrations

	Background Concentrations		NAAQS	
Pollutant	**Level**	**Averaging Time**	**Level**	**Averaging Time**
Carbon Monoxide	0.9 ppm	8-hour	9 ppm	8-hour
	1.3 ppm	1-hour	35 ppm	1-hour

Monitoring Location: Kenmore Square, Boston, MA. Years 2013-2015.

The potential CO concentrations from motor vehicle traffic related to the Project will be considered in conjunction with these background concentrations to demonstrate that the Project will comply with the NAAQS Standards.

BPDA Development Review Guidelines

The BPDA Development Review Guidelines require "a microscale analysis predicting localized carbon monoxide concentrations should be performed, including identification of any locations projected to exceed the National or Massachusetts Ambient Air Quality Standards, for projects in which:

- Project traffic would impact intersections or roadway links currently operating at Level of Service (LOS) D, E, or F or would cause LOS to decline to D, E, or F; or
- Project traffic would increase traffic volumes on nearby roadways by 10 percent or more (unless the increase in traffic volume is less than 100 vehicles per hour); or
- The Project will generate 3,000 or more new average daily trips on roadways providing access to a single location."

Traffic Data

The air quality study uses traffic data (volumes, delays, and speeds) developed for the different analysis conditions based on the traffic analysis. The traffic study area will include the intersections detailed in Section 5.3.1 and shown on Figure 5.1 of Chapter 5, *Transportation*. The microscale air quality study will analyze the "worst-case" intersections from the traffic study area based on the forthcoming capacity analysis. As presented in Chapter 5, *Transportation*, the Proposed Project is projected to generate approximately 4,470 vehicles per day, which exceeds the 3,000 new average daily trip trigger in the BPDA guidelines requiring a microscale air quality assessment.

6.6.2 Microscale Screening Analysis

An evaluation of the traffic data was conducted in accordance with the BPDA Development Review Guidelines for determining potential localized air quality impacts (i.e., increased CO emission). Based on this evaluation, the Proposed Project may cause or contribute to a violation of the NAAQS requiring a quantitative microscale analysis. As such, a quantitative CO hotspot analysis consistent with the methodology prescribed by EPA and MassDEP guidelines will be included as part of the DPIR filing. This analysis will demonstrate that all existing and future carbon monoxide concentrations at nearby receptors will be below the NAAQS.

6.7 Water Quality

The Proposed Project represents an opportunity to improve the quality and reduce the quantity of site stormwater runoff compared to existing conditions. Through the implementation of improved stormwater management practices, the Proposed Project will comply with the 2008 MassDEP Stormwater Management Policy and Boston Water and Sewer Commission (BWSC) standards. To satisfy BWSC requirements, the current

Project Site design includes potential stormwater infiltration, which provides pollutant treatment and promotes the introduction of stormwater runoff into the ground and reduces the rate and quantity of stormwater discharged to the municipal drainage system and ultimately, to the Charles River. Infiltration will have a positive impact on the surrounding groundwater table.

The Proponent will assist in educating the public and further improving the water quality of local water bodies installing permanent plaques that bear the warning "Don't Dump - Drains to Charles River" adjacent to all existing, modified, and new catch basins.

6.8 Flood Hazard

There are no wetlands in the immediate vicinity of the Project Site, and the Proposed Project is not located in a designated flood hazard zone as indicated by a review of the most recent flood insurance rate maps (FIRMs) available from the Federal Emergency Management Agency (FEMA) (dated September 25, 2009).

6.9 Groundwater

The elevation of the groundwater across the Project Site, as measured in the observation wells in July 2016, ranged from between El. 21.7 and 23.7. In general, groundwater levels at and near the Project Site could be influenced by leakage into and out of sewers, storm drains, water utilities, and other below-grade structures, and environmental factors such as precipitation, season, and temperature.

The Project Site is located outside the limits of the Groundwater Conservation Overlay District (GCOD). Accordingly, the Proposed Project is not required to comply with Article 32; however, it will capture and infiltrate stormwater as described earlier in this PNF.

6.10 Geotechnical

This section describes existing Project Site conditions, subsurface soil conditions, and planned below-grade construction for the Proposed Project.

6.10.1 Existing Site Conditions

As described previously in Chapter 1, *Project Description*, the Project Site is part of a 10.6-acre property currently occupied by a one-story retail building, which includes a Stop & Shop store constructed in 1998. The existing buildings are supported on spread footings and surrounded by a paved parking lot and loading docks. Site grades are relatively level ranging from approximately El. 29 to El. 35 Boston City Base (BCB) Datum.

6.10.2 Subsurface Soil and Bedrock Conditions

Site and subsurface conditions at the Project Site are based on results of test boring explorations completed at the Project Site in June 2016. Subsurface conditions are summarized in Table 6-4 below and generally indicate the following sequence of subsurface units in order of increasing depth below ground surface. One or more of the soil (overburden) units may be absent at any specific location.

Table 6-4 Subsurface Soil Conditions at Project Site

Stratum/Subsurface Unit	Top of Stratum Elevation (ft, BCB)	Estimated Range of Thickness (ft)
Fill Soils	29 to 35	4-8
Glaciofluvial Deposits	29.7 to -16.8	5-45
Marine Deposits (Sand/Clay/Silt)	20.2 to -14.8	5-37
Glaciomarine	-15.3 to -15.8	Not Fully Penetrated
Flow Till/Glacial Till	-10.3 to -19.8	4.5
Top of Probable Bedrock	-26.8	N/A

6.10.3 Proposed Foundation Construction

Redevelopment of the Project Site is anticipated to be accomplished in a phased approach and will require demolition of the existing buildings prior to excavation for foundations and below-grade walls. The proposed buildings are anticipated to be supported on either spread footings or a mat foundation bearing on the natural, inorganic Glaciofluvial and/or Marine Deposits. It is anticipated that either steel sheet piling, a soil mix wall, and/or a secant pile wall will be used for temporary earth support during construction. The type and design of both the temporary earth support system and foundation system will provide for adequate support of the structures and utilities and be compatible with the subsurface conditions.

6.11 Solid and Hazardous Wastes

Preliminary characterization of the environmental soil and groundwater quality at the Project Site was conducted by Haley & Aldrich in June 2016.

The preliminary soil pre-characterization program was conducted to characterize a portion of the soils prior to excavation. The findings of the preliminary soil and groundwater pre-characterization program were typical for a site with previous industrial uses.

Management of soil and groundwater will be in accordance with applicable local, state, and federal laws and regulations.

6.12 Noise

The noise assessment evaluated the potential noise impacts associated with the Proposed Project's activities, including mechanical equipment and loading activities. This section discusses the fundamentals of noise, noise impact criteria, noise analysis methodology, and potential noise impacts. A noise monitoring program was developed for determining existing ambient conditions near the Project Site.

The analysis demonstrates that the Proposed Project will comply with City of Boston noise regulations. Based on preliminary design, the Proposed Project's operations will have no adverse noise impacts at nearby sensitive receptor locations.

6.12.1 Fundamentals of Noise

Noise is defined as unwanted or excessive sound. Sound becomes unwanted when it interferes with normal activities such as sleep, communication, work, or recreation. How people perceive sound depends on several measurable physical characteristics, which include the following:

- Intensity - Sound intensity is often equated to loudness.
- Frequency - Sounds are comprised of acoustic energy distributed over a variety of frequencies. Acoustic frequencies, commonly referred to as tone or pitch, are typically measured in Hertz. Pure tones have all their energy concentrated in a narrow frequency range.

Sound levels are most often measured on a logarithmic scale of decibels (dB). The decibel scale compresses the audible acoustic pressure levels which can vary from the threshold of hearing (zero dB) to the threshold of pain (120 dB). Because sound levels are measured in dB, the addition of two sound levels is not linear. Adding two equal sound levels creates a 3 dB increase in the overall level. Research indicates the following general relationships between sound level and human perception:

- A 3-dB increase is a doubling of acoustic energy and is the threshold of perceptibility to the average person.
- A 10-dB increase is a tenfold increase in acoustic energy but is perceived as a doubling in loudness to the average person.

The human ear does not perceive sound levels from each frequency as equally loud. To compensate for this phenomenon in perception, a frequency filter known as A-weighted [dB(A)] is used to evaluate environmental noise levels. Table 6-5 presents a list of common outdoor and indoor sound levels.

Table 6-5 Common Outdoor and Indoor Sound Levels

Outdoor Sound Levels	Sound Pressure (μPa)*		Sound Level dB(A)**	Indoor Sound Levels
	6,324,555	-	110	Rock Band at 5 m
Jet Over Flight at 300 m		-	105	
	2,000,000	-	100	Inside New York Subway Train
Gas Lawn Mower at 1 m		-	95	
	632,456	-	90	Food Blender at 1 m
Diesel Truck at 15 m		-	85	
Noisy Urban Area—Daytime	200,000	-	80	Garbage Disposal at 1 m
		-	75	Shouting at 1 m
Gas Lawn Mower at 30 m	63,246	-	70	Vacuum Cleaner at 3 m
Suburban Commercial Area		-	65	Normal Speech at 1 m
	20,000	-	60	
Quiet Urban Area—Daytime		-	55	Quiet Conversation at 1 m
	6,325	-	50	Dishwasher Next Room
Quiet Urban Area—Nighttime		-	45	
	2,000	-	40	Empty Theater or Library
Quiet Suburb—Nighttime		-	35	
	632	-	30	Quiet Bedroom at Night
Quiet Rural Area—Nighttime		-	25	Empty Concert Hall
Rustling Leaves	200	-	20	
		-	15	Broadcast and Recording Studios
	63	-	10	
		-	5	
Reference Pressure Level	20	-	0	Threshold of Hearing

Source: Highway Noise Fundamentals. Federal Highway Administration, September 1980.

* μPA – MicroPascals, which describe pressure. The pressure level is what sound level monitors measure.

** dB(A) – A-weighted decibels, which describe pressure logarithmically with respect to 20 μPa (the reference pressure level).

A variety of sound level indicators can be used for environmental noise analysis. These indicators describe the variations in intensity and temporal pattern of the sound levels. The following is a list of common sound level descriptors used for environmental noise analyses:

- L90 is the sound level which is exceeded for 90 percent of the time during the time period. L90 is generally considered to be the ambient or background sound level.
- Leq is the A-weighted sound level, which averages the background sound levels with short-term transient sound levels and provides a uniform method for comparing sound levels that vary over time.

6.12.2 Methodology

The noise analysis evaluated the potential noise impacts associated with the Proposed Project's operations, which include mechanical equipment and loading/service activities. The noise analysis included measurements of existing ambient background sound levels and a qualitative evaluation of potential noise impacts associated with the proposed mechanical equipment (e.g., HVAC units, cooling towers) and loading activities. The study area was evaluated and sensitive receptor locations near the Proposed Project were identified and examined. The site layout and building design, as they relate to the loading areas and management of deliveries at the Project Site were also considered. The analysis considered sound level reductions due to distance, proposed building design, and obstructions from surrounding structures.

Receptor Locations

The noise analysis included an evaluation of the study area to identify nearby sensitive receptor locations, which typically include areas of sleep and areas of outdoor activities. The noise analysis identified three nearby sensitive receptor locations near the Project. As shown on Figure 6.3, the receptor locations include the following:

- R1 – Residential neighborhood to the east on Everett Street;
- R2 – Residential neighborhood to the south on Harvester Street; and
- R3 – Residential neighborhood to the west on Hichborn Street, which includes the vicinity of the planned Residences at Boston Landing at 125 Guest Street on the corner of Arthur Street.

These receptor locations, selected based on land use considerations, represent the most sensitive locations near the Project Site.

6.12.3 City of Boston Noise Impact Criteria

The City of Boston has developed noise standards that establish noise thresholds deemed to result in adverse impacts. The noise analysis for the Proposed Project used these standards to evaluate whether the Proposed Project will generate sound levels that result in potential adverse impacts.

Under Chapter 40 Section 21 of the General Laws of the Commonwealth of Massachusetts and Title 7 Section 50 of the City of Boston Code, the Air Pollution Control Commission of the City of Boston has adopted Regulations for the Control of Noise in the City of Boston. These regulations establish maximum allowable sound levels based upon the land use affected by the proposed development. Table 6-6 summarizes the allowable sound levels that should not be exceeded.

For a residential zoning district, the maximum noise level affecting residential uses shall not exceed the Residential Noise Standard. The residential land use noise standard is 60 dB(A) for daytime periods (7:00 AM to 6:00 PM) and 50 dB(A) for nighttime conditions (6:00 PM to 7:00 AM).

Table 6-6 City of Boston Noise Standards by Zoning District, dB(A)

Land Use Zone District	Daytime (7:00 AM – 6:00 PM)	All Other Times (6:00 PM – 7:00 AM)
Residential	60	50
Residential/Industrial	65	55
Business	65	65
Industrial	70	70

Source: Regulations for the Control of Noise in the City of Boston, Air Pollution Control Commission.

6.12.4 Existing Noise Conditions

A noise monitoring program was developed to establish existing ambient sound levels in vicinity of the Project Site. The existing sound levels were measured using Type 1 sound analyzers (Larson Davis 831 and SoundExpert LxT). Measurements were conducted between October 18, 2016 and October 19, 2016 to capture sound levels representative of typical existing ambient conditions. Short-term measurements (15 minutes) during the daytime period were conducted between 11:00 AM to 12:30 PM. The nighttime period measurements were conducted between 3:00 AM to 5:00 AM. The existing measured sound level data are summarized in Table 6-7.

Table 6-7 Existing Ambient Sound Levels, dB(A)

	City of Boston Residential District Noise Standard		Measured L90 Sound Levels	
Monitoring Location	Daytime	Nighttime	Daytime	Nighttime
M1 – Everett Street	60	50	55	45
M2 – Harvester Street	60	50	51	46
M3 – Hichborn Street	60	50	53	48

Source: VHB

Note: Refer to Figure 6.3 for noise monitoring locations.

* Measured sound levels represent average of hourly L90 levels during each period.

The measured L90 sound levels range from approximately 51 dB(A) to approximately 55 dB(A) during the daytime period in the surrounding neighborhoods. During the nighttime period, the neighborhoods experience sound levels ranging from approximately 45 dB(A) to approximately 48 dB(A). The result of the noise monitoring program indicates that the daytime and nighttime sound levels in the surrounding neighborhoods adjacent to the Project Site are currently below the City of Boston's standards for a Residential District. During the daytime period, the measured sound levels data were composed of noise from nearby construction activities and vehicles traveling on the surrounding roadways, such as the Turnpike, Everett Street and Hichborn Street. The nighttime period sound levels were generally

associated with traffic on the Turnpike and noise from mechanical equipment from nearby buildings. Appendix D provides the noise monitoring data.

6.12.5 Future Noise Conditions

The noise analysis assessed the potential noise impacts associated with the Proposed Project's mechanical equipment and loading activities. The analysis evaluated the potential sound level impacts at the nearby sensitive receptor locations and the proposed residential uses.

Mechanical Equipment

Since the Proposed Project is in the early stages of the design process, the specific details related to the final selection of mechanical equipment are not confirmed at the time of this noise assessment. Based on preliminary design plans, the anticipated mechanical equipment associated with the Proposed Project may include the following:

- Cooling towers,
- Hot water boilers,
- Energy recovery air handling units,
- Emergency generators, and
- Exhaust fans.

The Proposed Project will incorporate noise attenuation measures as necessary to comply with City of Boston's noise criteria at the sensitive receptor locations, including the Proposed Project's residential units. During the design and selection process, the mechanical equipment will be strategically located to minimize potential noise impacts, such as set on the building rooftops. The appropriate low-noise mechanical equipment will be selected, including potential noise mitigation measures, such as acoustical enclosures and/or acoustical silencers. Further, the design of the proposed on-site residential units will incorporate building construction material with sufficient Sound Transmission Class (STC) rating to minimize noise impacts to the interior of the units.

Noise attenuation can be achieved by utilizing the building structures. The proposed building design as the heights of the proposed buildings range from 14-stories to 20-stories high, which are greater than the height of the surrounding sensitive receptors. The proposed buildings could serve as a barrier by breaking the direct line of exposure between the noise sources and nearby receptors. As such, the sound levels associated with the Proposed Project's mechanical equipment are expected to be insignificant at the surrounding sensitive receptor locations.

The Proposed Project is expected to install emergency generators for life safety purposes, such as emergency exit lighting. The Proposed Project will be required to adhere to MassDEP's regulations that require such equipment to be certified and registered when installed. As part of the air permitting process, the Proposed Project will be required to comply with additional noise requirements described in MassDEP regulations under the Codes of Massachusetts Regulations (310 CMR 7.00). At the

proper time during the construction phase, the Proponent will submit the appropriate permit application to MassDEP, which would include noise mitigation measures, such as acoustic enclosures and exhaust silencers as necessary to meet MassDEP's noise criteria.

Service and Loading Activities

Due to the nature of the residential uses, daily loading/service activities associated with the proposed residential units are expected to be serviced by small delivery/service vehicles, such as FedEx/DHL vans. Deliveries associated with the proposed retail uses will consist of tractor-trailer trucks similar to ones used at the existing site. Loading activities are expected to occur in designated loading areas at each proposed building, as shown on Figure 1.5. The loading areas are expected to be located internally within the proposed buildings. The loading activities will be managed so that service and loading operations do not impact traffic on the adjacent roadways. Since loading activities will be enclosed and will be managed, potential noise impacts to nearby sensitive receptor locations are expected to be negligible.

6.12.6 Conclusion of Noise Impact Assessment

The noise analysis determined that the sensitive receptor locations near the Project Site currently experience sound levels below the City of Boston's noise criteria. Based on preliminary design, the Proposed Project's operations will have no adverse noise impacts at nearby sensitive receptor locations. During the design of the proposed residential units, selection of building materials and construction techniques will be considered to minimize noise impacts to the interior of the units on-site.

6.13 Construction

Impacts associated with the Proposed Project construction activities are temporary in nature and are typically related to truck traffic, air (dust), noise, stormwater runoff, solid waste, and vibration. For each phase of construction, the Proponent will develop a detailed Construction Management Plans (CMP) for approval by BTD prior to construction. Each CMP will be developed to reflect the input of the regulatory authorities having jurisdiction over such plans, including the Boston Fire Department and BTD. The CMP will include detailed information on construction activities, specific construction mitigation measures, and vehicle routing and staging to minimize impact on the surrounding neighborhood and the Turnpike.

Construction methodologies that ensure public safety and protect nearby residents will be employed. Techniques such as barricades, walkways, and signage will be used. Construction management and scheduling will minimize impacts on the surrounding environment and will include plans for construction worker commuting and parking, routing plans for trucking and deliveries, and control of noise and dust. The following section generally describes the potential construction-period impacts

and proposed CMP elements, which are subject to refinement and modification as the design of the Proposed Project progresses.

6.14 Rodent Control Post-Construction

Trash and solid waste removal will be handled by the Construction Manager (CM). The CM will maintain a service contract with a professional pest control firm to address rodent/pest control during the operational phase of the Proposed Project, as needed. In addition, no open top dumpsters will be allowed as an additional precaution to deter infestation.

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RWDI
CONSULTING ENGINEERS & SCIENTISTS

Preliminary Sensor Plan

LEGEND:
Grade Level Sensors

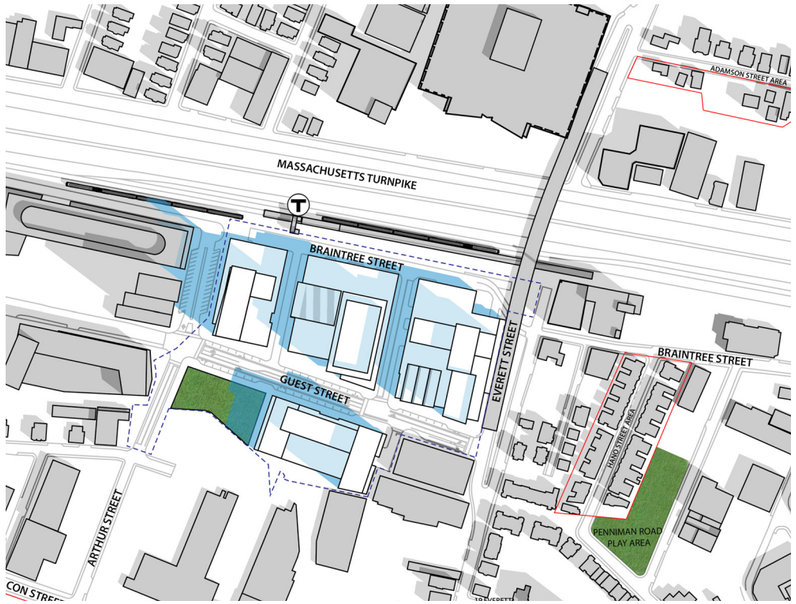
Source Info

Prepared by: RWDI

Figure 6.1
Proposed Wind Sensor Locations

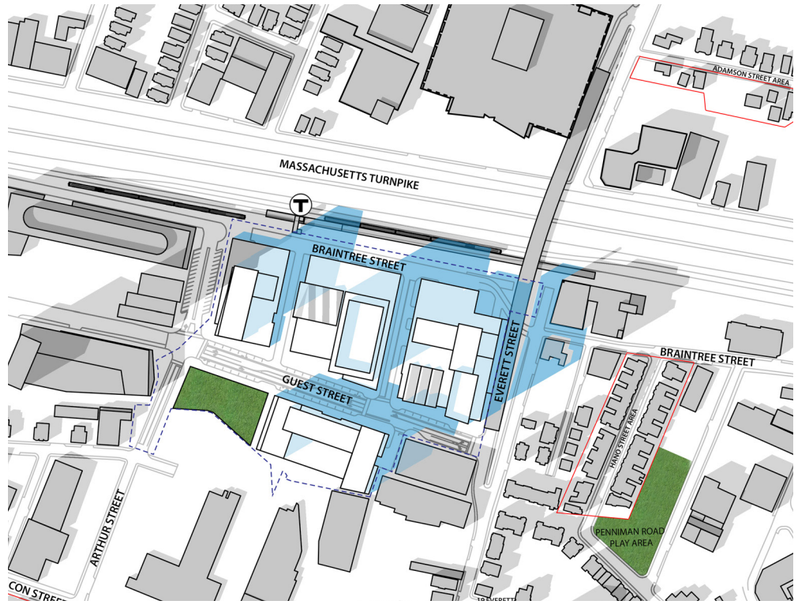
Allston Yards
Allston, Massachusetts

MARCH 21



9AM

12PM



3PM

0 200 400 Feet

EXISTING SHADOW
NET NEW SHADOW - STREET LEVEL
NET NEW SHADOW - ROOF LEVEL
PUBLIC GREEN SPACE
HISTORIC RESOURCES

Prepared by: Stantec

Figure 6.2a

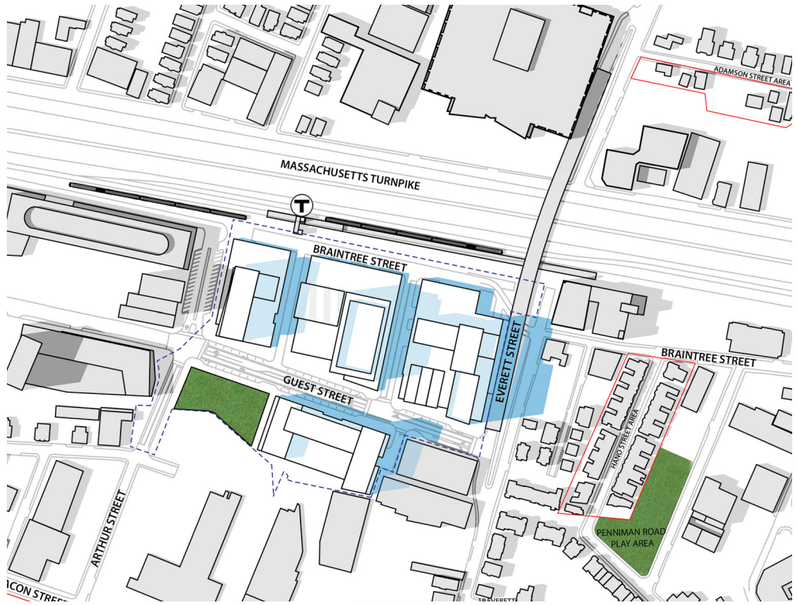
Shadow Study - March 21

Allston Yards
Allston, Massachusetts

JUNE 21

9AM

12PM



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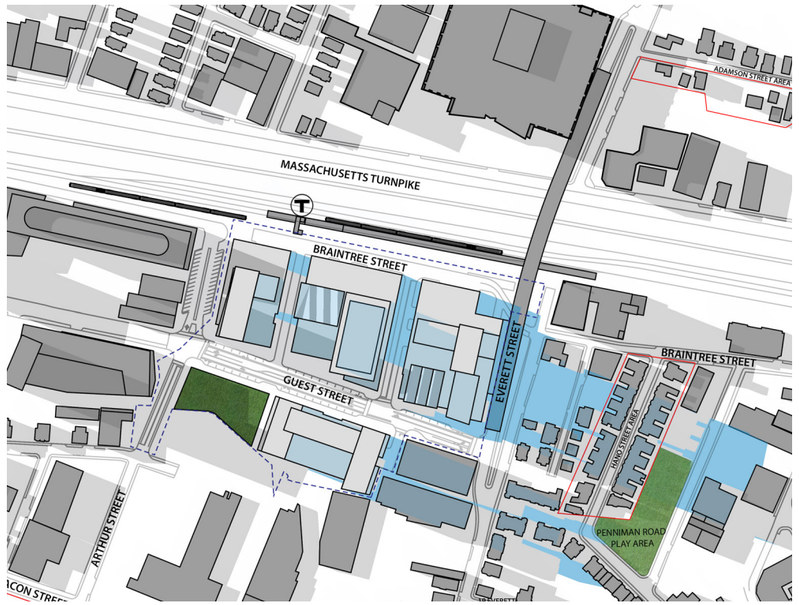


6PM

0 200 400 Feet

EXISTING SHADOW
NET NEW SHADOW - STREET LEVEL
NET NEW SHADOW - ROOF LEVEL
PUBLIC GREEN SPACE
HISTORIC RESOURCES

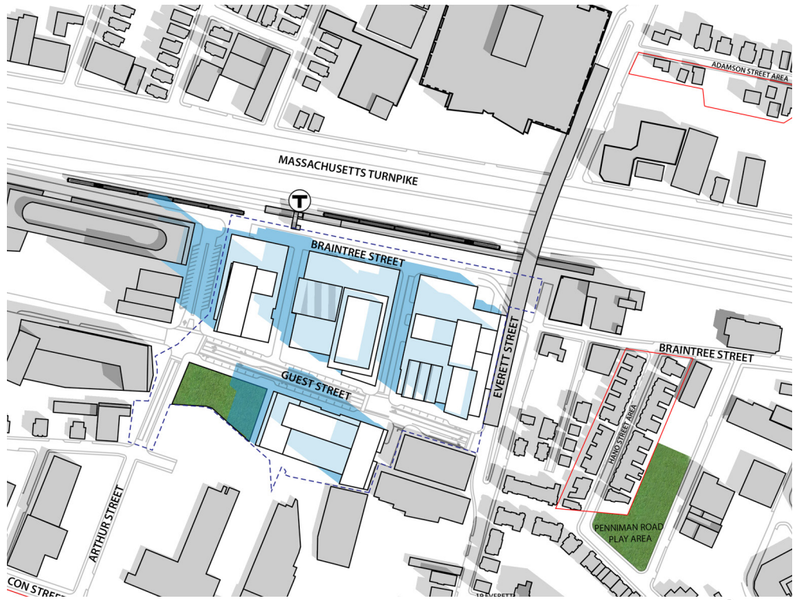
Prepared by: Stantec

Figure 6.2b

Shadow Study - June 21

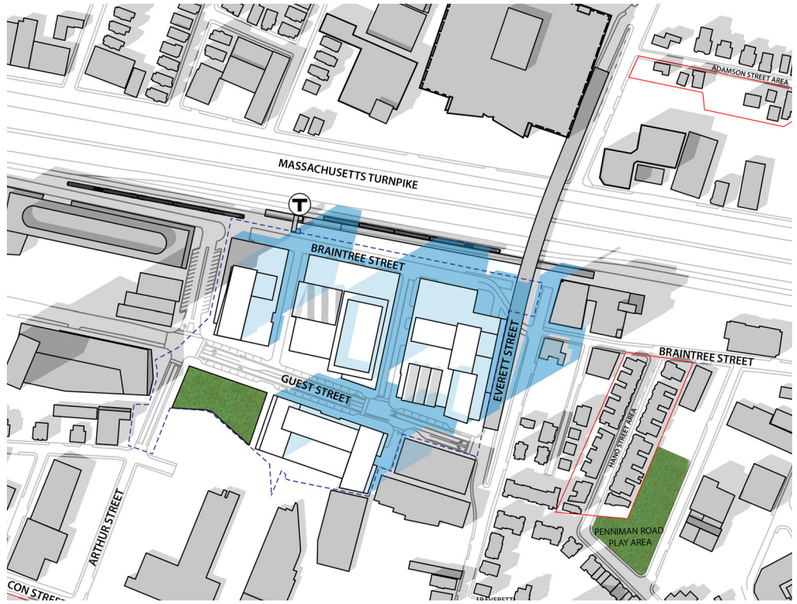
Allston Yards
Allston, Massachusetts

SEPTEMBER 21



9AM

12PM



3PM

6PM

0 200 400 Feet

EXISTING SHADOW
NET NEW SHADOW - STREET LEVEL
NET NEW SHADOW - ROOF LEVEL
PUBLIC GREEN SPACE
HISTORIC RESOURCES

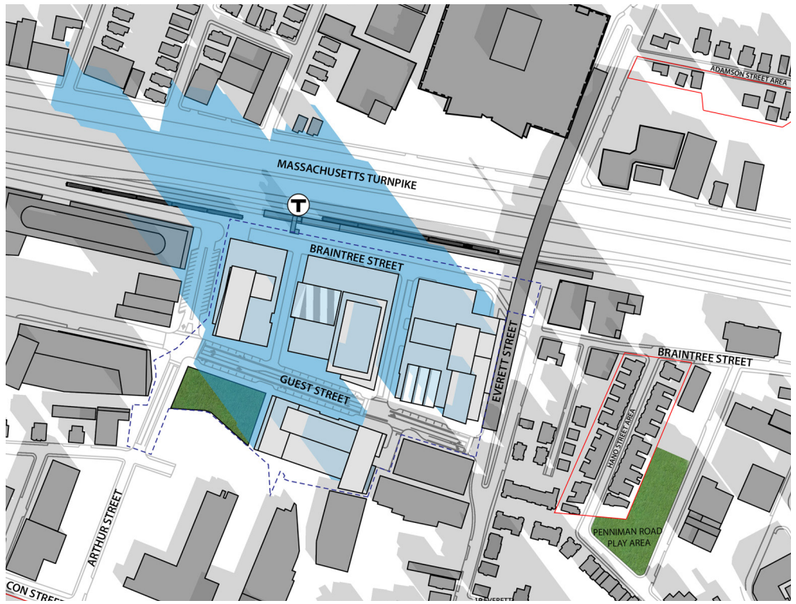
Prepared by: Stantec

Figure 6.2c

Shadow Study - September 21

Allston Yards
Allston, Massachusetts

DECEMBER 21



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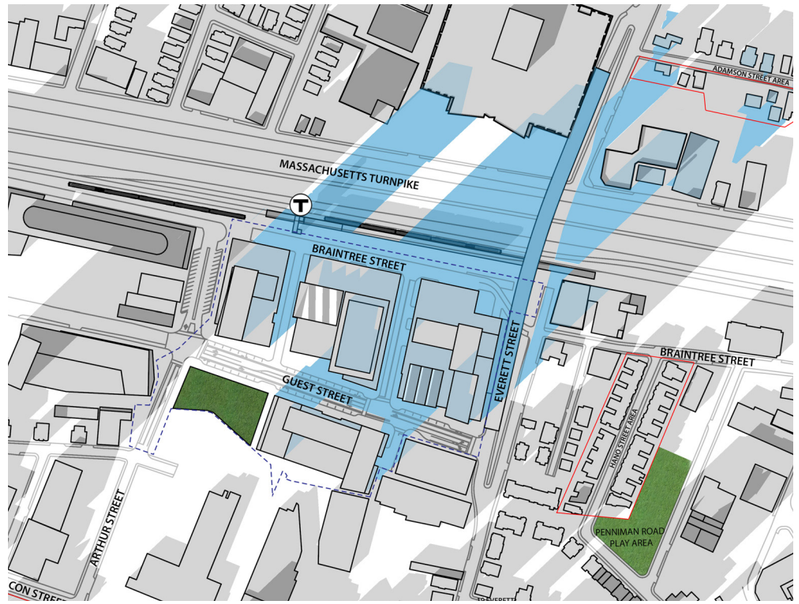
12PM



3PM

0 200 400 Feet

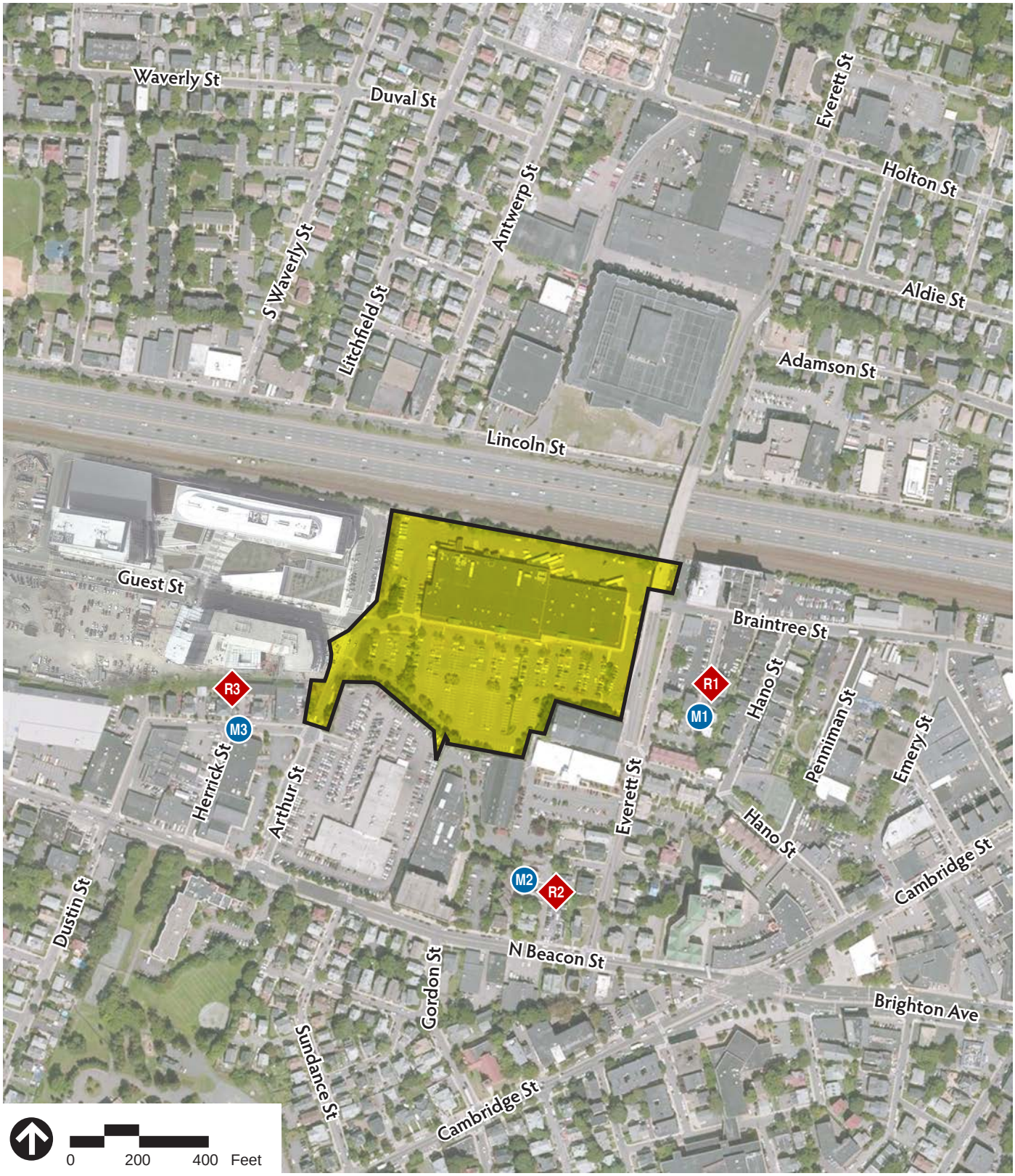
- EXISTING SHADOW
- NET NEW SHADOW - STREET LEVEL
- NET NEW SHADOW - ROOF LEVEL
- PUBLIC GREEN SPACE
- HISTORIC RESOURCES

Prepared by: Stantec

Figure 6.2d

Shadow Study - December 21

Allston Yards
Allston, Massachusetts



Source: ArcGIS Bing Aerial

Prepared By: VHB

Project Site

M# Monitoring Locations

R# Receptor Locations

Figure 6.3

Noise Monitoring and Receptor Locations

Allston Yards
Boston, Massachusetts

7

Infrastructure

This chapter describes the infrastructure systems that will support the Proposed Project. The following utilities are evaluated: wastewater, water, stormwater management, natural gas, electricity, and telecommunications. The Proposed Project is located in an urban context with a comprehensive utility service network available at the Project Site boundaries.

The Proposed Project will connect to proposed utility systems within Guest Street and Braintree Street Extensions. These proposed systems ultimately connect to existing city and utility company systems in the adjacent public streets. Based on initial investigations and consultations with the appropriate agencies and utility companies, it is anticipated that the existing infrastructure systems will support the incremental increase in demand associated with the development and operation of the Proposed Project. As design progresses, all required engineering analyses will be conducted, and the final design will adhere to all applicable protocols and design standards ensuring that the Proposed Project is properly supported by and properly uses city infrastructure. Detailed design of the Proposed Project's utility systems will proceed in conjunction with the design of the buildings and interior mechanical systems.

The systems discussed herein include those owned or managed by the Boston Water and Sewer Commission (BWSC), private utility companies, and on-site infrastructure systems. There will be close coordination among these entities and with the project engineers and architects during the construction process for the Proposed Project. Figure 7.1 shows the existing infrastructure at the Project Site, and Figure 7.2 presents the proposed utilities for the Proposed Project.

7.1 Summary of Key Findings and Benefits

The findings related to infrastructure systems include:

- Utility infrastructure systems are available at the Project Site boundaries and it is anticipated that they will support the demand associated with the development and operation of the Proposed Project. This will be confirmed as the design develops, service locations are established and the development team meets with the appropriate agencies and utility companies.
- On-site drainage generally flows towards the Charles River via BWSC-owned and maintained drainage infrastructure in Everett Street abutting the Project Site.
- The Project Site is currently serviced by BWSC for domestic and fire protection water and sanitary sewage conveyance.

› Based upon sewage generation rates outlined in the DEP Sewer Connection and Extension Regulations, 310 CMR 15.203.f, the Proposed Project is estimated to generate approximately 205,303 gallons per day of sanitary sewage (197,703 gallons per day of net new sanitary sewage) and will require approximately 225,833 gallons of water per day (217,473 net new gallons of water per day).

The key Proposed Project-related mitigation and beneficial measures associated with the infrastructure systems include:

› The Proposed Project will not introduce additional peak flows, pollutants, or sediments that would potentially impact the receiving waters of the local BWSC stormwater drainage system.

› The Proposed Project will improve the quality and quantity of site stormwater runoff compared to existing conditions by collecting and infiltrating 1 inch of rainfall over all impervious areas, including proposed streets and sidewalks.

› The proposed stormwater management systems will comply with the 2008 DEP Stormwater Management Policy and Standards.

› Consistent with the sustainable design goals and Article 37 of the Code, the Proposed Project is expected to exceed a 20 percent annual potable water use reduction for interior water use and sewage conveyance through the use of low-flow/high-efficiency plumbing fixtures. Such achievement will be determined once plumbing fixtures are selected by the plumbing engineer.

7.2 Regulatory Context

All connections will be designed and constructed in accordance with applicable city, state and federal standards. The final design process for the Proposed Project will include required engineering analyses and will adhere to applicable protocols and design standards, ensuring that the Proposed Project is properly supported by, and in turn properly uses the utility infrastructure of the City and private utilities. Detailed design of the Proposed Project-related utility systems will proceed in conjunction with the final design of the buildings and its interior mechanical systems.

All improvements and connections to BWSC infrastructure will be reviewed by BWSC as part of the Site Plan Review process. This process includes a comprehensive design review of the proposed service connections, assessment of system demands and capacity and establishment of service accounts.

› BWSC has reviewing authority of the proposed site plan design, including stormwater management infrastructure, and water and sanitary sewer system connections/design.

› The Boston Fire Department (BFD) will review the Proposed Project with respect to fire protection measures such as access, hydrants, Siamese connections, and standpipes.

› Design of the Project Site access, hydrant locations, and energy systems (gas and electric) will also be coordinated with the respective system owners.

- Where new utility connections are needed and existing connections are to be capped, the excavation will be authorized by the Boston Public Works Department (BPWD) through the street opening permit process, as required.
- Additional information on the regulatory framework for each utility system is included in subsequent sections of this chapter.

7.3 Stormwater Management

Since most of the Project Site is already impervious, the Proposed Project will not result in significant changes in the pattern of stormwater runoff. Stormwater management controls will be established in compliance with the BWSC standards. The Proposed Project is expected to improve stormwater runoff quality and reduce peak flows by increasing landscaping and pervious areas, and through the use of treatment and infiltration facilities. The development team is also studying opportunities to incorporate green roof technologies into the building program.

7.3.1 Existing Drainage Conditions

Record information shows on-site drainage generally flows towards the Charles River. Everett Street contains BWSC owned drainage infrastructure adjacent to the Project Site. Drainage infrastructure also runs through a utility easement on the northwest portion of the Project Site. Site run-off is collected through a series of catch basins throughout the existing parking lot and are directed through a vortechs water quality unit before discharging to the BWSC owned 66-inch by 87-inch drain in Everett Street. Roof drainage is collected within the existing plumbing system and directed through a vortechs water quality unit before discharging to the same BWSC owned drain in Everett Street. Run-off ultimately flows to the Charles River through outfall SD0037. Figure 7.1 shows the existing drainage facilities serving the Project Site.

7.3.2 Proposed Drainage Approach

The Proposed Project will incorporate stormwater management and treatment systems that will improve water quality, reduce runoff volume and control peak rates of runoff in comparison to existing conditions. The Proposed Project will provide infiltration that retains site runoff while providing treatment and peak flow mitigation, in accordance with stormwater standards and Boston Water and Sewer Commission (BWSC). Additionally, to better ensure improved water quality from the Proposed Project, a "Don't Dump, Drains to Charles River" casting will be installed at all new catch basins, area drains, and trench drains.

Stormwater runoff calculations will be done for existing and proposed conditions during the BWSC permitting process for the 2-, 10-, 25- and 100-year storm events. During construction, measures will be implemented to minimize water quality impacts and avoid impacts to abutters.

7.4 Sanitary Sewage

7.4.1 Existing Sewer System

BWSC owns and maintains the sanitary sewer lines near the Proposed Project Site. These include the 15-inch sewer which runs through an easement along the back side of the existing building in the Braintree Street Extension area and a 26-inch by 39-inch sewer in Everett Street. The existing site currently generates approximately 7,600 gallons per day of wastewater based on DEP 310 CMR 15.203 flow factors for the existing supermarket/retail uses of the Project Site.

7.4.2 Proposed Sewage Flow and Connection

Generation rates from the Massachusetts State Environmental Code (Title 5) were used to estimate the Proposed Project's sewage generation rates. Table 7-1 below presents the estimated sanitary sewage flow for the Proposed Project.

Table 7-1 Estimated Sanitary Sewage Flow (Full-Build)

Use	Sewage Generation Rate[1]	Proposed Size/Quantity	Estimated Sewage Generation (GPD)
Residential	110 GPD/Bedroom	1,517 Beds[2]	166,870
Office	75 GPD/1000 SF	303,000 SF[3]	22,725
Retail	50 GPD/1000 SF	50,000 SF	2,500
Grocery	97 GPD/1000 SF	64,000 SF	6,208
Restaurant	35 GPD/seat	200 seats	7,000
	Total Proposed		205,303
	Total Existing		7,600
	Net New Total		**197,703**

GPD = Gallons per day
SF = Square Feet
1 Based on DEP 310 CMR 15.203 flow calculation factors.
2 Assumes the following bedroom breakdown for the up to 1,050 units: 5.9% Studio, 52.9% 1-Bedroom, 37.9% 2-Bedrooms and 3.3% 3-Bedrooms. This bedroom mix is subject to change.
3 Accounts for the proposed community gathering space.

The Proposed Project will generate an estimated 205,303 gallons per day of sewage (197,703 net new gallons per day). The Project plans to maintain the existing 15-inch sewer within Braintree Street Extension and proposes a new main in Guest Street Extension that will connect to the existing 26-inch by 39-inch sewer in Everett Street. All connections will be coordinated with BWSC.

Proposed Sanitary Sewage Mitigation

BWSC requires that new developments generating greater than 15,000 gallons per day of net new wastewater flow compensate the Commission for the associated generation of I/I at a ratio of 4:1 relative to the net new wastewater generated. Infiltration/Inflow is the component of flows in sanitary sewer systems that do not

come from wastewater generated by a building, such as groundwater infiltration from leaking/broken sewer infrastructure, as well as stormwater connections from roof leaders and drainage infrastructure.

As the currently proposed, the initial development phase is projected to generate approximately 63,283 gallons per day of net new sewage based on the following program:

- 360 residential units;
- 64,000 square feet of grocery;
- 5,000 square feet of retail;
- 3,000 square feet of community gathering space; and
- 200 restaurant seats.

As design is advanced and approval is sought, BWSC will review and confirm the appropriate mitigation volume and value of compensation to be paid to the I/I mitigation fund, or provided through alternative mitigation mechanisms, such as individual improvement projects.

7.5 Domestic Water and Fire Protection

7.5.1 Existing Water Supply System

BWSC owns and maintains the water mains near the Project Site. BWSC record drawings show the streets surrounding the Project Site are serviced by southern low service mains. The existing site has an 8-inch private loop that is metered at the corner of Everett Street and Braintree Street Extension. The mains range in size from a 12-inch main in Guest Street and Everett Street, to a 6-inch main in Hichborn Street. The installation dates and materials of these pipes also vary, from pit-cast iron ("PCI") pipe installed in 1876 and 1884 to cast iron cement lined ("CICL") pipe installed and lined in 1950. The existing water infrastructure provides a high level of service and diversity to the Allston neighborhood. Additionally, currently two public fire hydrants are near the Project Site in addition to 4 private hydrants on-site.

7.5.2 Proposed Water Demand and Connection

Domestic water demand is based on estimated sewage generation with an added factor of 10 percent for consumption, system losses, and other use. Based upon sewage generation rates outlined in the DEP Sewer Connection and Extension Regulations, 310 CMR 15.203.f, the Proposed Project will require approximately 225,833 gallons of water per day (217,473 net new gallons per day). However, appropriate low-flow and low-consumption plumbing fixtures will be installed in all residential units to achieve a reduction in water usage at a minimum of 20 percent over the baseline to comply with Article 37 of the Boston Zoning Code, as discussed in Chapter 4, *Sustainability/Green Building and Climate Change Resiliency*. The Proposed Project is expected to exceed a 20 percent annual potable water use

reduction for interior water use and sewage conveyance through the use of low-flow/high-efficiency plumbing fixtures. Such achievement will be determined once plumbing fixtures are selected by the plumbing engineer.

New water connections will be designed in accordance with BWSC design standards and requirements. Water services to new buildings will be metered in accordance with BWSC's Site Plan Requirements and Site Review Process. The review includes, but is not limited to, sizing of domestic water and fire protection services, calculation of meter sizing, sizing and location of booster pumps (if required, by MEP Engineer), backflow prevention design, and location of hydrants and Siamese connections conform to BWSC and BFD requirements. The Proponent will provide for the meter connection to the BWSC's automatic meter reading system. Fire protection connections on the Project Site will also need approval of the BFD.

7.6 Other Utilities

7.6.1 Natural Gas Service

National Grid Energy owns and operates the natural gas mains and services near the Project Site. The site survey indicates a 4-inch gas main in Guest Street and an 8-inch main in Everett Street. The Proposed Project plans to extend the natural gas main along Guest Street Extension to Everett Street to service the proposed buildings.

The Proposed Project's estimated natural gas load for the initial phase of development is 21,500 MBH. The estimated natural gas load for the remaining proposed buildings will be determined based on final design and uses. The Proponent will work with National Grid to confirm adequate system capacity as the design for the buildings is advanced.

7.6.2 Electrical Service

Eversource owns and operates the electric facilities near the Project Site. The survey, provided by VHB, indicates underground power facilities in Everett Street and Guest Street along the frontage of the Project Site. The Proposed Project plans to extend the underground power facilities along Guest Street Extension to Everett Street to service the proposed buildings. As the design of the Proposed Project progresses, the Proponent's electrical engineer and civil engineer will coordinate with Eversource on future configurations of the power system and connections.

The estimated electrical demand load for the initial phase of development is one 480/277V, 5000 Amp service (house) and one 120/208V, 6000 Amp service (office). The electrical demand load for the remaining buildings will determined based on final design and uses. Energy conservation measures will be an integral part of the Proposed Project-related infrastructure design. As described in Chapter 4, *Sustainability/Green Building and Climate Change Resiliency*, all buildings will be designed to include energy-efficient and water-conservation features for mechanical, electrical, architectural, and structural systems, assemblies, and materials, where feasible and reasonable.

7.6.3 Telephone and Telecommunications

Verizon owns and operates the telephone facilities and services near the Project Site. The survey, provided by VHB, indicates that there is an active conduit and manhole located in Everett Street where the existing building is currently being serviced. Given the existing infrastructure, telephone for the Project Site could be provided from Everett Street or Guest Street as the Proposed Project plans to extend telephone systems to service the proposed buildings. The configuration of the proposed service will be developed with Verizon as the design progresses.

Comcast owns and operates the telecommunications facilities and services near the Project Site. The survey, provided by VHB, indicates that there is active conduit and manholes in Everett Street. Telecommunications for the Project Site could be provided from Everett or Guest Street as the Proposed Project plans to extend the telecommunications line to service the proposed buildings. The configuration of the proposed service will be developed with Comcast as the design progresses.

7.6.4 Protection of Utilities During Construction

During construction, infrastructure will be protected using sheeting and shoring, temporary relocations, and/or construction staging as required. The contractor will be required to coordinate all protection measures, temporary supports, and temporary shutdowns of all utilities with the appropriate utility owners and/or agencies. The contractor will also be required to provide adequate notification to the utility owner prior to any work commencing on their utility.

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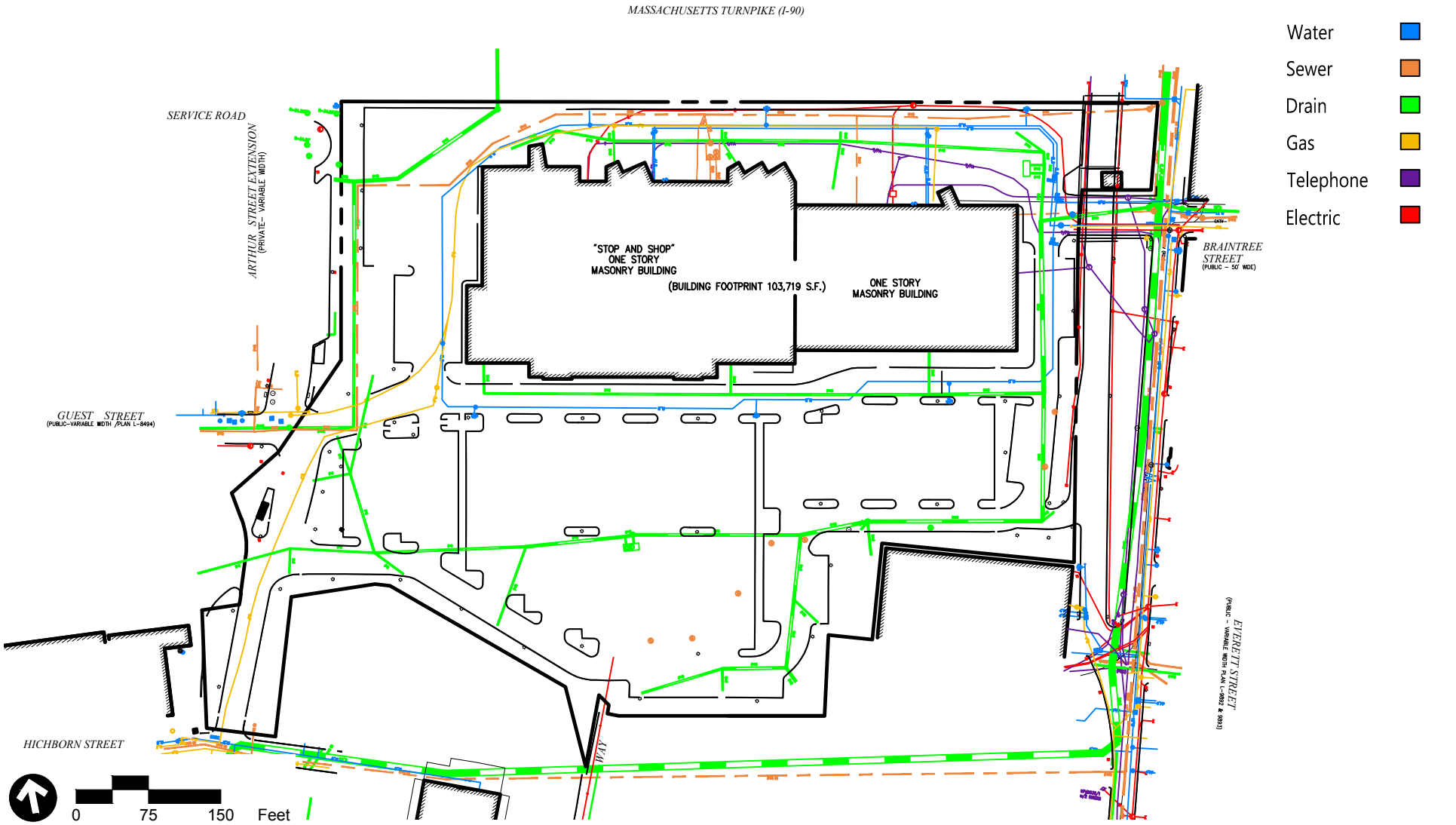

Source:

Prepared By:

Figure 7.1

Existing Utilities

Allston Yards
Allston, Massachusetts

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Source:

Prepared By:

Figure 7.2

Proposed Utilities

Allston Yards
Allston, Massachusetts

8

Historic Resources

This chapter identifies the historic and archaeological resources within a ¼-mile radius of the Project Site, and describes the potential Proposed Project-related impacts on these resources. A review of the State and National Registers of Historic Places, Inventory of Historic and Archaeological Assets of the Commonwealth (the "Inventory") maintained by the Massachusetts Historical Commission ("MHC"), and the and Massachusetts Cultural Resource Information System ("MACRIS"), was undertaken to identify historic resources.

8.1 Key Findings and Benefits

The key findings related to historic resources include:

- There are no historic resources on-site (i.e., listed in the State or National Registers of Historic Places, or included in the Inventory of Historic and Archaeological Assets of the Commonwealth).
- There are no previously identified archaeological resources are located within the Project Site.
- There are historic properties within a ¼-mile vicinity of the Project Site that are listed in the Inventory; however, none of these resources are anticipated to be significantly impacted as a result of the Proposed Project.

8.2 Historic Resources in the Project Vicinity

While the Project Site does not encompass any resources that are listed in the State or National Register, or included in the Inventory, it is near some historic properties. Table 8-1 below lists the historic resources within a ¼-mile of the Project Site.

The Saint Anthony's Area, 1-75 Aldie Street Area, and the 1-87 Adamson Street Area are located northwest of the Project Site. The Hano Street Area is located east of the Project Site. 19 Everett Street, 1 Sinclair Road, and 2 Sinclair Road are located southeast of the Project Site. The Allston Heights Area and Mount Saint Joseph Academy Area are located southwest of the Project Site. Refer to Figure 8.1 for the locations of these historic resources.

Table 8-1 Historic Resources within One-Quarter Mile of the Project Site

Map No.	Resource	Address	Designation
1	Saint Anthony's Area	Western Ave, Franklin St, Adamson St, Everett St	MHC Inventory
2	Mount Saint Joseph Academy Area	637 Cambridge St	MHC Inventory
3	Allston Heights Area	North Beacon St, Gordon St, Cambridge St, Imrie Rd	MHC Inventory
4	Hano Street Area	Hano St, Braintree St	MHC Inventory
5	1-87 Adamson Street Area	1-87 Adamson Street	MHC Inventory
6	1-75 Aldie Street Area	1-75 Aldie Street	MHC Inventory
7	19 Everett Street	19 Everett Street	MHC Inventory
8	1 Sinclair Road	1 Sinclair Road	MHC Inventory
9	2 Sinclair Road	2 Sinclair Road	MHC Inventory

8.3 Archaeological Resources

The Project Site consists of a previously developed urban parcel. No previously identified archaeological resources are located within the Project Site. Due to previous development activities and disturbances, including site grading activities, it is not anticipated that the Project Site contains significant archaeological resources and, therefore, no impacts to archaeological resources are anticipated as a result of the Proposed Project.

8.4 Potential Impacts to Historic Resources

8.4.1 Shadow

A shadow impact analysis was undertaken to show the anticipated impacts to historic resources from the Proposed Project in comparison to the existing condition. The analysis identifies net new shadow for March 21, June 21, September 21, and December 21 at 9AM, 12PM, and 3PM, as well as 6PM on June 21 and September 21, in accordance with the BPDA Article 80 review guidelines.

As presented in Section 6.3 of Chapter 6, *Environmental Protection*, and shown on Figures 6.2a through 6.2d, net new shadow is mostly limited to within the Project Site. Net new shadow that would extend over historic resources is limited to the 1-87 Adamson Street Area on December 21 at 3PM. The Proposed Project would not result in net new shadow on historic resources under any of the other conditions.

8.4.2 Visual

As described in Chapter 1, *Project Description*, the Proposed Project will redevelop the existing underutilized suburban-style retail Project Site into a mixed-use development in the spirit of the Guest Street Planning Study and consistent with the height, massing, and uses of the adjacent Boston Landing development.

The primary urban design goal of the Proposed Project is to enhance the public realm around and inside the Project Site and create a vibrant and interactive destination near the proposed extension of Guest Street. The massing of the Proposed Project has been broken up by creating activated pedestrian walkways with at-grade public seating and retail space throughout the Project Site.

In keeping with the Guest Street Planning Study, the bulk of building massing is located along Guest Street Extension away from North Beacon Street. The proposed building heights are consistent with the Boston Landing buildings recently constructed or being planned immediately west of the Project Site. The Proponent intends to further relate the scale of the buildings through metal panel and curtainwall accents.

8.5 Status of Project Reviews with Historical Agencies

8.5.1 Boston Landmarks Commission Article 80 Review

The submission of this PNF initiates review of the Proposed Project by the Boston Landmarks Commission under the City of Boston's Article 80 review process.

8.5.2 Boston Landmarks Commission Article 85 Review

The building on the Project Site is not over 50 years of age; therefore, is not subject to the City of Boston's Demolition Delay Ordinance (Article 85 of the Boston Zoning Code).

8.5.3 Massachusetts Historical Commission – State Register Review

The Massachusetts Historic Commission (MHC) has review authority over projects requiring state funding, licensing, permitting, and/or approvals that may have direct or indirect impacts to properties listed in the State Register of Historic Places (M.G. L. Chapter 9, Sections 27-27c, as amended). As discussed in Section 2.1.6 of Chapter 2, *Regulatory Context and General Information*, an Environmental Notification Form (ENF) will be filed for MEPA review, which will initiate the MHC State Register Review process.

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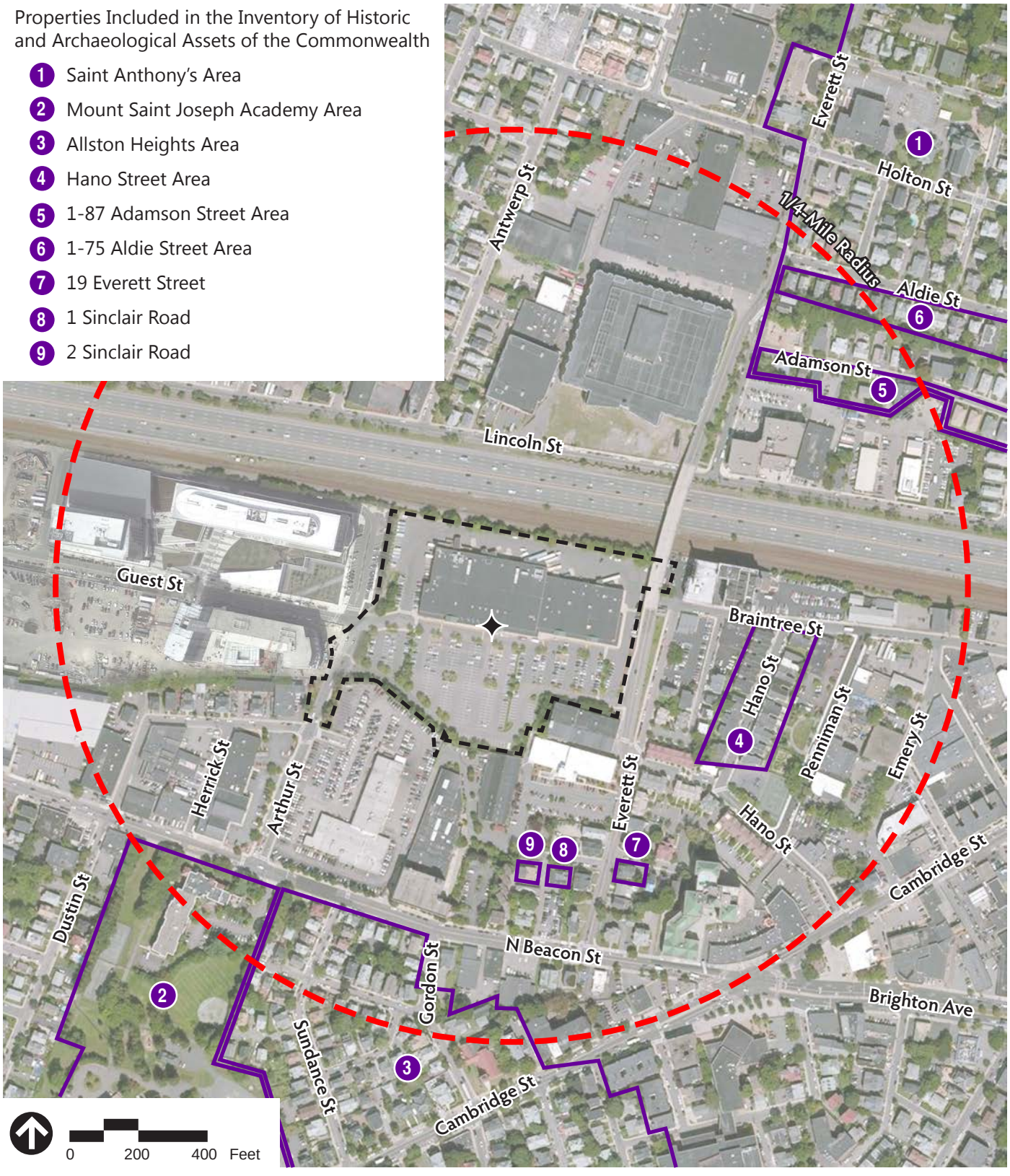

Source: ArcGIS Bing Aerial

Prepared By: VHB

Project Site

Figure 8.1

Historic Resources within ¼-mile of the Project Site

Allston Yards
Allston, Massachusetts

9

Project Certification

This PNF has been submitted to the Boston Planning & Development Agency, as required by Article 80B of the Zoning Code.

Proponent
The Stop & Shop Supermarket Company, LLC

Guy Stutz

New England Development

Stephen R. Karp
Chairman, Chief Executive Officer

Preparer
Vanasse Hangen Brustlin, Inc./VHB

Lauren DeVoe, LEED AP-BD+C
Senior Environmental Planner/Project Manager

APPENDIX A: Letter of Intent

The Stop & Shop Supermarket Company LLC

1385 HANCOCK STREET, QUINCY, MASS. 02169
Mailing Address: P.O. BOX 55888, BOSTON, MA 02205-5888

February 10, 2017

VIA HAND DELIVERY

Mr. Brian Golden
Director
Boston Redevelopment Authority
d/b/a Boston Planning and Development Agency
Boston City Hall, 9th Floor
One City Hall Square
Boston, MA 02201

Subject: Letter of Intent with Respect to the Multi-Phased Redevelopment of 60 Everett Street, Allston, Massachusetts

Dear Mr. Golden:

On behalf of WJG Realty Company LLC, and in accordance with the Executive Order relative to the provision of mitigation by development projects in Boston, The Stop & Shop Supermarket Company LLC ("Stop & Shop") is pleased to submit this Letter of Intent to file a Project Notification Form initiating Large Project Review under Article 80B of the Boston Zoning Code for the redevelopment of the existing Stop & Shop Supermarket retail center located at 60 Everett Street (the "Property") in the Allston neighborhood of Boston, Massachusetts (the "Project").

The existing shopping plaza has been serving the Allston-Brighton community for nearly 20 years, during which time the Guest Street corridor has evolved from its roots as an industrial district to what it is today. In 2012, neighborhood stakeholders, local officials and city planners collaborated to produce the Brighton Guest Street Area Planning Study providing recommendations for the future development of this corridor, including the creation of a comprehensive street grid, substantial open spaces, mix of uses and the placement of taller building heights along the Massachusetts Turnpike. These planning concepts are consistent with Mayor Walsh's *Housing A Changing City, Boston 2030* plan and widely accepted Smart Growth principals, such as providing transit-oriented development, new housing alternatives, walkable neighborhoods and a live-work-play community. Stop & Shop seeks to continue to invest in the Allston neighborhood, addressing

the need for a new state-of-the-art grocery store, while realizing the goals and vision provided in the Guest Street Area Planning Study for this Property.

The Project is proposed to be constructed in phases in order to allow the existing store to remain open during construction and continuously serve its neighbors and customers. The Project, initially, will include a new Stop & Shop grocery store and approximately 360 residential units, 5,000 square feet of retail space, parking, 25,000 square foot publicly accessible open space, and related infrastructure. The first phase infrastructure will support the overall project. The remaining build-out of the Project is planned to include additional retail and restaurant uses, up to 650 residential units, and Class A office space. As proposed, the Project will create new connections to adjacent roadways providing increased vehicular, bicycle and pedestrian travel paths. The Project will provide extensive infrastructure in the form of large and activated open spaces, a new street grid, and a mix of retail, residential and commercial uses. Further, the Project will deliver a new Stop & Shop supermarket, increased housing options, including affordable housing and home ownership among other benefits to the community and City. In the coming months, Stop & Shop looks forward to continue working with key stakeholders, abutters, the community, City officials and staff to review the plans for the Project, which Project aims to serve as a gathering place for the Allston community.

Stop & Shop has over 100 years of operating history in Greater Boston and operates 9 stores throughout the City, which stores employ approximately 1,300 associates. In addition to serving many Boston neighborhoods through its store operations, Stop & Shop has raised over $60M for the Jimmy Fund/Dana Farber Cancer Institute for Pediatric Cancer Research through a long standing partnership, donated 9,000 turkeys to not-for-profit organizations including the Greater Boston Food Bank, and served as a charter sponsor of Family Aid and Bottom Line organizations. Stop & Shop views the Project, with its resulting public benefits, as consistent with its historic commitment to the City of Boston and its residents.

Stop & Shop is pleased to submit this Letter of Intent and looks forward to filing its Project Notification Form. We look forward to working with your staff and the Impact Advisory Group that the Mayor will appoint to advise the BPDA with respect to this Project.

Sincerely,

THE STOP & SHOP SUPERMARKET COMPANY, LLC

By: _____
Name: Guy Stutz
Title: Vice President of Real Estate

APPENDIX B: BPDA Checklists

Accessibility Checklist

Climate Change Preparedness and Resilience Checklist

Accessibility Checklist

Article 80 – Accessibility Checklist

A requirement of the Boston Planning & Development Agency (BPDA)
Article 80 Development Review Process

The Mayor's Commission for Persons with Disabilities strives to reduce architectural, procedural, attitudinal, and communication barriers that affect persons with disabilities in the City of Boston. In 2009, a Disability Advisory Board was appointed by the Mayor to work alongside the Commission in creating universal access throughout the city's built environment. The Disability Advisory Board is made up of 13 volunteer Boston residents with disabilities who have been tasked with representing the accessibility needs of their neighborhoods and increasing inclusion of people with disabilities.

In conformance with this directive, the BDPA has instituted this Accessibility Checklist as a tool to encourage developers to begin thinking about access and inclusion at the beginning of development projects, and strive to go beyond meeting only minimum MAAB / ADAAG compliance requirements. Instead, our goal is for developers to create ideal design for accessibility which will ensure that the built environment provides equitable experiences for all people, regardless of their abilities. As such, any project subject to Boston Zoning Article 80 Small or Large Project Review, including Institutional Master Plan modifications and updates, must complete this Accessibility Checklist thoroughly to provide specific detail about accessibility and inclusion, including descriptions, diagrams, and data.

For more information on compliance requirements, advancing best practices, and learning about progressive approaches to expand accessibility throughout Boston's built environment. Proponents are highly encouraged to meet with Commission staff, prior to filing.

Accessibility Analysis Information Sources:

1. Americans with Disabilities Act – 2010 ADA Standards for Accessible Design
   http://www.ada.gov/2010ADAstandards_index.htm
2. Massachusetts Architectural Access Board 521 CMR
   http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/aab/aab-rules-and-regulations-pdf.html
3. Massachusetts State Building Code 780 CMR
   http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/csl/building-codebbrs.html
4. Massachusetts Office of Disability – Disabled Parking Regulations
   http://www.mass.gov/anf/docs/mod/hp-parking-regulations-summary-mod.pdf
5. MBTA Fixed Route Accessible Transit Stations
   http://www.mbta.com/riding_the_t/accessible_services/
6. City of Boston – Complete Street Guidelines
   http://bostoncompletestreets.org/
7. City of Boston – Mayor's Commission for Persons with Disabilities Advisory Board
   www.boston.gov/disability
8. City of Boston – Public Works Sidewalk Reconstruction Policy
   http://www.cityofboston.gov/images_documents/sidewalk%20policy%200114_tcm3-41668.pdf
9. City of Boston – Public Improvement Commission Sidewalk Café Policy
   http://www.cityofboston.gov/images_documents/Sidewalk_cafes_tcm3-1845.pdf

Glossary of Terms:

1. ***Accessible Route*** – A continuous and unobstructed path of travel that meets or exceeds the dimensional and inclusionary requirements set forth by MAAB 521 CMR: Section 20
2. ***Accessible Group 2 Units*** – Residential units with additional floor space that meet or exceed the dimensional and inclusionary requirements set forth by MAAB 521 CMR: Section 9.4
3. ***Accessible Guestrooms*** – Guestrooms with additional floor space, that meet or exceed the dimensional and inclusionary requirements set forth by MAAB 521 CMR: Section 8.4
4. ***Inclusionary Development Policy (IDP)*** – Program run by the BPDA that preserves access to affordable housing opportunities, in the City. For more information visit: http://www.bostonplans.org/housing/overview
5. ***Public Improvement Commission (PIC)*** – The regulatory body in charge of managing the public right of way. For more information visit: https://www.boston.gov/pic
6. ***Visitability*** – A place's ability to be accessed and visited by persons with disabilities that cause functional limitations; where architectural barriers do not inhibit access to entrances/doors and bathrooms.

1. Project Information:

If this is a multi-phased or multi-building project, fill out a separate Checklist for each phase/building.

Project Name:	**Allston Yards**
Primary Project Address:	**60 Everett Street, Allston, MA 02134**
Total Number of Phases/Buildings:	**N/A**
Primary Contact (Name / Title / Company / Email / Phone):	**John Twohig** **New England Development** **jtwohig@nedevlopment.com, (617)-965-8700** **Guy Stutz** **The Stop & Shop Supermarket Company, LLC** **gstutz@ahold.com, (781) 380-8000**
Owner / Developer:	**New England Development, Master Developer** **The Stop & Shop Supermarket Company, LLC, Developer and Owner**
Architect:	**Stantec Architecture/Elkus Manfredi Architects**
Civil Engineer:	**VHB**
Landscape Architect:	**Copley Wolff Design Group**
Permitting:	**VHB**
Construction Management:	**To be determined**

At what stage is the project at time of this questionnaire? Select below:

PNF / Expanded PNF **Submitted**	Draft / Final Project Impact Report Submitted	BPDA Board Approved
BPDA Design Approved	Under Construction	Construction Completed:

Do you anticipate filing for any variances with the Massachusetts Architectural Access Board (MAAB)? ***If yes,*** identify and explain.	

2. Building Classification and Description:

This section identifies preliminary construction information about the project including size and uses.

What are the dimensions of the project?				
Site Area:	**±460,000 SF**	Building Area:	**±1.9 million SF**	
Building Height:	**±235 Ft.**	Number of Stories:	**Up to 20 stories**	
First Floor Elevation:	**+34.67 Elev.**	Is there below grade space:	**Yes**	
What is the Construction Type? (Select most appropriate type)				
	Wood Frame	Masonry	**Steel Frame**	Concrete
What are the principal building uses? (IBC definitions are below – select all appropriate that apply)				
	Residential – One - Three Unit	**Residential - Multi-unit, Four +**	Institutional	Educational
	Business	**Mercantile**	Factory	Hospitality
	Laboratory / Medical	Storage, Utility and Other		
List street-level uses of the building:	**Residential, Retail and Restaurant, Office, Parking**			

3. Assessment of Existing Infrastructure for Accessibility:

This section explores the proximity to accessible transit lines and institutions, such as (but not limited to) hospitals, elderly & disabled housing, and general neighborhood resources. Identify how the area surrounding the development is accessible for people with mobility impairments and analyze the existing condition of the accessible routes through sidewalk and pedestrian ramp reports.

Provide a description of the neighborhood where this development is located and its identifying topographical characteristics:	**The Proposed Project is located at 60 Everett Street in the Allston-Brighton neighborhood of Boston and consists of the redevelopment of approximately 10.6 acres with a flagship grocery store, residential buildings, an office building and a new 0.5-acre community green space. The Proposed Project will stitch together the new development at Boston Landing with the existing, residential neighborhood across Everett Street.**
List the surrounding accessible MBTA transit lines and their proximity to development site: commuter rail / subway stations, bus stops:	**The new Boston Landing Commuter Rail MBTA station is directly adjacent to the Project Site, and a MBTA bus stop for Route 64 is located at Arthur and Guest Streets adjacent to the Project Site. Additionally, bus routes 57, 66, 86, and 70/70A all operate within a half-mile of the Project Site. Slightly over a half mile from the Project Site is the B Branch of the MBTA Green Line at Warren Street.**
List the surrounding institutions: hospitals, public housing, elderly and disabled housing developments, educational facilities, others:	**Institutions located within a mile of the Project Site are St. Elizabeth Medical Center, Boston Housing Authority/Faneuil Gardens, Brian J. Honan Apartments and Jackson Mann Elementary School.**

List the surrounding government buildings: libraries, community centers, recreational facilities, and other related facilities:	**Key public use facilities within a mile of the Project Site are Jackson Mann Community Center, Studio 52, DEAF Inc., Honan-Allston Branch of Boston Public Library, and Warrior Ice Arena.**
4. Surrounding Site Conditions – Existing: *This section identifies current condition of the sidewalks and pedestrian ramps at the development site.*	
Is the development site within a historic district? ***If yes,*** identify which district:	**No portion of the Project Site is within a historic district.**
Are there sidewalks and pedestrian ramps existing at the development site? ***If yes***, list the existing sidewalk and pedestrian ramp dimensions, slopes, materials, and physical condition at the development site:	**No, the Project Site is basically flat with smooth transitions to adjacent parcels with no accessibility obstructions anticipated.**
Are the sidewalks and pedestrian ramps existing-to-remain? ***If yes,*** have they been verified as ADA / MAAB compliant (with yellow composite detectable warning surfaces, cast in concrete)? ***If yes,*** provide description and photos:	**No, the entire Project Site is being redeveloped with new and improved sidewalks and pedestrian ways.**
5. Surrounding Site Conditions – Proposed *This section identifies the proposed condition of the walkways and pedestrian ramps around the development site. Sidewalk width contributes to the degree of comfort walking along a street. Narrow sidewalks do not support lively pedestrian activity, and may create dangerous conditions that force people to walk in the street. Wider sidewalks allow people to walk side by side and pass each other comfortably walking alone, walking in pairs, or using a wheelchair.*	
Are the proposed sidewalks consistent with the Boston Complete Street Guidelines? ***If yes***, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, or Boulevard.	**Yes –** **Downtown Mixed-Use: Guest Street Extension** **Neighborhood Main: Arthur Street** **Shared Street: West Street** **Industrial: East Street & Braintree Street Extension**
What are the total dimensions and slopes of the proposed sidewalks? List the widths of the proposed	**Guest Street Extension: South Side – Retail: Frontage Zone (varies) 5'-6"; Pedestrian Zone 6'-8"; Greenscape/Furnishing Zone (includes raised bikeway 12'-9"; bump-outs at corners additional 8'-0"**

zones: Frontage, Pedestrian and Furnishing Zone.	Guest Street Extension: North Side – Building 1 – Frontage Zone 6'-6"-22'-5"; Pedestrian Zone 7'-10"; Greenscape/Furnishing Zone (includes raised bikeway 13'-2"; bump-outs at corners additional 8'-0" Building 3 – Frontage Zone 5'-20'; Pedestrian Zone 7'-10'; Greenscape/Frontage Zone 8'-15'; bump-outs at corners additional 8' Building 4 – Frontage Zone (varies) 7'-14'; Pedestrian Zone 10'-12'; Greenscape/Frontage Zone 10'-12'; bump-outs at corners additional 8' Arthur Street – south of Guest Street: Pedestrian Zone 15'-10"; Greenscape/Furnishing Zone 5'-10" Arthur Street – north of Guest Street: Frontage Zone 3'; Pedestrian Zone" 7' West Street: Retail: Frontage Zone 2'; Pedestrian Zone 4-8'; Greenscape/Furnishing Zone 5'-0" – Townhouses: Frontage Zone 4'-6'; Pedestrian Zone 4'-6'; Greenscape/Furnishing Zone 5' East Street: Frontage Zone 2'wide; Pedestrian Zone 4'-8'; Greenscape/Furnishing Zone 5'-8' – Townhouses: Frontage Zone 8'-10'; Pedestrian Zone 4'-6'; Greenscape/Furnishing Zone 5' Braintree Street Extension: Pedestrian Zone 4'-2"; Greenscape/Furnishing Zone 1'-10"
List the proposed materials for each Zone. Will the proposed materials be on private property or will the proposed materials be on the City of Boston pedestrian right-of-way?	Frontage Zone: Unit pavers and raised planters Pedestrian Zone: Concrete pavement with light broom finish Greenscape/Furnishing Zone: Permeable pavers with raised planters with seating incorporated into edges; 5' width bike track All improvement zones are on private property with public access
Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way? ***If yes,*** what are the proposed dimensions of the sidewalk café or furnishings and what will the remaining right-of-way clearance be?	Sidewalk cafes will occur in the Frontage Zone with possible exception in Phase 3 on the south side of the Guest Street Extension. South side of the Guest Street Extension: estimated 5'-0"
If the pedestrian right-of-way is on private property, will the proponent seek a pedestrian easement with	To be determined due to preliminary nature of design.

the Public Improvement Commission (PIC)?	
Will any portion of the Project be going through the PIC? ***If yes,*** identify PIC actions and provide details.	
6. Accessible Parking: *See Massachusetts Architectural Access Board Rules and Regulations 521 CMR Section 23.00 regarding accessible parking requirement counts and the Massachusetts Office of Disability – Disabled Parking Regulations*.	
What is the total number of parking spaces provided at the development site? Will these be in a parking lot or garage?	**A total of approximately 1,300 parking spaces are proposed as part of the Proposed Project. These spaces will be provided within structured parking garages, in addition to approximately 30 on-street spaces.**
What is the total number of accessible spaces provided at the development site? How many of these are "Van Accessible" spaces with an 8 foot access aisle?	**A total of 23 accessible parking spaces will be provided as part of the Proposed Project. "Van Accessible" spaces are still to be determined due to the preliminary nature of design.**
Will any on-street accessible parking spaces be required? ***If yes,*** has the proponent contacted the Commission for Persons with Disabilities regarding this need?	**The number and location of on-street accessible parking spaces is dependent on whether the internal roads will be private or turned over to the city as public streets. The roads are anticipated to be private, therefore the number of accessible on-street parking spaces will be proportional to the total on- and off-street supply based on the attached AAB standards.**
Where is the accessible visitor parking located?	**For Building 1, accessible visitor parking will be provided on Guest Street and within the on-grade structured parking garage.**
Has a drop-off area been identified? ***If yes,*** will it be accessible?	**Building 1 accessible drop-off zone to be located on Guest Street in front of Grocery entrance for taxis, buses and cars. Other buildings' drop-off locations have not yet been identified at this stage in design.**
7. Circulation and Accessible Routes: *The primary objective in designing smooth and continuous paths of travel is to create universal access to entryways and common spaces, which accommodates persons of all abilities and allows for visitability with neighbors*.	
Describe accessibility at each entryway: Example: Flush Condition, Stairs, Ramp, Lift or Elevator:	**All site conditions will provide a smooth paved accessible path-of-travel to building entrances and egresses as required by the Architectural Access Board and Commission of Persons with Disabilities.**

Are the accessible entrances and standard entrance integrated? ***If yes,*** *describe.* ***If no,*** what is the reason?	**Yes - All site conditions will provide a smooth paved accessible path-of-travel to building entrances and egresses as required by the Architectural Access Board and Commission of Persons with Disabilities.**
If project is subject to Large Project Review/Institutional Master Plan, describe the accessible routes way-finding / signage package.	**To be determined due to preliminary nature of design.**
8. Accessible Units (Group 2) and Guestrooms: (If applicable) *In order to facilitate access to housing and hospitality, this section addresses the number of accessible units that are proposed for the development site that remove barriers to housing and hotel rooms.*	
What is the total number of proposed housing units or hotel rooms for the development?	**The Proposed Project includes approximately 1,050 residential units.**
If a residential development, how many units are for sale? How many are for rent? What is the breakdown of market value units vs. IDP (Inclusionary Development Policy) units?	**The approximately 1,050 housing units will be provided in a variety of sizes and price points, including affordable units and home ownership units. The market value vs. affordable breakdown has not yet been determined.**
If a residential development, how many accessible Group 2 units are being proposed?	**There are 53 (5% of total) proposed accessible Group 2A units and 21 (2% of total) hearing impaired units per MAAB.**
If a residential development, how many accessible Group 2 units will also be IDP units? ***If none***, describe reason.	**The proposed accessible units that will also be affordable have yet to be determined.**
If a hospitality development, how many accessible units will feature a wheel-in shower? Will accessible equipment be provided as well? ***If yes,*** provide amount and location of equipment.	
Do standard units have architectural barriers that would prevent entry or use of common space for persons with mobility impairments? Example: stairs / thresholds at entry, step to balcony, others. ***If yes,*** provide reason.	**The standard units do not have architectural barriers that would prevent entry or use of common spaces. All units will be designed to comply with Group 1 or Group 2A per MAAB.**

Are there interior elevators, ramps or lifts located in the development for access around architectural barriers and/or to separate floors? ***If yes,*** describe:	**Unknown at this conceptual design stage.**
9. Community Impact: *Accessibility and inclusion extend past required compliance with building codes. Providing an overall scheme that allows full and equal participation of persons with disabilities makes the development an asset to the surrounding community*.	
Is this project providing any funding or improvements to the surrounding neighborhood? Examples: adding extra street trees, building or refurbishing a local park, or supporting other community-based initiatives?	• **Transportation and infrastructure improvements totaling at least $6,500,000, which will facilitate redevelopment of the Project Site and surrounding sites with an interconnected, multi-modal street grid. The Proposed Project will connect the benefits realized by Brighton from other projects to Allston and will help connect these neighborhoods through the new street grid.** • **Provide an approximately half-acre community green to be actively managed and programmed by the Proponent for community use.** • **Endow a "Wellness and Public Realm Fund" available to the community including schools, community groups, athletic organizations and others to promote wellness, education and public realm and transportation enhancements.**
What inclusion elements does this development provide for persons with disabilities in common social and open spaces? Example: Indoor seating and TVs in common rooms; outdoor seating and barbeque grills in yard. Will all of these spaces and features provide accessibility?	**To be determined due to preliminary nature of design.**
Are any restrooms planned in common public spaces? ***If yes,*** will any be single-stall, ADA compliant and designated as "Family"/ "Companion" restrooms? ***If no***, explain why not.	**To be determined due to preliminary nature of design.**

Has the proponent reviewed the proposed plan with the City of Boston Disability Commissioner or with their Architectural Access staff? ***If yes,*** did they approve? ***If no,*** what were their comments?	**No**
Has the proponent presented the proposed plan to the Disability Advisory Board at one of their monthly meetings? Did the Advisory Board vote to support this project? ***If no,*** what recommendations did the Advisory Board give to make this project more accessible?	**No. No recommendations have been received thus far by the Advisory Board.**

10. Attachments

Include a list of all documents you are submitting with this Checklist. This may include drawings, diagrams, photos, or any other material that describes the accessible and inclusive elements of this project.

Provide a diagram of the accessible routes to and from the accessible parking lot/garage and drop-off areas to the development entry locations, including route distances.

Provide a diagram of the accessible route connections through the site, including distances.

Provide a diagram the accessible route to any roof decks or outdoor courtyard space? (if applicable)

Provide a plan and diagram of the accessible Group 2 units, including locations and route from accessible entry.

Provide any additional drawings, diagrams, photos, or any other material that describes the inclusive and accessible elements of this project.

- **Figure B.1 – Accessible Parking Diagram – Phase 1**
- **Figure B.2 – Ground Level Accessibility Diagram**

This completes the Article 80 Accessibility Checklist required for your project. Prior to and during the review process, Commission staff are able to provide technical assistance and design review, in order to help achieve ideal accessibility and to ensure that all buildings, sidewalks, parks, and open spaces are usable and welcoming to Boston's diverse residents and visitors, including those with physical, sensory, and other disabilities.

For questions or comments about this checklist, or for more information on best practices for improving accessibility and inclusion, visit www.boston.gov/disability, or our office:

The Mayor's Commission for Persons with Disabilities
1 City Hall Square, Room 967,
Boston MA 02201.

Architectural Access staff can be reached at:

accessibility@boston.gov | patricia.mendez@boston.gov | sarah.leung@boston.gov | 617-635-3682

Climate Change Preparedness and Resilience Checklist

boston planning & development agency

Climate Resiliency Checklist

NOTE: Project filings should be prepared and submitted using the online Climate Resiliency Checklist.

A.1 - Project Information

Project Name:	**Allston Yards**			
Project Address:	**60 Everett Street, Allston, MA 02134**			
Project Address Additional:	**N/A**			
Filing Type (s*elect*)	*Initial (**PNF**, EPNF, NPC or other substantial filing)* *Design / Building Permit (prior to final design approval), or* *Construction / Certificate of Occupancy (post construction completion)*			
Filing Contact	*John Twohig and Guy Stutz*	*New England Development* *The Stop & Shop Supermarket Company, LLC*	*jtwohig@nedevelopment.com* *gstutz@ahold.com*	(617)-965-8700 *(781) 380-8000*
Is MEPA approval required	*Yes/no*		*Date: **To be filed***	

A.3 - Project Team

Owner / Developer:	**New England Development, Master Developer; The Stop & Shop Supermarket Company, LLC, Developer and Owner**
Architect:	**Stantec Architecture/Elkus Manfredi Architects**
Engineer:	**WSP (building systems), VHB (site/civil engineering)**
Sustainability / LEED:	**The Green Engineer**
Permitting:	**VHB**
Construction Management:	**To be determined**

A.3 - Project Description and Design Conditions

List the principal Building Uses:	**Residential, Retail, Office**
List the First Floor Uses:	**Residential, Retail and Restaurant, Office, Parking**
List any Critical Site Infrastructure and or Building Uses:	**N/A**

Site and Building:

Site Area:	**±460,000 SF**	Building Area:	**±1.9 million SF**
Building Height:	**Bldg 2: Up to ±235 Ft.**	Building Height:	**Bldg 2: Up to 20 stories**
Existing Site Elevation – Low:	**28.53 Ft BCB**	Existing Site Elevation – High:	**34.67 Ft BCB**
Proposed Site Elevation – Low:	*Ft BCB*	Proposed Site Elevation – High:	*Ft BCB*
Proposed First Floor Elevation:	**+34.67 Ft. BCB**	Below grade levels:	**Yes, 1 level**

Article 37 Green Building:

LEED Version - Rating System :	**LEEDv4 for: New Construction (Resiential), Core & Shell (Office), and Commercial Interior (Grocery)**	LEED Certification:	**Grocery store only at this time**
Proposed LEED rating:	***Certified****/Silver/ Gold/Platinum*	Proposed LEED point score:	**44 Pts.**

Energy Loads and Performance

For this filing – describe how energy loads & performance were determined	**Preliminary energy performance for Building 1 was determined using EQUEST model of a base design compliant with the base state energy code, or ASHRAE 90.1-2013, compared to a design case with efficiency measures incorporated.**		
Annual Electric (kWh):	**Bldg 1: 4,744 Bldg 2: 1,771 Bldg 3: 1,663 Bldg 4: 4,042**	Peak Electric (kW):	**Bldg 1: 689 Bldg 2: 626 Bldg 3: 630 Bldg 4: 354**
Annual Heating (MMbtu/hr):	**Bldg 1: 13.0 Bldg 2: 9.0 Bldg 3: 12.0 Bldg 4: 10.0**	Peak Heating*(MMbtu/hr)*:	**-0-**
Annual Cooling (Tons/hr):	**Bldg 1: 1,100 Bldg 2: 700 Bldg 3: 900 Bldg 4: 1,200**	Peak Cooling (Tons/hr):	**-0-**
Energy Use - Below ASHRAE 90.1 - 2013:	**20% (for Building 1) 10% (minimum target for future buildings)**	Have the local utilities reviewed the building energy performance?:	*Yes / **No***
Energy Use - Below Mass. Code:	**Same as above**	Energy Use Intensity:	**33.2 KBTU/SF–** ***for overall Proposed Project***

Back-up / Emergency Power System

Electrical Generation Output (kW):	**Bldg 1: 750 Bldg 2: 750 Bldg 3: 750 Bldg 4: 500**	Number of Power Units:	
System Type:	**Combustion Engine**	Fuel Source:	**Diesel with Day Tank**

Emergency and Critical System Loads (in the event of a service interruption)

Electric (kW):	**Bldg 1: 689 Bldg 2: 626**	Heating:	**0 (MMbtu)**

Bldg 3: 630 Bldg 4: 354	
Cooling:	0 (Tons/hr)

B – Greenhouse Gas Reduction and Net Zero / Net Positive Carbon Building Performance

Reducing GHG emissions is critical to avoiding more extreme climate change conditions. To achieve the City's goal of carbon neutrality by 2050 new buildings performance will need to progressively improve to net carbon zero and positive.

B.1 – GHG Emissions - Design Conditions

For this Filing - Annual Building GHG Emissions:	Bldg 1: 3,957 *(Tons)*

For this filing - describe how building energy performance has been integrated into project planning, design, and engineering and any supporting analysis or modeling:

The Proposed Project buildings will be designed to be energy efficient to the extent possible. Buildings will include a high-performance envelope designed specifically for the building use and orientation. The Proponent plans to register the proposed buildings with the ENERGY STAR Portfolio Manager® program to record and monitor whole-building electricity, gas, and water use.

Describe building specific passive energy efficiency measures including orientation, massing, envelop, and systems:

Buildings will include a high-performance envelope designed specifically for the building use and orientation.

Describe building specific active energy efficiency measures including equipment, controls, fixtures, and systems:

The Proponent will continue to evaluate energy efficiency measures ("EEMs") for possible inclusion in select portions of the Proposed Project. The EEMs may include high-performance glazing, increased insulation, low lighting power densities, low flow plumbing fixtures, high-efficiency mechanical and ventilation systems equipment and alternative energy sources. Whole building energy modeling was used for a preliminary analysis of possible energy efficient measures.

Describe building specific load reduction strategies including on-site renewable, clean, and energy storage systems:

As design advances, the development team will continue to assess the viability of including small-scale Combined Heat Power (CHP) systems for each of the residential buildings.

A preliminary evaluation of incorporating both roof-mounted and building integrated solar PV systems has been conducted for the Proposed Project. The results of this study show the initial payback assessment is 20 years for the roof mounted arrays and 34 years for the building integrated approach. As the design progresses, the development team also will re-evaluate the possibility of a solar PV array installation once there is more detail regarding the available roof area and a better understanding of any possible incentive or grant programs to help offset the initial investment. At a minimum, the proposed buildings will be solar ready in order to accommodate a possible future solar installation.

The Proponent will explore the application of geothermal systems for the Proposed Project. The existing soils and sub-surface conditions will impact the type of system and the layout, therefore, further investigation is necessary.

Describe any area or district scale emission reduction strategies including renewable energy, central energy plants, distributed energy systems, and smart grid infrastructure:

N/A

Describe any energy efficiency assistance or support provided or to be provided to the project:

The Proponent has held initial meetings with representatives of local utility companies serving the area to discuss the potential utility incentives programs available for each building and will continue to work with these utilities throughout the design process.

B.2 - GHG Reduction - Adaptation Strategies

Describe how the building and its systems will evolve to further reduce GHG emissions and achieve annual carbon net zero and net positive performance (e.g. added efficiency measures, renewable energy, energy storage, etc.) and the timeline for meeting that goal (by 2050):

Strategies to potentially achieve carbon net zero or net positive performance need to be evaluated further for the Proposed Project.

C - Extreme Heat Events

Annual average temperature in Boston increased by about 2˚F in the past hundred years and will continue to rise due to climate change. By the end of the century, the average annual temperature could be 56° (compared to 46° now) and the number of days above 90° (currently about 10 a year) could rise to 90.

C.1 – Extreme Heat - Design Conditions

Temperature Range - Low:	7 ºF	Temperature Range - High:	91ºF
Annual Heating Degree Days:		Annual Cooling Degree Days	

What Extreme Heat Event characteristics will be / have been used for project planning

Days - Above 90°:	2	Days – Above 100°:	#
Number of Heatwaves / Year:	5 per year	Average Duration of Heatwave (Days):	#

Describe all building and site measures to reduce heat-island effect at the site and in the surrounding area:

At the street level, the Proponent aims to reduce the heat island effect through the use of use of light-colored paving materials and integration of greenery, such as tree canopy cover and several landscape features along the streetscape and common green space.

C.2 - Extreme Heat – Adaptation Strategies

Describe how the building and its systems will be adapted to efficiently manage future higher average temperatures, higher extreme temperatures, additional annual heatwaves, and longer heatwaves:

Incorporation of reflective roof materials and/or vegetated roofs

Describe all mechanical and non-mechanical strategies that will support building functionality and use during extended interruptions of utility services and infrastructure including proposed and future adaptations:

- Designing the residential units for natural ventilation (i.e., operable windows, where appropriate), which help mitigate power disruptions by reducing the reliance on mechanical ventilation systems windows by providing fresh air when mechanical systems are down.
- As part of the energy modeling process, climate files that reflect the predicted increase in temperature may be used to better understand how the buildings and their systems would perform under different climate conditions. (This understanding may then be considered when designing major plant and overall HVAC systems.)

D - Extreme Precipitation Events

From 1958 to 2010, there was a 70 percent increase in the amount of precipitation that fell on the days with the heaviest precipitation. Currently, the 10-Year, 24-Hour Design Storm precipitation level is 5.25". There is a significant probability that this will increase to at least 6" by the end of the century. Additionally, fewer, larger storms are likely to be accompanied by more frequent droughts.

D.1 – Extreme Precipitation - Design Conditions

10 Year, 24 Hour Design Storm: 7.88 In.

Describe all building and site measures for reducing storm water run-off:

To manage stormwater, the Proposed Project will provide infiltration that retains site runoff while providing treatment and peak flow mitigation in accordance with municipal stormwater standards. Additionally, the Project Site will grade away from the proposed buildings and on-site drainage will be picked up by area drains or infrastructure in the surrounding streets.

D.2 - Extreme Precipitation - Adaptation Strategies

Describe how site and building systems will be adapted to efficiently accommodate future more significant rain events (e.g. rainwater harvesting, on-site storm water retention, bio swales, green roofs):

- Soft & permeable surfaces (water infiltration) - *Open space located at the corner of Guest and Arthur Streets will have a tree canopy and/or shrubs and improvements at the periphery to mitigate wind effects created by the adjacent architecture*
- Hazard removal & protective landscapes - *Periphery edges will be planted or designed to mitigate wind effects created by temporary or permanent open spaces*
- Vegetated roofs

E – Sea Level Rise and Storms

Under any plausible greenhouse gas emissions scenario, sea levels in Boston will continue to rise throughout the century. This will increase the number of buildings in Boston susceptible to coastal flooding and the likely frequency of flooding for those already in the floodplain.

Is any portion of the site in a FEMA SFHA?	*Yes* / **No**	What Zone:	A, AE, AH, AO, AR, A99, V, VE
		Current FEMA SFHA Zone Base Flood Elevation:	

Is any portion of the site in a BPDA Sea Level Rise - Flood Hazard Area? Use the online BPDA SLR-FHA Mapping Tool to assess the susceptibility of the project site.	*Yes* / **No**

If you answered YES to either of the above questions, please complete the following questions.
Otherwise you have completed the questionnaire; thank you!

E.1 – Sea Level Rise and Storms – Design Conditions

Proposed projects should identify immediate and future adaptation strategies for managing the flooding scenario represented on the BPDA Sea Level Rise - Flood Hazard Area (SLR-FHA) map, which depicts a modeled 1% annual chance coastal flood event with 40 inches of sea level rise (SLR). Use the online BPDA SLR-FHA Mapping Tool to identify the highest Sea Level Rise - Base Flood Elevation for the site. The Sea Level Rise - Design Flood Elevation is determined by adding either 24" of freeboard for critical facilities and infrastructure and any ground floor residential units OR 12" of freeboard for other buildings and uses.

Sea Level Rise - Base Flood Elevation:	*Ft BCB*		
Sea Level Rise - Design Flood Elevation:	*Ft BCB*	First Floor Elevation:	*Ft BCB*
Site Elevations at Building:	*Ft BCB*	Accessible Route Elevation:	*Ft BCB*

Describe site design strategies for adapting to sea level rise including building access during flood events, elevated site areas, hard and soft barriers, wave / velocity breaks, storm water systems, utility services, etc.:

Describe how the proposed Building Design Flood Elevation will be achieved including dry / wet flood proofing, critical systems protection, utility service protection, temporary flood barriers, waste and drain water back flow prevention, etc.:

Describe how occupants might shelter in place during a flooding event including any emergency power, water, and waste water provisions and the expected availability of any such measures:

Describe any strategies that would support rapid recovery after a weather event:

E.2 – Sea Level Rise and Storms – Adaptation Strategies

Describe future site design and or infrastructure adaptation strategies for responding to sea level rise including future elevating of site areas and access routes, barriers, wave / velocity breaks, storm water systems, utility services, etc.:

Describe future building adaptation strategies for raising the Sea Level Rise Design Flood Elevation and further protecting critical systems, including permanent and temporary measures:

A pdf and word version of the Climate Resiliency Checklist is provided for informational use and off-line preparation of a project submission. NOTE: Project filings should be prepared and submitted using the online Climate Resiliency Checklist.

For questions or comments about this checklist or Climate Change best practices, please contact: John.Dalzell@boston.gov

APPENDIX C: Transportation Supporting Documentation

Traffic Volume Count Data

Public Transportation

Vehicular Crash Data

Trip Generation Worksheets

Trip Generation Traffic Volume Networks

Capacity Analysis Worksheets

Post-Build Analysis

Traffic Volume Count Data

- ***May 2016***

N. Beacon St
west of Gordon St
City, State; Boston, MA
Client; VHB/A. Santiago

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

165041 AA Volume
Site Code: 12305.00

Start	EB				WB				Combined				5/12/2016 Thu
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		
12:00	25		129		38		78		63		207		
12:15	14		143		16		109		30		252		
12:30	30		129		29		88		59		217		
12:45	20	89	113	514	18	101	112	387	38	190	225	901	
01:00	13		130		23		100		36		230		
01:15	18		133		21		98		39		231		
01:30	15		158		17		95		32		253		
01:45	19	65	135	556	14	75	98	391	33	140	233	947	
02:00	16		122		17		97		33		219		
02:15	14		120		13		87		27		207		
02:30	10		134		18		85		28		219		
02:45	7	47	139	515	10	58	92	361	17	105	231	876	
03:00	2		135		13		101		15		236		
03:15	10		134		10		97		20		231		
03:30	16		135		8		113		24		248		
03:45	8	36	125	529	11	42	113	424	19	78	238	953	
04:00	7		140		8		110		15		250		
04:15	7		137		14		141		21		278		
04:30	8		174		9		115		17		289		
04:45	15	37	170	621	15	46	101	467	30	83	271	1088	
05:00	10		162		21		130		31		292		
05:15	23		138		12		92		35		230		
05:30	23		109		22		67		45		176		
05:45	44	100	136	545	40	95	79	368	84	195	215	913	
06:00	42		152		41		88		83		240		
06:15	68		177		55		107		123		284		
06:30	78		163		59		83		137		246		
06:45	126	314	143	635	65	220	57	335	191	534	200	970	
07:00	122		142		72		90		194		232		
07:15	155		140		96		103		251		243		
07:30	177		125		99		91		276		216		
07:45	151	605	139	546	100	367	93	377	251	972	232	923	
08:00	146		131		115		96		261		227		
08:15	143		112		111		81		254		193		
08:30	156		96		110		85		266		181		
08:45	166	611	106	445	110	446	66	328	276	1057	172	773	
09:00	169		111		108		82		277		193		
09:15	140		103		99		78		239		181		
09:30	131		92		86		94		217		186		
09:45	109	549	106	412	94	387	84	338	203	936	190	750	
10:00	144		88		84		73		228		161		
10:15	120		82		84		102		204		184		
10:30	123		73		86		67		209		140		
10:45	131	518	57	300	85	339	60	302	216	857	117	602	
11:00	126		54		98		70		224		124		
11:15	119		55		94		56		213		111		
11:30	128		35		108		38		236		73		
11:45	132	505	43	187	112	412	29	193	244	917	72	380	
Total	3476		5805		2588		4271		6064		10076		
Percent	57.3%		57.6%		42.7%		42.4%						
Day Total		9281				6859				16140			
Peak	08:15	-	04:30	-	08:00	-	04:15	-	08:15	-	04:15	-	-	-
Vol.	634	-	644	-	446	-	487	-	1073	-	1130	-	-	-
P.H.F.	0.895		0.925		0.970		0.863		0.968		0.967			

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Start	EB				WB				Combined				5/13/2016 Fri		
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.				
12:00	42		143		33		87		75		230				
12:15	27		127		33		90		60		217				
12:30	28		157		31		91		59		248				
12:45	31	128	148	575	29	126	109	377	60	254	257	952			
01:00	32		151		25		95		57		246				
01:15	31		143		36		108		67		251				
01:30	27		145		18		91		45		236				
01:45	17	107	136	575	24	103	102	396	41	210	238	971			
02:00	19		161		20		87		39		248				
02:15	15		139		46		98		61		237				
02:30	13		169		21		96		34		265				
02:45	11	58	161	630	21	108	86	367	32	166	247	997			
03:00	10		138		13		117		23		255				
03:15	6		143		12		112		18		255				
03:30	7		148		7		108		14		256				
03:45	16	39	159	588	13	45	109	446	29	84	268	1034			
04:00	13		143		6		105		19		248				
04:15	7		159		4		123		11		282				
04:30	10		153		20		109		30		262				
04:45	12	42	147	602	13	43	114	451	25	85	261	1053			
05:00	9		196		24		108		33		304				
05:15	20		144		17		117		37		261				
05:30	22		149		22		113		44		262				
05:45	45	96	173	662	42	105	83	421	87	201	256	1083			
06:00	45		150		36		73		81		223				
06:15	58		164		39		89		97		253				
06:30	108		158		45		101		153		259				
06:45	111	322	167	639	63	183	88	351	174	505	255	990			
07:00	133		143		64		100		197		243				
07:15	151		151		70		98		221		249				
07:30	148		115		80		93		228		208				
07:45	162	594	134	543	91	305	90	381	253	899	224	924			
08:00	144		112		106		94		250		206				
08:15	157		91		113		81		270		172				
08:30	162		92		97		75		259		167				
08:45	156	619	96	391	105	421	71	321	261	1040	167	712			
09:00	150		88		108		74		258		162				
09:15	140		96		106		68		246		164				
09:30	154		85		79		76		233		161				
09:45	131	575	76	345	96	389	68	286	227	964	144	631			
10:00	125		91		81		73		206		164				
10:15	136		71		78		77		214		148				
10:30	128		73		76		55		204		128				
10:45	110	499	73	308	81	316	74	279	191	815	147	587			
11:00	122		74		98		55		220		129				
11:15	110		63		88		66		198		129				
11:30	140		61		86		53		226		114				
11:45	127	499	45	243	95	367	44	218	222	866	89	461			
Total	3578		6101		2511		4294		6089		10395				
Percent	58.8%		58.7%		41.2%		41.3%								
Day Total		9679				6805				16484					
Peak	07:45	-	05:00	-	08:15	-	04:15	-	08:15	-	04:15	-	-	-	
Vol.	625	-	662	-	423	-	454	-	1048	-	1109	-	-	-	
P.H.F.	0.965		0.844		0.936		0.923		0.970		0.912				

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165041 AA Volume
Site Code: 12305.00

Start	EB				WB				Combined				5/14/2016 Sat
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		
12:00	48		179		48		97		96		276		
12:15	48		164		31		106		79		270		
12:30	39		171		35		90		74		261		
12:45	40	175	176	690	40	154	90	383	80	329	266	1073	
01:00	38		153		36		100		74		253		
01:15	32		146		46		89		78		235		
01:30	45		149		26		111		71		260		
01:45	33	148	163	611	34	142	105	405	67	290	268	1016	
02:00	16		159		38		98		54		257		
02:15	28		136		41		102		69		238		
02:30	17		149		29		107		46		256		
02:45	13	74	128	572	18	126	94	401	31	200	222	973	
03:00	19		155		18		108		37		263		
03:15	12		124		9		116		21		240		
03:30	8		136		18		94		26		230		
03:45	15	54	147	562	17	62	101	419	32	116	248	981	
04:00	10		150		14		106		24		256		
04:15	9		150		14		101		23		251		
04:30	8		139		23		100		31		239		
04:45	10	37	143	582	9	60	102	409	19	97	245	991	
05:00	5		142		11		105		16		247		
05:15	11		133		4		80		15		213		
05:30	13		137		14		89		27		226		
05:45	17	46	114	526	20	49	95	369	37	95	209	895	
06:00	16		128		14		99		30		227		
06:15	28		126		15		67		43		193		
06:30	40		97		24		106		64		203		
06:45	49	133	101	452	27	80	77	349	76	213	178	801	
07:00	29		120		37		97		66		217		
07:15	57		112		25		85		82		197		
07:30	57		110		42		74		99		184		
07:45	82	225	110	452	36	140	79	335	118	365	189	787	
08:00	85		97		47		76		132		173		
08:15	89		91		63		80		152		171		
08:30	94		96		59		84		153		180		
08:45	109	377	85	369	53	222	66	306	162	599	151	675	
09:00	112		84		61		87		173		171		
09:15	94		78		69		70		163		148		
09:30	111		89		76		63		187		152		
09:45	106	423	86	337	84	290	67	287	190	713	153	624	
10:00	135		76		81		51		216		127		
10:15	122		75		87		57		209		132		
10:30	161		95		95		62		256		157		
10:45	149	567	74	320	89	352	63	233	238	919	137	553	
11:00	106		74		97		46		203		120		
11:15	148		73		103		47		251		120		
11:30	155		65		93		45		248		110		
11:45	156	565	61	273	97	390	67	205	253	955	128	478	
Total	2824		5746		2067		4101		4891		9847		
Percent	57.7%		58.4%		42.3%		41.6%						
Day Total		8570				6168				14738			
Peak	10:00	-	12:00	-	11:00	-	02:30	-	11:00	-	12:00	-	-	-
Vol.	567	-	690	-	390	-	425	-	955	-	1073	-	-	-
P.H.F.	0.880		0.964		0.947		0.916		0.944		0.972			

PRECISION
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N. Beacon St
west of Gordon St
City, State; Boston, MA
Client; VHB/A. Santiago
EB

165041 AA Class
Site Code: 12305.00

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/12/1														
6	2	77	7	1	1	0	0	0	1	0	0	0	0	89
01:00	1	53	8	0	1	2	0	0	0	0	0	0	0	65
02:00	0	41	5	0	1	0	0	0	0	0	0	0	0	47
03:00	0	23	7	2	2	1	0	0	1	0	0	0	0	36
04:00	0	27	6	0	2	1	0	1	0	0	0	0	0	37
05:00	4	75	15	3	2	1	0	0	0	0	0	0	0	100
06:00	9	213	66	8	16	1	0	1	0	0	0	0	0	314
07:00	25	433	99	11	28	4	1	2	2	0	0	0	0	605
08:00	40	456	83	7	17	4	1	2	1	0	0	0	0	611
09:00	28	401	64	14	36	3	0	2	1	0	0	0	0	549
10:00	14	363	90	9	30	7	2	1	2	0	0	0	0	518
11:00	16	383	75	10	15	5	0	0	1	0	0	0	0	505
12 PM	17	383	75	5	29	3	1	0	1	0	0	0	0	514
13:00	12	432	76	5	23	5	0	2	1	0	0	0	0	556
14:00	20	392	78	5	14	5	0	1	0	0	0	0	0	515
15:00	22	416	66	5	15	2	0	2	1	0	0	0	0	529
16:00	25	495	77	4	12	4	0	4	0	0	0	0	0	621
17:00	28	462	44	2	4	4	0	1	0	0	0	0	0	545
18:00	25	569	37	1	2	1	0	0	0	0	0	0	0	635
19:00	23	455	58	5	4	1	0	0	0	0	0	0	0	546
20:00	11	379	49	0	4	2	0	0	0	0	0	0	0	445
21:00	13	359	32	2	3	2	0	0	1	0	0	0	0	412
22:00	10	266	18	1	3	2	0	0	0	0	0	0	0	300
23:00	3	162	15	2	4	1	0	0	0	0	0	0	0	187
Percent	3.7%	78.8%	12.4%	1.1%	2.9%	0.7%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	07:00	09:00	09:00	10:00	10:00	07:00	07:00					08:00
Vol.	40	456	99	14	36	7	2	2	2					611
PM Peak	17:00	18:00	14:00	12:00	12:00	13:00	12:00	16:00	12:00					18:00
Vol.	28	569	78	5	29	5	1	4	1					635

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Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/13/1														
6	3	110	13	1	1	0	0	0	0	0	0	0	0	128
01:00	0	94	12	0	1	0	0	0	0	0	0	0	0	107
02:00	1	46	8	1	2	0	0	0	0	0	0	0	0	58
03:00	0	28	7	1	3	0	0	0	0	0	0	0	0	39
04:00	0	31	7	0	3	0	0	1	0	0	0	0	0	42
05:00	0	71	14	4	5	0	0	1	1	0	0	0	0	96
06:00	6	221	54	11	24	2	0	1	3	0	0	0	0	322
07:00	28	433	83	10	30	5	0	2	3	0	0	0	0	594
08:00	36	459	86	4	27	5	0	2	0	0	0	0	0	619
09:00	13	421	87	18	27	5	0	3	1	0	0	0	0	575
10:00	12	379	76	3	23	5	0	0	1	0	0	0	0	499
11:00	14	373	71	7	25	6	0	2	1	0	0	0	0	499
12 PM	11	423	94	8	28	7	0	4	0	0	0	0	0	575
13:00	10	449	69	4	33	6	0	3	1	0	0	0	0	575
14:00	14	494	88	5	26	1	0	1	1	0	0	0	0	630
15:00	12	474	78	4	15	5	0	0	0	0	0	0	0	588
16:00	15	496	68	6	9	7	0	1	0	0	0	0	0	602
17:00	20	569	49	2	18	4	0	0	0	0	0	0	0	662
18:00	9	566	44	1	19	0	0	0	0	0	0	0	0	639
19:00	20	463	47	3	5	5	0	0	0	0	0	0	0	543
20:00	5	344	35	1	5	1	0	0	0	0	0	0	0	391
21:00	4	304	24	4	8	0	0	0	1	0	0	0	0	345
22:00	3	271	33	0	1	0	0	0	0	0	0	0	0	308
23:00	1	211	25	1	4	1	0	0	0	0	0	0	0	243
Percent	2.4%	79.9%	12.1%	1.0%	3.5%	0.7%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	09:00	09:00	07:00	11:00		09:00	06:00					08:00
Vol.	36	459	87	18	30	6		3	3					619
PM Peak	17:00	17:00	12:00	12:00	13:00	12:00		12:00	13:00					17:00
Vol.	20	569	94	8	33	7		4	1					662

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Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/14/1														
6	2	154	18	1	0	0	0	0	0	0	0	0	0	175
01:00	1	126	18	0	2	1	0	0	0	0	0	0	0	148
02:00	1	65	6	0	1	1	0	0	0	0	0	0	0	74
03:00	1	48	3	1	1	0	0	0	0	0	0	0	0	54
04:00	1	31	3	0	2	0	0	0	0	0	0	0	0	37
05:00	1	36	6	2	0	1	0	0	0	0	0	0	0	46
06:00	4	91	28	2	7	0	0	0	1	0	0	0	0	133
07:00	7	158	44	2	13	0	0	1	0	0	0	0	0	225
08:00	13	295	53	1	10	1	1	1	2	0	0	0	0	377
09:00	8	342	56	5	9	1	0	1	1	0	0	0	0	423
10:00	20	463	64	2	14	3	0	0	1	0	0	0	0	567
11:00	18	485	49	2	5	3	1	2	0	0	0	0	0	565
12 PM	21	576	68	2	16	6	0	1	0	0	0	0	0	690
13:00	16	506	71	2	10	6	0	0	0	0	0	0	0	611
14:00	12	483	62	2	5	8	0	0	0	0	0	0	0	572
15:00	15	490	47	0	6	3	0	1	0	0	0	0	0	562
16:00	13	495	59	2	7	5	0	0	1	0	0	0	0	582
17:00	19	463	35	3	4	2	0	0	0	0	0	0	0	526
18:00	8	387	48	2	4	2	0	1	0	0	0	0	0	452
19:00	18	393	38	1	2	0	0	0	0	0	0	0	0	452
20:00	10	330	25	1	2	1	0	0	0	0	0	0	0	369
21:00	9	291	26	3	4	3	0	0	1	0	0	0	0	337
22:00	8	287	24	0	0	1	0	0	0	0	0	0	0	320
23:00	7	235	27	1	3	0	0	0	0	0	0	0	0	273
Percent	2.7%	84.4%	10.2%	0.4%	1.5%	0.6%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	11:00	10:00	09:00	10:00	10:00	08:00	11:00	08:00					10:00
Vol.	20	485	64	5	14	3	1	2	2					567
PM Peak	12:00	12:00	13:00	17:00	12:00	14:00		12:00	16:00					12:00
Vol.	21	576	71	3	16	8		1	1					690

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Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/12/1														
6	0	94	4	1	2	0	0	0	0	0	0	0	0	101
01:00	0	66	4	1	4	0	0	0	0	0	0	0	0	75
02:00	0	49	8	0	1	0	0	0	0	0	0	0	0	58
03:00	0	35	4	1	1	1	0	0	0	0	0	0	0	42
04:00	2	33	5	0	3	2	0	1	0	0	0	0	0	46
05:00	1	64	20	3	5	2	0	0	0	0	0	0	0	95
06:00	2	156	50	2	5	2	0	1	2	0	0	0	0	220
07:00	8	297	39	8	11	3	1	0	0	0	0	0	0	367
08:00	12	355	55	6	12	2	0	2	2	0	0	0	0	446
09:00	10	311	43	5	15	2	0	1	0	0	0	0	0	387
10:00	7	257	50	3	17	4	0	1	0	0	0	0	0	339
11:00	7	323	61	7	11	1	0	2	0	0	0	0	0	412
12 PM	9	291	58	10	10	7	0	2	0	0	0	0	0	387
13:00	9	320	46	5	9	1	1	0	0	0	0	0	0	391
14:00	10	296	44	2	5	2	0	2	0	0	0	0	0	361
15:00	16	339	54	5	8	0	1	1	0	0	0	0	0	424
16:00	15	399	36	6	8	2	0	1	0	0	0	0	0	467
17:00	14	316	30	2	5	1	0	0	0	0	0	0	0	368
18:00	8	302	18	2	5	0	0	0	0	0	0	0	0	335
19:00	10	332	27	2	5	1	0	0	0	0	0	0	0	377
20:00	7	299	15	2	3	1	0	1	0	0	0	0	0	328
21:00	15	299	20	2	2	0	0	0	0	0	0	0	0	338
22:00	11	263	24	2	2	0	0	0	0	0	0	0	0	302
23:00	4	171	13	2	3	0	0	0	0	0	0	0	0	193
Percent	2.6%	82.6%	10.6%	1.2%	2.2%	0.5%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	11:00	07:00	10:00	10:00	07:00	08:00	06:00					08:00
Vol.	12	355	61	8	17	4	1	2	2					446
PM Peak	15:00	16:00	12:00	12:00	12:00	12:00	13:00	12:00						16:00
Vol.	16	399	58	10	10	7	1	2						467

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Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/13/1														
6	1	116	7	1	1	0	0	0	0	0	0	0	0	126
01:00	0	94	8	1	0	0	0	0	0	0	0	0	0	103
02:00	1	97	9	0	1	0	0	0	0	0	0	0	0	108
03:00	0	32	9	0	2	2	0	0	0	0	0	0	0	45
04:00	1	33	6	0	3	0	0	0	0	0	0	0	0	43
05:00	4	64	24	4	3	3	0	2	0	1	0	0	0	105
06:00	2	125	35	7	7	4	0	1	2	0	0	0	0	183
07:00	4	242	34	10	12	1	0	0	1	0	0	0	1	305
08:00	12	343	48	7	5	3	0	1	2	0	0	0	0	421
09:00	13	301	51	4	12	5	1	0	2	0	0	0	0	389
10:00	9	246	40	5	13	0	0	2	1	0	0	0	0	316
11:00	11	289	42	5	12	8	0	0	0	0	0	0	0	367
12 PM	5	305	42	6	14	3	0	1	1	0	0	0	0	377
13:00	8	319	49	3	11	2	0	3	1	0	0	0	0	396
14:00	6	305	37	5	9	4	0	1	0	0	0	0	0	367
15:00	14	371	45	5	10	0	0	1	0	0	0	0	0	446
16:00	13	395	33	4	6	0	0	0	0	0	0	0	0	451
17:00	14	362	34	2	5	2	0	1	0	0	0	0	1	421
18:00	8	311	20	3	6	2	0	0	1	0	0	0	0	351
19:00	6	341	21	2	6	3	0	1	1	0	0	0	0	381
20:00	4	291	22	0	4	0	0	0	0	0	0	0	0	321
21:00	2	257	20	4	3	0	0	0	0	0	0	0	0	286
22:00	3	262	13	1	0	0	0	0	0	0	0	0	0	279
23:00	1	207	9	0	0	0	0	0	1	0	0	0	0	218
Percent	2.1%	83.9%	9.7%	1.2%	2.1%	0.6%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	09:00	07:00	10:00	11:00	09:00	05:00	06:00	05:00			07:00	08:00
Vol.	13	343	51	10	13	8	1	2	2	1			1	421
PM Peak	15:00	16:00	13:00	12:00	12:00	14:00		13:00	12:00				17:00	16:00
Vol.	14	395	49	6	14	4		3	1				1	451

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Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/14/1														
6	3	134	14	1	1	0	0	0	1	0	0	0	0	154
01:00	1	125	12	1	3	0	0	0	0	0	0	0	0	142
02:00	2	115	7	1	1	0	0	0	0	0	0	0	0	126
03:00	0	58	2	0	2	0	0	0	0	0	0	0	0	62
04:00	1	51	5	0	2	1	0	0	0	0	0	0	0	60
05:00	1	30	15	2	1	0	0	0	0	0	0	0	0	49
06:00	4	58	12	4	2	0	0	0	0	0	0	0	0	80
07:00	3	102	24	3	7	1	0	0	0	0	0	0	0	140
08:00	6	179	25	2	5	3	0	0	2	0	0	0	0	222
09:00	4	238	35	4	7	1	0	1	0	0	0	0	0	290
10:00	9	308	27	2	5	1	0	0	0	0	0	0	0	352
11:00	6	345	28	2	9	0	0	0	0	0	0	0	0	390
12 PM	18	332	24	3	4	2	0	0	0	0	0	0	0	383
13:00	9	361	28	1	5	0	0	1	0	0	0	0	0	405
14:00	18	344	34	1	2	2	0	0	0	0	0	0	0	401
15:00	10	383	16	1	8	1	0	0	0	0	0	0	0	419
16:00	10	359	32	1	5	2	0	0	0	0	0	0	0	409
17:00	9	332	25	0	2	1	0	0	0	0	0	0	0	369
18:00	8	312	24	3	2	0	0	0	0	0	0	0	0	349
19:00	5	309	19	0	2	0	0	0	0	0	0	0	0	335
20:00	11	266	23	1	3	0	0	1	1	0	0	0	0	306
21:00	6	260	20	1	0	0	0	0	0	0	0	0	0	287
22:00	2	214	13	2	0	2	0	0	0	0	0	0	0	233
23:00	5	190	7	1	2	0	0	0	0	0	0	0	0	205
Percent	2.4%	87.6%	7.6%	0.6%	1.3%	0.3%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	11:00	09:00	06:00	11:00	08:00		09:00	08:00					11:00
Vol.	9	345	35	4	9	3		1	2					390
PM Peak	12:00	15:00	14:00	12:00	15:00	12:00		13:00	20:00					15:00
Vol.	18	383	34	3	8	2		1	1					419

PRECISION
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N. Beacon St
west of Gordon St
City, State; Boston, MA
Client; VHB/A. Santiago
EB

165041 AA Speed
Site Code: 12305.00

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	Ave. Speed
05/12/ 16	3	1	8	23	36	16	2	0	0	0	0	0	0	89	30
01:00	1	2	11	17	20	9	4	1	0	0	0	0	0	65	30
02:00	0	1	2	12	18	11	3	0	0	0	0	0	0	47	32
03:00	0	0	2	10	16	5	2	0	1	0	0	0	0	36	32
04:00	0	0	3	3	12	11	6	2	0	0	0	0	0	37	35
05:00	3	3	11	14	33	28	7	1	0	0	0	0	0	100	31
06:00	7	3	33	87	135	40	8	1	0	0	0	0	0	314	30
07:00	15	47	146	253	131	8	5	0	0	0	0	0	0	605	26
08:00	117	84	193	160	52	4	1	0	0	0	0	0	0	611	21
09:00	52	61	153	195	80	7	1	0	0	0	0	0	0	549	24
10:00	17	26	112	206	124	29	3	1	0	0	0	0	0	518	27
11:00	27	39	164	173	86	14	2	0	0	0	0	0	0	505	25
12 PM	63	57	154	172	57	8	2	0	0	1	0	0	0	514	23
13:00	14	44	155	221	97	23	2	0	0	0	0	0	0	556	26
14:00	63	46	141	162	92	9	2	0	0	0	0	0	0	515	23
15:00	70	49	127	169	103	9	2	0	0	0	0	0	0	529	23
16:00	44	56	168	235	97	16	3	1	0	1	0	0	0	621	25
17:00	181	55	213	59	32	1	3	0	0	0	0	0	1	545	18
18:00	187	90	203	123	31	1	0	0	0	0	0	0	0	635	19
19:00	34	41	217	186	61	6	0	0	0	0	0	0	1	546	24
20:00	8	35	176	168	51	6	0	1	0	0	0	0	0	445	25
21:00	9	42	126	153	63	17	2	0	0	0	0	0	0	412	25
22:00	3	7	47	95	108	30	8	1	1	0	0	0	0	300	29
23:00	1	2	26	60	71	21	4	2	0	0	0	0	0	187	30
Percent	9.9%	8.5%	27.9%	31.9%	17.3%	3.5%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%		

%ile Speed

15th Percentile :	16 MPH
50th Percentile :	24 MPH
85th Percentile :	30 MPH
95th Percentile :	33 MPH

Stats

10 MPH Pace Speed :	20-29 MPH
Number in Pace :	5547
Percent in Pace :	59.8%
Number of Vehicles > 25 MPH :	4389
Percent of Vehicles > 25 MPH :	47.3%
Mean Speed(Average) :	24 MPH

PRECISION
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N. Beacon St
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EB

165041 AA Speed
Site Code: 12305.00

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	Ave. Speed
05/13/ 16	2	2	10	29	58	23	4	0	0	0	0	0	0	128	31
01:00	0	1	7	37	34	18	8	2	0	0	0	0	0	107	31
02:00	1	0	7	10	25	12	2	1	0	0	0	0	0	58	31
03:00	0	0	4	8	16	10	0	1	0	0	0	0	0	39	32
04:00	0	0	2	13	11	12	1	3	0	0	0	0	0	42	33
05:00	0	3	13	21	26	24	8	1	0	0	0	0	0	96	31
06:00	6	8	24	90	137	44	11	2	0	0	0	0	0	322	30
07:00	19	33	121	242	145	28	3	3	0	0	0	0	0	594	27
08:00	51	77	174	204	96	16	1	0	0	0	0	0	0	619	24
09:00	44	49	203	203	70	6	0	0	0	0	0	0	0	575	24
10:00	7	11	81	239	133	24	4	0	0	0	0	0	0	499	28
11:00	14	16	89	216	143	19	2	0	0	0	0	0	0	499	27
12 PM	22	35	130	243	124	19	2	0	0	0	0	0	0	575	26
13:00	24	54	152	230	105	9	1	0	0	0	0	0	0	575	25
14:00	25	40	180	259	106	19	1	0	0	0	0	0	0	630	25
15:00	26	56	191	229	75	11	0	0	0	0	0	0	0	588	24
16:00	70	58	200	209	54	7	1	1	0	0	0	1	1	602	23
17:00	151	100	248	137	22	4	0	0	0	0	0	0	0	662	19
18:00	293	128	186	27	5	0	0	0	0	0	0	0	0	639	15
19:00	46	74	194	187	38	4	0	0	0	0	0	0	0	543	23
20:00	10	36	123	161	53	8	0	0	0	0	0	0	0	391	25
21:00	10	25	126	133	45	6	0	0	0	0	0	0	0	345	25
22:00	3	18	102	107	59	16	3	0	0	0	0	0	0	308	26
23:00	6	6	46	96	70	19	0	0	0	0	0	0	0	243	28
Percent	8.6%	8.6%	27.0%	34.4%	17.0%	3.7%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%		

%ile Speed

15th Percentile :	17 MPH
50th Percentile :	24 MPH
85th Percentile :	30 MPH
95th Percentile :	33 MPH

Stats

10 MPH Pace Speed :	20-29 MPH
Number in Pace :	5943
Percent in Pace :	61.4%
Number of Vehicles > 25 MPH :	4740
Percent of Vehicles > 25 MPH :	49.0%
Mean Speed(Average) :	24 MPH

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N. Beacon St
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EB

165041 AA Speed
Site Code: 12305.00

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	Ave. Speed
05/14/ 16	2	6	24	73	58	10	2	0	0	0	0	0	0	175	28
01:00	4	3	24	44	50	17	5	0	0	1	0	0	0	148	29
02:00	2	0	11	19	30	10	2	0	0	0	0	0	0	74	30
03:00	2	3	9	8	20	11	0	1	0	0	0	0	0	54	29
04:00	0	2	5	9	10	6	5	0	0	0	0	0	0	37	31
05:00	0	0	0	8	18	12	7	1	0	0	0	0	0	46	34
06:00	5	3	18	36	43	25	3	0	0	0	0	0	0	133	29
07:00	10	4	23	58	94	32	3	1	0	0	0	0	0	225	29
08:00	12	1	54	151	122	33	3	1	0	0	0	0	0	377	28
09:00	7	19	74	191	112	19	1	0	0	0	0	0	0	423	27
10:00	16	26	194	226	89	14	2	0	0	0	0	0	0	567	25
11:00	40	48	155	226	84	10	1	1	0	0	0	0	0	565	24
12 PM	21	52	268	244	90	12	0	2	0	0	0	0	1	690	25
13:00	15	45	204	244	86	14	3	0	0	0	0	0	0	611	25
14:00	16	49	179	225	86	16	1	0	0	0	0	0	0	572	25
15:00	15	30	156	240	99	17	4	1	0	0	0	0	0	562	26
16:00	12	30	169	256	99	13	2	0	0	0	0	0	1	582	26
17:00	18	41	138	222	89	17	1	0	0	0	0	0	0	526	25
18:00	5	14	90	221	101	19	1	1	0	0	0	0	0	452	27
19:00	18	15	88	216	96	17	2	0	0	0	0	0	0	452	26
20:00	8	19	85	171	71	14	1	0	0	0	0	0	0	369	26
21:00	7	17	82	135	76	18	2	0	0	0	0	0	0	337	27
22:00	6	17	54	133	88	19	3	0	0	0	0	0	0	320	27
23:00	5	8	30	93	106	26	3	2	0	0	0	0	0	273	29
Percent	2.9%	5.3%	24.9%	40.2%	21.2%	4.7%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%		

%ile Speed

15th Percentile :	20 MPH
50th Percentile :	26 MPH
85th Percentile :	31 MPH
95th Percentile :	34 MPH

Stats

10 MPH Pace Speed :	20-29 MPH
Number in Pace :	5583
Percent in Pace :	65.1%
Number of Vehicles > 25 MPH :	5048
Percent of Vehicles > 25 MPH :	58.9%
Mean Speed(Average) :	26 MPH

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N. Beacon St
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Client; VHB/A. Santiago
WB

165041 AA Speed
Site Code: 12305.00

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	Ave. Speed
05/12/ 16	0	1	7	40	40	11	1	0	1	0	0	0	0	101	30
01:00	1	0	5	28	34	7	0	0	0	0	0	0	0	75	30
02:00	0	1	4	19	19	14	1	0	0	0	0	0	0	58	31
03:00	0	0	3	11	20	6	1	1	0	0	0	0	0	42	31
04:00	0	2	3	10	16	12	3	0	0	0	0	0	0	46	32
05:00	4	2	6	30	42	10	1	0	0	0	0	0	0	95	29
06:00	4	8	36	99	64	8	1	0	0	0	0	0	0	220	27
07:00	7	34	101	167	50	7	0	1	0	0	0	0	0	367	25
08:00	22	46	189	152	35	1	0	0	0	0	0	0	1	446	23
09:00	27	59	152	113	31	5	0	0	0	0	0	0	0	387	23
10:00	7	29	131	121	43	6	1	0	0	0	0	0	1	339	25
11:00	19	53	176	134	29	1	0	0	0	0	0	0	0	412	23
12 PM	16	55	163	123	29	1	0	0	0	0	0	0	0	387	23
13:00	5	24	139	166	56	0	1	0	0	0	0	0	0	391	25
14:00	10	36	139	139	35	2	0	0	0	0	0	0	0	361	24
15:00	21	53	142	148	52	8	0	0	0	0	0	0	0	424	24
16:00	29	55	140	174	61	6	2	0	0	0	0	0	0	467	24
17:00	28	37	140	124	33	5	1	0	0	0	0	0	0	368	23
18:00	8	37	130	119	39	2	0	0	0	0	0	0	0	335	24
19:00	11	82	138	115	30	1	0	0	0	0	0	0	0	377	23
20:00	13	33	125	127	27	3	0	0	0	0	0	0	0	328	24
21:00	16	53	124	109	33	3	0	0	0	0	0	0	0	338	23
22:00	3	3	65	174	52	5	0	0	0	0	0	0	0	302	27
23:00	0	5	42	80	56	9	1	0	0	0	0	0	0	193	28
Percent	3.7%	10.3%	33.5%	36.8%	13.5%	1.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		

%ile Speed

15th Percentile :	19 MPH
50th Percentile :	24 MPH
85th Percentile :	29 MPH
95th Percentile :	32 MPH

Stats

10 MPH Pace Speed :	20-29 MPH
Number in Pace :	4822
Percent in Pace :	70.3%
Number of Vehicles > 25 MPH :	3096
Percent of Vehicles > 25 MPH :	45.1%
Mean Speed(Average) :	24 MPH

PRECISION D A T A INDUSTRIES, LLC
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N. Beacon St
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WB

165041 AA Speed
Site Code: 12305.00

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	Ave. Speed
05/13/ 16	2	1	14	58	45	6	0	0	0	0	0	0	0	126	28
01:00	0	4	6	39	42	12	0	0	0	0	0	0	0	103	30
02:00	1	5	12	48	36	4	2	0	0	0	0	0	0	108	28
03:00	0	0	2	10	25	8	0	0	0	0	0	0	0	45	31
04:00	0	3	1	8	18	11	2	0	0	0	0	0	0	43	32
05:00	2	0	17	29	42	12	2	1	0	0	0	0	0	105	29
06:00	2	7	31	74	56	12	0	0	1	0	0	0	0	183	28
07:00	2	23	86	130	59	5	0	0	0	0	0	0	0	305	26
08:00	12	37	173	153	43	3	0	0	0	0	0	0	0	421	24
09:00	15	71	123	153	27	0	0	0	0	0	0	0	0	389	23
10:00	13	26	106	121	43	6	1	0	0	0	0	0	0	316	25
11:00	26	53	128	116	40	2	2	0	0	0	0	0	0	367	23
12 PM	23	66	144	101	38	4	1	0	0	0	0	0	0	377	23
13:00	10	67	161	132	24	2	0	0	0	0	0	0	0	396	23
14:00	10	35	150	134	31	7	0	0	0	0	0	0	0	367	24
15:00	28	60	149	161	43	5	0	0	0	0	0	0	0	446	23
16:00	41	75	179	117	33	5	1	0	0	0	0	0	0	451	22
17:00	19	51	191	124	35	1	0	0	0	0	0	0	0	421	23
18:00	13	28	138	132	33	6	0	0	0	0	0	0	1	351	24
19:00	16	33	146	148	35	3	0	0	0	0	0	0	0	381	24
20:00	13	23	130	130	24	1	0	0	0	0	0	0	0	321	24
21:00	3	32	117	107	25	2	0	0	0	0	0	0	0	286	24
22:00	9	12	75	126	47	9	1	0	0	0	0	0	0	279	26
23:00	5	15	38	103	47	10	0	0	0	0	0	0	0	218	27
Percent	3.9%	10.7%	34.0%	36.1%	13.1%	2.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		

%ile Speed

15th Percentile :	19 MPH
50th Percentile :	24 MPH
85th Percentile :	29 MPH
95th Percentile :	32 MPH

Stats

10 MPH Pace Speed :	20-29 MPH
Number in Pace :	4771
Percent in Pace :	70.1%
Number of Vehicles > 25 MPH :	3005
Percent of Vehicles > 25 MPH :	44.2%
Mean Speed(Average) :	24 MPH

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165041 AA Speed
Site Code: 12305.00

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	Ave. Speed
05/14/ 16	3	6	25	71	42	7	0	0	0	0	0	0	0	154	27
01:00	0	2	20	63	45	7	4	1	0	0	0	0	0	142	29
02:00	0	3	16	47	54	4	1	1	0	0	0	0	0	126	29
03:00	0	0	6	12	33	8	3	0	0	0	0	0	0	62	31
04:00	0	1	4	13	30	8	3	1	0	0	0	0	0	60	31
05:00	0	0	2	16	19	10	2	0	0	0	0	0	0	49	31
06:00	1	5	10	20	30	14	0	0	0	0	0	0	0	80	29
07:00	0	7	19	50	54	9	1	0	0	0	0	0	0	140	28
08:00	5	9	43	80	73	10	1	0	1	0	0	0	0	222	27
09:00	10	29	65	129	49	8	0	0	0	0	0	0	0	290	25
10:00	3	15	124	166	41	3	0	0	0	0	0	0	0	352	25
11:00	12	37	157	150	32	2	0	0	0	0	0	0	0	390	24
12 PM	10	30	165	140	32	5	1	0	0	0	0	0	0	383	24
13:00	15	57	161	137	32	2	0	0	1	0	0	0	0	405	23
14:00	16	41	161	148	32	2	1	0	0	0	0	0	0	401	24
15:00	15	40	160	163	38	2	1	0	0	0	0	0	0	419	24
16:00	8	32	118	193	52	6	0	0	0	0	0	0	0	409	25
17:00	7	26	81	195	55	4	1	0	0	0	0	0	0	369	26
18:00	10	22	102	170	40	4	1	0	0	0	0	0	0	349	25
19:00	6	21	117	140	44	5	1	1	0	0	0	0	0	335	25
20:00	4	18	84	145	50	4	1	0	0	0	0	0	0	306	26
21:00	2	10	82	147	41	5	0	0	0	0	0	0	0	287	26
22:00	0	5	56	117	46	7	1	1	0	0	0	0	0	233	27
23:00	0	6	44	113	39	2	1	0	0	0	0	0	0	205	27
Percent	2.1%	6.8%	29.5%	42.6%	16.3%	2.2%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%		

%ile Speed

15th Percentile :	20 MPH
50th Percentile :	25 MPH
85th Percentile :	30 MPH
95th Percentile :	33 MPH

Stats

10 MPH Pace Speed :	20-29 MPH
Number in Pace :	4447
Percent in Pace :	72.1%
Number of Vehicles > 25 MPH :	3272
Percent of Vehicles > 25 MPH :	53.0%
Mean Speed(Average) :	26 MPH

Everett Street
north of Clevermont Avenue
City, State: Brighton, MA
Client: VHB/ A. Santiago

PRECISION DATA INDUSTRIES, LLC
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165041 BB Volume
Site Code: 12305.00

Start	NB				SB				Combined				19-May-16
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Thu
12:00	10		63		8		51		18		114		
12:15	11		63		9		54		20		117		
12:30	9		59		5		63		14		122		
12:45	8	38	77	262	3	25	54	222	11	63	131	484	
01:00	5		71		8		51		13		122		
01:15	6		75		1		44		7		119		
01:30	2		79		6		58		8		137		
01:45	12	25	88	313	7	22	57	210	19	47	145	523	
02:00	5		80		5		36		10		116		
02:15	5		89		5		54		10		143		
02:30	9		81		4		66		13		147		
02:45	1	20	87	337	4	18	54	210	5	38	141	547	
03:00	6		100		0		63		6		163		
03:15	2		105		2		42		4		147		
03:30	3		73		0		58		3		131		
03:45	6	17	78	356	4	6	69	232	10	23	147	588	
04:00	1		93		2		78		3		171		
04:15	6		105		4		69		10		174		
04:30	3		106		4		68		7		174		
04:45	7	17	106	410	4	14	89	304	11	31	195	714	
05:00	7		110		1		84		8		194		
05:15	9		99		4		102		13		201		
05:30	13		106		7		91		20		197		
05:45	27	56	87	402	11	23	104	381	38	79	191	783	
06:00	12		85		17		85		29		170		
06:15	25		102		20		83		45		185		
06:30	46		84		27		83		73		167		
06:45	51	134	93	364	30	94	88	339	81	228	181	703	
07:00	65		67		38		70		103		137		
07:15	80		79		43		62		123		141		
07:30	113		68		56		76		169		144		
07:45	131	389	93	307	50	187	57	265	181	576	150	572	
08:00	124		62		56		48		180		110		
08:15	145		55		69		55		214		110		
08:30	131		56		59		70		190		126		
08:45	124	524	55	228	62	246	39	212	186	770	94	440	
09:00	102		52		72		49		174		101		
09:15	115		48		50		27		165		75		
09:30	91		44		51		30		142		74		
09:45	77	385	25	169	43	216	23	129	120	601	48	298	
10:00	76		37		41		35		117		72		
10:15	54		48		55		42		109		90		
10:30	65		35		35		27		100		62		
10:45	66	261	33	153	52	183	17	121	118	444	50	274	
11:00	60		16		42		21		102		37		
11:15	54		22		38		11		92		33		
11:30	59		20		58		18		117		38		
11:45	75	248	18	76	51	189	6	56	126	437	24	132	
Total	2114		3377		1223		2681		3337		6058		
Percent	63.4%		55.7%		36.6%		44.3%						
Day Total		5491				3904				9395			
Peak	07:45	-	04:15	-	08:15	-	05:15	-	08:00	-	04:45	-	-	-
Vol.	531	-	427	-	262	-	382	-	770	-	787	-	-	-
P.H.F.	0.916		0.970		0.910		0.918		0.900		0.979			

Everett Street
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PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Email: datarequests@pdillc.com

165041 BB Volume
Site Code: 12305.00

Start	NB				SB				Combined				20-May-16
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Fri
12:00	13		89		17		67		30		156		
12:15	16		81		10		68		26		149		
12:30	9		78		7		62		16		140		
12:45	10	48	73	321	13	47	75	272	23	95	148	593	
01:00	10		100		10		55		20		155		
01:15	11		98		3		75		14		173		
01:30	9		88		5		38		14		126		
01:45	4	34	106	392	10	28	64	232	14	62	170	624	
02:00	7		83		8		46		15		129		
02:15	9		92		10		80		19		172		
02:30	8		100		2		51		10		151		
02:45	3	27	110	385	2	22	60	237	5	49	170	622	
03:00	4		101		4		75		8		176		
03:15	2		81		5		68		7		149		
03:30	3		95		3		80		6		175		
03:45	5	14	85	362	2	14	78	301	7	28	163	663	
04:00	2		93		4		90		6		183		
04:15	1		94		0		68		1		162		
04:30	4		101		1		79		5		180		
04:45	7	14	91	379	6	11	94	331	13	25	185	710	
05:00	15		94		3		78		18		172		
05:15	12		86		6		96		18		182		
05:30	12		85		10		97		22		182		
05:45	22	61	89	354	12	31	106	377	34	92	195	731	
06:00	18		85		20		90		38		175		
06:15	20		68		28		75		48		143		
06:30	43		95		29		77		72		172		
06:45	46	127	83	331	48	125	77	319	94	252	160	650	
07:00	72		70		54		74		126		144		
07:15	70		81		48		66		118		147		
07:30	103		99		73		61		176		160		
07:45	122	367	69	319	53	228	56	257	175	595	125	576	
08:00	124		55		65		48		189		103		
08:15	120		55		73		47		193		102		
08:30	142		67		70		52		212		119		
08:45	122	508	66	243	55	263	43	190	177	771	109	433	
09:00	87		60		61		45		148		105		
09:15	75		51		56		48		131		99		
09:30	83		48		63		45		146		93		
09:45	75	320	44	203	57	237	36	174	132	557	80	377	
10:00	67		35		59		58		126		93		
10:15	73		46		50		45		123		91		
10:30	78		48		63		40		141		88		
10:45	51	269	48	177	53	225	39	182	104	494	87	359	
11:00	64		37		55		28		119		65		
11:15	65		28		65		20		130		48		
11:30	84		31		70		29		154		60		
11:45	68	281	32	128	66	256	20	97	134	537	52	225	
Total	2070		3594		1487		2969		3557		6563		
Percent	58.2%		54.8%		41.8%		45.2%						
Day Total		5664				4456				10120			
Peak	07:45	-	02:15	-	07:30	-	05:15	-	08:00	-	05:15	-	-	-
Vol.	508	-	403	-	264	-	389	-	771	-	734	-	-	-
P.H.F.	0.894		0.916		0.904		0.917		0.909		0.941			

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165041 BB Volume
Site Code: 12305.00

Start	NB				SB				Combined				21-May-16
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Sat
12:00	25		120		25		55		50		175		
12:15	16		132		21		65		37		197		
12:30	22		124		17		56		39		180		
12:45	20	83	103	479	11	74	62	238	31	157	165	717	
01:00	18		100		11		50		29		150		
01:15	15		105		11		62		26		167		
01:30	12		97		10		70		22		167		
01:45	21	66	111	413	9	41	53	235	30	107	164	648	
02:00	22		100		7		65		29		165		
02:15	13		83		8		60		21		143		
02:30	8		94		10		73		18		167		
02:45	10	53	82	359	11	36	50	248	21	89	132	607	
03:00	11		81		9		55		20		136		
03:15	4		80		8		49		12		129		
03:30	7		70		8		60		15		130		
03:45	10	32	82	313	4	29	56	220	14	61	138	533	
04:00	3		78		4		63		7		141		
04:15	5		62		2		44		7		106		
04:30	6		72		6		49		12		121		
04:45	5	19	69	281	4	16	40	196	9	35	109	477	
05:00	1		79		4		57		5		136		
05:15	7		57		4		49		11		106		
05:30	4		74		6		49		10		123		
05:45	7	19	59	269	10	24	47	202	17	43	106	471	
06:00	8		68		7		64		15		132		
06:15	6		59		5		51		11		110		
06:30	23		63		4		63		27		126		
06:45	20	57	78	268	18	34	52	230	38	91	130	498	
07:00	14		46		14		51		28		97		
07:15	23		73		15		73		38		146		
07:30	32		62		12		43		44		105		
07:45	33	102	46	227	22	63	37	204	55	165	83	431	
08:00	50		53		20		40		70		93		
08:15	27		56		26		34		53		90		
08:30	50		35		31		30		81		65		
08:45	60	187	35	179	35	112	34	138	95	299	69	317	
09:00	68		51		34		34		102		85		
09:15	63		42		41		47		104		89		
09:30	56		35		37		31		93		66		
09:45	74	261	41	169	37	149	31	143	111	410	72	312	
10:00	63		33		37		33		100		66		
10:15	65		36		45		33		110		69		
10:30	81		36		49		33		130		69		
10:45	86	295	33	138	59	190	23	122	145	485	56	260	
11:00	90		29		67		20		157		49		
11:15	100		30		51		26		151		56		
11:30	85		34		58		34		143		68		
11:45	100	375	37	130	53	229	21	101	153	604	58	231	
Total	1549		3225		997		2277		2546		5502		
Percent	60.8%		58.6%		39.2%		41.4%						
Day Total		4774				3274				8048			
Peak	11:00	-	12:00	-	10:45	-	01:45	-	11:00	-	12:00	-	- -
Vol.	375	-	479	-	235	-	251	-	604	-	717	-	- -
P.H.F.	0.938		0.907		0.877		0.860		0.962		0.910		

PRECISION
D A T A
INDUSTRIES, LLC
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Everett Street
north of Clevermont Avenue
City, State: Brighton, MA
Client: VHB/ A. Santiago

165041 BB Class
Site Code: 12305.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/19/1														
6	1	34	3	0	0	0	0	0	0	0	0	0	0	38
01:00	0	23	1	0	1	0	0	0	0	0	0	0	0	25
02:00	0	19	0	0	1	0	0	0	0	0	0	0	0	20
03:00	0	17	0	0	0	0	0	0	0	0	0	0	0	17
04:00	0	16	0	0	1	0	0	0	0	0	0	0	0	17
05:00	1	43	5	4	2	1	0	0	0	0	0	0	0	56
06:00	0	113	12	0	8	1	0	0	0	0	0	0	0	134
07:00	5	355	20	1	6	1	0	0	1	0	0	0	0	389
08:00	4	476	32	1	8	0	0	3	0	0	0	0	0	524
09:00	7	339	26	3	10	0	0	0	0	0	0	0	0	385
10:00	4	199	39	3	10	1	0	5	0	0	0	0	0	261
11:00	3	209	32	1	3	0	0	0	0	0	0	0	0	248
12 PM	8	216	34	1	3	0	0	0	0	0	0	0	0	262
13:00	4	262	31	1	10	2	0	2	1	0	0	0	0	313
14:00	7	289	32	0	7	0	0	2	0	0	0	0	0	337
15:00	2	302	42	1	8	1	0	0	0	0	0	0	0	356
16:00	7	356	37	1	7	2	0	0	0	0	0	0	0	410
17:00	7	355	30	4	3	3	0	0	0	0	0	0	0	402
18:00	12	319	29	0	2	1	0	1	0	0	0	0	0	364
19:00	6	287	12	0	0	2	0	0	0	0	0	0	0	307
20:00	2	212	10	0	2	2	0	0	0	0	0	0	0	228
21:00	0	160	8	0	1	0	0	0	0	0	0	0	0	169
22:00	3	144	5	0	1	0	0	0	0	0	0	0	0	153
23:00	0	74	1	0	1	0	0	0	0	0	0	0	0	76
Total	83	4819	441	21	95	17	0	13	2	0	0	0	0	5491
Percent	1.5%	87.8%	8.0%	0.4%	1.7%	0.3%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	10:00	05:00	09:00	05:00		10:00	07:00					08:00
Vol.	7	476	39	4	10	1		5	1					524
PM Peak	18:00	16:00	15:00	17:00	13:00	17:00		13:00	13:00					16:00
Vol.	12	356	42	4	10	3		2	1					410

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NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/20/1														
6	0	45	3	0	0	0	0	0	0	0	0	0	0	48
01:00	0	30	2	0	1	1	0	0	0	0	0	0	0	34
02:00	0	26	0	0	1	0	0	0	0	0	0	0	0	27
03:00	0	14	0	0	0	0	0	0	0	0	0	0	0	14
04:00	1	11	1	0	1	0	0	0	0	0	0	0	0	14
05:00	0	50	6	1	4	0	0	0	0	0	0	0	0	61
06:00	2	108	11	1	4	1	0	0	0	0	0	0	0	127
07:00	5	333	20	4	2	2	0	1	0	0	0	0	0	367
08:00	8	447	38	2	10	2	0	1	0	0	0	0	0	508
09:00	5	268	35	3	7	2	0	0	0	0	0	0	0	320
10:00	3	212	40	3	9	1	0	1	0	0	0	0	0	269
11:00	5	219	38	4	11	3	1	0	0	0	0	0	0	281
12 PM	7	274	30	2	5	2	0	1	0	0	0	0	0	321
13:00	10	328	41	1	9	1	2	0	0	0	0	0	0	392
14:00	12	316	43	1	9	4	0	0	0	0	0	0	0	385
15:00	10	299	41	2	10	0	0	0	0	0	0	0	0	362
16:00	8	314	50	0	6	1	0	0	0	0	0	0	0	379
17:00	12	302	30	2	6	2	0	0	0	0	0	0	0	354
18:00	8	287	28	1	6	1	0	0	0	0	0	0	0	331
19:00	7	285	24	0	2	1	0	0	0	0	0	0	0	319
20:00	1	218	23	0	0	1	0	0	0	0	0	0	0	243
21:00	2	188	11	0	2	0	0	0	0	0	0	0	0	203
22:00	2	162	13	0	0	0	0	0	0	0	0	0	0	177
23:00	3	119	3	0	2	1	0	0	0	0	0	0	0	128
Total	111	4855	531	27	107	26	3	4	0	0	0	0	0	5664
Percent	2.0%	85.7%	9.4%	0.5%	1.9%	0.5%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	10:00	07:00	11:00	11:00	11:00	07:00						08:00
Vol.	8	447	40	4	11	3	1	1						508
PM Peak	14:00	13:00	16:00	12:00	15:00	14:00	13:00	12:00						13:00
Vol.	12	328	50	2	10	4	2	1						392

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NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/21/1														
6	0	74	8	0	1	0	0	0	0	0	0	0	0	83
01:00	0	60	5	0	1	0	0	0	0	0	0	0	0	66
02:00	0	49	4	0	0	0	0	0	0	0	0	0	0	53
03:00	0	31	1	0	0	0	0	0	0	0	0	0	0	32
04:00	0	18	0	0	1	0	0	0	0	0	0	0	0	19
05:00	0	15	2	1	1	0	0	0	0	0	0	0	0	19
06:00	1	43	8	0	4	0	0	1	0	0	0	0	0	57
07:00	2	83	13	0	3	0	0	0	1	0	0	0	0	102
08:00	5	156	23	0	3	0	0	0	0	0	0	0	0	187
09:00	4	222	23	1	8	3	0	0	0	0	0	0	0	261
10:00	1	254	34	1	3	2	0	0	0	0	0	0	0	295
11:00	8	331	30	0	4	1	0	0	1	0	0	0	0	375
12 PM	9	424	39	2	4	0	0	1	0	0	0	0	0	479
13:00	7	353	50	0	2	0	0	1	0	0	0	0	0	413
14:00	5	321	28	0	5	0	0	0	0	0	0	0	0	359
15:00	1	287	22	0	3	0	0	0	0	0	0	0	0	313
16:00	4	255	17	1	4	0	0	0	0	0	0	0	0	281
17:00	5	237	19	0	6	1	0	1	0	0	0	0	0	269
18:00	5	234	27	0	2	0	0	0	0	0	0	0	0	268
19:00	2	207	16	0	2	0	0	0	0	0	0	0	0	227
20:00	0	163	16	0	0	0	0	0	0	0	0	0	0	179
21:00	2	147	17	1	2	0	0	0	0	0	0	0	0	169
22:00	1	124	13	0	0	0	0	0	0	0	0	0	0	138
23:00	0	119	9	0	2	0	0	0	0	0	0	0	0	130
Total	62	4207	424	7	61	7	0	4	2	0	0	0	0	4774
Percent	1.3%	88.1%	8.9%	0.1%	1.3%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	10:00	05:00	09:00	09:00		06:00	07:00					11:00
Vol.	8	331	34	1	8	3		1	1					375
PM Peak	12:00	12:00	13:00	12:00	17:00	17:00		12:00						12:00
Vol.	9	424	50	2	6	1		1						479

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SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/19/1														
6	0	24	1	0	0	0	0	0	0	0	0	0	0	25
01:00	1	18	2	0	1	0	0	0	0	0	0	0	0	22
02:00	1	15	0	0	1	1	0	0	0	0	0	0	0	18
03:00	0	3	1	0	2	0	0	0	0	0	0	0	0	6
04:00	0	8	3	0	2	1	0	0	0	0	0	0	0	14
05:00	0	19	2	0	2	0	0	0	0	0	0	0	0	23
06:00	0	65	21	2	5	1	0	0	0	0	0	0	0	94
07:00	2	143	33	3	6	0	0	0	0	0	0	0	0	187
08:00	4	197	31	2	11	1	0	0	0	0	0	0	0	246
09:00	2	173	28	3	10	0	0	0	0	0	0	0	0	216
10:00	1	146	24	4	7	1	0	0	0	0	0	0	0	183
11:00	4	145	35	2	2	1	0	0	0	0	0	0	0	189
12 PM	6	181	28	1	3	1	0	2	0	0	0	0	0	222
13:00	3	162	32	0	11	2	0	0	0	0	0	0	0	210
14:00	2	163	38	2	5	0	0	0	0	0	0	0	0	210
15:00	4	183	34	2	9	0	0	0	0	0	0	0	0	232
16:00	4	260	28	2	9	1	0	0	0	0	0	0	0	304
17:00	11	340	24	0	5	1	0	0	0	0	0	0	0	381
18:00	10	304	22	1	1	1	0	0	0	0	0	0	0	339
19:00	5	237	19	1	1	2	0	0	0	0	0	0	0	265
20:00	1	197	11	0	3	0	0	0	0	0	0	0	0	212
21:00	1	121	6	0	1	0	0	0	0	0	0	0	0	129
22:00	2	109	8	0	2	0	0	0	0	0	0	0	0	121
23:00	0	51	5	0	0	0	0	0	0	0	0	0	0	56
Total	64	3264	436	25	99	14	0	2	0	0	0	0	0	3904
Percent	1.6%	83.6%	11.2%	0.6%	2.5%	0.4%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	11:00	10:00	08:00	02:00								08:00
Vol.	4	197	35	4	11	1								246
PM Peak	17:00	17:00	14:00	14:00	13:00	13:00		12:00						17:00
Vol.	11	340	38	2	11	2		2						381

Everett Street
north of Clevermont Avenue
City, State: Brighton, MA
Client: VHB/ A. Santiago

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

165041 BB Class
Site Code: 12305.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/20/1														
6	0	40	5	0	2	0	0	0	0	0	0	0	0	47
01:00	0	26	2	0	0	0	0	0	0	0	0	0	0	28
02:00	1	19	0	0	2	0	0	0	0	0	0	0	0	22
03:00	0	11	1	0	2	0	0	0	0	0	0	0	0	14
04:00	1	8	1	0	1	0	0	0	0	0	0	0	0	11
05:00	0	20	10	0	1	0	0	0	0	0	0	0	0	31
06:00	0	98	21	1	3	2	0	0	0	0	0	0	0	125
07:00	1	181	35	1	7	2	0	1	0	0	0	0	0	228
08:00	5	226	18	3	11	0	0	0	0	0	0	0	0	263
09:00	4	193	32	1	5	1	0	1	0	0	0	0	0	237
10:00	2	172	39	3	6	2	0	1	0	0	0	0	0	225
11:00	8	195	36	2	11	3	0	1	0	0	0	0	0	256
12 PM	4	221	39	0	4	3	0	1	0	0	0	0	0	272
13:00	4	190	28	0	4	6	0	0	0	0	0	0	0	232
14:00	2	199	25	3	6	1	0	1	0	0	0	0	0	237
15:00	5	262	24	2	8	0	0	0	0	0	0	0	0	301
16:00	11	289	21	2	5	3	0	0	0	0	0	0	0	331
17:00	10	330	28	1	7	1	0	0	0	0	0	0	0	377
18:00	3	289	22	0	3	2	0	0	0	0	0	0	0	319
19:00	2	230	22	0	2	1	0	0	0	0	0	0	0	257
20:00	3	179	7	0	1	0	0	0	0	0	0	0	0	190
21:00	1	153	19	0	0	0	0	1	0	0	0	0	0	174
22:00	2	166	14	0	0	0	0	0	0	0	0	0	0	182
23:00	1	86	10	0	0	0	0	0	0	0	0	0	0	97
Total	70	3783	459	19	91	27	0	7	0	0	0	0	0	4456
Percent	1.6%	84.9%	10.3%	0.4%	2.0%	0.6%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	10:00	08:00	08:00	11:00		07:00						08:00
Vol.	8	226	39	3	11	3		1						263
PM Peak	16:00	17:00	12:00	14:00	15:00	13:00		12:00						17:00
Vol.	11	330	39	3	8	6		1						377

PRECISION
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Everett Street
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165041 BB Class
Site Code: 12305.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/21/1														
6	1	68	5	0	0	0	0	0	0	0	0	0	0	74
01:00	0	39	2	0	0	0	0	0	0	0	0	0	0	41
02:00	2	28	4	0	2	0	0	0	0	0	0	0	0	36
03:00	0	24	2	0	3	0	0	0	0	0	0	0	0	29
04:00	0	15	1	0	0	0	0	0	0	0	0	0	0	16
05:00	0	18	4	0	1	1	0	0	0	0	0	0	0	24
06:00	0	26	5	1	2	0	0	0	0	0	0	0	0	34
07:00	1	49	11	1	0	0	0	1	0	0	0	0	0	63
08:00	0	94	16	1	1	0	0	0	0	0	0	0	0	112
09:00	4	130	12	0	2	1	0	0	0	0	0	0	0	149
10:00	1	166	20	0	3	0	0	0	0	0	0	0	0	190
11:00	1	204	18	1	4	0	0	1	0	0	0	0	0	229
12 PM	3	213	20	2	0	0	0	0	0	0	0	0	0	238
13:00	2	205	25	0	1	2	0	0	0	0	0	0	0	235
14:00	6	212	24	1	4	0	0	1	0	0	0	0	0	248
15:00	3	194	21	0	2	0	0	0	0	0	0	0	0	220
16:00	4	179	10	1	2	0	0	0	0	0	0	0	0	196
17:00	4	170	22	0	6	0	0	0	0	0	0	0	0	202
18:00	3	206	18	1	2	0	0	0	0	0	0	0	0	230
19:00	2	184	15	0	3	0	0	0	0	0	0	0	0	204
20:00	1	125	12	0	0	0	0	0	0	0	0	0	0	138
21:00	6	123	12	1	1	0	0	0	0	0	0	0	0	143
22:00	0	110	8	1	3	0	0	0	0	0	0	0	0	122
23:00	0	91	10	0	0	0	0	0	0	0	0	0	0	101
Total	44	2873	297	11	42	4	0	3	0	0	0	0	0	3274
Percent	1.3%	87.8%	9.1%	0.3%	1.3%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	11:00	10:00	06:00	11:00	05:00		07:00						11:00
Vol.	4	204	20	1	4	1		1						229
PM Peak	14:00	12:00	13:00	12:00	17:00	13:00		14:00						14:00
Vol.	6	213	25	2	6	2		1						248

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Everett Street
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165041 BB Speed
Site Code: 12305.00

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/19/ 16	0	2	10	23	3	0	0	0	0	0	0	0	0	38	28	26
01:00	1	1	7	7	9	0	0	0	0	0	0	0	0	25	31	26
02:00	0	0	0	16	4	0	0	0	0	0	0	0	0	20	30	28
03:00	0	0	6	6	2	**3**	0	0	0	0	0	0	0	17	34	28
04:00	1	3	4	6	3	0	0	0	0	0	0	0	0	17	29	24
05:00	1	4	17	22	10	1	**1**	0	0	0	0	0	0	56	30	26
06:00	4	9	21	70	27	3	0	0	0	0	0	0	0	134	30	26
07:00	6	6	80	**238**	**56**	3	0	0	0	0	0	0	0	389	29	26
08:00	**28**	**49**	**171**	226	48	2	0	0	0	0	0	0	0	**524**	28	24
09:00	10	34	126	174	41	0	0	0	0	0	0	0	0	385	28	25
10:00	1	17	93	122	26	2	0	0	0	0	0	0	0	261	28	25
11:00	10	25	86	108	19	0	0	0	0	0	0	0	0	248	28	24
12 PM	17	18	88	111	**27**	1	0	0	0	0	0	0	0	262	28	24
13:00	21	28	135	104	23	2	0	0	0	0	0	0	0	313	27	23
14:00	14	41	153	112	14	**3**	0	0	0	0	0	0	0	337	27	23
15:00	6	32	134	158	25	0	**1**	0	0	0	0	0	0	356	28	24
16:00	9	33	177	**173**	18	0	0	0	0	0	0	0	0	**410**	27	24
17:00	**24**	**45**	**186**	128	19	0	0	0	0	0	0	0	0	402	27	23
18:00	11	28	153	145	27	0	0	0	0	0	0	0	0	364	28	24
19:00	12	39	138	107	11	0	0	0	0	0	0	0	0	307	27	23
20:00	2	19	104	90	13	0	0	0	0	0	0	0	0	228	27	24
21:00	1	9	74	72	12	1	0	0	0	0	0	0	0	169	28	25
22:00	2	12	65	60	13	1	0	0	0	0	0	0	0	153	28	24
23:00	0	3	27	41	5	0	0	0	0	0	0	0	0	76	28	25
Total	181	457	2055	2319	455	22	2	0	0	0	0	0	0	5491		
%	3.3%	8.3%	37.4%	42.2%	8.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	07:00	07:00	03:00	05:00							08:00		
Vol.	28	49	171	238	56	3	1							524		
PM Peak	17:00	17:00	17:00	16:00	12:00	14:00	15:00							16:00		
Vol.	24	45	186	173	27	3	1							410		

Stats

15th Percentile :	19 MPH
50th Percentile :	24 MPH
85th Percentile :	28 MPH
95th Percentile :	31 MPH
Mean Speed(Average) :	24 MPH
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	4374
Percent in Pace :	79.7%
Number of Vehicles > 25 MPH :	2334
Percent of Vehicles > 25 MPH :	42.5%

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
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Everett Street
north of Clevermont Avenue
City, State: Brighton, MA
Client: VHB/ A. Santiago

165041 BB Speed
Site Code: 12305.00

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/20/ 16	0	2	18	22	6	0	0	0	0	0	0	0	0	48	28	25
01:00	2	1	15	14	1	1	0	0	0	0	0	0	0	34	27	24
02:00	0	0	10	14	3	0	0	0	0	0	0	0	0	27	28	26
03:00	0	0	4	3	4	2	**1**	0	0	0	0	0	0	14	36	30
04:00	2	1	2	6	3	0	0	0	0	0	0	0	0	14	30	24
05:00	0	6	12	25	15	**3**	0	0	0	0	0	0	0	61	31	27
06:00	3	11	30	53	27	3	0	0	0	0	0	0	0	127	31	26
07:00	8	9	108	**193**	**48**	1	0	0	0	0	0	0	0	367	28	26
08:00	**32**	**55**	**190**	192	37	1	0	0	0	0	0	0	**1**	**508**	28	23
09:00	22	28	86	150	33	1	0	0	0	0	0	0	0	320	28	24
10:00	15	22	88	113	28	3	0	0	0	0	0	0	0	269	28	24
11:00	19	32	110	96	24	0	0	0	0	0	0	0	0	281	28	23
12 PM	6	33	102	146	29	**5**	0	0	0	0	0	0	0	321	28	25
13:00	22	**65**	**169**	119	16	1	0	0	0	0	0	0	0	**392**	27	22
14:00	**24**	50	137	148	23	3	0	0	0	0	0	0	0	385	27	23
15:00	14	26	126	162	**33**	1	0	0	0	0	0	0	0	362	28	24
16:00	4	36	146	**171**	21	1	0	0	0	0	0	0	0	379	27	24
17:00	8	27	152	141	26	0	0	0	0	0	0	0	0	354	28	24
18:00	9	33	116	144	28	1	0	0	0	0	0	0	0	331	28	24
19:00	8	37	129	126	17	1	0	0	0	0	0	0	**1**	319	27	24
20:00	2	17	97	104	21	2	0	0	0	0	0	0	0	243	28	25
21:00	1	14	84	83	18	1	0	0	**2**	0	0	0	0	203	28	25
22:00	3	23	39	87	24	1	0	0	0	0	0	0	0	177	28	25
23:00	1	5	31	67	19	4	0	0	1	0	0	0	0	128	30	26
Total	205	533	2001	2379	504	36	1	0	3	0	0	0	2	5664		
%	3.6%	9.4%	35.3%	42.0%	8.9%	0.6%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	07:00	07:00	05:00	03:00						08:00	08:00		
Vol.	32	55	190	193	48	3	1						1	508		
PM Peak	14:00	13:00	13:00	16:00	15:00	12:00			21:00				19:00	13:00		
Vol.	24	65	169	171	33	5			2				1	392		

Stats

15th Percentile :	19 MPH
50th Percentile :	24 MPH
85th Percentile :	28 MPH
95th Percentile :	31 MPH
Mean Speed(Average) :	24 MPH
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	4380
Percent in Pace :	77.3%
Number of Vehicles > 25 MPH :	2449
Percent of Vehicles > 25 MPH :	43.2%

PRECISION
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NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/21/ 16	5	5	19	42	10	2	0	0	0	0	0	0	0	83	28	25
01:00	2	4	15	30	12	3	0	0	0	0	0	0	0	66	31	26
02:00	0	0	17	29	7	0	0	0	0	0	0	0	0	53	28	26
03:00	0	2	10	14	6	0	0	0	0	0	0	0	0	32	30	26
04:00	0	6	3	6	4	0	0	0	0	0	0	0	0	19	30	24
05:00	0	0	4	8	7	0	0	0	0	0	0	0	0	19	31	28
06:00	2	1	9	23	20	2	0	0	0	0	0	0	0	57	32	27
07:00	0	2	12	49	29	**10**	0	0	0	0	0	0	0	102	33	29
08:00	3	8	40	101	29	4	**2**	0	0	0	0	0	0	187	30	26
09:00	3	12	83	140	22	1	0	0	0	0	0	0	0	261	28	25
10:00	**6**	**17**	87	144	**39**	1	1	0	0	0	0	0	0	295	28	25
11:00	3	16	**122**	**198**	33	3	0	0	0	0	0	0	0	**375**	28	25
12 PM	6	**32**	**180**	204	**53**	3	**1**	0	0	0	0	0	0	**479**	28	25
13:00	4	22	114	**225**	44	4	0	0	0	0	0	0	0	413	28	26
14:00	**9**	24	112	179	33	2	0	0	0	0	0	0	0	359	28	25
15:00	1	13	95	160	41	2	1	0	0	0	0	0	0	313	28	26
16:00	2	18	80	146	29	**5**	0	**1**	0	0	0	0	0	281	28	26
17:00	2	20	83	127	36	1	0	0	0	0	0	0	0	269	28	25
18:00	8	17	75	133	31	4	0	0	0	0	0	0	0	268	28	25
19:00	1	13	76	106	30	1	0	0	0	0	0	0	0	227	28	25
20:00	4	10	63	90	11	1	0	0	0	0	0	0	0	179	28	25
21:00	3	8	64	69	22	3	0	0	0	0	0	0	0	169	28	25
22:00	2	5	43	69	18	1	0	0	0	0	0	0	0	138	28	26
23:00	0	8	40	65	16	1	0	0	0	0	0	0	0	130	28	26
Total	66	263	1446	2357	582	54	5	1	0	0	0	0	0	4774		
%	1.4%	5.5%	30.3%	49.4%	12.2%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	10:00	11:00	11:00	10:00	07:00	08:00							11:00		
Vol.	6	17	122	198	39	10	2							375		
PM Peak	14:00	12:00	12:00	13:00	12:00	16:00	12:00	16:00						12:00		
Vol.	9	32	180	225	53	5	1	1						479		

Stats

15th Percentile :	20 MPH
50th Percentile :	25 MPH
85th Percentile :	28 MPH
95th Percentile :	32 MPH
Mean Speed(Average) :	25 MPH
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	3803
Percent in Pace :	79.7%
Number of Vehicles > 25 MPH :	2528
Percent of Vehicles > 25 MPH :	52.9%

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SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/19/ 16	0	0	5	13	7	0	0	0	0	0	0	0	0	25	31	27
01:00	0	1	3	8	7	3	0	0	0	0	0	0	0	22	33	29
02:00	0	4	4	2	8	0	0	0	0	0	0	0	0	18	32	26
03:00	0	0	2	2	2	0	0	0	0	0	0	0	0	6	31	27
04:00	0	0	3	9	1	0	**1**	0	0	0	0	0	0	14	28	27
05:00	0	1	5	11	6	0	0	0	0	0	0	0	0	23	31	27
06:00	2	7	26	44	14	1	0	0	0	0	0	0	0	94	29	25
07:00	5	18	63	75	24	2	0	0	0	0	0	0	0	187	28	25
08:00	**14**	**26**	**96**	**85**	21	3	1	0	0	0	0	0	0	**246**	28	23
09:00	6	23	79	78	**26**	3	1	0	0	0	0	0	0	216	28	24
10:00	2	19	79	72	11	0	0	0	0	0	0	0	0	183	27	24
11:00	7	19	70	69	19	**4**	0	**1**	0	0	0	0	0	189	28	24
12 PM	13	34	95	61	17	2	0	0	0	0	0	0	0	222	27	23
13:00	12	35	87	63	13	0	0	0	0	0	0	0	0	210	27	22
14:00	7	16	82	79	**23**	**3**	0	0	0	0	0	0	0	210	28	24
15:00	12	25	95	78	20	0	**1**	0	0	0	0	0	**1**	232	28	23
16:00	34	46	118	**92**	13	1	0	0	0	0	0	0	0	304	27	22
17:00	**108**	**85**	119	56	12	1	0	0	0	0	0	0	0	**381**	25	18
18:00	45	63	**127**	83	19	1	1	0	0	0	0	0	0	339	27	21
19:00	11	54	107	76	16	1	0	0	0	0	0	0	0	265	27	22
20:00	12	35	97	53	13	2	0	0	0	0	0	0	0	212	27	22
21:00	2	10	50	57	10	0	0	0	0	0	0	0	0	129	28	24
22:00	0	15	48	48	10	0	0	0	0	0	0	0	0	121	28	24
23:00	0	2	9	29	16	0	0	0	0	0	0	0	0	56	31	27
Total	292	538	1469	1243	328	27	5	1	0	0	0	0	1	3904		
%	7.5%	13.8%	37.6%	31.8%	8.4%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	09:00	11:00	04:00	11:00						08:00		
Vol.	14	26	96	85	26	4	1	1						246		
PM Peak	17:00	17:00	18:00	16:00	14:00	14:00	15:00						15:00	17:00		
Vol.	108	85	127	92	23	3	1						1	381		

Stats

15th Percentile :	16 MPH
50th Percentile :	22 MPH
85th Percentile :	28 MPH
95th Percentile :	31 MPH
Mean Speed(Average) :	23 MPH
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	2712
Percent in Pace :	69.5%
Number of Vehicles > 25 MPH :	1356
Percent of Vehicles > 25 MPH :	34.7%

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

Everett Street
north of Clevermont Avenue
City, State: Brighton, MA
Client: VHB/ A. Santiago

165041 BB Speed
Site Code: 12305.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/20/ 16	0	4	10	21	7	**4**	**1**	0	0	0	0	0	0	47	32	27
01:00	0	2	6	17	2	1	0	0	0	0	0	0	0	28	28	26
02:00	1	1	5	10	4	1	0	0	0	0	0	0	0	22	31	26
03:00	0	1	3	6	3	0	0	**1**	0	0	0	0	0	14	32	28
04:00	0	2	2	4	3	0	0	0	0	0	0	0	0	11	31	26
05:00	0	1	7	14	9	0	0	0	0	0	0	0	0	31	31	27
06:00	4	11	39	45	**22**	3	1	0	0	0	0	0	0	125	30	25
07:00	4	19	82	**101**	20	1	1	0	0	0	0	0	0	228	28	25
08:00	14	**51**	101	76	19	1	0	0	0	0	0	0	**1**	**263**	27	22
09:00	8	34	92	80	19	4	0	0	0	0	0	0	0	237	28	24
10:00	**32**	36	69	71	16	1	0	0	0	0	0	0	0	225	27	21
11:00	21	43	**112**	72	7	1	0	0	0	0	0	0	0	256	26	22
12 PM	63	44	102	51	11	1	0	0	0	0	0	0	0	272	26	19
13:00	60	57	75	35	5	0	0	0	0	0	0	0	0	232	24	18
14:00	**99**	26	77	30	4	1	0	0	0	0	0	0	0	237	23	16
15:00	17	52	**130**	**84**	17	1	0	0	0	0	0	0	0	301	27	22
16:00	82	65	117	51	14	2	0	0	0	0	0	0	0	331	25	19
17:00	93	**75**	126	69	11	**3**	0	0	0	0	0	0	0	**377**	25	19
18:00	66	52	110	74	15	2	0	0	0	0	0	0	0	319	26	20
19:00	14	38	104	81	**20**	0	0	0	0	0	0	0	0	257	27	23
20:00	4	16	78	77	12	2	1	0	0	0	0	0	0	190	28	24
21:00	2	15	76	64	15	0	**2**	0	0	0	0	0	0	174	28	24
22:00	4	22	74	59	20	3	0	0	0	0	0	0	0	182	28	24
23:00	1	6	40	40	10	0	0	0	0	0	0	0	0	97	28	25
Total	589	673	1637	1232	285	32	6	1	0	0	0	0	1	4456		
%	13.2%	15.1%	36.7%	27.6%	6.4%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	08:00	11:00	07:00	06:00	00:00	00:00	03:00					08:00	08:00		
Vol.	32	51	112	101	22	4	1	1					1	263		
PM Peak	14:00	17:00	15:00	15:00	19:00	17:00	21:00							17:00		
Vol.	99	75	130	84	20	3	2							377		

Stats

15th Percentile :	14 MPH
50th Percentile :	21 MPH
85th Percentile :	27 MPH
95th Percentile :	30 MPH
Mean Speed(Average) :	21 MPH
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	2869
Percent in Pace :	64.4%
Number of Vehicles > 25 MPH :	1311
Percent of Vehicles > 25 MPH :	29.4%

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

Everett Street
north of Clevermont Avenue
City, State: Brighton, MA
Client: VHB/ A. Santiago

165041 BB Speed
Site Code: 12305.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/21/ 16	0	4	22	34	11	3	0	0	0	0	0	0	0	74	30	26
01:00	0	2	6	20	8	**4**	0	**1**	0	0	0	0	0	41	33	28
02:00	0	2	10	14	10	0	0	0	0	0	0	0	0	36	31	26
03:00	0	1	8	9	9	2	0	0	0	0	0	0	0	29	32	28
04:00	1	0	4	6	3	1	1	0	0	0	0	0	0	16	33	27
05:00	0	0	2	16	6	0	0	0	0	0	0	0	0	24	31	28
06:00	0	3	3	18	9	1	0	0	0	0	0	0	0	34	31	27
07:00	0	2	11	28	21	1	0	0	0	0	0	0	0	63	31	28
08:00	1	4	30	50	21	4	**2**	0	0	0	0	0	0	112	31	27
09:00	2	7	34	72	**32**	2	0	0	0	0	0	0	0	149	30	26
10:00	**6**	15	55	**84**	28	2	0	0	0	0	0	0	0	190	29	25
11:00	5	**31**	**101**	75	16	1	0	0	0	0	0	0	0	**229**	27	23
12 PM	16	39	85	84	13	1	0	0	0	0	0	0	0	238	27	23
13:00	2	**42**	**100**	82	9	0	0	0	0	0	0	0	0	235	27	23
14:00	10	25	96	**94**	**22**	1	0	0	0	0	0	0	0	**248**	28	24
15:00	4	23	91	78	22	1	**1**	0	0	0	0	0	0	220	28	24
16:00	**23**	35	64	60	13	1	0	0	0	0	0	0	0	196	27	22
17:00	6	24	88	70	12	**2**	0	0	0	0	0	0	0	202	27	23
18:00	6	36	91	76	20	1	0	0	0	0	0	0	0	230	28	23
19:00	3	20	91	75	14	1	0	0	0	0	0	0	0	204	27	24
20:00	2	20	64	43	8	1	0	0	0	0	0	0	0	138	27	23
21:00	4	16	56	52	15	0	0	0	0	0	0	0	0	143	28	24
22:00	0	8	46	53	14	1	0	0	0	0	0	0	0	122	28	25
23:00	1	5	37	43	13	2	0	0	0	0	0	0	0	101	28	25
Total	92	364	1195	1236	349	33	4	1	0	0	0	0	0	3274		
%	2.8%	11.1%	36.5%	37.8%	10.7%	1.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	11:00	11:00	10:00	09:00	01:00	08:00	01:00						11:00		
Vol.	6	31	101	84	32	4	2	1						229		
PM Peak	16:00	13:00	13:00	14:00	14:00	17:00	15:00							14:00		
Vol.	23	42	100	94	22	2	1							248		

Stats

15th Percentile :	19 MPH
50th Percentile :	23 MPH
85th Percentile :	28 MPH
95th Percentile :	32 MPH
Mean Speed(Average) :	24 MPH
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	2431
Percent in Pace :	74.3%
Number of Vehicles > 25 MPH :	1376
Percent of Vehicles > 25 MPH :	42.0%

PRECISION DATA INDUSTRIES, LLC
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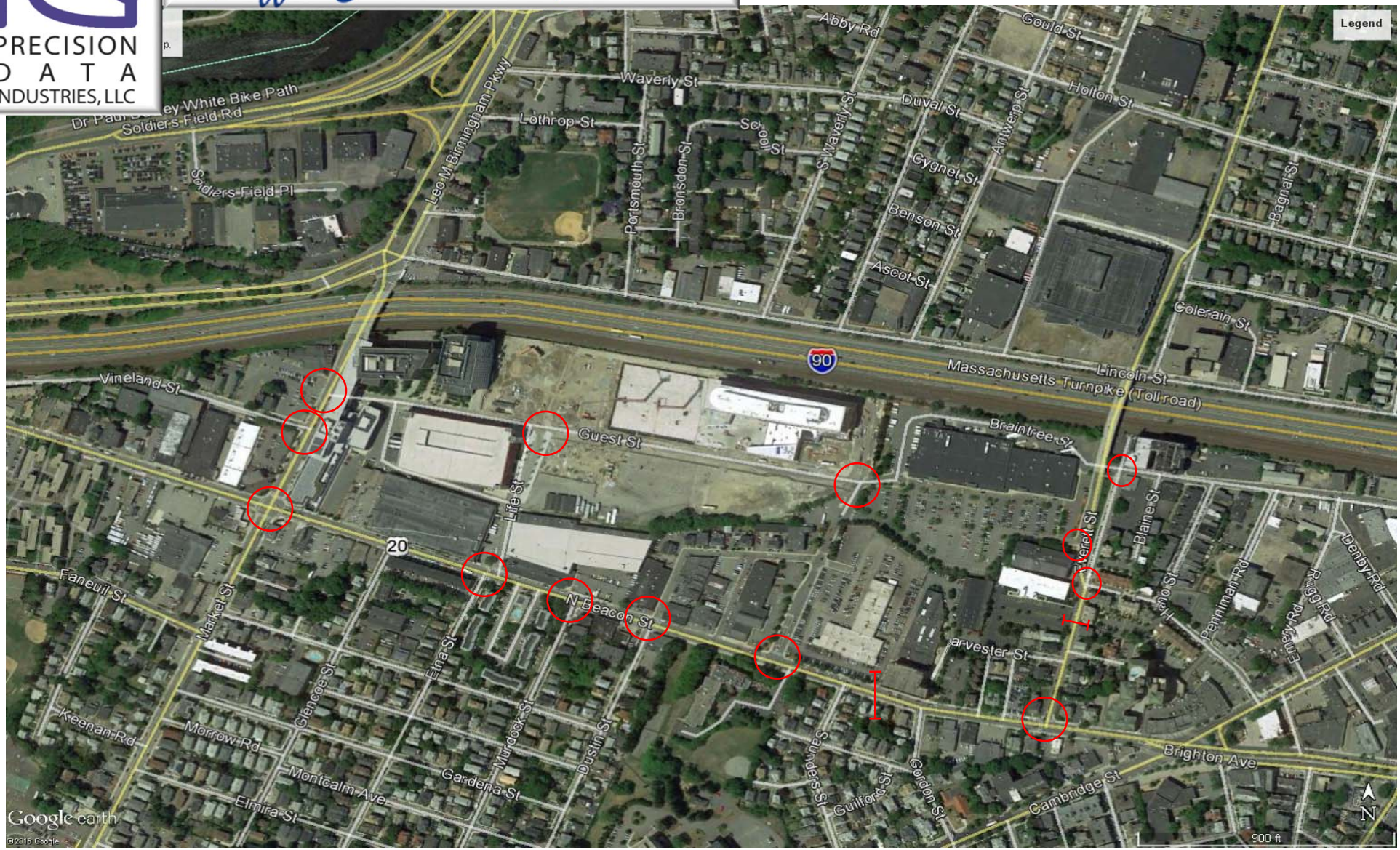
Traffic Counts with Precision



Client:	Engineer:	Site Code:	Date:	PDI Job Number:	City, State:
VHB	A. Santiago	12305.00	Thurs 5/5 thru Sat 5/7/16	165041	Boston, MA

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508.875.0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

N/S: Market Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 A
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Market Street From North				North Beacon Street From East				Market Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	5	110	20	0	20	49	4	0	13	101	13	0	11	66	4	0	416
07:15 AM	6	110	28	0	32	57	8	0	21	124	16	0	12	75	5	0	494
07:30 AM	4	115	24	0	21	75	18	0	19	133	22	0	16	82	5	0	534
07:45 AM	6	106	30	0	25	82	14	0	24	129	21	0	14	73	6	0	530
Total	21	441	102	0	98	263	44	0	77	487	72	0	53	296	20	0	1974
08:00 AM	9	106	36	0	22	80	11	0	28	144	15	0	8	66	5	0	530
08:15 AM	8	107	38	0	39	90	16	0	24	157	29	0	9	49	8	0	574
08:30 AM	9	107	41	0	27	83	14	0	24	165	32	0	5	82	11	0	600
08:45 AM	14	114	36	0	29	60	15	0	19	144	14	0	11	59	12	0	527
Total	40	434	151	0	117	313	56	0	95	610	90	0	33	256	36	0	2231
Grand Total	61	875	253	0	215	576	100	0	172	1097	162	0	86	552	56	0	4205
Apprch %	5.1	73.6	21.3	0	24.1	64.6	11.2	0	12	76.7	11.3	0	12.4	79.5	8.1	0	
Total %	1.5	20.8	6	0	5.1	13.7	2.4	0	4.1	26.1	3.9	0	2	13.1	1.3	0	
Cars	60	809	239	0	201	555	92	0	162	1055	157	0	82	527	53	0	3992
% Cars	98.4	92.5	94.5	0	93.5	96.4	92	0	94.2	96.2	96.9	0	95.3	95.5	94.6	0	94.9
Heavy Vehicles	1	66	14	0	14	21	8	0	10	42	5	0	4	25	3	0	213
% Heavy Vehicles	1.6	7.5	5.5	0	6.5	3.6	8	0	5.8	3.8	3.1	0	4.7	4.5	5.4	0	5.1

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	6	106	30	0	142	25	82	14	0	121	24	129	21	0	174	14	73	6	0	93	530
08:00 AM	9	106	36	0	151	22	80	11	0	113	28	144	15	0	187	8	66	5	0	79	530
08:15 AM	8	107	38	0	153	39	90	16	0	145	24	157	29	0	210	9	49	8	0	66	574
08:30 AM	9	107	41	0	157	27	83	14	0	124	24	165	32	0	221	5	82	11	0	98	600
Total Volume	32	426	145	0	603	113	335	55	0	503	100	595	97	0	792	36	270	30	0	336	2234
% App. Total	5.3	70.6	24	0		22.5	66.6	10.9	0		12.6	75.1	12.2	0		10.7	80.4	8.9	0		
PHF	.889	.995	.884	.000	.960	.724	.931	.859	.000	.867	.893	.902	.758	.000	.896	.643	.823	.682	.000	.857	.931
Cars	31	400	139	0	570	107	326	50	0	483	96	575	94	0	765	34	258	30	0	322	2140
% Cars	96.9	93.9	95.9	0	94.5	94.7	97.3	90.9	0	96.0	96.0	96.6	96.9	0	96.6	94.4	95.6	100	0	95.8	95.8
Heavy Vehicles	1	26	6	0	33	6	9	5	0	20	4	20	3	0	27	2	12	0	0	14	94
% Heavy Vehicles	3.1	6.1	4.1	0	5.5	5.3	2.7	9.1	0	4.0	4.0	3.4	3.1	0	3.4	5.6	4.4	0	0	4.2	4.2

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508.875.0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

N/S: Market Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 A
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Market Street From North				North Beacon Street From East				Market Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	5	97	20	0	18	47	4	0	11	100	12	0	11	64	4	0	393
07:15 AM	6	102	24	0	29	53	6	0	19	117	15	0	12	73	5	0	461
07:30 AM	4	102	22	0	21	72	18	0	19	127	22	0	15	75	3	0	500
07:45 AM	6	99	29	0	21	81	14	0	21	126	20	0	13	71	6	0	507
Total	21	400	95	0	89	253	42	0	70	470	69	0	51	283	18	0	1861
08:00 AM	9	100	36	0	21	76	11	0	27	140	14	0	7	63	5	0	509
08:15 AM	7	100	35	0	38	89	13	0	24	150	29	0	9	45	8	0	547
08:30 AM	9	101	39	0	27	80	12	0	24	159	31	0	5	79	11	0	577
08:45 AM	14	108	34	0	26	57	14	0	17	136	14	0	10	57	11	0	498
Total	39	409	144	0	112	302	50	0	92	585	88	0	31	244	35	0	2131
Grand Total	60	809	239	0	201	555	92	0	162	1055	157	0	82	527	53	0	3992
Apprch %	5.4	73	21.6	0	23.7	65.4	10.8	0	11.8	76.8	11.4	0	12.4	79.6	8	0	
Total %	1.5	20.3	6	0	5	13.9	2.3	0	4.1	26.4	3.9	0	2.1	13.2	1.3	0	

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	6	99	29	0	134	21	81	14	0	116	21	126	20	0	167	13	71	6	0	90	507
08:00 AM	9	100	36	0	145	21	76	11	0	108	27	140	14	0	181	7	63	5	0	75	509
08:15 AM	7	100	35	0	142	38	89	13	0	140	24	150	29	0	203	9	45	8	0	62	547
08:30 AM	9	101	39	0	149	27	80	12	0	119	24	159	31	0	214	5	79	11	0	95	577
Total Volume	31	400	139	0	570	107	326	50	0	483	96	575	94	0	765	34	258	30	0	322	2140
% App. Total	5.4	70.2	24.4	0		22.2	67.5	10.4	0		12.5	75.2	12.3	0		10.6	80.1	9.3	0		
PHF	.861	.990	.891	.000	.956	.704	.916	.893	.000	.863	.889	.904	.758	.000	.894	.654	.816	.682	.000	.847	.927

PRECISION
D A T A
INDUSTRIES, LLC
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N/S: Market Street
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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 A
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Market Street From North				North Beacon Street From East				Market Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	13	0	0	2	2	0	0	2	1	1	0	0	2	0	0	23
07:15 AM	0	8	4	0	3	4	2	0	2	7	1	0	0	2	0	0	33
07:30 AM	0	13	2	0	0	3	0	0	0	6	0	0	1	7	2	0	34
07:45 AM	0	7	1	0	4	1	0	0	3	3	1	0	1	2	0	0	23
Total	0	41	7	0	9	10	2	0	7	17	3	0	2	13	2	0	113
08:00 AM	0	6	0	0	1	4	0	0	1	4	1	0	1	3	0	0	21
08:15 AM	1	7	3	0	1	1	3	0	0	7	0	0	0	4	0	0	27
08:30 AM	0	6	2	0	0	3	2	0	0	6	1	0	0	3	0	0	23
08:45 AM	0	6	2	0	3	3	1	0	2	8	0	0	1	2	1	0	29
Total	1	25	7	0	5	11	6	0	3	25	2	0	2	12	1	0	100
Grand Total	1	66	14	0	14	21	8	0	10	42	5	0	4	25	3	0	213
Apprch %	1.2	81.5	17.3	0	32.6	48.8	18.6	0	17.5	73.7	8.8	0	12.5	78.1	9.4	0	
Total %	0.5	31	6.6	0	6.6	9.9	3.8	0	4.7	19.7	2.3	0	1.9	11.7	1.4	0	

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	13	0	0	13	2	2	0	0	4	2	1	1	0	4	0	2	0	0	2	23
07:15 AM	0	8	4	0	12	3	4	2	0	9	2	7	1	0	10	0	2	0	0	2	33
07:30 AM	0	13	2	0	15	0	3	0	0	3	0	6	0	0	6	1	7	2	0	10	34
07:45 AM	0	7	1	0	8	4	1	0	0	5	3	3	1	0	7	1	2	0	0	3	23
Total Volume	0	41	7	0	48	9	10	2	0	21	7	17	3	0	27	2	13	2	0	17	113
% App. Total	0	85.4	14.6	0		42.9	47.6	9.5	0		25.9	63	11.1	0		11.8	76.5	11.8	0		
PHF	.000	.788	.438	.000	.800	.563	.625	.250	.000	.583	.583	.607	.750	.000	.675	.500	.464	.250	.000	.425	.831

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E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 A
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Peds and Bikes

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	1	1	0	0	0	0	2	1	0	0	0	1	3	0	2	0	0	0	11
07:15 AM	0	0	0	1	0	0	0	0	1	4	0	1	0	3	2	0	2	0	0	1	15
07:30 AM	0	0	0	0	1	0	0	0	4	0	0	1	0	1	4	0	0	0	1	0	12
07:45 AM	0	0	0	2	1	0	0	0	3	5	0	0	0	1	3	0	0	0	2	1	18
Total	0	0	1	4	2	0	0	0	10	10	0	2	0	6	12	0	4	0	3	2	56
08:00 AM	0	0	0	0	1	0	1	0	2	0	0	0	0	1	9	0	2	0	0	2	18
08:15 AM	0	0	1	1	2	0	0	0	2	3	0	5	0	2	4	0	3	0	0	0	23
08:30 AM	0	0	0	3	2	0	2	0	0	9	0	6	0	1	3	0	1	0	0	2	29
08:45 AM	0	1	0	4	3	0	0	0	2	6	0	1	0	1	8	0	1	0	5	2	34
Total	0	1	1	8	8	0	3	0	6	18	0	12	0	5	24	0	7	0	5	6	104
Grand Total	0	1	2	12	10	0	3	0	16	28	0	14	0	11	36	0	11	0	8	8	160
Apprch %	0	4	8	48	40	0	6.4	0	34	59.6	0	23	0	18	59	0	40.7	0	29.6	29.6	
Total %	0	0.6	1.2	7.5	6.2	0	1.9	0	10	17.5	0	8.8	0	6.9	22.5	0	6.9	0	5	5	

	Market Street From North						North Beacon Street From East						Market Street From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	1	1	0	1	0	2	0	3	0	0	0	1	9	10	0	2	0	0	2	4	18
08:15 AM	0	0	1	1	2	4	0	0	0	2	3	5	0	5	0	2	4	11	0	3	0	0	0	3	23
08:30 AM	0	0	0	3	2	5	0	2	0	0	9	11	0	6	0	1	3	10	0	1	0	0	2	3	29
08:45 AM	0	1	0	4	3	8	0	0	0	2	6	8	0	1	0	1	8	10	0	1	0	5	2	8	34
Total Volume	0	1	1	8	8	18	0	3	0	6	18	27	0	12	0	5	24	41	0	7	0	5	6	18	104
% App. Total	0	5.6	5.6	44.4	44.4		0	11.1	0	22.2	66.7		0	29.3	0	12.2	58.5		0	38.9	0	27.8	33.3		
PHF	.000	.250	.250	.500	.667	.563	.000	.375	.000	.750	.500	.614	.000	.500	.000	.625	.667	.932	.000	.583	.000	.250	.750	.563	.765

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File Name : 165041 A
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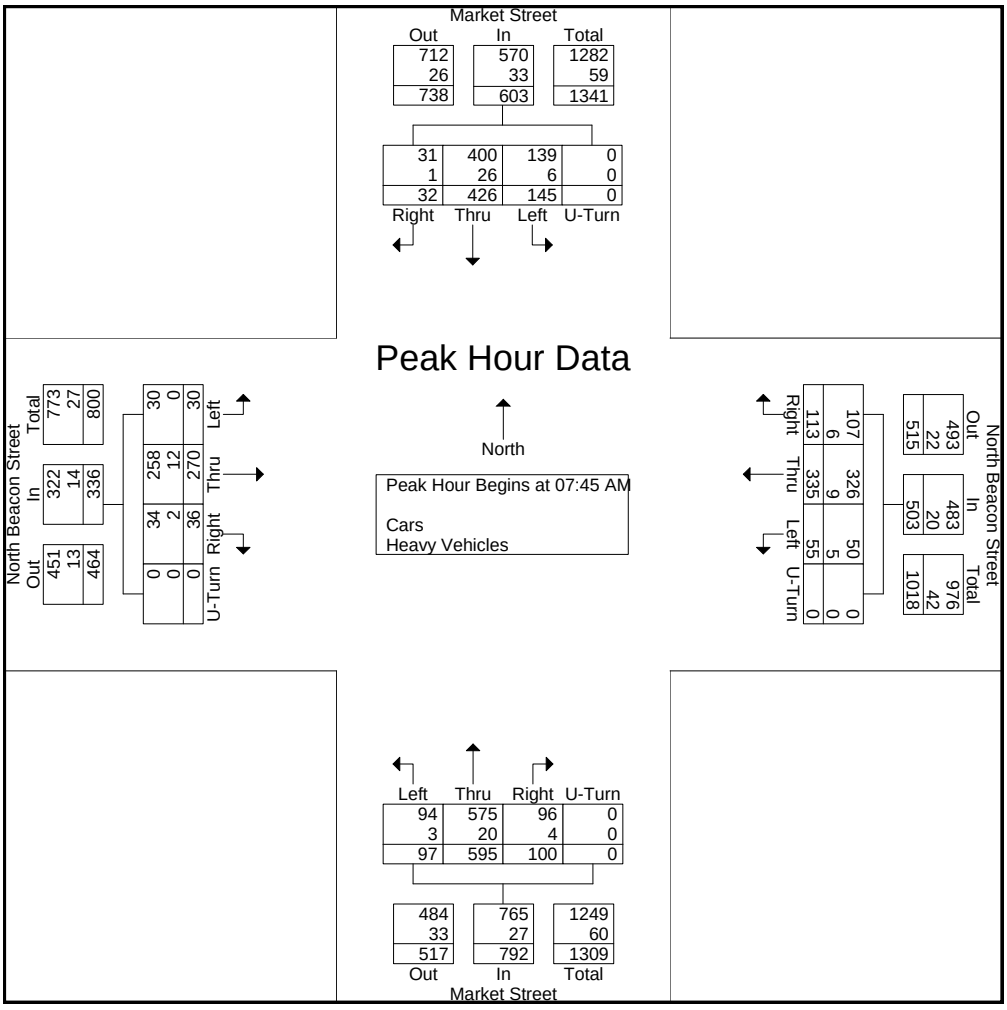
Page No : 1

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	6	106	30	0	142	25	82	14	0	121	24	129	21	0	174	14	73	6	0	93	530
08:00 AM	9	106	36	0	151	22	80	11	0	113	28	144	15	0	187	8	66	5	0	79	530
08:15 AM	8	107	38	0	153	39	90	16	0	145	24	157	29	0	210	9	49	8	0	66	574
08:30 AM	9	107	41	0	157	27	83	14	0	124	24	165	32	0	221	5	82	11	0	98	600
Total Volume	32	426	145	0	603	113	335	55	0	503	100	595	97	0	792	36	270	30	0	336	2234
% App. Total	5.3	70.6	24	0		22.5	66.6	10.9	0		12.6	75.1	12.2	0		10.7	80.4	8.9	0		
PHF	.889	.995	.884	.000	.960	.724	.931	.859	.000	.867	.893	.902	.758	.000	.896	.643	.823	.682	.000	.857	.931
Cars	31	400	139	0	570	107	326	50	0	483	96	575	94	0	765	34	258	30	0	322	2140
% Cars	96.9	93.9	95.9	0	94.5	94.7	97.3	90.9	0	96.0	96.0	96.6	96.9	0	96.6	94.4	95.6	100	0	95.8	95.8
Heavy Vehicles	1	26	6	0	33	6	9	5	0	20	4	20	3	0	27	2	12	0	0	14	94
% Heavy Vehicles	3.1	6.1	4.1	0	5.5	5.3	2.7	9.1	0	4.0	4.0	3.4	3.1	0	3.4	5.6	4.4	0	0	4.2	4.2



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E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 AA
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Market Street From North				North Beacon Street From East				Market Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	9	161	34	0	20	89	19	0	19	101	18	0	17	72	7	0	566
04:15 PM	14	165	30	0	31	73	28	0	20	102	10	0	10	68	4	0	555
04:30 PM	11	194	26	0	30	105	16	0	17	114	11	0	13	64	4	0	605
04:45 PM	11	157	24	0	27	94	22	0	33	119	15	0	12	71	6	0	591
Total	45	677	114	0	108	361	85	0	89	436	54	0	52	275	21	0	2317
05:00 PM	8	181	37	0	36	93	21	0	25	100	10	0	6	88	6	0	611
05:15 PM	16	190	39	0	39	112	25	0	25	106	17	0	9	65	5	0	648
05:30 PM	13	164	25	0	22	95	28	0	33	108	9	0	17	99	6	0	619
05:45 PM	21	183	37	0	26	84	20	0	16	135	5	0	12	110	6	0	655
Total	58	718	138	0	123	384	94	0	99	449	41	0	44	362	23	0	2533
Grand Total	103	1395	252	0	231	745	179	0	188	885	95	0	96	637	44	0	4850
Apprch %	5.9	79.7	14.4	0	20	64.5	15.5	0	16.1	75.8	8.1	0	12.4	82	5.7	0	
Total %	2.1	28.8	5.2	0	4.8	15.4	3.7	0	3.9	18.2	2	0	2	13.1	0.9	0	
Cars	102	1368	248	0	227	731	174	0	188	861	91	0	96	620	42	0	4748
% Cars	99	98.1	98.4	0	98.3	98.1	97.2	0	100	97.3	95.8	0	100	97.3	95.5	0	97.9
Heavy Vehicles	1	27	4	0	4	14	5	0	0	24	4	0	0	17	2	0	102
% Heavy Vehicles	1	1.9	1.6	0	1.7	1.9	2.8	0	0	2.7	4.2	0	0	2.7	4.5	0	2.1

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	8	181	37	0	226	36	93	21	0	150	25	100	10	0	135	6	88	6	0	100	611
05:15 PM	16	190	39	0	245	39	112	25	0	176	25	106	17	0	148	9	65	5	0	79	648
05:30 PM	13	164	25	0	202	22	95	28	0	145	33	108	9	0	150	17	99	6	0	122	619
05:45 PM	21	183	37	0	241	26	84	20	0	130	16	135	5	0	156	12	110	6	0	128	655
Total Volume	58	718	138	0	914	123	384	94	0	601	99	449	41	0	589	44	362	23	0	429	2533
% App. Total	6.3	78.6	15.1	0		20.5	63.9	15.6	0		16.8	76.2	7	0		10.3	84.4	5.4	0		
PHF	.690	.945	.885	.000	.933	.788	.857	.839	.000	.854	.750	.831	.603	.000	.944	.647	.823	.958	.000	.838	.967
Cars	57	707	137	0	901	122	378	92	0	592	99	437	39	0	575	44	355	22	0	421	2489
% Cars	98.3	98.5	99.3	0	98.6	99.2	98.4	97.9	0	98.5	100	97.3	95.1	0	97.6	100	98.1	95.7	0	98.1	98.3
Heavy Vehicles	1	11	1	0	13	1	6	2	0	9	0	12	2	0	14	0	7	1	0	8	44
% Heavy Vehicles	1.7	1.5	0.7	0	1.4	0.8	1.6	2.1	0	1.5	0	2.7	4.9	0	2.4	0	1.9	4.3	0	1.9	1.7

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Site Code : 12305.00
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Page No : 1

Groups Printed- Cars

	Market Street From North				North Beacon Street From East				Market Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	9	156	33	0	19	86	19	0	19	98	18	0	17	67	6	0	547
04:15 PM	14	160	30	0	30	72	27	0	20	99	10	0	10	66	4	0	542
04:30 PM	11	191	25	0	30	102	16	0	17	109	9	0	13	62	4	0	589
04:45 PM	11	154	23	0	26	93	20	0	33	118	15	0	12	70	6	0	581
Total	45	661	111	0	105	353	82	0	89	424	52	0	52	265	20	0	2259
05:00 PM	8	181	37	0	35	91	21	0	25	96	10	0	6	85	6	0	601
05:15 PM	15	186	39	0	39	111	25	0	25	103	15	0	9	64	5	0	636
05:30 PM	13	160	24	0	22	93	27	0	33	106	9	0	17	96	5	0	605
05:45 PM	21	180	37	0	26	83	19	0	16	132	5	0	12	110	6	0	647
Total	57	707	137	0	122	378	92	0	99	437	39	0	44	355	22	0	2489
Grand Total	102	1368	248	0	227	731	174	0	188	861	91	0	96	620	42	0	4748
Apprch %	5.9	79.6	14.4	0	20.1	64.6	15.4	0	16.5	75.5	8	0	12.7	81.8	5.5	0	
Total %	2.1	28.8	5.2	0	4.8	15.4	3.7	0	4	18.1	1.9	0	2	13.1	0.9	0	

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	8	181	37	0	226	35	91	21	0	147	25	96	10	0	131	6	85	6	0	97	601
05:15 PM	15	186	39	0	240	39	111	25	0	175	25	103	15	0	143	9	64	5	0	78	636
05:30 PM	13	160	24	0	197	22	93	27	0	142	33	106	9	0	148	17	96	5	0	118	605
05:45 PM	21	180	37	0	238	26	83	19	0	128	16	132	5	0	153	12	110	6	0	128	647
Total Volume	57	707	137	0	901	122	378	92	0	592	99	437	39	0	575	44	355	22	0	421	2489
% App. Total	6.3	78.5	15.2	0		20.6	63.9	15.5	0		17.2	76	6.8	0		10.5	84.3	5.2	0		
PHF	.679	.950	.878	.000	.939	.782	.851	.852	.000	.846	.750	.828	.650	.000	.940	.647	.807	.917	.000	.822	.962

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Groups Printed- Heavy Vehicles

	Market Street From North				North Beacon Street From East				Market Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	5	1	0	1	3	0	0	0	3	0	0	0	5	1	0	19
04:15 PM	0	5	0	0	1	1	1	0	0	3	0	0	0	2	0	0	13
04:30 PM	0	3	1	0	0	3	0	0	0	5	2	0	0	2	0	0	16
04:45 PM	0	3	1	0	1	1	2	0	0	1	0	0	0	1	0	0	10
Total	0	16	3	0	3	8	3	0	0	12	2	0	0	10	1	0	58
05:00 PM	0	0	0	0	1	2	0	0	0	4	0	0	0	3	0	0	10
05:15 PM	1	4	0	0	0	1	0	0	0	3	2	0	0	1	0	0	12
05:30 PM	0	4	1	0	0	2	1	0	0	2	0	0	0	3	1	0	14
05:45 PM	0	3	0	0	0	1	1	0	0	3	0	0	0	0	0	0	8
Total	1	11	1	0	1	6	2	0	0	12	2	0	0	7	1	0	44
Grand Total	1	27	4	0	4	14	5	0	0	24	4	0	0	17	2	0	102
Apprch %	3.1	84.4	12.5	0	17.4	60.9	21.7	0	0	85.7	14.3	0	0	89.5	10.5	0	
Total %	1	26.5	3.9	0	3.9	13.7	4.9	0	0	23.5	3.9	0	0	16.7	2	0	

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	5	1	0	6	1	3	0	0	4	0	3	0	0	3	0	5	1	0	6	19
04:15 PM	0	5	0	0	5	1	1	1	0	3	0	3	0	0	3	0	2	0	0	2	13
04:30 PM	0	3	1	0	4	0	3	0	0	3	0	5	2	0	7	0	2	0	0	2	16
04:45 PM	0	3	1	0	4	1	1	2	0	4	0	1	0	0	1	0	1	0	0	1	10
Total Volume	0	16	3	0	19	3	8	3	0	14	0	12	2	0	14	0	10	1	0	11	58
% App. Total	0	84.2	15.8	0		21.4	57.1	21.4	0		0	85.7	14.3	0		0	90.9	9.1	0		
PHF	.000	.800	.750	.000	.792	.750	.667	.375	.000	.875	.000	.600	.250	.000	.500	.000	.500	.250	.000	.458	.763

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Groups Printed- Peds and Bikes

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	2	0	2	1	0	0	1	3	1	0	1	0	4	0	0	0	0	0	2	17
04:15 PM	0	0	0	0	1	0	0	0	5	4	1	0	0	3	6	0	0	0	1	4	25
04:30 PM	0	1	0	2	2	1	1	0	6	1	0	1	0	4	1	0	0	0	0	1	21
04:45 PM	0	0	0	1	1	0	0	0	5	2	0	2	1	5	1	0	0	0	2	1	21
Total	0	3	0	5	5	1	1	1	19	8	1	4	1	16	8	0	0	0	3	8	84
05:00 PM	0	0	0	1	5	0	1	0	10	2	0	0	0	5	3	0	0	0	0	2	29
05:15 PM	0	0	0	0	0	0	2	0	12	2	0	0	0	3	5	0	0	0	0	3	27
05:30 PM	0	1	0	1	2	0	0	1	7	5	0	0	0	6	5	0	0	0	1	3	32
05:45 PM	0	1	0	0	3	0	1	0	5	3	0	0	0	6	1	0	0	0	0	3	23
Total	0	2	0	2	10	0	4	1	34	12	0	0	0	20	14	0	0	0	1	11	111
Grand Total	0	5	0	7	15	1	5	2	53	20	1	4	1	36	22	0	0	0	4	19	195
Apprch %	0	18.5	0	25.9	55.6	1.2	6.2	2.5	65.4	24.7	1.6	6.2	1.6	56.2	34.4	0	0	0	17.4	82.6	
Total %	0	2.6	0	3.6	7.7	0.5	2.6	1	27.2	10.3	0.5	2.1	0.5	18.5	11.3	0	0	0	2.1	9.7	

	Market Street From North						North Beacon Street From East						Market Street From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	1	5	6	0	1	0	10	2	13	0	0	0	5	3	8	0	0	0	0	2	2	29
05:15 PM	0	0	0	0	0	0	0	2	0	12	2	16	0	0	0	3	5	8	0	0	0	0	3	3	27
05:30 PM	0	1	0	1	2	4	0	0	1	7	5	13	0	0	0	6	5	11	0	0	0	1	3	4	32
05:45 PM	0	1	0	0	3	4	0	1	0	5	3	9	0	0	0	6	1	7	0	0	0	0	3	3	23
Total Volume	0	2	0	2	10	14	0	4	1	34	12	51	0	0	0	20	14	34	0	0	0	1	11	12	111
% App. Total	0	14.3	0	14.3	71.4		0	7.8	2	66.7	23.5		0	0	0	58.8	41.2		0	0	0	8.3	91.7		
PHF	.000	.500	.000	.500	.500	.583	.000	.500	.250	.708	.600	.797	.000	.000	.000	.833	.700	.773	.000	.000	.000	.250	.917	.750	.867

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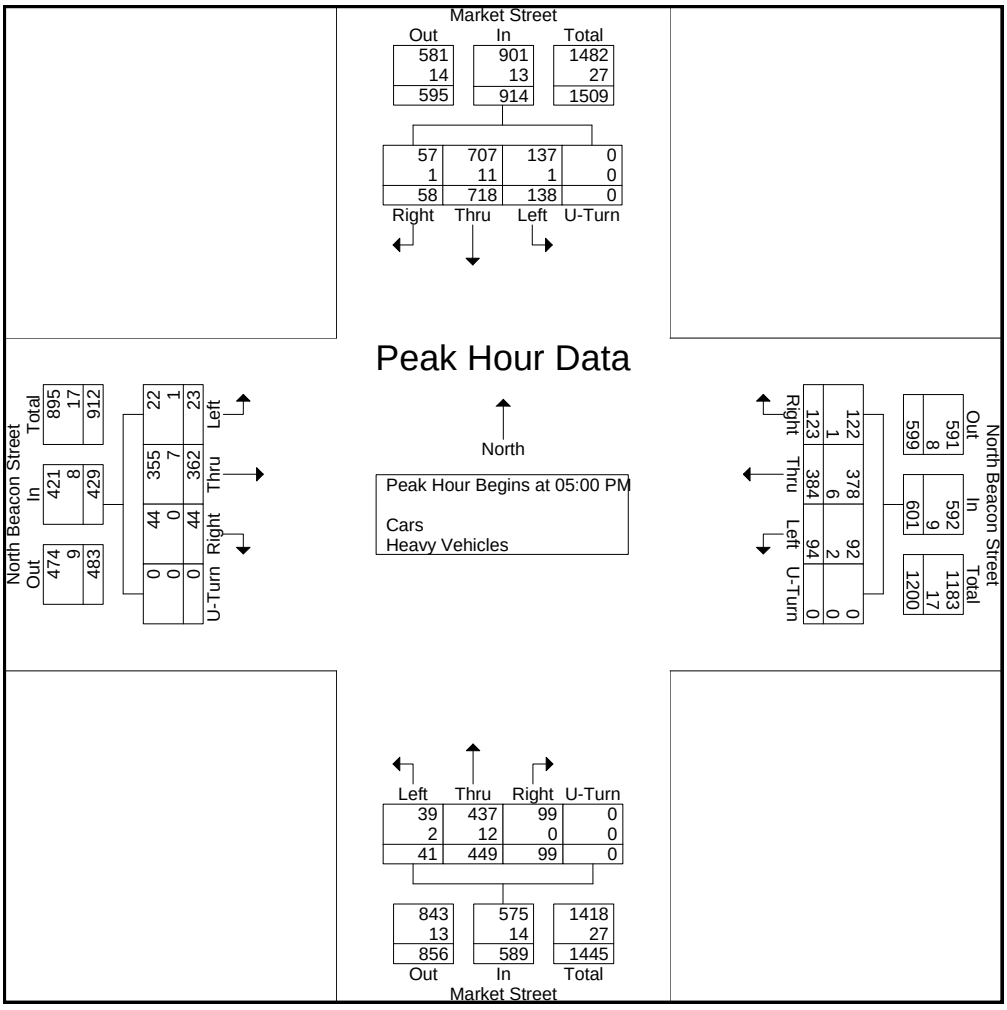
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 AA
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	8	181	37	0	226	36	93	21	0	150	25	100	10	0	135	6	88	6	0	100	611
05:15 PM	16	190	39	0	245	39	112	25	0	176	25	106	17	0	148	9	65	5	0	79	648
05:30 PM	13	164	25	0	202	22	95	28	0	145	33	108	9	0	150	17	99	6	0	122	619
05:45 PM	21	183	37	0	241	26	84	20	0	130	16	135	5	0	156	12	110	6	0	128	655
Total Volume	58	718	138	0	914	123	384	94	0	601	99	449	41	0	589	44	362	23	0	429	2533
% App. Total	6.3	78.6	15.1	0		20.5	63.9	15.6	0		16.8	76.2	7	0		10.3	84.4	5.4	0		
PHF	.690	.945	.885	.000	.933	.788	.857	.839	.000	.854	.750	.831	.603	.000	.944	.647	.823	.958	.000	.838	.967
Cars	57	707	137	0	901	122	378	92	0	592	99	437	39	0	575	44	355	22	0	421	2489
% Cars	98.3	98.5	99.3	0	98.6	99.2	98.4	97.9	0	98.5	100	97.3	95.1	0	97.6	100	98.1	95.7	0	98.1	98.3
Heavy Vehicles	1	11	1	0	13	1	6	2	0	9	0	12	2	0	14	0	7	1	0	8	44
% Heavy Vehicles	1.7	1.5	0.7	0	1.4	0.8	1.6	2.1	0	1.5	0	2.7	4.9	0	2.4	0	1.9	4.3	0	1.9	1.7



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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 AAA
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Market Street From North				North Beacon Street From East				Market Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	9	126	32	0	21	70	24	0	33	124	9	0	18	53	0	0	519
11:15 AM	12	125	33	0	29	58	23	0	35	89	15	0	12	63	6	0	500
11:30 AM	9	143	29	0	26	61	23	0	25	111	15	0	15	66	4	0	527
11:45 AM	3	120	32	0	20	62	22	0	27	116	16	0	17	73	8	0	516
Total	33	514	126	0	96	251	92	0	120	440	55	0	62	255	18	0	2062
12:00 PM	18	167	41	0	36	61	25	0	29	91	15	0	10	75	4	0	572
12:15 PM	18	135	35	0	42	70	22	0	29	97	11	0	11	64	5	0	539
12:30 PM	9	138	41	0	31	68	34	0	31	110	15	0	18	78	7	0	580
12:45 PM	7	153	43	0	25	74	23	0	31	113	17	0	12	60	11	0	569
Total	52	593	160	0	134	273	104	0	120	411	58	0	51	277	27	0	2260
01:00 PM	6	110	37	0	32	60	18	0	27	112	20	0	9	73	7	0	511
01:15 PM	12	124	47	0	41	65	22	0	31	112	17	0	13	57	10	0	551
01:30 PM	9	138	36	0	31	75	26	0	21	108	15	0	18	60	8	0	545
01:45 PM	11	155	40	0	31	66	22	0	22	133	17	0	10	67	6	0	580
Total	38	527	160	0	135	266	88	0	101	465	69	0	50	257	31	0	2187
Grand Total	123	1634	446	0	365	790	284	0	341	1316	182	0	163	789	76	0	6509
Apprch %	5.6	74.2	20.2	0	25.4	54.9	19.7	0	18.5	71.6	9.9	0	15.9	76.8	7.4	0	
Total %	1.9	25.1	6.9	0	5.6	12.1	4.4	0	5.2	20.2	2.8	0	2.5	12.1	1.2	0	
Cars	119	1607	440	0	356	774	280	0	339	1283	180	0	156	779	73	0	6386
% Cars	96.7	98.3	98.7	0	97.5	98	98.6	0	99.4	97.5	98.9	0	95.7	98.7	96.1	0	98.1
Heavy Vehicles	4	27	6	0	9	16	4	0	2	33	2	0	7	10	3	0	123
% Heavy Vehicles	3.3	1.7	1.3	0	2.5	2	1.4	0	0.6	2.5	1.1	0	4.3	1.3	3.9	0	1.9

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	18	167	41	0	226	36	61	25	0	122	29	91	15	0	135	10	75	4	0	89	572
12:15 PM	18	135	35	0	188	42	70	22	0	134	29	97	11	0	137	11	64	5	0	80	539
12:30 PM	9	138	41	0	188	31	68	34	0	133	31	110	15	0	156	18	78	7	0	103	580
12:45 PM	7	153	43	0	203	25	74	23	0	122	31	113	17	0	161	12	60	11	0	83	569
Total Volume	52	593	160	0	805	134	273	104	0	511	120	411	58	0	589	51	277	27	0	355	2260
% App. Total	6.5	73.7	19.9	0		26.2	53.4	20.4	0		20.4	69.8	9.8	0		14.4	78	7.6	0		
PHF	.722	.888	.930	.000	.890	.798	.922	.765	.000	.953	.968	.909	.853	.000	.915	.708	.888	.614	.000	.862	.974
Cars	49	585	159	0	793	131	266	103	0	500	119	394	57	0	570	49	273	25	0	347	2210
% Cars	94.2	98.7	99.4	0	98.5	97.8	97.4	99.0	0	97.8	99.2	95.9	98.3	0	96.8	96.1	98.6	92.6	0	97.7	97.8
Heavy Vehicles	3	8	1	0	12	3	7	1	0	11	1	17	1	0	19	2	4	2	0	8	50
% Heavy Vehicles	5.8	1.3	0.6	0	1.5	2.2	2.6	1.0	0	2.2	0.8	4.1	1.7	0	3.2	3.9	1.4	7.4	0	2.3	2.2

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 AAA
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars

	Market Street From North				North Beacon Street From East				Market Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	9	124	32	0	21	68	24	0	33	121	9	0	17	52	0	0	510
11:15 AM	12	123	33	0	28	57	22	0	35	88	15	0	11	63	6	0	493
11:30 AM	9	141	28	0	24	58	23	0	25	109	15	0	14	65	3	0	514
11:45 AM	3	117	30	0	20	62	22	0	27	113	16	0	17	73	8	0	508
Total	33	505	123	0	93	245	91	0	120	431	55	0	59	253	17	0	2025
12:00 PM	16	165	40	0	34	59	25	0	29	85	14	0	10	74	4	0	555
12:15 PM	17	133	35	0	42	70	22	0	28	95	11	0	10	64	5	0	532
12:30 PM	9	136	41	0	30	66	33	0	31	107	15	0	17	77	7	0	569
12:45 PM	7	151	43	0	25	71	23	0	31	107	17	0	12	58	9	0	554
Total	49	585	159	0	131	266	103	0	119	394	57	0	49	273	25	0	2210
01:00 PM	6	106	36	0	31	60	18	0	27	112	20	0	9	72	7	0	504
01:15 PM	12	121	47	0	41	64	22	0	30	111	16	0	12	57	10	0	543
01:30 PM	9	137	36	0	30	75	25	0	21	104	15	0	17	57	8	0	534
01:45 PM	10	153	39	0	30	64	21	0	22	131	17	0	10	67	6	0	570
Total	37	517	158	0	132	263	86	0	100	458	68	0	48	253	31	0	2151
Grand Total	119	1607	440	0	356	774	280	0	339	1283	180	0	156	779	73	0	6386
Apprch %	5.5	74.2	20.3	0	25.2	54.9	19.9	0	18.8	71.2	10	0	15.5	77.3	7.2	0	
Total %	1.9	25.2	6.9	0	5.6	12.1	4.4	0	5.3	20.1	2.8	0	2.4	12.2	1.1	0	

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	16	165	40	0	221	34	59	25	0	118	29	85	14	0	128	10	74	4	0	88	555
12:15 PM	17	133	35	0	185	42	70	22	0	134	28	95	11	0	134	10	64	5	0	79	532
12:30 PM	9	136	41	0	186	30	66	33	0	129	31	107	15	0	153	17	77	7	0	101	569
12:45 PM	7	151	43	0	201	25	71	23	0	119	31	107	17	0	155	12	58	9	0	79	554
Total Volume	49	585	159	0	793	131	266	103	0	500	119	394	57	0	570	49	273	25	0	347	2210
% App. Total	6.2	73.8	20.1	0		26.2	53.2	20.6	0		20.9	69.1	10	0		14.1	78.7	7.2	0		
PHF	.721	.886	.924	.000	.897	.780	.937	.780	.000	.933	.960	.921	.838	.000	.919	.721	.886	.694	.000	.859	.971

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 AAA
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Market Street From North				North Beacon Street From East				Market Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	2	0	0	0	2	0	0	0	3	0	0	1	1	0	0	9
11:15 AM	0	2	0	0	1	1	1	0	0	1	0	0	1	0	0	0	7
11:30 AM	0	2	1	0	2	3	0	0	0	2	0	0	1	1	1	0	13
11:45 AM	0	3	2	0	0	0	0	0	0	3	0	0	0	0	0	0	8
Total	0	9	3	0	3	6	1	0	0	9	0	0	3	2	1	0	37
12:00 PM	2	2	1	0	2	2	0	0	0	6	1	0	0	1	0	0	17
12:15 PM	1	2	0	0	0	0	0	0	1	2	0	0	1	0	0	0	7
12:30 PM	0	2	0	0	1	2	1	0	0	3	0	0	1	1	0	0	11
12:45 PM	0	2	0	0	0	3	0	0	0	6	0	0	0	2	2	0	15
Total	3	8	1	0	3	7	1	0	1	17	1	0	2	4	2	0	50
01:00 PM	0	4	1	0	1	0	0	0	0	0	0	0	0	1	0	0	7
01:15 PM	0	3	0	0	0	1	0	0	1	1	1	0	1	0	0	0	8
01:30 PM	0	1	0	0	1	0	1	0	0	4	0	0	1	3	0	0	11
01:45 PM	1	2	1	0	1	2	1	0	0	2	0	0	0	0	0	0	10
Total	1	10	2	0	3	3	2	0	1	7	1	0	2	4	0	0	36
Grand Total	4	27	6	0	9	16	4	0	2	33	2	0	7	10	3	0	123
Apprch %	10.8	73	16.2	0	31	55.2	13.8	0	5.4	89.2	5.4	0	35	50	15	0	
Total %	3.3	22	4.9	0	7.3	13	3.3	0	1.6	26.8	1.6	0	5.7	8.1	2.4	0	

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	2	2	1	0	5	2	2	0	0	4	0	6	1	0	7	0	1	0	0	1	17
12:15 PM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3	1	0	0	0	1	7
12:30 PM	0	2	0	0	2	1	2	1	0	4	0	3	0	0	3	1	1	0	0	2	11
12:45 PM	0	2	0	0	2	0	3	0	0	3	0	6	0	0	6	0	2	2	0	4	15
Total Volume	3	8	1	0	12	3	7	1	0	11	1	17	1	0	19	2	4	2	0	8	50
% App. Total	25	66.7	8.3	0		27.3	63.6	9.1	0		5.3	89.5	5.3	0		25	50	25	0		
PHF	.375	1.00	.250	.000	.600	.375	.583	.250	.000	.688	.250	.708	.250	.000	.679	.500	.500	.250	.000	.500	.735

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File Name : 165041 AAA
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Peds and Bikes

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	0	4	0	0	0	3	2	0	0	0	2	3	0	0	0	2	3	19
11:15 AM	0	0	0	1	0	0	1	0	6	2	0	1	0	2	6	0	0	0	0	0	19
11:30 AM	0	0	1	1	1	0	0	0	7	2	0	0	0	0	3	0	0	0	2	2	19
11:45 AM	0	0	0	3	1	0	0	0	5	7	0	1	0	7	2	0	0	0	6	0	32
Total	0	0	1	5	6	0	1	0	21	13	0	2	0	11	14	0	0	0	10	5	89
12:00 PM	0	1	0	4	7	0	0	0	7	5	0	1	0	1	1	0	1	0	0	0	28
12:15 PM	0	2	0	9	5	0	1	0	6	5	1	3	0	4	6	0	1	0	8	4	55
12:30 PM	0	1	0	4	0	0	1	0	3	6	0	0	0	2	13	0	1	1	1	8	41
12:45 PM	0	2	0	4	2	0	0	0	3	3	0	0	0	1	5	0	0	0	0	4	24
Total	0	6	0	21	14	0	2	0	19	19	1	4	0	8	25	0	3	1	9	16	148
01:00 PM	0	0	0	0	4	0	0	0	2	8	0	0	0	6	6	0	1	0	0	3	30
01:15 PM	0	0	0	8	4	0	1	0	4	8	0	0	0	3	4	0	0	0	0	2	34
01:30 PM	0	0	0	4	4	0	0	0	1	3	0	1	0	2	2	0	0	0	0	3	20
01:45 PM	0	0	0	3	3	0	0	0	1	3	0	2	0	1	4	0	0	0	2	0	19
Total	0	0	0	15	15	0	1	0	8	22	0	3	0	12	16	0	1	0	2	8	103
Grand Total	0	6	1	41	35	0	4	0	48	54	1	9	0	31	55	0	4	1	21	29	340
Apprch %	0	7.2	1.2	49.4	42.2	0	3.8	0	45.3	50.9	1	9.4	0	32.3	57.3	0	7.3	1.8	38.2	52.7	
Total %	0	1.8	0.3	12.1	10.3	0	1.2	0	14.1	15.9	0.3	2.6	0	9.1	16.2	0	1.2	0.3	6.2	8.5	

	Market Street From North						North Beacon Street From East						Market Street From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 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	3	1	4	0	0	0	5	7	12	0	1	0	7	2	10	0	0	0	6	0	6	32
12:00 PM	0	1	0	4	7	12	0	0	0	7	5	12	0	1	0	1	1	3	0	1	0	0	0	1	28
12:15 PM	0	2	0	9	5	16	0	1	0	6	5	12	1	3	0	4	6	14	0	1	0	8	4	13	55
12:30 PM	0	1	0	4	0	5	0	1	0	3	6	10	0	0	0	2	13	15	0	1	1	1	8	11	41
Total Volume	0	4	0	20	13	37	0	2	0	21	23	46	1	5	0	14	22	42	0	3	1	15	12	31	156
% App. Total	0	10.8	0	54.1	35.1		0	4.3	0	45.7	50		2.4	11.9	0	33.3	52.4		0	9.7	3.2	48.4	38.7		
PHF	.000	.500	.000	.556	.464	.578	.000	.500	.000	.750	.821	.958	.250	.417	.000	.500	.423	.700	.000	.750	.250	.469	.375	.596	.709

PRECISION DATA INDUSTRIES, LLC
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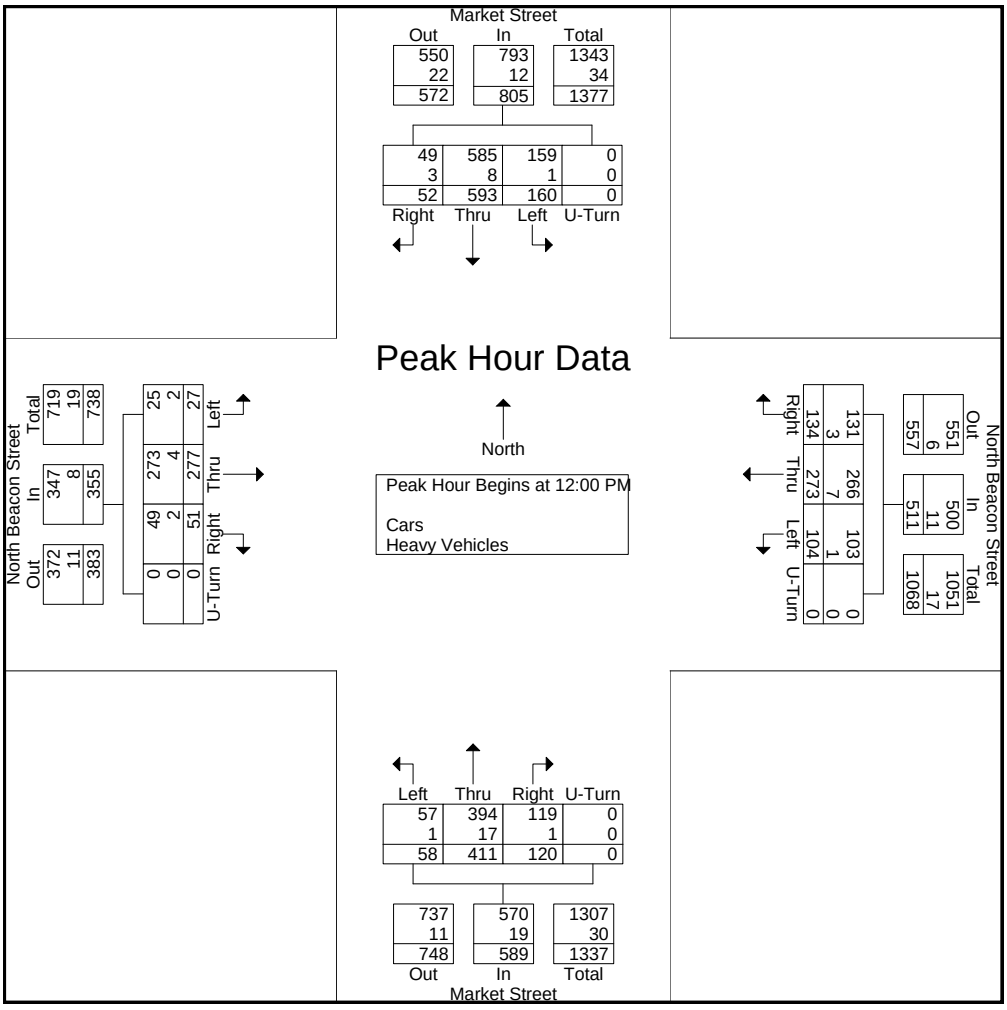
N/S: Market Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 AAA
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

	Market Street From North					North Beacon Street From East					Market Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	18	167	41	0	226	36	61	25	0	122	29	91	15	0	135	10	75	4	0	89	572
12:15 PM	18	135	35	0	188	42	70	22	0	134	29	97	11	0	137	11	64	5	0	80	539
12:30 PM	9	138	41	0	188	31	68	34	0	133	31	110	15	0	156	18	78	7	0	103	580
12:45 PM	7	153	43	0	203	25	74	23	0	122	31	113	17	0	161	12	60	11	0	83	569
Total Volume	52	593	160	0	805	134	273	104	0	511	120	411	58	0	589	51	277	27	0	355	2260
% App. Total	6.5	73.7	19.9	0		26.2	53.4	20.4	0		20.4	69.8	9.8	0		14.4	78	7.6	0		
PHF	.722	.888	.930	.000	.890	.798	.922	.765	.000	.953	.968	.909	.853	.000	.915	.708	.888	.614	.000	.862	.974
Cars	49	585	159	0	793	131	266	103	0	500	119	394	57	0	570	49	273	25	0	347	2210
% Cars	94.2	98.7	99.4	0	98.5	97.8	97.4	99.0	0	97.8	99.2	95.9	98.3	0	96.8	96.1	98.6	92.6	0	97.7	97.8
Heavy Vehicles	3	8	1	0	12	3	7	1	0	11	1	17	1	0	19	2	4	2	0	8	50
% Heavy Vehicles	5.8	1.3	0.6	0	1.5	2.2	2.6	1.0	0	2.2	0.8	4.1	1.7	0	3.2	3.9	1.4	7.4	0	2.3	2.2



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E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 B
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Life Street From North				North Beacon Street From East				Etna Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	1	0	0	1	70	1	0	0	0	0	0	1	100	1	0	176
07:15 AM	2	0	4	0	1	87	0	0	0	0	0	0	0	125	3	0	222
07:30 AM	3	0	5	0	4	95	3	0	0	0	0	0	1	130	1	0	242
07:45 AM	1	0	4	0	1	115	0	0	0	0	0	0	0	127	0	0	248
Total	7	1	13	0	7	367	4	0	0	0	0	0	2	482	5	0	888
08:00 AM	3	0	6	0	3	111	1	0	0	0	0	0	1	147	1	0	273
08:15 AM	3	0	3	0	6	127	3	0	0	0	0	0	3	104	6	0	255
08:30 AM	2	0	6	0	4	118	0	0	0	0	0	0	3	153	1	0	287
08:45 AM	4	2	4	0	7	102	3	0	0	0	0	0	2	125	2	0	251
Total	12	2	19	0	20	458	7	0	0	0	0	0	9	529	10	0	1066
Grand Total	19	3	32	0	27	825	11	0	0	0	0	0	11	1011	15	0	1954
Apprch %	35.2	5.6	59.3	0	3.1	95.6	1.3	0	0	0	0	0	1.1	97.5	1.4	0	
Total %	1	0.2	1.6	0	1.4	42.2	0.6	0	0	0	0	0	0.6	51.7	0.8	0	
Cars	16	3	26	0	24	781	11	0	0	0	0	0	10	955	15	0	1841
% Cars	84.2	100	81.2	0	88.9	94.7	100	0	0	0	0	0	90.9	94.5	100	0	94.2
Heavy Vehicles	3	0	6	0	3	44	0	0	0	0	0	0	1	56	0	0	113
% Heavy Vehicles	15.8	0	18.8	0	11.1	5.3	0	0	0	0	0	0	9.1	5.5	0	0	5.8

	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	3	0	6	0	9	3	111	1	0	115	0	0	0	0	0	1	147	1	0	149	273
08:15 AM	3	0	3	0	6	6	127	3	0	136	0	0	0	0	0	3	104	6	0	113	255
08:30 AM	2	0	6	0	8	4	118	0	0	122	0	0	0	0	0	3	153	1	0	157	287
08:45 AM	4	2	4	0	10	7	102	3	0	112	0	0	0	0	0	2	125	2	0	129	251
Total Volume	12	2	19	0	33	20	458	7	0	485	0	0	0	0	0	9	529	10	0	548	1066
% App. Total	36.4	6.1	57.6	0		4.1	94.4	1.4	0		0	0	0	0		1.6	96.5	1.8	0		
PHF	.750	.250	.792	.000	.825	.714	.902	.583	.000	.892	.000	.000	.000	.000	.000	.750	.864	.417	.000	.873	.929
Cars	10	2	17	0	29	18	437	7	0	462	0	0	0	0	0	8	504	10	0	522	1013
% Cars	83.3	100	89.5	0	87.9	90.0	95.4	100	0	95.3	0	0	0	0	0	88.9	95.3	100	0	95.3	95.0
Heavy Vehicles	2	0	2	0	4	2	21	0	0	23	0	0	0	0	0	1	25	0	0	26	53
% Heavy Vehicles	16.7	0	10.5	0	12.1	10.0	4.6	0	0	4.7	0	0	0	0	0	11.1	4.7	0	0	4.7	5.0

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E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 B
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Life Street From North				North Beacon Street From East				Etna Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	1	0	0	1	66	1	0	0	0	0	0	1	95	1	0	167
07:15 AM	2	0	3	0	1	77	0	0	0	0	0	0	0	117	3	0	203
07:30 AM	2	0	3	0	3	93	3	0	0	0	0	0	1	120	1	0	226
07:45 AM	1	0	3	0	1	108	0	0	0	0	0	0	0	119	0	0	232
Total	6	1	9	0	6	344	4	0	0	0	0	0	2	451	5	0	828
08:00 AM	3	0	5	0	3	103	1	0	0	0	0	0	1	141	1	0	258
08:15 AM	3	0	2	0	5	124	3	0	0	0	0	0	3	98	6	0	244
08:30 AM	1	0	6	0	3	114	0	0	0	0	0	0	2	147	1	0	274
08:45 AM	3	2	4	0	7	96	3	0	0	0	0	0	2	118	2	0	237
Total	10	2	17	0	18	437	7	0	0	0	0	0	8	504	10	0	1013
Grand Total	16	3	26	0	24	781	11	0	0	0	0	0	10	955	15	0	1841
Apprch %	35.6	6.7	57.8	0	2.9	95.7	1.3	0	0	0	0	0	1	97.4	1.5	0	
Total %	0.9	0.2	1.4	0	1.3	42.4	0.6	0	0	0	0	0	0.5	51.9	0.8	0	

	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	3	0	5	0	8	3	103	1	0	107	0	0	0	0	0	1	141	1	0	143	258
08:15 AM	3	0	2	0	5	5	124	3	0	132	0	0	0	0	0	3	98	6	0	107	244
08:30 AM	1	0	6	0	7	3	114	0	0	117	0	0	0	0	0	2	147	1	0	150	274
08:45 AM	3	2	4	0	9	7	96	3	0	106	0	0	0	0	0	2	118	2	0	122	237
Total Volume	10	2	17	0	29	18	437	7	0	462	0	0	0	0	0	8	504	10	0	522	1013
% App. Total	34.5	6.9	58.6	0		3.9	94.6	1.5	0		0	0	0	0		1.5	96.6	1.9	0		
PHF	.833	.250	.708	.000	.806	.643	.881	.583	.000	.875	.000	.000	.000	.000	.000	.667	.857	.417	.000	.870	.924

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 B
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Life Street From North				North Beacon Street From East				Etna Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	5	0	0	9
07:15 AM	0	0	1	0	0	10	0	0	0	0	0	0	0	8	0	0	19
07:30 AM	1	0	2	0	1	2	0	0	0	0	0	0	0	10	0	0	16
07:45 AM	0	0	1	0	0	7	0	0	0	0	0	0	0	8	0	0	16
Total	1	0	4	0	1	23	0	0	0	0	0	0	0	31	0	0	60
08:00 AM	0	0	1	0	0	8	0	0	0	0	0	0	0	6	0	0	15
08:15 AM	0	0	1	0	1	3	0	0	0	0	0	0	0	6	0	0	11
08:30 AM	1	0	0	0	1	4	0	0	0	0	0	0	1	6	0	0	13
08:45 AM	1	0	0	0	0	6	0	0	0	0	0	0	0	7	0	0	14
Total	2	0	2	0	2	21	0	0	0	0	0	0	1	25	0	0	53
Grand Total	3	0	6	0	3	44	0	0	0	0	0	0	1	56	0	0	113
Apprch %	33.3	0	66.7	0	6.4	93.6	0	0	0	0	0	0	1.8	98.2	0	0	
Total %	2.7	0	5.3	0	2.7	38.9	0	0	0	0	0	0	0.9	49.6	0	0	

	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	0	8	0	0	8	19
07:30 AM	1	0	2	0	3	1	2	0	0	3	0	0	0	0	0	0	10	0	0	10	16
07:45 AM	0	0	1	0	1	0	7	0	0	7	0	0	0	0	0	0	8	0	0	8	16
08:00 AM	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	0	6	0	0	6	15
Total Volume	1	0	5	0	6	1	27	0	0	28	0	0	0	0	0	0	32	0	0	32	66
% App. Total	16.7	0	83.3	0		3.6	96.4	0	0		0	0	0	0		0	100	0	0		
PHF	.250	.000	.625	.000	.500	.250	.675	.000	.000	.700	.000	.000	.000	.000	.000	.000	.800	.000	.000	.800	.868

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 B
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Peds and Bikes

	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	6
07:15 AM	0	0	0	3	0	0	0	0	1	0	1	0	0	4	4	0	2	0	1	0	16
07:30 AM	0	0	0	1	2	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	6
07:45 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	6	3	0	0	0	3	0	14
Total	0	0	0	7	4	0	0	0	1	0	1	0	0	11	9	0	5	0	4	0	42
08:00 AM	0	0	0	0	1	0	2	0	0	0	0	0	0	2	6	0	5	0	2	0	18
08:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	6	2	0	4	0	1	0	15
08:30 AM	0	0	0	1	1	0	3	0	0	0	0	0	0	2	1	0	1	0	5	1	15
08:45 AM	0	0	0	2	8	0	0	0	0	0	0	0	0	0	3	0	3	0	4	0	20
Total	0	0	0	3	12	0	5	0	0	0	0	0	0	10	12	0	13	0	12	1	68
Grand Total	0	0	0	10	16	0	5	0	1	0	1	0	0	21	21	0	18	0	16	1	110
Apprch %	0	0	0	38.5	61.5	0	83.3	0	16.7	0	2.3	0	0	48.8	48.8	0	51.4	0	45.7	2.9	
Total %	0	0	0	9.1	14.5	0	4.5	0	0.9	0	0.9	0	0	19.1	19.1	0	16.4	0	14.5	0.9	

	Life Street From North						North Beacon Street From East						Etna Street From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	1	1	0	2	0	0	0	2	0	0	0	2	6	8	0	5	0	2	0	7	18
08:15 AM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	6	2	8	0	4	0	1	0	5	15
08:30 AM	0	0	0	1	1	2	0	3	0	0	0	3	0	0	0	2	1	3	0	1	0	5	1	7	15
08:45 AM	0	0	0	2	8	10	0	0	0	0	0	0	0	0	0	0	3	3	0	3	0	4	0	7	20
Total Volume	0	0	0	3	12	15	0	5	0	0	0	5	0	0	0	10	12	22	0	13	0	12	1	26	68
% App. Total	0	0	0	20	80		0	100	0	0	0		0	0	0	45.5	54.5		0	50	0	46.2	3.8		
PHF	.000	.000	.000	.375	.375	.375	.000	.417	.000	.000	.000	.417	.000	.000	.000	.417	.500	.688	.000	.650	.000	.600	.250	.929	.850

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File Name : 165041 B
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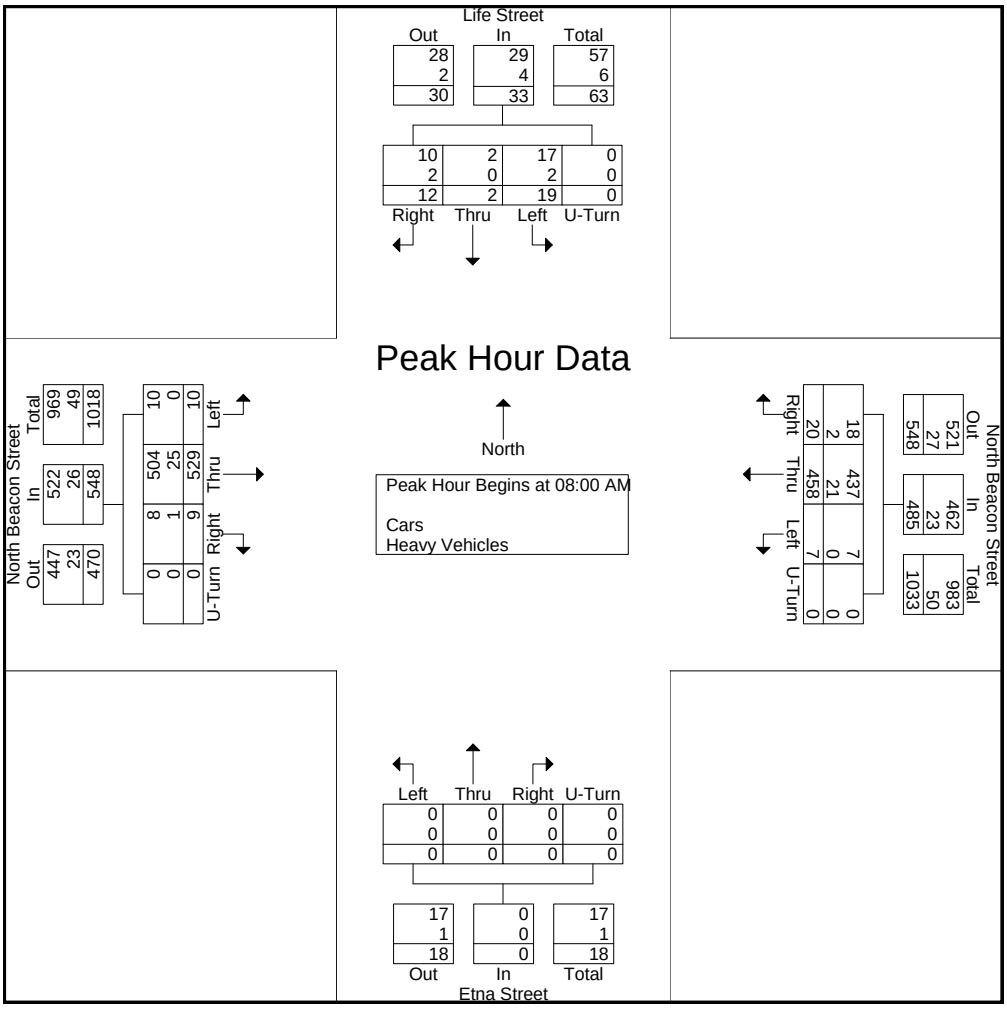
	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	3	0	6	0	9	3	111	1	0	115	0	0	0	0	0	1	147	1	0	149	273
08:15 AM	3	0	3	0	6	6	127	3	0	136	0	0	0	0	0	3	104	6	0	113	255
08:30 AM	2	0	6	0	8	4	118	0	0	122	0	0	0	0	0	3	153	1	0	157	287
08:45 AM	4	2	4	0	10	7	102	3	0	112	0	0	0	0	0	2	125	2	0	129	251
Total Volume	12	2	19	0	33	20	458	7	0	485	0	0	0	0	0	9	529	10	0	548	1066
% App. Total	36.4	6.1	57.6	0		4.1	94.4	1.4	0		0	0	0	0		1.6	96.5	1.8	0		
PHF	.750	.250	.792	.000	.825	.714	.902	.583	.000	.892	.000	.000	.000	.000	.000	.750	.864	.417	.000	.873	.929
Cars	10	2	17	0	29	18	437	7	0	462	0	0	0	0	0	8	504	10	0	522	1013
% Cars	83.3	100	89.5	0	87.9	90.0	95.4	100	0	95.3	0	0	0	0	0	88.9	95.3	100	0	95.3	95.0
Heavy Vehicles	2	0	2	0	4	2	21	0	0	23	0	0	0	0	0	1	25	0	0	26	53
% Heavy Vehicles	16.7	0	10.5	0	12.1	10.0	4.6	0	0	4.7	0	0	0	0	0	11.1	4.7	0	0	4.7	5.0



PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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N/S: Life Street/ Etna Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 BB
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Life Street From North				North Beacon Street From East				Etna Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	7	0	2	0	1	118	1	0	0	0	0	0	0	114	2	0	245
04:15 PM	3	0	6	0	2	146	1	0	0	0	0	0	2	115	0	0	275
04:30 PM	3	2	8	0	2	144	3	0	0	0	0	0	5	105	1	0	273
04:45 PM	7	0	10	0	0	138	4	0	0	0	0	0	2	128	0	0	289
Total	20	2	26	0	5	546	9	0	0	0	0	0	9	462	3	0	1082
05:00 PM	11	2	11	0	3	150	4	0	0	0	0	0	2	167	5	0	355
05:15 PM	13	4	14	0	2	166	3	0	0	0	0	0	4	127	4	0	337
05:30 PM	9	2	19	0	2	137	5	0	0	0	0	0	2	159	2	0	337
05:45 PM	10	8	20	0	4	123	3	0	0	0	0	0	6	159	0	0	333
Total	43	16	64	0	11	576	15	0	0	0	0	0	14	612	11	0	1362
Grand Total	63	18	90	0	16	1122	24	0	0	0	0	0	23	1074	14	0	2444
Apprch %	36.8	10.5	52.6	0	1.4	96.6	2.1	0	0	0	0	0	2.1	96.7	1.3	0	
Total %	2.6	0.7	3.7	0	0.7	45.9	1	0	0	0	0	0	0.9	43.9	0.6	0	
Cars	63	18	90	0	16	1098	24	0	0	0	0	0	23	1054	13	0	2399
% Cars	100	100	100	0	100	97.9	100	0	0	0	0	0	100	98.1	92.9	0	98.2
Heavy Vehicles	0	0	0	0	0	24	0	0	0	0	0	0	0	20	1	0	45
% Heavy Vehicles	0	0	0	0	0	2.1	0	0	0	0	0	0	0	1.9	7.1	0	1.8

	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	11	2	11	0	24	3	150	4	0	157	0	0	0	0	0	2	167	5	0	174	355
05:15 PM	13	4	14	0	31	2	166	3	0	171	0	0	0	0	0	4	127	4	0	135	337
05:30 PM	9	2	19	0	30	2	137	5	0	144	0	0	0	0	0	2	159	2	0	163	337
05:45 PM	10	8	20	0	38	4	123	3	0	130	0	0	0	0	0	6	159	0	0	165	333
Total Volume	43	16	64	0	123	11	576	15	0	602	0	0	0	0	0	14	612	11	0	637	1362
% App. Total	35	13	52	0		1.8	95.7	2.5	0		0	0	0	0		2.2	96.1	1.7	0		
PHF	.827	.500	.800	.000	.809	.688	.867	.750	.000	.880	.000	.000	.000	.000	.000	.583	.916	.550	.000	.915	.959
Cars	43	16	64	0	123	11	565	15	0	591	0	0	0	0	0	14	605	10	0	629	1343
% Cars	100	100	100	0	100	100	98.1	100	0	98.2	0	0	0	0	0	100	98.9	90.9	0	98.7	98.6
Heavy Vehicles	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	7	1	0	8	19
% Heavy Vehicles	0	0	0	0	0	0	1.9	0	0	1.8	0	0	0	0	0	0	1.1	9.1	0	1.3	1.4

PRECISION
D A T A
INDUSTRIES, LLC
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N/S: Life Street/ Etna Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 BB
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Life Street From North				North Beacon Street From East				Etna Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	7	0	2	0	1	113	1	0	0	0	0	0	0	110	2	0	236
04:15 PM	3	0	6	0	2	143	1	0	0	0	0	0	2	111	0	0	268
04:30 PM	3	2	8	0	2	140	3	0	0	0	0	0	5	104	1	0	268
04:45 PM	7	0	10	0	0	137	4	0	0	0	0	0	2	124	0	0	284
Total	20	2	26	0	5	533	9	0	0	0	0	0	9	449	3	0	1056
05:00 PM	11	2	11	0	3	145	4	0	0	0	0	0	2	165	4	0	347
05:15 PM	13	4	14	0	2	164	3	0	0	0	0	0	4	126	4	0	334
05:30 PM	9	2	19	0	2	134	5	0	0	0	0	0	2	156	2	0	331
05:45 PM	10	8	20	0	4	122	3	0	0	0	0	0	6	158	0	0	331
Total	43	16	64	0	11	565	15	0	0	0	0	0	14	605	10	0	1343
Grand Total	63	18	90	0	16	1098	24	0	0	0	0	0	23	1054	13	0	2399
Apprch %	36.8	10.5	52.6	0	1.4	96.5	2.1	0	0	0	0	0	2.1	96.7	1.2	0	
Total %	2.6	0.8	3.8	0	0.7	45.8	1	0	0	0	0	0	1	43.9	0.5	0	

	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	11	2	11	0	24	3	145	4	0	152	0	0	0	0	0	2	165	4	0	171	347
05:15 PM	13	4	14	0	31	2	164	3	0	169	0	0	0	0	0	4	126	4	0	134	334
05:30 PM	9	2	19	0	30	2	134	5	0	141	0	0	0	0	0	2	156	2	0	160	331
05:45 PM	10	8	20	0	38	4	122	3	0	129	0	0	0	0	0	6	158	0	0	164	331
Total Volume	43	16	64	0	123	11	565	15	0	591	0	0	0	0	0	14	605	10	0	629	1343
% App. Total	35	13	52	0		1.9	95.6	2.5	0		0	0	0	0		2.2	96.2	1.6	0		
PHF	.827	.500	.800	.000	.809	.688	.861	.750	.000	.874	.000	.000	.000	.000	.000	.583	.917	.625	.000	.920	.968

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 BB
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Life Street From North				North Beacon Street From East				Etna Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	4	0	0	9
04:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	4	0	0	7
04:30 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0	5
04:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	5
Total	0	0	0	0	0	13	0	0	0	0	0	0	0	13	0	0	26
05:00 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	2	1	0	8
05:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
05:30 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	6
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
Total	0	0	0	0	0	11	0	0	0	0	0	0	0	7	1	0	19
Grand Total	0	0	0	0	0	24	0	0	0	0	0	0	0	20	1	0	45
Apprch %	0	0	0	0	0	100	0	0	0	0	0	0	0	95.2	4.8	0	
Total %	0	0	0	0	0	53.3	0	0	0	0	0	0	0	44.4	2.2	0	

	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	9
04:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	7
04:30 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	5
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	5
Total Volume	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	13	0	0	13	26
% App. Total	0	0	0	0		0	100	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.650	.000	.000	.650	.000	.000	.000	.000	.000	.000	.813	.000	.000	.813	.722

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 BB
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Peds and Bikes

	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	1	0	0	0	0	3	0	0	0	0	3	3	0	0	0	0	3	13
04:15 PM	0	0	0	1	0	0	3	0	0	0	0	0	0	5	2	0	1	0	0	0	12
04:30 PM	0	0	0	4	1	0	1	2	4	0	0	0	0	5	3	0	0	0	0	4	24
04:45 PM	0	0	0	0	1	0	3	0	2	3	0	0	0	6	3	0	1	0	3	3	25
Total	0	0	0	6	2	0	7	2	9	3	0	0	0	19	11	0	2	0	3	10	74
05:00 PM	0	0	0	3	1	0	0	0	1	0	0	0	0	4	3	0	2	0	1	4	19
05:15 PM	0	0	0	5	3	0	2	0	0	0	0	0	0	8	8	0	2	0	1	7	36
05:30 PM	0	0	0	4	2	0	1	0	0	0	0	0	0	11	5	0	0	0	2	13	38
05:45 PM	0	0	0	3	2	0	3	0	1	1	0	0	0	6	6	0	0	0	2	3	27
Total	0	0	0	15	8	0	6	0	2	1	0	0	0	29	22	0	4	0	6	27	120
Grand Total	0	0	0	21	10	0	13	2	11	4	0	0	0	48	33	0	6	0	9	37	194
Apprch %	0	0	0	67.7	32.3	0	43.3	6.7	36.7	13.3	0	0	0	59.3	40.7	0	11.5	0	17.3	71.2	
Total %	0	0	0	10.8	5.2	0	6.7	1	5.7	2.1	0	0	0	24.7	17	0	3.1	0	4.6	19.1	

	Life Street From North						North Beacon Street From East						Etna Street From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	3	1	4	0	0	0	1	0	1	0	0	0	4	3	7	0	2	0	1	4	7	19
05:15 PM	0	0	0	5	3	8	0	2	0	0	0	2	0	0	0	8	8	16	0	2	0	1	7	10	36
05:30 PM	0	0	0	4	2	6	0	1	0	0	0	1	0	0	0	11	5	16	0	0	0	2	13	15	38
05:45 PM	0	0	0	3	2	5	0	3	0	1	1	5	0	0	0	6	6	12	0	0	0	2	3	5	27
Total Volume	0	0	0	15	8	23	0	6	0	2	1	9	0	0	0	29	22	51	0	4	0	6	27	37	120
% App. Total	0	0	0	65.2	34.8		0	66.7	0	22.2	11.1		0	0	0	56.9	43.1		0	10.8	0	16.2	73		
PHF	.000	.000	.000	.750	.667	.719	.000	.500	.000	.500	.250	.450	.000	.000	.000	.659	.688	.797	.000	.500	.000	.750	.519	.617	.789

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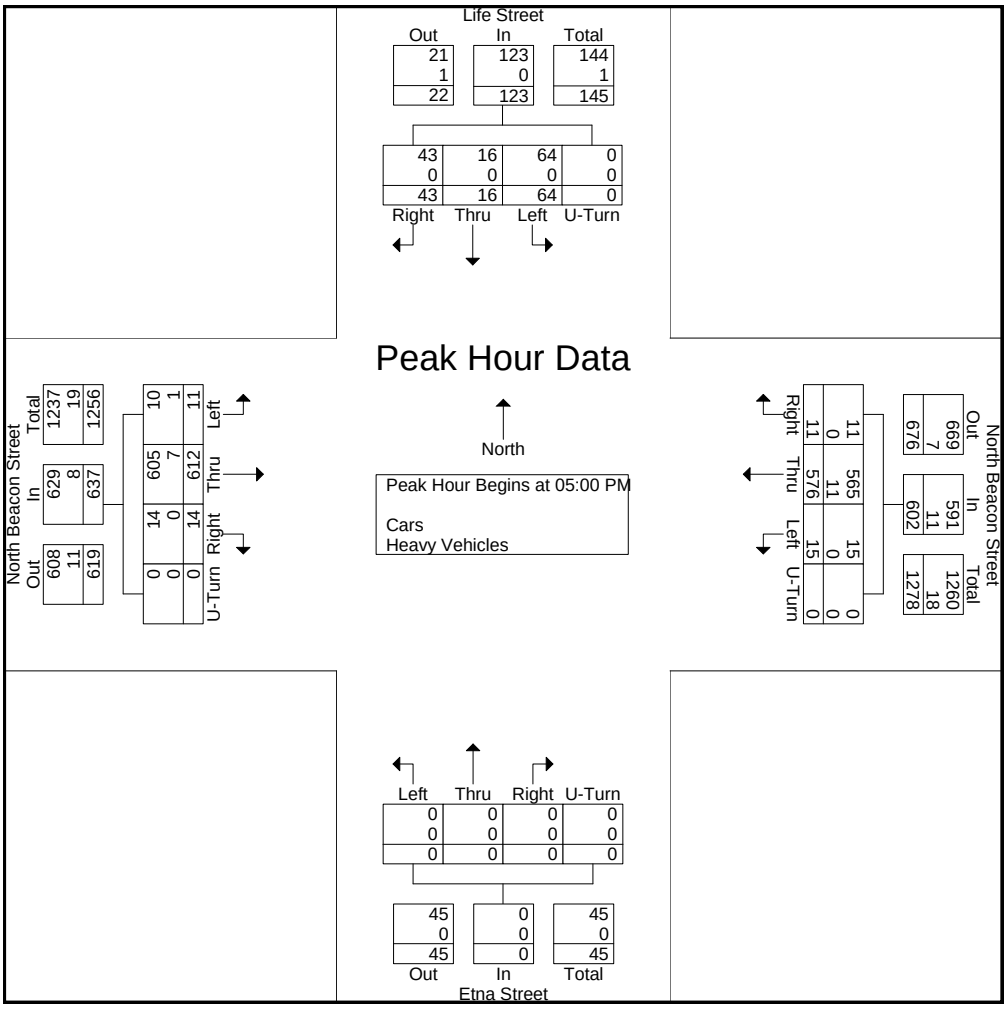
	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	11	2	11	0	24	3	150	4	0	157	0	0	0	0	0	2	167	5	0	174	355
05:15 PM	13	4	14	0	31	2	166	3	0	171	0	0	0	0	0	4	127	4	0	135	337
05:30 PM	9	2	19	0	30	2	137	5	0	144	0	0	0	0	0	2	159	2	0	163	337
05:45 PM	10	8	20	0	38	4	123	3	0	130	0	0	0	0	0	6	159	0	0	165	333
Total Volume	43	16	64	0	123	11	576	15	0	602	0	0	0	0	0	14	612	11	0	637	1362
% App. Total	35	13	52	0		1.8	95.7	2.5	0		0	0	0	0		2.2	96.1	1.7	0		
PHF	.827	.500	.800	.000	.809	.688	.867	.750	.000	.880	.000	.000	.000	.000	.000	.583	.916	.550	.000	.915	.959
Cars	43	16	64	0	123	11	565	15	0	591	0	0	0	0	0	14	605	10	0	629	1343
% Cars	100	100	100	0	100	100	98.1	100	0	98.2	0	0	0	0	0	100	98.9	90.9	0	98.7	98.6
Heavy Vehicles	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	7	1	0	8	19
% Heavy Vehicles	0	0	0	0	0	0	1.9	0	0	1.8	0	0	0	0	0	0	1.1	9.1	0	1.3	1.4



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Client: VHB/ A. Santiago

File Name : 165041 BBB
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Life Street From North				North Beacon Street From East				Etna Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	2	0	4	0	1	110	3	0	0	0	0	0	3	108	3	1	235
11:15 AM	7	0	4	0	4	104	1	0	0	0	0	0	1	122	1	1	245
11:30 AM	3	1	1	0	4	114	4	0	0	0	0	0	3	115	0	0	245
11:45 AM	4	0	3	0	4	92	3	0	0	0	0	0	2	129	2	0	239
Total	16	1	12	0	13	420	11	0	0	0	0	0	9	474	6	2	964
12:00 PM	11	0	7	0	0	119	3	0	0	0	0	0	5	141	0	0	286
12:15 PM	5	0	2	0	3	127	1	1	0	0	0	0	0	119	3	0	261
12:30 PM	5	0	1	0	0	117	3	0	0	0	0	0	1	139	3	0	269
12:45 PM	3	0	3	0	5	121	3	0	0	0	0	0	4	135	2	0	276
Total	24	0	13	0	8	484	10	1	0	0	0	0	10	534	8	0	1092
01:00 PM	5	0	2	0	5	122	3	0	0	0	0	0	4	139	1	0	281
01:15 PM	4	0	6	0	1	130	2	0	0	0	0	0	4	125	7	0	279
01:30 PM	3	3	2	0	1	129	2	0	0	0	0	0	1	130	1	0	272
01:45 PM	5	0	5	0	2	110	3	1	0	0	0	0	3	118	1	0	248
Total	17	3	15	0	9	491	10	1	0	0	0	0	12	512	10	0	1080
Grand Total	57	4	40	0	30	1395	31	2	0	0	0	0	31	1520	24	2	3136
Apprch %	56.4	4	39.6	0	2.1	95.7	2.1	0.1	0	0	0	0	2	96.4	1.5	0.1	
Total %	1.8	0.1	1.3	0	1	44.5	1	0.1	0	0	0	0	1	48.5	0.8	0.1	
Cars	57	4	39	0	30	1364	30	2	0	0	0	0	31	1499	24	2	3082
% Cars	100	100	97.5	0	100	97.8	96.8	100	0	0	0	0	100	98.6	100	100	98.3
Heavy Vehicles	0	0	1	0	0	31	1	0	0	0	0	0	0	21	0	0	54
% Heavy Vehicles	0	0	2.5	0	0	2.2	3.2	0	0	0	0	0	0	1.4	0	0	1.7

	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45 PM																					
12:45 PM	3	0	3	0	6	5	121	3	0	129	0	0	0	0	0	4	135	2	0	141	276
01:00 PM	5	0	2	0	7	5	122	3	0	130	0	0	0	0	0	4	139	1	0	144	281
01:15 PM	4	0	6	0	10	1	130	2	0	133	0	0	0	0	0	4	125	7	0	136	279
01:30 PM	3	3	2	0	8	1	129	2	0	132	0	0	0	0	0	1	130	1	0	132	272
Total Volume	15	3	13	0	31	12	502	10	0	524	0	0	0	0	0	13	529	11	0	553	1108
% App. Total	48.4	9.7	41.9	0		2.3	95.8	1.9	0		0	0	0	0		2.4	95.7	2	0		
PHF	.750	.250	.542	.000	.775	.600	.965	.833	.000	.985	.000	.000	.000	.000	.000	.813	.951	.393	.000	.960	.986
Cars	15	3	12	0	30	12	494	10	0	516	0	0	0	0	0	13	519	11	0	543	1089
% Cars	100	100	92.3	0	96.8	100	98.4	100	0	98.5	0	0	0	0	0	100	98.1	100	0	98.2	98.3
Heavy Vehicles	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	0	10	0	0	10	19
% Heavy Vehicles	0	0	7.7	0	3.2	0	1.6	0	0	1.5	0	0	0	0	0	0	1.9	0	0	1.8	1.7

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508.875.0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

N/S: Life Street/ Etna Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 BBB
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars

	Life Street From North				North Beacon Street From East				Etna Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	2	0	4	0	1	108	3	0	0	0	0	0	3	107	3	1	232
11:15 AM	7	0	4	0	4	102	1	0	0	0	0	0	1	122	1	1	243
11:30 AM	3	1	1	0	4	109	3	0	0	0	0	0	3	113	0	0	237
11:45 AM	4	0	3	0	4	92	3	0	0	0	0	0	2	127	2	0	237
Total	16	1	12	0	13	411	10	0	0	0	0	0	9	469	6	2	949
12:00 PM	11	0	7	0	0	115	3	0	0	0	0	0	5	139	0	0	280
12:15 PM	5	0	2	0	3	124	1	1	0	0	0	0	0	118	3	0	257
12:30 PM	5	0	1	0	0	115	3	0	0	0	0	0	1	138	3	0	266
12:45 PM	3	0	3	0	5	118	3	0	0	0	0	0	4	134	2	0	272
Total	24	0	13	0	8	472	10	1	0	0	0	0	10	529	8	0	1075
01:00 PM	5	0	2	0	5	120	3	0	0	0	0	0	4	135	1	0	275
01:15 PM	4	0	5	0	1	129	2	0	0	0	0	0	4	124	7	0	276
01:30 PM	3	3	2	0	1	127	2	0	0	0	0	0	1	126	1	0	266
01:45 PM	5	0	5	0	2	105	3	1	0	0	0	0	3	116	1	0	241
Total	17	3	14	0	9	481	10	1	0	0	0	0	12	501	10	0	1058
Grand Total	57	4	39	0	30	1364	30	2	0	0	0	0	31	1499	24	2	3082
Apprch %	57	4	39	0	2.1	95.7	2.1	0.1	0	0	0	0	2	96.3	1.5	0.1	
Total %	1.8	0.1	1.3	0	1	44.3	1	0.1	0	0	0	0	1	48.6	0.8	0.1	

	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	5	0	1	0	6	0	115	3	0	118	0	0	0	0	0	1	138	3	0	142	266
12:45 PM	3	0	3	0	6	5	118	3	0	126	0	0	0	0	0	4	134	2	0	140	272
01:00 PM	5	0	2	0	7	5	120	3	0	128	0	0	0	0	0	4	135	1	0	140	275
01:15 PM	4	0	5	0	9	1	129	2	0	132	0	0	0	0	0	4	124	7	0	135	276
Total Volume	17	0	11	0	28	11	482	11	0	504	0	0	0	0	0	13	531	13	0	557	1089
% App. Total	60.7	0	39.3	0		2.2	95.6	2.2	0		0	0	0	0		2.3	95.3	2.3	0		
PHF	.850	.000	.550	.000	.778	.550	.934	.917	.000	.955	.000	.000	.000	.000	.000	.813	.962	.464	.000	.981	.986

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Email: datarequests@pdillc.com

N/S: Life Street/ Etna Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 BBB
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Life Street From North				North Beacon Street From East				Etna Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
11:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
11:30 AM	0	0	0	0	0	5	1	0	0	0	0	0	0	2	0	0	8
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Total	0	0	0	0	0	9	1	0	0	0	0	0	0	5	0	0	15
12:00 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	2	0	0	6
12:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	4
12:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
12:45 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	4
Total	0	0	0	0	0	12	0	0	0	0	0	0	0	5	0	0	17
01:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0	6
01:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	3
01:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0	6
01:45 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	2	0	0	7
Total	0	0	1	0	0	10	0	0	0	0	0	0	0	11	0	0	22
Grand Total	0	0	1	0	0	31	1	0	0	0	0	0	0	21	0	0	54
Apprch %	0	0	100	0	0	96.9	3.1	0	0	0	0	0	0	100	0	0	
Total %	0	0	1.9	0	0	57.4	1.9	0	0	0	0	0	0	38.9	0	0	

	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6
01:15 PM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3
01:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6
01:45 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	7
Total Volume	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	0	11	0	0	11	22
% App. Total	0	0	100	0		0	100	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.250	.000	.250	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.688	.000	.000	.688	.786

PRECISION DATA INDUSTRIES, LLC
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N/S: Life Street/ Etna Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 BBB
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Peds and Bikes

	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	1	1	0	2	0	0	0	0	0	0	3	3	0	0	0	1	1	12
11:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	11	0	0	0	2	1	17
11:30 AM	0	0	0	2	4	0	0	0	2	1	0	0	0	1	6	0	0	0	0	0	16
11:45 AM	0	0	0	3	3	0	0	0	0	3	0	0	0	7	3	0	0	0	1	0	20
Total	0	0	0	7	9	0	2	0	2	4	0	0	0	12	23	0	0	0	4	2	65
12:00 PM	0	0	0	18	2	0	1	0	2	0	0	0	0	3	3	0	2	0	2	8	41
12:15 PM	0	0	0	8	2	0	1	0	0	0	0	0	0	6	4	0	1	0	2	0	24
12:30 PM	0	0	0	1	1	0	1	0	0	0	0	0	0	3	4	0	2	0	0	0	12
12:45 PM	0	0	0	2	2	0	0	0	0	2	0	0	0	2	11	0	0	0	1	1	21
Total	0	0	0	29	7	0	3	0	2	2	0	0	0	14	22	0	5	0	5	9	98
01:00 PM	0	0	0	2	1	0	0	1	0	0	0	0	0	7	3	0	4	0	6	3	27
01:15 PM	0	0	0	5	1	0	0	0	0	0	0	0	0	1	11	0	1	0	7	1	27
01:30 PM	0	0	0	0	7	0	0	0	1	0	0	0	0	4	4	0	0	0	5	3	24
01:45 PM	0	0	0	3	1	0	0	0	0	1	0	0	0	4	7	0	4	0	2	2	24
Total	0	0	0	10	10	0	0	1	1	1	0	0	0	16	25	0	9	0	20	9	102
Grand Total	0	0	0	46	26	0	5	1	5	7	0	0	0	42	70	0	14	0	29	20	265
Apprch %	0	0	0	63.9	36.1	0	27.8	5.6	27.8	38.9	0	0	0	37.5	62.5	0	22.2	0	46	31.7	
Total %	0	0	0	17.4	9.8	0	1.9	0.4	1.9	2.6	0	0	0	15.8	26.4	0	5.3	0	10.9	7.5	

	Life Street From North						North Beacon Street From East						Etna Street From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 01:00 PM																									
01:00 PM	0	0	0	2	1	3	0	0	1	0	0	1	0	0	0	7	3	10	0	4	0	6	3	13	27
01:15 PM	0	0	0	5	1	6	0	0	0	0	0	0	0	0	0	1	11	12	0	1	0	7	1	9	27
01:30 PM	0	0	0	0	7	7	0	0	0	1	0	1	0	0	0	4	4	8	0	0	0	5	3	8	24
01:45 PM	0	0	0	3	1	4	0	0	0	0	1	1	0	0	0	4	7	11	0	4	0	2	2	8	24
Total Volume	0	0	0	10	10	20	0	0	1	1	1	3	0	0	0	16	25	41	0	9	0	20	9	38	102
% App. Total	0	0	0	50	50		0	0	33.3	33.3	33.3		0	0	0	39	61		0	23.7	0	52.6	23.7		
PHF	.000	.000	.000	.500	.357	.714	.000	.000	.250	.250	.250	.750	.000	.000	.000	.571	.568	.854	.000	.563	.000	.714	.750	.731	.944

PRECISION DATA INDUSTRIES, LLC
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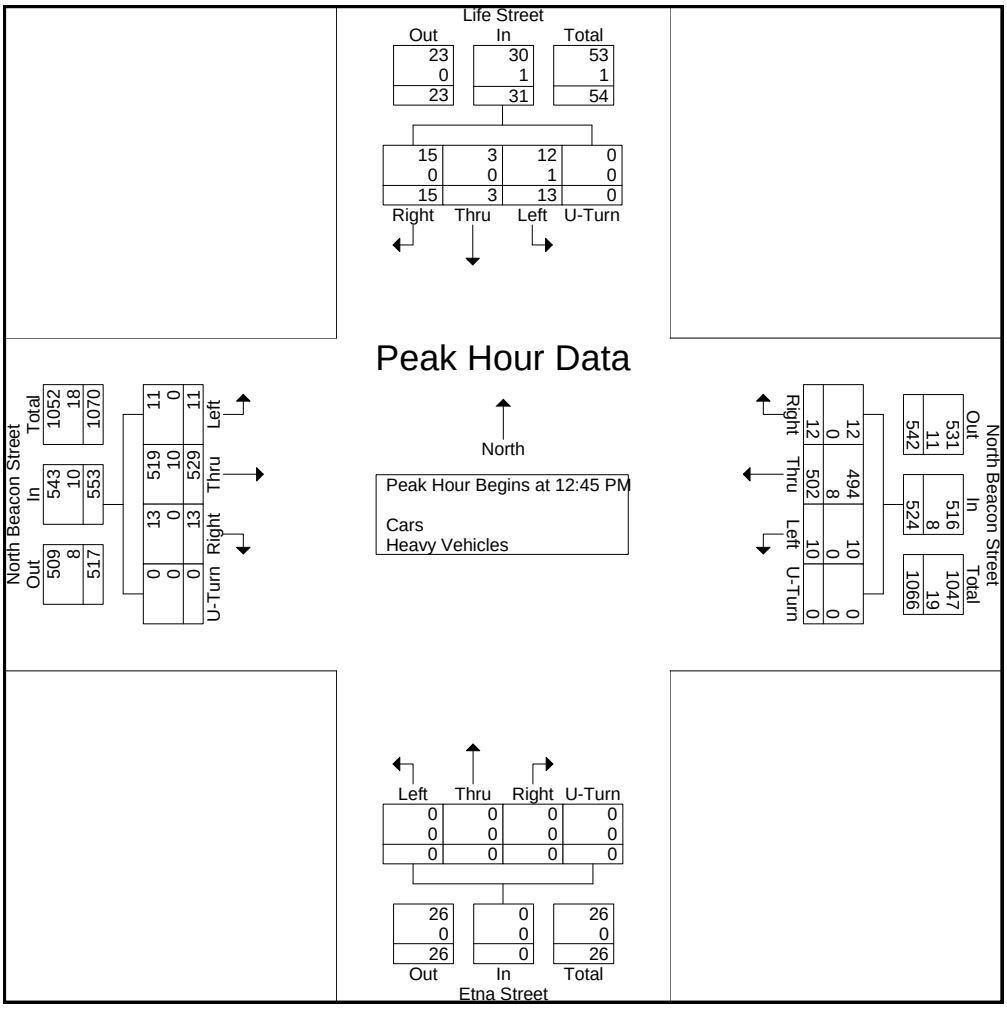
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 BBB
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

	Life Street From North					North Beacon Street From East					Etna Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45 PM																					
12:45 PM	3	0	3	0	6	5	121	3	0	129	0	0	0	0	0	4	135	2	0	141	276
01:00 PM	5	0	2	0	7	5	122	3	0	130	0	0	0	0	0	4	139	1	0	144	281
01:15 PM	4	0	6	0	10	1	130	2	0	133	0	0	0	0	0	4	125	7	0	136	279
01:30 PM	3	3	2	0	8	1	129	2	0	132	0	0	0	0	0	1	130	1	0	132	272
Total Volume	15	3	13	0	31	12	502	10	0	524	0	0	0	0	0	13	529	11	0	553	1108
% App. Total	48.4	9.7	41.9	0		2.3	95.8	1.9	0		0	0	0	0		2.4	95.7	2	0		
PHF	.750	.250	.542	.000	.775	.600	.965	.833	.000	.985	.000	.000	.000	.000	.000	.813	.951	.393	.000	.960	.986
Cars	15	3	12	0	30	12	494	10	0	516	0	0	0	0	0	13	519	11	0	543	1089
% Cars	100	100	92.3	0	96.8	100	98.4	100	0	98.5	0	0	0	0	0	100	98.1	100	0	98.2	98.3
Heavy Vehicles	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	0	10	0	0	10	19
% Heavy Vehicles	0	0	7.7	0	3.2	0	1.6	0	0	1.5	0	0	0	0	0	0	1.9	0	0	1.8	1.7



PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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N/S: Driveway/ Murdock Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 C
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Driveway From North				North Beacon Street From East				Murdock Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	0	0	0	0	66	3	0	0	0	0	0	6	97	0	0	173
07:15 AM	0	0	0	0	0	90	10	0	1	0	0	0	5	125	0	0	231
07:30 AM	0	0	0	0	0	99	10	0	0	0	0	0	8	125	0	0	242
07:45 AM	0	0	2	0	1	112	8	0	1	0	0	0	6	123	0	0	253
Total	1	0	2	0	1	367	31	0	2	0	0	0	25	470	0	0	899
08:00 AM	0	0	0	0	0	111	9	0	1	0	0	0	8	147	0	0	276
08:15 AM	0	0	0	0	0	136	14	0	0	0	0	0	3	109	0	0	262
08:30 AM	1	0	1	0	0	116	8	0	0	0	0	0	5	156	0	0	287
08:45 AM	0	0	0	0	0	115	9	0	0	0	0	0	10	127	1	0	262
Total	1	0	1	0	0	478	40	0	1	0	0	0	26	539	1	0	1087
Grand Total	2	0	3	0	1	845	71	0	3	0	0	0	51	1009	1	0	1986
Apprch %	40	0	60	0	0.1	92.1	7.7	0	100	0	0	0	4.8	95.1	0.1	0	
Total %	0.1	0	0.2	0	0.1	42.5	3.6	0	0.2	0	0	0	2.6	50.8	0.1	0	
Cars	1	0	2	0	0	805	70	0	3	0	0	0	49	954	1	0	1885
% Cars	50	0	66.7	0	0	95.3	98.6	0	100	0	0	0	96.1	94.5	100	0	94.9
Heavy Vehicles	1	0	1	0	1	40	1	0	0	0	0	0	2	55	0	0	101
% Heavy Vehicles	50	0	33.3	0	100	4.7	1.4	0	0	0	0	0	3.9	5.5	0	0	5.1

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	111	9	0	120	1	0	0	0	1	8	147	0	0	155	276
08:15 AM	0	0	0	0	0	0	136	14	0	150	0	0	0	0	0	3	109	0	0	112	262
08:30 AM	1	0	1	0	2	0	116	8	0	124	0	0	0	0	0	5	156	0	0	161	287
08:45 AM	0	0	0	0	0	0	115	9	0	124	0	0	0	0	0	10	127	1	0	138	262
Total Volume	1	0	1	0	2	0	478	40	0	518	1	0	0	0	1	26	539	1	0	566	1087
% App. Total	50	0	50	0		0	92.3	7.7	0		100	0	0	0		4.6	95.2	0.2	0		
PHF	.250	.000	.250	.000	.250	.000	.879	.714	.000	.863	.250	.000	.000	.000	.250	.650	.864	.250	.000	.879	.947
Cars	1	0	1	0	2	0	460	39	0	499	1	0	0	0	1	25	513	1	0	539	1041
% Cars	100	0	100	0	100	0	96.2	97.5	0	96.3	100	0	0	0	100	96.2	95.2	100	0	95.2	95.8
Heavy Vehicles	0	0	0	0	0	0	18	1	0	19	0	0	0	0	0	1	26	0	0	27	46
% Heavy Vehicles	0	0	0	0	0	0	3.8	2.5	0	3.7	0	0	0	0	0	3.8	4.8	0	0	4.8	4.2

PRECISION
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Groups Printed- Cars

	Driveway From North				North Beacon Street From East				Murdock Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	0	64	3	0	0	0	0	0	6	93	0	0	166
07:15 AM	0	0	0	0	0	79	10	0	1	0	0	0	5	116	0	0	211
07:30 AM	0	0	0	0	0	97	10	0	0	0	0	0	7	118	0	0	232
07:45 AM	0	0	1	0	0	105	8	0	1	0	0	0	6	114	0	0	235
Total	0	0	1	0	0	345	31	0	2	0	0	0	24	441	0	0	844
08:00 AM	0	0	0	0	0	106	9	0	1	0	0	0	7	142	0	0	265
08:15 AM	0	0	0	0	0	132	14	0	0	0	0	0	3	101	0	0	250
08:30 AM	1	0	1	0	0	113	7	0	0	0	0	0	5	150	0	0	277
08:45 AM	0	0	0	0	0	109	9	0	0	0	0	0	10	120	1	0	249
Total	1	0	1	0	0	460	39	0	1	0	0	0	25	513	1	0	1041
Grand Total	1	0	2	0	0	805	70	0	3	0	0	0	49	954	1	0	1885
Apprch %	33.3	0	66.7	0	0	92	8	0	100	0	0	0	4.9	95	0.1	0	
Total %	0.1	0	0.1	0	0	42.7	3.7	0	0.2	0	0	0	2.6	50.6	0.1	0	

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	106	9	0	115	1	0	0	0	1	7	142	0	0	149	265
08:15 AM	0	0	0	0	0	0	132	14	0	146	0	0	0	0	0	3	101	0	0	104	250
08:30 AM	1	0	1	0	2	0	113	7	0	120	0	0	0	0	0	5	150	0	0	155	277
08:45 AM	0	0	0	0	0	0	109	9	0	118	0	0	0	0	0	10	120	1	0	131	249
Total Volume	1	0	1	0	2	0	460	39	0	499	1	0	0	0	1	25	513	1	0	539	1041
% App. Total	50	0	50	0		0	92.2	7.8	0		100	0	0	0		4.6	95.2	0.2	0		
PHF	.250	.000	.250	.000	.250	.000	.871	.696	.000	.854	.250	.000	.000	.000	.250	.625	.855	.250	.000	.869	.940

PRECISION
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N/S: Driveway/ Murdock Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 C
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Driveway From North				North Beacon Street From East				Murdock Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0	7
07:15 AM	0	0	0	0	0	11	0	0	0	0	0	0	0	9	0	0	20
07:30 AM	0	0	0	0	0	2	0	0	0	0	0	0	1	7	0	0	10
07:45 AM	0	0	1	0	1	7	0	0	0	0	0	0	0	9	0	0	18
Total	1	0	1	0	1	22	0	0	0	0	0	0	1	29	0	0	55
08:00 AM	0	0	0	0	0	5	0	0	0	0	0	0	1	5	0	0	11
08:15 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	8	0	0	12
08:30 AM	0	0	0	0	0	3	1	0	0	0	0	0	0	6	0	0	10
08:45 AM	0	0	0	0	0	6	0	0	0	0	0	0	0	7	0	0	13
Total	0	0	0	0	0	18	1	0	0	0	0	0	1	26	0	0	46
Grand Total	1	0	1	0	1	40	1	0	0	0	0	0	2	55	0	0	101
Apprch %	50	0	50	0	2.4	95.2	2.4	0	0	0	0	0	3.5	96.5	0	0	
Total %	1	0	1	0	1	39.6	1	0	0	0	0	0	2	54.5	0	0	

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	11	0	0	11	0	0	0	0	0	0	9	0	0	9	20
07:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	7	0	0	8	10
07:45 AM	0	0	1	0	1	1	7	0	0	8	0	0	0	0	0	0	9	0	0	9	18
08:00 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	1	5	0	0	6	11
Total Volume	0	0	1	0	1	1	25	0	0	26	0	0	0	0	0	2	30	0	0	32	59
% App. Total	0	0	100	0		3.8	96.2	0	0		0	0	0	0		6.2	93.8	0	0		
PHF	.000	.000	.250	.000	.250	.250	.568	.000	.000	.591	.000	.000	.000	.000	.000	.500	.833	.000	.000	.889	.738

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 C
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Peds and Bikes

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	5
07:15 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	1	2	0	2	0	0	0	8
07:30 AM	0	0	0	2	3	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	9
07:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	4
Total	0	0	0	6	4	0	0	0	0	0	0	0	0	2	8	0	6	0	0	0	26
08:00 AM	0	0	0	0	2	0	1	0	0	0	0	0	0	5	1	0	5	0	0	0	14
08:15 AM	0	0	0	1	3	0	0	0	0	0	2	0	0	3	1	0	1	0	0	1	12
08:30 AM	0	0	0	0	3	0	2	1	0	0	0	0	0	2	1	0	3	0	0	0	12
08:45 AM	0	0	0	2	7	0	0	0	0	0	0	0	0	5	2	0	2	0	0	0	18
Total	0	0	0	3	15	0	3	1	0	0	2	0	0	15	5	0	11	0	0	1	56
Grand Total	0	0	0	9	19	0	3	1	0	0	2	0	0	17	13	0	17	0	0	1	82
Apprch %	0	0	0	32.1	67.9	0	75	25	0	0	6.2	0	0	53.1	40.6	0	94.4	0	0	5.6	
Total %	0	0	0	11	23.2	0	3.7	1.2	0	0	2.4	0	0	20.7	15.9	0	20.7	0	0	1.2	

	Driveway From North						North Beacon Street From East						Murdock Street From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	2	2	0	1	0	0	0	1	0	0	0	5	1	6	0	5	0	0	0	5	14
08:15 AM	0	0	0	1	3	4	0	0	0	0	0	0	2	0	0	3	1	6	0	1	0	0	1	2	12
08:30 AM	0	0	0	0	3	3	0	2	1	0	0	3	0	0	0	2	1	3	0	3	0	0	0	3	12
08:45 AM	0	0	0	2	7	9	0	0	0	0	0	0	0	0	0	5	2	7	0	2	0	0	0	2	18
Total Volume	0	0	0	3	15	18	0	3	1	0	0	4	2	0	0	15	5	22	0	11	0	0	1	12	56
% App. Total	0	0	0	16.7	83.3		0	75	25	0	0		9.1	0	0	68.2	22.7		0	91.7	0	0	8.3		
PHF	.000	.000	.000	.375	.536	.500	.000	.375	.250	.000	.000	.333	.250	.000	.000	.750	.625	.786	.000	.550	.000	.000	.250	.600	.778

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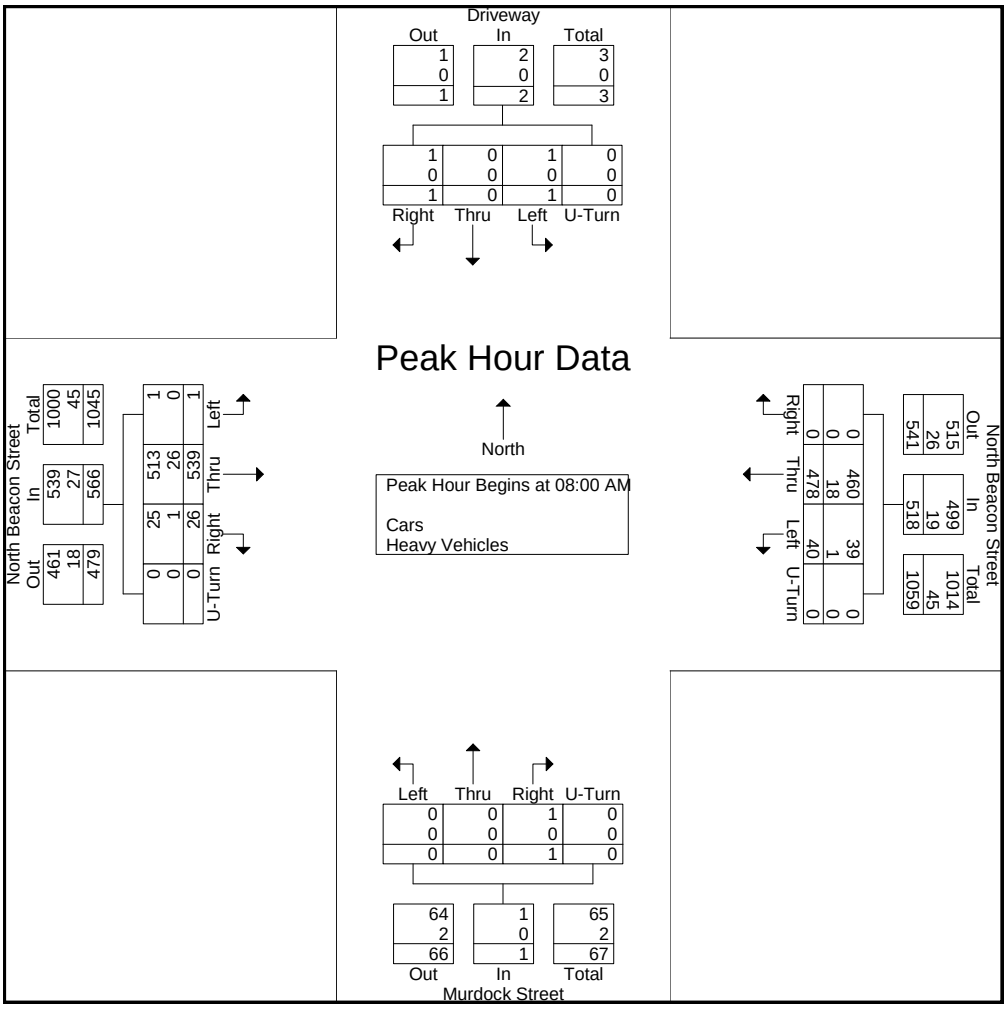
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 C
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	111	9	0	120	1	0	0	0	1	8	147	0	0	155	276
08:15 AM	0	0	0	0	0	0	136	14	0	150	0	0	0	0	0	3	109	0	0	112	262
08:30 AM	1	0	1	0	2	0	116	8	0	124	0	0	0	0	0	5	156	0	0	161	287
08:45 AM	0	0	0	0	0	0	115	9	0	124	0	0	0	0	0	10	127	1	0	138	262
Total Volume	1	0	1	0	2	0	478	40	0	518	1	0	0	0	1	26	539	1	0	566	1087
% App. Total	50	0	50	0		0	92.3	7.7	0		100	0	0	0		4.6	95.2	0.2	0		
PHF	.250	.000	.250	.000	.250	.000	.879	.714	.000	.863	.250	.000	.000	.000	.250	.650	.864	.250	.000	.879	.947
Cars	1	0	1	0	2	0	460	39	0	499	1	0	0	0	1	25	513	1	0	539	1041
% Cars	100	0	100	0	100	0	96.2	97.5	0	96.3	100	0	0	0	100	96.2	95.2	100	0	95.2	95.8
Heavy Vehicles	0	0	0	0	0	0	18	1	0	19	0	0	0	0	0	1	26	0	0	27	46
% Heavy Vehicles	0	0	0	0	0	0	3.8	2.5	0	3.7	0	0	0	0	0	3.8	4.8	0	0	4.8	4.2



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E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 CC
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Driveway From North				North Beacon Street From East				Murdock Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	1	0	0	120	23	1	0	0	0	0	4	117	0	0	266
04:15 PM	3	0	0	0	1	145	21	0	0	0	0	0	7	114	0	0	291
04:30 PM	1	0	1	0	0	147	18	1	0	0	0	0	15	103	1	1	288
04:45 PM	0	0	1	0	0	146	22	0	0	0	0	0	8	128	1	0	306
Total	4	0	3	0	1	558	84	2	0	0	0	0	34	462	2	1	1151
05:00 PM	2	0	1	0	0	162	24	0	0	0	0	0	18	156	0	0	363
05:15 PM	1	1	1	0	0	158	31	0	0	0	0	0	19	129	1	0	341
05:30 PM	0	0	0	0	0	150	25	0	0	0	0	0	31	148	0	0	354
05:45 PM	1	1	2	0	0	130	33	1	0	0	0	0	29	146	0	0	343
Total	4	2	4	0	0	600	113	1	0	0	0	0	97	579	1	0	1401
Grand Total	8	2	7	0	1	1158	197	3	0	0	0	0	131	1041	3	1	2552
Apprch %	47.1	11.8	41.2	0	0.1	85.2	14.5	0.2	0	0	0	0	11.1	88.5	0.3	0.1	
Total %	0.3	0.1	0.3	0	0	45.4	7.7	0.1	0	0	0	0	5.1	40.8	0.1	0	
Cars	8	2	7	0	1	1133	194	3	0	0	0	0	128	1023	3	1	2503
% Cars	100	100	100	0	100	97.8	98.5	100	0	0	0	0	97.7	98.3	100	100	98.1
Heavy Vehicles	0	0	0	0	0	25	3	0	0	0	0	0	3	18	0	0	49
% Heavy Vehicles	0	0	0	0	0	2.2	1.5	0	0	0	0	0	2.3	1.7	0	0	1.9

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	2	0	1	0	3	0	162	24	0	186	0	0	0	0	0	18	156	0	0	174	363
05:15 PM	1	1	1	0	3	0	158	31	0	189	0	0	0	0	0	19	129	1	0	149	341
05:30 PM	0	0	0	0	0	0	150	25	0	175	0	0	0	0	0	31	148	0	0	179	354
05:45 PM	1	1	2	0	4	0	130	33	1	164	0	0	0	0	0	29	146	0	0	175	343
Total Volume	4	2	4	0	10	0	600	113	1	714	0	0	0	0	0	97	579	1	0	677	1401
% App. Total	40	20	40	0		0	84	15.8	0.1		0	0	0	0		14.3	85.5	0.1	0		
PHF	.500	.500	.500	.000	.625	.000	.926	.856	.250	.944	.000	.000	.000	.000	.000	.782	.928	.250	.000	.946	.965
Cars	4	2	4	0	10	0	590	112	1	703	0	0	0	0	0	95	573	1	0	669	1382
% Cars	100	100	100	0	100	0	98.3	99.1	100	98.5	0	0	0	0	0	97.9	99.0	100	0	98.8	98.6
Heavy Vehicles	0	0	0	0	0	0	10	1	0	11	0	0	0	0	0	2	6	0	0	8	19
% Heavy Vehicles	0	0	0	0	0	0	1.7	0.9	0	1.5	0	0	0	0	0	2.1	1.0	0	0	1.2	1.4

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File Name : 165041 CC
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Groups Printed- Cars

	Driveway From North				North Beacon Street From East				Murdock Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	1	0	0	114	23	1	0	0	0	0	4	112	0	0	255
04:15 PM	3	0	0	0	1	142	19	0	0	0	0	0	6	111	0	0	282
04:30 PM	1	0	1	0	0	143	18	1	0	0	0	0	15	102	1	1	283
04:45 PM	0	0	1	0	0	144	22	0	0	0	0	0	8	125	1	0	301
Total	4	0	3	0	1	543	82	2	0	0	0	0	33	450	2	1	1121
05:00 PM	2	0	1	0	0	158	24	0	0	0	0	0	18	154	0	0	357
05:15 PM	1	1	1	0	0	156	30	0	0	0	0	0	19	127	1	0	336
05:30 PM	0	0	0	0	0	147	25	0	0	0	0	0	29	147	0	0	348
05:45 PM	1	1	2	0	0	129	33	1	0	0	0	0	29	145	0	0	341
Total	4	2	4	0	0	590	112	1	0	0	0	0	95	573	1	0	1382
Grand Total	8	2	7	0	1	1133	194	3	0	0	0	0	128	1023	3	1	2503
Apprch %	47.1	11.8	41.2	0	0.1	85.1	14.6	0.2	0	0	0	0	11.1	88.6	0.3	0.1	
Total %	0.3	0.1	0.3	0	0	45.3	7.8	0.1	0	0	0	0	5.1	40.9	0.1	0	

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	2	0	1	0	3	0	158	24	0	182	0	0	0	0	0	18	154	0	0	172	357
05:15 PM	1	1	1	0	3	0	156	30	0	186	0	0	0	0	0	19	127	1	0	147	336
05:30 PM	0	0	0	0	0	0	147	25	0	172	0	0	0	0	0	29	147	0	0	176	348
05:45 PM	1	1	2	0	4	0	129	33	1	163	0	0	0	0	0	29	145	0	0	174	341
Total Volume	4	2	4	0	10	0	590	112	1	703	0	0	0	0	0	95	573	1	0	669	1382
% App. Total	40	20	40	0		0	83.9	15.9	0.1		0	0	0	0		14.2	85.7	0.1	0		
PHF	.500	.500	.500	.000	.625	.000	.934	.848	.250	.945	.000	.000	.000	.000	.000	.819	.930	.250	.000	.950	.968

PRECISION
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Groups Printed- Heavy Vehicles

	Driveway From North				North Beacon Street From East				Murdock Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	5	0	0	11
04:15 PM	0	0	0	0	0	3	2	0	0	0	0	0	1	3	0	0	9
04:30 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0	5
04:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	5
Total	0	0	0	0	0	15	2	0	0	0	0	0	1	12	0	0	30
05:00 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	2	0	0	6
05:15 PM	0	0	0	0	0	2	1	0	0	0	0	0	0	2	0	0	5
05:30 PM	0	0	0	0	0	3	0	0	0	0	0	0	2	1	0	0	6
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
Total	0	0	0	0	0	10	1	0	0	0	0	0	2	6	0	0	19
Grand Total	0	0	0	0	0	25	3	0	0	0	0	0	3	18	0	0	49
Apprch %	0	0	0	0	0	89.3	10.7	0	0	0	0	0	14.3	85.7	0	0	
Total %	0	0	0	0	0	51	6.1	0	0	0	0	0	6.1	36.7	0	0	

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	11
04:15 PM	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	1	3	0	0	4	9
04:30 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	5
04:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5
Total Volume	0	0	0	0	0	0	15	2	0	17	0	0	0	0	0	1	12	0	0	13	30
% App. Total	0	0	0	0		0	88.2	11.8	0		0	0	0	0		7.7	92.3	0	0		
PHF	.000	.000	.000	.000	.000	.000	.625	.250	.000	.708	.000	.000	.000	.000	.000	.250	.600	.000	.000	.650	.682

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N/S: Driveway/ Murdock Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 CC
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Peds and Bikes

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	2	3	0	0	0	0	0	6
04:15 PM	0	0	0	1	2	0	3	0	0	0	0	0	0	4	0	0	1	0	0	0	11
04:30 PM	0	0	0	2	1	0	4	0	0	0	1	0	0	4	3	0	0	0	0	0	15
04:45 PM	0	0	0	0	1	0	4	2	1	0	0	0	0	3	2	0	1	0	0	0	14
Total	0	0	0	3	4	0	11	2	2	0	1	0	0	13	8	0	2	0	0	0	46
05:00 PM	0	0	0	3	0	0	0	1	0	0	0	0	0	4	4	0	2	0	0	0	14
05:15 PM	0	0	0	3	1	0	3	0	3	0	0	0	0	5	3	0	1	0	0	0	19
05:30 PM	0	0	0	9	3	0	1	0	2	3	0	0	0	6	3	0	2	0	0	0	29
05:45 PM	0	0	0	4	3	0	4	0	2	1	0	0	0	6	4	0	0	0	0	0	24
Total	0	0	0	19	7	0	8	1	7	4	0	0	0	21	14	0	5	0	0	0	86
Grand Total	0	0	0	22	11	0	19	3	9	4	1	0	0	34	22	0	7	0	0	0	132
Apprch %	0	0	0	66.7	33.3	0	54.3	8.6	25.7	11.4	1.8	0	0	59.6	38.6	0	100	0	0	0	
Total %	0	0	0	16.7	8.3	0	14.4	2.3	6.8	3	0.8	0	0	25.8	16.7	0	5.3	0	0	0	

	Driveway From North						North Beacon Street From East						Murdock Street From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	3	0	3	0	0	1	0	0	1	0	0	0	4	4	8	0	2	0	0	0	2	14
05:15 PM	0	0	0	3	1	4	0	3	0	3	0	6	0	0	0	5	3	8	0	1	0	0	0	1	19
05:30 PM	0	0	0	9	3	12	0	1	0	2	3	6	0	0	0	6	3	9	0	2	0	0	0	2	29
05:45 PM	0	0	0	4	3	7	0	4	0	2	1	7	0	0	0	6	4	10	0	0	0	0	0	0	24
Total Volume	0	0	0	19	7	26	0	8	1	7	4	20	0	0	0	21	14	35	0	5	0	0	0	5	86
% App. Total	0	0	0	73.1	26.9		0	40	5	35	20		0	0	0	60	40		0	100	0	0	0		
PHF	.000	.000	.000	.528	.583	.542	.000	.500	.250	.583	.333	.714	.000	.000	.000	.875	.875	.875	.000	.625	.000	.000	.000	.625	.741

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City, State: Boston, MA
Client: VHB/ A. Santiago

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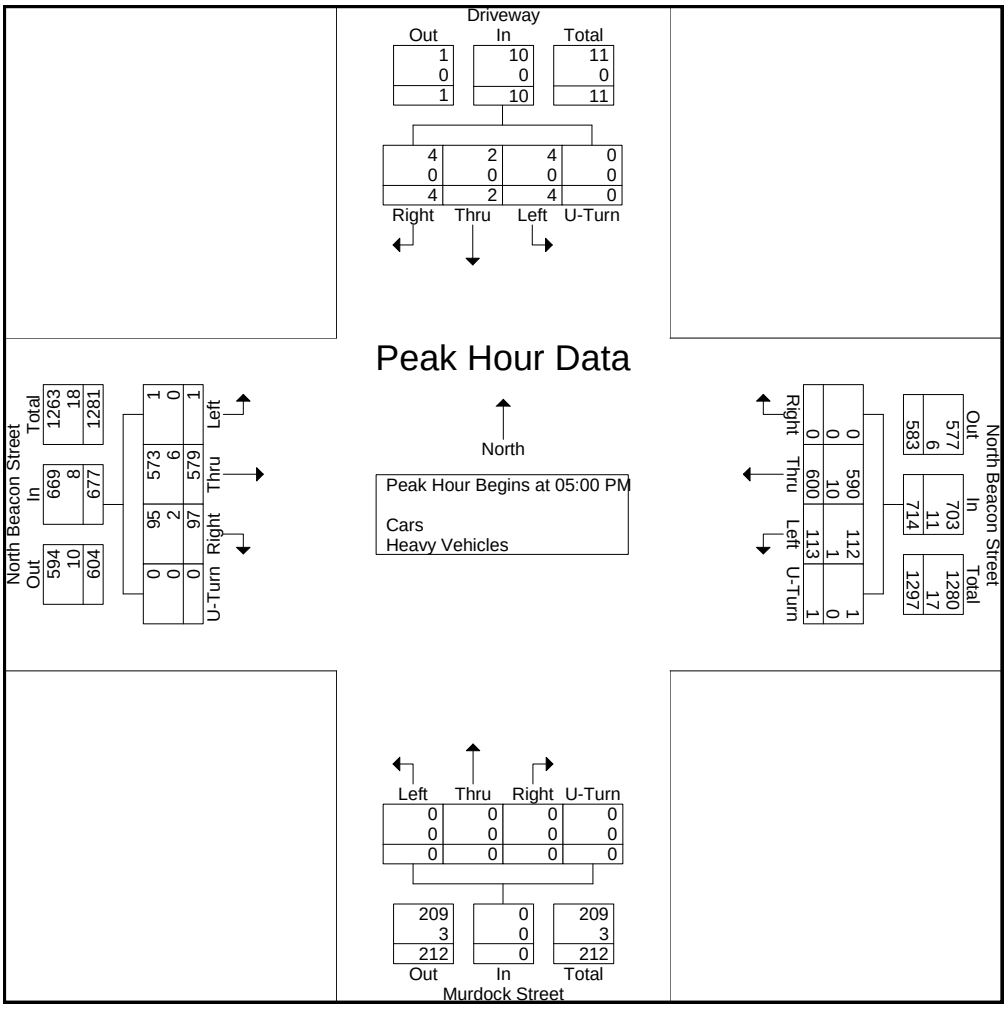
Page No : 1

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	2	0	1	0	3	0	162	24	0	186	0	0	0	0	0	18	156	0	0	174	363
05:15 PM	1	1	1	0	3	0	158	31	0	189	0	0	0	0	0	19	129	1	0	149	341
05:30 PM	0	0	0	0	0	0	150	25	0	175	0	0	0	0	0	31	148	0	0	179	354
05:45 PM	1	1	2	0	4	0	130	33	1	164	0	0	0	0	0	29	146	0	0	175	343
Total Volume	4	2	4	0	10	0	600	113	1	714	0	0	0	0	0	97	579	1	0	677	1401
% App. Total	40	20	40	0		0	84	15.8	0.1		0	0	0	0		14.3	85.5	0.1	0		
PHF	.500	.500	.500	.000	.625	.000	.926	.856	.250	.944	.000	.000	.000	.000	.000	.782	.928	.250	.000	.946	.965
Cars	4	2	4	0	10	0	590	112	1	703	0	0	0	0	0	95	573	1	0	669	1382
% Cars	100	100	100	0	100	0	98.3	99.1	100	98.5	0	0	0	0	0	97.9	99.0	100	0	98.8	98.6
Heavy Vehicles	0	0	0	0	0	0	10	1	0	11	0	0	0	0	0	2	6	0	0	8	19
% Heavy Vehicles	0	0	0	0	0	0	1.7	0.9	0	1.5	0	0	0	0	0	2.1	1.0	0	0	1.2	1.4



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E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 CCC
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Driveway From North				North Beacon Street From East				Murdock Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	2	0	0	116	15	0	0	0	0	0	6	110	0	0	249
11:15 AM	0	0	1	0	0	110	16	0	0	0	0	0	2	117	0	0	246
11:30 AM	2	0	1	0	0	118	17	0	0	0	0	0	9	120	0	0	267
11:45 AM	1	0	2	0	1	97	10	1	0	0	0	0	9	126	1	0	248
Total	3	0	6	0	1	441	58	1	0	0	0	0	26	473	1	0	1010
12:00 PM	1	0	0	0	0	121	14	0	0	0	0	0	8	142	0	0	286
12:15 PM	0	0	1	0	0	130	16	0	0	0	1	0	12	111	0	0	271
12:30 PM	0	0	1	0	0	125	15	0	0	0	0	0	4	141	0	0	286
12:45 PM	0	0	0	0	0	128	14	0	0	0	0	0	8	126	0	0	276
Total	1	0	2	0	0	504	59	0	0	0	1	0	32	520	0	0	1119
01:00 PM	0	0	1	0	0	132	15	0	0	1	0	0	5	132	0	1	287
01:15 PM	1	2	0	0	1	134	20	0	0	0	0	0	5	122	4	1	290
01:30 PM	1	0	2	0	0	137	13	0	0	0	0	0	6	126	0	0	285
01:45 PM	1	1	0	0	1	117	17	0	0	0	0	0	5	119	0	0	261
Total	3	3	3	0	2	520	65	0	0	1	0	0	21	499	4	2	1123
Grand Total	7	3	11	0	3	1465	182	1	0	1	1	0	79	1492	5	2	3252
Apprch %	33.3	14.3	52.4	0	0.2	88.7	11	0.1	0	50	50	0	5	94.6	0.3	0.1	
Total %	0.2	0.1	0.3	0	0.1	45	5.6	0	0	0	0	0	2.4	45.9	0.2	0.1	
Cars	5	3	11	0	3	1439	181	1	0	1	1	0	78	1471	4	2	3200
% Cars	71.4	100	100	0	100	98.2	99.5	100	0	100	100	0	98.7	98.6	80	100	98.4
Heavy Vehicles	2	0	0	0	0	26	1	0	0	0	0	0	1	21	1	0	52
% Heavy Vehicles	28.6	0	0	0	0	1.8	0.5	0	0	0	0	0	1.3	1.4	20	0	1.6

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	0	0	1	0	1	0	125	15	0	140	0	0	0	0	0	4	141	0	0	145	286
12:45 PM	0	0	0	0	0	0	128	14	0	142	0	0	0	0	0	8	126	0	0	134	276
01:00 PM	0	0	1	0	1	0	132	15	0	147	0	1	0	0	1	5	132	0	1	138	287
01:15 PM	1	2	0	0	3	1	134	20	0	155	0	0	0	0	0	5	122	4	1	132	290
Total Volume	1	2	2	0	5	1	519	64	0	584	0	1	0	0	1	22	521	4	2	549	1139
% App. Total	20	40	40	0		0.2	88.9	11	0		0	100	0	0		4	94.9	0.7	0.4		
PHF	.250	.250	.500	.000	.417	.250	.968	.800	.000	.942	.000	.250	.000	.000	.250	.688	.924	.250	.500	.947	.982
Cars	1	2	2	0	5	1	512	64	0	577	0	1	0	0	1	22	514	3	2	541	1124
% Cars	100	100	100	0	100	100	98.7	100	0	98.8	0	100	0	0	100	100	98.7	75.0	100	98.5	98.7
Heavy Vehicles	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	7	1	0	8	15
% Heavy Vehicles	0	0	0	0	0	0	1.3	0	0	1.2	0	0	0	0	0	0	1.3	25.0	0	1.5	1.3

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E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 CCC
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars

	Driveway From North				North Beacon Street From East				Murdock Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	2	0	0	114	15	0	0	0	0	0	6	109	0	0	246
11:15 AM	0	0	1	0	0	108	16	0	0	0	0	0	2	116	0	0	243
11:30 AM	1	0	1	0	0	113	16	0	0	0	0	0	8	119	0	0	258
11:45 AM	1	0	2	0	1	97	10	1	0	0	0	0	9	124	1	0	246
Total	2	0	6	0	1	432	57	1	0	0	0	0	25	468	1	0	993
12:00 PM	1	0	0	0	0	119	14	0	0	0	0	0	8	139	0	0	281
12:15 PM	0	0	1	0	0	127	16	0	0	0	1	0	12	111	0	0	268
12:30 PM	0	0	1	0	0	123	15	0	0	0	0	0	4	139	0	0	282
12:45 PM	0	0	0	0	0	126	14	0	0	0	0	0	8	126	0	0	274
Total	1	0	2	0	0	495	59	0	0	0	1	0	32	515	0	0	1105
01:00 PM	0	0	1	0	0	130	15	0	0	1	0	0	5	130	0	1	283
01:15 PM	1	2	0	0	1	133	20	0	0	0	0	0	5	119	3	1	285
01:30 PM	1	0	2	0	0	135	13	0	0	0	0	0	6	122	0	0	279
01:45 PM	0	1	0	0	1	114	17	0	0	0	0	0	5	117	0	0	255
Total	2	3	3	0	2	512	65	0	0	1	0	0	21	488	3	2	1102
Grand Total	5	3	11	0	3	1439	181	1	0	1	1	0	78	1471	4	2	3200
Apprch %	26.3	15.8	57.9	0	0.2	88.6	11.1	0.1	0	50	50	0	5	94.6	0.3	0.1	
Total %	0.2	0.1	0.3	0	0.1	45	5.7	0	0	0	0	0	2.4	46	0.1	0.1	

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	0	0	1	0	1	0	123	15	0	138	0	0	0	0	0	4	139	0	0	143	282
12:45 PM	0	0	0	0	0	0	126	14	0	140	0	0	0	0	0	8	126	0	0	134	274
01:00 PM	0	0	1	0	1	0	130	15	0	145	0	1	0	0	1	5	130	0	1	136	283
01:15 PM	1	2	0	0	3	1	133	20	0	154	0	0	0	0	0	5	119	3	1	128	285
Total Volume	1	2	2	0	5	1	512	64	0	577	0	1	0	0	1	22	514	3	2	541	1124
% App. Total	20	40	40	0		0.2	88.7	11.1	0		0	100	0	0		4.1	95	0.6	0.4		
PHF	.250	.250	.500	.000	.417	.250	.962	.800	.000	.937	.000	.250	.000	.000	.250	.688	.924	.250	.500	.946	.986

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Page No : 1

Groups Printed- Heavy Vehicles

	Driveway From North				North Beacon Street From East				Murdock Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
11:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
11:30 AM	1	0	0	0	0	5	1	0	0	0	0	0	1	1	0	0	9
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Total	1	0	0	0	0	9	1	0	0	0	0	0	1	5	0	0	17
12:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	5
12:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
12:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	9	0	0	0	0	0	0	0	5	0	0	14
01:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
01:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	3	1	0	5
01:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0	6
01:45 PM	1	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	6
Total	1	0	0	0	0	8	0	0	0	0	0	0	0	11	1	0	21
Grand Total	2	0	0	0	0	26	1	0	0	0	0	0	1	21	1	0	52
Apprch %	100	0	0	0	0	96.3	3.7	0	0	0	0	0	4.3	91.3	4.3	0	
Total %	3.8	0	0	0	0	50	1.9	0	0	0	0	0	1.9	40.4	1.9	0	

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
01:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	1	0	4	5
01:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6
01:45 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	6
Total Volume	1	0	0	0	1	0	8	0	0	8	0	0	0	0	0	0	11	1	0	12	21
% App. Total	100	0	0	0		0	100	0	0		0	0	0	0		0	91.7	8.3	0		
PHF	.250	.000	.000	.000	.250	.000	.667	.000	.000	.667	.000	.000	.000	.000	.000	.000	.688	.250	.000	.750	.875

PRECISION DATA INDUSTRIES, LLC
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N/S: Driveway/ Murdock Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 CCC
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Peds and Bikes

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	1	2	0	2	0	0	0	0	0	0	6	7	0	1	0	0	0	19
11:15 AM	0	0	0	1	2	0	0	0	0	0	0	0	0	3	4	0	0	0	0	0	10
11:30 AM	0	0	0	1	4	0	0	0	1	0	0	0	0	6	8	0	1	0	0	0	21
11:45 AM	0	0	0	4	6	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	24
Total	0	0	0	7	14	0	2	0	1	0	0	0	0	22	26	0	2	0	0	0	74
12:00 PM	0	0	0	5	3	0	0	1	0	0	0	0	0	5	4	0	1	0	1	0	20
12:15 PM	0	0	0	5	2	0	3	0	0	1	0	0	0	6	10	0	1	0	0	1	29
12:30 PM	0	0	0	4	2	0	1	0	0	0	0	0	0	3	3	0	2	0	0	0	15
12:45 PM	0	0	0	3	1	0	1	0	0	1	0	0	0	3	12	0	0	0	1	0	22
Total	0	0	0	17	8	0	5	1	0	2	0	0	0	17	29	0	4	0	2	1	86
01:00 PM	0	0	0	3	3	0	1	0	0	0	0	0	0	2	3	0	4	0	0	1	17
01:15 PM	0	0	0	6	3	0	0	1	0	0	0	0	0	1	8	0	1	0	0	0	20
01:30 PM	0	0	0	0	5	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	11
01:45 PM	0	0	0	3	0	0	0	0	0	0	0	0	0	1	9	0	2	0	0	0	15
Total	0	0	0	12	11	0	1	1	0	0	0	0	0	8	22	0	7	0	0	1	63
Grand Total	0	0	0	36	33	0	8	2	1	2	0	0	0	47	77	0	13	0	2	2	223
Apprch %	0	0	0	52.2	47.8	0	61.5	15.4	7.7	15.4	0	0	0	37.9	62.1	0	76.5	0	11.8	11.8	
Total %	0	0	0	16.1	14.8	0	3.6	0.9	0.4	0.9	0	0	0	21.1	34.5	0	5.8	0	0.9	0.9	

	Driveway From North						North Beacon Street From East						Murdock Street From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 11:30 AM																									
11:30 AM	0	0	0	1	4	5	0	0	0	1	0	1	0	0	0	6	8	14	0	1	0	0	0	1	21
11:45 AM	0	0	0	4	6	10	0	0	0	0	0	0	0	0	0	7	7	14	0	0	0	0	0	0	24
12:00 PM	0	0	0	5	3	8	0	0	1	0	0	1	0	0	0	5	4	9	0	1	0	1	0	2	20
12:15 PM	0	0	0	5	2	7	0	3	0	0	1	4	0	0	0	6	10	16	0	1	0	0	1	2	29
Total Volume	0	0	0	15	15	30	0	3	1	1	1	6	0	0	0	24	29	53	0	3	0	1	1	5	94
% App. Total	0	0	0	50	50		0	50	16.7	16.7	16.7		0	0	0	45.3	54.7		0	60	0	20	20		
PHF	.000	.000	.000	.750	.625	.750	.000	.250	.250	.250	.250	.375	.000	.000	.000	.857	.725	.828	.000	.750	.000	.250	.250	.625	.810

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City, State: Boston, MA
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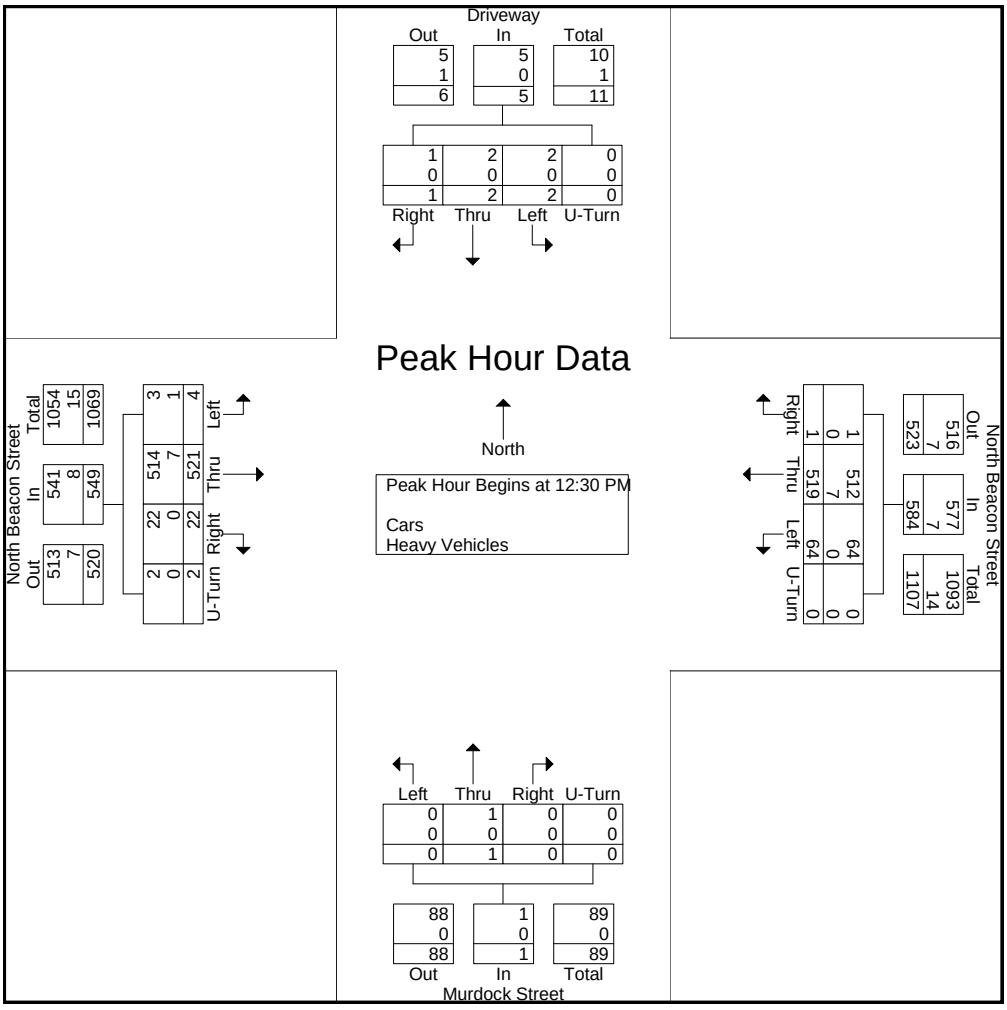
File Name : 165041 CCC
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

	Driveway From North					North Beacon Street From East					Murdock Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	0	0	1	0	1	0	125	15	0	140	0	0	0	0	0	4	141	0	0	145	286
12:45 PM	0	0	0	0	0	0	128	14	0	142	0	0	0	0	0	8	126	0	0	134	276
01:00 PM	0	0	1	0	1	0	132	15	0	147	0	1	0	0	1	5	132	0	1	138	287
01:15 PM	1	2	0	0	3	1	134	20	0	155	0	0	0	0	0	5	122	4	1	132	290
Total Volume	1	2	2	0	5	1	519	64	0	584	0	1	0	0	1	22	521	4	2	549	1139
% App. Total	20	40	40	0		0.2	88.9	11	0		0	100	0	0		4	94.9	0.7	0.4		
PHF	.250	.250	.500	.000	.417	.250	.968	.800	.000	.942	.000	.250	.000	.000	.250	.688	.924	.250	.500	.947	.982
Cars	1	2	2	0	5	1	512	64	0	577	0	1	0	0	1	22	514	3	2	541	1124
% Cars	100	100	100	0	100	100	98.7	100	0	98.8	0	100	0	0	100	100	98.7	75.0	100	98.5	98.7
Heavy Vehicles	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	7	1	0	8	15
% Heavy Vehicles	0	0	0	0	0	0	1.3	0	0	1.2	0	0	0	0	0	0	1.3	25.0	0	1.5	1.3



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N/S: Hichborn Street/ Dustin Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 D
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Hichborn Street From North				North Beacon Street From East				Dustin Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	0	1	0	0	56	0	0	13	0	13	0	0	97	0	0	181
07:15 AM	1	0	1	0	2	85	0	0	18	0	17	0	0	126	1	0	251
07:30 AM	2	0	0	0	0	94	0	0	20	0	23	0	0	129	0	0	268
07:45 AM	3	0	1	0	1	97	0	0	27	1	24	0	0	126	1	0	281
Total	7	0	3	0	3	332	0	0	78	1	77	0	0	478	2	0	981
08:00 AM	4	0	0	0	3	97	0	0	31	1	24	0	0	145	1	0	306
08:15 AM	1	0	1	0	1	115	0	0	29	1	29	0	0	111	1	0	289
08:30 AM	4	0	2	0	0	100	0	0	27	0	31	0	0	151	2	0	317
08:45 AM	3	0	3	0	1	107	0	0	33	0	16	0	0	120	2	0	285
Total	12	0	6	0	5	419	0	0	120	2	100	0	0	527	6	0	1197
Grand Total	19	0	9	0	8	751	0	0	198	3	177	0	0	1005	8	0	2178
Apprch %	67.9	0	32.1	0	1.1	98.9	0	0	52.4	0.8	46.8	0	0	99.2	0.8	0	
Total %	0.9	0	0.4	0	0.4	34.5	0	0	9.1	0.1	8.1	0	0	46.1	0.4	0	
Cars	18	0	5	0	8	703	0	0	197	2	172	0	0	946	6	0	2057
% Cars	94.7	0	55.6	0	100	93.6	0	0	99.5	66.7	97.2	0	0	94.1	75	0	94.4
Heavy Vehicles	1	0	4	0	0	48	0	0	1	1	5	0	0	59	2	0	121
% Heavy Vehicles	5.3	0	44.4	0	0	6.4	0	0	0.5	33.3	2.8	0	0	5.9	25	0	5.6

	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	4	0	0	0	4	3	97	0	0	100	31	1	24	0	56	0	145	1	0	146	306
08:15 AM	1	0	1	0	2	1	115	0	0	116	29	1	29	0	59	0	111	1	0	112	289
08:30 AM	4	0	2	0	6	0	100	0	0	100	27	0	31	0	58	0	151	2	0	153	317
08:45 AM	3	0	3	0	6	1	107	0	0	108	33	0	16	0	49	0	120	2	0	122	285
Total Volume	12	0	6	0	18	5	419	0	0	424	120	2	100	0	222	0	527	6	0	533	1197
% App. Total	66.7	0	33.3	0		1.2	98.8	0	0		54.1	0.9	45	0		0	98.9	1.1	0		
PHF	.750	.000	.500	.000	.750	.417	.911	.000	.000	.914	.909	.500	.806	.000	.941	.000	.873	.750	.000	.871	.944
Cars	12	0	3	0	15	5	392	0	0	397	119	1	99	0	219	0	500	5	0	505	1136
% Cars	100	0	50.0	0	83.3	100	93.6	0	0	93.6	99.2	50.0	99.0	0	98.6	0	94.9	83.3	0	94.7	94.9
Heavy Vehicles	0	0	3	0	3	0	27	0	0	27	1	1	1	0	3	0	27	1	0	28	61
% Heavy Vehicles	0	0	50.0	0	16.7	0	6.4	0	0	6.4	0.8	50.0	1.0	0	1.4	0	5.1	16.7	0	5.3	5.1

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 D
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Hichborn Street From North				North Beacon Street From East				Dustin Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	0	1	0	0	54	0	0	13	0	13	0	0	93	0	0	175
07:15 AM	0	0	1	0	2	77	0	0	18	0	14	0	0	118	0	0	230
07:30 AM	2	0	0	0	0	89	0	0	20	0	23	0	0	117	0	0	251
07:45 AM	3	0	0	0	1	91	0	0	27	1	23	0	0	118	1	0	265
Total	6	0	2	0	3	311	0	0	78	1	73	0	0	446	1	0	921
08:00 AM	4	0	0	0	3	90	0	0	31	0	24	0	0	139	1	0	292
08:15 AM	1	0	0	0	1	111	0	0	29	1	29	0	0	101	1	0	274
08:30 AM	4	0	1	0	0	89	0	0	27	0	30	0	0	146	2	0	299
08:45 AM	3	0	2	0	1	102	0	0	32	0	16	0	0	114	1	0	271
Total	12	0	3	0	5	392	0	0	119	1	99	0	0	500	5	0	1136
Grand Total	18	0	5	0	8	703	0	0	197	2	172	0	0	946	6	0	2057
Apprch %	78.3	0	21.7	0	1.1	98.9	0	0	53.1	0.5	46.4	0	0	99.4	0.6	0	
Total %	0.9	0	0.2	0	0.4	34.2	0	0	9.6	0.1	8.4	0	0	46	0.3	0	

	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	4	0	0	0	4	3	90	0	0	93	31	0	24	0	55	0	139	1	0	140	292
08:15 AM	1	0	0	0	1	1	111	0	0	112	29	1	29	0	59	0	101	1	0	102	274
08:30 AM	4	0	1	0	5	0	89	0	0	89	27	0	30	0	57	0	146	2	0	148	299
08:45 AM	3	0	2	0	5	1	102	0	0	103	32	0	16	0	48	0	114	1	0	115	271
Total Volume	12	0	3	0	15	5	392	0	0	397	119	1	99	0	219	0	500	5	0	505	1136
% App. Total	80	0	20	0		1.3	98.7	0	0		54.3	0.5	45.2	0		0	99	1	0		
PHF	.750	.000	.375	.000	.750	.417	.883	.000	.000	.886	.930	.250	.825	.000	.928	.000	.856	.625	.000	.853	.950

PRECISION
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Groups Printed- Heavy Vehicles

	Hichborn Street From North				North Beacon Street From East				Dustin Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0	6
07:15 AM	1	0	0	0	0	8	0	0	0	0	3	0	0	8	1	0	21
07:30 AM	0	0	0	0	0	5	0	0	0	0	0	0	0	12	0	0	17
07:45 AM	0	0	1	0	0	6	0	0	0	0	1	0	0	8	0	0	16
Total	1	0	1	0	0	21	0	0	0	0	4	0	0	32	1	0	60
08:00 AM	0	0	0	0	0	7	0	0	0	1	0	0	0	6	0	0	14
08:15 AM	0	0	1	0	0	4	0	0	0	0	0	0	0	10	0	0	15
08:30 AM	0	0	1	0	0	11	0	0	0	0	1	0	0	5	0	0	18
08:45 AM	0	0	1	0	0	5	0	0	1	0	0	0	0	6	1	0	14
Total	0	0	3	0	0	27	0	0	1	1	1	0	0	27	1	0	61
Grand Total	1	0	4	0	0	48	0	0	1	1	5	0	0	59	2	0	121
Apprch %	20	0	80	0	0	100	0	0	14.3	14.3	71.4	0	0	96.7	3.3	0	
Total %	0.8	0	3.3	0	0	39.7	0	0	0.8	0.8	4.1	0	0	48.8	1.7	0	

	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	1	0	0	0	1	0	8	0	0	8	0	0	3	0	3	0	8	1	0	9	21
07:30 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	12	0	0	12	17
07:45 AM	0	0	1	0	1	0	6	0	0	6	0	0	1	0	1	0	8	0	0	8	16
08:00 AM	0	0	0	0	0	0	7	0	0	7	0	1	0	0	1	0	6	0	0	6	14
Total Volume	1	0	1	0	2	0	26	0	0	26	0	1	4	0	5	0	34	1	0	35	68
% App. Total	50	0	50	0		0	100	0	0		0	20	80	0		0	97.1	2.9	0		
PHF	.250	.000	.250	.000	.500	.000	.813	.000	.000	.813	.000	.250	.333	.000	.417	.000	.708	.250	.000	.729	.810

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Groups Printed- Peds and Bikes

	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	0	1	1	0	3	0	0	0	8
07:15 AM	0	0	0	2	1	0	0	0	1	0	0	0	0	1	1	0	3	1	0	0	10
07:30 AM	0	0	0	2	3	0	0	0	0	1	2	0	0	0	3	0	1	0	0	0	12
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0	0	0	0	0	7
Total	0	0	0	4	4	0	0	1	1	1	4	0	0	5	9	0	7	1	0	0	37
08:00 AM	0	0	0	0	3	0	1	0	0	4	0	0	0	2	2	0	5	0	0	0	17
08:15 AM	0	0	0	1	2	0	1	0	0	1	0	0	0	1	3	0	4	1	0	0	14
08:30 AM	0	0	0	0	4	0	3	0	0	2	3	0	0	5	2	0	1	0	0	0	20
08:45 AM	0	0	0	3	7	0	0	0	0	3	1	0	0	1	3	0	3	0	1	0	22
Total	0	0	0	4	16	0	5	0	0	10	4	0	0	9	10	0	13	1	1	0	73
Grand Total	0	0	0	8	20	0	5	1	1	11	8	0	0	14	19	0	20	2	1	0	110
Apprch %	0	0	0	28.6	71.4	0	27.8	5.6	5.6	61.1	19.5	0	0	34.1	46.3	0	87	8.7	4.3	0	
Total %	0	0	0	7.3	18.2	0	4.5	0.9	0.9	10	7.3	0	0	12.7	17.3	0	18.2	1.8	0.9	0	

	Hichborn Street From North						North Beacon Street From East						Dustin Street From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	3	3	0	1	0	0	4	5	0	0	0	2	2	4	0	5	0	0	0	5	17
08:15 AM	0	0	0	1	2	3	0	1	0	0	1	2	0	0	0	1	3	4	0	4	1	0	0	5	14
08:30 AM	0	0	0	0	4	4	0	3	0	0	2	5	3	0	0	5	2	10	0	1	0	0	0	1	20
08:45 AM	0	0	0	3	7	10	0	0	0	0	3	3	1	0	0	1	3	5	0	3	0	1	0	4	22
Total Volume	0	0	0	4	16	20	0	5	0	0	10	15	4	0	0	9	10	23	0	13	1	1	0	15	73
% App. Total	0	0	0	20	80		0	33.3	0	0	66.7		17.4	0	0	39.1	43.5		0	86.7	6.7	6.7	0		
PHF	.000	.000	.000	.333	.571	.500	.000	.417	.000	.000	.625	.750	.333	.000	.000	.450	.833	.575	.000	.650	.250	.250	.000	.750	.830

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E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 D
Site Code : 12305.00
Start Date : 5/5/2016
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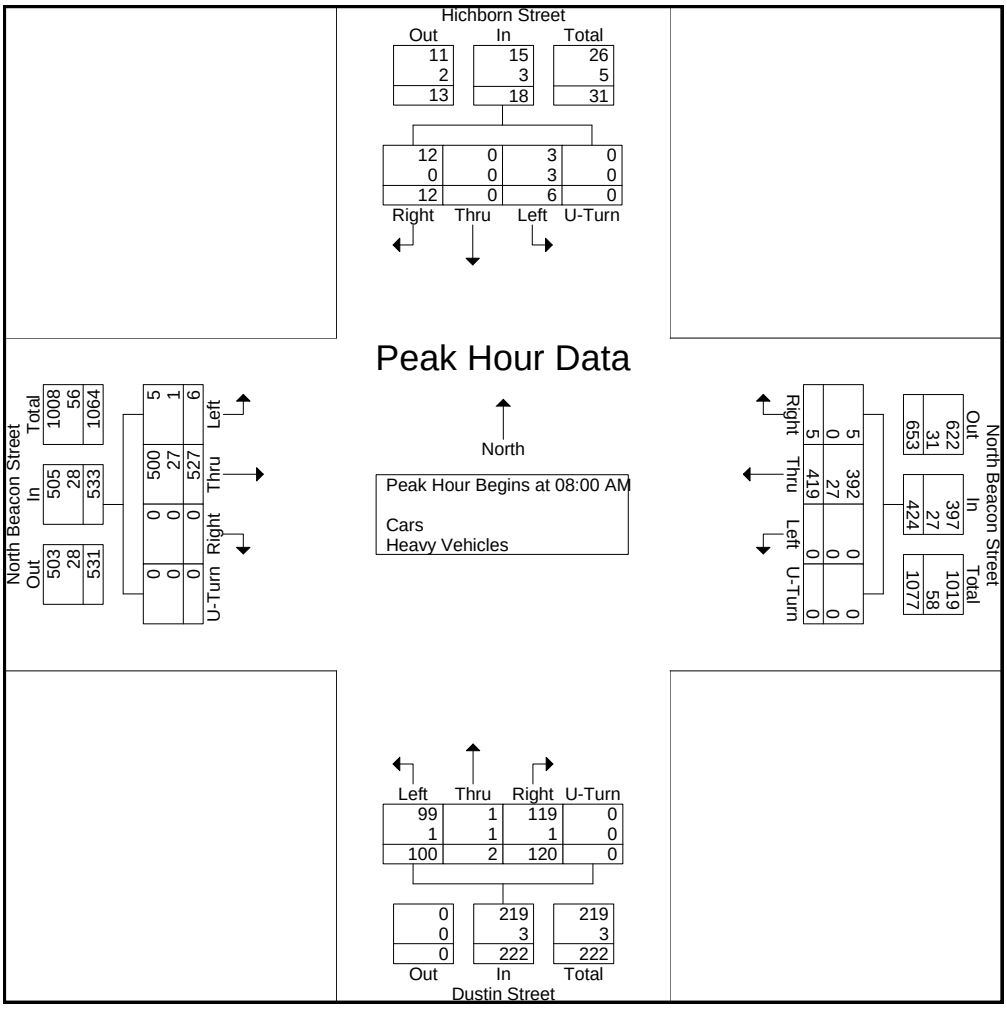
	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	4	0	0	0	4	3	97	0	0	100	31	1	24	0	56	0	145	1	0	146	306
08:15 AM	1	0	1	0	2	1	115	0	0	116	29	1	29	0	59	0	111	1	0	112	289
08:30 AM	4	0	2	0	6	0	100	0	0	100	27	0	31	0	58	0	151	2	0	153	317
08:45 AM	3	0	3	0	6	1	107	0	0	108	33	0	16	0	49	0	120	2	0	122	285
Total Volume	12	0	6	0	18	5	419	0	0	424	120	2	100	0	222	0	527	6	0	533	1197
% App. Total	66.7	0	33.3	0		1.2	98.8	0	0		54.1	0.9	45	0		0	98.9	1.1	0		
PHF	.750	.000	.500	.000	.750	.417	.911	.000	.000	.914	.909	.500	.806	.000	.941	.000	.873	.750	.000	.871	.944
Cars	12	0	3	0	15	5	392	0	0	397	119	1	99	0	219	0	500	5	0	505	1136
% Cars	100	0	50.0	0	83.3	100	93.6	0	0	93.6	99.2	50.0	99.0	0	98.6	0	94.9	83.3	0	94.7	94.9
Heavy Vehicles	0	0	3	0	3	0	27	0	0	27	1	1	1	0	3	0	27	1	0	28	61
% Heavy Vehicles	0	0	50.0	0	16.7	0	6.4	0	0	6.4	0.8	50.0	1.0	0	1.4	0	5.1	16.7	0	5.3	5.1



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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 DD
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Hichborn Street From North				North Beacon Street From East				Dustin Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	9	0	0	0	1	128	0	0	22	1	18	0	0	117	0	0	296
04:15 PM	2	0	1	0	1	155	0	0	20	0	16	0	0	117	1	0	313
04:30 PM	6	0	2	0	1	139	0	0	16	1	20	0	0	105	0	0	290
04:45 PM	4	0	2	0	1	151	0	0	17	1	10	0	0	124	1	0	311
Total	21	0	5	0	4	573	0	0	75	3	64	0	0	463	2	0	1210
05:00 PM	7	0	2	0	0	172	0	0	21	2	11	0	0	161	4	0	380
05:15 PM	8	0	4	0	1	173	0	0	18	1	13	0	0	123	0	0	341
05:30 PM	8	0	6	0	1	157	0	0	21	0	12	0	0	152	0	0	357
05:45 PM	11	0	1	0	1	140	0	0	17	1	19	0	0	153	1	0	344
Total	34	0	13	0	3	642	0	0	77	4	55	0	0	589	5	0	1422
Grand Total	55	0	18	0	7	1215	0	0	152	7	119	0	0	1052	7	0	2632
Apprch %	75.3	0	24.7	0	0.6	99.4	0	0	54.7	2.5	42.8	0	0	99.3	0.7	0	
Total %	2.1	0	0.7	0	0.3	46.2	0	0	5.8	0.3	4.5	0	0	40	0.3	0	
Cars	53	0	17	0	7	1188	0	0	151	5	116	0	0	1032	7	0	2576
% Cars	96.4	0	94.4	0	100	97.8	0	0	99.3	71.4	97.5	0	0	98.1	100	0	97.9
Heavy Vehicles	2	0	1	0	0	27	0	0	1	2	3	0	0	20	0	0	56
% Heavy Vehicles	3.6	0	5.6	0	0	2.2	0	0	0.7	28.6	2.5	0	0	1.9	0	0	2.1

	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	7	0	2	0	9	0	172	0	0	172	21	2	11	0	34	0	161	4	0	165	380
05:15 PM	8	0	4	0	12	1	173	0	0	174	18	1	13	0	32	0	123	0	0	123	341
05:30 PM	8	0	6	0	14	1	157	0	0	158	21	0	12	0	33	0	152	0	0	152	357
05:45 PM	11	0	1	0	12	1	140	0	0	141	17	1	19	0	37	0	153	1	0	154	344
Total Volume	34	0	13	0	47	3	642	0	0	645	77	4	55	0	136	0	589	5	0	594	1422
% App. Total	72.3	0	27.7	0		0.5	99.5	0	0		56.6	2.9	40.4	0		0	99.2	0.8	0		
PHF	.773	.000	.542	.000	.839	.750	.928	.000	.000	.927	.917	.500	.724	.000	.919	.000	.915	.313	.000	.900	.936
Cars	34	0	12	0	46	3	631	0	0	634	76	3	55	0	134	0	583	5	0	588	1402
% Cars	100	0	92.3	0	97.9	100	98.3	0	0	98.3	98.7	75.0	100	0	98.5	0	99.0	100	0	99.0	98.6
Heavy Vehicles	0	0	1	0	1	0	11	0	0	11	1	1	0	0	2	0	6	0	0	6	20
% Heavy Vehicles	0	0	7.7	0	2.1	0	1.7	0	0	1.7	1.3	25.0	0	0	1.5	0	1.0	0	0	1.0	1.4

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 DD
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Hichborn Street From North				North Beacon Street From East				Dustin Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	7	0	0	0	1	123	0	0	22	0	15	0	0	111	0	0	279
04:15 PM	2	0	1	0	1	151	0	0	20	0	16	0	0	115	1	0	307
04:30 PM	6	0	2	0	1	134	0	0	16	1	20	0	0	102	0	0	282
04:45 PM	4	0	2	0	1	149	0	0	17	1	10	0	0	121	1	0	306
Total	19	0	5	0	4	557	0	0	75	2	61	0	0	449	2	0	1174
05:00 PM	7	0	2	0	0	168	0	0	21	2	11	0	0	158	4	0	373
05:15 PM	8	0	4	0	1	171	0	0	18	0	13	0	0	122	0	0	337
05:30 PM	8	0	5	0	1	153	0	0	20	0	12	0	0	150	0	0	349
05:45 PM	11	0	1	0	1	139	0	0	17	1	19	0	0	153	1	0	343
Total	34	0	12	0	3	631	0	0	76	3	55	0	0	583	5	0	1402
Grand Total	53	0	17	0	7	1188	0	0	151	5	116	0	0	1032	7	0	2576
Apprch %	75.7	0	24.3	0	0.6	99.4	0	0	55.5	1.8	42.6	0	0	99.3	0.7	0	
Total %	2.1	0	0.7	0	0.3	46.1	0	0	5.9	0.2	4.5	0	0	40.1	0.3	0	

	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	7	0	2	0	9	0	168	0	0	168	21	2	11	0	34	0	158	4	0	162	373
05:15 PM	8	0	4	0	12	1	171	0	0	172	18	0	13	0	31	0	122	0	0	122	337
05:30 PM	8	0	5	0	13	1	153	0	0	154	20	0	12	0	32	0	150	0	0	150	349
05:45 PM	11	0	1	0	12	1	139	0	0	140	17	1	19	0	37	0	153	1	0	154	343
Total Volume	34	0	12	0	46	3	631	0	0	634	76	3	55	0	134	0	583	5	0	588	1402
% App. Total	73.9	0	26.1	0		0.5	99.5	0	0		56.7	2.2	41	0		0	99.1	0.9	0		
PHF	.773	.000	.600	.000	.885	.750	.923	.000	.000	.922	.905	.375	.724	.000	.905	.000	.922	.313	.000	.907	.940

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File Name : 165041 DD
Site Code : 12305.00
Start Date : 5/5/2016
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Groups Printed- Heavy Vehicles

	Hichborn Street From North				North Beacon Street From East				Dustin Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	2	0	0	0	0	5	0	0	0	1	3	0	0	6	0	0	17
04:15 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	2	0	0	6
04:30 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	3	0	0	8
04:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	5
Total	2	0	0	0	0	16	0	0	0	1	3	0	0	14	0	0	36
05:00 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	3	0	0	7
05:15 PM	0	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	4
05:30 PM	0	0	1	0	0	4	0	0	1	0	0	0	0	2	0	0	8
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	11	0	0	1	1	0	0	0	6	0	0	20
Grand Total	2	0	1	0	0	27	0	0	1	2	3	0	0	20	0	0	56
Apprch %	66.7	0	33.3	0	0	100	0	0	16.7	33.3	50	0	0	100	0	0	
Total %	3.6	0	1.8	0	0	48.2	0	0	1.8	3.6	5.4	0	0	35.7	0	0	

	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	2	0	0	0	2	0	5	0	0	5	0	1	3	0	4	0	6	0	0	6	17
04:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	6
04:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	8
04:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5
Total Volume	2	0	0	0	2	0	16	0	0	16	0	1	3	0	4	0	14	0	0	14	36
% App. Total	100	0	0	0		0	100	0	0		0	25	75	0		0	100	0	0		
PHF	.250	.000	.000	.000	.250	.000	.800	.000	.000	.800	.000	.250	.250	.000	.250	.000	.583	.000	.000	.583	.529

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Groups Printed- Peds and Bikes

	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	1	1	0	0	0	1	0	1	0	0	1	1	0	0	0	0	0	6
04:15 PM	4	0	0	1	2	0	3	0	0	0	0	0	0	5	0	0	1	0	0	0	16
04:30 PM	1	0	0	2	1	0	1	0	0	1	1	0	0	5	5	0	1	0	0	0	18
04:45 PM	0	0	0	0	2	0	5	1	2	1	0	0	0	5	2	0	1	0	0	0	19
Total	5	0	0	4	6	0	9	1	3	2	2	0	0	16	8	0	3	0	0	0	59
05:00 PM	2	0	0	3	1	0	0	0	0	0	1	0	0	0	2	0	2	0	0	0	11
05:15 PM	0	0	0	5	1	0	2	0	1	0	0	0	0	6	4	0	2	0	0	0	21
05:30 PM	0	0	0	8	3	0	2	0	0	0	0	0	0	7	3	0	1	0	0	0	24
05:45 PM	0	0	0	1	3	0	3	0	2	0	0	0	0	3	6	0	0	0	0	0	18
Total	2	0	0	17	8	0	7	0	3	0	1	0	0	16	15	0	5	0	0	0	74
Grand Total	7	0	0	21	14	0	16	1	6	2	3	0	0	32	23	0	8	0	0	0	133
Apprch %	16.7	0	0	50	33.3	0	64	4	24	8	5.2	0	0	55.2	39.7	0	100	0	0	0	
Total %	5.3	0	0	15.8	10.5	0	12	0.8	4.5	1.5	2.3	0	0	24.1	17.3	0	6	0	0	0	

	Hichborn Street From North						North Beacon Street From East						Dustin Street From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:45 PM																									
04:45 PM	0	0	0	0	2	2	0	5	1	2	1	9	0	0	0	5	2	7	0	1	0	0	0	1	19
05:00 PM	2	0	0	3	1	6	0	0	0	0	0	0	1	0	0	0	2	3	0	2	0	0	0	2	11
05:15 PM	0	0	0	5	1	6	0	2	0	1	0	3	0	0	0	6	4	10	0	2	0	0	0	2	21
05:30 PM	0	0	0	8	3	11	0	2	0	0	0	2	0	0	0	7	3	10	0	1	0	0	0	1	24
Total Volume	2	0	0	16	7	25	0	9	1	3	1	14	1	0	0	18	11	30	0	6	0	0	0	6	75
% App. Total	8	0	0	64	28		0	64.3	7.1	21.4	7.1		3.3	0	0	60	36.7		0	100	0	0	0		
PHF	.250	.000	.000	.500	.583	.568	.000	.450	.250	.375	.250	.389	.250	.000	.000	.643	.688	.750	.000	.750	.000	.000	.000	.750	.781

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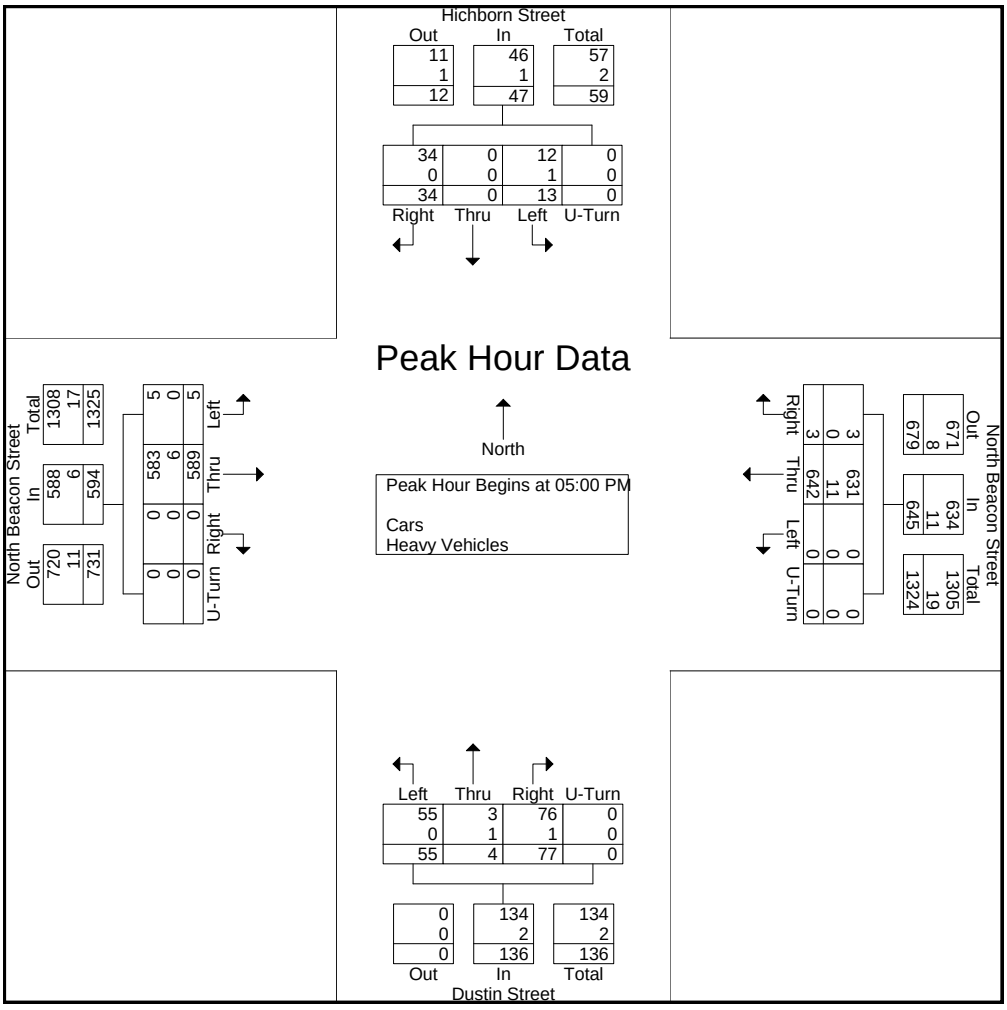
	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	7	0	2	0	9	0	172	0	0	172	21	2	11	0	34	0	161	4	0	165	380
05:15 PM	8	0	4	0	12	1	173	0	0	174	18	1	13	0	32	0	123	0	0	123	341
05:30 PM	8	0	6	0	14	1	157	0	0	158	21	0	12	0	33	0	152	0	0	152	357
05:45 PM	11	0	1	0	12	1	140	0	0	141	17	1	19	0	37	0	153	1	0	154	344
Total Volume	34	0	13	0	47	3	642	0	0	645	77	4	55	0	136	0	589	5	0	594	1422
% App. Total	72.3	0	27.7	0		0.5	99.5	0	0		56.6	2.9	40.4	0		0	99.2	0.8	0		
PHF	.773	.000	.542	.000	.839	.750	.928	.000	.000	.927	.917	.500	.724	.000	.919	.000	.915	.313	.000	.900	.936
Cars	34	0	12	0	46	3	631	0	0	634	76	3	55	0	134	0	583	5	0	588	1402
% Cars	100	0	92.3	0	97.9	100	98.3	0	0	98.3	98.7	75.0	100	0	98.5	0	99.0	100	0	99.0	98.6
Heavy Vehicles	0	0	1	0	1	0	11	0	0	11	1	1	0	0	2	0	6	0	0	6	20
% Heavy Vehicles	0	0	7.7	0	2.1	0	1.7	0	0	1.7	1.3	25.0	0	0	1.5	0	1.0	0	0	1.0	1.4



PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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N/S: Hichborn Street/ Dustin Street
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 DDD
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Hichborn Street From North				North Beacon Street From East				Dustin Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	2	0	1	0	0	119	0	0	17	0	15	0	0	109	0	0	263
11:15 AM	1	0	1	0	0	112	0	0	16	0	14	0	0	125	0	0	269
11:30 AM	5	0	0	0	0	115	0	0	27	0	7	0	0	111	0	0	265
11:45 AM	3	0	0	0	0	101	0	0	12	0	8	0	0	127	0	0	251
Total	11	0	2	0	0	447	0	0	72	0	44	0	0	472	0	0	1048
12:00 PM	4	0	2	0	0	137	0	0	21	1	6	0	0	139	1	0	311
12:15 PM	2	0	0	0	1	134	0	0	17	0	8	0	0	116	1	0	279
12:30 PM	3	0	1	0	1	115	0	0	23	0	13	0	0	141	1	0	298
12:45 PM	3	0	1	0	0	139	0	0	17	0	12	0	0	121	1	0	294
Total	12	0	4	0	2	525	0	0	78	1	39	0	0	517	4	0	1182
01:00 PM	9	0	0	0	1	129	0	0	15	1	13	0	0	137	0	0	305
01:15 PM	3	0	0	0	1	149	0	0	18	0	10	0	0	123	1	0	305
01:30 PM	3	0	0	0	0	138	0	0	12	0	11	0	0	135	0	0	299
01:45 PM	2	0	1	0	0	130	0	0	15	1	16	0	0	110	2	0	277
Total	17	0	1	0	2	546	0	0	60	2	50	0	0	505	3	0	1186
Grand Total	40	0	7	0	4	1518	0	0	210	3	133	0	0	1494	7	0	3416
Apprch %	85.1	0	14.9	0	0.3	99.7	0	0	60.7	0.9	38.4	0	0	99.5	0.5	0	
Total %	1.2	0	0.2	0	0.1	44.4	0	0	6.1	0.1	3.9	0	0	43.7	0.2	0	
Cars	40	0	7	0	4	1486	0	0	208	3	132	0	0	1473	6	0	3359
% Cars	100	0	100	0	100	97.9	0	0	99	100	99.2	0	0	98.6	85.7	0	98.3
Heavy Vehicles	0	0	0	0	0	32	0	0	2	0	1	0	0	21	1	0	57
% Heavy Vehicles	0	0	0	0	0	2.1	0	0	1	0	0.8	0	0	1.4	14.3	0	1.7

	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45 PM																					
12:45 PM	3	0	1	0	4	0	139	0	0	139	17	0	12	0	29	0	121	1	0	122	294
01:00 PM	9	0	0	0	9	1	129	0	0	130	15	1	13	0	29	0	137	0	0	137	305
01:15 PM	3	0	0	0	3	1	149	0	0	150	18	0	10	0	28	0	123	1	0	124	305
01:30 PM	3	0	0	0	3	0	138	0	0	138	12	0	11	0	23	0	135	0	0	135	299
Total Volume	18	0	1	0	19	2	555	0	0	557	62	1	46	0	109	0	516	2	0	518	1203
% App. Total	94.7	0	5.3	0		0.4	99.6	0	0		56.9	0.9	42.2	0		0	99.6	0.4	0		
PHF	.500	.000	.250	.000	.528	.500	.931	.000	.000	.928	.861	.250	.885	.000	.940	.000	.942	.500	.000	.945	.986
Cars	18	0	1	0	19	2	545	0	0	547	62	1	46	0	109	0	507	1	0	508	1183
% Cars	100	0	100	0	100	100	98.2	0	0	98.2	100	100	100	0	100	0	98.3	50.0	0	98.1	98.3
Heavy Vehicles	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	9	1	0	10	20
% Heavy Vehicles	0	0	0	0	0	0	1.8	0	0	1.8	0	0	0	0	0	0	1.7	50.0	0	1.9	1.7

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 DDD
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars

	Hichborn Street From North				North Beacon Street From East				Dustin Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	2	0	1	0	0	116	0	0	17	0	15	0	0	108	0	0	259
11:15 AM	1	0	1	0	0	110	0	0	16	0	14	0	0	124	0	0	266
11:30 AM	5	0	0	0	0	108	0	0	27	0	7	0	0	110	0	0	257
11:45 AM	3	0	0	0	0	101	0	0	12	0	7	0	0	125	0	0	248
Total	11	0	2	0	0	435	0	0	72	0	43	0	0	467	0	0	1030
12:00 PM	4	0	2	0	0	133	0	0	19	1	6	0	0	136	1	0	302
12:15 PM	2	0	0	0	1	131	0	0	17	0	8	0	0	116	1	0	276
12:30 PM	3	0	1	0	1	114	0	0	23	0	13	0	0	139	1	0	295
12:45 PM	3	0	1	0	0	136	0	0	17	0	12	0	0	119	1	0	289
Total	12	0	4	0	2	514	0	0	76	1	39	0	0	510	4	0	1162
01:00 PM	9	0	0	0	1	127	0	0	15	1	13	0	0	135	0	0	301
01:15 PM	3	0	0	0	1	147	0	0	18	0	10	0	0	122	0	0	301
01:30 PM	3	0	0	0	0	135	0	0	12	0	11	0	0	131	0	0	292
01:45 PM	2	0	1	0	0	128	0	0	15	1	16	0	0	108	2	0	273
Total	17	0	1	0	2	537	0	0	60	2	50	0	0	496	2	0	1167
Grand Total	40	0	7	0	4	1486	0	0	208	3	132	0	0	1473	6	0	3359
Apprch %	85.1	0	14.9	0	0.3	99.7	0	0	60.6	0.9	38.5	0	0	99.6	0.4	0	
Total %	1.2	0	0.2	0	0.1	44.2	0	0	6.2	0.1	3.9	0	0	43.9	0.2	0	

	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	3	0	1	0	4	1	114	0	0	115	23	0	13	0	36	0	139	1	0	140	295
12:45 PM	3	0	1	0	4	0	136	0	0	136	17	0	12	0	29	0	119	1	0	120	289
01:00 PM	9	0	0	0	9	1	127	0	0	128	15	1	13	0	29	0	135	0	0	135	301
01:15 PM	3	0	0	0	3	1	147	0	0	148	18	0	10	0	28	0	122	0	0	122	301
Total Volume	18	0	2	0	20	3	524	0	0	527	73	1	48	0	122	0	515	2	0	517	1186
% App. Total	90	0	10	0		0.6	99.4	0	0		59.8	0.8	39.3	0		0	99.6	0.4	0		
PHF	.500	.000	.500	.000	.556	.750	.891	.000	.000	.890	.793	.250	.923	.000	.847	.000	.926	.500	.000	.923	.985

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E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 DDD
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Hichborn Street From North				North Beacon Street From East				Dustin Street From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	4
11:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
11:30 AM	0	0	0	0	0	7	0	0	0	0	0	0	0	1	0	0	8
11:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	3
Total	0	0	0	0	0	12	0	0	0	0	1	0	0	5	0	0	18
12:00 PM	0	0	0	0	0	4	0	0	2	0	0	0	0	3	0	0	9
12:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
12:45 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	5
Total	0	0	0	0	0	11	0	0	2	0	0	0	0	7	0	0	20
01:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
01:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	1	0	4
01:30 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	4	0	0	7
01:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
Total	0	0	0	0	0	9	0	0	0	0	0	0	0	9	1	0	19
Grand Total	0	0	0	0	0	32	0	0	2	0	1	0	0	21	1	0	57
Apprch %	0	0	0	0	0	100	0	0	66.7	0	33.3	0	0	95.5	4.5	0	
Total %	0	0	0	0	0	56.1	0	0	3.5	0	1.8	0	0	36.8	1.8	0	

	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:15 AM																					
11:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
11:30 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	1	0	0	1	8
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	3
12:00 PM	0	0	0	0	0	0	4	0	0	4	2	0	0	0	2	0	3	0	0	3	9
Total Volume	0	0	0	0	0	0	13	0	0	13	2	0	1	0	3	0	7	0	0	7	23
% App. Total	0	0	0	0		0	100	0	0		66.7	0	33.3	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.464	.000	.000	.464	.250	.000	.250	.000	.375	.000	.583	.000	.000	.583	.639

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 DDD
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Peds and Bikes

	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	2	1	0	1	0	1	2	0	0	0	4	10	0	1	0	0	0	22
11:15 AM	0	0	0	1	1	0	0	0	1	2	0	0	0	2	5	0	0	0	0	0	12
11:30 AM	0	0	0	2	7	0	0	0	4	0	0	0	0	6	5	0	1	0	0	1	26
11:45 AM	0	0	0	4	1	0	1	0	3	0	0	0	0	7	7	0	0	0	0	0	23
Total	0	0	0	9	10	0	2	0	9	4	0	0	0	19	27	0	2	0	0	1	83
12:00 PM	1	0	0	5	1	0	2	0	0	0	0	0	0	0	1	0	2	0	0	0	12
12:15 PM	0	0	0	6	2	0	2	0	0	1	1	0	0	1	4	0	1	0	0	0	18
12:30 PM	0	0	0	3	2	0	1	0	1	0	0	0	0	2	2	0	2	0	0	0	13
12:45 PM	0	0	0	3	0	0	0	0	1	0	1	0	0	1	14	0	0	0	0	1	21
Total	1	0	0	17	5	0	5	0	2	1	2	0	0	4	21	0	5	0	0	1	64
01:00 PM	0	0	0	1	2	0	1	0	0	0	0	0	0	1	1	0	4	0	0	0	10
01:15 PM	0	0	0	6	3	0	1	0	1	1	0	0	0	4	9	0	1	0	1	0	27
01:30 PM	0	0	0	0	4	0	0	0	1	0	1	0	0	4	0	0	1	0	0	0	11
01:45 PM	0	0	0	4	1	0	0	0	0	1	0	0	0	3	4	0	1	1	0	0	15
Total	0	0	0	11	10	0	2	0	2	2	1	0	0	12	14	0	7	1	1	0	63
Grand Total	1	0	0	37	25	0	9	0	13	7	3	0	0	35	62	0	14	1	1	2	210
Apprch %	1.6	0	0	58.7	39.7	0	31	0	44.8	24.1	3	0	0	35	62	0	77.8	5.6	5.6	11.1	
Total %	0.5	0	0	17.6	11.9	0	4.3	0	6.2	3.3	1.4	0	0	16.7	29.5	0	6.7	0.5	0.5	1	

	Hichborn Street From North						North Beacon Street From East						Dustin Street From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 11:00 AM																									
11:00 AM	0	0	0	2	1	3	0	1	0	1	2	4	0	0	0	4	10	14	0	1	0	0	0	1	22
11:15 AM	0	0	0	1	1	2	0	0	0	1	2	3	0	0	0	2	5	7	0	0	0	0	0	0	12
11:30 AM	0	0	0	2	7	9	0	0	0	4	0	4	0	0	0	6	5	11	0	1	0	0	1	2	26
11:45 AM	0	0	0	4	1	5	0	1	0	3	0	4	0	0	0	7	7	14	0	0	0	0	0	0	23
Total Volume	0	0	0	9	10	19	0	2	0	9	4	15	0	0	0	19	27	46	0	2	0	0	1	3	83
% App. Total	0	0	0	47.4	52.6		0	13.3	0	60	26.7		0	0	0	41.3	58.7		0	66.7	0	0	33.3		
PHF	.000	.000	.000	.563	.357	.528	.000	.500	.000	.563	.500	.938	.000	.000	.000	.679	.675	.821	.000	.500	.000	.000	.250	.375	.798

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File Name : 165041 DDD
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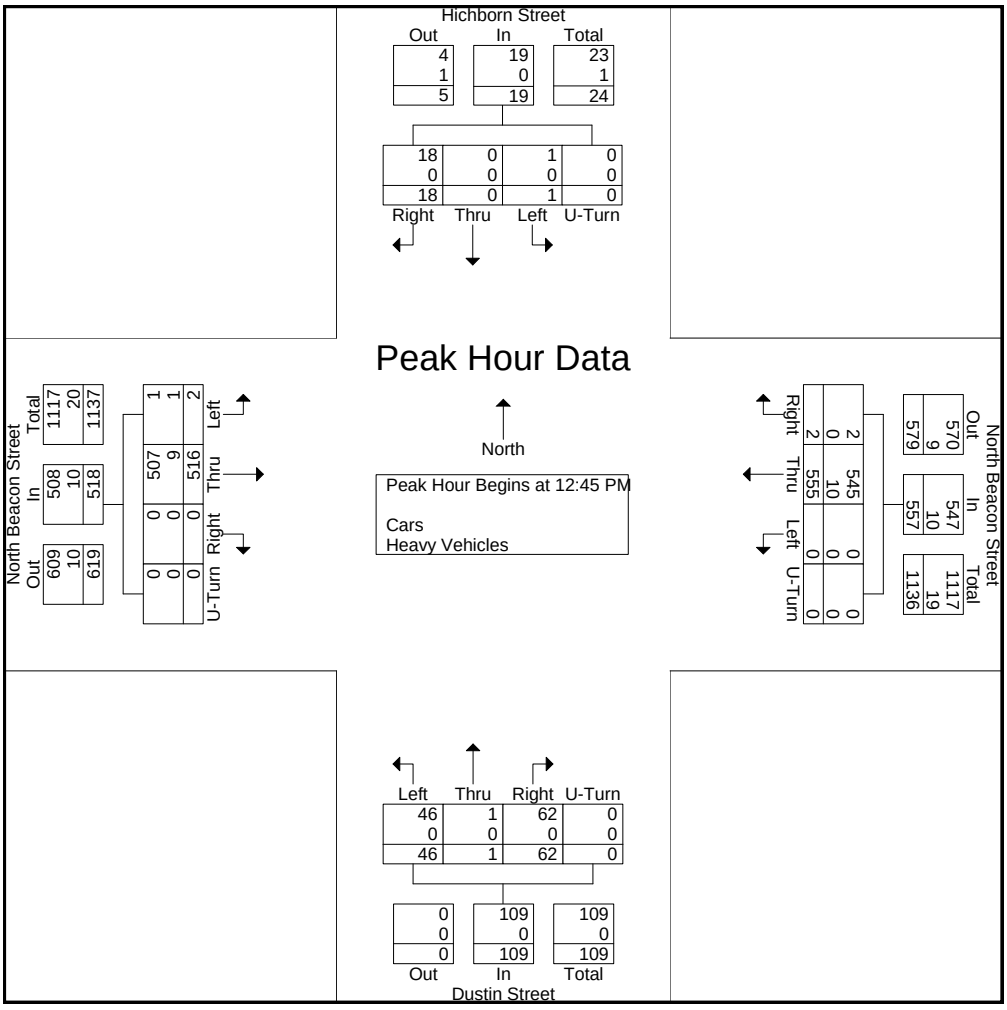
	Hichborn Street From North					North Beacon Street From East					Dustin Street From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45 PM																					
12:45 PM	3	0	1	0	4	0	139	0	0	139	17	0	12	0	29	0	121	1	0	122	294
01:00 PM	9	0	0	0	9	1	129	0	0	130	15	1	13	0	29	0	137	0	0	137	305
01:15 PM	3	0	0	0	3	1	149	0	0	150	18	0	10	0	28	0	123	1	0	124	305
01:30 PM	3	0	0	0	3	0	138	0	0	138	12	0	11	0	23	0	135	0	0	135	299
Total Volume	18	0	1	0	19	2	555	0	0	557	62	1	46	0	109	0	516	2	0	518	1203
% App. Total	94.7	0	5.3	0		0.4	99.6	0	0		56.9	0.9	42.2	0		0	99.6	0.4	0		
PHF	.500	.000	.250	.000	.528	.500	.931	.000	.000	.928	.861	.250	.885	.000	.940	.000	.942	.500	.000	.945	.986
Cars	18	0	1	0	19	2	545	0	0	547	62	1	46	0	109	0	507	1	0	508	1183
% Cars	100	0	100	0	100	100	98.2	0	0	98.2	100	100	100	0	100	0	98.3	50.0	0	98.1	98.3
Heavy Vehicles	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	9	1	0	10	20
% Heavy Vehicles	0	0	0	0	0	0	1.8	0	0	1.8	0	0	0	0	0	0	1.7	50.0	0	1.9	1.7



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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 E
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Arthur Street From North			North Beacon Street From East			North Beacon Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:00 AM	5	12	0	6	46	0	92	12	0	173
07:15 AM	8	9	0	11	85	0	135	11	0	259
07:30 AM	10	11	0	14	80	0	134	8	0	257
07:45 AM	5	12	0	17	96	0	143	10	0	283
Total	28	44	0	48	307	0	504	41	0	972
08:00 AM	9	17	0	24	81	0	148	22	0	301
08:15 AM	11	13	0	26	108	0	127	18	0	303
08:30 AM	9	17	0	31	78	0	156	23	0	314
08:45 AM	16	18	0	25	90	0	137	17	0	303
Total	45	65	0	106	357	0	568	80	0	1221
Grand Total	73	109	0	154	664	0	1072	121	0	2193
Apprch %	40.1	59.9	0	18.8	81.2	0	89.9	10.1	0	
Total %	3.3	5	0	7	30.3	0	48.9	5.5	0	
Cars	72	91	0	140	623	0	1014	117	0	2057
% Cars	98.6	83.5	0	90.9	93.8	0	94.6	96.7	0	93.8
Heavy Vehicles	1	18	0	14	41	0	58	4	0	136
% Heavy Vehicles	1.4	16.5	0	9.1	6.2	0	5.4	3.3	0	6.2

	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	9	17	0	26	24	81	0	105	148	22	0	170	301
08:15 AM	11	13	0	24	26	108	0	134	127	18	0	145	303
08:30 AM	9	17	0	26	31	78	0	109	156	23	0	179	314
08:45 AM	16	18	0	34	25	90	0	115	137	17	0	154	303
Total Volume	45	65	0	110	106	357	0	463	568	80	0	648	1221
% App. Total	40.9	59.1	0		22.9	77.1	0		87.7	12.3	0		
PHF	.703	.903	.000	.809	.855	.826	.000	.864	.910	.870	.000	.905	.972
Cars	45	56	0	101	97	334	0	431	538	78	0	616	1148
% Cars	100	86.2	0	91.8	91.5	93.6	0	93.1	94.7	97.5	0	95.1	94.0
Heavy Vehicles	0	9	0	9	9	23	0	32	30	2	0	32	73
% Heavy Vehicles	0	13.8	0	8.2	8.5	6.4	0	6.9	5.3	2.5	0	4.9	6.0

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Client: VHB/ A. Santiago

File Name : 165041 E
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Groups Printed- Cars

	Arthur Street From North			North Beacon Street From East			North Beacon Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:00 AM	4	11	0	5	45	0	89	12	0	166
07:15 AM	8	8	0	9	78	0	128	11	0	242
07:30 AM	10	7	0	14	78	0	125	8	0	242
07:45 AM	5	9	0	15	88	0	134	8	0	259
Total	27	35	0	43	289	0	476	39	0	909
08:00 AM	9	15	0	21	74	0	142	22	0	283
08:15 AM	11	13	0	25	104	0	118	17	0	288
08:30 AM	9	15	0	28	73	0	148	23	0	296
08:45 AM	16	13	0	23	83	0	130	16	0	281
Total	45	56	0	97	334	0	538	78	0	1148
Grand Total	72	91	0	140	623	0	1014	117	0	2057
Apprch %	44.2	55.8	0	18.3	81.7	0	89.7	10.3	0	
Total %	3.5	4.4	0	6.8	30.3	0	49.3	5.7	0	

	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	9	15	0	24	21	74	0	95	142	22	0	164	283
08:15 AM	11	13	0	24	25	104	0	129	118	17	0	135	288
08:30 AM	9	15	0	24	28	73	0	101	148	23	0	171	296
08:45 AM	16	13	0	29	23	83	0	106	130	16	0	146	281
Total Volume	45	56	0	101	97	334	0	431	538	78	0	616	1148
% App. Total	44.6	55.4	0		22.5	77.5	0		87.3	12.7	0		
PHF	.703	.933	.000	.871	.866	.803	.000	.835	.909	.848	.000	.901	.970

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Groups Printed- Heavy Vehicles

	Arthur Street From North			North Beacon Street From East			North Beacon Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:00 AM	1	1	0	1	1	0	3	0	0	7
07:15 AM	0	1	0	2	7	0	7	0	0	17
07:30 AM	0	4	0	0	2	0	9	0	0	15
07:45 AM	0	3	0	2	8	0	9	2	0	24
Total	1	9	0	5	18	0	28	2	0	63
08:00 AM	0	2	0	3	7	0	6	0	0	18
08:15 AM	0	0	0	1	4	0	9	1	0	15
08:30 AM	0	2	0	3	5	0	8	0	0	18
08:45 AM	0	5	0	2	7	0	7	1	0	22
Total	0	9	0	9	23	0	30	2	0	73
Grand Total	1	18	0	14	41	0	58	4	0	136
Apprch %	5.3	94.7	0	25.5	74.5	0	93.5	6.5	0	
Total %	0.7	13.2	0	10.3	30.1	0	42.6	2.9	0	

	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	0	3	0	3	2	8	0	10	9	2	0	11	24
08:00 AM	0	2	0	2	3	7	0	10	6	0	0	6	18
08:15 AM	0	0	0	0	1	4	0	5	9	1	0	10	15
08:30 AM	0	2	0	2	3	5	0	8	8	0	0	8	18
Total Volume	0	7	0	7	9	24	0	33	32	3	0	35	75
% App. Total	0	100	0		27.3	72.7	0		91.4	8.6	0		
PHF	.000	.583	.000	.583	.750	.750	.000	.825	.889	.375	.000	.795	.781

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Groups Printed- Peds and Bikes

	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	1	0	1	1	0	5	0	0	0	8
07:15 AM	0	0	0	1	0	0	0	0	3	0	0	0	4
07:30 AM	0	0	1	3	0	0	0	0	2	0	0	0	6
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	5	0	1	1	0	10	0	0	0	18
08:00 AM	0	0	0	4	0	2	0	1	3	0	0	1	11
08:15 AM	0	0	1	2	0	0	0	0	2	0	0	0	5
08:30 AM	0	0	0	2	0	4	0	0	3	1	0	0	10
08:45 AM	0	0	1	6	0	0	0	0	4	0	1	1	13
Total	0	0	2	14	0	6	0	1	12	1	1	2	39
Grand Total	0	0	3	19	0	7	1	1	22	1	1	2	57
Apprch %	0	0	13.6	86.4	0	77.8	11.1	11.1	84.6	3.8	3.8	7.7	
Total %	0	0	5.3	33.3	0	12.3	1.8	1.8	38.6	1.8	1.8	3.5	

	Arthur Street From North					North Beacon Street From East					North Beacon Street From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	4	4	0	2	0	1	3	3	0	0	1	4	11
08:15 AM	0	0	1	2	3	0	0	0	0	0	2	0	0	0	2	5
08:30 AM	0	0	0	2	2	0	4	0	0	4	3	1	0	0	4	10
08:45 AM	0	0	1	6	7	0	0	0	0	0	4	0	1	1	6	13
Total Volume	0	0	2	14	16	0	6	0	1	7	12	1	1	2	16	39
% App. Total	0	0	12.5	87.5		0	85.7	0	14.3		75	6.2	6.2	12.5		
PHF	.000	.000	.500	.583	.571	.000	.375	.000	.250	.438	.750	.250	.250	.500	.667	.750

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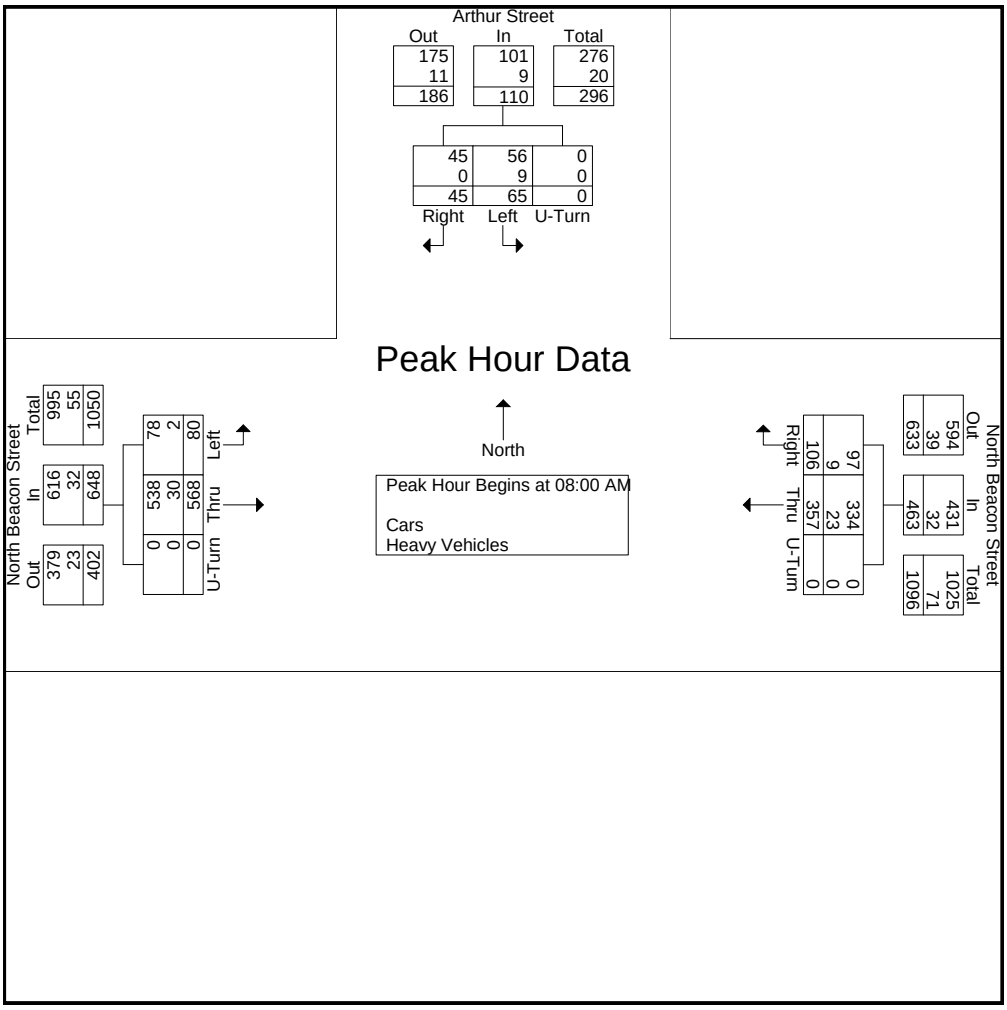
	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	9	17	0	26	24	81	0	105	148	22	0	170	301
08:15 AM	11	13	0	24	26	108	0	134	127	18	0	145	303
08:30 AM	9	17	0	26	31	78	0	109	156	23	0	179	314
08:45 AM	16	18	0	34	25	90	0	115	137	17	0	154	303
Total Volume	45	65	0	110	106	357	0	463	568	80	0	648	1221
% App. Total	40.9	59.1	0		22.9	77.1	0		87.7	12.3	0		
PHF	.703	.903	.000	.809	.855	.826	.000	.864	.910	.870	.000	.905	.972
Cars	45	56	0	101	97	334	0	431	538	78	0	616	1148
% Cars	100	86.2	0	91.8	91.5	93.6	0	93.1	94.7	97.5	0	95.1	94.0
Heavy Vehicles	0	9	0	9	9	23	0	32	30	2	0	32	73
% Heavy Vehicles	0	13.8	0	8.2	8.5	6.4	0	6.9	5.3	2.5	0	4.9	6.0



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Groups Printed- Cars - Heavy Vehicles

	Arthur Street From North			North Beacon Street From East			North Beacon Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:00 PM	26	41	0	14	95	0	120	24	0	320
04:15 PM	26	41	0	15	121	0	104	32	0	339
04:30 PM	32	38	0	18	103	0	112	18	0	321
04:45 PM	37	45	0	13	110	0	111	30	0	346
Total	121	165	0	60	429	0	447	104	0	1326
05:00 PM	42	33	0	22	121	0	139	40	0	397
05:15 PM	42	44	0	20	125	0	111	33	0	375
05:30 PM	45	41	0	18	113	0	141	32	0	390
05:45 PM	45	40	0	25	92	0	141	34	0	377
Total	174	158	0	85	451	0	532	139	0	1539
Grand Total	295	323	0	145	880	0	979	243	0	2865
Apprch %	47.7	52.3	0	14.1	85.9	0	80.1	19.9	0	
Total %	10.3	11.3	0	5.1	30.7	0	34.2	8.5	0	
Cars	290	318	0	142	859	0	959	238	0	2806
% Cars	98.3	98.5	0	97.9	97.6	0	98	97.9	0	97.9
Heavy Vehicles	5	5	0	3	21	0	20	5	0	59
% Heavy Vehicles	1.7	1.5	0	2.1	2.4	0	2	2.1	0	2.1

	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	42	33	0	75	22	121	0	143	139	40	0	179	397
05:15 PM	42	44	0	86	20	125	0	145	111	33	0	144	375
05:30 PM	45	41	0	86	18	113	0	131	141	32	0	173	390
05:45 PM	45	40	0	85	25	92	0	117	141	34	0	175	377
Total Volume	174	158	0	332	85	451	0	536	532	139	0	671	1539
% App. Total	52.4	47.6	0		15.9	84.1	0		79.3	20.7	0		
PHF	.967	.898	.000	.965	.850	.902	.000	.924	.943	.869	.000	.937	.969
Cars	171	156	0	327	83	442	0	525	526	137	0	663	1515
% Cars	98.3	98.7	0	98.5	97.6	98.0	0	97.9	98.9	98.6	0	98.8	98.4
Heavy Vehicles	3	2	0	5	2	9	0	11	6	2	0	8	24
% Heavy Vehicles	1.7	1.3	0	1.5	2.4	2.0	0	2.1	1.1	1.4	0	1.2	1.6

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Groups Printed- Cars

	Arthur Street From North			North Beacon Street From East			North Beacon Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:00 PM	24	40	0	14	93	0	117	23	0	311
04:15 PM	26	41	0	14	117	0	100	31	0	329
04:30 PM	32	37	0	18	98	0	110	17	0	312
04:45 PM	37	44	0	13	109	0	106	30	0	339
Total	119	162	0	59	417	0	433	101	0	1291
05:00 PM	42	33	0	21	117	0	138	39	0	390
05:15 PM	41	43	0	20	123	0	109	32	0	368
05:30 PM	43	40	0	17	111	0	139	32	0	382
05:45 PM	45	40	0	25	91	0	140	34	0	375
Total	171	156	0	83	442	0	526	137	0	1515
Grand Total	290	318	0	142	859	0	959	238	0	2806
Apprch %	47.7	52.3	0	14.2	85.8	0	80.1	19.9	0	
Total %	10.3	11.3	0	5.1	30.6	0	34.2	8.5	0	

	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	42	33	0	75	21	117	0	138	138	39	0	177	390
05:15 PM	41	43	0	84	20	123	0	143	109	32	0	141	368
05:30 PM	43	40	0	83	17	111	0	128	139	32	0	171	382
05:45 PM	45	40	0	85	25	91	0	116	140	34	0	174	375
Total Volume	171	156	0	327	83	442	0	525	526	137	0	663	1515
% App. Total	52.3	47.7	0		15.8	84.2	0		79.3	20.7	0		
PHF	.950	.907	.000	.962	.830	.898	.000	.918	.939	.878	.000	.936	.971

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Groups Printed- Heavy Vehicles

	Arthur Street From North			North Beacon Street From East			North Beacon Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:00 PM	2	1	0	0	2	0	3	1	0	9
04:15 PM	0	0	0	1	4	0	4	1	0	10
04:30 PM	0	1	0	0	5	0	2	1	0	9
04:45 PM	0	1	0	0	1	0	5	0	0	7
Total	2	3	0	1	12	0	14	3	0	35
05:00 PM	0	0	0	1	4	0	1	1	0	7
05:15 PM	1	1	0	0	2	0	2	1	0	7
05:30 PM	2	1	0	1	2	0	2	0	0	8
05:45 PM	0	0	0	0	1	0	1	0	0	2
Total	3	2	0	2	9	0	6	2	0	24
Grand Total	5	5	0	3	21	0	20	5	0	59
Apprch %	50	50	0	12.5	87.5	0	80	20	0	
Total %	8.5	8.5	0	5.1	35.6	0	33.9	8.5	0	

	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	2	1	0	3	0	2	0	2	3	1	0	4	9
04:15 PM	0	0	0	0	1	4	0	5	4	1	0	5	10
04:30 PM	0	1	0	1	0	5	0	5	2	1	0	3	9
04:45 PM	0	1	0	1	0	1	0	1	5	0	0	5	7
Total Volume	2	3	0	5	1	12	0	13	14	3	0	17	35
% App. Total	40	60	0		7.7	92.3	0		82.4	17.6	0		
PHF	.250	.750	.000	.417	.250	.600	.000	.650	.700	.750	.000	.850	.875

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Groups Printed- Peds and Bikes

	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	2	0	0	0	0	0	0	0	1	1	4
04:15 PM	0	0	2	2	0	0	0	0	0	0	1	0	5
04:30 PM	0	0	3	1	0	0	0	0	1	0	0	0	5
04:45 PM	0	0	1	5	0	4	0	0	1	0	0	0	11
Total	0	0	8	8	0	4	0	0	2	0	2	1	25
05:00 PM	1	0	2	0	0	0	0	0	2	0	0	1	6
05:15 PM	0	0	4	1	0	1	0	0	1	0	2	3	12
05:30 PM	0	0	4	3	0	1	1	0	1	0	0	2	12
05:45 PM	1	0	5	2	0	3	0	0	0	0	2	1	14
Total	2	0	15	6	0	5	1	0	4	0	4	7	44
Grand Total	2	0	23	14	0	9	1	0	6	0	6	8	69
Apprch %	5.1	0	59	35.9	0	90	10	0	30	0	30	40	
Total %	2.9	0	33.3	20.3	0	13	1.4	0	8.7	0	8.7	11.6	

	Arthur Street From North					North Beacon Street From East					North Beacon Street From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:00 PM																
05:00 PM	1	0	2	0	3	0	0	0	0	0	2	0	0	1	3	6
05:15 PM	0	0	4	1	5	0	1	0	0	1	1	0	2	3	6	12
05:30 PM	0	0	4	3	7	0	1	1	0	2	1	0	0	2	3	12
05:45 PM	1	0	5	2	8	0	3	0	0	3	0	0	2	1	3	14
Total Volume	2	0	15	6	23	0	5	1	0	6	4	0	4	7	15	44
% App. Total	8.7	0	65.2	26.1		0	83.3	16.7	0		26.7	0	26.7	46.7		
PHF	.500	.000	.750	.500	.719	.000	.417	.250	.000	.500	.500	.000	.500	.583	.625	.786

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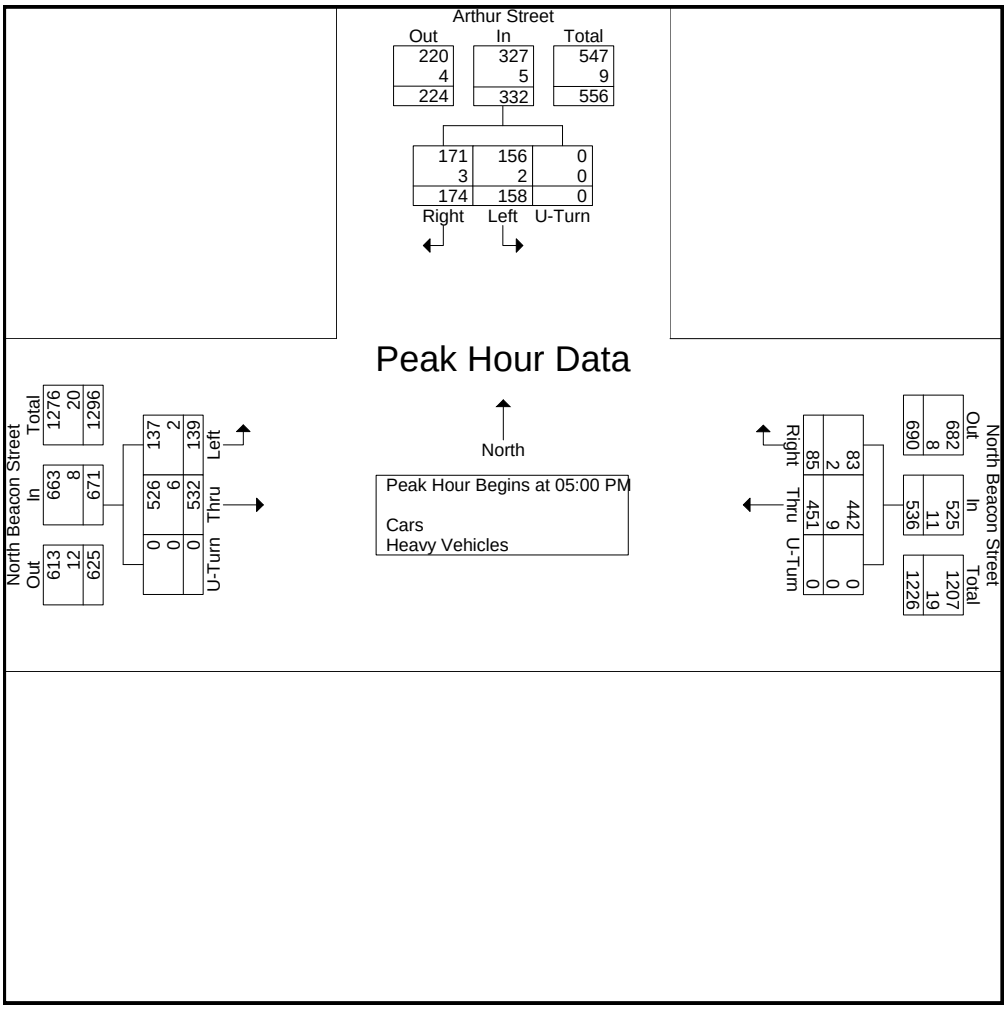
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 EE
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	42	33	0	75	22	121	0	143	139	40	0	179	397
05:15 PM	42	44	0	86	20	125	0	145	111	33	0	144	375
05:30 PM	45	41	0	86	18	113	0	131	141	32	0	173	390
05:45 PM	45	40	0	85	25	92	0	117	141	34	0	175	377
Total Volume	174	158	0	332	85	451	0	536	532	139	0	671	1539
% App. Total	52.4	47.6	0		15.9	84.1	0		79.3	20.7	0		
PHF	.967	.898	.000	.965	.850	.902	.000	.924	.943	.869	.000	.937	.969
Cars	171	156	0	327	83	442	0	525	526	137	0	663	1515
% Cars	98.3	98.7	0	98.5	97.6	98.0	0	97.9	98.9	98.6	0	98.8	98.4
Heavy Vehicles	3	2	0	5	2	9	0	11	6	2	0	8	24
% Heavy Vehicles	1.7	1.3	0	1.5	2.4	2.0	0	2.1	1.1	1.4	0	1.2	1.6



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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 EEE
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Arthur Street From North			North Beacon Street From East			North Beacon Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
11:00 AM	36	20	0	10	80	0	93	35	0	274
11:15 AM	28	26	0	17	83	0	118	22	0	294
11:30 AM	32	29	0	16	94	0	116	31	0	318
11:45 AM	28	35	0	14	66	0	103	36	0	282
Total	124	110	0	57	323	0	430	124	0	1168
12:00 PM	28	30	0	20	98	0	122	35	0	333
12:15 PM	26	40	0	20	110	0	113	25	0	334
12:30 PM	34	25	0	15	90	0	131	29	0	324
12:45 PM	31	28	0	16	100	0	119	27	0	321
Total	119	123	0	71	398	0	485	116	0	1312
01:00 PM	34	38	0	17	92	0	120	29	0	330
01:15 PM	35	36	0	23	106	0	101	40	0	341
01:30 PM	32	33	0	18	105	0	117	20	0	325
01:45 PM	32	33	0	20	91	0	100	31	0	307
Total	133	140	0	78	394	0	438	120	0	1303
Grand Total	376	373	0	206	1115	0	1353	360	0	3783
Apprch %	50.2	49.8	0	15.6	84.4	0	79	21	0	
Total %	9.9	9.9	0	5.4	29.5	0	35.8	9.5	0	
Cars	372	368	0	206	1089	0	1330	360	0	3725
% Cars	98.9	98.7	0	100	97.7	0	98.3	100	0	98.5
Heavy Vehicles	4	5	0	0	26	0	23	0	0	58
% Heavy Vehicles	1.1	1.3	0	0	2.3	0	1.7	0	0	1.5

	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:45 PM													
12:45 PM	31	28	0	59	16	100	0	116	119	27	0	146	321
01:00 PM	34	38	0	72	17	92	0	109	120	29	0	149	330
01:15 PM	35	36	0	71	23	106	0	129	101	40	0	141	341
01:30 PM	32	33	0	65	18	105	0	123	117	20	0	137	325
Total Volume	132	135	0	267	74	403	0	477	457	116	0	573	1317
% App. Total	49.4	50.6	0		15.5	84.5	0		79.8	20.2	0		
PHF	.943	.888	.000	.927	.804	.950	.000	.924	.952	.725	.000	.961	.966
Cars	131	134	0	265	74	396	0	470	448	116	0	564	1299
% Cars	99.2	99.3	0	99.3	100	98.3	0	98.5	98.0	100	0	98.4	98.6
Heavy Vehicles	1	1	0	2	0	7	0	7	9	0	0	9	18
% Heavy Vehicles	0.8	0.7	0	0.7	0	1.7	0	1.5	2.0	0	0	1.6	1.4

PRECISION
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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 EEE
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars

	Arthur Street From North			North Beacon Street From East			North Beacon Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
11:00 AM	35	19	0	10	79	0	90	35	0	268
11:15 AM	28	25	0	17	81	0	117	22	0	290
11:30 AM	30	28	0	16	88	0	115	31	0	308
11:45 AM	28	34	0	14	66	0	101	36	0	279
Total	121	106	0	57	314	0	423	124	0	1145
12:00 PM	28	30	0	20	95	0	120	35	0	328
12:15 PM	26	40	0	20	106	0	111	25	0	328
12:30 PM	34	25	0	15	89	0	129	29	0	321
12:45 PM	31	28	0	16	97	0	118	27	0	317
Total	119	123	0	71	387	0	478	116	0	1294
01:00 PM	34	38	0	17	90	0	117	29	0	325
01:15 PM	34	36	0	23	105	0	100	40	0	338
01:30 PM	32	32	0	18	104	0	113	20	0	319
01:45 PM	32	33	0	20	89	0	99	31	0	304
Total	132	139	0	78	388	0	429	120	0	1286
Grand Total	372	368	0	206	1089	0	1330	360	0	3725
Apprch %	50.3	49.7	0	15.9	84.1	0	78.7	21.3	0	
Total %	10	9.9	0	5.5	29.2	0	35.7	9.7	0	

	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:30 PM													
12:30 PM	34	25	0	59	15	89	0	104	129	29	0	158	321
12:45 PM	31	28	0	59	16	97	0	113	118	27	0	145	317
01:00 PM	34	38	0	72	17	90	0	107	117	29	0	146	325
01:15 PM	34	36	0	70	23	105	0	128	100	40	0	140	338
Total Volume	133	127	0	260	71	381	0	452	464	125	0	589	1301
% App. Total	51.2	48.8	0		15.7	84.3	0		78.8	21.2	0		
PHF	.978	.836	.000	.903	.772	.907	.000	.883	.899	.781	.000	.932	.962

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 EEE
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Arthur Street From North			North Beacon Street From East			North Beacon Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
11:00 AM	1	1	0	0	1	0	3	0	0	6
11:15 AM	0	1	0	0	2	0	1	0	0	4
11:30 AM	2	1	0	0	6	0	1	0	0	10
11:45 AM	0	1	0	0	0	0	2	0	0	3
Total	3	4	0	0	9	0	7	0	0	23
12:00 PM	0	0	0	0	3	0	2	0	0	5
12:15 PM	0	0	0	0	4	0	2	0	0	6
12:30 PM	0	0	0	0	1	0	2	0	0	3
12:45 PM	0	0	0	0	3	0	1	0	0	4
Total	0	0	0	0	11	0	7	0	0	18
01:00 PM	0	0	0	0	2	0	3	0	0	5
01:15 PM	1	0	0	0	1	0	1	0	0	3
01:30 PM	0	1	0	0	1	0	4	0	0	6
01:45 PM	0	0	0	0	2	0	1	0	0	3
Total	1	1	0	0	6	0	9	0	0	17
Grand Total	4	5	0	0	26	0	23	0	0	58
Apprch %	44.4	55.6	0	0	100	0	100	0	0	
Total %	6.9	8.6	0	0	44.8	0	39.7	0	0	

	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:30 AM													
11:30 AM	2	1	0	3	0	6	0	6	1	0	0	1	10
11:45 AM	0	1	0	1	0	0	0	0	2	0	0	2	3
12:00 PM	0	0	0	0	0	3	0	3	2	0	0	2	5
12:15 PM	0	0	0	0	0	4	0	4	2	0	0	2	6
Total Volume	2	2	0	4	0	13	0	13	7	0	0	7	24
% App. Total	50	50	0		0	100	0		100	0	0		
PHF	.250	.500	.000	.333	.000	.542	.000	.542	.875	.000	.000	.875	.600

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File Name : 165041 EEE
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Peds and Bikes

	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	1	1	0	0	0	0	1	0	1	1	5
11:15 AM	0	0	0	2	0	0	0	0	0	0	0	0	2
11:30 AM	0	0	1	8	0	0	0	0	0	0	0	1	10
11:45 AM	1	0	3	2	0	0	0	0	0	0	0	0	6
Total	1	0	5	13	0	0	0	0	1	0	1	2	23
12:00 PM	1	1	5	1	0	1	0	0	0	0	0	0	9
12:15 PM	0	0	1	2	0	2	0	0	1	0	3	0	9
12:30 PM	0	1	5	2	0	1	0	1	1	0	0	0	11
12:45 PM	0	0	2	1	0	0	0	0	1	0	0	0	4
Total	1	2	13	6	0	4	0	1	3	0	3	0	33
01:00 PM	0	0	0	0	0	1	0	1	3	0	0	0	5
01:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
01:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
01:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
Total	0	0	0	0	0	1	1	1	5	0	0	0	8
Grand Total	2	2	18	19	0	5	1	2	9	0	4	2	64
Apprch %	4.9	4.9	43.9	46.3	0	62.5	12.5	25	60	0	26.7	13.3	
Total %	3.1	3.1	28.1	29.7	0	7.8	1.6	3.1	14.1	0	6.2	3.1	

	Arthur Street From North					North Beacon Street From East					North Beacon Street From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 11:45 AM																
11:45 AM	1	0	3	2	6	0	0	0	0	0	0	0	0	0	0	6
12:00 PM	1	1	5	1	8	0	1	0	0	1	0	0	0	0	0	9
12:15 PM	0	0	1	2	3	0	2	0	0	2	1	0	3	0	4	9
12:30 PM	0	1	5	2	8	0	1	0	1	2	1	0	0	0	1	11
Total Volume	2	2	14	7	25	0	4	0	1	5	2	0	3	0	5	35
% App. Total	8	8	56	28		0	80	0	20		40	0	60	0		
PHF	.500	.500	.700	.875	.781	.000	.500	.000	.250	.625	.500	.000	.250	.000	.313	.795

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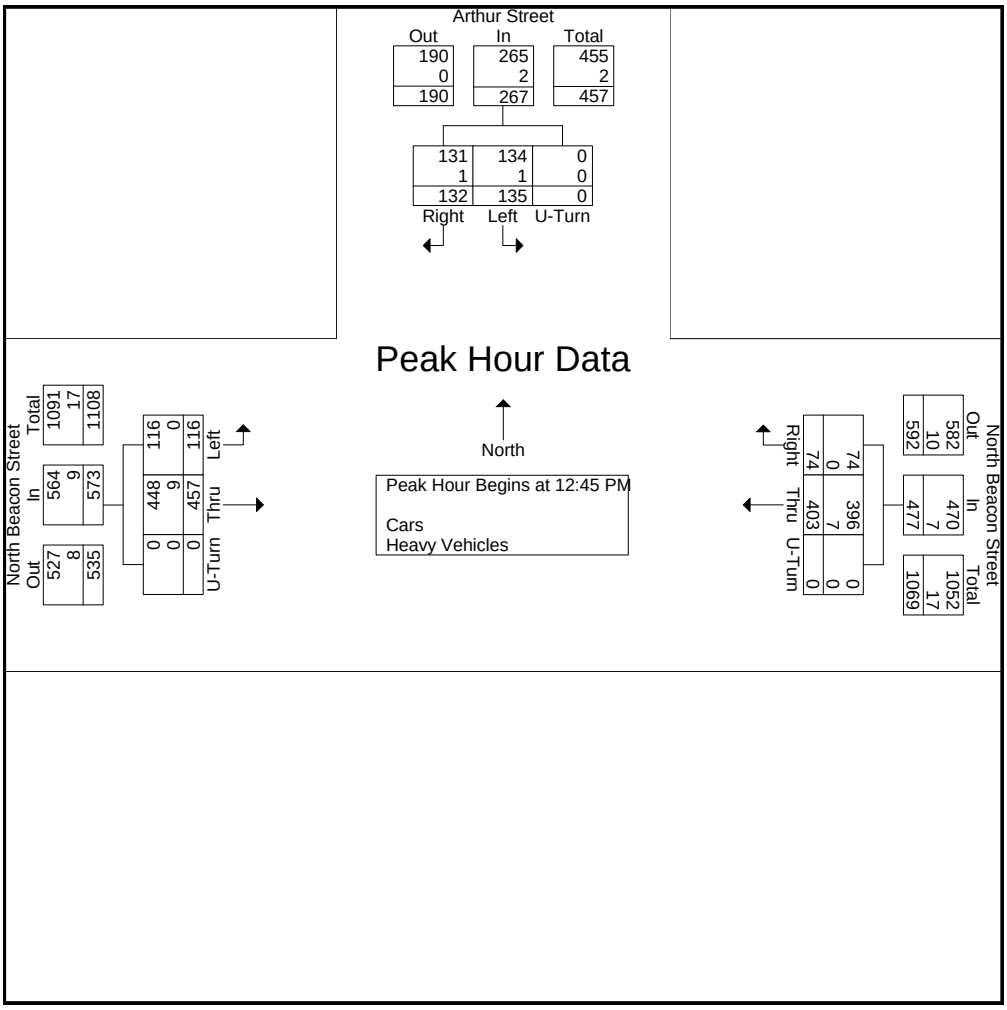
	Arthur Street From North				North Beacon Street From East				North Beacon Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:45 PM													
12:45 PM	31	28	0	59	16	100	0	116	119	27	0	146	321
01:00 PM	34	38	0	72	17	92	0	109	120	29	0	149	330
01:15 PM	35	36	0	71	23	106	0	129	101	40	0	141	341
01:30 PM	32	33	0	65	18	105	0	123	117	20	0	137	325
Total Volume	132	135	0	267	74	403	0	477	457	116	0	573	1317
% App. Total	49.4	50.6	0		15.5	84.5	0		79.8	20.2	0		
PHF	.943	.888	.000	.927	.804	.950	.000	.924	.952	.725	.000	.961	.966
Cars	131	134	0	265	74	396	0	470	448	116	0	564	1299
% Cars	99.2	99.3	0	99.3	100	98.3	0	98.5	98.0	100	0	98.4	98.6
Heavy Vehicles	1	1	0	2	0	7	0	7	9	0	0	9	18
% Heavy Vehicles	0.8	0.7	0	0.7	0	1.7	0	1.5	2.0	0	0	1.6	1.4



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N/S: Everett Street/KFC Driveway (Enter)
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 F
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Everett Street From North				North Beacon Street From East				KFC Driveway (Enter) From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	11	0	26	0	41	50	0	0	0	0	0	0	0	89	40	0	257
07:15 AM	23	0	25	0	44	71	0	0	0	0	0	0	0	117	37	0	317
07:30 AM	29	0	28	0	58	71	0	0	0	0	0	0	1	105	54	0	346
07:45 AM	20	0	32	0	57	100	0	0	0	0	0	0	0	117	59	0	385
Total	83	0	111	0	200	292	0	0	0	0	0	0	1	428	190	0	1305
08:00 AM	25	0	23	0	49	84	0	0	0	0	0	0	0	127	85	0	393
08:15 AM	29	0	37	0	77	100	0	0	0	0	0	0	0	99	86	0	428
08:30 AM	23	0	33	0	55	93	0	0	0	0	0	0	0	133	78	0	415
08:45 AM	22	0	32	0	51	107	1	0	0	0	0	0	0	117	69	0	399
Total	99	0	125	0	232	384	1	0	0	0	0	0	0	476	318	0	1635
Grand Total	182	0	236	0	432	676	1	0	0	0	0	0	1	904	508	0	2940
Apprch %	43.5	0	56.5	0	39	61	0.1	0	0	0	0	0	0.1	64	36	0	
Total %	6.2	0	8	0	14.7	23	0	0	0	0	0	0	0	30.7	17.3	0	
Cars	171	0	222	0	419	618	1	0	0	0	0	0	1	836	493	0	2761
% Cars	94	0	94.1	0	97	91.4	100	0	0	0	0	0	100	92.5	97	0	93.9
Heavy Vehicles	11	0	14	0	13	58	0	0	0	0	0	0	0	68	15	0	179
% Heavy Vehicles	6	0	5.9	0	3	8.6	0	0	0	0	0	0	0	7.5	3	0	6.1

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	25	0	23	0	48	49	84	0	0	133	0	0	0	0	0	0	127	85	0	212	393
08:15 AM	29	0	37	0	66	77	100	0	0	177	0	0	0	0	0	0	99	86	0	185	428
08:30 AM	23	0	33	0	56	55	93	0	0	148	0	0	0	0	0	0	133	78	0	211	415
08:45 AM	22	0	32	0	54	51	107	1	0	159	0	0	0	0	0	0	117	69	0	186	399
Total Volume	99	0	125	0	224	232	384	1	0	617	0	0	0	0	0	0	476	318	0	794	1635
% App. Total	44.2	0	55.8	0		37.6	62.2	0.2	0		0	0	0	0		0	59.9	40.1	0		
PHF	.853	.000	.845	.000	.848	.753	.897	.250	.000	.871	.000	.000	.000	.000	.000	.000	.895	.924	.000	.936	.955
Cars	95	0	122	0	217	228	349	1	0	578	0	0	0	0	0	0	446	309	0	755	1550
% Cars	96.0	0	97.6	0	96.9	98.3	90.9	100	0	93.7	0	0	0	0	0	0	93.7	97.2	0	95.1	94.8
Heavy Vehicles	4	0	3	0	7	4	35	0	0	39	0	0	0	0	0	0	30	9	0	39	85
% Heavy Vehicles	4.0	0	2.4	0	3.1	1.7	9.1	0	0	6.3	0	0	0	0	0	0	6.3	2.8	0	4.9	5.2

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508.875.0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

N/S: Everett Street/KFC Driveway (Enter)
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 F
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Everett Street From North				North Beacon Street From East				KFC Driveway (Enter) From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	11	0	26	0	38	48	0	0	0	0	0	0	0	85	38	0	246
07:15 AM	23	0	19	0	41	61	0	0	0	0	0	0	0	109	37	0	290
07:30 AM	24	0	27	0	56	69	0	0	0	0	0	0	1	92	52	0	321
07:45 AM	18	0	28	0	56	91	0	0	0	0	0	0	0	104	57	0	354
Total	76	0	100	0	191	269	0	0	0	0	0	0	1	390	184	0	1211
08:00 AM	23	0	23	0	48	75	0	0	0	0	0	0	0	121	85	0	375
08:15 AM	27	0	36	0	76	95	0	0	0	0	0	0	0	91	84	0	409
08:30 AM	23	0	33	0	55	82	0	0	0	0	0	0	0	125	78	0	396
08:45 AM	22	0	30	0	49	97	1	0	0	0	0	0	0	109	62	0	370
Total	95	0	122	0	228	349	1	0	0	0	0	0	0	446	309	0	1550
Grand Total	171	0	222	0	419	618	1	0	0	0	0	0	1	836	493	0	2761
Apprch %	43.5	0	56.5	0	40.4	59.5	0.1	0	0	0	0	0	0.1	62.9	37.1	0	
Total %	6.2	0	8	0	15.2	22.4	0	0	0	0	0	0	0	30.3	17.9	0	

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	23	0	23	0	46	48	75	0	0	123	0	0	0	0	0	0	121	85	0	206	375
08:15 AM	27	0	36	0	63	76	95	0	0	171	0	0	0	0	0	0	91	84	0	175	409
08:30 AM	23	0	33	0	56	55	82	0	0	137	0	0	0	0	0	0	125	78	0	203	396
08:45 AM	22	0	30	0	52	49	97	1	0	147	0	0	0	0	0	0	109	62	0	171	370
Total Volume	95	0	122	0	217	228	349	1	0	578	0	0	0	0	0	0	446	309	0	755	1550
% App. Total	43.8	0	56.2	0		39.4	60.4	0.2	0		0	0	0	0		0	59.1	40.9	0		
PHF	.880	.000	.847	.000	.861	.750	.899	.250	.000	.845	.000	.000	.000	.000	.000	.000	.892	.909	.000	.916	.947

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 F
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Everett Street From North				North Beacon Street From East				KFC Driveway (Enter) From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	3	2	0	0	0	0	0	0	0	4	2	0	11
07:15 AM	0	0	6	0	3	10	0	0	0	0	0	0	0	8	0	0	27
07:30 AM	5	0	1	0	2	2	0	0	0	0	0	0	0	13	2	0	25
07:45 AM	2	0	4	0	1	9	0	0	0	0	0	0	0	13	2	0	31
Total	7	0	11	0	9	23	0	0	0	0	0	0	0	38	6	0	94
08:00 AM	2	0	0	0	1	9	0	0	0	0	0	0	0	6	0	0	18
08:15 AM	2	0	1	0	1	5	0	0	0	0	0	0	0	8	2	0	19
08:30 AM	0	0	0	0	0	11	0	0	0	0	0	0	0	8	0	0	19
08:45 AM	0	0	2	0	2	10	0	0	0	0	0	0	0	8	7	0	29
Total	4	0	3	0	4	35	0	0	0	0	0	0	0	30	9	0	85
Grand Total	11	0	14	0	13	58	0	0	0	0	0	0	0	68	15	0	179
Apprch %	44	0	56	0	18.3	81.7	0	0	0	0	0	0	0	81.9	18.1	0	
Total %	6.1	0	7.8	0	7.3	32.4	0	0	0	0	0	0	0	38	8.4	0	

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	0	6	0	6	3	10	0	0	13	0	0	0	0	0	0	8	0	0	8	27
07:30 AM	5	0	1	0	6	2	2	0	0	4	0	0	0	0	0	0	13	2	0	15	25
07:45 AM	2	0	4	0	6	1	9	0	0	10	0	0	0	0	0	0	13	2	0	15	31
08:00 AM	2	0	0	0	2	1	9	0	0	10	0	0	0	0	0	0	6	0	0	6	18
Total Volume	9	0	11	0	20	7	30	0	0	37	0	0	0	0	0	0	40	4	0	44	101
% App. Total	45	0	55	0		18.9	81.1	0	0		0	0	0	0		0	90.9	9.1	0		
PHF	.450	.000	.458	.000	.833	.583	.750	.000	.000	.712	.000	.000	.000	.000	.000	.000	.769	.500	.000	.733	.815

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Client: VHB/ A. Santiago

File Name : 165041 F
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Peds and Bikes

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	2	1	0	1	0	2	0	0	0	0	1	7	0	6	0	1	3	24
07:15 AM	0	0	0	0	0	0	0	0	3	0	0	0	0	3	5	0	3	0	2	3	19
07:30 AM	0	0	0	3	3	0	0	0	2	0	0	0	0	2	6	0	2	0	2	0	20
07:45 AM	0	0	0	1	6	1	0	0	6	1	0	0	0	9	15	0	0	0	4	9	52
Total	0	0	0	6	10	1	1	0	13	1	0	0	0	15	33	0	11	0	9	15	115
08:00 AM	0	0	0	0	1	0	1	0	1	2	0	0	0	2	6	0	3	1	1	3	21
08:15 AM	0	0	1	2	0	2	1	0	4	0	0	0	0	1	9	0	2	0	4	3	29
08:30 AM	0	0	0	1	5	0	3	0	3	0	0	0	0	10	2	0	4	0	2	4	34
08:45 AM	0	0	1	0	3	0	0	0	3	3	0	0	0	6	4	0	4	0	3	4	31
Total	0	0	2	3	9	2	5	0	11	5	0	0	0	19	21	0	13	1	10	14	115
Grand Total	0	0	2	9	19	3	6	0	24	6	0	0	0	34	54	0	24	1	19	29	230
Apprch %	0	0	6.7	30	63.3	7.7	15.4	0	61.5	15.4	0	0	0	38.6	61.4	0	32.9	1.4	26	39.7	
Total %	0	0	0.9	3.9	8.3	1.3	2.6	0	10.4	2.6	0	0	0	14.8	23.5	0	10.4	0.4	8.3	12.6	

	Everett Street From North						North Beacon Street From East						KFC Driveway (Enter) From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	1	6	7	1	0	0	6	1	8	0	0	0	9	15	24	0	0	0	4	9	13	52
08:00 AM	0	0	0	0	1	1	0	1	0	1	2	4	0	0	0	2	6	8	0	3	1	1	3	8	21
08:15 AM	0	0	1	2	0	3	2	1	0	4	0	7	0	0	0	1	9	10	0	2	0	4	3	9	29
08:30 AM	0	0	0	1	5	6	0	3	0	3	0	6	0	0	0	10	2	12	0	4	0	2	4	10	34
Total Volume	0	0	1	4	12	17	3	5	0	14	3	25	0	0	0	22	32	54	0	9	1	11	19	40	136
% App. Total	0	0	5.9	23.5	70.6		12	20	0	56	12		0	0	0	40.7	59.3		0	22.5	2.5	27.5	47.5		
PHF	.000	.000	.250	.500	.500	.607	.375	.417	.000	.583	.375	.781	.000	.000	.000	.550	.533	.563	.000	.563	.250	.688	.528	.769	.654

PRECISION DATA INDUSTRIES, LLC
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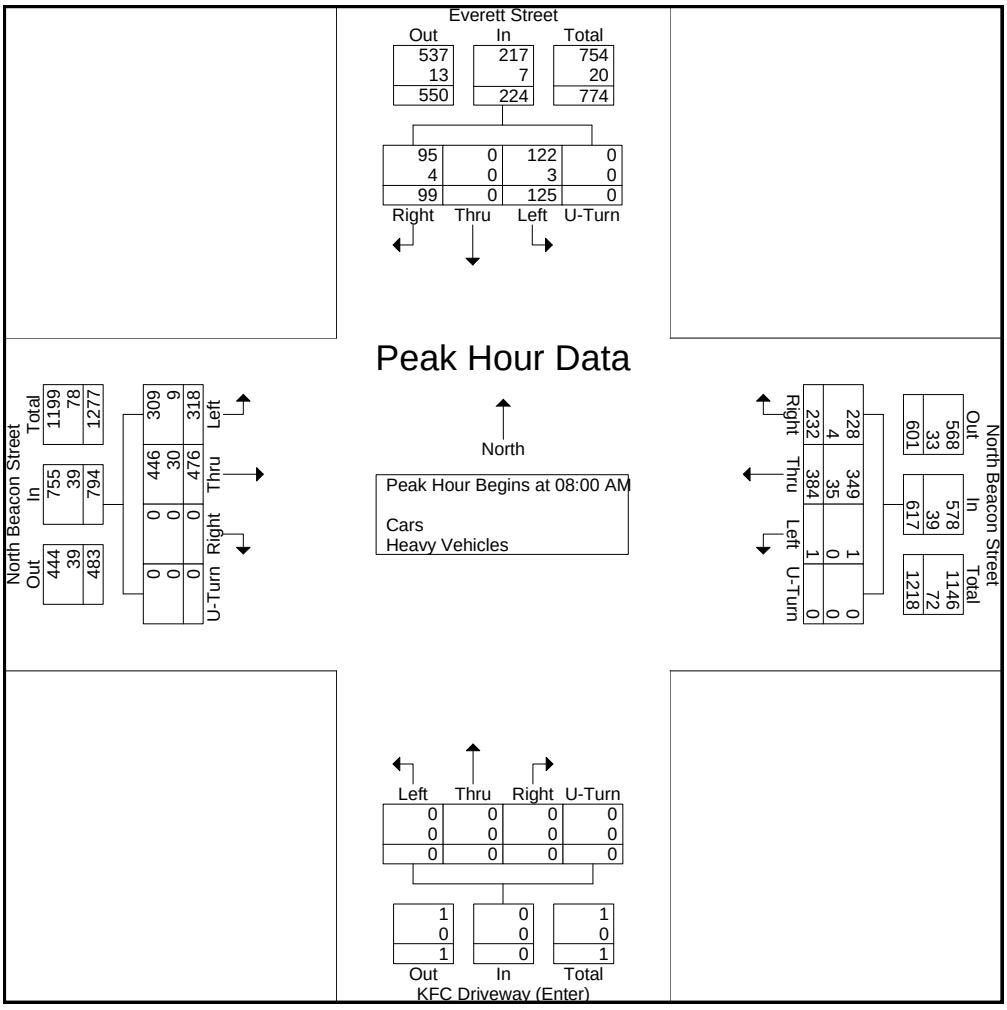
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	25	0	23	0	48	49	84	0	0	133	0	0	0	0	0	0	127	85	0	212	393
08:15 AM	29	0	37	0	66	77	100	0	0	177	0	0	0	0	0	0	99	86	0	185	428
08:30 AM	23	0	33	0	56	55	93	0	0	148	0	0	0	0	0	0	133	78	0	211	415
08:45 AM	22	0	32	0	54	51	107	1	0	159	0	0	0	0	0	0	117	69	0	186	399
Total Volume	99	0	125	0	224	232	384	1	0	617	0	0	0	0	0	0	476	318	0	794	1635
% App. Total	44.2	0	55.8	0		37.6	62.2	0.2	0		0	0	0	0		0	59.9	40.1	0		
PHF	.853	.000	.845	.000	.848	.753	.897	.250	.000	.871	.000	.000	.000	.000	.000	.000	.895	.924	.000	.936	.955
Cars	95	0	122	0	217	228	349	1	0	578	0	0	0	0	0	0	446	309	0	755	1550
% Cars	96.0	0	97.6	0	96.9	98.3	90.9	100	0	93.7	0	0	0	0	0	0	93.7	97.2	0	95.1	94.8
Heavy Vehicles	4	0	3	0	7	4	35	0	0	39	0	0	0	0	0	0	30	9	0	39	85
% Heavy Vehicles	4.0	0	2.4	0	3.1	1.7	9.1	0	0	6.3	0	0	0	0	0	0	6.3	2.8	0	4.9	5.2



PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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N/S: Everett Street/KFC Driveway (Enter)
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 FF
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Everett Street From North				North Beacon Street From East				KFC Driveway (Enter) From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	26	0	37	0	43	96	1	0	0	0	0	0	5	112	57	0	377
04:15 PM	20	2	49	0	54	133	1	0	0	0	0	0	0	110	40	0	409
04:30 PM	28	0	46	0	65	107	1	0	0	0	0	0	2	111	47	0	407
04:45 PM	31	2	50	0	56	113	5	0	0	0	0	0	0	106	55	0	418
Total	105	4	182	0	218	449	8	0	0	0	0	0	7	439	199	0	1611
05:00 PM	29	0	50	0	56	144	1	0	0	0	0	0	2	118	59	0	459
05:15 PM	31	0	64	0	53	117	1	0	0	0	0	0	5	111	51	0	433
05:30 PM	42	0	70	0	57	115	1	0	0	0	0	0	0	105	42	0	432
05:45 PM	34	0	60	0	63	105	1	0	0	0	0	0	0	116	32	0	411
Total	136	0	244	0	229	481	4	0	0	0	0	0	7	450	184	0	1735
Grand Total	241	4	426	0	447	930	12	0	0	0	0	0	14	889	383	0	3346
Apprch %	35.9	0.6	63.5	0	32.2	67	0.9	0	0	0	0	0	1.1	69.1	29.8	0	
Total %	7.2	0.1	12.7	0	13.4	27.8	0.4	0	0	0	0	0	0.4	26.6	11.4	0	
Cars	237	4	420	0	445	904	12	0	0	0	0	0	14	876	378	0	3290
% Cars	98.3	100	98.6	0	99.6	97.2	100	0	0	0	0	0	100	98.5	98.7	0	98.3
Heavy Vehicles	4	0	6	0	2	26	0	0	0	0	0	0	0	13	5	0	56
% Heavy Vehicles	1.7	0	1.4	0	0.4	2.8	0	0	0	0	0	0	0	1.5	1.3	0	1.7

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	31	2	50	0	83	56	113	5	0	174	0	0	0	0	0	0	106	55	0	161	418
05:00 PM	29	0	50	0	79	56	144	1	0	201	0	0	0	0	0	2	118	59	0	179	459
05:15 PM	31	0	64	0	95	53	117	1	0	171	0	0	0	0	0	5	111	51	0	167	433
05:30 PM	42	0	70	0	112	57	115	1	0	173	0	0	0	0	0	0	105	42	0	147	432
Total Volume	133	2	234	0	369	222	489	8	0	719	0	0	0	0	0	7	440	207	0	654	1742
% App. Total	36	0.5	63.4	0		30.9	68	1.1	0		0	0	0	0		1.1	67.3	31.7	0		
PHF	.792	.250	.836	.000	.824	.974	.849	.400	.000	.894	.000	.000	.000	.000	.000	.350	.932	.877	.000	.913	.949
Cars	133	2	231	0	366	222	480	8	0	710	0	0	0	0	0	7	435	204	0	646	1722
% Cars	100	100	98.7	0	99.2	100	98.2	100	0	98.7	0	0	0	0	0	100	98.9	98.6	0	98.8	98.9
Heavy Vehicles	0	0	3	0	3	0	9	0	0	9	0	0	0	0	0	0	5	3	0	8	20
% Heavy Vehicles	0	0	1.3	0	0.8	0	1.8	0	0	1.3	0	0	0	0	0	0	1.1	1.4	0	1.2	1.1

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Groups Printed- Cars

	Everett Street From North				North Beacon Street From East				KFC Driveway (Enter) From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	25	0	37	0	42	92	1	0	0	0	0	0	5	109	56	0	367
04:15 PM	18	2	47	0	54	128	1	0	0	0	0	0	0	108	39	0	397
04:30 PM	27	0	45	0	65	100	1	0	0	0	0	0	2	111	47	0	398
04:45 PM	31	2	49	0	56	111	5	0	0	0	0	0	0	102	55	0	411
Total	101	4	178	0	217	431	8	0	0	0	0	0	7	430	197	0	1573
05:00 PM	29	0	50	0	56	140	1	0	0	0	0	0	2	117	59	0	454
05:15 PM	31	0	63	0	53	116	1	0	0	0	0	0	5	111	51	0	431
05:30 PM	42	0	69	0	57	113	1	0	0	0	0	0	0	105	39	0	426
05:45 PM	34	0	60	0	62	104	1	0	0	0	0	0	0	113	32	0	406
Total	136	0	242	0	228	473	4	0	0	0	0	0	7	446	181	0	1717
Grand Total	237	4	420	0	445	904	12	0	0	0	0	0	14	876	378	0	3290
Apprch %	35.9	0.6	63.5	0	32.7	66.4	0.9	0	0	0	0	0	1.1	69.1	29.8	0	
Total %	7.2	0.1	12.8	0	13.5	27.5	0.4	0	0	0	0	0	0.4	26.6	11.5	0	

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	31	2	49	0	82	56	111	5	0	172	0	0	0	0	0	0	102	55	0	157	411
05:00 PM	29	0	50	0	79	56	140	1	0	197	0	0	0	0	0	2	117	59	0	178	454
05:15 PM	31	0	63	0	94	53	116	1	0	170	0	0	0	0	0	5	111	51	0	167	431
05:30 PM	42	0	69	0	111	57	113	1	0	171	0	0	0	0	0	0	105	39	0	144	426
Total Volume	133	2	231	0	366	222	480	8	0	710	0	0	0	0	0	7	435	204	0	646	1722
% App. Total	36.3	0.5	63.1	0		31.3	67.6	1.1	0		0	0	0	0		1.1	67.3	31.6	0		
PHF	.792	.250	.837	.000	.824	.974	.857	.400	.000	.901	.000	.000	.000	.000	.000	.350	.929	.864	.000	.907	.948

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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N/S: Everett Street/KFC Driveway (Enter)
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 FF
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Everett Street From North				North Beacon Street From East				KFC Driveway (Enter) From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	1	0	0	0	1	4	0	0	0	0	0	0	0	3	1	0	10
04:15 PM	2	0	2	0	0	5	0	0	0	0	0	0	0	2	1	0	12
04:30 PM	1	0	1	0	0	7	0	0	0	0	0	0	0	0	0	0	9
04:45 PM	0	0	1	0	0	2	0	0	0	0	0	0	0	4	0	0	7
Total	4	0	4	0	1	18	0	0	0	0	0	0	0	9	2	0	38
05:00 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0	5
05:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	1	0	0	2	0	0	0	0	0	0	0	0	3	0	6
05:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	3	0	0	5
Total	0	0	2	0	1	8	0	0	0	0	0	0	0	4	3	0	18
Grand Total	4	0	6	0	2	26	0	0	0	0	0	0	0	13	5	0	56
Apprch %	40	0	60	0	7.1	92.9	0	0	0	0	0	0	0	72.2	27.8	0	
Total %	7.1	0	10.7	0	3.6	46.4	0	0	0	0	0	0	0	23.2	8.9	0	

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	1	0	0	0	1	1	4	0	0	5	0	0	0	0	0	0	3	1	0	4	10
04:15 PM	2	0	2	0	4	0	5	0	0	5	0	0	0	0	0	0	2	1	0	3	12
04:30 PM	1	0	1	0	2	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	9
04:45 PM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	7
Total Volume	4	0	4	0	8	1	18	0	0	19	0	0	0	0	0	0	9	2	0	11	38
% App. Total	50	0	50	0		5.3	94.7	0	0		0	0	0	0		0	81.8	18.2	0		
PHF	.500	.000	.500	.000	.500	.250	.643	.000	.000	.679	.000	.000	.000	.000	.000	.000	.563	.500	.000	.688	.792

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Client: VHB/ A. Santiago

File Name : 165041 FF
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Peds and Bikes

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	3	7	0	2	0	0	0	0	0	0	12	6	0	1	0	10	6	47
04:15 PM	0	0	0	4	0	0	3	0	6	2	0	0	0	13	9	0	1	0	5	7	50
04:30 PM	0	0	1	3	2	0	0	0	1	1	0	0	0	4	6	0	1	0	3	2	24
04:45 PM	0	0	0	1	5	2	4	0	1	0	0	0	0	7	4	0	1	0	4	3	32
Total	0	0	1	11	14	2	9	0	8	3	0	0	0	36	25	0	4	0	22	18	153
05:00 PM	0	0	0	1	2	0	0	0	3	2	0	0	0	8	6	0	0	0	4	4	30
05:15 PM	1	0	1	2	3	1	2	0	5	3	0	0	0	10	4	0	0	0	4	3	39
05:30 PM	0	0	0	7	2	0	2	0	5	5	0	0	0	8	11	0	1	0	1	4	46
05:45 PM	0	0	1	8	4	0	2	0	2	1	0	0	0	8	6	0	0	0	3	3	38
Total	1	0	2	18	11	1	6	0	15	11	0	0	0	34	27	0	1	0	12	14	153
Grand Total	1	0	3	29	25	3	15	0	23	14	0	0	0	70	52	0	5	0	34	32	306
Apprch %	1.7	0	5.2	50	43.1	5.5	27.3	0	41.8	25.5	0	0	0	57.4	42.6	0	7	0	47.9	45.1	
Total %	0.3	0	1	9.5	8.2	1	4.9	0	7.5	4.6	0	0	0	22.9	17	0	1.6	0	11.1	10.5	

	Everett Street From North						North Beacon Street From East						KFC Driveway (Enter) From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	3	7	10	0	2	0	0	0	2	0	0	0	12	6	18	0	1	0	10	6	17	47
04:15 PM	0	0	0	4	0	4	0	3	0	6	2	11	0	0	0	13	9	22	0	1	0	5	7	13	50
04:30 PM	0	0	1	3	2	6	0	0	0	1	1	2	0	0	0	4	6	10	0	1	0	3	2	6	24
04:45 PM	0	0	0	1	5	6	2	4	0	1	0	7	0	0	0	7	4	11	0	1	0	4	3	8	32
Total Volume	0	0	1	11	14	26	2	9	0	8	3	22	0	0	0	36	25	61	0	4	0	22	18	44	153
% App. Total	0	0	3.8	42.3	53.8		9.1	40.9	0	36.4	13.6		0	0	0	59	41		0	9.1	0	50	40.9		
PHF	.000	.000	.250	.688	.500	.650	.250	.563	.000	.333	.375	.500	.000	.000	.000	.692	.694	.693	.000	1.00	.000	.550	.643	.647	.765

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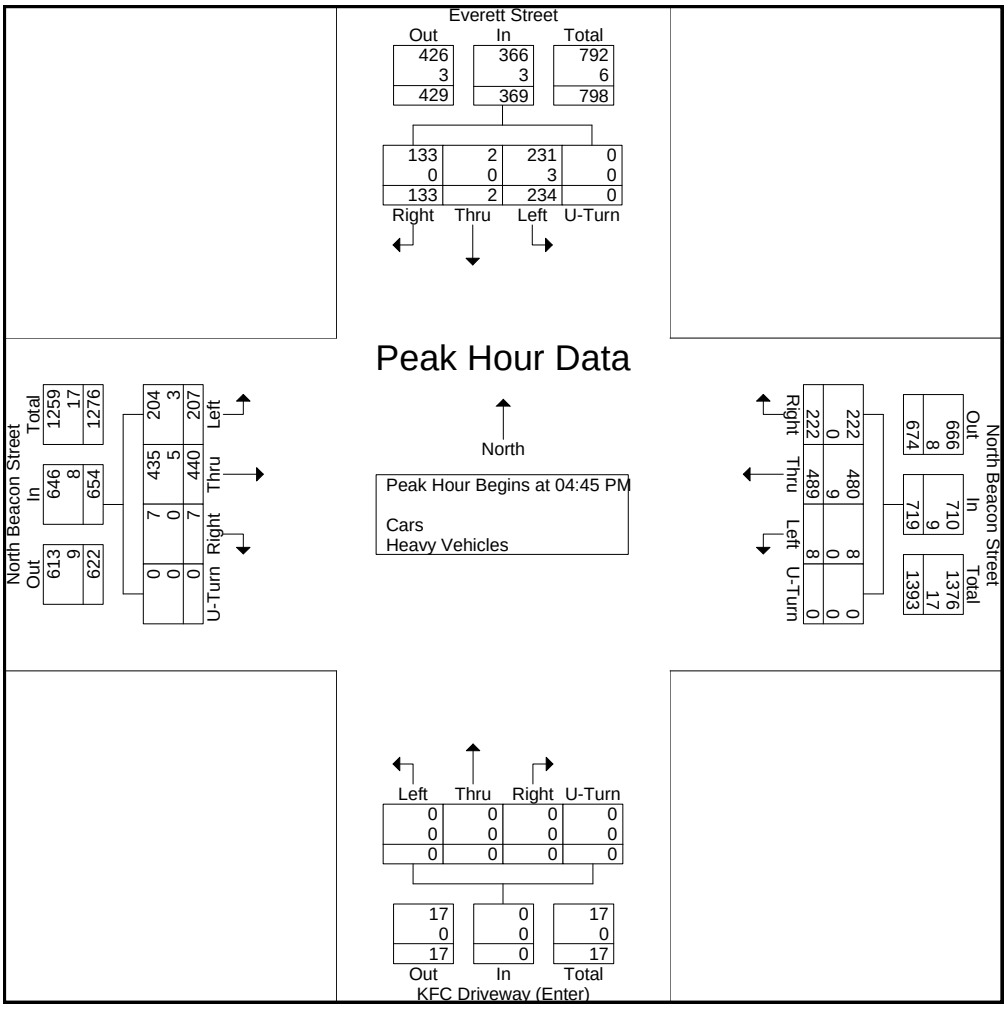
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 FF
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	31	2	50	0	83	56	113	5	0	174	0	0	0	0	0	0	106	55	0	161	418
05:00 PM	29	0	50	0	79	56	144	1	0	201	0	0	0	0	0	2	118	59	0	179	459
05:15 PM	31	0	64	0	95	53	117	1	0	171	0	0	0	0	0	5	111	51	0	167	433
05:30 PM	42	0	70	0	112	57	115	1	0	173	0	0	0	0	0	0	105	42	0	147	432
Total Volume	133	2	234	0	369	222	489	8	0	719	0	0	0	0	0	7	440	207	0	654	1742
% App. Total	36	0.5	63.4	0		30.9	68	1.1	0		0	0	0	0		1.1	67.3	31.7	0		
PHF	.792	.250	.836	.000	.824	.974	.849	.400	.000	.894	.000	.000	.000	.000	.000	.350	.932	.877	.000	.913	.949
Cars	133	2	231	0	366	222	480	8	0	710	0	0	0	0	0	7	435	204	0	646	1722
% Cars	100	100	98.7	0	99.2	100	98.2	100	0	98.7	0	0	0	0	0	100	98.9	98.6	0	98.8	98.9
Heavy Vehicles	0	0	3	0	3	0	9	0	0	9	0	0	0	0	0	0	5	3	0	8	20
% Heavy Vehicles	0	0	1.3	0	0.8	0	1.8	0	0	1.3	0	0	0	0	0	0	1.1	1.4	0	1.2	1.1



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N/S: Everett Street/KFC Driveway (Enter)
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 FFF
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Everett Street From North				North Beacon Street From East				KFC Driveway (Enter) From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	27	0	31	0	50	83	1	0	0	0	0	0	0	85	45	0	322
11:15 AM	19	0	43	0	56	85	0	0	0	0	0	0	1	119	39	0	362
11:30 AM	15	3	37	0	44	86	3	0	0	0	0	0	1	116	45	0	350
11:45 AM	19	0	37	0	50	70	2	1	0	0	0	0	1	124	27	0	331
Total	80	3	148	0	200	324	6	1	0	0	0	0	3	444	156	0	1365
12:00 PM	12	0	41	0	43	112	0	0	0	0	0	0	0	121	39	0	368
12:15 PM	30	0	43	0	43	98	1	0	0	0	0	0	1	125	42	0	383
12:30 PM	13	0	46	0	51	89	2	0	0	0	0	0	0	121	47	1	370
12:45 PM	22	0	55	0	52	105	3	0	0	0	0	0	1	114	44	0	396
Total	77	0	185	0	189	404	6	0	0	0	0	0	2	481	172	1	1517
01:00 PM	24	1	43	0	50	89	2	0	0	1	0	0	3	133	35	0	381
01:15 PM	21	0	45	0	58	119	2	1	0	0	0	0	2	118	30	0	396
01:30 PM	17	0	35	0	48	112	4	0	0	0	0	0	1	125	41	0	383
01:45 PM	21	0	35	0	59	104	0	0	0	0	0	0	3	110	36	0	368
Total	83	1	158	0	215	424	8	1	0	1	0	0	9	486	142	0	1528
Grand Total	240	4	491	0	604	1152	20	2	0	1	0	0	14	1411	470	1	4410
Apprch %	32.7	0.5	66.8	0	34	64.8	1.1	0.1	0	100	0	0	0.7	74.4	24.8	0.1	
Total %	5.4	0.1	11.1	0	13.7	26.1	0.5	0	0	0	0	0	0.3	32	10.7	0	
Cars	234	3	485	0	595	1126	20	2	0	1	0	0	14	1383	465	1	4329
% Cars	97.5	75	98.8	0	98.5	97.7	100	100	0	100	0	0	100	98	98.9	100	98.2
Heavy Vehicles	6	1	6	0	9	26	0	0	0	0	0	0	0	28	5	0	81
% Heavy Vehicles	2.5	25	1.2	0	1.5	2.3	0	0	0	0	0	0	0	2	1.1	0	1.8

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45 PM																					
12:45 PM	22	0	55	0	77	52	105	3	0	160	0	0	0	0	0	1	114	44	0	159	396
01:00 PM	24	1	43	0	68	50	89	2	0	141	0	1	0	0	1	3	133	35	0	171	381
01:15 PM	21	0	45	0	66	58	119	2	1	180	0	0	0	0	0	2	118	30	0	150	396
01:30 PM	17	0	35	0	52	48	112	4	0	164	0	0	0	0	0	1	125	41	0	167	383
Total Volume	84	1	178	0	263	208	425	11	1	645	0	1	0	0	1	7	490	150	0	647	1556
% App. Total	31.9	0.4	67.7	0		32.2	65.9	1.7	0.2		0	100	0	0		1.1	75.7	23.2	0		
PHF	.875	.250	.809	.000	.854	.897	.893	.688	.250	.896	.000	.250	.000	.000	.250	.583	.921	.852	.000	.946	.982
Cars	83	1	175	0	259	205	416	11	1	633	0	1	0	0	1	7	478	149	0	634	1527
% Cars	98.8	100	98.3	0	98.5	98.6	97.9	100	100	98.1	0	100	0	0	100	100	97.6	99.3	0	98.0	98.1
Heavy Vehicles	1	0	3	0	4	3	9	0	0	12	0	0	0	0	0	0	12	1	0	13	29
% Heavy Vehicles	1.2	0	1.7	0	1.5	1.4	2.1	0	0	1.9	0	0	0	0	0	0	2.4	0.7	0	2.0	1.9

PRECISION
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City, State: Boston, MA
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File Name : 165041 FFF
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars

	Everett Street From North				North Beacon Street From East				KFC Driveway (Enter) From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	26	0	30	0	48	82	1	0	0	0	0	0	0	83	44	0	314
11:15 AM	17	0	42	0	55	84	0	0	0	0	0	0	1	117	37	0	353
11:30 AM	15	2	37	0	43	81	3	0	0	0	0	0	1	115	45	0	342
11:45 AM	18	0	37	0	49	70	2	1	0	0	0	0	1	121	27	0	326
Total	76	2	146	0	195	317	6	1	0	0	0	0	3	436	153	0	1335
12:00 PM	12	0	41	0	42	107	0	0	0	0	0	0	0	119	38	0	359
12:15 PM	29	0	42	0	43	96	1	0	0	0	0	0	1	123	42	0	377
12:30 PM	13	0	46	0	51	87	2	0	0	0	0	0	0	119	47	1	366
12:45 PM	22	0	54	0	51	103	3	0	0	0	0	0	1	112	43	0	389
Total	76	0	183	0	187	393	6	0	0	0	0	0	2	473	170	1	1491
01:00 PM	24	1	42	0	50	87	2	0	0	1	0	0	3	130	35	0	375
01:15 PM	21	0	44	0	56	118	2	1	0	0	0	0	2	117	30	0	391
01:30 PM	16	0	35	0	48	108	4	0	0	0	0	0	1	119	41	0	372
01:45 PM	21	0	35	0	59	103	0	0	0	0	0	0	3	108	36	0	365
Total	82	1	156	0	213	416	8	1	0	1	0	0	9	474	142	0	1503
Grand Total	234	3	485	0	595	1126	20	2	0	1	0	0	14	1383	465	1	4329
Apprch %	32.4	0.4	67.2	0	34.1	64.6	1.1	0.1	0	100	0	0	0.8	74.2	25	0.1	
Total %	5.4	0.1	11.2	0	13.7	26	0.5	0	0	0	0	0	0.3	31.9	10.7	0	

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45 PM																					
12:45 PM	22	0	54	0	76	51	103	3	0	157	0	0	0	0	0	1	112	43	0	156	389
01:00 PM	24	1	42	0	67	50	87	2	0	139	0	1	0	0	1	3	130	35	0	168	375
01:15 PM	21	0	44	0	65	56	118	2	1	177	0	0	0	0	0	2	117	30	0	149	391
01:30 PM	16	0	35	0	51	48	108	4	0	160	0	0	0	0	0	1	119	41	0	161	372
Total Volume	83	1	175	0	259	205	416	11	1	633	0	1	0	0	1	7	478	149	0	634	1527
% App. Total	32	0.4	67.6	0		32.4	65.7	1.7	0.2		0	100	0	0		1.1	75.4	23.5	0		
PHF	.865	.250	.810	.000	.852	.915	.881	.688	.250	.894	.000	.250	.000	.000	.250	.583	.919	.866	.000	.943	.976

PRECISION
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Groups Printed- Heavy Vehicles

	Everett Street From North				North Beacon Street From East				KFC Driveway (Enter) From South				North Beacon Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	1	0	1	0	2	1	0	0	0	0	0	0	0	2	1	0	8
11:15 AM	2	0	1	0	1	1	0	0	0	0	0	0	0	2	2	0	9
11:30 AM	0	1	0	0	1	5	0	0	0	0	0	0	0	1	0	0	8
11:45 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	5
Total	4	1	2	0	5	7	0	0	0	0	0	0	0	8	3	0	30
12:00 PM	0	0	0	0	1	5	0	0	0	0	0	0	0	2	1	0	9
12:15 PM	1	0	1	0	0	2	0	0	0	0	0	0	0	2	0	0	6
12:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
12:45 PM	0	0	1	0	1	2	0	0	0	0	0	0	0	2	1	0	7
Total	1	0	2	0	2	11	0	0	0	0	0	0	0	8	2	0	26
01:00 PM	0	0	1	0	0	2	0	0	0	0	0	0	0	3	0	0	6
01:15 PM	0	0	1	0	2	1	0	0	0	0	0	0	0	1	0	0	5
01:30 PM	1	0	0	0	0	4	0	0	0	0	0	0	0	6	0	0	11
01:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
Total	1	0	2	0	2	8	0	0	0	0	0	0	0	12	0	0	25
Grand Total	6	1	6	0	9	26	0	0	0	0	0	0	0	28	5	0	81
Apprch %	46.2	7.7	46.2	0	25.7	74.3	0	0	0	0	0	0	0	84.8	15.2	0	
Total %	7.4	1.2	7.4	0	11.1	32.1	0	0	0	0	0	0	0	34.6	6.2	0	

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:15 AM																					
11:15 AM	2	0	1	0	3	1	1	0	0	2	0	0	0	0	0	0	2	2	0	4	9
11:30 AM	0	1	0	0	1	1	5	0	0	6	0	0	0	0	0	0	1	0	0	1	8
11:45 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	3	0	0	3	5
12:00 PM	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	2	1	0	3	9
Total Volume	3	1	1	0	5	4	11	0	0	15	0	0	0	0	0	0	8	3	0	11	31
% App. Total	60	20	20	0		26.7	73.3	0	0		0	0	0	0		0	72.7	27.3	0		
PHF	.375	.250	.250	.000	.417	1.00	.550	.000	.000	.625	.000	.000	.000	.000	.000	.000	.667	.375	.000	.688	.861

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N/S: Everett Street/KFC Driveway (Enter)
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 FFF
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Peds and Bikes

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	1	2	1	1	0	0	0	0	0	0	11	8	0	2	1	4	1	32
11:15 AM	0	0	0	1	3	0	0	0	2	0	0	0	0	10	10	0	0	0	6	7	39
11:30 AM	0	0	0	2	13	0	0	0	0	0	0	0	0	12	13	0	1	0	2	4	47
11:45 AM	0	0	2	7	4	0	0	0	2	2	0	0	0	6	4	0	0	0	6	1	34
Total	0	0	2	11	22	1	1	0	4	2	0	0	0	39	35	0	3	1	18	13	152
12:00 PM	0	0	0	3	4	0	0	0	2	0	0	0	0	3	8	0	2	0	0	3	25
12:15 PM	1	0	3	3	7	0	1	0	0	1	0	0	0	8	15	0	1	0	9	7	56
12:30 PM	0	0	1	7	0	0	1	0	3	1	0	0	0	7	17	0	2	0	1	11	51
12:45 PM	0	0	1	9	3	0	0	0	1	3	0	0	0	1	22	0	1	0	4	7	52
Total	1	0	5	22	14	0	2	0	6	5	0	0	0	19	62	0	6	0	14	28	184
01:00 PM	0	0	0	9	5	1	1	0	0	2	0	0	0	3	3	0	4	1	4	3	36
01:15 PM	0	0	0	8	7	0	1	0	5	0	0	0	0	14	2	0	1	0	8	2	48
01:30 PM	0	0	0	6	3	1	0	0	0	2	0	0	0	13	6	0	0	0	6	2	39
01:45 PM	0	0	0	7	6	0	0	0	3	0	0	0	0	4	5	0	1	0	1	3	30
Total	0	0	0	30	21	2	2	0	8	4	0	0	0	34	16	0	6	1	19	10	153
Grand Total	1	0	7	63	57	3	5	0	18	11	0	0	0	92	113	0	15	2	51	51	489
Apprch %	0.8	0	5.5	49.2	44.5	8.1	13.5	0	48.6	29.7	0	0	0	44.9	55.1	0	12.6	1.7	42.9	42.9	
Total %	0.2	0	1.4	12.9	11.7	0.6	1	0	3.7	2.2	0	0	0	18.8	23.1	0	3.1	0.4	10.4	10.4	

	Everett Street From North						North Beacon Street From East						KFC Driveway (Enter) From South						North Beacon Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 12:15 PM																									
12:15 PM	1	0	3	3	7	14	0	1	0	0	1	2	0	0	0	8	15	23	0	1	0	9	7	17	56
12:30 PM	0	0	1	7	0	8	0	1	0	3	1	5	0	0	0	7	17	24	0	2	0	1	11	14	51
12:45 PM	0	0	1	9	3	13	0	0	0	1	3	4	0	0	0	1	22	23	0	1	0	4	7	12	52
01:00 PM	0	0	0	9	5	14	1	1	0	0	2	4	0	0	0	3	3	6	0	4	1	4	3	12	36
Total Volume	1	0	5	28	15	49	1	3	0	4	7	15	0	0	0	19	57	76	0	8	1	18	28	55	195
% App. Total	2	0	10.2	57.1	30.6		6.7	20	0	26.7	46.7		0	0	0	25	75		0	14.5	1.8	32.7	50.9		
PHF	.250	.000	.417	.778	.536	.875	.250	.750	.000	.333	.583	.750	.000	.000	.000	.594	.648	.792	.000	.500	.250	.500	.636	.809	.871

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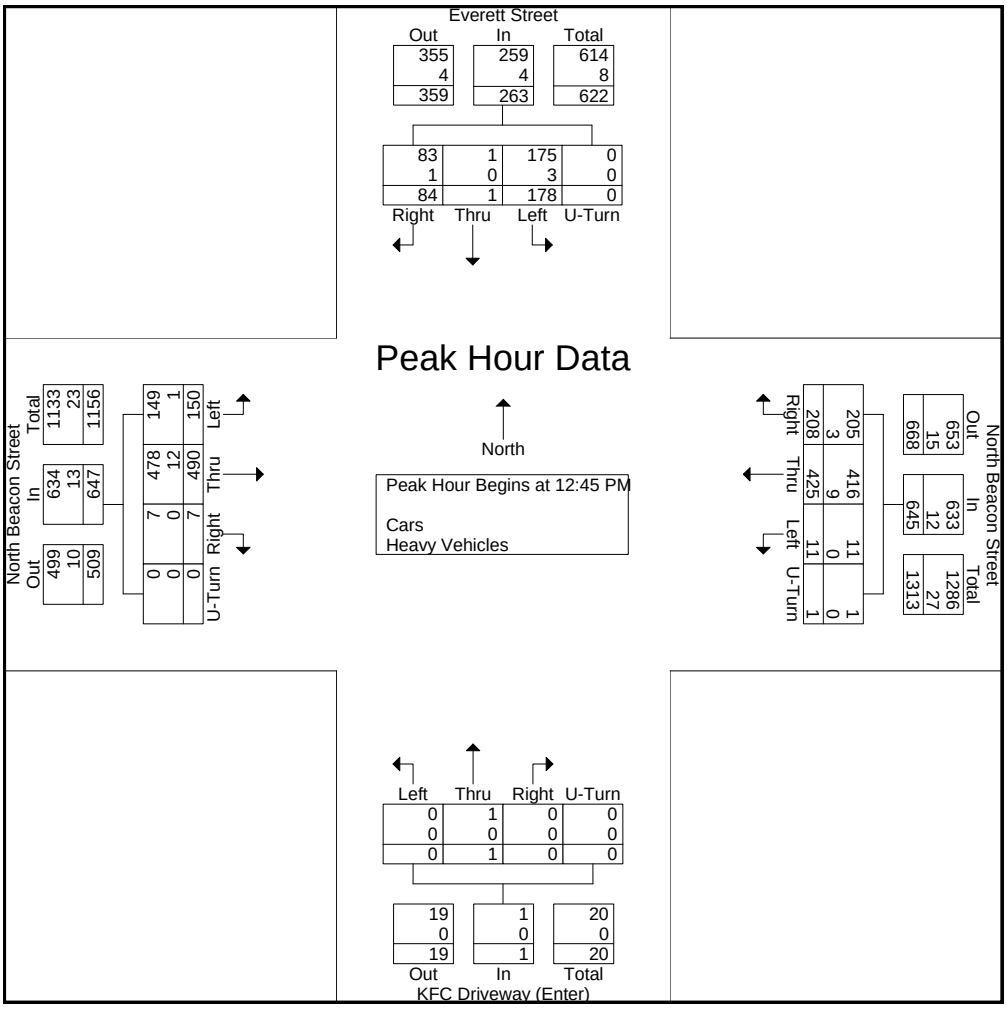
N/S: Everett Street/KFC Driveway (Enter)
E/W: North Beacon Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 FFF
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

	Everett Street From North					North Beacon Street From East					KFC Driveway (Enter) From South					North Beacon Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45 PM																					
12:45 PM	22	0	55	0	77	52	105	3	0	160	0	0	0	0	0	1	114	44	0	159	396
01:00 PM	24	1	43	0	68	50	89	2	0	141	0	1	0	0	1	3	133	35	0	171	381
01:15 PM	21	0	45	0	66	58	119	2	1	180	0	0	0	0	0	2	118	30	0	150	396
01:30 PM	17	0	35	0	52	48	112	4	0	164	0	0	0	0	0	1	125	41	0	167	383
Total Volume	84	1	178	0	263	208	425	11	1	645	0	1	0	0	1	7	490	150	0	647	1556
% App. Total	31.9	0.4	67.7	0		32.2	65.9	1.7	0.2		0	100	0	0		1.1	75.7	23.2	0		
PHF	.875	.250	.809	.000	.854	.897	.893	.688	.250	.896	.000	.250	.000	.000	.250	.583	.921	.852	.000	.946	.982
Cars	83	1	175	0	259	205	416	11	1	633	0	1	0	0	1	7	478	149	0	634	1527
% Cars	98.8	100	98.3	0	98.5	98.6	97.9	100	100	98.1	0	100	0	0	100	100	97.6	99.3	0	98.0	98.1
Heavy Vehicles	1	0	3	0	4	3	9	0	0	12	0	0	0	0	0	0	12	1	0	13	29
% Heavy Vehicles	1.2	0	1.7	0	1.5	1.4	2.1	0	0	1.9	0	0	0	0	0	0	2.4	0.7	0	2.0	1.9



PRECISION
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W: Vineland Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 G
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Market Street From North			Market Street From South			Vineland Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:00 AM	1	135	0	121	0	0	5	6	0	268
07:15 AM	0	140	0	157	0	0	3	7	0	307
07:30 AM	0	134	0	159	0	0	5	6	0	304
07:45 AM	0	144	0	155	0	0	2	8	0	309
Total	1	553	0	592	0	0	15	27	0	1188
08:00 AM	0	145	0	176	1	0	7	4	0	333
08:15 AM	0	152	0	207	1	0	3	6	0	369
08:30 AM	0	154	0	203	0	0	3	6	0	366
08:45 AM	0	158	0	178	0	0	6	3	0	345
Total	0	609	0	764	2	0	19	19	0	1413
Grand Total	1	1162	0	1356	2	0	34	46	0	2601
Apprch %	0.1	99.9	0	99.9	0.1	0	42.5	57.5	0	
Total %	0	44.7	0	52.1	0.1	0	1.3	1.8	0	
Cars	1	1087	0	1293	2	0	31	45	0	2459
% Cars	100	93.5	0	95.4	100	0	91.2	97.8	0	94.5
Heavy Vehicles	0	75	0	63	0	0	3	1	0	142
% Heavy Vehicles	0	6.5	0	4.6	0	0	8.8	2.2	0	5.5

	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	145	0	145	176	1	0	177	7	4	0	11	333
08:15 AM	0	152	0	152	207	1	0	208	3	6	0	9	369
08:30 AM	0	154	0	154	203	0	0	203	3	6	0	9	366
08:45 AM	0	158	0	158	178	0	0	178	6	3	0	9	345
Total Volume	0	609	0	609	764	2	0	766	19	19	0	38	1413
% App. Total	0	100	0		99.7	0.3	0		50	50	0		
PHF	.000	.964	.000	.964	.923	.500	.000	.921	.679	.792	.000	.864	.957
Cars	0	574	0	574	728	2	0	730	18	19	0	37	1341
% Cars	0	94.3	0	94.3	95.3	100	0	95.3	94.7	100	0	97.4	94.9
Heavy Vehicles	0	35	0	35	36	0	0	36	1	0	0	1	72
% Heavy Vehicles	0	5.7	0	5.7	4.7	0	0	4.7	5.3	0	0	2.6	5.1

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File Name : 165041 G
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Market Street From North			Market Street From South			Vineland Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:00 AM	1	123	0	119	0	0	5	6	0	254
07:15 AM	0	134	0	148	0	0	2	6	0	290
07:30 AM	0	119	0	149	0	0	5	6	0	279
07:45 AM	0	137	0	149	0	0	1	8	0	295
Total	1	513	0	565	0	0	13	26	0	1118
08:00 AM	0	137	0	167	1	0	6	4	0	315
08:15 AM	0	140	0	199	1	0	3	6	0	349
08:30 AM	0	147	0	196	0	0	3	6	0	352
08:45 AM	0	150	0	166	0	0	6	3	0	325
Total	0	574	0	728	2	0	18	19	0	1341
Grand Total	1	1087	0	1293	2	0	31	45	0	2459
Apprch %	0.1	99.9	0	99.8	0.2	0	40.8	59.2	0	
Total %	0	44.2	0	52.6	0.1	0	1.3	1.8	0	

	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	137	0	137	167	1	0	168	6	4	0	10	315
08:15 AM	0	140	0	140	199	1	0	200	3	6	0	9	349
08:30 AM	0	147	0	147	196	0	0	196	3	6	0	9	352
08:45 AM	0	150	0	150	166	0	0	166	6	3	0	9	325
Total Volume	0	574	0	574	728	2	0	730	18	19	0	37	1341
% App. Total	0	100	0		99.7	0.3	0		48.6	51.4	0		
PHF	.000	.957	.000	.957	.915	.500	.000	.913	.750	.792	.000	.925	.952

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Groups Printed- Heavy Vehicles

	Market Street From North			Market Street From South			Vineland Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:00 AM	0	12	0	2	0	0	0	0	0	14
07:15 AM	0	6	0	9	0	0	1	1	0	17
07:30 AM	0	15	0	10	0	0	0	0	0	25
07:45 AM	0	7	0	6	0	0	1	0	0	14
Total	0	40	0	27	0	0	2	1	0	70
08:00 AM	0	8	0	9	0	0	1	0	0	18
08:15 AM	0	12	0	8	0	0	0	0	0	20
08:30 AM	0	7	0	7	0	0	0	0	0	14
08:45 AM	0	8	0	12	0	0	0	0	0	20
Total	0	35	0	36	0	0	1	0	0	72
Grand Total	0	75	0	63	0	0	3	1	0	142
Apprch %	0	100	0	100	0	0	75	25	0	
Total %	0	52.8	0	44.4	0	0	2.1	0.7	0	

	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	0	15	0	15	10	0	0	10	0	0	0	0	25
07:45 AM	0	7	0	7	6	0	0	6	1	0	0	1	14
08:00 AM	0	8	0	8	9	0	0	9	1	0	0	1	18
08:15 AM	0	12	0	12	8	0	0	8	0	0	0	0	20
Total Volume	0	42	0	42	33	0	0	33	2	0	0	2	77
% App. Total	0	100	0		100	0	0		100	0	0		
PHF	.000	.700	.000	.700	.825	.000	.000	.825	.500	.000	.000	.500	.770

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Groups Printed- Peds and Bikes

	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	Peds EB	Peds WB	Thru	Left	Peds WB	Peds EB	Right	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
07:15 AM	0	0	1	0	0	0	0	0	0	0	3	0	4
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	10	4	14
Total	0	0	1	0	0	0	0	1	0	0	15	5	22
08:00 AM	0	0	1	0	0	0	0	0	0	0	1	0	2
08:15 AM	0	1	0	0	4	0	1	0	0	0	1	2	9
08:30 AM	0	0	0	0	7	0	0	0	0	0	19	0	26
08:45 AM	0	1	4	0	1	0	0	0	0	0	11	0	17
Total	0	2	5	0	12	0	1	0	0	0	32	2	54
Grand Total	0	2	6	0	12	0	1	1	0	0	47	7	76
Apprch %	0	25	75	0	85.7	0	7.1	7.1	0	0	87	13	
Total %	0	2.6	7.9	0	15.8	0	1.3	1.3	0	0	61.8	9.2	

	Market Street From North					Market Street From South					Vineland Street From West					
Start Time	Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Peds WB	Peds EB	App. Total	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 08:00 AM																
08:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	2
08:15 AM	0	1	0	0	1	4	0	1	0	5	0	0	1	2	3	9
08:30 AM	0	0	0	0	0	7	0	0	0	7	0	0	19	0	19	26
08:45 AM	0	1	4	0	5	1	0	0	0	1	0	0	11	0	11	17
Total Volume	0	2	5	0	7	12	0	1	0	13	0	0	32	2	34	54
% App. Total	0	28.6	71.4	0		92.3	0	7.7	0		0	0	94.1	5.9		
PHF	.000	.500	.313	.000	.350	.429	.000	.250	.000	.464	.000	.000	.421	.250	.447	.519

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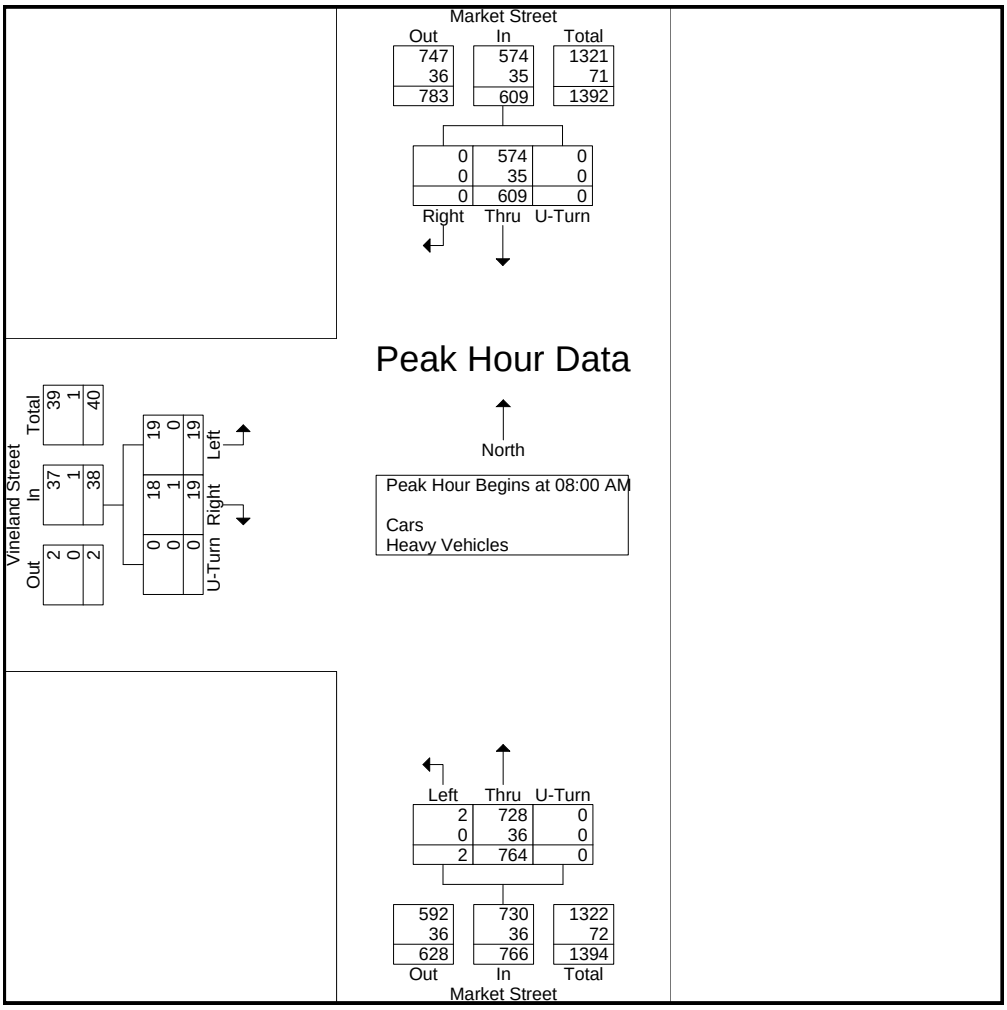
	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	145	0	145	176	1	0	177	7	4	0	11	333
08:15 AM	0	152	0	152	207	1	0	208	3	6	0	9	369
08:30 AM	0	154	0	154	203	0	0	203	3	6	0	9	366
08:45 AM	0	158	0	158	178	0	0	178	6	3	0	9	345
Total Volume	0	609	0	609	764	2	0	766	19	19	0	38	1413
% App. Total	0	100	0		99.7	0.3	0		50	50	0		
PHF	.000	.964	.000	.964	.923	.500	.000	.921	.679	.792	.000	.864	.957
Cars	0	574	0	574	728	2	0	730	18	19	0	37	1341
% Cars	0	94.3	0	94.3	95.3	100	0	95.3	94.7	100	0	97.4	94.9
Heavy Vehicles	0	35	0	35	36	0	0	36	1	0	0	1	72
% Heavy Vehicles	0	5.7	0	5.7	4.7	0	0	4.7	5.3	0	0	2.6	5.1



PRECISION
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W: Vineland Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 GG
Site Code : 12305.00
Start Date : 5/5/2016
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Groups Printed- Cars - Heavy Vehicles

	Market Street From North			Market Street From South			Vineland Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:00 PM	0	202	0	126	1	0	3	0	0	332
04:15 PM	0	201	0	136	0	0	2	0	0	339
04:30 PM	0	227	0	151	1	1	4	2	0	386
04:45 PM	0	188	0	154	1	0	4	1	0	348
Total	0	818	0	567	3	1	13	3	0	1405
05:00 PM	0	228	0	138	0	0	6	1	0	373
05:15 PM	0	252	0	151	0	0	4	1	0	408
05:30 PM	0	206	0	132	1	1	3	0	0	343
05:45 PM	0	237	0	161	0	0	4	1	0	403
Total	0	923	0	582	1	1	17	3	0	1527
Grand Total	0	1741	0	1149	4	2	30	6	0	2932
Apprch %	0	100	0	99.5	0.3	0.2	83.3	16.7	0	
Total %	0	59.4	0	39.2	0.1	0.1	1	0.2	0	
Cars	0	1710	0	1115	4	2	28	6	0	2865
% Cars	0	98.2	0	97	100	100	93.3	100	0	97.7
Heavy Vehicles	0	31	0	34	0	0	2	0	0	67
% Heavy Vehicles	0	1.8	0	3	0	0	6.7	0	0	2.3

	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	228	0	228	138	0	0	138	6	1	0	7	373
05:15 PM	0	252	0	252	151	0	0	151	4	1	0	5	408
05:30 PM	0	206	0	206	132	1	1	134	3	0	0	3	343
05:45 PM	0	237	0	237	161	0	0	161	4	1	0	5	403
Total Volume	0	923	0	923	582	1	1	584	17	3	0	20	1527
% App. Total	0	100	0		99.7	0.2	0.2		85	15	0		
PHF	.000	.916	.000	.916	.904	.250	.250	.907	.708	.750	.000	.714	.936
Cars	0	911	0	911	566	1	1	568	16	3	0	19	1498
% Cars	0	98.7	0	98.7	97.3	100	100	97.3	94.1	100	0	95.0	98.1
Heavy Vehicles	0	12	0	12	16	0	0	16	1	0	0	1	29
% Heavy Vehicles	0	1.3	0	1.3	2.7	0	0	2.7	5.9	0	0	5.0	1.9

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File Name : 165041 GG
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Groups Printed- Cars

	Market Street From North			Market Street From South			Vineland Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:00 PM	0	196	0	121	1	0	3	0	0	321
04:15 PM	0	196	0	131	0	0	2	0	0	329
04:30 PM	0	224	0	145	1	1	3	2	0	376
04:45 PM	0	183	0	152	1	0	4	1	0	341
Total	0	799	0	549	3	1	12	3	0	1367
05:00 PM	0	228	0	133	0	0	6	1	0	368
05:15 PM	0	247	0	147	0	0	4	1	0	399
05:30 PM	0	202	0	129	1	1	2	0	0	335
05:45 PM	0	234	0	157	0	0	4	1	0	396
Total	0	911	0	566	1	1	16	3	0	1498
Grand Total	0	1710	0	1115	4	2	28	6	0	2865
Apprch %	0	100	0	99.5	0.4	0.2	82.4	17.6	0	
Total %	0	59.7	0	38.9	0.1	0.1	1	0.2	0	

	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	228	0	228	133	0	0	133	6	1	0	7	368
05:15 PM	0	247	0	247	147	0	0	147	4	1	0	5	399
05:30 PM	0	202	0	202	129	1	1	131	2	0	0	2	335
05:45 PM	0	234	0	234	157	0	0	157	4	1	0	5	396
Total Volume	0	911	0	911	566	1	1	568	16	3	0	19	1498
% App. Total	0	100	0		99.6	0.2	0.2		84.2	15.8	0		
PHF	.000	.922	.000	.922	.901	.250	.250	.904	.667	.750	.000	.679	.939

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File Name : 165041 GG
Site Code : 12305.00
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Groups Printed- Heavy Vehicles

	Market Street From North			Market Street From South			Vineland Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:00 PM	0	6	0	5	0	0	0	0	0	11
04:15 PM	0	5	0	5	0	0	0	0	0	10
04:30 PM	0	3	0	6	0	0	1	0	0	10
04:45 PM	0	5	0	2	0	0	0	0	0	7
Total	0	19	0	18	0	0	1	0	0	38
05:00 PM	0	0	0	5	0	0	0	0	0	5
05:15 PM	0	5	0	4	0	0	0	0	0	9
05:30 PM	0	4	0	3	0	0	1	0	0	8
05:45 PM	0	3	0	4	0	0	0	0	0	7
Total	0	12	0	16	0	0	1	0	0	29
Grand Total	0	31	0	34	0	0	2	0	0	67
Apprch %	0	100	0	100	0	0	100	0	0	
Total %	0	46.3	0	50.7	0	0	3	0	0	

	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	6	0	6	5	0	0	5	0	0	0	0	11
04:15 PM	0	5	0	5	5	0	0	5	0	0	0	0	10
04:30 PM	0	3	0	3	6	0	0	6	1	0	0	1	10
04:45 PM	0	5	0	5	2	0	0	2	0	0	0	0	7
Total Volume	0	19	0	19	18	0	0	18	1	0	0	1	38
% App. Total	0	100	0		100	0	0		100	0	0		
PHF	.000	.792	.000	.792	.750	.000	.000	.750	.250	.000	.000	.250	.864

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Groups Printed- Peds and Bikes

	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	Peds EB	Peds WB	Thru	Left	Peds WB	Peds EB	Right	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	2	0	0	1	0	0	0	0	0	1	2	6
04:15 PM	0	1	1	0	0	0	0	0	0	0	2	3	7
04:30 PM	0	0	0	0	2	0	0	0	0	0	2	1	5
04:45 PM	0	0	0	0	2	0	0	0	0	0	1	1	4
Total	0	3	1	0	5	0	0	0	0	0	6	7	22
05:00 PM	0	1	0	0	0	0	0	0	0	0	2	3	6
05:15 PM	0	5	0	1	0	0	0	0	0	0	0	6	12
05:30 PM	0	2	1	1	0	0	0	0	0	0	3	4	11
05:45 PM	0	0	0	0	1	0	0	0	0	0	1	1	3
Total	0	8	1	2	1	0	0	0	0	0	6	14	32
Grand Total	0	11	2	2	6	0	0	0	0	0	12	21	54
Apprch %	0	73.3	13.3	13.3	100	0	0	0	0	0	36.4	63.6	
Total %	0	20.4	3.7	3.7	11.1	0	0	0	0	0	22.2	38.9	

	Market Street From North					Market Street From South					Vineland Street From West					
Start Time	Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Peds WB	Peds EB	App. Total	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:45 PM																
04:45 PM	0	0	0	0	0	2	0	0	0	2	0	0	1	1	2	4
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	3	5	6
05:15 PM	0	5	0	1	6	0	0	0	0	0	0	0	0	6	6	12
05:30 PM	0	2	1	1	4	0	0	0	0	0	0	0	3	4	7	11
Total Volume	0	8	1	2	11	2	0	0	0	2	0	0	6	14	20	33
% App. Total	0	72.7	9.1	18.2		100	0	0	0		0	0	30	70		
PHF	.000	.400	.250	.500	.458	.250	.000	.000	.000	.250	.000	.000	.500	.583	.714	.688

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File Name : 165041 GG
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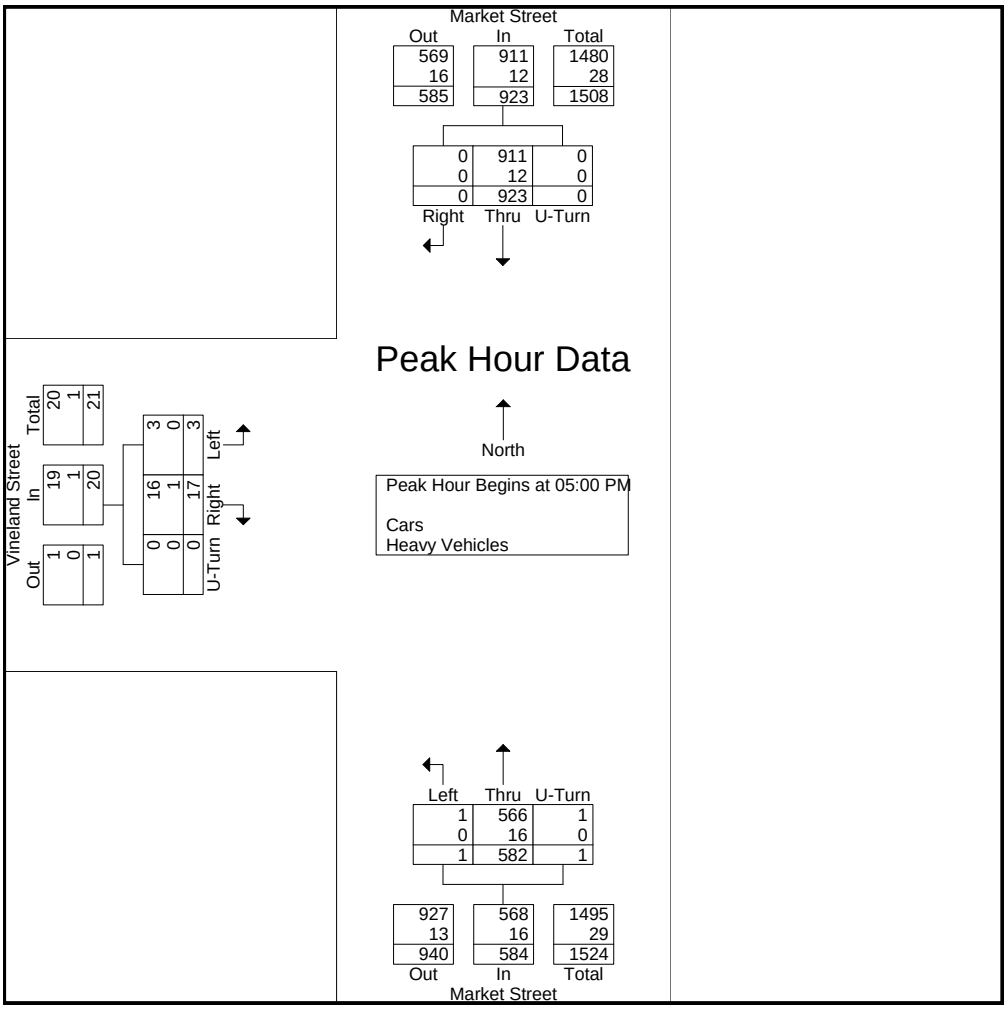
	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	228	0	228	138	0	0	138	6	1	0	7	373
05:15 PM	0	252	0	252	151	0	0	151	4	1	0	5	408
05:30 PM	0	206	0	206	132	1	1	134	3	0	0	3	343
05:45 PM	0	237	0	237	161	0	0	161	4	1	0	5	403
Total Volume	0	923	0	923	582	1	1	584	17	3	0	20	1527
% App. Total	0	100	0		99.7	0.2	0.2		85	15	0		
PHF	.000	.916	.000	.916	.904	.250	.250	.907	.708	.750	.000	.714	.936
Cars	0	911	0	911	566	1	1	568	16	3	0	19	1498
% Cars	0	98.7	0	98.7	97.3	100	100	97.3	94.1	100	0	95.0	98.1
Heavy Vehicles	0	12	0	12	16	0	0	16	1	0	0	1	29
% Heavy Vehicles	0	1.3	0	1.3	2.7	0	0	2.7	5.9	0	0	5.0	1.9



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File Name : 165041 GGG
Site Code : 12305.00
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Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Market Street From North			Market Street From South			Vineland Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
11:00 AM	0	164	0	151	1	0	1	2	0	319
11:15 AM	0	178	0	121	1	0	1	0	0	301
11:30 AM	0	183	0	143	0	0	1	3	0	330
11:45 AM	0	149	0	132	1	1	6	5	0	294
Total	0	674	0	547	3	1	9	10	0	1244
12:00 PM	0	213	0	142	0	0	5	1	0	361
12:15 PM	0	193	0	141	1	0	2	3	0	340
12:30 PM	0	185	0	149	1	0	2	1	0	338
12:45 PM	0	197	0	146	0	0	4	2	0	349
Total	0	788	0	578	2	0	13	7	0	1388
01:00 PM	0	155	0	161	1	0	3	1	0	321
01:15 PM	0	184	0	162	1	2	4	0	0	353
01:30 PM	0	192	0	155	2	1	2	1	0	353
01:45 PM	0	191	0	168	3	0	6	0	0	368
Total	0	722	0	646	7	3	15	2	0	1395
Grand Total	0	2184	0	1771	12	4	37	19	0	4027
Apprch %	0	100	0	99.1	0.7	0.2	66.1	33.9	0	
Total %	0	54.2	0	44	0.3	0.1	0.9	0.5	0	
Cars	0	2148	0	1723	12	3	36	18	0	3940
% Cars	0	98.4	0	97.3	100	75	97.3	94.7	0	97.8
Heavy Vehicles	0	36	0	48	0	1	1	1	0	87
% Heavy Vehicles	0	1.6	0	2.7	0	25	2.7	5.3	0	2.2

	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 01:00 PM													
01:00 PM	0	155	0	155	161	1	0	162	3	1	0	4	321
01:15 PM	0	184	0	184	162	1	2	165	4	0	0	4	353
01:30 PM	0	192	0	192	155	2	1	158	2	1	0	3	353
01:45 PM	0	191	0	191	168	3	0	171	6	0	0	6	368
Total Volume	0	722	0	722	646	7	3	656	15	2	0	17	1395
% App. Total	0	100	0		98.5	1.1	0.5		88.2	11.8	0		
PHF	.000	.940	.000	.940	.961	.583	.375	.959	.625	.500	.000	.708	.948
Cars	0	710	0	710	636	7	3	646	15	2	0	17	1373
% Cars	0	98.3	0	98.3	98.5	100	100	98.5	100	100	0	100	98.4
Heavy Vehicles	0	12	0	12	10	0	0	10	0	0	0	0	22
% Heavy Vehicles	0	1.7	0	1.7	1.5	0	0	1.5	0	0	0	0	1.6

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File Name : 165041 GGG
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Groups Printed- Cars

	Market Street From North			Market Street From South			Vineland Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
11:00 AM	0	163	0	145	1	0	1	2	0	312
11:15 AM	0	175	0	118	1	0	1	0	0	295
11:30 AM	0	178	0	139	0	0	1	3	0	321
11:45 AM	0	144	0	129	1	0	6	5	0	285
Total	0	660	0	531	3	0	9	10	0	1213
12:00 PM	0	209	0	135	0	0	4	1	0	349
12:15 PM	0	190	0	137	1	0	2	3	0	333
12:30 PM	0	183	0	145	1	0	2	1	0	332
12:45 PM	0	196	0	139	0	0	4	1	0	340
Total	0	778	0	556	2	0	12	6	0	1354
01:00 PM	0	151	0	159	1	0	3	1	0	315
01:15 PM	0	183	0	160	1	2	4	0	0	350
01:30 PM	0	191	0	152	2	1	2	1	0	349
01:45 PM	0	185	0	165	3	0	6	0	0	359
Total	0	710	0	636	7	3	15	2	0	1373
Grand Total	0	2148	0	1723	12	3	36	18	0	3940
Apprch %	0	100	0	99.1	0.7	0.2	66.7	33.3	0	
Total %	0	54.5	0	43.7	0.3	0.1	0.9	0.5	0	

	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 01:00 PM													
01:00 PM	0	151	0	151	159	1	0	160	3	1	0	4	315
01:15 PM	0	183	0	183	160	1	2	163	4	0	0	4	350
01:30 PM	0	191	0	191	152	2	1	155	2	1	0	3	349
01:45 PM	0	185	0	185	165	3	0	168	6	0	0	6	359
Total Volume	0	710	0	710	636	7	3	646	15	2	0	17	1373
% App. Total	0	100	0		98.5	1.1	0.5		88.2	11.8	0		
PHF	.000	.929	.000	.929	.964	.583	.375	.961	.625	.500	.000	.708	.956

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Groups Printed- Heavy Vehicles

	Market Street From North			Market Street From South			Vineland Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
11:00 AM	0	1	0	6	0	0	0	0	0	7
11:15 AM	0	3	0	3	0	0	0	0	0	6
11:30 AM	0	5	0	4	0	0	0	0	0	9
11:45 AM	0	5	0	3	0	1	0	0	0	9
Total	0	14	0	16	0	1	0	0	0	31
12:00 PM	0	4	0	7	0	0	1	0	0	12
12:15 PM	0	3	0	4	0	0	0	0	0	7
12:30 PM	0	2	0	4	0	0	0	0	0	6
12:45 PM	0	1	0	7	0	0	0	1	0	9
Total	0	10	0	22	0	0	1	1	0	34
01:00 PM	0	4	0	2	0	0	0	0	0	6
01:15 PM	0	1	0	2	0	0	0	0	0	3
01:30 PM	0	1	0	3	0	0	0	0	0	4
01:45 PM	0	6	0	3	0	0	0	0	0	9
Total	0	12	0	10	0	0	0	0	0	22
Grand Total	0	36	0	48	0	1	1	1	0	87
Apprch %	0	100	0	98	0	2	50	50	0	
Total %	0	41.4	0	55.2	0	1.1	1.1	1.1	0	

	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:30 AM													
11:30 AM	0	5	0	5	4	0	0	4	0	0	0	0	9
11:45 AM	0	5	0	5	3	0	1	4	0	0	0	0	9
12:00 PM	0	4	0	4	7	0	0	7	1	0	0	1	12
12:15 PM	0	3	0	3	4	0	0	4	0	0	0	0	7
Total Volume	0	17	0	17	18	0	1	19	1	0	0	1	37
% App. Total	0	100	0		94.7	0	5.3		100	0	0		
PHF	.000	.850	.000	.850	.643	.000	.250	.679	.250	.000	.000	.250	.771

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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N/S: Market Street
W: Vineland Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 GGG
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Peds and Bikes

	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	Peds EB	Peds WB	Thru	Left	Peds WB	Peds EB	Right	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
11:15 AM	0	0	0	0	1	0	0	0	0	0	1	4	6
11:30 AM	0	1	0	0	0	0	0	0	1	0	0	2	4
11:45 AM	0	1	0	0	1	0	1	0	0	0	4	0	7
Total	0	2	0	0	2	0	1	0	1	0	6	6	18
12:00 PM	0	2	0	0	1	0	0	0	0	0	3	4	10
12:15 PM	0	1	0	0	3	0	0	0	0	0	1	0	5
12:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
12:45 PM	0	2	1	0	0	0	1	0	0	0	1	0	5
Total	0	6	1	0	5	0	1	0	0	0	5	4	22
01:00 PM	0	1	0	2	0	0	4	0	0	0	2	3	12
01:15 PM	0	0	0	0	1	0	0	0	0	0	3	4	8
01:30 PM	0	0	0	0	1	0	0	0	0	0	1	1	3
01:45 PM	0	1	1	0	2	0	0	1	0	0	4	1	10
Total	0	2	1	2	4	0	4	1	0	0	10	9	33
Grand Total	0	10	2	2	11	0	6	1	1	0	21	19	73
Apprch %	0	71.4	14.3	14.3	61.1	0	33.3	5.6	2.4	0	51.2	46.3	
Total %	0	13.7	2.7	2.7	15.1	0	8.2	1.4	1.4	0	28.8	26	

	Market Street From North					Market Street From South					Vineland Street From West					
Start Time	Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Peds WB	Peds EB	App. Total	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 01:00 PM																
01:00 PM	0	1	0	2	3	0	0	4	0	4	0	0	2	3	5	12
01:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	3	4	7	8
01:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	1	1	2	3
01:45 PM	0	1	1	0	2	2	0	0	1	3	0	0	4	1	5	10
Total Volume	0	2	1	2	5	4	0	4	1	9	0	0	10	9	19	33
% App. Total	0	40	20	40		44.4	0	44.4	11.1		0	0	52.6	47.4		
PHF	.000	.500	.250	.250	.417	.500	.000	.250	.250	.563	.000	.000	.625	.563	.679	.688

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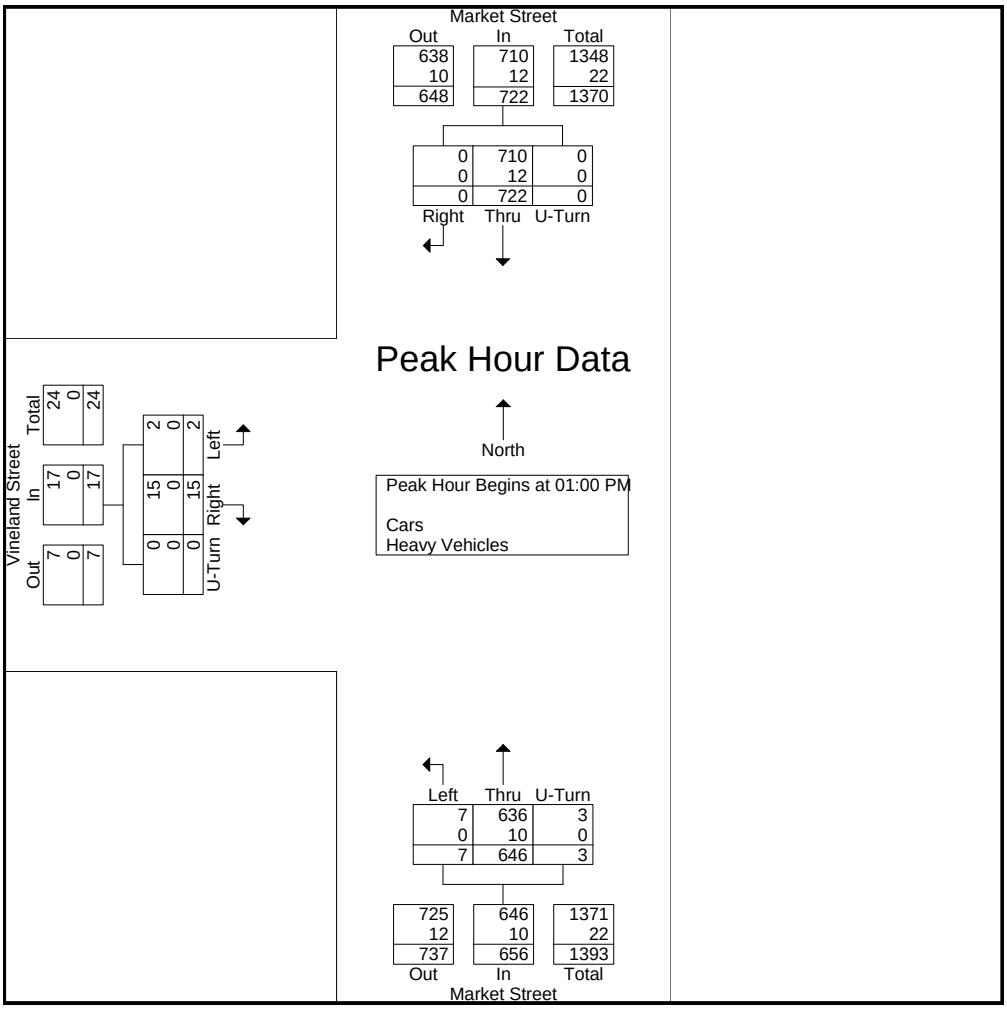
	Market Street From North				Market Street From South				Vineland Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 01:00 PM													
01:00 PM	0	155	0	155	161	1	0	162	3	1	0	4	321
01:15 PM	0	184	0	184	162	1	2	165	4	0	0	4	353
01:30 PM	0	192	0	192	155	2	1	158	2	1	0	3	353
01:45 PM	0	191	0	191	168	3	0	171	6	0	0	6	368
Total Volume	0	722	0	722	646	7	3	656	15	2	0	17	1395
% App. Total	0	100	0		98.5	1.1	0.5		88.2	11.8	0		
PHF	.000	.940	.000	.940	.961	.583	.375	.959	.625	.500	.000	.708	.948
Cars	0	710	0	710	636	7	3	646	15	2	0	17	1373
% Cars	0	98.3	0	98.3	98.5	100	100	98.5	100	100	0	100	98.4
Heavy Vehicles	0	12	0	12	10	0	0	10	0	0	0	0	22
% Heavy Vehicles	0	1.7	0	1.7	1.5	0	0	1.5	0	0	0	0	1.6



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N/S: Market Street
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File Name : 165041 H
Site Code : 12305.00
Start Date : 5/5/2016
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Groups Printed- Cars - Heavy Vehicles

	Market Street From North				Guest Street From East				Market Street From South				Stockyard Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	135	49	0	6	2	4	0	14	105	0	0	0	1	0	0	317
07:15 AM	0	133	56	0	12	0	9	0	14	151	0	0	0	0	0	0	375
07:30 AM	1	132	63	0	18	0	3	0	19	144	0	0	0	0	0	0	380
07:45 AM	2	137	59	0	9	0	8	0	41	132	1	0	0	0	2	0	391
Total	4	537	227	0	45	2	24	0	88	532	1	0	0	1	2	0	1463
08:00 AM	0	141	79	0	25	0	6	0	27	158	0	0	0	0	0	0	436
08:15 AM	0	145	82	0	26	0	8	0	23	182	1	0	0	1	1	0	469
08:30 AM	1	144	90	0	24	0	8	0	47	167	0	0	0	0	1	0	482
08:45 AM	1	149	114	0	31	1	8	0	41	140	3	0	0	2	0	0	490
Total	2	579	365	0	106	1	30	0	138	647	4	0	0	3	2	0	1877
Grand Total	6	1116	592	0	151	3	54	0	226	1179	5	0	0	4	4	0	3340
Apprch %	0.4	65.1	34.5	0	72.6	1.4	26	0	16	83.6	0.4	0	0	50	50	0	
Total %	0.2	33.4	17.7	0	4.5	0.1	1.6	0	6.8	35.3	0.1	0	0	0.1	0.1	0	
Cars	4	1042	584	0	138	2	52	0	223	1119	4	0	0	3	4	0	3175
% Cars	66.7	93.4	98.6	0	91.4	66.7	96.3	0	98.7	94.9	80	0	0	75	100	0	95.1
Heavy Vehicles	2	74	8	0	13	1	2	0	3	60	1	0	0	1	0	0	165
% Heavy Vehicles	33.3	6.6	1.4	0	8.6	33.3	3.7	0	1.3	5.1	20	0	0	25	0	0	4.9

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	141	79	0	220	25	0	6	0	31	27	158	0	0	185	0	0	0	0	0	436
08:15 AM	0	145	82	0	227	26	0	8	0	34	23	182	1	0	206	0	1	1	0	2	469
08:30 AM	1	144	90	0	235	24	0	8	0	32	47	167	0	0	214	0	0	1	0	1	482
08:45 AM	1	149	114	0	264	31	1	8	0	40	41	140	3	0	184	0	2	0	0	2	490
Total Volume	2	579	365	0	946	106	1	30	0	137	138	647	4	0	789	0	3	2	0	5	1877
% App. Total	0.2	61.2	38.6	0		77.4	0.7	21.9	0		17.5	82	0.5	0		0	60	40	0		
PHF	.500	.971	.800	.000	.896	.855	.250	.938	.000	.856	.734	.889	.333	.000	.922	.000	.375	.500	.000	.625	.958
Cars	2	543	362	0	907	98	1	29	0	128	136	615	3	0	754	0	3	2	0	5	1794
% Cars	100	93.8	99.2	0	95.9	92.5	100	96.7	0	93.4	98.6	95.1	75.0	0	95.6	0	100	100	0	100	95.6
Heavy Vehicles	0	36	3	0	39	8	0	1	0	9	2	32	1	0	35	0	0	0	0	0	83
% Heavy Vehicles	0	6.2	0.8	0	4.1	7.5	0	3.3	0	6.6	1.4	4.9	25.0	0	4.4	0	0	0	0	0	4.4

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E/W: Guest Street/ Stockyard Driveway
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 H
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Market Street From North				Guest Street From East				Market Street From South				Stockyard Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	125	49	0	4	1	4	0	14	103	0	0	0	0	0	0	301
07:15 AM	0	124	53	0	11	0	9	0	14	143	0	0	0	0	0	0	354
07:30 AM	0	118	62	0	17	0	3	0	19	131	0	0	0	0	0	0	350
07:45 AM	1	132	58	0	8	0	7	0	40	127	1	0	0	0	2	0	376
Total	2	499	222	0	40	1	23	0	87	504	1	0	0	0	2	0	1381
08:00 AM	0	133	77	0	22	0	6	0	27	152	0	0	0	0	0	0	417
08:15 AM	0	133	82	0	25	0	8	0	23	174	0	0	0	1	1	0	447
08:30 AM	1	137	90	0	23	0	7	0	47	159	0	0	0	0	1	0	465
08:45 AM	1	140	113	0	28	1	8	0	39	130	3	0	0	2	0	0	465
Total	2	543	362	0	98	1	29	0	136	615	3	0	0	3	2	0	1794
Grand Total	4	1042	584	0	138	2	52	0	223	1119	4	0	0	3	4	0	3175
Apprch %	0.2	63.9	35.8	0	71.9	1	27.1	0	16.6	83.1	0.3	0	0	42.9	57.1	0	
Total %	0.1	32.8	18.4	0	4.3	0.1	1.6	0	7	35.2	0.1	0	0	0.1	0.1	0	

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	133	77	0	210	22	0	6	0	28	27	152	0	0	179	0	0	0	0	0	417
08:15 AM	0	133	82	0	215	25	0	8	0	33	23	174	0	0	197	0	1	1	0	2	447
08:30 AM	1	137	90	0	228	23	0	7	0	30	47	159	0	0	206	0	0	1	0	1	465
08:45 AM	1	140	113	0	254	28	1	8	0	37	39	130	3	0	172	0	2	0	0	2	465
Total Volume	2	543	362	0	907	98	1	29	0	128	136	615	3	0	754	0	3	2	0	5	1794
% App. Total	0.2	59.9	39.9	0		76.6	0.8	22.7	0		18	81.6	0.4	0		0	60	40	0		
PHF	.500	.970	.801	.000	.893	.875	.250	.906	.000	.865	.723	.884	.250	.000	.915	.000	.375	.500	.000	.625	.965

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Groups Printed- Heavy Vehicles

	Market Street From North				Guest Street From East				Market Street From South				Stockyard Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	10	0	0	2	1	0	0	0	2	0	0	0	1	0	0	16
07:15 AM	0	9	3	0	1	0	0	0	0	8	0	0	0	0	0	0	21
07:30 AM	1	14	1	0	1	0	0	0	0	13	0	0	0	0	0	0	30
07:45 AM	1	5	1	0	1	0	1	0	1	5	0	0	0	0	0	0	15
Total	2	38	5	0	5	1	1	0	1	28	0	0	0	1	0	0	82
08:00 AM	0	8	2	0	3	0	0	0	0	6	0	0	0	0	0	0	19
08:15 AM	0	12	0	0	1	0	0	0	0	8	1	0	0	0	0	0	22
08:30 AM	0	7	0	0	1	0	1	0	0	8	0	0	0	0	0	0	17
08:45 AM	0	9	1	0	3	0	0	0	2	10	0	0	0	0	0	0	25
Total	0	36	3	0	8	0	1	0	2	32	1	0	0	0	0	0	83
Grand Total	2	74	8	0	13	1	2	0	3	60	1	0	0	1	0	0	165
Apprch %	2.4	88.1	9.5	0	81.2	6.2	12.5	0	4.7	93.8	1.6	0	0	100	0	0	
Total %	1.2	44.8	4.8	0	7.9	0.6	1.2	0	1.8	36.4	0.6	0	0	0.6	0	0	

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	1	14	1	0	16	1	0	0	0	1	0	13	0	0	13	0	0	0	0	0	30
07:45 AM	1	5	1	0	7	1	0	1	0	2	1	5	0	0	6	0	0	0	0	0	15
08:00 AM	0	8	2	0	10	3	0	0	0	3	0	6	0	0	6	0	0	0	0	0	19
08:15 AM	0	12	0	0	12	1	0	0	0	1	0	8	1	0	9	0	0	0	0	0	22
Total Volume	2	39	4	0	45	6	0	1	0	7	1	32	1	0	34	0	0	0	0	0	86
% App. Total	4.4	86.7	8.9	0		85.7	0	14.3	0		2.9	94.1	2.9	0		0	0	0	0		
PHF	.500	.696	.500	.000	.703	.500	.000	.250	.000	.583	.250	.615	.250	.000	.654	.000	.000	.000	.000	.000	.717

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Groups Printed- Peds and Bikes

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	5	1	0	0	0	0	2	0	0	0	1	0	9
07:30 AM	0	0	0	0	0	0	0	0	3	0	1	0	0	1	0	0	1	0	1	0	7
07:45 AM	0	0	0	0	0	0	0	0	5	1	0	0	0	3	5	0	0	0	1	0	15
Total	0	0	0	0	0	0	0	0	14	3	1	0	0	4	7	0	1	0	3	0	33
08:00 AM	0	0	0	0	0	0	0	0	3	4	0	0	0	0	3	0	0	0	1	0	11
08:15 AM	0	1	1	1	0	0	0	0	3	4	0	5	0	1	1	0	0	0	0	1	18
08:30 AM	0	0	0	0	0	0	0	0	3	5	0	6	0	0	18	0	0	0	1	1	34
08:45 AM	0	1	0	0	0	0	0	0	3	2	0	2	0	0	5	0	0	0	4	0	17
Total	0	2	1	1	0	0	0	0	12	15	0	13	0	1	27	0	0	0	6	2	80
Grand Total	0	2	1	1	0	0	0	0	26	18	1	13	0	5	34	0	1	0	9	2	113
Apprch %	0	50	25	25	0	0	0	0	59.1	40.9	1.9	24.5	0	9.4	64.2	0	8.3	0	75	16.7	
Total %	0	1.8	0.9	0.9	0	0	0	0	23	15.9	0.9	11.5	0	4.4	30.1	0	0.9	0	8	1.8	

	Market Street From North						Guest Street From East						Market Street From South						Stockyard Driveway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	3	4	7	0	0	0	0	3	3	0	0	0	1	0	1	11
08:15 AM	0	1	1	1	0	3	0	0	0	3	4	7	0	5	0	1	1	7	0	0	0	0	1	1	18
08:30 AM	0	0	0	0	0	0	0	0	0	3	5	8	0	6	0	0	18	24	0	0	0	1	1	2	34
08:45 AM	0	1	0	0	0	1	0	0	0	3	2	5	0	2	0	0	5	7	0	0	0	4	0	4	17
Total Volume	0	2	1	1	0	4	0	0	0	12	15	27	0	13	0	1	27	41	0	0	0	6	2	8	80
% App. Total	0	50	25	25	0		0	0	0	44.4	55.6		0	31.7	0	2.4	65.9		0	0	0	75	25		
PHF	.000	.500	.250	.250	.000	.333	.000	.000	.000	1.00	.750	.844	.000	.542	.000	.250	.375	.427	.000	.000	.000	.375	.500	.500	.588

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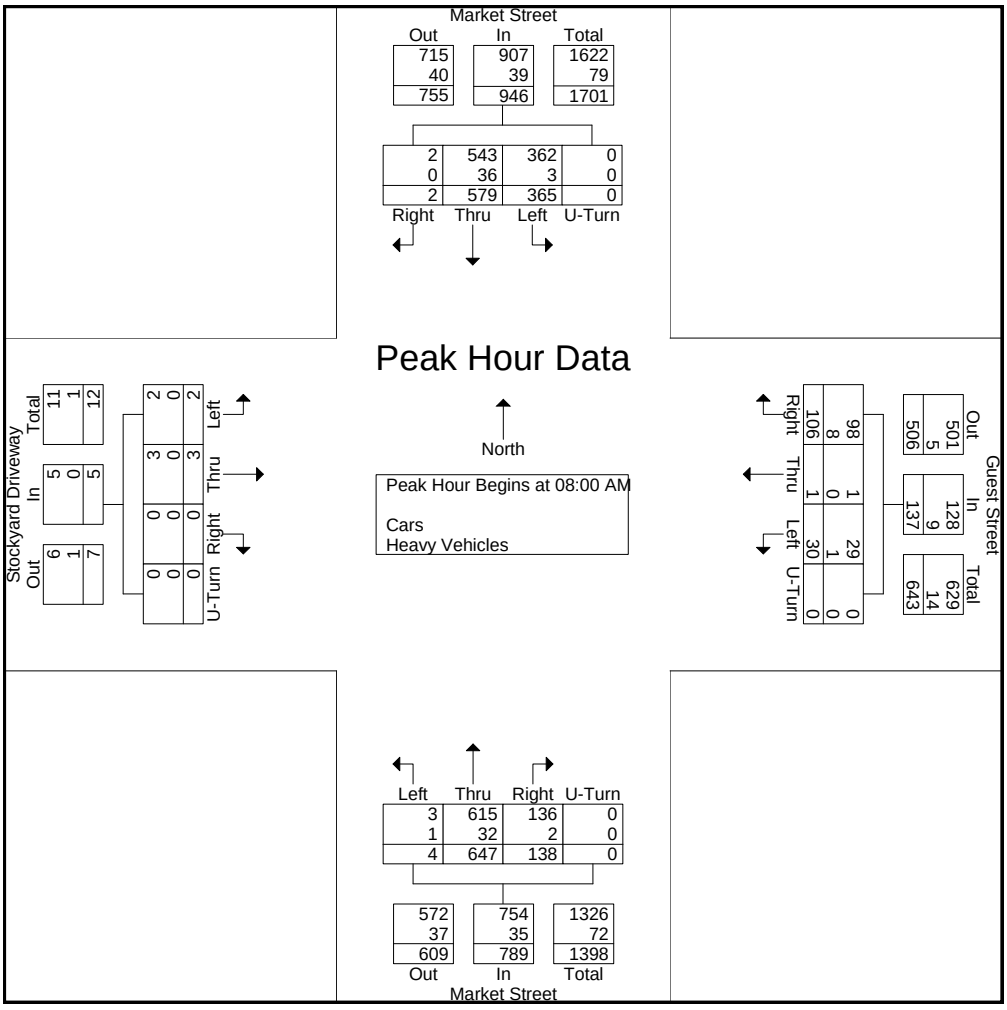
Page No : 1

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	141	79	0	220	25	0	6	0	31	27	158	0	0	185	0	0	0	0	0	436
08:15 AM	0	145	82	0	227	26	0	8	0	34	23	182	1	0	206	0	1	1	0	2	469
08:30 AM	1	144	90	0	235	24	0	8	0	32	47	167	0	0	214	0	0	1	0	1	482
08:45 AM	1	149	114	0	264	31	1	8	0	40	41	140	3	0	184	0	2	0	0	2	490
Total Volume	2	579	365	0	946	106	1	30	0	137	138	647	4	0	789	0	3	2	0	5	1877
% App. Total	0.2	61.2	38.6	0		77.4	0.7	21.9	0		17.5	82	0.5	0		0	60	40	0		
PHF	.500	.971	.800	.000	.896	.855	.250	.938	.000	.856	.734	.889	.333	.000	.922	.000	.375	.500	.000	.625	.958
Cars	2	543	362	0	907	98	1	29	0	128	136	615	3	0	754	0	3	2	0	5	1794
% Cars	100	93.8	99.2	0	95.9	92.5	100	96.7	0	93.4	98.6	95.1	75.0	0	95.6	0	100	100	0	100	95.6
Heavy Vehicles	0	36	3	0	39	8	0	1	0	9	2	32	1	0	35	0	0	0	0	0	83
% Heavy Vehicles	0	6.2	0.8	0	4.1	7.5	0	3.3	0	6.6	1.4	4.9	25.0	0	4.4	0	0	0	0	0	4.4



PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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N/S: Market Street
E/W: Guest Street/ Stockyard Driveway
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 HH
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Market Street From North				Guest Street From East				Market Street From South				Stockyard Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	4	162	33	0	90	1	41	0	9	113	1	0	0	1	2	0	457
04:15 PM	6	175	27	0	99	2	26	0	5	131	2	0	0	1	2	0	476
04:30 PM	1	194	14	0	93	0	32	0	18	131	4	0	0	1	1	0	489
04:45 PM	7	166	26	0	98	9	21	0	10	142	2	1	0	0	0	0	482
Total	18	697	100	0	380	12	120	0	42	517	9	1	0	3	5	0	1904
05:00 PM	11	191	22	0	127	4	37	0	2	136	3	0	0	1	1	0	535
05:15 PM	12	207	36	0	128	5	41	0	12	131	4	0	1	0	1	0	578
05:30 PM	5	199	30	0	136	2	18	0	9	120	7	0	0	1	4	0	531
05:45 PM	10	196	32	0	116	4	38	0	12	141	9	0	0	1	4	0	563
Total	38	793	120	0	507	15	134	0	35	528	23	0	1	3	10	0	2207
Grand Total	56	1490	220	0	887	27	254	0	77	1045	32	1	1	6	15	0	4111
Apprch %	3.2	84.4	12.5	0	75.9	2.3	21.7	0	6.7	90.5	2.8	0.1	4.5	27.3	68.2	0	
Total %	1.4	36.2	5.4	0	21.6	0.7	6.2	0	1.9	25.4	0.8	0	0	0.1	0.4	0	
Cars	56	1462	211	0	877	27	251	0	77	1012	32	1	1	6	13	0	4026
% Cars	100	98.1	95.9	0	98.9	100	98.8	0	100	96.8	100	100	100	100	86.7	0	97.9
Heavy Vehicles	0	28	9	0	10	0	3	0	0	33	0	0	0	0	2	0	85
% Heavy Vehicles	0	1.9	4.1	0	1.1	0	1.2	0	0	3.2	0	0	0	0	13.3	0	2.1

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	11	191	22	0	224	127	4	37	0	168	2	136	3	0	141	0	1	1	0	2	535
05:15 PM	12	207	36	0	255	128	5	41	0	174	12	131	4	0	147	1	0	1	0	2	578
05:30 PM	5	199	30	0	234	136	2	18	0	156	9	120	7	0	136	0	1	4	0	5	531
05:45 PM	10	196	32	0	238	116	4	38	0	158	12	141	9	0	162	0	1	4	0	5	563
Total Volume	38	793	120	0	951	507	15	134	0	656	35	528	23	0	586	1	3	10	0	14	2207
% App. Total	4	83.4	12.6	0		77.3	2.3	20.4	0		6	90.1	3.9	0		7.1	21.4	71.4	0		
PHF	.792	.958	.833	.000	.932	.932	.750	.817	.000	.943	.729	.936	.639	.000	.904	.250	.750	.625	.000	.700	.955
Cars	38	782	117	0	937	501	15	133	0	649	35	512	23	0	570	1	3	10	0	14	2170
% Cars	100	98.6	97.5	0	98.5	98.8	100	99.3	0	98.9	100	97.0	100	0	97.3	100	100	100	0	100	98.3
Heavy Vehicles	0	11	3	0	14	6	0	1	0	7	0	16	0	0	16	0	0	0	0	0	37
% Heavy Vehicles	0	1.4	2.5	0	1.5	1.2	0	0.7	0	1.1	0	3.0	0	0	2.7	0	0	0	0	0	1.7

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 HH
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Market Street From North				Guest Street From East				Market Street From South				Stockyard Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	4	158	31	0	90	1	39	0	9	108	1	0	0	1	1	0	443
04:15 PM	6	170	25	0	99	2	26	0	5	126	2	0	0	1	1	0	463
04:30 PM	1	191	13	0	89	0	32	0	18	126	4	0	0	1	1	0	476
04:45 PM	7	161	25	0	98	9	21	0	10	140	2	1	0	0	0	0	474
Total	18	680	94	0	376	12	118	0	42	500	9	1	0	3	3	0	1856
05:00 PM	11	191	21	0	124	4	37	0	2	131	3	0	0	1	1	0	526
05:15 PM	12	202	35	0	127	5	41	0	12	127	4	0	1	0	1	0	567
05:30 PM	5	196	29	0	136	2	17	0	9	117	7	0	0	1	4	0	523
05:45 PM	10	193	32	0	114	4	38	0	12	137	9	0	0	1	4	0	554
Total	38	782	117	0	501	15	133	0	35	512	23	0	1	3	10	0	2170
Grand Total	56	1462	211	0	877	27	251	0	77	1012	32	1	1	6	13	0	4026
Apprch %	3.2	84.6	12.2	0	75.9	2.3	21.7	0	6.9	90.2	2.9	0.1	5	30	65	0	
Total %	1.4	36.3	5.2	0	21.8	0.7	6.2	0	1.9	25.1	0.8	0	0	0.1	0.3	0	

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	11	191	21	0	223	124	4	37	0	165	2	131	3	0	136	0	1	1	0	2	526
05:15 PM	12	202	35	0	249	127	5	41	0	173	12	127	4	0	143	1	0	1	0	2	567
05:30 PM	5	196	29	0	230	136	2	17	0	155	9	117	7	0	133	0	1	4	0	5	523
05:45 PM	10	193	32	0	235	114	4	38	0	156	12	137	9	0	158	0	1	4	0	5	554
Total Volume	38	782	117	0	937	501	15	133	0	649	35	512	23	0	570	1	3	10	0	14	2170
% App. Total	4.1	83.5	12.5	0		77.2	2.3	20.5	0		6.1	89.8	4	0		7.1	21.4	71.4	0		
PHF	.792	.968	.836	.000	.941	.921	.750	.811	.000	.938	.729	.934	.639	.000	.902	.250	.750	.625	.000	.700	.957

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Client: VHB/ A. Santiago

File Name : 165041 HH
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Market Street From North				Guest Street From East				Market Street From South				Stockyard Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	4	2	0	0	0	2	0	0	5	0	0	0	0	1	0	14
04:15 PM	0	5	2	0	0	0	0	0	0	5	0	0	0	0	1	0	13
04:30 PM	0	3	1	0	4	0	0	0	0	5	0	0	0	0	0	0	13
04:45 PM	0	5	1	0	0	0	0	0	0	2	0	0	0	0	0	0	8
Total	0	17	6	0	4	0	2	0	0	17	0	0	0	0	2	0	48
05:00 PM	0	0	1	0	3	0	0	0	0	5	0	0	0	0	0	0	9
05:15 PM	0	5	1	0	1	0	0	0	0	4	0	0	0	0	0	0	11
05:30 PM	0	3	1	0	0	0	1	0	0	3	0	0	0	0	0	0	8
05:45 PM	0	3	0	0	2	0	0	0	0	4	0	0	0	0	0	0	9
Total	0	11	3	0	6	0	1	0	0	16	0	0	0	0	0	0	37
Grand Total	0	28	9	0	10	0	3	0	0	33	0	0	0	0	2	0	85
Apprch %	0	75.7	24.3	0	76.9	0	23.1	0	0	100	0	0	0	0	100	0	
Total %	0	32.9	10.6	0	11.8	0	3.5	0	0	38.8	0	0	0	0	2.4	0	

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	4	2	0	6	0	0	2	0	2	0	5	0	0	5	0	0	1	0	1	14
04:15 PM	0	5	2	0	7	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	13
04:30 PM	0	3	1	0	4	4	0	0	0	4	0	5	0	0	5	0	0	0	0	0	13
04:45 PM	0	5	1	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8
Total Volume	0	17	6	0	23	4	0	2	0	6	0	17	0	0	17	0	0	2	0	2	48
% App. Total	0	73.9	26.1	0		66.7	0	33.3	0		0	100	0	0		0	0	100	0		
PHF	.000	.850	.750	.000	.821	.250	.000	.250	.000	.375	.000	.850	.000	.000	.850	.000	.000	.500	.000	.500	.857

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Start Date : 5/5/2016
Page No : 1

Groups Printed- Peds and Bikes

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	2	0	1	0	2	1	0	1	0	0	1	0	3	0	0	0	0	0	0	11
04:15 PM	0	0	0	0	0	0	0	1	2	1	0	0	0	4	2	0	0	0	0	1	11
04:30 PM	0	0	0	0	0	0	0	0	2	1	0	2	0	1	1	0	0	0	1	1	9
04:45 PM	0	0	0	0	3	0	0	0	1	5	1	0	0	0	1	0	0	0	0	1	12
Total	0	2	0	1	3	2	1	1	6	7	1	3	0	8	4	0	0	0	1	3	43
05:00 PM	0	1	0	0	0	0	1	0	11	3	0	1	0	13	0	0	0	0	10	0	40
05:15 PM	0	4	0	0	0	1	0	1	8	3	0	0	0	7	1	0	0	0	2	1	28
05:30 PM	0	1	0	1	0	1	0	1	2	2	0	0	0	7	4	0	0	0	1	2	22
05:45 PM	0	1	0	0	0	2	0	0	4	3	0	1	0	5	0	0	0	0	1	0	17
Total	0	7	0	1	0	4	1	2	25	11	0	2	0	32	5	0	0	0	14	3	107
Grand Total	0	9	0	2	3	6	2	3	31	18	1	5	0	40	9	0	0	0	15	6	150
Apprch %	0	64.3	0	14.3	21.4	10	3.3	5	51.7	30	1.8	9.1	0	72.7	16.4	0	0	0	71.4	28.6	
Total %	0	6	0	1.3	2	4	1.3	2	20.7	12	0.7	3.3	0	26.7	6	0	0	0	10	4	

	Market Street From North						Guest Street From East						Market Street From South						Stockyard Driveway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	0	1	0	0	0	1	0	1	0	11	3	15	0	1	0	13	0	14	0	0	0	10	0	10	40
05:15 PM	0	4	0	0	0	4	1	0	1	8	3	13	0	0	0	7	1	8	0	0	0	2	1	3	28
05:30 PM	0	1	0	1	0	2	1	0	1	2	2	6	0	0	0	7	4	11	0	0	0	1	2	3	22
05:45 PM	0	1	0	0	0	1	2	0	0	4	3	9	0	1	0	5	0	6	0	0	0	1	0	1	17
Total Volume	0	7	0	1	0	8	4	1	2	25	11	43	0	2	0	32	5	39	0	0	0	14	3	17	107
% App. Total	0	87.5	0	12.5	0		9.3	2.3	4.7	58.1	25.6		0	5.1	0	82.1	12.8		0	0	0	82.4	17.6		
PHF	.000	.438	.000	.250	.000	.500	.500	.250	.500	.568	.917	.717	.000	.500	.000	.615	.313	.696	.000	.000	.000	.350	.375	.425	.669

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Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
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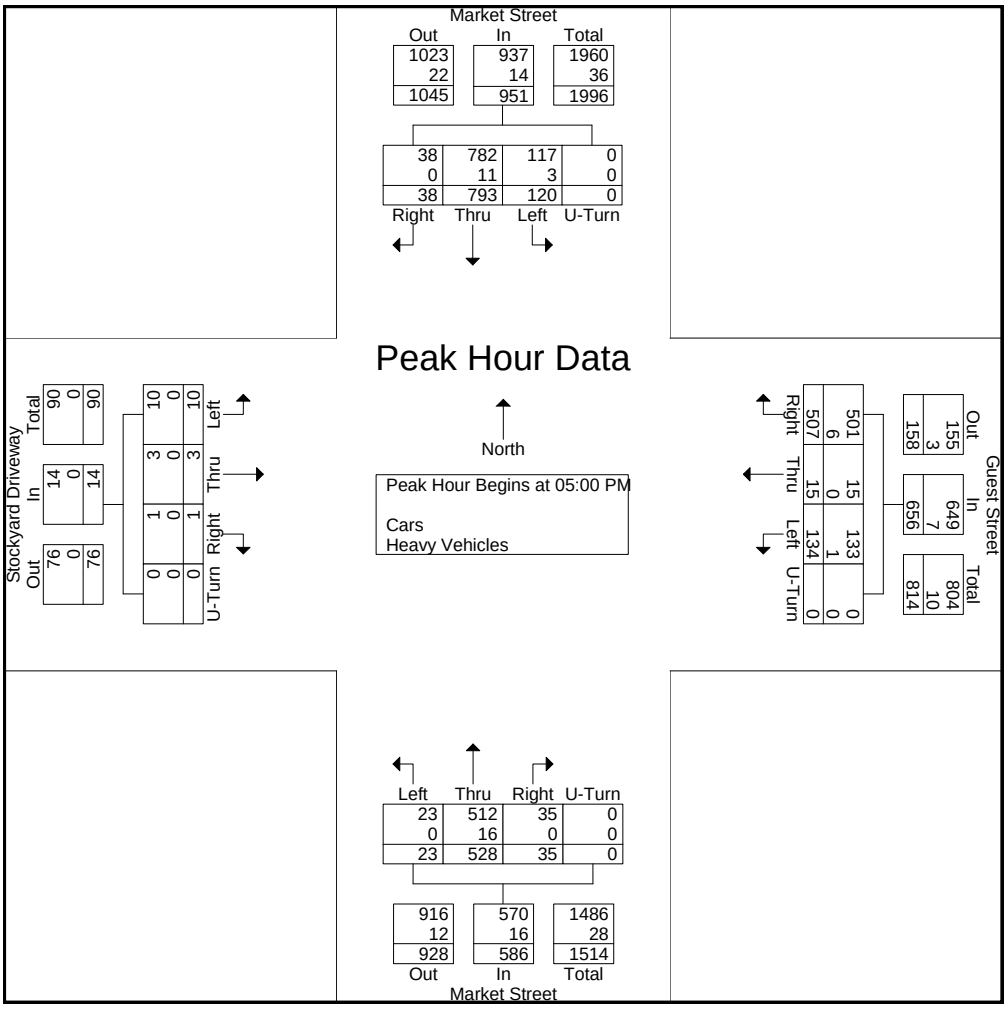
05:15 PM	12	207	36	0	255	128	5	41	0	174	12	131	4	0	147	1	0	1	0	2	578
05:30 PM	5	199	30	0	234	136	2	18	0	156	9	120	7	0	136	0	1	4	0	5	531
05:45 PM	10	196	32	0	238	116	4	38	0	158	12	141	9	0	162	0	1	4	0	5	563
Total Volume	38	793	120	0	951	507	15	134	0	656	35	528	23	0	586	1	3	10	0	14	2207
% App. Total	4	83.4	12.6	0		77.3	2.3	20.4	0		6	90.1	3.9	0		7.1	21.4	71.4	0		
PHF	.792	.958	.833	.000	.932	.932	.750	.817	.000	.943	.729	.936	.639	.000	.904	.250	.750	.625	.000	.700	.955
Cars	38	782	117	0	937	501	15	133	0	649	35	512	23	0	570	1	3	10	0	14	2170
% Cars	100	98.6	97.5	0	98.5	98.8	100	99.3	0	98.9	100	97.0	100	0	97.3	100	100	100	0	100	98.3
Heavy Vehicles	0	11	3	0	14	6	0	1	0	7	0	16	0	0	16	0	0	0	0	0	37
% Heavy Vehicles	0	1.4	2.5	0	1.5	1.2	0	0.7	0	1.1	0	3.0	0	0	2.7	0	0	0	0	0	1.7



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Groups Printed- Cars - Heavy Vehicles

	Market Street From North				Guest Street From East				Market Street From South				Stockyard Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	2	148	21	0	21	0	13	0	4	152	1	0	2	0	0	0	364
11:15 AM	1	162	20	0	26	0	10	0	7	110	2	0	0	0	0	0	338
11:30 AM	4	173	12	0	27	1	11	0	6	134	2	0	1	1	1	0	373
11:45 AM	4	142	21	0	29	0	7	0	7	134	1	0	0	0	2	0	347
Total	11	625	74	0	103	1	41	0	24	530	6	0	3	1	3	0	1422
12:00 PM	4	199	17	0	37	0	20	0	8	134	1	0	0	0	0	0	420
12:15 PM	3	170	18	0	22	2	18	0	5	138	1	0	1	1	0	0	379
12:30 PM	5	176	17	0	27	0	8	0	4	140	3	0	0	2	1	0	383
12:45 PM	7	180	19	0	23	2	19	0	10	129	6	0	1	0	0	0	396
Total	19	725	71	0	109	4	65	0	27	541	11	0	2	3	1	0	1578
01:00 PM	10	132	20	0	31	0	10	0	8	160	9	0	2	1	4	0	387
01:15 PM	2	172	13	0	34	2	10	0	6	156	7	0	3	0	0	0	405
01:30 PM	1	172	18	0	48	0	18	0	9	151	2	0	0	0	2	0	421
01:45 PM	5	171	17	0	32	2	18	0	6	169	4	0	2	2	2	0	430
Total	18	647	68	0	145	4	56	0	29	636	22	0	7	3	8	0	1643
Grand Total	48	1997	213	0	357	9	162	0	80	1707	39	0	12	7	12	0	4643
Apprch %	2.1	88.4	9.4	0	67.6	1.7	30.7	0	4.4	93.5	2.1	0	38.7	22.6	38.7	0	
Total %	1	43	4.6	0	7.7	0.2	3.5	0	1.7	36.8	0.8	0	0.3	0.2	0.3	0	
Cars	48	1964	212	0	353	9	161	0	77	1664	39	0	12	7	12	0	4558
% Cars	100	98.3	99.5	0	98.9	100	99.4	0	96.2	97.5	100	0	100	100	100	0	98.2
Heavy Vehicles	0	33	1	0	4	0	1	0	3	43	0	0	0	0	0	0	85
% Heavy Vehicles	0	1.7	0.5	0	1.1	0	0.6	0	3.8	2.5	0	0	0	0	0	0	1.8

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	10	132	20	0	162	31	0	10	0	41	8	160	9	0	177	2	1	4	0	7	387
01:15 PM	2	172	13	0	187	34	2	10	0	46	6	156	7	0	169	3	0	0	0	3	405
01:30 PM	1	172	18	0	191	48	0	18	0	66	9	151	2	0	162	0	0	2	0	2	421
01:45 PM	5	171	17	0	193	32	2	18	0	52	6	169	4	0	179	2	2	2	0	6	430
Total Volume	18	647	68	0	733	145	4	56	0	205	29	636	22	0	687	7	3	8	0	18	1643
% App. Total	2.5	88.3	9.3	0		70.7	2	27.3	0		4.2	92.6	3.2	0		38.9	16.7	44.4	0		
PHF	.450	.940	.850	.000	.949	.755	.500	.778	.000	.777	.806	.941	.611	.000	.959	.583	.375	.500	.000	.643	.955
Cars	18	636	68	0	722	143	4	55	0	202	28	624	22	0	674	7	3	8	0	18	1616
% Cars	100	98.3	100	0	98.5	98.6	100	98.2	0	98.5	96.6	98.1	100	0	98.1	100	100	100	0	100	98.4
Heavy Vehicles	0	11	0	0	11	2	0	1	0	3	1	12	0	0	13	0	0	0	0	0	27
% Heavy Vehicles	0	1.7	0	0	1.5	1.4	0	1.8	0	1.5	3.4	1.9	0	0	1.9	0	0	0	0	0	1.6

PRECISION DATA INDUSTRIES, LLC
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N/S: Market Street
E/W: Guest Street/ Stockyard Driveway
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 HHH
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars

	Market Street From North				Guest Street From East				Market Street From South				Stockyard Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	2	147	21	0	21	0	13	0	3	149	1	0	2	0	0	0	359
11:15 AM	1	160	20	0	26	0	10	0	7	108	2	0	0	0	0	0	334
11:30 AM	4	169	12	0	26	1	11	0	5	133	2	0	1	1	1	0	366
11:45 AM	4	138	21	0	29	0	7	0	7	130	1	0	0	0	2	0	339
Total	11	614	74	0	102	1	41	0	22	520	6	0	3	1	3	0	1398
12:00 PM	4	195	17	0	37	0	20	0	8	127	1	0	0	0	0	0	409
12:15 PM	3	167	18	0	21	2	18	0	5	134	1	0	1	1	0	0	371
12:30 PM	5	174	17	0	27	0	8	0	4	136	3	0	0	2	1	0	377
12:45 PM	7	178	18	0	23	2	19	0	10	123	6	0	1	0	0	0	387
Total	19	714	70	0	108	4	65	0	27	520	11	0	2	3	1	0	1544
01:00 PM	10	128	20	0	31	0	10	0	7	157	9	0	2	1	4	0	379
01:15 PM	2	171	13	0	34	2	10	0	6	154	7	0	3	0	0	0	402
01:30 PM	1	171	18	0	47	0	18	0	9	147	2	0	0	0	2	0	415
01:45 PM	5	166	17	0	31	2	17	0	6	166	4	0	2	2	2	0	420
Total	18	636	68	0	143	4	55	0	28	624	22	0	7	3	8	0	1616
Grand Total	48	1964	212	0	353	9	161	0	77	1664	39	0	12	7	12	0	4558
Apprch %	2.2	88.3	9.5	0	67.5	1.7	30.8	0	4.3	93.5	2.2	0	38.7	22.6	38.7	0	
Total %	1.1	43.1	4.7	0	7.7	0.2	3.5	0	1.7	36.5	0.9	0	0.3	0.2	0.3	0	

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	10	128	20	0	158	31	0	10	0	41	7	157	9	0	173	2	1	4	0	7	379
01:15 PM	2	171	13	0	186	34	2	10	0	46	6	154	7	0	167	3	0	0	0	3	402
01:30 PM	1	171	18	0	190	47	0	18	0	65	9	147	2	0	158	0	0	2	0	2	415
01:45 PM	5	166	17	0	188	31	2	17	0	50	6	166	4	0	176	2	2	2	0	6	420
Total Volume	18	636	68	0	722	143	4	55	0	202	28	624	22	0	674	7	3	8	0	18	1616
% App. Total	2.5	88.1	9.4	0		70.8	2	27.2	0		4.2	92.6	3.3	0		38.9	16.7	44.4	0		
PHF	.450	.930	.850	.000	.950	.761	.500	.764	.000	.777	.778	.940	.611	.000	.957	.583	.375	.500	.000	.643	.962

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N/S: Market Street
E/W: Guest Street/ Stockyard Driveway
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 HHH
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Market Street From North				Guest Street From East				Market Street From South				Stockyard Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	1	0	0	0	0	0	0	1	3	0	0	0	0	0	0	5
11:15 AM	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4
11:30 AM	0	4	0	0	1	0	0	0	1	1	0	0	0	0	0	0	7
11:45 AM	0	4	0	0	0	0	0	0	0	4	0	0	0	0	0	0	8
Total	0	11	0	0	1	0	0	0	2	10	0	0	0	0	0	0	24
12:00 PM	0	4	0	0	0	0	0	0	0	7	0	0	0	0	0	0	11
12:15 PM	0	3	0	0	1	0	0	0	0	4	0	0	0	0	0	0	8
12:30 PM	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0	6
12:45 PM	0	2	1	0	0	0	0	0	0	6	0	0	0	0	0	0	9
Total	0	11	1	0	1	0	0	0	0	21	0	0	0	0	0	0	34
01:00 PM	0	4	0	0	0	0	0	0	1	3	0	0	0	0	0	0	8
01:15 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
01:30 PM	0	1	0	0	1	0	0	0	0	4	0	0	0	0	0	0	6
01:45 PM	0	5	0	0	1	0	1	0	0	3	0	0	0	0	0	0	10
Total	0	11	0	0	2	0	1	0	1	12	0	0	0	0	0	0	27
Grand Total	0	33	1	0	4	0	1	0	3	43	0	0	0	0	0	0	85
Apprch %	0	97.1	2.9	0	80	0	20	0	6.5	93.5	0	0	0	0	0	0	
Total %	0	38.8	1.2	0	4.7	0	1.2	0	3.5	50.6	0	0	0	0	0	0	

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	0	4	0	0	4	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	7
11:45 AM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	8
12:00 PM	0	4	0	0	4	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	11
12:15 PM	0	3	0	0	3	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	8
Total Volume	0	15	0	0	15	2	0	0	0	2	1	16	0	0	17	0	0	0	0	0	34
% App. Total	0	100	0	0		100	0	0	0		5.9	94.1	0	0		0	0	0	0		
PHF	.000	.938	.000	.000	.938	.500	.000	.000	.000	.500	.250	.571	.000	.000	.607	.000	.000	.000	.000	.000	.773

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 HHH
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Peds and Bikes

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	1	0	4
11:15 AM	0	0	0	0	2	0	0	0	9	3	0	1	0	4	1	0	0	0	0	0	20
11:30 AM	0	0	0	0	1	0	0	0	5	1	0	0	0	0	0	0	0	0	1	1	9
11:45 AM	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	6
Total	0	1	0	1	3	0	0	0	17	5	1	1	0	4	1	0	0	0	4	1	39
12:00 PM	0	1	0	0	2	0	0	0	6	4	0	1	0	6	4	0	0	0	4	2	30
12:15 PM	0	2	0	1	0	0	0	0	1	2	0	3	0	0	0	0	0	0	1	0	10
12:30 PM	0	1	0	0	0	0	0	0	1	6	0	1	0	5	0	0	0	0	5	0	19
12:45 PM	0	2	0	0	1	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	7
Total	0	6	0	1	3	0	0	0	8	15	0	5	0	12	4	0	0	0	10	2	66
01:00 PM	0	0	0	0	0	0	0	0	2	5	0	0	0	2	1	0	0	0	0	1	11
01:15 PM	0	0	0	1	1	0	0	0	11	1	0	1	0	4	6	0	0	0	3	4	32
01:30 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	1	1	0	0	0	0	1	9
01:45 PM	0	1	0	0	0	0	0	0	1	2	0	2	0	1	0	0	0	0	3	0	10
Total	0	1	0	1	1	0	0	0	14	14	0	3	0	8	8	0	0	0	6	6	62
Grand Total	0	8	0	3	7	0	0	0	39	34	1	9	0	24	13	0	0	0	20	9	167
Apprch %	0	44.4	0	16.7	38.9	0	0	0	53.4	46.6	2.1	19.1	0	51.1	27.7	0	0	0	69	31	
Total %	0	4.8	0	1.8	4.2	0	0	0	23.4	20.4	0.6	5.4	0	14.4	7.8	0	0	0	12	5.4	

	Market Street From North						Guest Street From East						Market Street From South						Stockyard Driveway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 12:30 PM																									
12:30 PM	0	1	0	0	0	1	0	0	0	1	6	7	0	1	0	5	0	6	0	0	0	5	0	5	19
12:45 PM	0	2	0	0	1	3	0	0	0	0	3	3	0	0	0	1	0	1	0	0	0	0	0	0	7
01:00 PM	0	0	0	0	0	0	0	0	0	2	5	7	0	0	0	2	1	3	0	0	0	0	1	1	11
01:15 PM	0	0	0	1	1	2	0	0	0	11	1	12	0	1	0	4	6	11	0	0	0	3	4	7	32
Total Volume	0	3	0	1	2	6	0	0	0	14	15	29	0	2	0	12	7	21	0	0	0	8	5	13	69
% App. Total	0	50	0	16.7	33.3		0	0	0	48.3	51.7		0	9.5	0	57.1	33.3		0	0	0	61.5	38.5		
PHF	.000	.375	.000	.250	.500	.500	.000	.000	.000	.318	.625	.604	.000	.500	.000	.600	.292	.477	.000	.000	.000	.400	.313	.464	.539

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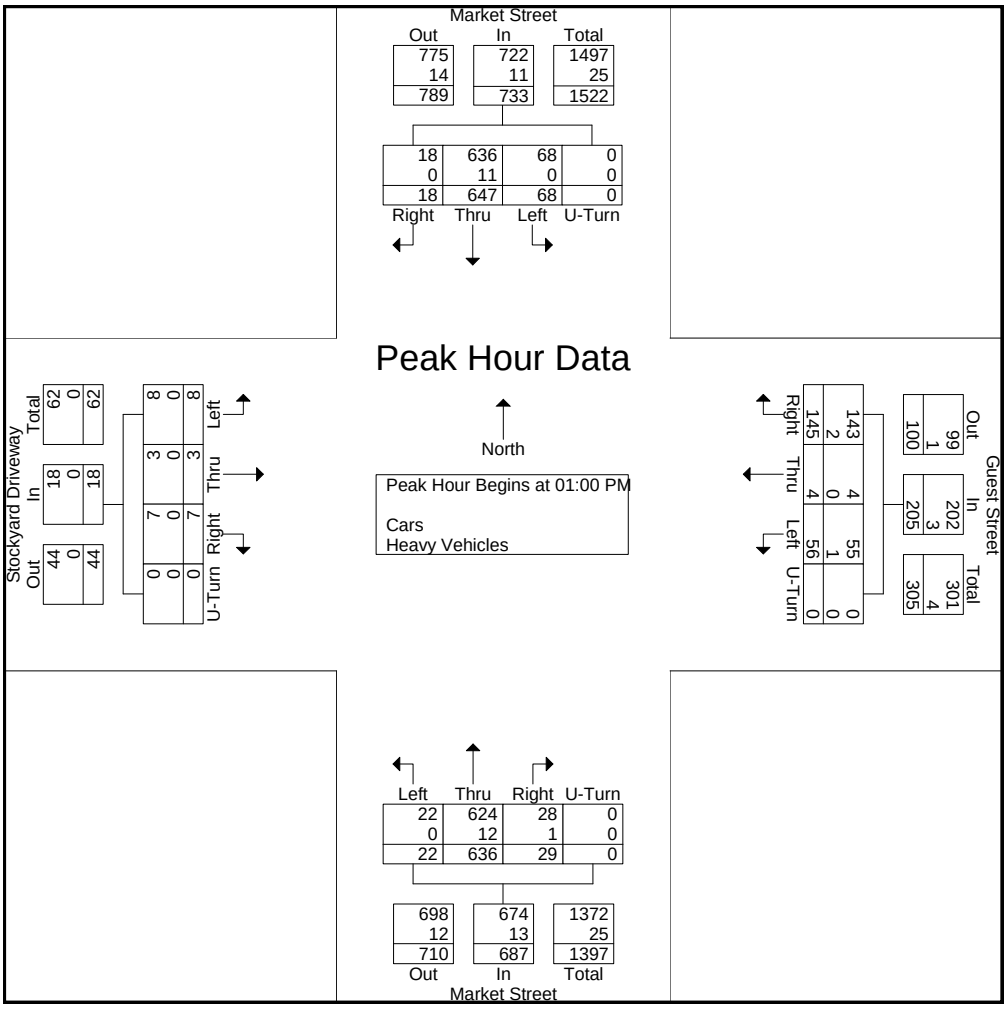
File Name : 165041 HHH
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

	Market Street From North					Guest Street From East					Market Street From South					Stockyard Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	10	132	20	0	162	31	0	10	0	41	8	160	9	0	177	2	1	4	0	7	387
01:15 PM	2	172	13	0	187	34	2	10	0	46	6	156	7	0	169	3	0	0	0	3	405
01:30 PM	1	172	18	0	191	48	0	18	0	66	9	151	2	0	162	0	0	2	0	2	421
01:45 PM	5	171	17	0	193	32	2	18	0	52	6	169	4	0	179	2	2	2	0	6	430
Total Volume	18	647	68	0	733	145	4	56	0	205	29	636	22	0	687	7	3	8	0	18	1643
% App. Total	2.5	88.3	9.3	0		70.7	2	27.3	0		4.2	92.6	3.2	0		38.9	16.7	44.4	0		
PHF	.450	.940	.850	.000	.949	.755	.500	.778	.000	.777	.806	.941	.611	.000	.959	.583	.375	.500	.000	.643	.955
Cars	18	636	68	0	722	143	4	55	0	202	28	624	22	0	674	7	3	8	0	18	1616
% Cars	100	98.3	100	0	98.5	98.6	100	98.2	0	98.5	96.6	98.1	100	0	98.1	100	100	100	0	100	98.4
Heavy Vehicles	0	11	0	0	11	2	0	1	0	3	1	12	0	0	13	0	0	0	0	0	27
% Heavy Vehicles	0	1.7	0	0	1.5	1.4	0	1.8	0	1.5	3.4	1.9	0	0	1.9	0	0	0	0	0	1.6



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E/W: Guest Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 I
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Site Driveway From North				Guest Street From East				Life Street From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	0	0	0	3	13	0	0	1	1	1	0	2	32	0	1	55
07:15 AM	1	0	0	0	3	18	2	0	2	0	1	0	4	23	1	0	55
07:30 AM	0	0	1	0	1	18	1	0	3	0	5	0	5	30	0	0	64
07:45 AM	1	1	0	0	1	14	1	0	1	0	0	0	3	29	3	0	54
Total	3	1	1	0	8	63	4	0	7	1	7	0	14	114	4	1	228
08:00 AM	1	0	3	0	1	33	3	0	2	0	3	0	5	41	3	0	95
08:15 AM	0	0	1	0	2	30	2	0	4	1	7	0	5	31	0	0	83
08:30 AM	1	0	1	0	1	31	1	0	3	0	2	0	11	37	1	0	89
08:45 AM	1	1	1	0	4	41	6	0	3	0	4	0	2	41	1	0	105
Total	3	1	6	0	8	135	12	0	12	1	16	0	23	150	5	0	372
Grand Total	6	2	7	0	16	198	16	0	19	2	23	0	37	264	9	1	600
Apprch %	40	13.3	46.7	0	7	86.1	7	0	43.2	4.5	52.3	0	11.9	84.9	2.9	0.3	
Total %	1	0.3	1.2	0	2.7	33	2.7	0	3.2	0.3	3.8	0	6.2	44	1.5	0.2	
Cars	3	0	6	0	9	190	14	0	19	2	22	0	34	262	4	1	566
% Cars	50	0	85.7	0	56.2	96	87.5	0	100	100	95.7	0	91.9	99.2	44.4	100	94.3
Heavy Vehicles	3	2	1	0	7	8	2	0	0	0	1	0	3	2	5	0	34
% Heavy Vehicles	50	100	14.3	0	43.8	4	12.5	0	0	0	4.3	0	8.1	0.8	55.6	0	5.7

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	0	3	0	4	1	33	3	0	37	2	0	3	0	5	5	41	3	0	49	95
08:15 AM	0	0	1	0	1	2	30	2	0	34	4	1	7	0	12	5	31	0	0	36	83
08:30 AM	1	0	1	0	2	1	31	1	0	33	3	0	2	0	5	11	37	1	0	49	89
08:45 AM	1	1	1	0	3	4	41	6	0	51	3	0	4	0	7	2	41	1	0	44	105
Total Volume	3	1	6	0	10	8	135	12	0	155	12	1	16	0	29	23	150	5	0	178	372
% App. Total	30	10	60	0		5.2	87.1	7.7	0		41.4	3.4	55.2	0		12.9	84.3	2.8	0		
PHF	.750	.250	.500	.000	.625	.500	.823	.500	.000	.760	.750	.250	.571	.000	.604	.523	.915	.417	.000	.908	.886
Cars	2	0	5	0	7	3	131	10	0	144	12	1	15	0	28	23	149	3	0	175	354
% Cars	66.7	0	83.3	0	70.0	37.5	97.0	83.3	0	92.9	100	100	93.8	0	96.6	100	99.3	60.0	0	98.3	95.2
Heavy Vehicles	1	1	1	0	3	5	4	2	0	11	0	0	1	0	1	0	1	2	0	3	18
% Heavy Vehicles	33.3	100	16.7	0	30.0	62.5	3.0	16.7	0	7.1	0	0	6.3	0	3.4	0	0.7	40.0	0	1.7	4.8

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508.875.0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

N/S: Site Driveway/ Life Street
E/W: Guest Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 I
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Site Driveway From North				Guest Street From East				Life Street From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	2	11	0	0	1	1	1	0	2	31	0	1	50
07:15 AM	1	0	0	0	3	17	2	0	2	0	1	0	3	23	0	0	52
07:30 AM	0	0	1	0	1	18	1	0	3	0	5	0	3	30	0	0	62
07:45 AM	0	0	0	0	0	13	1	0	1	0	0	0	3	29	1	0	48
Total	1	0	1	0	6	59	4	0	7	1	7	0	11	113	1	1	212
08:00 AM	1	0	3	0	1	32	2	0	2	0	3	0	5	41	2	0	92
08:15 AM	0	0	1	0	0	29	1	0	4	1	6	0	5	31	0	0	78
08:30 AM	1	0	0	0	1	30	1	0	3	0	2	0	11	37	1	0	87
08:45 AM	0	0	1	0	1	40	6	0	3	0	4	0	2	40	0	0	97
Total	2	0	5	0	3	131	10	0	12	1	15	0	23	149	3	0	354
Grand Total	3	0	6	0	9	190	14	0	19	2	22	0	34	262	4	1	566
Apprch %	33.3	0	66.7	0	4.2	89.2	6.6	0	44.2	4.7	51.2	0	11.3	87	1.3	0.3	
Total %	0.5	0	1.1	0	1.6	33.6	2.5	0	3.4	0.4	3.9	0	6	46.3	0.7	0.2	

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	0	3	0	4	1	32	2	0	35	2	0	3	0	5	5	41	2	0	48	92
08:15 AM	0	0	1	0	1	0	29	1	0	30	4	1	6	0	11	5	31	0	0	36	78
08:30 AM	1	0	0	0	1	1	30	1	0	32	3	0	2	0	5	11	37	1	0	49	87
08:45 AM	0	0	1	0	1	1	40	6	0	47	3	0	4	0	7	2	40	0	0	42	97
Total Volume	2	0	5	0	7	3	131	10	0	144	12	1	15	0	28	23	149	3	0	175	354
% App. Total	28.6	0	71.4	0		2.1	91	6.9	0		42.9	3.6	53.6	0		13.1	85.1	1.7	0		
PHF	.500	.000	.417	.000	.438	.750	.819	.417	.000	.766	.750	.250	.625	.000	.636	.523	.909	.375	.000	.893	.912

PRECISION
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N/S: Site Driveway/ Life Street
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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 I
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Site Driveway From North				Guest Street From East				Life Street From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	0	0	0	1	2	0	0	0	0	0	0	0	1	0	0	5
07:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
07:45 AM	1	1	0	0	1	1	0	0	0	0	0	0	0	0	2	0	6
Total	2	1	0	0	2	4	0	0	0	0	0	0	3	1	3	0	16
08:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	3
08:15 AM	0	0	0	0	2	1	1	0	0	0	1	0	0	0	0	0	5
08:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	1	1	0	0	3	1	0	0	0	0	0	0	0	1	1	0	8
Total	1	1	1	0	5	4	2	0	0	0	1	0	0	1	2	0	18
Grand Total	3	2	1	0	7	8	2	0	0	0	1	0	3	2	5	0	34
Apprch %	50	33.3	16.7	0	41.2	47.1	11.8	0	0	0	100	0	30	20	50	0	
Total %	8.8	5.9	2.9	0	20.6	23.5	5.9	0	0	0	2.9	0	8.8	5.9	14.7	0	

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	1	1	0	2	0	0	0	0	0	0	0	1	0	1	3
08:15 AM	0	0	0	0	0	2	1	1	0	4	0	0	1	0	1	0	0	0	0	0	5
08:30 AM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	1	1	0	0	2	3	1	0	0	4	0	0	0	0	0	0	1	1	0	2	8
Total Volume	1	1	1	0	3	5	4	2	0	11	0	0	1	0	1	0	1	2	0	3	18
% App. Total	33.3	33.3	33.3	0		45.5	36.4	18.2	0		0	0	100	0		0	33.3	66.7	0		
PHF	.250	.250	.250	.000	.375	.417	1.00	.500	.000	.688	.000	.000	.250	.000	.250	.000	.250	.500	.000	.375	.563

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 I
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Peds and Bikes

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	3	0	0	2	0	0	0	0	0	0	3	0	0	0	0	0	1	9
07:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	1	7
07:30 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	6	1	1	0	1	1	12
07:45 AM	0	0	0	1	1	0	1	0	0	0	0	0	0	2	3	0	0	0	2	2	12
Total	0	0	0	6	2	0	3	0	0	0	0	0	0	5	13	1	1	0	4	5	40
08:00 AM	0	0	0	1	2	0	1	0	0	0	0	0	0	1	7	0	0	0	0	3	15
08:15 AM	0	0	0	1	2	0	3	0	1	0	0	0	0	3	3	0	0	0	2	2	17
08:30 AM	0	0	0	0	0	0	1	0	1	1	0	0	0	1	1	0	1	0	0	0	6
08:45 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	5	6	0	0	0	0	1	14
Total	0	0	0	2	4	0	7	0	2	1	0	0	0	10	17	0	1	0	2	6	52
Grand Total	0	0	0	8	6	0	10	0	2	1	0	0	0	15	30	1	2	0	6	11	92
Apprch %	0	0	0	57.1	42.9	0	76.9	0	15.4	7.7	0	0	0	33.3	66.7	5	10	0	30	55	
Total %	0	0	0	8.7	6.5	0	10.9	0	2.2	1.1	0	0	0	16.3	32.6	1.1	2.2	0	6.5	12	

	Site Driveway From North						Guest Street From East						Life Street From South						Guest Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	1	1	2	0	0	0	0	0	0	0	0	0	0	6	6	1	1	0	1	1	4	12
07:45 AM	0	0	0	1	1	2	0	1	0	0	0	1	0	0	0	2	3	5	0	0	0	2	2	4	12
08:00 AM	0	0	0	1	2	3	0	1	0	0	0	1	0	0	0	1	7	8	0	0	0	0	3	3	15
08:15 AM	0	0	0	1	2	3	0	3	0	1	0	4	0	0	0	3	3	6	0	0	0	2	2	4	17
Total Volume	0	0	0	4	6	10	0	5	0	1	0	6	0	0	0	6	19	25	1	1	0	5	8	15	56
% App. Total	0	0	0	40	60		0	83.3	0	16.7	0		0	0	0	24	76		6.7	6.7	0	33.3	53.3		
PHF	.000	.000	.000	1.00	.750	.833	.000	.417	.000	.250	.000	.375	.000	.000	.000	.500	.679	.781	.250	.250	.000	.625	.667	.938	.824

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File Name : 165041 I
Site Code : 12305.00
Start Date : 5/5/2016
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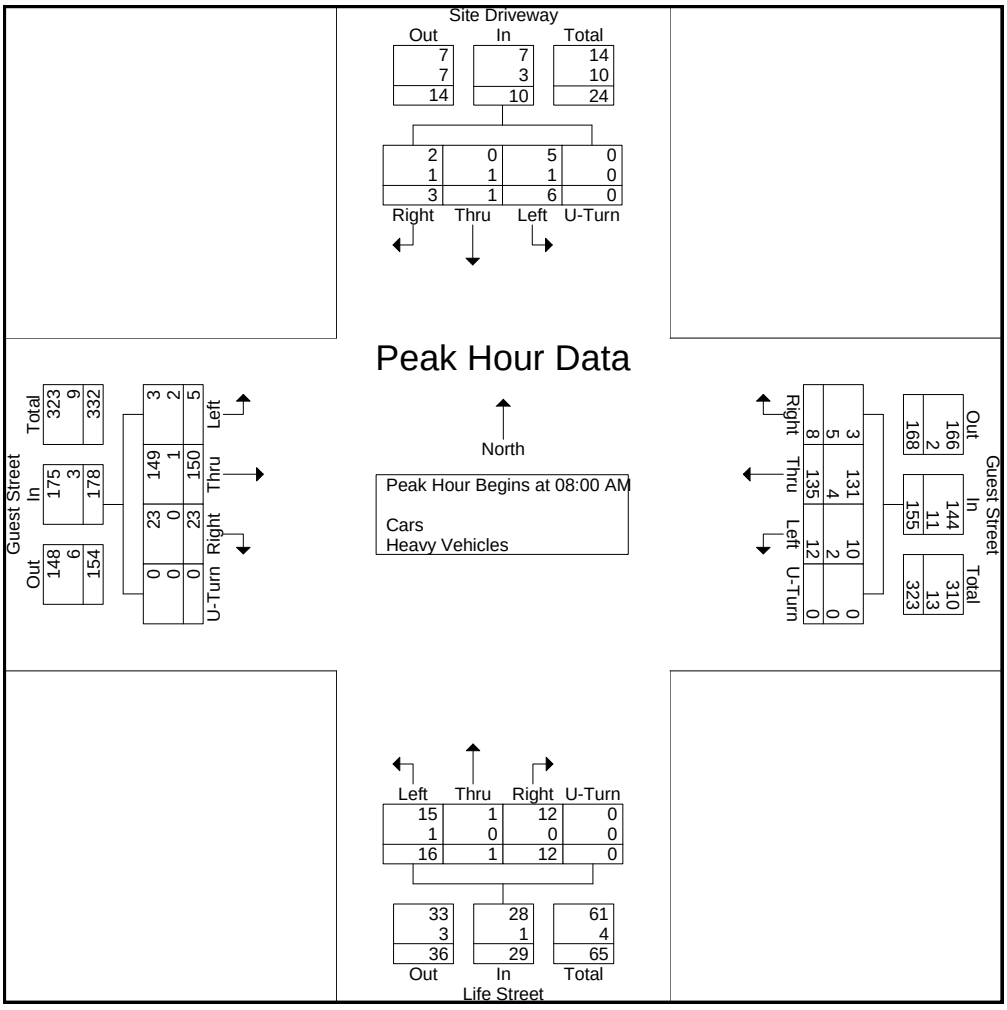
	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	0	3	0	4	1	33	3	0	37	2	0	3	0	5	5	41	3	0	49	95
08:15 AM	0	0	1	0	1	2	30	2	0	34	4	1	7	0	12	5	31	0	0	36	83
08:30 AM	1	0	1	0	2	1	31	1	0	33	3	0	2	0	5	11	37	1	0	49	89
08:45 AM	1	1	1	0	3	4	41	6	0	51	3	0	4	0	7	2	41	1	0	44	105
Total Volume	3	1	6	0	10	8	135	12	0	155	12	1	16	0	29	23	150	5	0	178	372
% App. Total	30	10	60	0		5.2	87.1	7.7	0		41.4	3.4	55.2	0		12.9	84.3	2.8	0		
PHF	.750	.250	.500	.000	.625	.500	.823	.500	.000	.760	.750	.250	.571	.000	.604	.523	.915	.417	.000	.908	.886
Cars	2	0	5	0	7	3	131	10	0	144	12	1	15	0	28	23	149	3	0	175	354
% Cars	66.7	0	83.3	0	70.0	37.5	97.0	83.3	0	92.9	100	100	93.8	0	96.6	100	99.3	60.0	0	98.3	95.2
Heavy Vehicles	1	1	1	0	3	5	4	2	0	11	0	0	1	0	1	0	1	2	0	3	18
% Heavy Vehicles	33.3	100	16.7	0	30.0	62.5	3.0	16.7	0	7.1	0	0	6.3	0	3.4	0	0.7	40.0	0	1.7	4.8



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N/S: Site Driveway/ Life Street
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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 II
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Site Driveway From North				Guest Street From East				Life Street From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	1	1	0	0	74	1	0	0	1	2	0	4	29	1	0	114
04:15 PM	0	0	0	0	0	78	3	0	1	0	3	0	7	25	1	0	118
04:30 PM	0	0	0	0	0	68	5	0	0	0	4	0	13	21	0	0	111
04:45 PM	0	1	1	0	3	75	8	0	0	0	1	0	12	30	0	0	131
Total	0	2	2	0	3	295	17	0	1	1	10	0	36	105	2	0	474
05:00 PM	2	0	0	0	1	81	9	0	3	1	2	0	15	19	0	0	133
05:15 PM	1	1	1	0	2	77	8	0	1	0	5	0	23	24	1	0	144
05:30 PM	1	0	5	0	1	70	2	0	1	0	3	1	26	31	0	0	141
05:45 PM	0	0	1	0	0	64	3	0	0	0	2	0	28	36	0	0	134
Total	4	1	7	0	4	292	22	0	5	1	12	1	92	110	1	0	552
Grand Total	4	3	9	0	7	587	39	0	6	2	22	1	128	215	3	0	1026
Apprch %	25	18.8	56.2	0	1.1	92.7	6.2	0	19.4	6.5	71	3.2	37	62.1	0.9	0	
Total %	0.4	0.3	0.9	0	0.7	57.2	3.8	0	0.6	0.2	2.1	0.1	12.5	21	0.3	0	
Cars	4	3	9	0	7	580	39	0	6	2	22	1	128	211	3	0	1015
% Cars	100	100	100	0	100	98.8	100	0	100	100	100	100	100	98.1	100	0	98.9
Heavy Vehicles	0	0	0	0	0	7	0	0	0	0	0	0	0	4	0	0	11
% Heavy Vehicles	0	0	0	0	0	1.2	0	0	0	0	0	0	0	1.9	0	0	1.1

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	0	2	1	81	9	0	91	3	1	2	0	6	15	19	0	0	34	133
05:15 PM	1	1	1	0	3	2	77	8	0	87	1	0	5	0	6	23	24	1	0	48	144
05:30 PM	1	0	5	0	6	1	70	2	0	73	1	0	3	1	5	26	31	0	0	57	141
05:45 PM	0	0	1	0	1	0	64	3	0	67	0	0	2	0	2	28	36	0	0	64	134
Total Volume	4	1	7	0	12	4	292	22	0	318	5	1	12	1	19	92	110	1	0	203	552
% App. Total	33.3	8.3	58.3	0		1.3	91.8	6.9	0		26.3	5.3	63.2	5.3		45.3	54.2	0.5	0		
PHF	.500	.250	.350	.000	.500	.500	.901	.611	.000	.874	.417	.250	.600	.250	.792	.821	.764	.250	.000	.793	.958
Cars	4	1	7	0	12	4	288	22	0	314	5	1	12	1	19	92	110	1	0	203	548
% Cars	100	100	100	0	100	100	98.6	100	0	98.7	100	100	100	100	100	100	100	100	0	100	99.3
Heavy Vehicles	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
% Heavy Vehicles	0	0	0	0	0	0	1.4	0	0	1.3	0	0	0	0	0	0	0	0	0	0	0.7

PRECISION
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Groups Printed- Cars

	Site Driveway From North				Guest Street From East				Life Street From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	1	1	0	0	74	1	0	0	1	2	0	4	28	1	0	113
04:15 PM	0	0	0	0	0	77	3	0	1	0	3	0	7	24	1	0	116
04:30 PM	0	0	0	0	0	66	5	0	0	0	4	0	13	21	0	0	109
04:45 PM	0	1	1	0	3	75	8	0	0	0	1	0	12	28	0	0	129
Total	0	2	2	0	3	292	17	0	1	1	10	0	36	101	2	0	467
05:00 PM	2	0	0	0	1	78	9	0	3	1	2	0	15	19	0	0	130
05:15 PM	1	1	1	0	2	77	8	0	1	0	5	0	23	24	1	0	144
05:30 PM	1	0	5	0	1	69	2	0	1	0	3	1	26	31	0	0	140
05:45 PM	0	0	1	0	0	64	3	0	0	0	2	0	28	36	0	0	134
Total	4	1	7	0	4	288	22	0	5	1	12	1	92	110	1	0	548
Grand Total	4	3	9	0	7	580	39	0	6	2	22	1	128	211	3	0	1015
Apprch %	25	18.8	56.2	0	1.1	92.7	6.2	0	19.4	6.5	71	3.2	37.4	61.7	0.9	0	
Total %	0.4	0.3	0.9	0	0.7	57.1	3.8	0	0.6	0.2	2.2	0.1	12.6	20.8	0.3	0	

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	0	2	1	78	9	0	88	3	1	2	0	6	15	19	0	0	34	130
05:15 PM	1	1	1	0	3	2	77	8	0	87	1	0	5	0	6	23	24	1	0	48	144
05:30 PM	1	0	5	0	6	1	69	2	0	72	1	0	3	1	5	26	31	0	0	57	140
05:45 PM	0	0	1	0	1	0	64	3	0	67	0	0	2	0	2	28	36	0	0	64	134
Total Volume	4	1	7	0	12	4	288	22	0	314	5	1	12	1	19	92	110	1	0	203	548
% App. Total	33.3	8.3	58.3	0		1.3	91.7	7	0		26.3	5.3	63.2	5.3		45.3	54.2	0.5	0		
PHF	.500	.250	.350	.000	.500	.500	.923	.611	.000	.892	.417	.250	.600	.250	.792	.821	.764	.250	.000	.793	.951

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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N/S: Site Driveway/ Life Street
E/W: Guest Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 II
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Site Driveway From North				Guest Street From East				Life Street From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
04:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
04:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Total	0	0	0	0	0	3	0	0	0	0	0	0	0	4	0	0	7
05:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4
Grand Total	0	0	0	0	0	7	0	0	0	0	0	0	0	4	0	0	11
Apprch %	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	
Total %	0	0	0	0	0	63.6	0	0	0	0	0	0	0	36.4	0	0	

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
04:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
05:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Total Volume	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	9
% App. Total	0	0	0	0		0	100	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.375	.000	.000	.375	.750

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File Name : 165041 II
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Peds and Bikes

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	4	2	0	0	0	0	0	7
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	0	1	0	0	0	9
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	0	1	0	0	0	8
04:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	6	2	0	0	0	0	0	9
Total	0	0	0	0	0	0	2	0	0	0	0	0	0	20	9	0	2	0	0	0	33
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	0	2	0	0	0	10
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	2	0	0	0	6
05:30 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	5	5	0	3	0	0	0	15
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5
Total	0	0	0	0	0	0	2	0	0	0	0	0	0	16	11	0	7	0	0	0	36
Grand Total	0	0	0	0	0	0	4	0	0	0	0	0	0	36	20	0	9	0	0	0	69
Apprch %	0	0	0	0	0	0	100	0	0	0	0	0	0	64.3	35.7	0	100	0	0	0	
Total %	0	0	0	0	0	0	5.8	0	0	0	0	0	0	52.2	29	0	13	0	0	0	

	Site Driveway From North						Guest Street From East						Life Street From South						Guest Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:45 PM																									
04:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	6	2	8	0	0	0	0	0	0	9
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	8	0	2	0	0	0	2	10
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	2	0	0	0	2	6
05:30 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	5	5	10	0	3	0	0	0	3	15
Total Volume	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	22	8	30	0	7	0	0	0	7	40
% App. Total	0	0	0	0	0		0	100	0	0	0		0	0	0	73.3	26.7		0	100	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.375	.000	.000	.000	.375	.000	.000	.000	.786	.400	.750	.000	.583	.000	.000	.000	.583	.667

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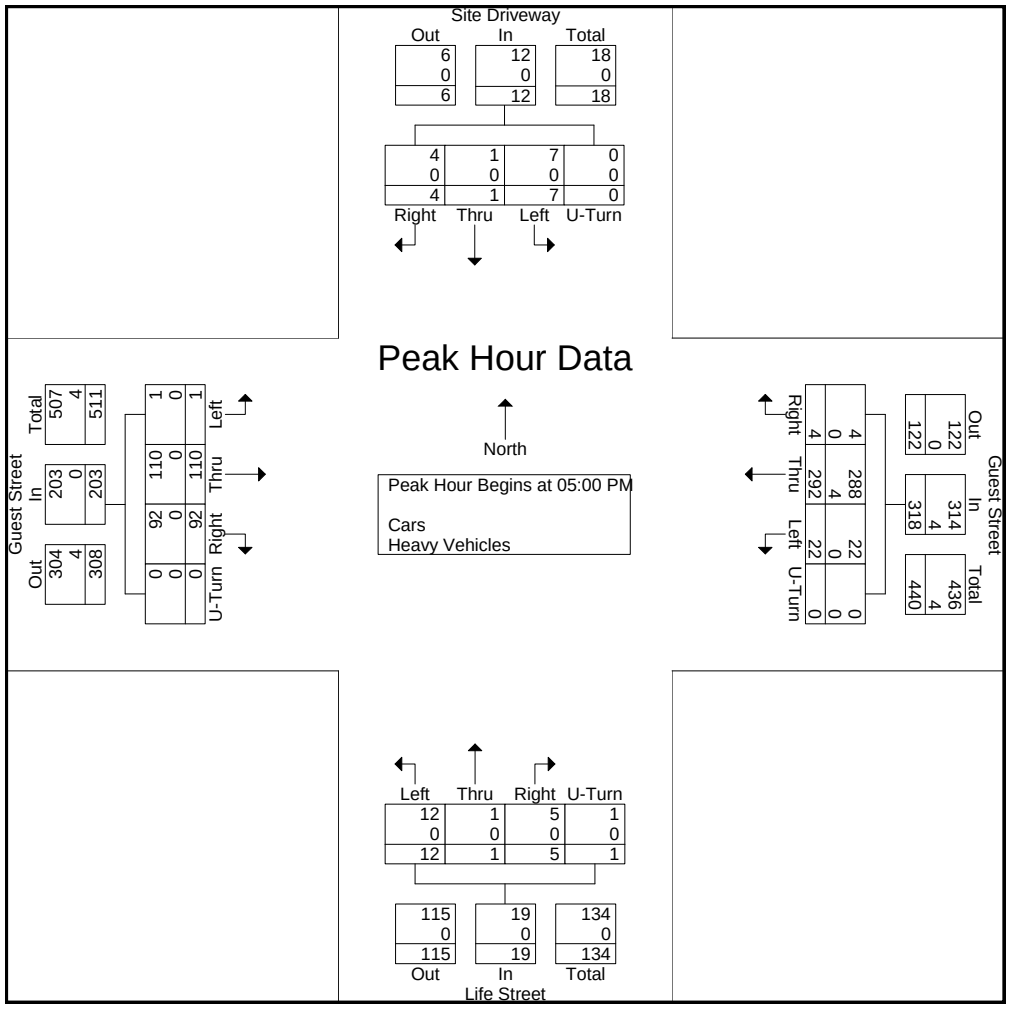
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 II
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	0	2	1	81	9	0	91	3	1	2	0	6	15	19	0	0	34	133
05:15 PM	1	1	1	0	3	2	77	8	0	87	1	0	5	0	6	23	24	1	0	48	144
05:30 PM	1	0	5	0	6	1	70	2	0	73	1	0	3	1	5	26	31	0	0	57	141
05:45 PM	0	0	1	0	1	0	64	3	0	67	0	0	2	0	2	28	36	0	0	64	134
Total Volume	4	1	7	0	12	4	292	22	0	318	5	1	12	1	19	92	110	1	0	203	552
% App. Total	33.3	8.3	58.3	0		1.3	91.8	6.9	0		26.3	5.3	63.2	5.3		45.3	54.2	0.5	0		
PHF	.500	.250	.350	.000	.500	.500	.901	.611	.000	.874	.417	.250	.600	.250	.792	.821	.764	.250	.000	.793	.958
Cars	4	1	7	0	12	4	288	22	0	314	5	1	12	1	19	92	110	1	0	203	548
% Cars	100	100	100	0	100	100	98.6	100	0	98.7	100	100	100	100	100	100	100	100	0	100	99.3
Heavy Vehicles	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
% Heavy Vehicles	0	0	0	0	0	0	1.4	0	0	1.3	0	0	0	0	0	0	0	0	0	0	0.7



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N/S: Site Driveway/ Life Street
E/W: Guest Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 III
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Site Driveway From North				Guest Street From East				Life Street From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	1	29	1	0	1	0	2	0	3	18	1	0	56
11:15 AM	0	0	1	0	0	29	1	0	2	0	2	1	6	15	0	0	57
11:30 AM	0	0	0	0	1	35	0	0	1	0	3	0	3	14	0	0	57
11:45 AM	0	0	1	0	1	32	1	0	1	0	3	1	2	22	0	0	64
Total	0	0	2	0	3	125	3	0	5	0	10	2	14	69	1	0	234
12:00 PM	1	0	0	0	0	47	0	0	1	0	6	0	6	18	0	0	79
12:15 PM	0	0	0	0	0	37	2	0	3	0	3	0	3	21	0	0	69
12:30 PM	1	0	0	0	0	32	1	0	0	0	1	0	2	19	0	0	56
12:45 PM	0	0	0	0	1	37	0	0	0	0	3	0	4	19	0	0	64
Total	2	0	0	0	1	153	3	0	4	0	13	0	15	77	0	0	268
01:00 PM	0	0	0	0	1	32	4	0	1	0	7	0	6	21	0	0	72
01:15 PM	0	0	1	0	0	45	1	0	1	0	4	0	2	16	0	0	70
01:30 PM	1	0	1	0	0	56	4	0	1	0	0	0	3	22	0	0	88
01:45 PM	1	0	0	0	0	45	2	1	2	0	1	0	3	20	0	0	75
Total	2	0	2	0	1	178	11	1	5	0	12	0	14	79	0	0	305
Grand Total	4	0	4	0	5	456	17	1	14	0	35	2	43	225	1	0	807
Apprch %	50	0	50	0	1	95.2	3.5	0.2	27.5	0	68.6	3.9	16	83.6	0.4	0	
Total %	0.5	0	0.5	0	0.6	56.5	2.1	0.1	1.7	0	4.3	0.2	5.3	27.9	0.1	0	
Cars	3	0	4	0	4	454	17	1	14	0	35	2	43	223	1	0	801
% Cars	75	0	100	0	80	99.6	100	100	100	0	100	100	100	99.1	100	0	99.3
Heavy Vehicles	1	0	0	0	1	2	0	0	0	0	0	0	0	2	0	0	6
% Heavy Vehicles	25	0	0	0	20	0.4	0	0	0	0	0	0	0	0.9	0	0	0.7

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	0	0	0	0	1	32	4	0	37	1	0	7	0	8	6	21	0	0	27	72
01:15 PM	0	0	1	0	1	0	45	1	0	46	1	0	4	0	5	2	16	0	0	18	70
01:30 PM	1	0	1	0	2	0	56	4	0	60	1	0	0	0	1	3	22	0	0	25	88
01:45 PM	1	0	0	0	1	0	45	2	1	48	2	0	1	0	3	3	20	0	0	23	75
Total Volume	2	0	2	0	4	1	178	11	1	191	5	0	12	0	17	14	79	0	0	93	305
% App. Total	50	0	50	0		0.5	93.2	5.8	0.5		29.4	0	70.6	0		15.1	84.9	0	0		
PHF	.500	.000	.500	.000	.500	.250	.795	.688	.250	.796	.625	.000	.429	.000	.531	.583	.898	.000	.000	.861	.866
Cars	1	0	2	0	3	0	176	11	1	188	5	0	12	0	17	14	79	0	0	93	301
% Cars	50.0	0	100	0	75.0	0	98.9	100	100	98.4	100	0	100	0	100	100	100	0	0	100	98.7
Heavy Vehicles	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	4
% Heavy Vehicles	50.0	0	0	0	25.0	100	1.1	0	0	1.6	0	0	0	0	0	0	0	0	0	0	1.3

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N/S: Site Driveway/ Life Street
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File Name : 165041 III
Site Code : 12305.00
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Page No : 1

Groups Printed- Cars

	Site Driveway From North				Guest Street From East				Life Street From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	1	29	1	0	1	0	2	0	3	17	1	0	55
11:15 AM	0	0	1	0	0	29	1	0	2	0	2	1	6	15	0	0	57
11:30 AM	0	0	0	0	1	35	0	0	1	0	3	0	3	14	0	0	57
11:45 AM	0	0	1	0	1	32	1	0	1	0	3	1	2	22	0	0	64
Total	0	0	2	0	3	125	3	0	5	0	10	2	14	68	1	0	233
12:00 PM	1	0	0	0	0	47	0	0	1	0	6	0	6	18	0	0	79
12:15 PM	0	0	0	0	0	37	2	0	3	0	3	0	3	21	0	0	69
12:30 PM	1	0	0	0	0	32	1	0	0	0	1	0	2	19	0	0	56
12:45 PM	0	0	0	0	1	37	0	0	0	0	3	0	4	18	0	0	63
Total	2	0	0	0	1	153	3	0	4	0	13	0	15	76	0	0	267
01:00 PM	0	0	0	0	0	31	4	0	1	0	7	0	6	21	0	0	70
01:15 PM	0	0	1	0	0	45	1	0	1	0	4	0	2	16	0	0	70
01:30 PM	0	0	1	0	0	56	4	0	1	0	0	0	3	22	0	0	87
01:45 PM	1	0	0	0	0	44	2	1	2	0	1	0	3	20	0	0	74
Total	1	0	2	0	0	176	11	1	5	0	12	0	14	79	0	0	301
Grand Total	3	0	4	0	4	454	17	1	14	0	35	2	43	223	1	0	801
Apprch %	42.9	0	57.1	0	0.8	95.4	3.6	0.2	27.5	0	68.6	3.9	16.1	83.5	0.4	0	
Total %	0.4	0	0.5	0	0.5	56.7	2.1	0.1	1.7	0	4.4	0.2	5.4	27.8	0.1	0	

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	0	0	0	0	0	31	4	0	35	1	0	7	0	8	6	21	0	0	27	70
01:15 PM	0	0	1	0	1	0	45	1	0	46	1	0	4	0	5	2	16	0	0	18	70
01:30 PM	0	0	1	0	1	0	56	4	0	60	1	0	0	0	1	3	22	0	0	25	87
01:45 PM	1	0	0	0	1	0	44	2	1	47	2	0	1	0	3	3	20	0	0	23	74
Total Volume	1	0	2	0	3	0	176	11	1	188	5	0	12	0	17	14	79	0	0	93	301
% App. Total	33.3	0	66.7	0		0	93.6	5.9	0.5		29.4	0	70.6	0		15.1	84.9	0	0		
PHF	.250	.000	.500	.000	.750	.000	.786	.688	.250	.783	.625	.000	.429	.000	.531	.583	.898	.000	.000	.861	.865

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Groups Printed- Heavy Vehicles

	Site Driveway From North				Guest Street From East				Life Street From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
01:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	4
Grand Total	1	0	0	0	1	2	0	0	0	0	0	0	0	2	0	0	6
Apprch %	100	0	0	0	33.3	66.7	0	0	0	0	0	0	0	100	0	0	
Total %	16.7	0	0	0	16.7	33.3	0	0	0	0	0	0	0	33.3	0	0	

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45 PM																					
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
01:00 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	4
% App. Total	100	0	0	0		50	50	0	0		0	0	0	0		0	100	0	0		
PHF	.250	.000	.000	.000	.250	.250	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.500

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N/S: Site Driveway/ Life Street
E/W: Guest Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 III
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Peds and Bikes

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	2	2	0	0	0	0	0	5
11:30 AM	0	0	0	0	1	0	0	1	0	0	1	0	0	1	2	0	0	0	0	0	6
11:45 AM	0	0	0	1	1	0	0	0	0	0	1	0	0	3	0	0	1	0	0	0	7
Total	0	0	0	1	2	0	1	1	0	0	2	0	0	6	4	0	1	0	0	0	18
12:00 PM	0	0	0	2	4	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	11
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	5
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	6
Total	0	0	0	2	4	0	0	0	0	0	0	0	0	12	5	0	0	0	0	0	23
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	5
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	0	0	0	0	0	6
Total	0	0	0	0	2	0	0	0	0	0	0	0	0	2	8	0	0	0	0	0	12
Grand Total	0	0	0	3	8	0	1	1	0	0	2	0	0	20	17	0	1	0	0	0	53
Apprch %	0	0	0	27.3	72.7	0	50	50	0	0	5.1	0	0	51.3	43.6	0	100	0	0	0	
Total %	0	0	0	5.7	15.1	0	1.9	1.9	0	0	3.8	0	0	37.7	32.1	0	1.9	0	0	0	

	Site Driveway From North						Guest Street From East						Life Street From South						Guest Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 11:15 AM																									
11:15 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	2	4	0	0	0	0	0	0	5
11:30 AM	0	0	0	0	1	1	0	0	1	0	0	1	1	0	0	1	2	4	0	0	0	0	0	0	6
11:45 AM	0	0	0	1	1	2	0	0	0	0	0	0	1	0	0	3	0	4	0	1	0	0	0	1	7
12:00 PM	0	0	0	2	4	6	0	0	0	0	0	0	0	0	0	2	3	5	0	0	0	0	0	0	11
Total Volume	0	0	0	3	6	9	0	1	1	0	0	2	2	0	0	8	7	17	0	1	0	0	0	1	29
% App. Total	0	0	0	33.3	66.7		0	50	50	0	0		11.8	0	0	47.1	41.2		0	100	0	0	0		
PHF	.000	.000	.000	.375	.375	.375	.000	.250	.250	.000	.000	.500	.500	.000	.000	.667	.583	.850	.000	.250	.000	.000	.000	.250	.659

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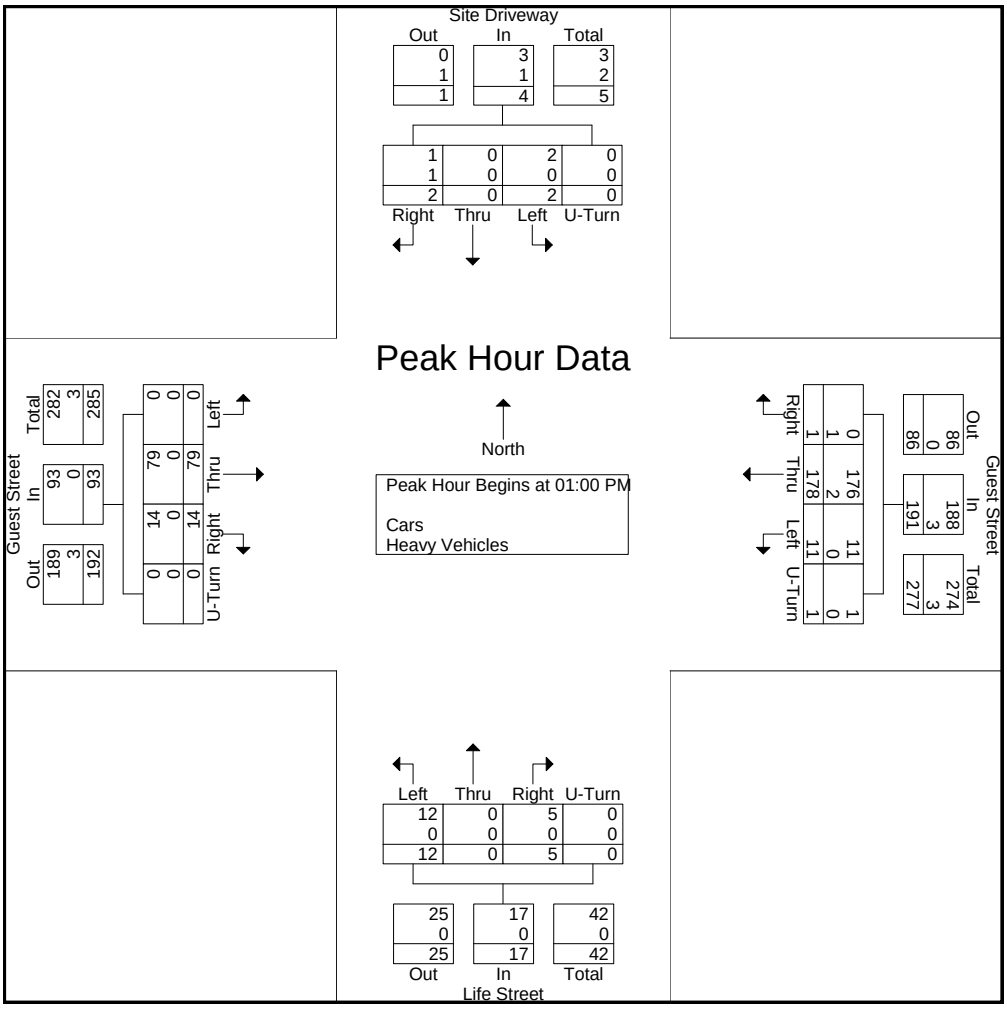
N/S: Site Driveway/ Life Street
E/W: Guest Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 III
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

	Site Driveway From North					Guest Street From East					Life Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	0	0	0	0	1	32	4	0	37	1	0	7	0	8	6	21	0	0	27	72
01:15 PM	0	0	1	0	1	0	45	1	0	46	1	0	4	0	5	2	16	0	0	18	70
01:30 PM	1	0	1	0	2	0	56	4	0	60	1	0	0	0	1	3	22	0	0	25	88
01:45 PM	1	0	0	0	1	0	45	2	1	48	2	0	1	0	3	3	20	0	0	23	75
Total Volume	2	0	2	0	4	1	178	11	1	191	5	0	12	0	17	14	79	0	0	93	305
% App. Total	50	0	50	0		0.5	93.2	5.8	0.5		29.4	0	70.6	0		15.1	84.9	0	0		
PHF	.500	.000	.500	.000	.500	.250	.795	.688	.250	.796	.625	.000	.429	.000	.531	.583	.898	.000	.000	.861	.866
Cars	1	0	2	0	3	0	176	11	1	188	5	0	12	0	17	14	79	0	0	93	301
% Cars	50.0	0	100	0	75.0	0	98.9	100	100	98.4	100	0	100	0	100	100	100	0	0	100	98.7
Heavy Vehicles	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	4
% Heavy Vehicles	50.0	0	0	0	25.0	100	1.1	0	0	1.6	0	0	0	0	0	0	0	0	0	0	1.3



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N/S: New Balance Driveway/ Arthur Rd
E/W: Guest Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 J
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	New Balance Driveway From North				Guest Street From East				Guest Street From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	0	0	0	4	13	2	0	1	3	4	0	10	4	21	0	63
07:15 AM	3	2	3	0	7	11	1	0	0	6	10	0	7	4	15	0	69
07:30 AM	1	1	1	0	2	12	5	0	1	6	8	0	3	6	23	0	69
07:45 AM	1	0	0	0	16	8	3	0	3	9	13	0	6	8	18	0	85
Total	6	3	4	0	29	44	11	0	5	24	35	0	26	22	77	0	286
08:00 AM	1	1	0	0	10	16	3	0	1	9	20	0	15	7	19	0	102
08:15 AM	0	0	0	0	18	21	0	0	5	12	14	0	8	7	24	0	109
08:30 AM	1	3	0	0	10	21	4	0	4	14	14	0	4	9	24	0	108
08:45 AM	2	1	2	0	13	30	4	0	3	14	18	0	4	10	33	0	134
Total	4	5	2	0	51	88	11	0	13	49	66	0	31	33	100	0	453
Grand Total	10	8	6	0	80	132	22	0	18	73	101	0	57	55	177	0	739
Apprch %	41.7	33.3	25	0	34.2	56.4	9.4	0	9.4	38	52.6	0	19.7	19	61.2	0	
Total %	1.4	1.1	0.8	0	10.8	17.9	3	0	2.4	9.9	13.7	0	7.7	7.4	24	0	
Cars	7	5	5	0	78	126	15	0	13	69	90	0	56	54	174	0	692
% Cars	70	62.5	83.3	0	97.5	95.5	68.2	0	72.2	94.5	89.1	0	98.2	98.2	98.3	0	93.6
Heavy Vehicles	3	3	1	0	2	6	7	0	5	4	11	0	1	1	3	0	47
% Heavy Vehicles	30	37.5	16.7	0	2.5	4.5	31.8	0	27.8	5.5	10.9	0	1.8	1.8	1.7	0	6.4

	New Balance Driveway From North					Guest Street From East					Guest Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	1	0	0	2	10	16	3	0	29	1	9	20	0	30	15	7	19	0	41	102
08:15 AM	0	0	0	0	0	18	21	0	0	39	5	12	14	0	31	8	7	24	0	39	109
08:30 AM	1	3	0	0	4	10	21	4	0	35	4	14	14	0	32	4	9	24	0	37	108
08:45 AM	2	1	2	0	5	13	30	4	0	47	3	14	18	0	35	4	10	33	0	47	134
Total Volume	4	5	2	0	11	51	88	11	0	150	13	49	66	0	128	31	33	100	0	164	453
% App. Total	36.4	45.5	18.2	0		34	58.7	7.3	0		10.2	38.3	51.6	0		18.9	20.1	61	0		
PHF	.500	.417	.250	.000	.550	.708	.733	.688	.000	.798	.650	.875	.825	.000	.914	.517	.825	.758	.000	.872	.845
Cars	2	3	2	0	7	50	85	9	0	144	10	45	59	0	114	31	33	100	0	164	429
% Cars	50.0	60.0	100	0	63.6	98.0	96.6	81.8	0	96.0	76.9	91.8	89.4	0	89.1	100	100	100	0	100	94.7
Heavy Vehicles	2	2	0	0	4	1	3	2	0	6	3	4	7	0	14	0	0	0	0	0	24
% Heavy Vehicles	50.0	40.0	0	0	36.4	2.0	3.4	18.2	0	4.0	23.1	8.2	10.6	0	10.9	0	0	0	0	0	5.3

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N/S: New Balance Driveway/ Arthur Rd
E/W: Guest Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 J
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	New Balance Driveway From North				Guest Street From East				Guest Street From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	0	0	0	3	12	1	0	1	3	3	0	10	4	21	0	59
07:15 AM	2	2	2	0	7	10	1	0	0	6	9	0	6	4	13	0	62
07:30 AM	1	0	1	0	2	12	2	0	1	6	8	0	3	6	23	0	65
07:45 AM	1	0	0	0	16	7	2	0	1	9	11	0	6	7	17	0	77
Total	5	2	3	0	28	41	6	0	3	24	31	0	25	21	74	0	263
08:00 AM	0	1	0	0	10	16	3	0	1	8	18	0	15	7	19	0	98
08:15 AM	0	0	0	0	18	20	0	0	5	10	12	0	8	7	24	0	104
08:30 AM	1	2	0	0	9	20	4	0	2	14	13	0	4	9	24	0	102
08:45 AM	1	0	2	0	13	29	2	0	2	13	16	0	4	10	33	0	125
Total	2	3	2	0	50	85	9	0	10	45	59	0	31	33	100	0	429
Grand Total	7	5	5	0	78	126	15	0	13	69	90	0	56	54	174	0	692
Apprch %	41.2	29.4	29.4	0	35.6	57.5	6.8	0	7.6	40.1	52.3	0	19.7	19	61.3	0	
Total %	1	0.7	0.7	0	11.3	18.2	2.2	0	1.9	10	13	0	8.1	7.8	25.1	0	

	New Balance Driveway From North					Guest Street From East					Guest Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	1	0	0	1	10	16	3	0	29	1	8	18	0	27	15	7	19	0	41	98
08:15 AM	0	0	0	0	0	18	20	0	0	38	5	10	12	0	27	8	7	24	0	39	104
08:30 AM	1	2	0	0	3	9	20	4	0	33	2	14	13	0	29	4	9	24	0	37	102
08:45 AM	1	0	2	0	3	13	29	2	0	44	2	13	16	0	31	4	10	33	0	47	125
Total Volume	2	3	2	0	7	50	85	9	0	144	10	45	59	0	114	31	33	100	0	164	429
% App. Total	28.6	42.9	28.6	0		34.7	59	6.2	0		8.8	39.5	51.8	0		18.9	20.1	61	0		
PHF	.500	.375	.250	.000	.583	.694	.733	.563	.000	.818	.500	.804	.819	.000	.919	.517	.825	.758	.000	.872	.858

PRECISION
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N/S: New Balance Driveway/ Arthur Rd
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File Name : 165041 J
Site Code : 12305.00
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Page No : 1

Groups Printed- Heavy Vehicles

	New Balance Driveway From North				Guest Street From East				Guest Street From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	4
07:15 AM	1	0	1	0	0	1	0	0	0	0	1	0	1	0	2	0	7
07:30 AM	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	4
07:45 AM	0	0	0	0	0	1	1	0	2	0	2	0	0	1	1	0	8
Total	1	1	1	0	1	3	5	0	2	0	4	0	1	1	3	0	23
08:00 AM	1	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	4
08:15 AM	0	0	0	0	0	1	0	0	0	2	2	0	0	0	0	0	5
08:30 AM	0	1	0	0	1	1	0	0	2	0	1	0	0	0	0	0	6
08:45 AM	1	1	0	0	0	1	2	0	1	1	2	0	0	0	0	0	9
Total	2	2	0	0	1	3	2	0	3	4	7	0	0	0	0	0	24
Grand Total	3	3	1	0	2	6	7	0	5	4	11	0	1	1	3	0	47
Apprch %	42.9	42.9	14.3	0	13.3	40	46.7	0	25	20	55	0	20	20	60	0	
Total %	6.4	6.4	2.1	0	4.3	12.8	14.9	0	10.6	8.5	23.4	0	2.1	2.1	6.4	0	

	New Balance Driveway From North					Guest Street From East					Guest Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	0	0	0	1	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	4
08:15 AM	0	0	0	0	0	0	1	0	0	1	0	2	2	0	4	0	0	0	0	0	5
08:30 AM	0	1	0	0	1	1	1	0	0	2	2	0	1	0	3	0	0	0	0	0	6
08:45 AM	1	1	0	0	2	0	1	2	0	3	1	1	2	0	4	0	0	0	0	0	9
Total Volume	2	2	0	0	4	1	3	2	0	6	3	4	7	0	14	0	0	0	0	0	24
% App. Total	50	50	0	0		16.7	50	33.3	0		21.4	28.6	50	0		0	0	0	0		
PHF	.500	.500	.000	.000	.500	.250	.750	.250	.000	.500	.375	.500	.875	.000	.875	.000	.000	.000	.000	.000	.667

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Groups Printed- Peds and Bikes

	New Balance Driveway From North					Guest Street From East					Guest Street From South					Guest Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	2	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
07:15 AM	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
07:30 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	5
07:45 AM	0	0	0	2	2	0	1	0	1	0	0	0	0	0	0	0	0	0	1	2	9
Total	0	0	0	6	8	0	2	0	1	0	0	0	0	0	1	0	0	1	1	3	23
08:00 AM	0	0	0	2	2	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	6
08:15 AM	0	0	0	3	2	0	3	0	0	0	0	0	0	0	1	0	0	0	2	1	12
08:30 AM	0	0	0	2	5	0	1	0	1	1	0	0	0	1	0	0	0	0	1	3	15
08:45 AM	0	0	0	9	7	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	19
Total	0	0	0	16	16	0	7	0	1	1	0	0	0	2	2	0	0	0	3	4	52
Grand Total	0	0	0	22	24	0	9	0	2	1	0	0	0	2	3	0	0	1	4	7	75
Apprch %	0	0	0	47.8	52.2	0	75	0	16.7	8.3	0	0	0	40	60	0	0	8.3	33.3	58.3	
Total %	0	0	0	29.3	32	0	12	0	2.7	1.3	0	0	0	2.7	4	0	0	1.3	5.3	9.3	

	New Balance Driveway From North						Guest Street From East						Guest Street From South						Guest Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	2	2	4	0	1	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	6
08:15 AM	0	0	0	3	2	5	0	3	0	0	0	3	0	0	0	0	1	1	0	0	0	2	1	3	12
08:30 AM	0	0	0	2	5	7	0	1	0	1	1	3	0	0	0	1	0	1	0	0	0	1	3	4	15
08:45 AM	0	0	0	9	7	16	0	2	0	0	0	2	0	0	0	1	0	1	0	0	0	0	0	0	19
Total Volume	0	0	0	16	16	32	0	7	0	1	1	9	0	0	0	2	2	4	0	0	0	3	4	7	52
% App. Total	0	0	0	50	50		0	77.8	0	11.1	11.1		0	0	0	50	50		0	0	0	42.9	57.1		
PHF	.000	.000	.000	.444	.571	.500	.000	.583	.000	.250	.250	.750	.000	.000	.000	.500	.500	1.00	.000	.000	.000	.375	.333	.438	.684

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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N/S: New Balance Driveway/ Arthur Rd
E/W: Guest Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 J
Site Code : 12305.00
Start Date : 5/5/2016
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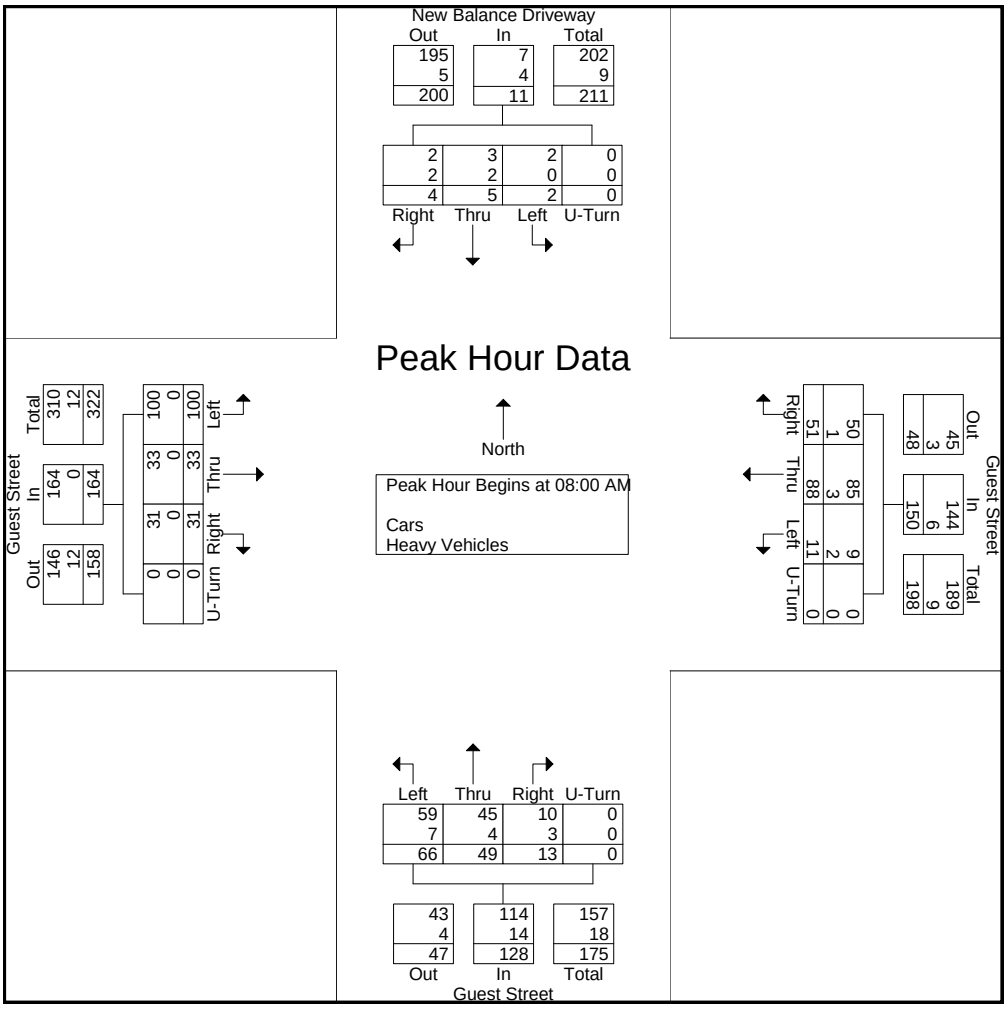
	New Balance Driveway From North					Guest Street From East					Guest Street From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	1	0	0	2	10	16	3	0	29	1	9	20	0	30	15	7	19	0	41	102
08:15 AM	0	0	0	0	0	18	21	0	0	39	5	12	14	0	31	8	7	24	0	39	109
08:30 AM	1	3	0	0	4	10	21	4	0	35	4	14	14	0	32	4	9	24	0	37	108
08:45 AM	2	1	2	0	5	13	30	4	0	47	3	14	18	0	35	4	10	33	0	47	134
Total Volume	4	5	2	0	11	51	88	11	0	150	13	49	66	0	128	31	33	100	0	164	453
% App. Total	36.4	45.5	18.2	0		34	58.7	7.3	0		10.2	38.3	51.6	0		18.9	20.1	61	0		
PHF	.500	.417	.250	.000	.550	.708	.733	.688	.000	.798	.650	.875	.825	.000	.914	.517	.825	.758	.000	.872	.845
Cars	2	3	2	0	7	50	85	9	0	144	10	45	59	0	114	31	33	100	0	164	429
% Cars	50.0	60.0	100	0	63.6	98.0	96.6	81.8	0	96.0	76.9	91.8	89.4	0	89.1	100	100	100	0	100	94.7
Heavy Vehicles	2	2	0	0	4	1	3	2	0	6	3	4	7	0	14	0	0	0	0	0	24
% Heavy Vehicles	50.0	40.0	0	0	36.4	2.0	3.4	18.2	0	4.0	23.1	8.2	10.6	0	10.9	0	0	0	0	0	5.3



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N/S: New Balance Driveway/ Arthur Rd
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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 JJ
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	New Balance Driveway From North				Guest Street From East				Arthur Road From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	32	11	1	0	0	31	14	0	10	0	12	0	13	19	1	0	144
04:15 PM	25	7	5	0	0	30	16	0	8	1	20	0	4	13	1	0	130
04:30 PM	26	17	3	0	2	29	15	0	9	0	12	0	7	16	2	0	138
04:45 PM	37	10	2	0	0	32	18	0	12	0	14	0	13	16	5	0	159
Total	120	45	11	0	2	122	63	0	39	1	58	0	37	64	9	0	571
05:00 PM	34	14	4	0	2	38	15	0	8	3	19	0	8	13	3	0	161
05:15 PM	31	9	5	0	1	29	18	0	6	0	21	0	8	17	5	0	150
05:30 PM	22	5	2	0	0	26	14	0	4	0	24	0	16	14	4	0	131
05:45 PM	16	2	2	0	2	34	14	0	9	0	18	0	17	16	2	0	132
Total	103	30	13	0	5	127	61	0	27	3	82	0	49	60	14	0	574
Grand Total	223	75	24	0	7	249	124	0	66	4	140	0	86	124	23	0	1145
Apprch %	69.3	23.3	7.5	0	1.8	65.5	32.6	0	31.4	1.9	66.7	0	36.9	53.2	9.9	0	
Total %	19.5	6.6	2.1	0	0.6	21.7	10.8	0	5.8	0.3	12.2	0	7.5	10.8	2	0	
Cars	222	75	24	0	7	247	118	0	64	4	138	0	84	124	22	0	1129
% Cars	99.6	100	100	0	100	99.2	95.2	0	97	100	98.6	0	97.7	100	95.7	0	98.6
Heavy Vehicles	1	0	0	0	0	2	6	0	2	0	2	0	2	0	1	0	16
% Heavy Vehicles	0.4	0	0	0	0	0.8	4.8	0	3	0	1.4	0	2.3	0	4.3	0	1.4

	New Balance Driveway From North					Guest Street From East					Arthur Road From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	26	17	3	0	46	2	29	15	0	46	9	0	12	0	21	7	16	2	0	25	138
04:45 PM	37	10	2	0	49	0	32	18	0	50	12	0	14	0	26	13	16	5	0	34	159
05:00 PM	34	14	4	0	52	2	38	15	0	55	8	3	19	0	30	8	13	3	0	24	161
05:15 PM	31	9	5	0	45	1	29	18	0	48	6	0	21	0	27	8	17	5	0	30	150
Total Volume	128	50	14	0	192	5	128	66	0	199	35	3	66	0	104	36	62	15	0	113	608
% App. Total	66.7	26	7.3	0		2.5	64.3	33.2	0		33.7	2.9	63.5	0		31.9	54.9	13.3	0		
PHF	.865	.735	.700	.000	.923	.625	.842	.917	.000	.905	.729	.250	.786	.000	.867	.692	.912	.750	.000	.831	.944
Cars	127	50	14	0	191	5	126	64	0	195	34	3	65	0	102	35	62	14	0	111	599
% Cars	99.2	100	100	0	99.5	100	98.4	97.0	0	98.0	97.1	100	98.5	0	98.1	97.2	100	93.3	0	98.2	98.5
Heavy Vehicles	1	0	0	0	1	0	2	2	0	4	1	0	1	0	2	1	0	1	0	2	9
% Heavy Vehicles	0.8	0	0	0	0.5	0	1.6	3.0	0	2.0	2.9	0	1.5	0	1.9	2.8	0	6.7	0	1.8	1.5

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E/W: Guest Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 JJ
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	New Balance Driveway From North				Guest Street From East				Arthur Road From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	32	11	1	0	0	31	13	0	9	0	12	0	12	19	1	0	141
04:15 PM	25	7	5	0	0	30	15	0	8	1	20	0	4	13	1	0	129
04:30 PM	26	17	3	0	2	28	15	0	8	0	12	0	7	16	2	0	136
04:45 PM	37	10	2	0	0	32	17	0	12	0	14	0	12	16	4	0	156
Total	120	45	11	0	2	121	60	0	37	1	58	0	35	64	8	0	562
05:00 PM	33	14	4	0	2	37	15	0	8	3	18	0	8	13	3	0	158
05:15 PM	31	9	5	0	1	29	17	0	6	0	21	0	8	17	5	0	149
05:30 PM	22	5	2	0	0	26	12	0	4	0	23	0	16	14	4	0	128
05:45 PM	16	2	2	0	2	34	14	0	9	0	18	0	17	16	2	0	132
Total	102	30	13	0	5	126	58	0	27	3	80	0	49	60	14	0	567
Grand Total	222	75	24	0	7	247	118	0	64	4	138	0	84	124	22	0	1129
Apprch %	69.2	23.4	7.5	0	1.9	66.4	31.7	0	31.1	1.9	67	0	36.5	53.9	9.6	0	
Total %	19.7	6.6	2.1	0	0.6	21.9	10.5	0	5.7	0.4	12.2	0	7.4	11	1.9	0	

	New Balance Driveway From North					Guest Street From East					Arthur Road From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	26	17	3	0	46	2	28	15	0	45	8	0	12	0	20	7	16	2	0	25	136
04:45 PM	37	10	2	0	49	0	32	17	0	49	12	0	14	0	26	12	16	4	0	32	156
05:00 PM	33	14	4	0	51	2	37	15	0	54	8	3	18	0	29	8	13	3	0	24	158
05:15 PM	31	9	5	0	45	1	29	17	0	47	6	0	21	0	27	8	17	5	0	30	149
Total Volume	127	50	14	0	191	5	126	64	0	195	34	3	65	0	102	35	62	14	0	111	599
% App. Total	66.5	26.2	7.3	0		2.6	64.6	32.8	0		33.3	2.9	63.7	0		31.5	55.9	12.6	0		
PHF	.858	.735	.700	.000	.936	.625	.851	.941	.000	.903	.708	.250	.774	.000	.879	.729	.912	.700	.000	.867	.948

PRECISION
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Client: VHB/ A. Santiago

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Page No : 1

Groups Printed- Heavy Vehicles

	New Balance Driveway From North				Guest Street From East				Arthur Road From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	3
04:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	3
Total	0	0	0	0	0	1	3	0	2	0	0	0	2	0	1	0	9
05:00 PM	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	1	3	0	0	0	2	0	0	0	0	0	7
Grand Total	1	0	0	0	0	2	6	0	2	0	2	0	2	0	1	0	16
Apprch %	100	0	0	0	0	25	75	0	50	0	50	0	66.7	0	33.3	0	
Total %	6.2	0	0	0	0	12.5	37.5	0	12.5	0	12.5	0	12.5	0	6.2	0	

	New Balance Driveway From North					Guest Street From East					Arthur Road From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	3
05:00 PM	1	0	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	2	0	2	0	0	1	0	1	0	0	0	0	0	3
Total Volume	1	0	0	0	1	0	1	4	0	5	0	0	2	0	2	1	0	1	0	2	10
% App. Total	100	0	0	0		0	20	80	0		0	0	100	0		50	0	50	0		
PHF	.250	.000	.000	.000	.250	.000	.250	.500	.000	.625	.000	.000	.500	.000	.500	.250	.000	.250	.000	.250	.833

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Groups Printed- Peds and Bikes

	New Balance Driveway From North					Guest Street From East					Arthur Road From South					Guest Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	3
04:15 PM	0	0	0	0	1	0	0	0	1	0	0	0	0	3	0	0	1	0	0	1	7
04:30 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	5
04:45 PM	0	0	0	0	4	0	1	0	0	0	0	0	0	0	2	0	0	0	1	0	8
Total	0	0	0	2	5	0	3	0	1	0	0	0	0	3	2	0	2	0	3	2	23
05:00 PM	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	7
05:15 PM	0	1	0	0	3	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	7
05:30 PM	0	0	0	0	0	0	1	0	0	2	0	0	0	0	3	0	4	0	0	1	11
05:45 PM	0	0	0	2	0	0	0	1	0	0	1	0	0	0	2	0	0	0	1	0	7
Total	0	1	0	3	6	0	2	1	0	2	1	0	0	0	6	0	7	0	1	2	32
Grand Total	0	1	0	5	11	0	5	1	1	2	1	0	0	3	8	0	9	0	4	4	55
Apprch %	0	5.9	0	29.4	64.7	0	55.6	11.1	11.1	22.2	8.3	0	0	25	66.7	0	52.9	0	23.5	23.5	
Total %	0	1.8	0	9.1	20	0	9.1	1.8	1.8	3.6	1.8	0	0	5.5	14.5	0	16.4	0	7.3	7.3	

	New Balance Driveway From North						Guest Street From East						Arthur Road From South						Guest Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:45 PM																									
04:45 PM	0	0	0	0	4	4	0	1	0	0	0	1	0	0	0	0	2	2	0	0	0	1	0	1	8
05:00 PM	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	3	7
05:15 PM	0	1	0	0	3	4	0	1	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	1	7
05:30 PM	0	0	0	0	0	0	0	1	0	0	2	3	0	0	0	0	3	3	0	4	0	0	1	5	11
Total Volume	0	1	0	1	10	12	0	3	0	0	2	5	0	0	0	0	6	6	0	7	0	1	2	10	33
% App. Total	0	8.3	0	8.3	83.3		0	60	0	0	40		0	0	0	0	100		0	70	0	10	20		
PHF	.000	.250	.000	.250	.625	.750	.000	.750	.000	.000	.250	.417	.000	.000	.000	.000	.500	.500	.000	.438	.000	.250	.500	.500	.750

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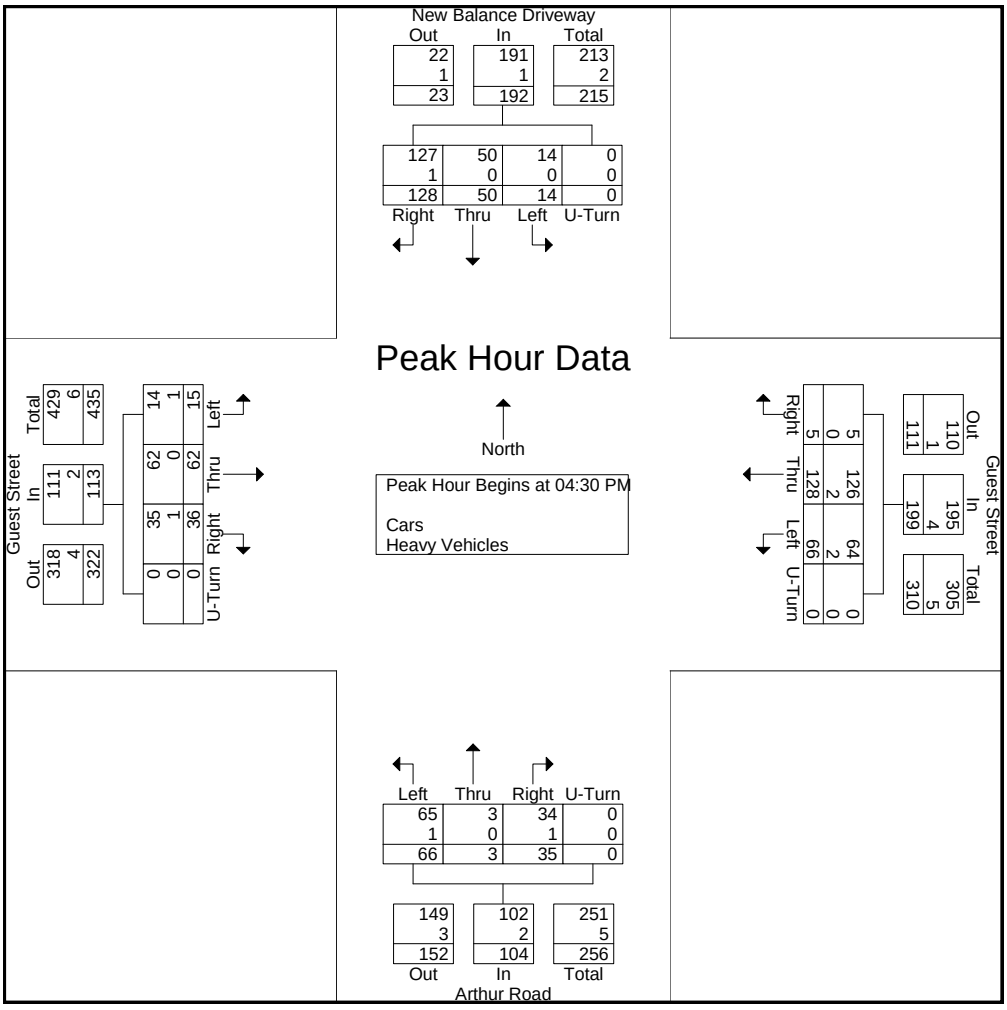
	New Balance Driveway From North					Guest Street From East					Arthur Road From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	26	17	3	0	46	2	29	15	0	46	9	0	12	0	21	7	16	2	0	25	138
04:45 PM	37	10	2	0	49	0	32	18	0	50	12	0	14	0	26	13	16	5	0	34	159
05:00 PM	34	14	4	0	52	2	38	15	0	55	8	3	19	0	30	8	13	3	0	24	161
05:15 PM	31	9	5	0	45	1	29	18	0	48	6	0	21	0	27	8	17	5	0	30	150
Total Volume	128	50	14	0	192	5	128	66	0	199	35	3	66	0	104	36	62	15	0	113	608
% App. Total	66.7	26	7.3	0		2.5	64.3	33.2	0		33.7	2.9	63.5	0		31.9	54.9	13.3	0		
PHF	.865	.735	.700	.000	.923	.625	.842	.917	.000	.905	.729	.250	.786	.000	.867	.692	.912	.750	.000	.831	.944
Cars	127	50	14	0	191	5	126	64	0	195	34	3	65	0	102	35	62	14	0	111	599
% Cars	99.2	100	100	0	99.5	100	98.4	97.0	0	98.0	97.1	100	98.5	0	98.1	97.2	100	93.3	0	98.2	98.5
Heavy Vehicles	1	0	0	0	1	0	2	2	0	4	1	0	1	0	2	1	0	1	0	2	9
% Heavy Vehicles	0.8	0	0	0	0.5	0	1.6	3.0	0	2.0	2.9	0	1.5	0	1.9	2.8	0	6.7	0	1.8	1.5



PRECISION DATA INDUSTRIES, LLC
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N/S: New Balance Driveway/ Arthur Rd
E/W: Guest Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 JJJ
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	New Balance Driveway From North				Guest Street From East				Arthur Road From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	1	0	0	0	0	19	13	0	8	0	10	0	3	14	1	0	69
11:15 AM	0	0	0	0	0	11	13	0	3	0	17	0	5	13	0	0	62
11:30 AM	2	2	0	0	1	21	15	0	7	0	10	0	1	15	0	0	74
11:45 AM	0	0	0	0	0	24	6	0	10	0	9	0	6	17	1	0	73
Total	3	2	0	0	1	75	47	0	28	0	46	0	15	59	2	0	278
12:00 PM	0	0	1	0	0	35	10	0	8	1	13	0	2	17	0	0	87
12:15 PM	2	0	0	0	0	26	13	0	5	1	10	0	6	15	1	0	79
12:30 PM	0	0	0	0	0	20	8	0	3	1	14	0	6	14	1	0	67
12:45 PM	1	1	0	0	0	19	20	0	4	1	17	0	1	17	0	0	81
Total	3	1	1	0	0	100	51	0	20	4	54	0	15	63	2	0	314
01:00 PM	0	1	0	0	0	23	10	0	11	0	10	0	6	16	0	0	77
01:15 PM	0	0	0	0	0	24	20	0	10	0	16	0	6	12	0	0	88
01:30 PM	2	0	0	0	0	25	11	0	4	1	16	0	7	24	0	0	90
01:45 PM	2	2	1	0	0	16	7	0	9	0	18	0	7	19	0	0	81
Total	4	3	1	0	0	88	48	0	34	1	60	0	26	71	0	0	336
Grand Total	10	6	2	0	1	263	146	0	82	5	160	0	56	193	4	0	928
Apprch %	55.6	33.3	11.1	0	0.2	64.1	35.6	0	33.2	2	64.8	0	22.1	76.3	1.6	0	
Total %	1.1	0.6	0.2	0	0.1	28.3	15.7	0	8.8	0.5	17.2	0	6	20.8	0.4	0	
Cars	10	6	2	0	1	262	140	0	82	5	160	0	56	192	4	0	920
% Cars	100	100	100	0	100	99.6	95.9	0	100	100	100	0	100	99.5	100	0	99.1
Heavy Vehicles	0	0	0	0	0	1	6	0	0	0	0	0	0	1	0	0	8
% Heavy Vehicles	0	0	0	0	0	0.4	4.1	0	0	0	0	0	0	0.5	0	0	0.9

	New Balance Driveway From North					Guest Street From East					Arthur Road From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45 PM																					
12:45 PM	1	1	0	0	2	0	19	20	0	39	4	1	17	0	22	1	17	0	0	18	81
01:00 PM	0	1	0	0	1	0	23	10	0	33	11	0	10	0	21	6	16	0	0	22	77
01:15 PM	0	0	0	0	0	0	24	20	0	44	10	0	16	0	26	6	12	0	0	18	88
01:30 PM	2	0	0	0	2	0	25	11	0	36	4	1	16	0	21	7	24	0	0	31	90
Total Volume	3	2	0	0	5	0	91	61	0	152	29	2	59	0	90	20	69	0	0	89	336
% App. Total	60	40	0	0		0	59.9	40.1	0		32.2	2.2	65.6	0		22.5	77.5	0	0		
PHF	.375	.500	.000	.000	.625	.000	.910	.763	.000	.864	.659	.500	.868	.000	.865	.714	.719	.000	.000	.718	.933
Cars	3	2	0	0	5	0	91	59	0	150	29	2	59	0	90	20	69	0	0	89	334
% Cars	100	100	0	0	100	0	100	96.7	0	98.7	100	100	100	0	100	100	100	0	0	100	99.4
Heavy Vehicles	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
% Heavy Vehicles	0	0	0	0	0	0	0	3.3	0	1.3	0	0	0	0	0	0	0	0	0	0	0.6

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N/S: New Balance Driveway/ Arthur Rd
E/W: Guest Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 JJJ
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars

	New Balance Driveway From North				Guest Street From East				Arthur Road From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	1	0	0	0	0	19	12	0	8	0	10	0	3	13	1	0	67
11:15 AM	0	0	0	0	0	11	13	0	3	0	17	0	5	13	0	0	62
11:30 AM	2	2	0	0	1	21	13	0	7	0	10	0	1	15	0	0	72
11:45 AM	0	0	0	0	0	24	5	0	10	0	9	0	6	17	1	0	72
Total	3	2	0	0	1	75	43	0	28	0	46	0	15	58	2	0	273
12:00 PM	0	0	1	0	0	35	10	0	8	1	13	0	2	17	0	0	87
12:15 PM	2	0	0	0	0	26	13	0	5	1	10	0	6	15	1	0	79
12:30 PM	0	0	0	0	0	20	8	0	3	1	14	0	6	14	1	0	67
12:45 PM	1	1	0	0	0	19	20	0	4	1	17	0	1	17	0	0	81
Total	3	1	1	0	0	100	51	0	20	4	54	0	15	63	2	0	314
01:00 PM	0	1	0	0	0	23	10	0	11	0	10	0	6	16	0	0	77
01:15 PM	0	0	0	0	0	24	18	0	10	0	16	0	6	12	0	0	86
01:30 PM	2	0	0	0	0	25	11	0	4	1	16	0	7	24	0	0	90
01:45 PM	2	2	1	0	0	15	7	0	9	0	18	0	7	19	0	0	80
Total	4	3	1	0	0	87	46	0	34	1	60	0	26	71	0	0	333
Grand Total	10	6	2	0	1	262	140	0	82	5	160	0	56	192	4	0	920
Apprch %	55.6	33.3	11.1	0	0.2	65	34.7	0	33.2	2	64.8	0	22.2	76.2	1.6	0	
Total %	1.1	0.7	0.2	0	0.1	28.5	15.2	0	8.9	0.5	17.4	0	6.1	20.9	0.4	0	

	New Balance Driveway From North					Guest Street From East					Arthur Road From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45 PM																					
12:45 PM	1	1	0	0	2	0	19	20	0	39	4	1	17	0	22	1	17	0	0	18	81
01:00 PM	0	1	0	0	1	0	23	10	0	33	11	0	10	0	21	6	16	0	0	22	77
01:15 PM	0	0	0	0	0	0	24	18	0	42	10	0	16	0	26	6	12	0	0	18	86
01:30 PM	2	0	0	0	2	0	25	11	0	36	4	1	16	0	21	7	24	0	0	31	90
Total Volume	3	2	0	0	5	0	91	59	0	150	29	2	59	0	90	20	69	0	0	89	334
% App. Total	60	40	0	0		0	60.7	39.3	0		32.2	2.2	65.6	0		22.5	77.5	0	0		
PHF	.375	.500	.000	.000	.625	.000	.910	.738	.000	.893	.659	.500	.868	.000	.865	.714	.719	.000	.000	.718	.928

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N/S: New Balance Driveway/ Arthur Rd
E/W: Guest Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 JJJ
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Heavy Vehicles

	New Balance Driveway From North				Guest Street From East				Arthur Road From South				Guest Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	4	0	0	0	0	0	0	1	0	0	5
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3
Grand Total	0	0	0	0	0	1	6	0	0	0	0	0	0	1	0	0	8
Apprch %	0	0	0	0	0	14.3	85.7	0	0	0	0	0	0	100	0	0	
Total %	0	0	0	0	0	12.5	75	0	0	0	0	0	0	12.5	0	0	

	New Balance Driveway From North					Guest Street From East					Arthur Road From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	1	0	0	1	5
% App. Total	0	0	0	0		0	0	100	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.625

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 JJJ
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Peds and Bikes

	New Balance Driveway From North					Guest Street From East					Arthur Road From South					Guest Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:30 AM	0	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	5
11:45 AM	0	0	0	2	7	0	0	1	1	0	0	0	0	2	0	0	0	0	0	1	14
Total	0	0	0	4	9	0	2	1	2	0	0	0	0	2	0	0	1	0	0	1	22
12:00 PM	0	0	0	4	2	0	1	0	0	0	1	0	0	0	2	2	1	0	0	0	13
12:15 PM	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6
12:30 PM	0	0	0	1	2	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	7
12:45 PM	0	0	0	1	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4	11
Total	0	0	0	7	12	0	1	1	1	1	1	0	1	1	2	2	1	0	0	6	37
01:00 PM	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	1	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	5
01:45 PM	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	4
Total	0	0	0	1	3	0	0	0	2	1	1	0	0	0	3	0	0	0	0	0	11
Grand Total	0	0	0	12	24	0	3	2	5	2	2	0	1	3	5	2	2	0	0	7	70
Apprch %	0	0	0	33.3	66.7	0	25	16.7	41.7	16.7	18.2	0	9.1	27.3	45.5	18.2	18.2	0	0	63.6	
Total %	0	0	0	17.1	34.3	0	4.3	2.9	7.1	2.9	2.9	0	1.4	4.3	7.1	2.9	2.9	0	0	10	

	New Balance Driveway From North						Guest Street From East						Arthur Road From South						Guest Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 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	2	7	9	0	0	1	1	0	2	0	0	0	2	0	2	0	0	0	0	1	1	14
12:00 PM	0	0	0	4	2	6	0	1	0	0	0	1	1	0	0	0	2	3	2	1	0	0	0	3	13
12:15 PM	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	6
12:30 PM	0	0	0	1	2	3	0	0	1	1	1	3	0	0	0	1	0	1	0	0	0	0	0	0	7
Total Volume	0	0	0	8	14	22	0	1	2	2	1	6	1	0	0	3	2	6	2	1	0	0	3	6	40
% App. Total	0	0	0	36.4	63.6		0	16.7	33.3	33.3	16.7		16.7	0	0	50	33.3		33.3	16.7	0	0	50		
PHF	.000	.000	.000	.500	.500	.611	.000	.250	.500	.500	.250	.500	.250	.000	.000	.375	.250	.500	.250	.250	.000	.000	.375	.500	.714

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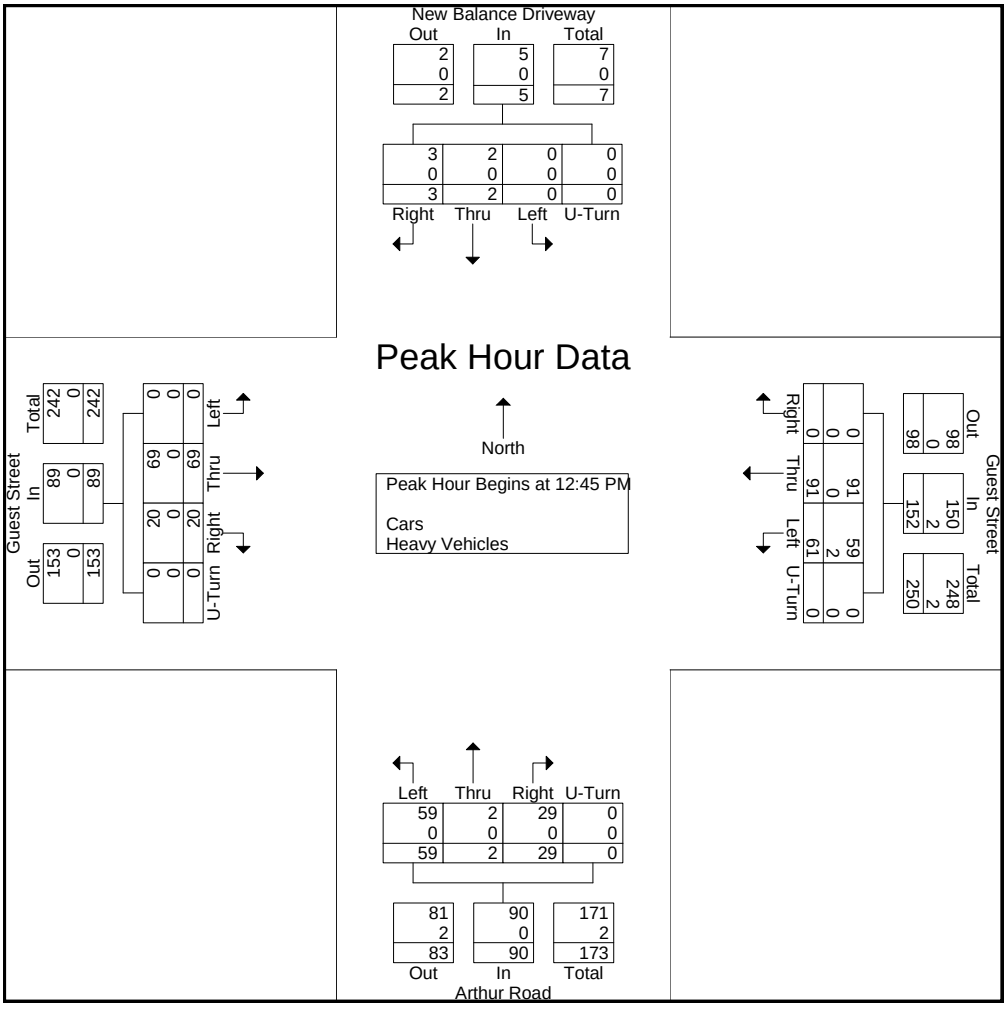
	New Balance Driveway From North					Guest Street From East					Arthur Road From South					Guest Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45 PM																					
12:45 PM	1	1	0	0	2	0	19	20	0	39	4	1	17	0	22	1	17	0	0	18	81
01:00 PM	0	1	0	0	1	0	23	10	0	33	11	0	10	0	21	6	16	0	0	22	77
01:15 PM	0	0	0	0	0	0	24	20	0	44	10	0	16	0	26	6	12	0	0	18	88
01:30 PM	2	0	0	0	2	0	25	11	0	36	4	1	16	0	21	7	24	0	0	31	90
Total Volume	3	2	0	0	5	0	91	61	0	152	29	2	59	0	90	20	69	0	0	89	336
% App. Total	60	40	0	0		0	59.9	40.1	0		32.2	2.2	65.6	0		22.5	77.5	0	0		
PHF	.375	.500	.000	.000	.625	.000	.910	.763	.000	.864	.659	.500	.868	.000	.865	.714	.719	.000	.000	.718	.933
Cars	3	2	0	0	5	0	91	59	0	150	29	2	59	0	90	20	69	0	0	89	334
% Cars	100	100	0	0	100	0	100	96.7	0	98.7	100	100	100	0	100	100	100	0	0	100	99.4
Heavy Vehicles	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
% Heavy Vehicles	0	0	0	0	0	0	0	3.3	0	1.3	0	0	0	0	0	0	0	0	0	0	0.6



PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508.875.0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

N/S: Everett Street
W: Stop & Shop Driveway
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 K
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Everett Street From North				From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	6	46	0	0	0	0	0	0	0	76	0	0	1	0	1	0	130
07:15 AM	9	50	0	0	0	0	0	0	0	72	3	0	0	0	0	0	134
07:30 AM	9	73	0	0	0	0	0	0	0	99	0	0	0	0	3	0	184
07:45 AM	10	63	0	0	0	0	0	0	0	127	1	0	1	0	1	0	203
Total	34	232	0	0	0	0	0	0	0	374	4	0	2	0	5	0	651
08:00 AM	15	61	0	0	0	0	0	0	0	121	0	0	1	0	1	0	199
08:15 AM	24	71	0	0	0	0	0	0	0	151	1	0	2	0	4	0	253
08:30 AM	14	70	0	0	0	0	0	0	0	130	1	0	0	0	1	0	216
08:45 AM	20	68	0	0	0	0	0	0	0	99	3	0	0	0	1	0	191
Total	73	270	0	0	0	0	0	0	0	501	5	0	3	0	7	0	859
Grand Total	107	502	0	0	0	0	0	0	0	875	9	0	5	0	12	0	1510
Apprch %	17.6	82.4	0	0	0	0	0	0	0	99	1	0	29.4	0	70.6	0	
Total %	7.1	33.2	0	0	0	0	0	0	0	57.9	0.6	0	0.3	0	0.8	0	
Cars	104	477	0	0	0	0	0	0	0	858	9	0	5	0	12	0	1465
% Cars	97.2	95	0	0	0	0	0	0	0	98.1	100	0	100	0	100	0	97
Heavy Vehicles	3	25	0	0	0	0	0	0	0	17	0	0	0	0	0	0	45
% Heavy Vehicles	2.8	5	0	0	0	0	0	0	0	1.9	0	0	0	0	0	0	3

	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	10	63	0	0	73	0	0	0	0	0	0	127	1	0	128	1	0	1	0	2	203
08:00 AM	15	61	0	0	76	0	0	0	0	0	0	121	0	0	121	1	0	1	0	2	199
08:15 AM	24	71	0	0	95	0	0	0	0	0	0	151	1	0	152	2	0	4	0	6	253
08:30 AM	14	70	0	0	84	0	0	0	0	0	0	130	1	0	131	0	0	1	0	1	216
Total Volume	63	265	0	0	328	0	0	0	0	0	0	529	3	0	532	4	0	7	0	11	871
% App. Total	19.2	80.8	0	0		0	0	0	0		0	99.4	0.6	0		36.4	0	63.6	0		
PHF	.656	.933	.000	.000	.863	.000	.000	.000	.000	.000	.000	.876	.750	.000	.875	.500	.000	.438	.000	.458	.861
Cars	60	255	0	0	315	0	0	0	0	0	0	523	3	0	526	4	0	7	0	11	852
% Cars	95.2	96.2	0	0	96.0	0	0	0	0	0	0	98.9	100	0	98.9	100	0	100	0	100	97.8
Heavy Vehicles	3	10	0	0	13	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	19
% Heavy Vehicles	4.8	3.8	0	0	4.0	0	0	0	0	0	0	1.1	0	0	1.1	0	0	0	0	0	2.2

PRECISION
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INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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N/S: Everett Street
W: Stop & Shop Driveway
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 K
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Everett Street From North				From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	6	45	0	0	0	0	0	0	0	72	0	0	1	0	1	0	125
07:15 AM	9	44	0	0	0	0	0	0	0	70	3	0	0	0	0	0	126
07:30 AM	9	68	0	0	0	0	0	0	0	97	0	0	0	0	3	0	177
07:45 AM	10	56	0	0	0	0	0	0	0	123	1	0	1	0	1	0	192
Total	34	213	0	0	0	0	0	0	0	362	4	0	2	0	5	0	620
08:00 AM	13	60	0	0	0	0	0	0	0	121	0	0	1	0	1	0	196
08:15 AM	23	69	0	0	0	0	0	0	0	149	1	0	2	0	4	0	248
08:30 AM	14	70	0	0	0	0	0	0	0	130	1	0	0	0	1	0	216
08:45 AM	20	65	0	0	0	0	0	0	0	96	3	0	0	0	1	0	185
Total	70	264	0	0	0	0	0	0	0	496	5	0	3	0	7	0	845
Grand Total	104	477	0	0	0	0	0	0	0	858	9	0	5	0	12	0	1465
Apprch %	17.9	82.1	0	0	0	0	0	0	0	99	1	0	29.4	0	70.6	0	
Total %	7.1	32.6	0	0	0	0	0	0	0	58.6	0.6	0	0.3	0	0.8	0	

	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	10	56	0	0	66	0	0	0	0	0	0	123	1	0	124	1	0	1	0	2	192
08:00 AM	13	60	0	0	73	0	0	0	0	0	0	121	0	0	121	1	0	1	0	2	196
08:15 AM	23	69	0	0	92	0	0	0	0	0	0	149	1	0	150	2	0	4	0	6	248
08:30 AM	14	70	0	0	84	0	0	0	0	0	0	130	1	0	131	0	0	1	0	1	216
Total Volume	60	255	0	0	315	0	0	0	0	0	0	523	3	0	526	4	0	7	0	11	852
% App. Total	19	81	0	0		0	0	0	0		0	99.4	0.6	0		36.4	0	63.6	0		
PHF	.652	.911	.000	.000	.856	.000	.000	.000	.000	.000	.000	.878	.750	.000	.877	.500	.000	.438	.000	.458	.859

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Site Code : 12305.00
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Page No : 1

Groups Printed- Heavy Vehicles

	Everett Street From North				From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	5
07:15 AM	0	6	0	0	0	0	0	0	0	2	0	0	0	0	0	0	8
07:30 AM	0	5	0	0	0	0	0	0	0	2	0	0	0	0	0	0	7
07:45 AM	0	7	0	0	0	0	0	0	0	4	0	0	0	0	0	0	11
Total	0	19	0	0	0	0	0	0	0	12	0	0	0	0	0	0	31
08:00 AM	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:15 AM	1	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	5
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	6
Total	3	6	0	0	0	0	0	0	0	5	0	0	0	0	0	0	14
Grand Total	3	25	0	0	0	0	0	0	0	17	0	0	0	0	0	0	45
Apprch %	10.7	89.3	0	0	0	0	0	0	0	100	0	0	0	0	0	0	
Total %	6.7	55.6	0	0	0	0	0	0	0	37.8	0	0	0	0	0	0	

	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5
07:15 AM	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8
07:30 AM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
07:45 AM	0	7	0	0	7	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	11
Total Volume	0	19	0	0	19	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	31
% App. Total	0	100	0	0		0	0	0	0		0	100	0	0		0	0	0	0		
PHF	.000	.679	.000	.000	.679	.000	.000	.000	.000	.000	.000	.750	.000	.000	.750	.000	.000	.000	.000	.000	.705

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Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Peds and Bikes

	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	1	5
07:15 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
07:45 AM	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	5
Total	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	6	4	16
08:00 AM	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	1	6
08:15 AM	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	1	7
08:30 AM	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	6
08:45 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	7
Total	5	2	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	1	7	7	26
Grand Total	7	2	0	2	0	0	0	0	0	0	0	4	1	1	0	0	0	1	13	11	42
Apprch %	63.6	18.2	0	18.2	0	0	0	0	0	0	0	66.7	16.7	16.7	0	0	0	4	52	44	
Total %	16.7	4.8	0	4.8	0	0	0	0	0	0	0	9.5	2.4	2.4	0	0	0	2.4	31	26.2	

	Everett Street From North						From East						Everett Street From South						Stop & Shop Driveway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:00 AM																									
08:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	2	1	3	6
08:15 AM	1	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	3	1	4	7
08:30 AM	1	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	2	3	6
08:45 AM	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	5	7
Total Volume	5	2	0	0	0	7	0	0	0	0	0	0	0	3	1	0	0	4	0	0	1	7	7	15	26
% App. Total	71.4	28.6	0	0	0		0	0	0	0	0		0	75	25	0	0		0	0	6.7	46.7	46.7		
PHF	.625	.500	.000	.000	.000	.875	.000	.000	.000	.000	.000	.000	.000	.750	.250	.000	.000	.500	.000	.000	.250	.583	.583	.750	.929

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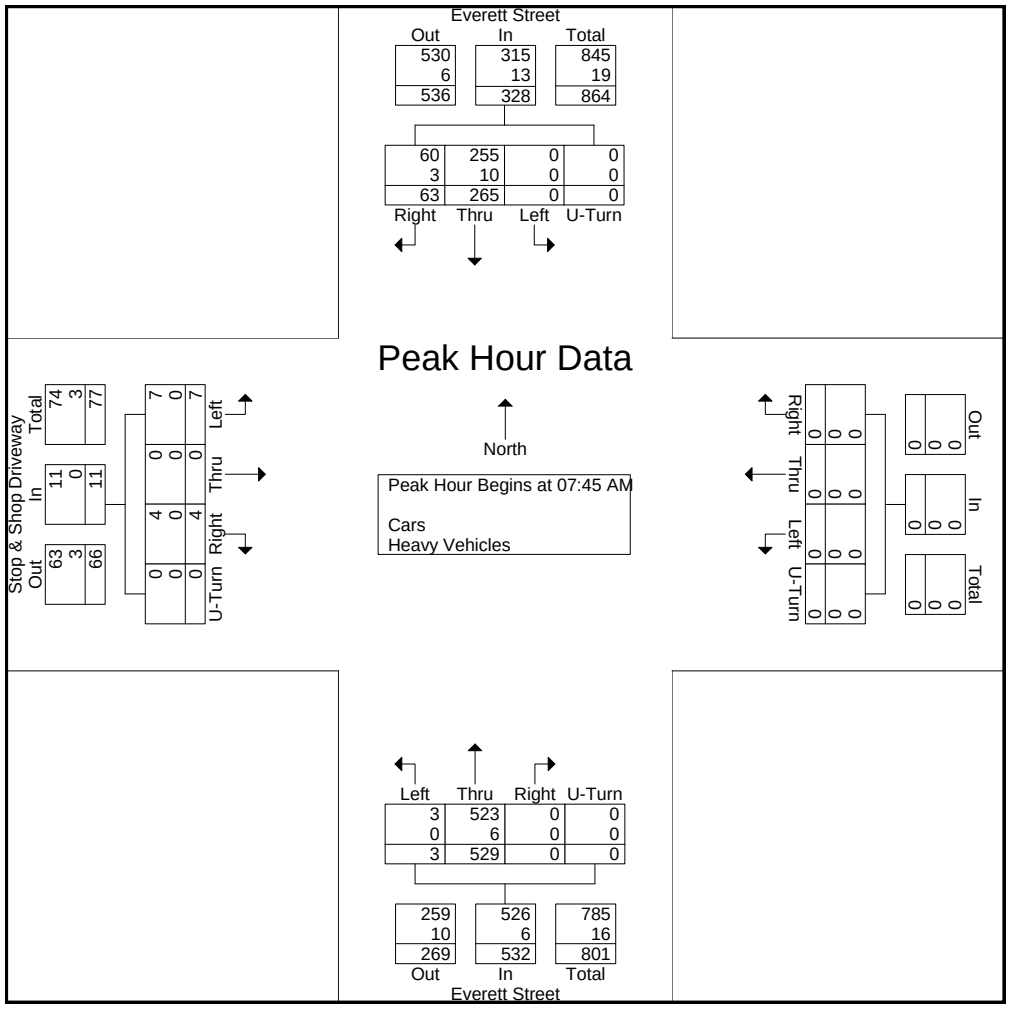
	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	10	63	0	0	73	0	0	0	0	0	0	127	1	0	128	1	0	1	0	2	203
08:00 AM	15	61	0	0	76	0	0	0	0	0	0	121	0	0	121	1	0	1	0	2	199
08:15 AM	24	71	0	0	95	0	0	0	0	0	0	151	1	0	152	2	0	4	0	6	253
08:30 AM	14	70	0	0	84	0	0	0	0	0	0	130	1	0	131	0	0	1	0	1	216
Total Volume	63	265	0	0	328	0	0	0	0	0	0	529	3	0	532	4	0	7	0	11	871
% App. Total	19.2	80.8	0	0		0	0	0	0		0	99.4	0.6	0		36.4	0	63.6	0		
PHF	.656	.933	.000	.000	.863	.000	.000	.000	.000	.000	.000	.876	.750	.000	.875	.500	.000	.438	.000	.458	.861
Cars	60	255	0	0	315	0	0	0	0	0	0	523	3	0	526	4	0	7	0	11	852
% Cars	95.2	96.2	0	0	96.0	0	0	0	0	0	0	98.9	100	0	98.9	100	0	100	0	100	97.8
Heavy Vehicles	3	10	0	0	13	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	19
% Heavy Vehicles	4.8	3.8	0	0	4.0	0	0	0	0	0	0	1.1	0	0	1.1	0	0	0	0	0	2.2



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Groups Printed- Cars - Heavy Vehicles

	Everett Street From North				From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	20	59	0	0	0	0	0	0	0	97	3	0	2	0	1	0	182
04:15 PM	16	77	0	0	0	0	0	0	0	86	7	0	3	0	1	0	190
04:30 PM	21	67	0	0	0	0	0	0	0	103	4	0	3	0	4	0	202
04:45 PM	14	87	0	1	0	0	0	0	0	109	6	0	2	0	6	0	225
Total	71	290	0	1	0	0	0	0	0	395	20	0	10	0	12	0	799
05:00 PM	22	81	0	0	0	0	0	0	0	102	3	0	4	0	2	0	214
05:15 PM	34	86	0	0	0	0	0	0	0	114	3	0	6	0	5	0	248
05:30 PM	27	103	0	0	0	0	0	0	0	110	4	0	2	0	1	0	247
05:45 PM	41	103	0	1	0	0	0	0	0	89	4	0	1	0	2	0	241
Total	124	373	0	1	0	0	0	0	0	415	14	0	13	0	10	0	950
Grand Total	195	663	0	2	0	0	0	0	0	810	34	0	23	0	22	0	1749
Apprch %	22.7	77.1	0	0.2	0	0	0	0	0	96	4	0	51.1	0	48.9	0	
Total %	11.1	37.9	0	0.1	0	0	0	0	0	46.3	1.9	0	1.3	0	1.3	0	
Cars	193	651	0	2	0	0	0	0	0	804	34	0	23	0	21	0	1728
% Cars	99	98.2	0	100	0	0	0	0	0	99.3	100	0	100	0	95.5	0	98.8
Heavy Vehicles	2	12	0	0	0	0	0	0	0	6	0	0	0	0	1	0	21
% Heavy Vehicles	1	1.8	0	0	0	0	0	0	0	0.7	0	0	0	0	4.5	0	1.2

	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	22	81	0	0	103	0	0	0	0	0	0	102	3	0	105	4	0	2	0	6	214
05:15 PM	34	86	0	0	120	0	0	0	0	0	0	114	3	0	117	6	0	5	0	11	248
05:30 PM	27	103	0	0	130	0	0	0	0	0	0	110	4	0	114	2	0	1	0	3	247
05:45 PM	41	103	0	1	145	0	0	0	0	0	0	89	4	0	93	1	0	2	0	3	241
Total Volume	124	373	0	1	498	0	0	0	0	0	0	415	14	0	429	13	0	10	0	23	950
% App. Total	24.9	74.9	0	0.2		0	0	0	0		0	96.7	3.3	0		56.5	0	43.5	0		
PHF	.756	.905	.000	.250	.859	.000	.000	.000	.000	.000	.000	.910	.875	.000	.917	.542	.000	.500	.000	.523	.958
Cars	124	370	0	1	495	0	0	0	0	0	0	412	14	0	426	13	0	9	0	22	943
% Cars	100	99.2	0	100	99.4	0	0	0	0	0	0	99.3	100	0	99.3	100	0	90.0	0	95.7	99.3
Heavy Vehicles	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	7
% Heavy Vehicles	0	0.8	0	0	0.6	0	0	0	0	0	0	0.7	0	0	0.7	0	0	10.0	0	4.3	0.7

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Email: datarequests@pdillc.com

N/S: Everett Street
W: Stop & Shop Driveway
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 KK
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Everett Street From North				From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	19	58	0	0	0	0	0	0	0	97	3	0	2	0	1	0	180
04:15 PM	16	72	0	0	0	0	0	0	0	85	7	0	3	0	1	0	184
04:30 PM	20	65	0	0	0	0	0	0	0	103	4	0	3	0	4	0	199
04:45 PM	14	86	0	1	0	0	0	0	0	107	6	0	2	0	6	0	222
Total	69	281	0	1	0	0	0	0	0	392	20	0	10	0	12	0	785
05:00 PM	22	80	0	0	0	0	0	0	0	102	3	0	4	0	1	0	212
05:15 PM	34	85	0	0	0	0	0	0	0	114	3	0	6	0	5	0	247
05:30 PM	27	102	0	0	0	0	0	0	0	107	4	0	2	0	1	0	243
05:45 PM	41	103	0	1	0	0	0	0	0	89	4	0	1	0	2	0	241
Total	124	370	0	1	0	0	0	0	0	412	14	0	13	0	9	0	943
Grand Total	193	651	0	2	0	0	0	0	0	804	34	0	23	0	21	0	1728
Apprch %	22.8	77	0	0.2	0	0	0	0	0	95.9	4.1	0	52.3	0	47.7	0	
Total %	11.2	37.7	0	0.1	0	0	0	0	0	46.5	2	0	1.3	0	1.2	0	

	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	22	80	0	0	102	0	0	0	0	0	0	102	3	0	105	4	0	1	0	5	212
05:15 PM	34	85	0	0	119	0	0	0	0	0	0	114	3	0	117	6	0	5	0	11	247
05:30 PM	27	102	0	0	129	0	0	0	0	0	0	107	4	0	111	2	0	1	0	3	243
05:45 PM	41	103	0	1	145	0	0	0	0	0	0	89	4	0	93	1	0	2	0	3	241
Total Volume	124	370	0	1	495	0	0	0	0	0	0	412	14	0	426	13	0	9	0	22	943
% App. Total	25.1	74.7	0	0.2		0	0	0	0		0	96.7	3.3	0		59.1	0	40.9	0		
PHF	.756	.898	.000	.250	.853	.000	.000	.000	.000	.000	.000	.904	.875	.000	.910	.542	.000	.450	.000	.500	.954

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File Name : 165041 KK
Site Code : 12305.00
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Groups Printed- Heavy Vehicles

	Everett Street From North				From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	6
04:30 PM	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
Total	2	9	0	0	0	0	0	0	0	3	0	0	0	0	0	0	14
05:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
05:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	0	0	0	0	0	0	3	0	0	0	0	1	0	7
Grand Total	2	12	0	0	0	0	0	0	0	6	0	0	0	0	1	0	21
Apprch %	14.3	85.7	0	0	0	0	0	0	0	100	0	0	0	0	100	0	
Total %	9.5	57.1	0	0	0	0	0	0	0	28.6	0	0	0	0	4.8	0	

	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6
04:30 PM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total Volume	2	9	0	0	11	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	14
% App. Total	18.2	81.8	0	0		0	0	0	0		0	100	0	0		0	0	0	0		
PHF	.500	.450	.000	.000	.550	.000	.000	.000	.000	.000	.000	.375	.000	.000	.375	.000	.000	.000	.000	.000	.583

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Groups Printed- Peds and Bikes

	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5	4	10
04:15 PM	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	10	3	17
04:30 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	7	1	11
04:45 PM	2	0	0	0	1	0	0	0	0	0	0	4	0	0	0	0	0	0	4	1	12
Total	5	1	0	0	1	0	0	0	0	0	0	6	0	0	1	0	0	1	26	9	50
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	7
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	5	2	11
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6	2	13
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	2	12
Total	1	3	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0	4	22	7	43
Grand Total	6	4	0	4	1	0	0	0	0	0	0	8	0	0	1	0	0	5	48	16	93
Apprch %	40	26.7	0	26.7	6.7	0	0	0	0	0	0	88.9	0	0	11.1	0	0	7.2	69.6	23.2	
Total %	6.5	4.3	0	4.3	1.1	0	0	0	0	0	0	8.6	0	0	1.1	0	0	5.4	51.6	17.2	

	Everett Street From North						From East						Everett Street From South						Stop & Shop Driveway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	5	4	9	10
04:15 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	10	3	14	17
04:30 PM	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	7	1	8	11
04:45 PM	2	0	0	0	1	3	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	4	1	5	12
Total Volume	5	1	0	0	1	7	0	0	0	0	0	0	0	6	0	0	1	7	0	0	1	26	9	36	50
% App. Total	71.4	14.3	0	0	14.3		0	0	0	0	0		0	85.7	0	0	14.3		0	0	2.8	72.2	25		
PHF	.625	.250	.000	.000	.250	.583	.000	.000	.000	.000	.000	.000	.000	.375	.000	.000	.250	.438	.000	.000	.250	.650	.563	.643	.735

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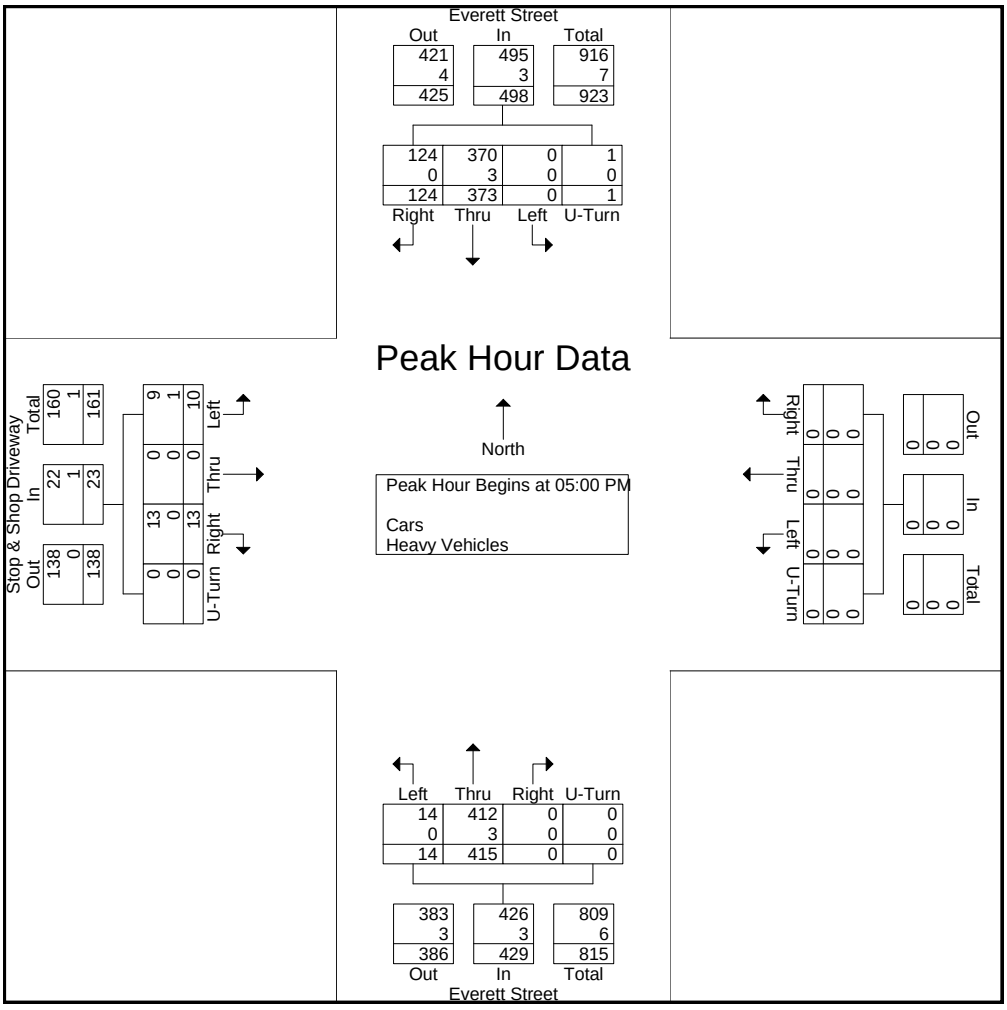
	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	22	81	0	0	103	0	0	0	0	0	0	102	3	0	105	4	0	2	0	6	214
05:15 PM	34	86	0	0	120	0	0	0	0	0	0	114	3	0	117	6	0	5	0	11	248
05:30 PM	27	103	0	0	130	0	0	0	0	0	0	110	4	0	114	2	0	1	0	3	247
05:45 PM	41	103	0	1	145	0	0	0	0	0	0	89	4	0	93	1	0	2	0	3	241
Total Volume	124	373	0	1	498	0	0	0	0	0	0	415	14	0	429	13	0	10	0	23	950
% App. Total	24.9	74.9	0	0.2		0	0	0	0		0	96.7	3.3	0		56.5	0	43.5	0		
PHF	.756	.905	.000	.250	.859	.000	.000	.000	.000	.000	.000	.910	.875	.000	.917	.542	.000	.500	.000	.523	.958
Cars	124	370	0	1	495	0	0	0	0	0	0	412	14	0	426	13	0	9	0	22	943
% Cars	100	99.2	0	100	99.4	0	0	0	0	0	0	99.3	100	0	99.3	100	0	90.0	0	95.7	99.3
Heavy Vehicles	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	7
% Heavy Vehicles	0	0.8	0	0	0.6	0	0	0	0	0	0	0.7	0	0	0.7	0	0	10.0	0	4.3	0.7



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Client: VHB/ A. Santiago

File Name : 165041 KKK
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Everett Street From North				From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	16	55	0	0	0	0	0	0	0	79	10	0	1	0	3	0	164
11:15 AM	22	55	0	1	0	0	0	0	0	79	6	0	3	0	2	0	168
11:30 AM	26	54	0	1	0	0	0	0	0	70	5	0	2	0	3	0	161
11:45 AM	12	51	0	0	0	0	0	0	0	70	11	0	2	0	4	0	150
Total	76	215	0	2	0	0	0	0	0	298	32	0	8	0	12	0	643
12:00 PM	28	52	0	0	0	0	0	0	0	79	6	0	2	0	6	0	173
12:15 PM	24	69	0	0	0	0	0	0	0	85	1	0	2	0	1	0	182
12:30 PM	22	56	0	0	0	0	0	0	0	81	8	0	2	0	4	0	173
12:45 PM	25	68	0	0	0	0	0	0	0	90	10	0	1	0	1	0	195
Total	99	245	0	0	0	0	0	0	0	335	25	0	7	0	12	0	723
01:00 PM	25	68	0	0	0	0	0	0	0	75	5	0	1	0	1	0	175
01:15 PM	19	62	0	0	0	0	0	0	0	68	4	0	2	0	5	0	160
01:30 PM	14	48	0	0	0	0	0	0	0	77	7	0	5	0	2	0	153
01:45 PM	22	61	0	0	0	0	0	0	0	78	2	0	1	0	2	0	166
Total	80	239	0	0	0	0	0	0	0	298	18	0	9	0	10	0	654
Grand Total	255	699	0	2	0	0	0	0	0	931	75	0	24	0	34	0	2020
Apprch %	26.7	73.1	0	0.2	0	0	0	0	0	92.5	7.5	0	41.4	0	58.6	0	
Total %	12.6	34.6	0	0.1	0	0	0	0	0	46.1	3.7	0	1.2	0	1.7	0	
Cars	254	691	0	2	0	0	0	0	0	923	74	0	23	0	33	0	2000
% Cars	99.6	98.9	0	100	0	0	0	0	0	99.1	98.7	0	95.8	0	97.1	0	99
Heavy Vehicles	1	8	0	0	0	0	0	0	0	8	1	0	1	0	1	0	20
% Heavy Vehicles	0.4	1.1	0	0	0	0	0	0	0	0.9	1.3	0	4.2	0	2.9	0	1

	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	24	69	0	0	93	0	0	0	0	0	0	85	1	0	86	2	0	1	0	3	182
12:30 PM	22	56	0	0	78	0	0	0	0	0	0	81	8	0	89	2	0	4	0	6	173
12:45 PM	25	68	0	0	93	0	0	0	0	0	0	90	10	0	100	1	0	1	0	2	195
01:00 PM	25	68	0	0	93	0	0	0	0	0	0	75	5	0	80	1	0	1	0	2	175
Total Volume	96	261	0	0	357	0	0	0	0	0	0	331	24	0	355	6	0	7	0	13	725
% App. Total	26.9	73.1	0	0		0	0	0	0		0	93.2	6.8	0		46.2	0	53.8	0		
PHF	.960	.946	.000	.000	.960	.000	.000	.000	.000	.000	.000	.919	.600	.000	.888	.750	.000	.438	.000	.542	.929
Cars	96	259	0	0	355	0	0	0	0	0	0	328	24	0	352	6	0	7	0	13	720
% Cars	100	99.2	0	0	99.4	0	0	0	0	0	0	99.1	100	0	99.2	100	0	100	0	100	99.3
Heavy Vehicles	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
% Heavy Vehicles	0	0.8	0	0	0.6	0	0	0	0	0	0	0.9	0	0	0.8	0	0	0	0	0	0.7

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Groups Printed- Cars

	Everett Street From North				From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	15	53	0	0	0	0	0	0	0	76	9	0	1	0	2	0	156
11:15 AM	22	53	0	1	0	0	0	0	0	78	6	0	2	0	2	0	164
11:30 AM	26	54	0	1	0	0	0	0	0	69	5	0	2	0	3	0	160
11:45 AM	12	50	0	0	0	0	0	0	0	70	11	0	2	0	4	0	149
Total	75	210	0	2	0	0	0	0	0	293	31	0	7	0	11	0	629
12:00 PM	28	52	0	0	0	0	0	0	0	79	6	0	2	0	6	0	173
12:15 PM	24	68	0	0	0	0	0	0	0	84	1	0	2	0	1	0	180
12:30 PM	22	56	0	0	0	0	0	0	0	81	8	0	2	0	4	0	173
12:45 PM	25	67	0	0	0	0	0	0	0	89	10	0	1	0	1	0	193
Total	99	243	0	0	0	0	0	0	0	333	25	0	7	0	12	0	719
01:00 PM	25	68	0	0	0	0	0	0	0	74	5	0	1	0	1	0	174
01:15 PM	19	62	0	0	0	0	0	0	0	68	4	0	2	0	5	0	160
01:30 PM	14	47	0	0	0	0	0	0	0	77	7	0	5	0	2	0	152
01:45 PM	22	61	0	0	0	0	0	0	0	78	2	0	1	0	2	0	166
Total	80	238	0	0	0	0	0	0	0	297	18	0	9	0	10	0	652
Grand Total	254	691	0	2	0	0	0	0	0	923	74	0	23	0	33	0	2000
Apprch %	26.8	73	0	0.2	0	0	0	0	0	92.6	7.4	0	41.1	0	58.9	0	
Total %	12.7	34.5	0	0.1	0	0	0	0	0	46.2	3.7	0	1.1	0	1.6	0	

	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	24	68	0	0	92	0	0	0	0	0	0	84	1	0	85	2	0	1	0	3	180
12:30 PM	22	56	0	0	78	0	0	0	0	0	0	81	8	0	89	2	0	4	0	6	173
12:45 PM	25	67	0	0	92	0	0	0	0	0	0	89	10	0	99	1	0	1	0	2	193
01:00 PM	25	68	0	0	93	0	0	0	0	0	0	74	5	0	79	1	0	1	0	2	174
Total Volume	96	259	0	0	355	0	0	0	0	0	0	328	24	0	352	6	0	7	0	13	720
% App. Total	27	73	0	0		0	0	0	0		0	93.2	6.8	0		46.2	0	53.8	0		
PHF	.960	.952	.000	.000	.954	.000	.000	.000	.000	.000	.000	.921	.600	.000	.889	.750	.000	.438	.000	.542	.933

PRECISION DATA INDUSTRIES, LLC
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N/S: Everett Street
W: Stop & Shop Driveway
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 KKK
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Everett Street From North				From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	1	2	0	0	0	0	0	0	0	3	1	0	0	0	1	0	8
11:15 AM	0	2	0	0	0	0	0	0	0	1	0	0	1	0	0	0	4
11:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
11:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	5	0	0	0	0	0	0	0	5	1	0	1	0	1	0	14
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
Total	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4
01:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
Grand Total	1	8	0	0	0	0	0	0	0	8	1	0	1	0	1	0	20
Apprch %	11.1	88.9	0	0	0	0	0	0	0	88.9	11.1	0	50	0	50	0	
Total %	5	40	0	0	0	0	0	0	0	40	5	0	5	0	5	0	

	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	1	2	0	0	3	0	0	0	0	0	0	3	1	0	4	0	0	1	0	1	8
11:15 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	4
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
11:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	5	0	0	6	0	0	0	0	0	0	5	1	0	6	1	0	1	0	2	14
% App. Total	16.7	83.3	0	0		0	0	0	0		0	83.3	16.7	0		50	0	50	0		
PHF	.250	.625	.000	.000	.500	.000	.000	.000	.000	.000	.000	.417	.250	.000	.375	.250	.000	.250	.000	.500	.438

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W: Stop & Shop Driveway
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 KKK
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Peds and Bikes

	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	3
11:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	6	5	14
11:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	6	8
11:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	7	2	12
Total	0	2	0	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0	15	13	37
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	3
12:15 PM	0	2	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	8	2	15
12:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4
12:45 PM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	13
Total	0	4	0	3	1	0	0	0	0	0	0	1	2	0	0	1	0	0	11	12	35
01:00 PM	0	0	0	2	0	0	0	0	0	0	0	2	0	0	1	0	0	0	4	2	11
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4	3	8
01:30 PM	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	3
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	4	11
Total	0	1	0	2	0	0	0	0	0	0	0	4	0	0	1	0	0	0	16	9	33
Grand Total	0	7	0	6	2	0	0	0	0	0	0	6	3	1	2	2	0	0	42	34	105
Apprch %	0	46.7	0	40	13.3	0	0	0	0	0	0	50	25	8.3	16.7	2.6	0	0	53.8	43.6	
Total %	0	6.7	0	5.7	1.9	0	0	0	0	0	0	5.7	2.9	1	1.9	1.9	0	0	40	32.4	

	Everett Street From North						From East						Everett Street From South						Stop & Shop Driveway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 12:15 PM																									
12:15 PM	0	2	0	1	0	3	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	8	2	11	15
12:30 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	4
12:45 PM	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	10	13
01:00 PM	0	0	0	2	0	2	0	0	0	0	0	0	0	2	0	0	1	3	0	0	0	4	2	6	11
Total Volume	0	4	0	5	1	10	0	0	0	0	0	0	0	2	1	0	1	4	1	0	0	15	13	29	43
% App. Total	0	40	0	50	10		0	0	0	0	0		0	50	25	0	25		3.4	0	0	51.7	44.8		
PHF	.000	.500	.000	.625	.250	.833	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.250	.333	.250	.000	.000	.469	.406	.659	.717

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City, State: Boston, MA
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Site Code : 12305.00
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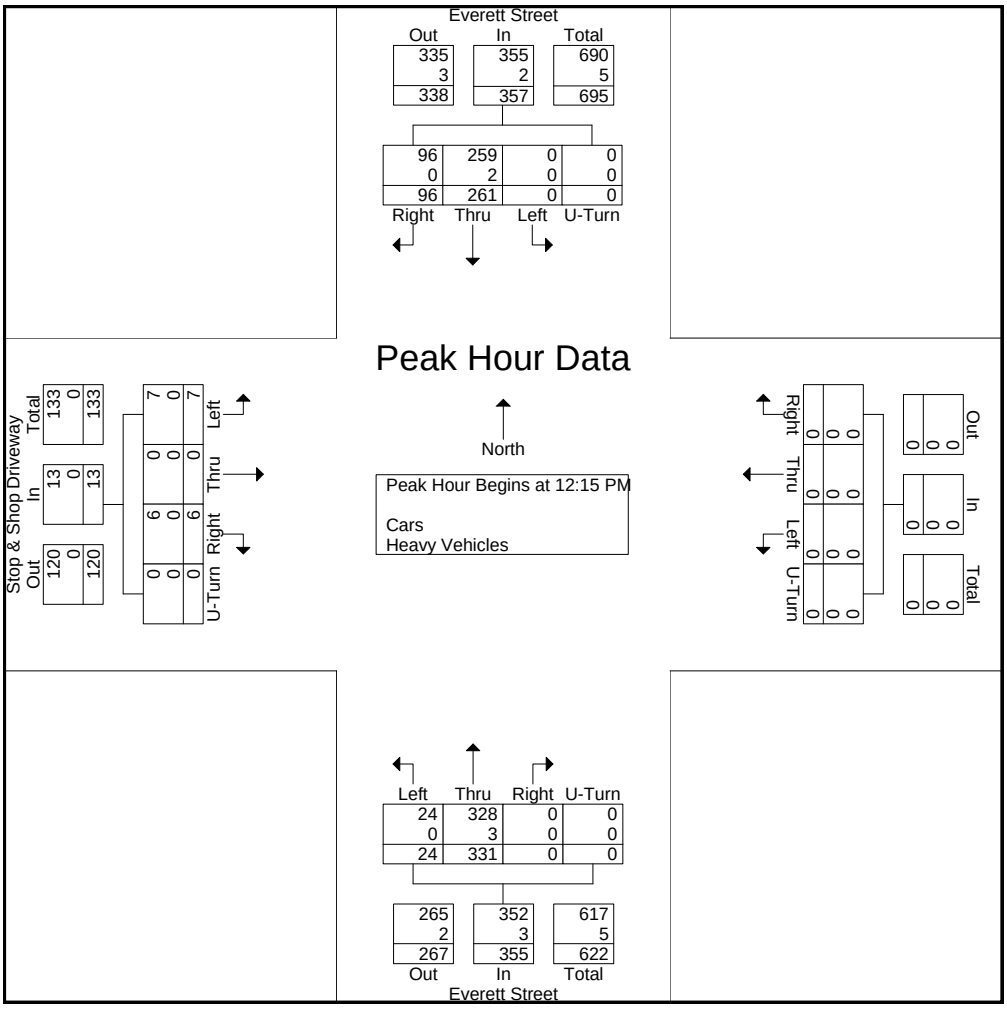
Page No : 1

	Everett Street From North					From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	24	69	0	0	93	0	0	0	0	0	0	85	1	0	86	2	0	1	0	3	182
12:30 PM	22	56	0	0	78	0	0	0	0	0	0	81	8	0	89	2	0	4	0	6	173
12:45 PM	25	68	0	0	93	0	0	0	0	0	0	90	10	0	100	1	0	1	0	2	195
01:00 PM	25	68	0	0	93	0	0	0	0	0	0	75	5	0	80	1	0	1	0	2	175
Total Volume	96	261	0	0	357	0	0	0	0	0	0	331	24	0	355	6	0	7	0	13	725
% App. Total	26.9	73.1	0	0		0	0	0	0		0	93.2	6.8	0		46.2	0	53.8	0		
PHF	.960	.946	.000	.000	.960	.000	.000	.000	.000	.000	.000	.919	.600	.000	.888	.750	.000	.438	.000	.542	.929
Cars	96	259	0	0	355	0	0	0	0	0	0	328	24	0	352	6	0	7	0	13	720
% Cars	100	99.2	0	0	99.4	0	0	0	0	0	0	99.1	100	0	99.2	100	0	100	0	100	99.3
Heavy Vehicles	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
% Heavy Vehicles	0	0.8	0	0	0.6	0	0	0	0	0	0	0.9	0	0	0.8	0	0	0	0	0	0.7



PRECISION
D A T A
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N/S: Driveway/Everett Street
E/W: Braintree Street/ Stop & Shop Drive
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 L
Site Code : 12305.00
Start Date : 5/12/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Driveway From North				Braintree Street From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	0	3	3	0	13	0	1	0	0	0	0	0	20
07:15 AM	0	0	0	0	0	4	16	0	14	1	0	2	0	0	0	0	37
07:30 AM	0	0	0	0	0	4	8	0	21	1	3	4	1	2	0	0	44
07:45 AM	0	0	0	0	0	4	7	1	16	2	2	1	0	0	0	0	33
Total	0	0	0	0	0	15	34	1	64	4	6	7	1	2	0	0	134
08:00 AM	0	2	0	0	0	5	3	0	20	3	8	1	1	1	0	0	44
08:15 AM	0	0	0	0	1	5	4	0	14	2	5	2	1	0	0	0	34
08:30 AM	1	1	0	0	0	5	5	0	17	2	4	0	3	1	0	0	39
08:45 AM	0	0	0	0	1	2	2	0	18	2	2	1	2	1	0	0	31
Total	1	3	0	0	2	17	14	0	69	9	19	4	7	3	0	0	148
Grand Total	1	3	0	0	2	32	48	1	133	13	25	11	8	5	0	0	282
Apprch %	25	75	0	0	2.4	38.6	57.8	1.2	73.1	7.1	13.7	6	61.5	38.5	0	0	
Total %	0.4	1.1	0	0	0.7	11.3	17	0.4	47.2	4.6	8.9	3.9	2.8	1.8	0	0	
Cars	1	3	0	0	2	30	44	0	130	13	23	9	8	5	0	0	268
% Cars	100	100	0	0	100	93.8	91.7	0	97.7	100	92	81.8	100	100	0	0	95
Heavy Vehicles	0	0	0	0	0	2	4	1	3	0	2	2	0	0	0	0	14
% Heavy Vehicles	0	0	0	0	0	6.2	8.3	100	2.3	0	8	18.2	0	0	0	0	5

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	4	16	0	20	14	1	0	2	17	0	0	0	0	0	37
07:30 AM	0	0	0	0	0	0	4	8	0	12	21	1	3	4	29	1	2	0	0	3	44
07:45 AM	0	0	0	0	0	0	4	7	1	12	16	2	2	1	21	0	0	0	0	0	33
08:00 AM	0	2	0	0	2	0	5	3	0	8	20	3	8	1	32	1	1	0	0	2	44
Total Volume	0	2	0	0	2	0	17	34	1	52	71	7	13	8	99	2	3	0	0	5	158
% App. Total	0	100	0	0		0	32.7	65.4	1.9		71.7	7.1	13.1	8.1		40	60	0	0		
PHF	.000	.250	.000	.000	.250	.000	.850	.531	.250	.650	.845	.583	.406	.500	.773	.500	.375	.000	.000	.417	.898
Cars	0	2	0	0	2	0	16	31	0	47	69	7	13	7	96	2	3	0	0	5	150
% Cars	0	100	0	0	100	0	94.1	91.2	0	90.4	97.2	100	100	87.5	97.0	100	100	0	0	100	94.9
Heavy Vehicles	0	0	0	0	0	0	1	3	1	5	2	0	0	1	3	0	0	0	0	0	8
% Heavy Vehicles	0	0	0	0	0	0	5.9	8.8	100	9.6	2.8	0	0	12.5	3.0	0	0	0	0	0	5.1

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N/S: Driveway/Everett Street
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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 L
Site Code : 12305.00
Start Date : 5/12/2016
Page No : 1

Groups Printed- Cars

	Driveway From North				Braintree Street From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	0	3	3	0	13	0	1	0	0	0	0	0	20
07:15 AM	0	0	0	0	0	4	15	0	14	1	0	2	0	0	0	0	36
07:30 AM	0	0	0	0	0	4	8	0	21	1	3	3	1	2	0	0	43
07:45 AM	0	0	0	0	0	3	6	0	15	2	2	1	0	0	0	0	29
Total	0	0	0	0	0	14	32	0	63	4	6	6	1	2	0	0	128
08:00 AM	0	2	0	0	0	5	2	0	19	3	8	1	1	1	0	0	42
08:15 AM	0	0	0	0	1	4	3	0	14	2	4	1	1	0	0	0	30
08:30 AM	1	1	0	0	0	5	5	0	17	2	3	0	3	1	0	0	38
08:45 AM	0	0	0	0	1	2	2	0	17	2	2	1	2	1	0	0	30
Total	1	3	0	0	2	16	12	0	67	9	17	3	7	3	0	0	140
Grand Total	1	3	0	0	2	30	44	0	130	13	23	9	8	5	0	0	268
Apprch %	25	75	0	0	2.6	39.5	57.9	0	74.3	7.4	13.1	5.1	61.5	38.5	0	0	
Total %	0.4	1.1	0	0	0.7	11.2	16.4	0	48.5	4.9	8.6	3.4	3	1.9	0	0	

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	4	15	0	19	14	1	0	2	17	0	0	0	0	0	36
07:30 AM	0	0	0	0	0	0	4	8	0	12	21	1	3	3	28	1	2	0	0	3	43
07:45 AM	0	0	0	0	0	0	3	6	0	9	15	2	2	1	20	0	0	0	0	0	29
08:00 AM	0	2	0	0	2	0	5	2	0	7	19	3	8	1	31	1	1	0	0	2	42
Total Volume	0	2	0	0	2	0	16	31	0	47	69	7	13	7	96	2	3	0	0	5	150
% App. Total	0	100	0	0		0	34	66	0		71.9	7.3	13.5	7.3		40	60	0	0		
PHF	.000	.250	.000	.000	.250	.000	.800	.517	.000	.618	.821	.583	.406	.583	.774	.500	.375	.000	.000	.417	.872

PRECISION
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Groups Printed- Heavy Vehicles

	Driveway From North				Braintree Street From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	4
Total	0	0	0	0	0	1	2	1	1	0	0	1	0	0	0	0	6
08:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	2	0	2	0	2	1	0	0	0	0	8
Grand Total	0	0	0	0	0	2	4	1	3	0	2	2	0	0	0	0	14
Apprch %	0	0	0	0	0	28.6	57.1	14.3	42.9	0	28.6	28.6	0	0	0	0	
Total %	0	0	0	0	0	14.3	28.6	7.1	21.4	0	14.3	14.3	0	0	0	0	

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	1	1	1	3	1	0	0	0	1	0	0	0	0	0	4
08:00 AM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	1	1	0	2	0	0	1	1	2	0	0	0	0	0	4
Total Volume	0	0	0	0	0	0	2	3	1	6	2	0	1	2	5	0	0	0	0	0	11
% App. Total	0	0	0	0		0	33.3	50	16.7		40	0	20	40		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.750	.250	.500	.500	.000	.250	.500	.625	.000	.000	.000	.000	.000	.688

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

N/S: Driveway/Everett Street
E/W: Braintree Street/ Stop & Shop Drive
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 L
Site Code : 12305.00
Start Date : 5/12/2016
Page No : 1

Groups Printed- Peds and Bikes

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
07:45 AM	0	0	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	4
Total	0	0	0	1	0	0	1	0	0	1	0	0	0	1	1	1	2	0	0	0	8
08:00 AM	0	0	0	6	2	0	0	0	0	3	0	0	1	1	0	0	0	0	0	0	13
08:15 AM	0	0	0	1	0	0	1	0	0	3	0	0	0	0	1	0	0	0	0	0	6
08:30 AM	0	0	0	0	1	0	1	0	0	1	0	0	0	2	0	0	0	0	2	0	7
08:45 AM	0	0	0	5	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	9
Total	0	0	0	12	5	0	2	0	0	7	0	0	1	4	1	0	1	0	2	0	35
Grand Total	0	0	0	13	5	0	3	0	0	8	0	0	1	5	2	1	3	0	2	0	43
Apprch %	0	0	0	72.2	27.8	0	27.3	0	0	72.7	0	0	12.5	62.5	25	16.7	50	0	33.3	0	
Total %	0	0	0	30.2	11.6	0	7	0	0	18.6	0	0	2.3	11.6	4.7	2.3	7	0	4.7	0	

	Driveway From North						Braintree Street From East						Everett Street From South						Stop & Shop Driveway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	6	2	8	0	0	0	0	3	3	0	0	1	1	0	2	0	0	0	0	0	0	13
08:15 AM	0	0	0	1	0	1	0	1	0	0	3	4	0	0	0	0	1	1	0	0	0	0	0	0	6
08:30 AM	0	0	0	0	1	1	0	1	0	0	1	2	0	0	0	2	0	2	0	0	0	2	0	2	7
08:45 AM	0	0	0	5	2	7	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1	9
Total Volume	0	0	0	12	5	17	0	2	0	0	7	9	0	0	1	4	1	6	0	1	0	2	0	3	35
% App. Total	0	0	0	70.6	29.4		0	22.2	0	0	77.8		0	0	16.7	66.7	16.7		0	33.3	0	66.7	0		
PHF	.000	.000	.000	.500	.625	.531	.000	.500	.000	.000	.583	.563	.000	.000	.250	.500	.250	.750	.000	.250	.000	.250	.000	.375	.673

PRECISION
D A T A
INDUSTRIES, LLC
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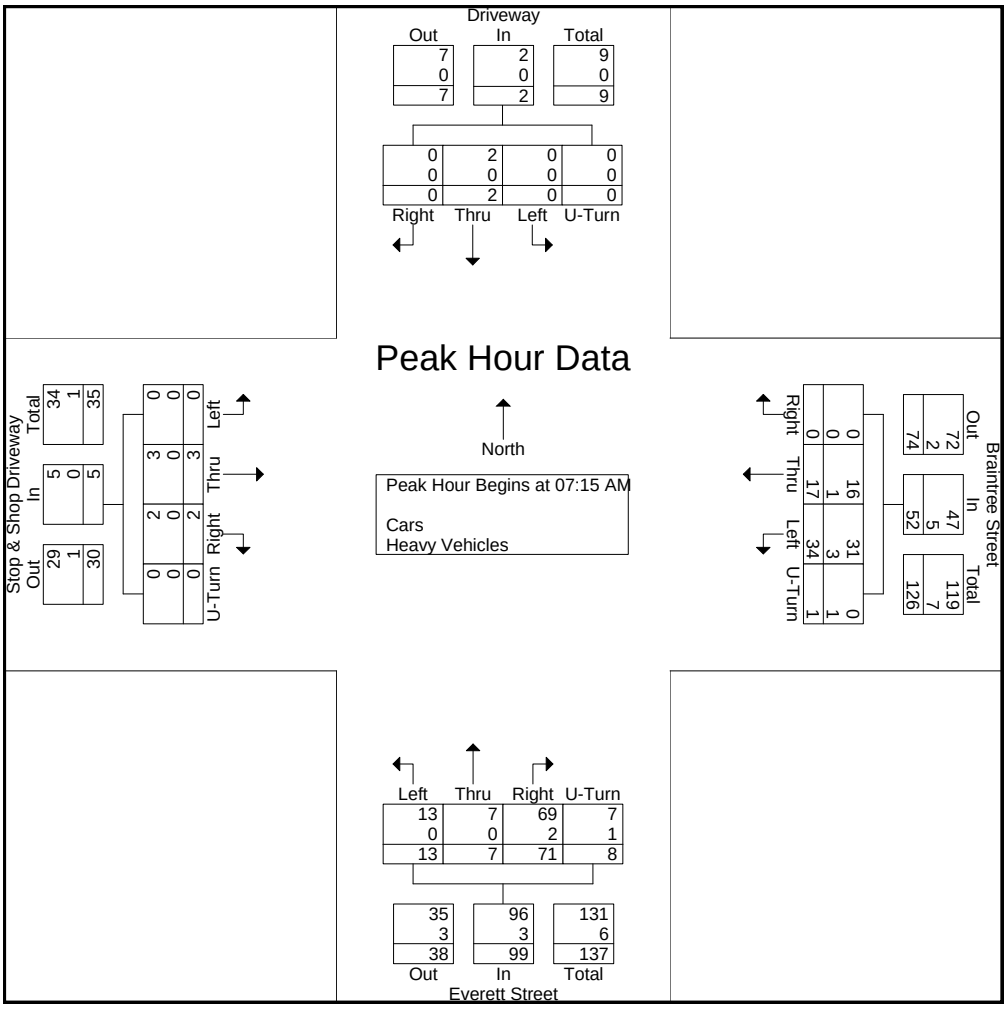
N/S: Driveway/Everett Street
E/W: Braintree Street/ Stop & Shop Drive
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 L
Site Code : 12305.00
Start Date : 5/12/2016
Page No : 1

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	4	16	0	20	14	1	0	2	17	0	0	0	0	0	37
07:30 AM	0	0	0	0	0	0	4	8	0	12	21	1	3	4	29	1	2	0	0	3	44
07:45 AM	0	0	0	0	0	0	4	7	1	12	16	2	2	1	21	0	0	0	0	0	33
08:00 AM	0	2	0	0	2	0	5	3	0	8	20	3	8	1	32	1	1	0	0	2	44
Total Volume	0	2	0	0	2	0	17	34	1	52	71	7	13	8	99	2	3	0	0	5	158
% App. Total	0	100	0	0		0	32.7	65.4	1.9		71.7	7.1	13.1	8.1		40	60	0	0		
PHF	.000	.250	.000	.000	.250	.000	.850	.531	.250	.650	.845	.583	.406	.500	.773	.500	.375	.000	.000	.417	.898
Cars	0	2	0	0	2	0	16	31	0	47	69	7	13	7	96	2	3	0	0	5	150
% Cars	0	100	0	0	100	0	94.1	91.2	0	90.4	97.2	100	100	87.5	97.0	100	100	0	0	100	94.9
Heavy Vehicles	0	0	0	0	0	0	1	3	1	5	2	0	0	1	3	0	0	0	0	0	8
% Heavy Vehicles	0	0	0	0	0	0	5.9	8.8	100	9.6	2.8	0	0	12.5	3.0	0	0	0	0	0	5.1



PRECISION
D A T A
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Email: datarequests@pdillc.com

N/S: Driveway/Everett Street
E/W: Braintree Street/ Stop & Shop Drive
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 LL
Site Code : 12305.00
Start Date : 5/12/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Driveway From North				Braintree Street From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	1	1	0	0	0	28	11	0	19	0	1	0	4	5	0	0	70
04:15 PM	1	1	0	0	1	17	11	1	23	0	4	0	0	5	0	0	64
04:30 PM	0	0	1	0	0	24	19	1	19	1	2	1	1	5	0	0	74
04:45 PM	0	0	0	0	1	24	8	0	26	2	1	0	6	5	0	0	73
Total	2	2	1	0	2	93	49	2	87	3	8	1	11	20	0	0	281
05:00 PM	1	5	0	0	0	18	8	0	26	1	0	0	1	9	0	0	69
05:15 PM	0	0	1	0	0	14	13	0	18	0	5	1	1	8	0	0	61
05:30 PM	0	3	1	0	0	16	17	0	25	1	5	1	1	12	0	0	82
05:45 PM	0	3	1	0	0	12	7	0	28	1	2	0	2	10	0	0	66
Total	1	11	3	0	0	60	45	0	97	3	12	2	5	39	0	0	278
Grand Total	3	13	4	0	2	153	94	2	184	6	20	3	16	59	0	0	559
Apprch %	15	65	20	0	0.8	61	37.5	0.8	86.4	2.8	9.4	1.4	21.3	78.7	0	0	
Total %	0.5	2.3	0.7	0	0.4	27.4	16.8	0.4	32.9	1.1	3.6	0.5	2.9	10.6	0	0	
Cars	3	13	4	0	2	150	93	2	181	6	20	3	16	57	0	0	550
% Cars	100	100	100	0	100	98	98.9	100	98.4	100	100	100	100	96.6	0	0	98.4
Heavy Vehicles	0	0	0	0	0	3	1	0	3	0	0	0	0	2	0	0	9
% Heavy Vehicles	0	0	0	0	0	2	1.1	0	1.6	0	0	0	0	3.4	0	0	1.6

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	1	24	8	0	33	26	2	1	0	29	6	5	0	0	11	73
05:00 PM	1	5	0	0	6	0	18	8	0	26	26	1	0	0	27	1	9	0	0	10	69
05:15 PM	0	0	1	0	1	0	14	13	0	27	18	0	5	1	24	1	8	0	0	9	61
05:30 PM	0	3	1	0	4	0	16	17	0	33	25	1	5	1	32	1	12	0	0	13	82
Total Volume	1	8	2	0	11	1	72	46	0	119	95	4	11	2	112	9	34	0	0	43	285
% App. Total	9.1	72.7	18.2	0		0.8	60.5	38.7	0		84.8	3.6	9.8	1.8		20.9	79.1	0	0		
PHF	.250	.400	.500	.000	.458	.250	.750	.676	.000	.902	.913	.500	.550	.500	.875	.375	.708	.000	.000	.827	.869
Cars	1	8	2	0	11	1	71	46	0	118	93	4	11	2	110	9	33	0	0	42	281
% Cars	100	100	100	0	100	100	98.6	100	0	99.2	97.9	100	100	100	98.2	100	97.1	0	0	97.7	98.6
Heavy Vehicles	0	0	0	0	0	0	1	0	0	1	2	0	0	0	2	0	1	0	0	1	4
% Heavy Vehicles	0	0	0	0	0	0	1.4	0	0	0.8	2.1	0	0	0	1.8	0	2.9	0	0	2.3	1.4

PRECISION
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N/S: Driveway/Everett Street
E/W: Braintree Street/ Stop & Shop Drive
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 LL
Site Code : 12305.00
Start Date : 5/12/2016
Page No : 1

Groups Printed- Cars

	Driveway From North				Braintree Street From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	1	1	0	0	0	27	11	0	19	0	1	0	4	5	0	0	69
04:15 PM	1	1	0	0	1	17	11	1	23	0	4	0	0	4	0	0	63
04:30 PM	0	0	1	0	0	23	19	1	19	1	2	1	1	5	0	0	73
04:45 PM	0	0	0	0	1	23	8	0	24	2	1	0	6	5	0	0	70
Total	2	2	1	0	2	90	49	2	85	3	8	1	11	19	0	0	275
05:00 PM	1	5	0	0	0	18	8	0	26	1	0	0	1	8	0	0	68
05:15 PM	0	0	1	0	0	14	13	0	18	0	5	1	1	8	0	0	61
05:30 PM	0	3	1	0	0	16	17	0	25	1	5	1	1	12	0	0	82
05:45 PM	0	3	1	0	0	12	6	0	27	1	2	0	2	10	0	0	64
Total	1	11	3	0	0	60	44	0	96	3	12	2	5	38	0	0	275
Grand Total	3	13	4	0	2	150	93	2	181	6	20	3	16	57	0	0	550
Apprch %	15	65	20	0	0.8	60.7	37.7	0.8	86.2	2.9	9.5	1.4	21.9	78.1	0	0	
Total %	0.5	2.4	0.7	0	0.4	27.3	16.9	0.4	32.9	1.1	3.6	0.5	2.9	10.4	0	0	

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	1	23	8	0	32	24	2	1	0	27	6	5	0	0	11	70
05:00 PM	1	5	0	0	6	0	18	8	0	26	26	1	0	0	27	1	8	0	0	9	68
05:15 PM	0	0	1	0	1	0	14	13	0	27	18	0	5	1	24	1	8	0	0	9	61
05:30 PM	0	3	1	0	4	0	16	17	0	33	25	1	5	1	32	1	12	0	0	13	82
Total Volume	1	8	2	0	11	1	71	46	0	118	93	4	11	2	110	9	33	0	0	42	281
% App. Total	9.1	72.7	18.2	0		0.8	60.2	39	0		84.5	3.6	10	1.8		21.4	78.6	0	0		
PHF	.250	.400	.500	.000	.458	.250	.772	.676	.000	.894	.894	.500	.550	.500	.859	.375	.688	.000	.000	.808	.857

PRECISION
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N/S: Driveway/Everett Street
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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 LL
Site Code : 12305.00
Start Date : 5/12/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Driveway From North				Braintree Street From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
04:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	3	0	0	2	0	0	0	0	1	0	0	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	3
Grand Total	0	0	0	0	0	3	1	0	3	0	0	0	0	2	0	0	9
Apprch %	0	0	0	0	0	75	25	0	100	0	0	0	0	100	0	0	
Total %	0	0	0	0	0	33.3	11.1	0	33.3	0	0	0	0	22.2	0	0	

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	3
Total Volume	0	0	0	0	0	0	3	0	0	3	2	0	0	0	2	0	1	0	0	1	6
% App. Total	0	0	0	0		0	100	0	0		100	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.750	.000	.000	.750	.250	.000	.000	.000	.250	.000	.250	.000	.000	.250	.500

PRECISION
D A T A
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N/S: Driveway/Everett Street
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File Name : 165041 LL
Site Code : 12305.00
Start Date : 5/12/2016
Page No : 1

Groups Printed- Peds and Bikes

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	1	2	0	0	1	0	2	0	0	0	4	0	0	0	0	0	0	10
04:15 PM	0	0	0	1	1	0	3	0	0	1	0	0	0	1	4	0	2	0	0	0	13
04:30 PM	0	0	0	3	2	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	8
04:45 PM	0	0	0	2	2	0	2	0	3	0	1	0	0	0	0	0	3	0	0	0	13
Total	0	0	0	7	7	0	6	2	3	3	1	0	0	5	5	0	5	0	0	0	44
05:00 PM	0	0	0	3	3	0	0	1	1	0	0	0	0	1	0	0	1	0	0	0	10
05:15 PM	0	0	0	2	4	0	0	0	1	0	0	0	0	4	1	1	0	0	0	0	13
05:30 PM	0	0	0	0	3	0	0	0	2	1	0	0	0	3	2	0	3	0	0	0	14
05:45 PM	0	0	0	0	2	0	1	2	2	1	0	0	0	0	3	0	0	0	0	0	11
Total	0	0	0	5	12	0	1	3	6	2	0	0	0	8	6	1	4	0	0	0	48
Grand Total	0	0	0	12	19	0	7	5	9	5	1	0	0	13	11	1	9	0	0	0	92
Apprch %	0	0	0	38.7	61.3	0	26.9	19.2	34.6	19.2	4	0	0	52	44	10	90	0	0	0	
Total %	0	0	0	13	20.7	0	7.6	5.4	9.8	5.4	1.1	0	0	14.1	12	1.1	9.8	0	0	0	

	Driveway From North						Braintree Street From East						Everett Street From South						Stop & Shop Driveway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:45 PM																									
04:45 PM	0	0	0	2	2	4	0	2	0	3	0	5	1	0	0	0	0	1	0	3	0	0	0	3	13
05:00 PM	0	0	0	3	3	6	0	0	1	1	0	2	0	0	0	1	0	1	0	1	0	0	0	1	10
05:15 PM	0	0	0	2	4	6	0	0	0	1	0	1	0	0	0	4	1	5	1	0	0	0	0	1	13
05:30 PM	0	0	0	0	3	3	0	0	0	2	1	3	0	0	0	3	2	5	0	3	0	0	0	3	14
Total Volume	0	0	0	7	12	19	0	2	1	7	1	11	1	0	0	8	3	12	1	7	0	0	0	8	50
% App. Total	0	0	0	36.8	63.2		0	18.2	9.1	63.6	9.1		8.3	0	0	66.7	25		12.5	87.5	0	0	0		
PHF	.000	.000	.000	.583	.750	.792	.000	.250	.250	.583	.250	.550	.250	.000	.000	.500	.375	.600	.250	.583	.000	.000	.000	.667	.893

PRECISION
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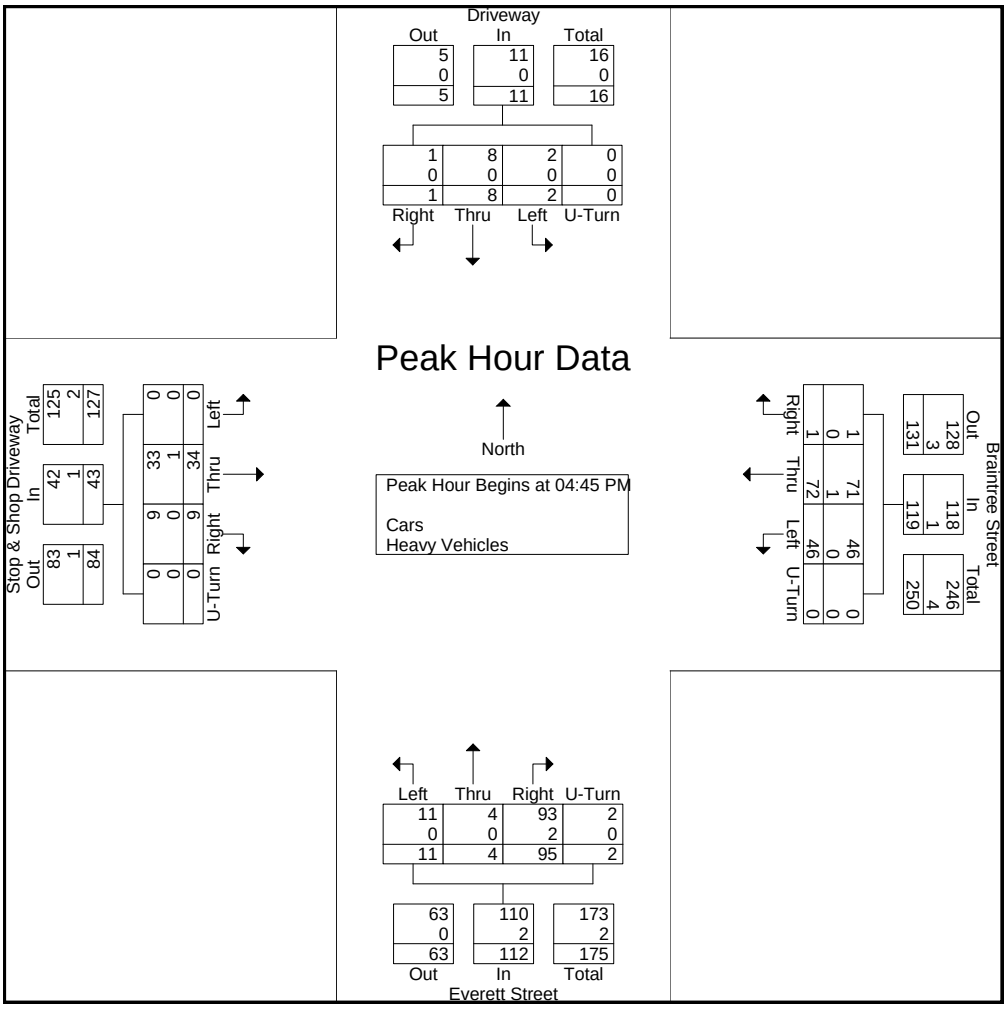
N/S: Driveway/Everett Street
E/W: Braintree Street/ Stop & Shop Drive
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 LL
Site Code : 12305.00
Start Date : 5/12/2016
Page No : 1

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	1	24	8	0	33	26	2	1	0	29	6	5	0	0	11	73
05:00 PM	1	5	0	0	6	0	18	8	0	26	26	1	0	0	27	1	9	0	0	10	69
05:15 PM	0	0	1	0	1	0	14	13	0	27	18	0	5	1	24	1	8	0	0	9	61
05:30 PM	0	3	1	0	4	0	16	17	0	33	25	1	5	1	32	1	12	0	0	13	82
Total Volume	1	8	2	0	11	1	72	46	0	119	95	4	11	2	112	9	34	0	0	43	285
% App. Total	9.1	72.7	18.2	0		0.8	60.5	38.7	0		84.8	3.6	9.8	1.8		20.9	79.1	0	0		
PHF	.250	.400	.500	.000	.458	.250	.750	.676	.000	.902	.913	.500	.550	.500	.875	.375	.708	.000	.000	.827	.869
Cars	1	8	2	0	11	1	71	46	0	118	93	4	11	2	110	9	33	0	0	42	281
% Cars	100	100	100	0	100	100	98.6	100	0	99.2	97.9	100	100	100	98.2	100	97.1	0	0	97.7	98.6
Heavy Vehicles	0	0	0	0	0	0	1	0	0	1	2	0	0	0	2	0	1	0	0	1	4
% Heavy Vehicles	0	0	0	0	0	0	1.4	0	0	0.8	2.1	0	0	0	1.8	0	2.9	0	0	2.3	1.4



PRECISION
D A T A
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N/S: Driveway/Everett Street
E/W: Braintree Street/ Stop & Shop Drive
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 LLL
Site Code : 12305.00
Start Date : 5/14/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Driveway From North				Braintree Street From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	0	13	7	0	13	0	2	0	2	3	0	0	40
11:15 AM	0	2	0	0	2	15	6	0	8	1	3	0	0	4	0	0	41
11:30 AM	0	0	0	0	1	18	9	0	16	0	0	0	4	3	1	0	52
11:45 AM	1	1	1	0	5	10	9	0	16	3	3	0	1	3	0	0	53
Total	1	3	1	0	8	56	31	0	53	4	8	0	7	13	1	0	186
12:00 PM	1	4	6	0	3	15	9	0	15	1	2	0	0	4	0	0	60
12:15 PM	0	1	1	0	1	13	9	0	10	0	4	1	1	5	0	0	46
12:30 PM	0	0	0	0	0	19	6	0	16	1	4	0	0	2	0	0	48
12:45 PM	0	0	0	0	1	11	8	0	21	0	2	0	2	1	0	0	46
Total	1	5	7	0	5	58	32	0	62	2	12	1	3	12	0	0	200
01:00 PM	0	0	0	0	1	15	8	0	18	0	2	1	1	3	0	0	49
01:15 PM	0	0	0	0	0	10	15	0	10	2	6	0	1	2	1	0	47
01:30 PM	1	0	0	0	2	11	6	0	17	1	5	1	0	7	0	0	51
01:45 PM	0	0	1	0	2	13	6	0	13	1	4	1	0	2	0	0	43
Total	1	0	1	0	5	49	35	0	58	4	17	3	2	14	1	0	190
Grand Total	3	8	9	0	18	163	98	0	173	10	37	4	12	39	2	0	576
Apprch %	15	40	45	0	6.5	58.4	35.1	0	77.2	4.5	16.5	1.8	22.6	73.6	3.8	0	
Total %	0.5	1.4	1.6	0	3.1	28.3	17	0	30	1.7	6.4	0.7	2.1	6.8	0.3	0	
Cars	3	8	9	0	18	162	97	0	169	10	37	4	12	38	2	0	569
% Cars	100	100	100	0	100	99.4	99	0	97.7	100	100	100	100	97.4	100	0	98.8
Heavy Vehicles	0	0	0	0	0	1	1	0	4	0	0	0	0	1	0	0	7
% Heavy Vehicles	0	0	0	0	0	0.6	1	0	2.3	0	0	0	0	2.6	0	0	1.2

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	0	0	0	0	0	1	18	9	0	28	16	0	0	0	16	4	3	1	0	8	52
11:45 AM	1	1	1	0	3	5	10	9	0	24	16	3	3	0	22	1	3	0	0	4	53
12:00 PM	1	4	6	0	11	3	15	9	0	27	15	1	2	0	18	0	4	0	0	4	60
12:15 PM	0	1	1	0	2	1	13	9	0	23	10	0	4	1	15	1	5	0	0	6	46
Total Volume	2	6	8	0	16	10	56	36	0	102	57	4	9	1	71	6	15	1	0	22	211
% App. Total	12.5	37.5	50	0		9.8	54.9	35.3	0		80.3	5.6	12.7	1.4		27.3	68.2	4.5	0		
PHF	.500	.375	.333	.000	.364	.500	.778	1.00	.000	.911	.891	.333	.563	.250	.807	.375	.750	.250	.000	.688	.879
Cars	2	6	8	0	16	10	56	35	0	101	57	4	9	1	71	6	14	1	0	21	209
% Cars	100	100	100	0	100	100	100	97.2	0	99.0	100	100	100	100	100	100	93.3	100	0	95.5	99.1
Heavy Vehicles	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2
% Heavy Vehicles	0	0	0	0	0	0	0	2.8	0	1.0	0	0	0	0	0	0	6.7	0	0	4.5	0.9

PRECISION
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N/S: Driveway/Everett Street
E/W: Braintree Street/ Stop & Shop Drive
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 LLL
Site Code : 12305.00
Start Date : 5/14/2016
Page No : 1

Groups Printed- Cars

	Driveway From North				Braintree Street From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	0	13	7	0	10	0	2	0	2	3	0	0	37
11:15 AM	0	2	0	0	2	14	6	0	8	1	3	0	0	4	0	0	40
11:30 AM	0	0	0	0	1	18	9	0	16	0	0	0	4	2	1	0	51
11:45 AM	1	1	1	0	5	10	9	0	16	3	3	0	1	3	0	0	53
Total	1	3	1	0	8	55	31	0	50	4	8	0	7	12	1	0	181
12:00 PM	1	4	6	0	3	15	9	0	15	1	2	0	0	4	0	0	60
12:15 PM	0	1	1	0	1	13	8	0	10	0	4	1	1	5	0	0	45
12:30 PM	0	0	0	0	0	19	6	0	16	1	4	0	0	2	0	0	48
12:45 PM	0	0	0	0	1	11	8	0	20	0	2	0	2	1	0	0	45
Total	1	5	7	0	5	58	31	0	61	2	12	1	3	12	0	0	198
01:00 PM	0	0	0	0	1	15	8	0	18	0	2	1	1	3	0	0	49
01:15 PM	0	0	0	0	0	10	15	0	10	2	6	0	1	2	1	0	47
01:30 PM	1	0	0	0	2	11	6	0	17	1	5	1	0	7	0	0	51
01:45 PM	0	0	1	0	2	13	6	0	13	1	4	1	0	2	0	0	43
Total	1	0	1	0	5	49	35	0	58	4	17	3	2	14	1	0	190
Grand Total	3	8	9	0	18	162	97	0	169	10	37	4	12	38	2	0	569
Apprch %	15	40	45	0	6.5	58.5	35	0	76.8	4.5	16.8	1.8	23.1	73.1	3.8	0	
Total %	0.5	1.4	1.6	0	3.2	28.5	17	0	29.7	1.8	6.5	0.7	2.1	6.7	0.4	0	

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	0	0	0	0	0	1	18	9	0	28	16	0	0	0	16	4	2	1	0	7	51
11:45 AM	1	1	1	0	3	5	10	9	0	24	16	3	3	0	22	1	3	0	0	4	53
12:00 PM	1	4	6	0	11	3	15	9	0	27	15	1	2	0	18	0	4	0	0	4	60
12:15 PM	0	1	1	0	2	1	13	8	0	22	10	0	4	1	15	1	5	0	0	6	45
Total Volume	2	6	8	0	16	10	56	35	0	101	57	4	9	1	71	6	14	1	0	21	209
% App. Total	12.5	37.5	50	0		9.9	55.4	34.7	0		80.3	5.6	12.7	1.4		28.6	66.7	4.8	0		
PHF	.500	.375	.333	.000	.364	.500	.778	.972	.000	.902	.891	.333	.563	.250	.807	.375	.700	.250	.000	.750	.871

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E/W: Braintree Street/ Stop & Shop Drive
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 LLL
Site Code : 12305.00
Start Date : 5/14/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Driveway From North				Braintree Street From East				Everett Street From South				Stop & Shop Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
11:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	3	0	0	0	0	1	0	0	5
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	1	0	4	0	0	0	0	1	0	0	7
Apprch %	0	0	0	0	0	50	50	0	100	0	0	0	0	100	0	0	
Total %	0	0	0	0	0	14.3	14.3	0	57.1	0	0	0	0	14.3	0	0	

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	3
11:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	0	1	3	0	0	0	3	0	1	0	0	1	5
% App. Total	0	0	0	0		0	100	0	0		100	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.250	.000	.000	.000	.250	.000	.250	.000	.000	.250	.417

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 LLL
Site Code : 12305.00
Start Date : 5/14/2016
Page No : 1

Groups Printed- Peds and Bikes

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	1	0	0	0	7
11:15 AM	0	0	0	1	1	0	1	0	0	1	0	0	0	2	2	0	0	0	0	0	8
11:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	1	0	0	0	4
11:45 AM	0	0	0	3	2	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	8
Total	0	0	0	4	3	0	2	0	0	1	0	0	0	9	5	0	3	0	0	0	27
12:00 PM	0	0	0	0	4	0	1	0	0	0	0	0	0	4	6	0	0	0	0	0	15
12:15 PM	0	0	0	2	4	0	2	0	0	0	0	0	0	5	4	0	1	0	0	0	18
12:30 PM	0	0	0	3	0	0	0	0	0	0	1	0	0	1	1	0	1	0	0	0	7
12:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	4
Total	0	0	0	6	8	0	3	0	0	0	1	0	0	12	12	0	2	0	0	0	44
01:00 PM	0	0	0	0	1	0	0	0	0	0	0	1	0	1	4	0	1	0	0	0	8
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
01:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	8
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	6
Total	0	0	0	1	1	0	0	0	0	0	0	1	0	15	5	0	1	0	0	0	24
Grand Total	0	0	0	11	12	0	5	0	0	1	1	1	0	36	22	0	6	0	0	0	95
Apprch %	0	0	0	47.8	52.2	0	83.3	0	0	16.7	1.7	1.7	0	60	36.7	0	100	0	0	0	
Total %	0	0	0	11.6	12.6	0	5.3	0	0	1.1	1.1	1.1	0	37.9	23.2	0	6.3	0	0	0	

	Driveway From North						Braintree Street From East						Everett Street From South						Stop & Shop Driveway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 11:45 AM																									
11:45 AM	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	2	2	0	1	0	0	0	1	8
12:00 PM	0	0	0	0	4	4	0	1	0	0	0	1	0	0	0	4	6	10	0	0	0	0	0	0	15
12:15 PM	0	0	0	2	4	6	0	2	0	0	0	2	0	0	0	5	4	9	0	1	0	0	0	1	18
12:30 PM	0	0	0	3	0	3	0	0	0	0	0	0	1	0	0	1	1	3	0	1	0	0	0	1	7
Total Volume	0	0	0	8	10	18	0	3	0	0	0	3	1	0	0	10	13	24	0	3	0	0	0	3	48
% App. Total	0	0	0	44.4	55.6		0	100	0	0	0		4.2	0	0	41.7	54.2		0	100	0	0	0		
PHF	.000	.000	.000	.667	.625	.750	.000	.375	.000	.000	.000	.375	.250	.000	.000	.500	.542	.600	.000	.750	.000	.000	.000	.750	.667

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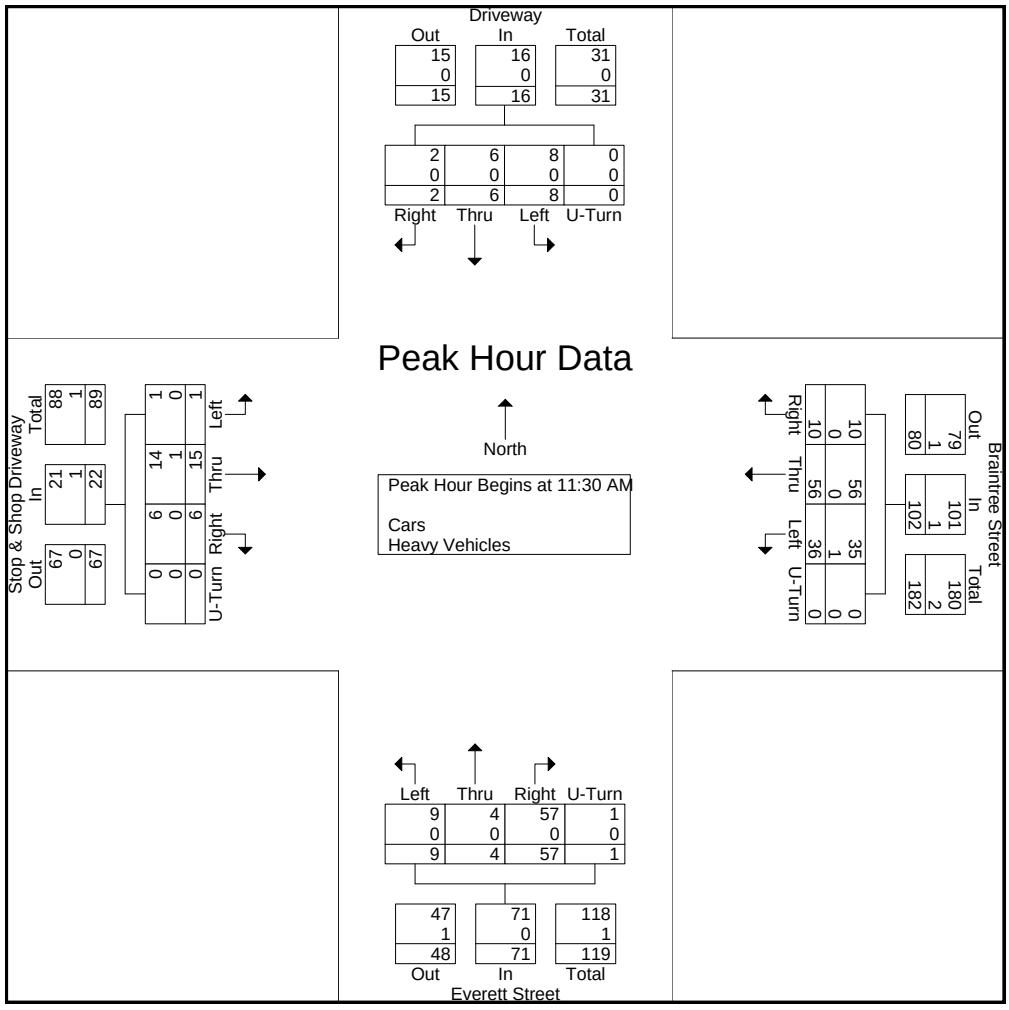
N/S: Driveway/Everett Street
E/W: Braintree Street/ Stop & Shop Drive
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 LLL
Site Code : 12305.00
Start Date : 5/14/2016
Page No : 1

	Driveway From North					Braintree Street From East					Everett Street From South					Stop & Shop Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	0	0	0	0	0	1	18	9	0	28	16	0	0	0	16	4	3	1	0	8	52
11:45 AM	1	1	1	0	3	5	10	9	0	24	16	3	3	0	22	1	3	0	0	4	53
12:00 PM	1	4	6	0	11	3	15	9	0	27	15	1	2	0	18	0	4	0	0	4	60
12:15 PM	0	1	1	0	2	1	13	9	0	23	10	0	4	1	15	1	5	0	0	6	46
Total Volume	2	6	8	0	16	10	56	36	0	102	57	4	9	1	71	6	15	1	0	22	211
% App. Total	12.5	37.5	50	0		9.8	54.9	35.3	0		80.3	5.6	12.7	1.4		27.3	68.2	4.5	0		
PHF	.500	.375	.333	.000	.364	.500	.778	1.00	.000	.911	.891	.333	.563	.250	.807	.375	.750	.250	.000	.688	.879
Cars	2	6	8	0	16	10	56	35	0	101	57	4	9	1	71	6	14	1	0	21	209
% Cars	100	100	100	0	100	100	100	97.2	0	99.0	100	100	100	100	100	100	93.3	100	0	95.5	99.1
Heavy Vehicles	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2
% Heavy Vehicles	0	0	0	0	0	0	0	2.8	0	1.0	0	0	0	0	0	0	6.7	0	0	4.5	0.9



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E/W: Driveway/ Everett Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 M
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Everett Street From North				Driveway From East				Everett Street From South				Everett Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	5	1	0	0	0	1	0	0	0	7	72	0	38	0	9	0	133
07:15 AM	3	2	0	0	0	1	0	0	0	7	73	0	43	0	7	0	136
07:30 AM	7	0	0	0	1	0	0	0	0	13	97	0	57	0	17	0	192
07:45 AM	8	1	0	0	0	1	0	0	0	12	115	0	55	1	10	0	203
Total	23	4	0	0	1	3	0	0	0	39	357	0	193	1	43	0	664
08:00 AM	5	5	0	0	1	0	0	0	0	12	114	0	48	1	11	0	197
08:15 AM	5	5	0	0	0	1	1	0	0	13	144	0	58	0	10	0	237
08:30 AM	5	5	1	0	0	0	1	0	0	16	123	0	56	0	14	0	221
08:45 AM	5	5	0	0	0	0	0	0	0	16	97	0	59	0	8	0	190
Total	20	20	1	0	1	1	2	0	0	57	478	0	221	1	43	0	845
Grand Total	43	24	1	0	2	4	2	0	0	96	835	0	414	2	86	0	1509
Apprch %	63.2	35.3	1.5	0	25	50	25	0	0	10.3	89.7	0	82.5	0.4	17.1	0	
Total %	2.8	1.6	0.1	0	0.1	0.3	0.1	0	0	6.4	55.3	0	27.4	0.1	5.7	0	
Cars	43	22	1	0	2	4	2	0	0	94	810	0	391	2	83	0	1454
% Cars	100	91.7	100	0	100	100	100	0	0	97.9	97	0	94.4	100	96.5	0	96.4
Heavy Vehicles	0	2	0	0	0	0	0	0	0	2	25	0	23	0	3	0	55
% Heavy Vehicles	0	8.3	0	0	0	0	0	0	0	2.1	3	0	5.6	0	3.5	0	3.6

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	8	1	0	0	9	0	1	0	0	1	0	12	115	0	127	55	1	10	0	66	203
08:00 AM	5	5	0	0	10	1	0	0	0	1	0	12	114	0	126	48	1	11	0	60	197
08:15 AM	5	5	0	0	10	0	1	1	0	2	0	13	144	0	157	58	0	10	0	68	237
08:30 AM	5	5	1	0	11	0	0	1	0	1	0	16	123	0	139	56	0	14	0	70	221
Total Volume	23	16	1	0	40	1	2	2	0	5	0	53	496	0	549	217	2	45	0	264	858
% App. Total	57.5	40	2.5	0		20	40	40	0		0	9.7	90.3	0		82.2	0.8	17	0		
PHF	.719	.800	.250	.000	.909	.250	.500	.500	.000	.625	.000	.828	.861	.000	.874	.935	.500	.804	.000	.943	.905
Cars	23	14	1	0	38	1	2	2	0	5	0	52	489	0	541	208	2	43	0	253	837
% Cars	100	87.5	100	0	95.0	100	100	100	0	100	0	98.1	98.6	0	98.5	95.9	100	95.6	0	95.8	97.6
Heavy Vehicles	0	2	0	0	2	0	0	0	0	0	0	1	7	0	8	9	0	2	0	11	21
% Heavy Vehicles	0	12.5	0	0	5.0	0	0	0	0	0	0	1.9	1.4	0	1.5	4.1	0	4.4	0	4.2	2.4

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E/W: Driveway/ Everett Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 M
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Everett Street From North				Driveway From East				Everett Street From South				Everett Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	5	1	0	0	0	1	0	0	0	7	66	0	38	0	8	0	126
07:15 AM	3	2	0	0	0	1	0	0	0	7	70	0	37	0	7	0	127
07:30 AM	7	0	0	0	1	0	0	0	0	12	95	0	51	0	17	0	183
07:45 AM	8	1	0	0	0	1	0	0	0	12	111	0	49	1	9	0	192
Total	23	4	0	0	1	3	0	0	0	38	342	0	175	1	41	0	628
08:00 AM	5	4	0	0	1	0	0	0	0	12	113	0	47	1	11	0	194
08:15 AM	5	4	0	0	0	1	1	0	0	12	142	0	56	0	10	0	231
08:30 AM	5	5	1	0	0	0	1	0	0	16	123	0	56	0	13	0	220
08:45 AM	5	5	0	0	0	0	0	0	0	16	90	0	57	0	8	0	181
Total	20	18	1	0	1	1	2	0	0	56	468	0	216	1	42	0	826
Grand Total	43	22	1	0	2	4	2	0	0	94	810	0	391	2	83	0	1454
Apprch %	65.2	33.3	1.5	0	25	50	25	0	0	10.4	89.6	0	82.1	0.4	17.4	0	
Total %	3	1.5	0.1	0	0.1	0.3	0.1	0	0	6.5	55.7	0	26.9	0.1	5.7	0	

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	8	1	0	0	9	0	1	0	0	1	0	12	111	0	123	49	1	9	0	59	192
08:00 AM	5	4	0	0	9	1	0	0	0	1	0	12	113	0	125	47	1	11	0	59	194
08:15 AM	5	4	0	0	9	0	1	1	0	2	0	12	142	0	154	56	0	10	0	66	231
08:30 AM	5	5	1	0	11	0	0	1	0	1	0	16	123	0	139	56	0	13	0	69	220
Total Volume	23	14	1	0	38	1	2	2	0	5	0	52	489	0	541	208	2	43	0	253	837
% App. Total	60.5	36.8	2.6	0		20	40	40	0		0	9.6	90.4	0		82.2	0.8	17	0		
PHF	.719	.700	.250	.000	.864	.250	.500	.500	.000	.625	.000	.813	.861	.000	.878	.929	.500	.827	.000	.917	.906

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 M
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Everett Street From North				Driveway From East				Everett Street From South				Everett Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	1	0	7
07:15 AM	0	0	0	0	0	0	0	0	0	0	3	0	6	0	0	0	9
07:30 AM	0	0	0	0	0	0	0	0	0	1	2	0	6	0	0	0	9
07:45 AM	0	0	0	0	0	0	0	0	0	0	4	0	6	0	1	0	11
Total	0	0	0	0	0	0	0	0	0	1	15	0	18	0	2	0	36
08:00 AM	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	3
08:15 AM	0	1	0	0	0	0	0	0	0	1	2	0	2	0	0	0	6
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	7	0	2	0	0	0	9
Total	0	2	0	0	0	0	0	0	0	1	10	0	5	0	1	0	19
Grand Total	0	2	0	0	0	0	0	0	0	2	25	0	23	0	3	0	55
Apprch %	0	100	0	0	0	0	0	0	0	7.4	92.6	0	88.5	0	11.5	0	
Total %	0	3.6	0	0	0	0	0	0	0	3.6	45.5	0	41.8	0	5.5	0	

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	0	0	6	0	6	0	0	1	0	1	7
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	6	0	0	0	6	9
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	6	0	0	0	6	9
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	6	0	1	0	7	11
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	15	0	16	18	0	2	0	20	36
% App. Total	0	0	0	0		0	0	0	0		0	6.2	93.8	0		90	0	10	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.625	.000	.667	.750	.000	.500	.000	.714	.818

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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 M
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Peds and Bikes

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	3	2	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	8
07:15 AM	0	0	0	1	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	6
07:30 AM	0	0	0	2	1	0	0	0	2	1	0	0	0	1	0	0	0	0	1	2	10
07:45 AM	0	0	0	5	2	0	0	0	5	1	0	0	1	0	1	0	0	0	1	1	17
Total	0	0	0	11	7	0	0	0	11	2	0	0	1	1	2	0	0	0	3	3	41
08:00 AM	0	0	0	0	3	0	0	0	1	3	0	0	1	0	0	0	0	0	0	1	9
08:15 AM	0	0	0	2	1	0	0	0	3	1	0	0	1	0	0	1	0	0	0	2	11
08:30 AM	0	0	0	3	2	0	0	0	1	2	0	0	1	4	0	1	0	0	0	3	17
08:45 AM	0	0	0	4	3	0	0	0	2	1	0	0	0	0	0	1	0	0	1	1	13
Total	0	0	0	9	9	0	0	0	7	7	0	0	3	4	0	3	0	0	1	7	50
Grand Total	0	0	0	20	16	0	0	0	18	9	0	0	4	5	2	3	0	0	4	10	91
Apprch %	0	0	0	55.6	44.4	0	0	0	66.7	33.3	0	0	36.4	45.5	18.2	17.6	0	0	23.5	58.8	
Total %	0	0	0	22	17.6	0	0	0	19.8	9.9	0	0	4.4	5.5	2.2	3.3	0	0	4.4	11	

	Everett Street From North						Driveway From East						Everett Street From South						Everett Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	5	2	7	0	0	0	5	1	6	0	0	1	0	1	2	0	0	0	1	1	2	17
08:00 AM	0	0	0	0	3	3	0	0	0	1	3	4	0	0	1	0	0	1	0	0	0	0	1	1	9
08:15 AM	0	0	0	2	1	3	0	0	0	3	1	4	0	0	1	0	0	1	1	0	0	0	2	3	11
08:30 AM	0	0	0	3	2	5	0	0	0	1	2	3	0	0	1	4	0	5	1	0	0	0	3	4	17
Total Volume	0	0	0	10	8	18	0	0	0	10	7	17	0	0	4	4	1	9	2	0	0	1	7	10	54
% App. Total	0	0	0	55.6	44.4		0	0	0	58.8	41.2		0	0	44.4	44.4	11.1		20	0	0	10	70		
PHF	.000	.000	.000	.500	.667	.643	.000	.000	.000	.500	.583	.708	.000	.000	1.00	.250	.250	.450	.500	.000	.000	.250	.583	.625	.794

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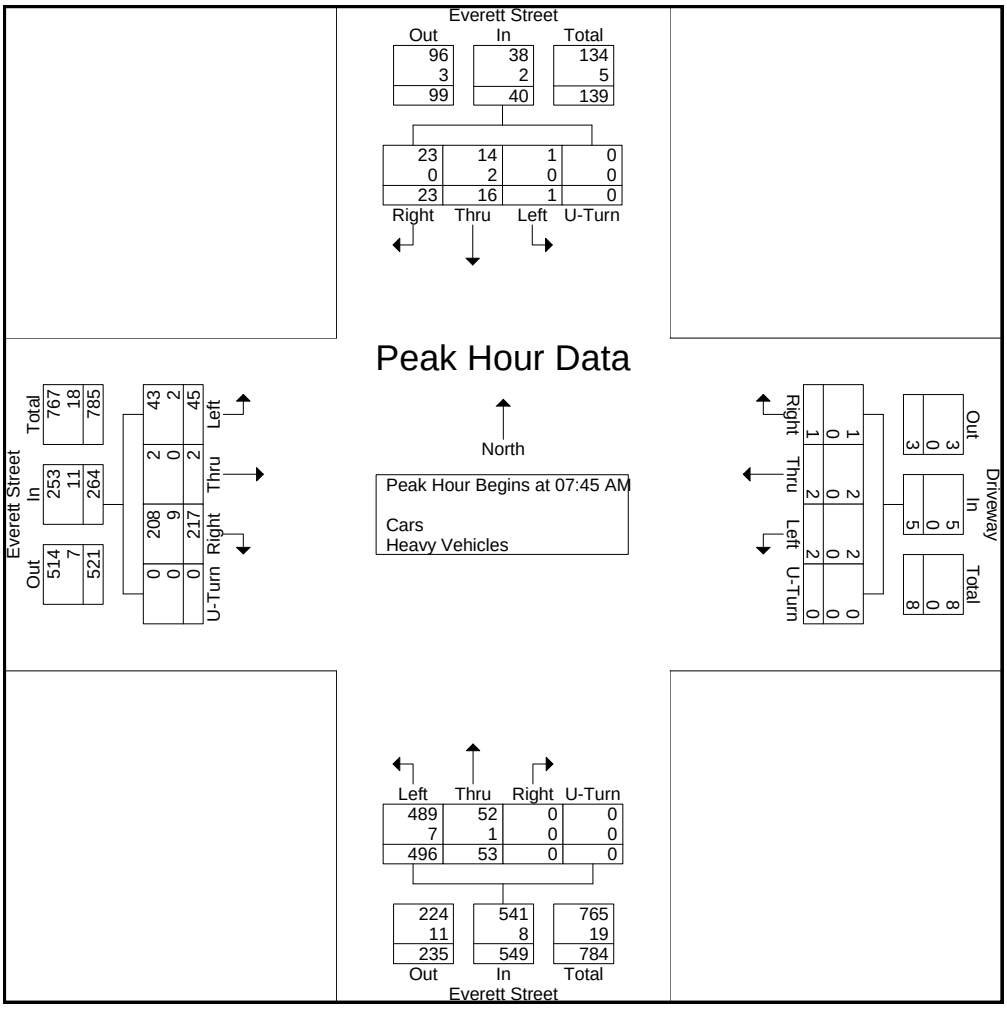
	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	8	1	0	0	9	0	1	0	0	1	0	12	115	0	127	55	1	10	0	66	203
08:00 AM	5	5	0	0	10	1	0	0	0	1	0	12	114	0	126	48	1	11	0	60	197
08:15 AM	5	5	0	0	10	0	1	1	0	2	0	13	144	0	157	58	0	10	0	68	237
08:30 AM	5	5	1	0	11	0	0	1	0	1	0	16	123	0	139	56	0	14	0	70	221
Total Volume	23	16	1	0	40	1	2	2	0	5	0	53	496	0	549	217	2	45	0	264	858
% App. Total	57.5	40	2.5	0		20	40	40	0		0	9.7	90.3	0		82.2	0.8	17	0		
PHF	.719	.800	.250	.000	.909	.250	.500	.500	.000	.625	.000	.828	.861	.000	.874	.935	.500	.804	.000	.943	.905
Cars	23	14	1	0	38	1	2	2	0	5	0	52	489	0	541	208	2	43	0	253	837
% Cars	100	87.5	100	0	95.0	100	100	100	0	100	0	98.1	98.6	0	98.5	95.9	100	95.6	0	95.8	97.6
Heavy Vehicles	0	2	0	0	2	0	0	0	0	0	0	1	7	0	8	9	0	2	0	11	21
% Heavy Vehicles	0	12.5	0	0	5.0	0	0	0	0	0	0	1.9	1.4	0	1.5	4.1	0	4.4	0	4.2	2.4



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N/S: Everett Street
E/W: Driveway/ Everett Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 MM
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Everett Street From North				Driveway From East				Everett Street From South				Everett Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	10	4	0	0	0	0	0	0	1	18	89	1	53	1	6	0	183
04:15 PM	8	1	0	0	1	0	1	0	0	13	85	0	73	1	6	0	189
04:30 PM	9	8	1	0	0	0	0	0	0	10	96	0	64	0	7	0	195
04:45 PM	10	7	0	0	0	0	0	0	1	13	107	0	76	0	12	0	226
Total	37	20	1	0	1	0	1	0	2	54	377	1	266	2	31	0	793
05:00 PM	7	9	0	0	0	0	0	0	0	9	95	0	69	0	16	0	205
05:15 PM	17	5	0	0	0	0	1	0	1	13	102	0	84	0	9	0	232
05:30 PM	10	6	0	0	0	0	0	0	0	9	100	0	98	0	9	0	232
05:45 PM	9	3	0	0	0	0	1	0	1	13	85	0	90	0	13	0	215
Total	43	23	0	0	0	0	2	0	2	44	382	0	341	0	47	0	884
Grand Total	80	43	1	0	1	0	3	0	4	98	759	1	607	2	78	0	1677
Apprch %	64.5	34.7	0.8	0	25	0	75	0	0.5	11.4	88.1	0.1	88.4	0.3	11.4	0	
Total %	4.8	2.6	0.1	0	0.1	0	0.2	0	0.2	5.8	45.3	0.1	36.2	0.1	4.7	0	
Cars	80	43	1	0	1	0	3	0	4	95	754	1	597	2	76	0	1657
% Cars	100	100	100	0	100	0	100	0	100	96.9	99.3	100	98.4	100	97.4	0	98.8
Heavy Vehicles	0	0	0	0	0	0	0	0	0	3	5	0	10	0	2	0	20
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	3.1	0.7	0	1.6	0	2.6	0	1.2

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	10	7	0	0	17	0	0	0	0	0	1	13	107	0	121	76	0	12	0	88	226
05:00 PM	7	9	0	0	16	0	0	0	0	0	0	9	95	0	104	69	0	16	0	85	205
05:15 PM	17	5	0	0	22	0	0	1	0	1	1	13	102	0	116	84	0	9	0	93	232
05:30 PM	10	6	0	0	16	0	0	0	0	0	0	9	100	0	109	98	0	9	0	107	232
Total Volume	44	27	0	0	71	0	0	1	0	1	2	44	404	0	450	327	0	46	0	373	895
% App. Total	62	38	0	0		0	0	100	0		0.4	9.8	89.8	0		87.7	0	12.3	0		
PHF	.647	.750	.000	.000	.807	.000	.000	.250	.000	.250	.500	.846	.944	.000	.930	.834	.000	.719	.000	.871	.964
Cars	44	27	0	0	71	0	0	1	0	1	2	44	400	0	446	324	0	45	0	369	887
% Cars	100	100	0	0	100	0	0	100	0	100	100	100	99.0	0	99.1	99.1	0	97.8	0	98.9	99.1
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	3	0	1	0	4	8
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	1.0	0	0.9	0.9	0	2.2	0	1.1	0.9

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508.875.0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

N/S: Everett Street
E/W: Driveway/ Everett Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 MM
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Cars

	Everett Street From North				Driveway From East				Everett Street From South				Everett Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	10	4	0	0	0	0	0	0	1	16	89	1	52	1	6	0	180
04:15 PM	8	1	0	0	1	0	1	0	0	13	84	0	69	1	5	0	183
04:30 PM	9	8	1	0	0	0	0	0	0	10	96	0	62	0	7	0	193
04:45 PM	10	7	0	0	0	0	0	0	1	13	106	0	75	0	12	0	224
Total	37	20	1	0	1	0	1	0	2	52	375	1	258	2	30	0	780
05:00 PM	7	9	0	0	0	0	0	0	0	9	95	0	69	0	15	0	204
05:15 PM	17	5	0	0	0	0	1	0	1	13	102	0	83	0	9	0	231
05:30 PM	10	6	0	0	0	0	0	0	0	9	97	0	97	0	9	0	228
05:45 PM	9	3	0	0	0	0	1	0	1	12	85	0	90	0	13	0	214
Total	43	23	0	0	0	0	2	0	2	43	379	0	339	0	46	0	877
Grand Total	80	43	1	0	1	0	3	0	4	95	754	1	597	2	76	0	1657
Apprch %	64.5	34.7	0.8	0	25	0	75	0	0.5	11.1	88.3	0.1	88.4	0.3	11.3	0	
Total %	4.8	2.6	0.1	0	0.1	0	0.2	0	0.2	5.7	45.5	0.1	36	0.1	4.6	0	

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	10	7	0	0	17	0	0	0	0	0	1	13	106	0	120	75	0	12	0	87	224
05:00 PM	7	9	0	0	16	0	0	0	0	0	0	9	95	0	104	69	0	15	0	84	204
05:15 PM	17	5	0	0	22	0	0	1	0	1	1	13	102	0	116	83	0	9	0	92	231
05:30 PM	10	6	0	0	16	0	0	0	0	0	0	9	97	0	106	97	0	9	0	106	228
Total Volume	44	27	0	0	71	0	0	1	0	1	2	44	400	0	446	324	0	45	0	369	887
% App. Total	62	38	0	0		0	0	100	0		0.4	9.9	89.7	0		87.8	0	12.2	0		
PHF	.647	.750	.000	.000	.807	.000	.000	.250	.000	.250	.500	.846	.943	.000	.929	.835	.000	.750	.000	.870	.960

PRECISION
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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 MM
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Everett Street From North				Driveway From East				Everett Street From South				Everett Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	4	0	1	0	6
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	2	2	0	8	0	1	0	13
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	4
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	3	0	2	0	1	0	7
Grand Total	0	0	0	0	0	0	0	0	0	3	5	0	10	0	2	0	20
Apprch %	0	0	0	0	0	0	0	0	0	37.5	62.5	0	83.3	0	16.7	0	
Total %	0	0	0	0	0	0	0	0	0	15	25	0	50	0	10	0	

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4	0	1	0	5	6
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	8	0	1	0	9	13
% App. Total	0	0	0	0		0	0	0	0		0	50	50	0		88.9	0	11.1	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.500	.000	.500	.500	.000	.250	.000	.450	.542

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46 Morton Street, Framingham, MA 01702
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N/S: Everett Street
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City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 MM
Site Code : 12305.00
Start Date : 5/5/2016
Page No : 1

Groups Printed- Peds and Bikes

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	6	2	0	0	0	5	0	0	0	1	1	0	0	0	0	1	4	20
04:15 PM	0	0	0	6	16	0	0	0	6	2	0	0	0	0	1	0	0	0	2	9	42
04:30 PM	0	0	0	4	10	0	0	0	1	1	0	0	0	0	1	1	0	0	2	10	30
04:45 PM	0	0	0	3	6	0	0	0	3	0	0	0	4	0	0	0	2	0	1	8	27
Total	0	0	0	19	34	0	0	0	15	3	0	0	5	1	2	1	2	0	6	31	119
05:00 PM	0	0	0	6	6	0	0	0	4	2	1	0	0	0	1	0	0	0	2	2	24
05:15 PM	0	0	0	4	3	0	1	0	3	5	0	0	1	0	0	1	0	0	2	1	21
05:30 PM	0	0	0	6	7	0	0	0	3	2	0	0	0	0	0	1	0	0	3	7	29
05:45 PM	0	0	0	5	8	0	0	0	1	5	0	0	0	0	1	1	0	0	3	7	31
Total	0	0	0	21	24	0	1	0	11	14	1	0	1	0	2	3	0	0	10	17	105
Grand Total	0	0	0	40	58	0	1	0	26	17	1	0	6	1	4	4	2	0	16	48	224
Apprch %	0	0	0	40.8	59.2	0	2.3	0	59.1	38.6	8.3	0	50	8.3	33.3	5.7	2.9	0	22.9	68.6	
Total %	0	0	0	17.9	25.9	0	0.4	0	11.6	7.6	0.4	0	2.7	0.4	1.8	1.8	0.9	0	7.1	21.4	

	Everett Street From North						Driveway From East						Everett Street From South						Everett Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	6	16	22	0	0	0	6	2	8	0	0	0	0	1	1	0	0	0	2	9	11	42
04:30 PM	0	0	0	4	10	14	0	0	0	1	1	2	0	0	0	0	1	1	1	0	0	2	10	13	30
04:45 PM	0	0	0	3	6	9	0	0	0	3	0	3	0	0	4	0	0	4	0	2	0	1	8	11	27
05:00 PM	0	0	0	6	6	12	0	0	0	4	2	6	1	0	0	0	1	2	0	0	0	2	2	4	24
Total Volume	0	0	0	19	38	57	0	0	0	14	5	19	1	0	4	0	3	8	1	2	0	7	29	39	123
% App. Total	0	0	0	33.3	66.7		0	0	0	73.7	26.3		12.5	0	50	0	37.5		2.6	5.1	0	17.9	74.4		
PHF	.000	.000	.000	.792	.594	.648	.000	.000	.000	.583	.625	.594	.250	.000	.250	.000	.750	.500	.250	.250	.000	.875	.725	.750	.732

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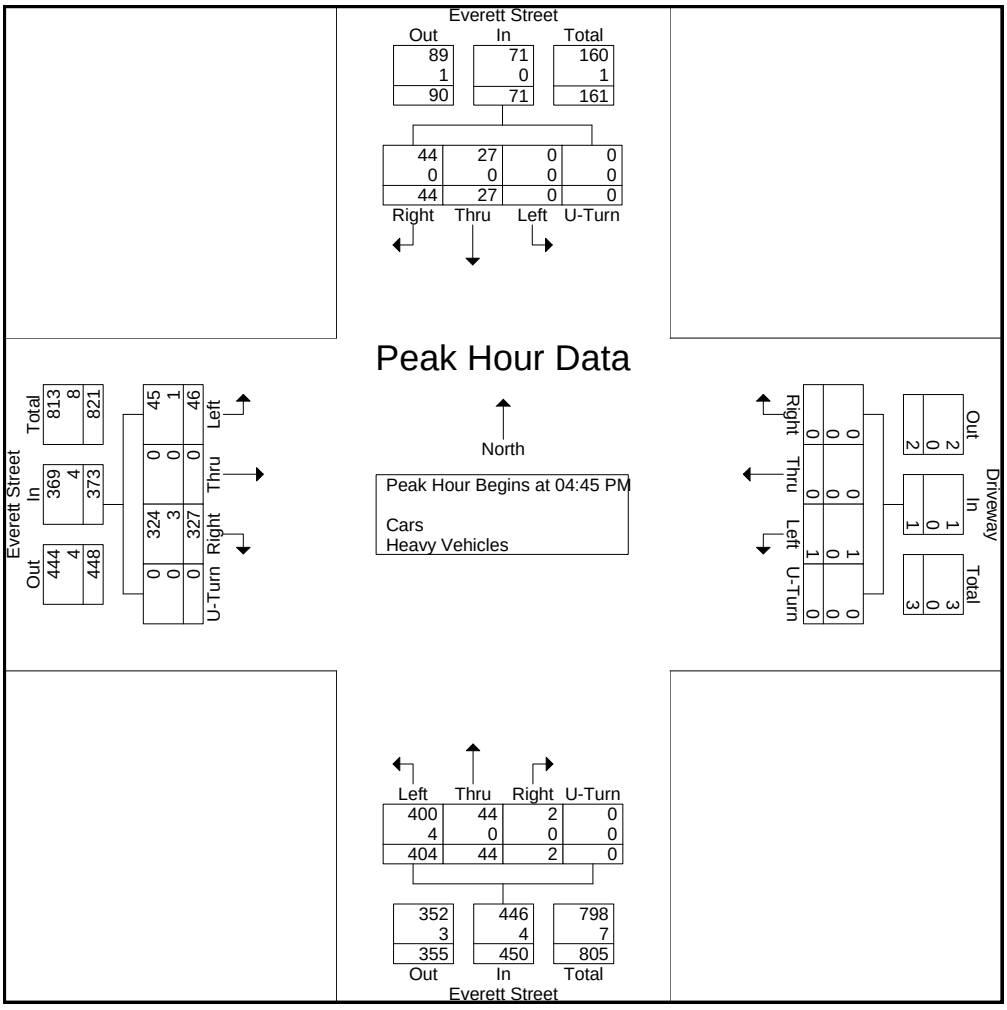
Start Date : 5/5/2016
Page No : 1

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	10	7	0	0	17	0	0	0	0	0	1	13	107	0	121	76	0	12	0	88	226
05:00 PM	7	9	0	0	16	0	0	0	0	0	0	9	95	0	104	69	0	16	0	85	205
05:15 PM	17	5	0	0	22	0	0	1	0	1	1	13	102	0	116	84	0	9	0	93	232
05:30 PM	10	6	0	0	16	0	0	0	0	0	0	9	100	0	109	98	0	9	0	107	232
Total Volume	44	27	0	0	71	0	0	1	0	1	2	44	404	0	450	327	0	46	0	373	895
% App. Total	62	38	0	0		0	0	100	0		0.4	9.8	89.8	0		87.7	0	12.3	0		
PHF	.647	.750	.000	.000	.807	.000	.000	.250	.000	.250	.500	.846	.944	.000	.930	.834	.000	.719	.000	.871	.964
Cars	44	27	0	0	71	0	0	1	0	1	2	44	400	0	446	324	0	45	0	369	887
% Cars	100	100	0	0	100	0	0	100	0	100	100	100	99.0	0	99.1	99.1	0	97.8	0	98.9	99.1
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	3	0	1	0	4	8
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	1.0	0	0.9	0.9	0	2.2	0	1.1	0.9



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File Name : 165041 MMM
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Everett Street From North				Driveway From East				Everett Street From South				Everett Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	5	5	0	0	0	0	0	0	1	11	82	1	54	0	2	0	161
11:15 AM	7	4	0	0	0	1	0	0	0	17	79	0	50	0	8	0	166
11:30 AM	2	7	0	0	0	0	0	0	0	12	70	0	50	0	6	0	147
11:45 AM	4	7	0	0	0	0	0	0	0	7	79	0	49	0	3	0	149
Total	18	23	0	0	0	1	0	0	1	47	310	1	203	0	19	0	623
12:00 PM	13	6	0	0	0	0	0	0	0	10	69	0	46	0	8	0	152
12:15 PM	8	5	0	0	0	0	0	0	0	6	80	0	65	0	4	0	168
12:30 PM	5	2	0	0	0	0	1	0	1	9	84	0	57	0	2	0	161
12:45 PM	7	10	0	0	0	0	0	0	0	15	89	0	64	0	3	0	188
Total	33	23	0	0	0	0	1	0	1	40	322	0	232	0	17	0	669
01:00 PM	10	3	0	0	0	0	0	0	0	9	69	0	66	0	2	1	160
01:15 PM	2	5	0	0	0	0	0	0	0	11	73	0	49	1	5	0	146
01:30 PM	4	6	0	1	0	0	0	0	1	16	80	0	46	1	4	0	159
01:45 PM	1	3	1	1	0	0	2	0	0	16	76	0	51	0	9	1	161
Total	17	17	1	2	0	0	2	0	1	52	298	0	212	2	20	2	626
Grand Total	68	63	1	2	0	1	3	0	3	139	930	1	647	2	56	2	1918
Apprch %	50.7	47	0.7	1.5	0	25	75	0	0.3	13	86.7	0.1	91.5	0.3	7.9	0.3	
Total %	3.5	3.3	0.1	0.1	0	0.1	0.2	0	0.2	7.2	48.5	0.1	33.7	0.1	2.9	0.1	
Cars	68	63	1	2	0	1	3	0	3	136	925	1	637	2	54	2	1898
% Cars	100	100	100	100	0	100	100	0	100	97.8	99.5	100	98.5	100	96.4	100	99
Heavy Vehicles	0	0	0	0	0	0	0	0	0	3	5	0	10	0	2	0	20
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	2.2	0.5	0	1.5	0	3.6	0	1

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	8	5	0	0	13	0	0	0	0	0	0	6	80	0	86	65	0	4	0	69	168
12:30 PM	5	2	0	0	7	0	0	1	0	1	1	9	84	0	94	57	0	2	0	59	161
12:45 PM	7	10	0	0	17	0	0	0	0	0	0	15	89	0	104	64	0	3	0	67	188
01:00 PM	10	3	0	0	13	0	0	0	0	0	0	9	69	0	78	66	0	2	1	69	160
Total Volume	30	20	0	0	50	0	0	1	0	1	1	39	322	0	362	252	0	11	1	264	677
% App. Total	60	40	0	0		0	0	100	0		0.3	10.8	89	0		95.5	0	4.2	0.4		
PHF	.750	.500	.000	.000	.735	.000	.000	.250	.000	.250	.250	.650	.904	.000	.870	.955	.000	.688	.250	.957	.900
Cars	30	20	0	0	50	0	0	1	0	1	1	38	319	0	358	250	0	11	1	262	671
% Cars	100	100	0	0	100	0	0	100	0	100	100	97.4	99.1	0	98.9	99.2	0	100	100	99.2	99.1
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	2	0	0	0	2	6
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	2.6	0.9	0	1.1	0.8	0	0	0	0.8	0.9

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508.875.0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

N/S: Everett Street
E/W: Driveway/ Everett Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 MMM
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Cars

	Everett Street From North				Driveway From East				Everett Street From South				Everett Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	5	5	0	0	0	0	0	0	1	9	82	1	53	0	2	0	158
11:15 AM	7	4	0	0	0	1	0	0	0	17	78	0	46	0	7	0	160
11:30 AM	2	7	0	0	0	0	0	0	0	12	70	0	48	0	6	0	145
11:45 AM	4	7	0	0	0	0	0	0	0	7	78	0	48	0	3	0	147
Total	18	23	0	0	0	1	0	0	1	45	308	1	195	0	18	0	610
12:00 PM	13	6	0	0	0	0	0	0	0	10	69	0	46	0	7	0	151
12:15 PM	8	5	0	0	0	0	0	0	0	6	80	0	64	0	4	0	167
12:30 PM	5	2	0	0	0	0	1	0	1	9	81	0	56	0	2	0	157
12:45 PM	7	10	0	0	0	0	0	0	0	14	89	0	64	0	3	0	187
Total	33	23	0	0	0	0	1	0	1	39	319	0	230	0	16	0	662
01:00 PM	10	3	0	0	0	0	0	0	0	9	69	0	66	0	2	1	160
01:15 PM	2	5	0	0	0	0	0	0	0	11	73	0	49	1	5	0	146
01:30 PM	4	6	0	1	0	0	0	0	1	16	80	0	46	1	4	0	159
01:45 PM	1	3	1	1	0	0	2	0	0	16	76	0	51	0	9	1	161
Total	17	17	1	2	0	0	2	0	1	52	298	0	212	2	20	2	626
Grand Total	68	63	1	2	0	1	3	0	3	136	925	1	637	2	54	2	1898
Apprch %	50.7	47	0.7	1.5	0	25	75	0	0.3	12.8	86.9	0.1	91.7	0.3	7.8	0.3	
Total %	3.6	3.3	0.1	0.1	0	0.1	0.2	0	0.2	7.2	48.7	0.1	33.6	0.1	2.8	0.1	

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	8	5	0	0	13	0	0	0	0	0	0	6	80	0	86	64	0	4	0	68	167
12:30 PM	5	2	0	0	7	0	0	1	0	1	1	9	81	0	91	56	0	2	0	58	157
12:45 PM	7	10	0	0	17	0	0	0	0	0	0	14	89	0	103	64	0	3	0	67	187
01:00 PM	10	3	0	0	13	0	0	0	0	0	0	9	69	0	78	66	0	2	1	69	160
Total Volume	30	20	0	0	50	0	0	1	0	1	1	38	319	0	358	250	0	11	1	262	671
% App. Total	60	40	0	0		0	0	100	0		0.3	10.6	89.1	0		95.4	0	4.2	0.4		
PHF	.750	.500	.000	.000	.735	.000	.000	.250	.000	.250	.250	.679	.896	.000	.869	.947	.000	.688	.250	.949	.897

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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N/S: Everett Street
E/W: Driveway/ Everett Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 MMM
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Everett Street From North				Driveway From East				Everett Street From South				Everett Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3
11:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	4	0	1	0	6
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
11:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	2	2	0	8	0	1	0	13
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	4
12:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	3	0	2	0	1	0	7
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	3	5	0	10	0	2	0	20
Apprch %	0	0	0	0	0	0	0	0	0	37.5	62.5	0	83.3	0	16.7	0	
Total %	0	0	0	0	0	0	0	0	0	15	25	0	50	0	10	0	

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	3
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4	0	1	0	5	6
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	8	0	1	0	9	13
% App. Total	0	0	0	0		0	0	0	0		0	50	50	0		88.9	0	11.1	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.500	.000	.500	.500	.000	.250	.000	.450	.542

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Email: datarequests@pdillc.com

N/S: Everett Street
E/W: Driveway/ Everett Street
City, State: Boston, MA
Client: VHB/ A. Santiago

File Name : 165041 MMM
Site Code : 12305.00
Start Date : 5/7/2016
Page No : 1

Groups Printed- Peds and Bikes

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	5	4	0	0	0	4	2	0	1	1	0	0	0	0	0	3	1	21
11:15 AM	0	0	0	3	5	0	0	0	2	2	0	0	0	0	0	0	0	0	0	1	13
11:30 AM	0	0	0	5	7	0	0	0	4	7	0	0	1	0	0	0	0	0	3	5	32
11:45 AM	0	0	0	5	10	0	0	0	2	13	0	0	0	0	0	2	1	0	7	3	43
Total	0	0	0	18	26	0	0	0	12	24	0	1	2	0	0	2	1	0	13	10	109
12:00 PM	0	0	0	3	2	0	1	0	2	3	0	0	1	0	1	0	0	0	4	2	19
12:15 PM	0	0	0	3	4	0	0	0	5	7	0	0	1	1	3	3	0	0	1	0	28
12:30 PM	0	0	0	6	5	0	0	0	2	5	0	0	0	1	0	2	0	0	1	3	25
12:45 PM	0	0	0	6	6	0	0	0	4	3	0	0	0	0	0	0	0	0	7	4	30
Total	0	0	0	18	17	0	1	0	13	18	0	0	2	2	4	5	0	0	13	9	102
01:00 PM	1	0	0	4	5	0	0	0	1	4	0	1	0	0	0	0	0	1	2	2	21
01:15 PM	0	0	0	7	4	0	0	0	6	3	0	0	1	0	1	0	0	0	4	2	28
01:30 PM	0	0	0	5	3	0	0	0	3	1	0	0	1	0	0	0	0	1	2	2	18
01:45 PM	0	0	0	3	7	0	0	0	1	4	0	0	0	1	0	0	0	0	2	4	22
Total	1	0	0	19	19	0	0	0	11	12	0	1	2	1	1	0	0	2	10	10	89
Grand Total	1	0	0	55	62	0	1	0	36	54	0	2	6	3	5	7	1	2	36	29	300
Apprch %	0.8	0	0	46.6	52.5	0	1.1	0	39.6	59.3	0	12.5	37.5	18.8	31.2	9.3	1.3	2.7	48	38.7	
Total %	0.3	0	0	18.3	20.7	0	0.3	0	12	18	0	0.7	2	1	1.7	2.3	0.3	0.7	12	9.7	

	Everett Street From North						Driveway From East						Everett Street From South						Everett Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 11:30 AM																									
11:30 AM	0	0	0	5	7	12	0	0	0	4	7	11	0	0	1	0	0	1	0	0	0	3	5	8	32
11:45 AM	0	0	0	5	10	15	0	0	0	2	13	15	0	0	0	0	0	0	2	1	0	7	3	13	43
12:00 PM	0	0	0	3	2	5	0	1	0	2	3	6	0	0	1	0	1	2	0	0	0	4	2	6	19
12:15 PM	0	0	0	3	4	7	0	0	0	5	7	12	0	0	1	1	3	5	3	0	0	1	0	4	28
Total Volume	0	0	0	16	23	39	0	1	0	13	30	44	0	0	3	1	4	8	5	1	0	15	10	31	122
% App. Total	0	0	0	41	59		0	2.3	0	29.5	68.2		0	0	37.5	12.5	50		16.1	3.2	0	48.4	32.3		
PHF	.000	.000	.000	.800	.575	.650	.000	.250	.000	.650	.577	.733	.000	.000	.750	.250	.333	.400	.417	.250	.000	.536	.500	.596	.709

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N/S: Everett Street
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City, State: Boston, MA
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File Name : 165041 MMM
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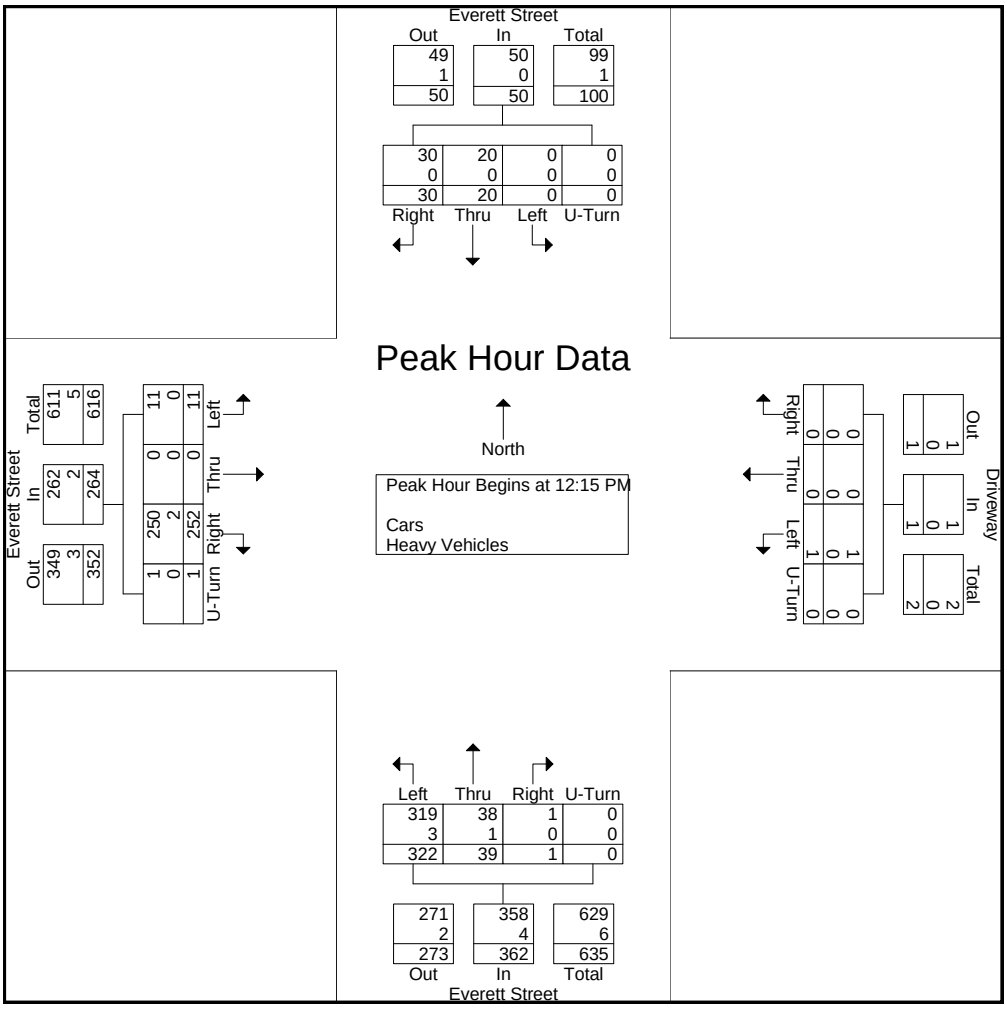
Page No : 1

	Everett Street From North					Driveway From East					Everett Street From South					Everett Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	8	5	0	0	13	0	0	0	0	0	0	6	80	0	86	65	0	4	0	69	168
12:30 PM	5	2	0	0	7	0	0	1	0	1	1	9	84	0	94	57	0	2	0	59	161
12:45 PM	7	10	0	0	17	0	0	0	0	0	0	15	89	0	104	64	0	3	0	67	188
01:00 PM	10	3	0	0	13	0	0	0	0	0	0	9	69	0	78	66	0	2	1	69	160
Total Volume	30	20	0	0	50	0	0	1	0	1	1	39	322	0	362	252	0	11	1	264	677
% App. Total	60	40	0	0		0	0	100	0		0.3	10.8	89	0		95.5	0	4.2	0.4		
PHF	.750	.500	.000	.000	.735	.000	.000	.250	.000	.250	.250	.650	.904	.000	.870	.955	.000	.688	.250	.957	.900
Cars	30	20	0	0	50	0	0	1	0	1	1	38	319	0	358	250	0	11	1	262	671
% Cars	100	100	0	0	100	0	0	100	0	100	100	97.4	99.1	0	98.9	99.2	0	100	100	99.2	99.1
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	2	0	0	0	2	6
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	2.6	0.9	0	1.1	0.8	0	0	0	0.8	0.9

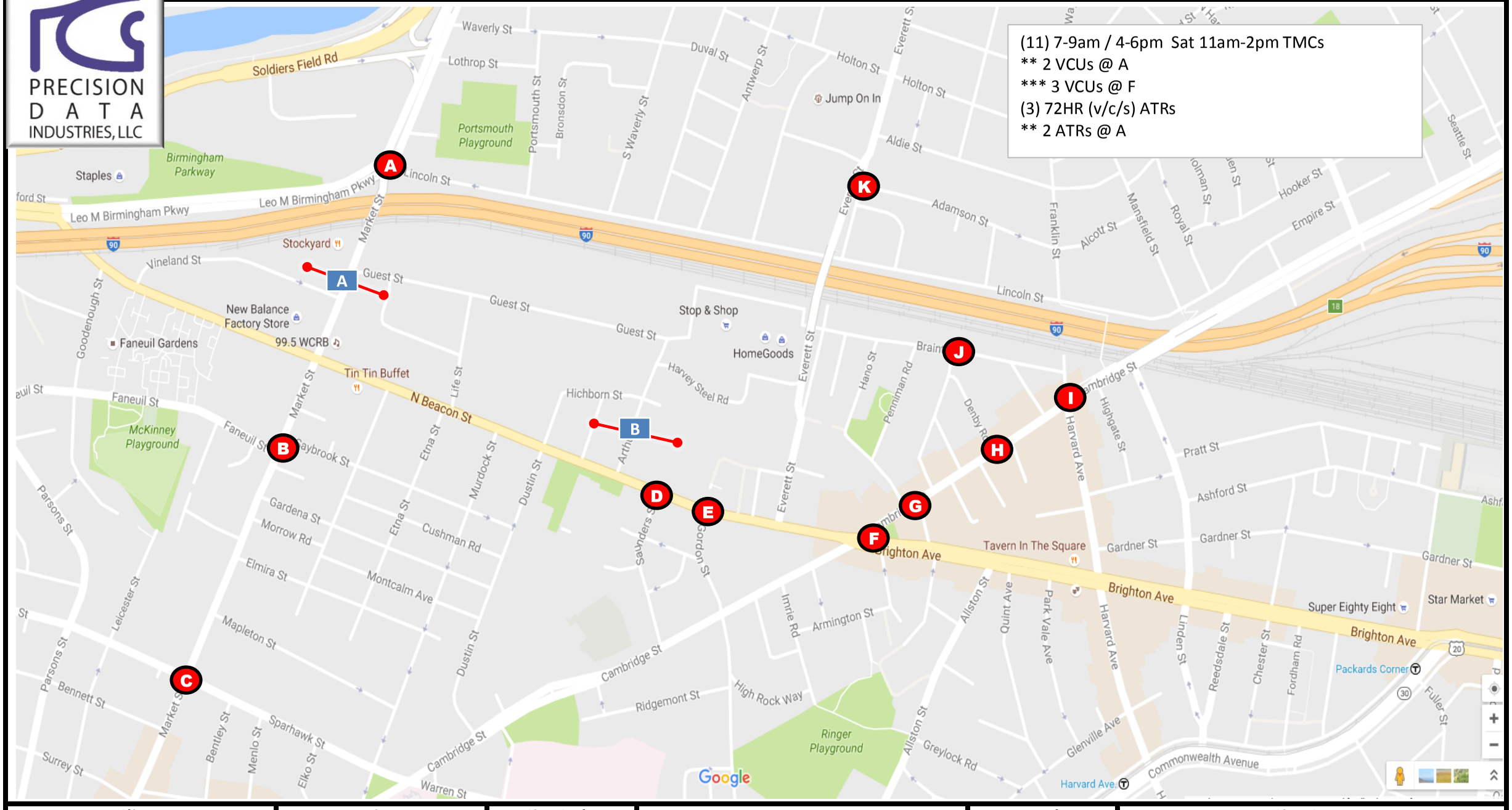


- ***October 2016***

PRECISION DATA INDUSTRIES, LLC

Location Map: 165274 Allston-Brighton, MA

Precision Data Industries, LLC 46 Morton Street, Framingham, MA 01702 ph: 508-875-0100 email: datarequests@pdillc.com



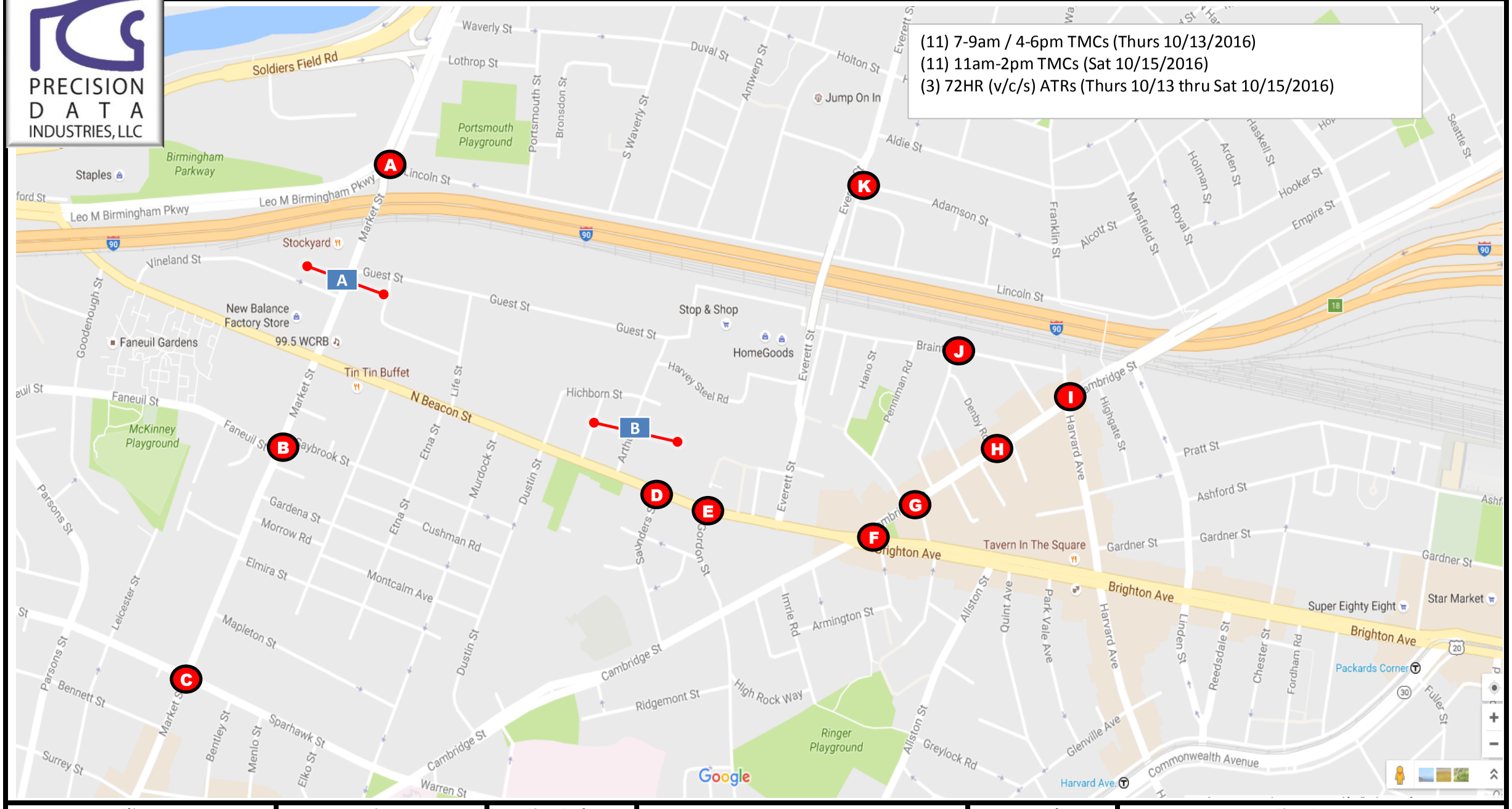
Client:	Engineer:	Site Code:	Date:	PDI Job #	City, State:
VHB	P. Dunford	12305		165274	Allston-Brighton, MA

PRECISION DATA INDUSTRIES, LLC

Location Map: 165274 Allston-Brighton, MA

Precision Data Industries, LLC 46 Morton Street, Framingham, MA 01702 ph: 508-875-0100 email: datarequests@pdillc.com

(11) 7-9am / 4-6pm TMCs (Thurs 10/13/2016)
(11) 11am-2pm TMCs (Sat 10/15/2016)
(3) 72HR (v/c/s) ATRs (Thurs 10/13 thru Sat 10/15/2016)



Client:	Engineer:	Site Code:	Date:	PDI Job #	City, State:
VHB	P. Dunford	12305	Thurs 10/13 thru Sat 10/15/2016	165274	Allston-Brighton, MA

Market Street NB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

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

165274 A NB Volume
Site Code: 12305

Start Time	A.M.	NB	P.M.												
															Thu 10/13/20 16
12:00	19		102												
12:15	10		147												
12:30	13		138												
12:45	6	48	128	515											
01:00	6		141												
01:15	12		129												
01:30	13		128												
01:45	6	37	131	529											
02:00	8		123												
02:15	7		140												
02:30	5		124												
02:45	3	23	143	530											
03:00	4		139												
03:15	5		159												
03:30	4		134												
03:45	13	26	148	580											
04:00	12		124												
04:15	5		149												
04:30	6		144												
04:45	15	38	141	558											
05:00	18		149												
05:15	22		156												
05:30	33		158												
05:45	59	132	143	606											
06:00	36		144												
06:15	69		134												
06:30	92		147												
06:45	115	312	127	552											
07:00	109		118												
07:15	158		121												
07:30	138		99												
07:45	160	565	97	435											
08:00	181		81												
08:15	174		103												
08:30	163		86												
08:45	153	671	74	344											
09:00	148		43												
09:15	147		36												
09:30	139		60												
09:45	143	577	61	200											
10:00	107		65												
10:15	121		51												
10:30	121		39												
10:45	138	487	39	194											
11:00	143		28												
11:15	125		26												
11:30	129		19												
11:45	132	529	13	86											
Total	3445		5129												
Percent			100.0 %		0.0%		0.0%								
Day Total		8574													
Peak	07:45	-	05:00	-	-	-	-	-	-	-	-	-	-	-	-
Vol.	678	-	606	-	-	-	-	-	-	-	-	-	-	-	-
P.H.F.	0.936		0.959												

Market Street NB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION D A T A INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
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165274 A NB Volume
Site Code: 12305

Start Time	A.M.	NB	P.M.												Fri 10/14/20 16
12:00	19		138												
12:15	18		142												
12:30	13		126												
12:45	16	66	137	543											
01:00	12		129												
01:15	10		143												
01:30	13		132												
01:45	6	41	133	537											
02:00	15		131												
02:15	3		138												
02:30	6		144												
02:45	3	27	129	542											
03:00	5		147												
03:15	6		158												
03:30	6		142												
03:45	9	26	147	594											
04:00	9		121												
04:15	8		135												
04:30	6		126												
04:45	17	40	153	535											
05:00	19		136												
05:15	21		145												
05:30	32		138												
05:45	40	112	138	557											
06:00	53		120												
06:15	71		106												
06:30	73		138												
06:45	109	306	125	489											
07:00	131		117												
07:15	123		107												
07:30	139		125												
07:45	161	554	123	472											
08:00	166		112												
08:15	148		83												
08:30	162		75												
08:45	150	626	68	338											
09:00	132		67												
09:15	123		86												
09:30	124		72												
09:45	142	521	66	291											
10:00	120		59												
10:15	115		55												
10:30	141		53												
10:45	119	495	40	207											
11:00	121		41												
11:15	135		50												
11:30	120		41												
11:45	139	515	28	160											
Total	3329		5265												
Percent			100.0 %		0.0%		0.0%								
Day Total		8594													
Peak	07:45	-	03:00	-	-	-	-	-	-	-	-	-	-	-	
Vol.	637	-	594	-	-	-	-	-	-	-	-	-	-	-	
P.H.F.	0.959		0.940												

Market Street NB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

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

165274 A NB Volume
Site Code: 12305

Start Time	A.M.	NB	P.M.												Sat 10/15/20 16
12:00	29		144												
12:15	22		142												
12:30	31		156												
12:45	27	109	160	602											
01:00	24		131												
01:15	18		146												
01:30	11		144												
01:45	18	71	143	564											
02:00	14		141												
02:15	18		126												
02:30	16		142												
02:45	10	58	145	554											
03:00	7		134												
03:15	11		142												
03:30	11		128												
03:45	10	39	127	531											
04:00	3		136												
04:15	7		126												
04:30	8		147												
04:45	11	29	127	536											
05:00	6		113												
05:15	9		118												
05:30	15		125												
05:45	20	50	119	475											
06:00	21		123												
06:15	32		115												
06:30	50		96												
06:45	34	137	118	452											
07:00	44		101												
07:15	40		81												
07:30	57		84												
07:45	85	226	80	346											
08:00	63		58												
08:15	72		67												
08:30	87		80												
08:45	89	311	64	269											
09:00	99		65												
09:15	104		64												
09:30	114		65												
09:45	105	422	41	235											
10:00	140		54												
10:15	132		65												
10:30	127		51												
10:45	131	530	42	212											
11:00	98		43												
11:15	154		37												
11:30	148		46												
11:45	156	556	41	167											
Total	2538		4943												
Percent			100.0 %		0.0%		0.0%								
Day Total		7481													
Peak	11:00	-	12:00	-	-	-	-	-	-	-	-	-	-	-	
Vol.	556	-	602	-	-	-	-	-	-	-	-	-	-	-	
P.H.F.	0.891		0.941												

Market Street SB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
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165274 A SB Volume
Site Code: 12305

Start Time	A.M.	SB	P.M.												Thu 10/13/20 16
12:00	36		135												
12:15	15		133												
12:30	18		151												
12:45	23	92	170	589											
01:00	13		157												
01:15	7		160												
01:30	14		165												
01:45	7	41	158	640											
02:00	13		142												
02:15	6		155												
02:30	6		148												
02:45	7	32	184	629											
03:00	3		165												
03:15	11		176												
03:30	6		178												
03:45	8	28	185	704											
04:00	4		187												
04:15	10		195												
04:30	12		179												
04:45	15	41	200	761											
05:00	12		209												
05:15	24		224												
05:30	21		205												
05:45	29	86	192	830											
06:00	56		209												
06:15	58		204												
06:30	75		190												
06:45	123	312	202	805											
07:00	134		195												
07:15	144		177												
07:30	137		135												
07:45	138	553	71	578											
08:00	138		110												
08:15	147		95												
08:30	145		121												
08:45	140	570	129	455											
09:00	157		141												
09:15	147		120												
09:30	155		115												
09:45	150	609	93	469											
10:00	154		97												
10:15	110		83												
10:30	129		84												
10:45	131	524	65	329											
11:00	129		71												
11:15	123		51												
11:30	153		41												
11:45	146	551	52	215											
Total	3439		7004												
Percent			100.0 %		0.0%		0.0%								
Day Total		10443													
Peak	09:00	-	04:45	-	-	-	-	-	-	-	-	-	-	-	
Vol.	609	-	838	-	-	-	-	-	-	-	-	-	-	-	
P.H.F.	0.970		0.935												

Market Street SB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

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

165274 A SB Volume
Site Code: 12305

Start Time	A.M.	SB	P.M.												Fri 10/14/20 16
12:00	42		145												
12:15	29		176												
12:30	33		154												
12:45	27	131	162	637											
01:00	25		160												
01:15	26		162												
01:30	20		160												
01:45	20	91	132	614											
02:00	12		164												
02:15	17		160												
02:30	5		183												
02:45	13	47	193	700											
03:00	10		187												
03:15	7		188												
03:30	6		181												
03:45	7	30	196	752											
04:00	6		198												
04:15	9		216												
04:30	13		219												
04:45	8	36	187	820											
05:00	12		187												
05:15	16		232												
05:30	30		194												
05:45	39	97	203	816											
06:00	59		201												
06:15	73		183												
06:30	112		183												
06:45	114	358	194	761											
07:00	126		174												
07:15	140		163												
07:30	127		160												
07:45	152	545	162	659											
08:00	128		142												
08:15	121		154												
08:30	135		129												
08:45	143	527	134	559											
09:00	166		104												
09:15	152		119												
09:30	149		96												
09:45	145	612	113	432											
10:00	147		112												
10:15	138		133												
10:30	154		109												
10:45	141	580	88	442											
11:00	145		81												
11:15	138		73												
11:30	121		76												
11:45	170	574	61	291											
Total	3628		7483												
Percent			100.0 %		0.0%		0.0%								
Day Total		11111													
Peak	09:00	-	05:15	-	-	-	-	-	-	-	-	-	-	-	
Vol.	612	-	830	-	-	-	-	-	-	-	-	-	-	-	
P.H.F.	0.922		0.894												

Market Street SB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

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

165274 A SB Volume
Site Code: 12305

Start Time	A.M.	SB	P.M.												Sat 10/15/20 16
12:00	48		175												
12:15	57		180												
12:30	63		183												
12:45	37	205	175	713											
01:00	47		164												
01:15	54		185												
01:30	39		171												
01:45	43	183	175	695											
02:00	40		170												
02:15	32		164												
02:30	25		158												
02:45	24	121	166	658											
03:00	9		190												
03:15	13		180												
03:30	16		177												
03:45	19	57	162	709											
04:00	10		182												
04:15	14		166												
04:30	12		190												
04:45	5	41	164	702											
05:00	4		179												
05:15	12		158												
05:30	6		165												
05:45	15	37	144	646											
06:00	16		169												
06:15	28		159												
06:30	30		143												
06:45	43	117	147	618											
07:00	43		132												
07:15	63		138												
07:30	69		130												
07:45	72	247	113	513											
08:00	79		133												
08:15	62		102												
08:30	99		108												
08:45	115	355	117	460											
09:00	119		123												
09:15	101		95												
09:30	132		92												
09:45	136	488	103	413											
10:00	129		97												
10:15	142		92												
10:30	145		82												
10:45	144	560	92	363											
11:00	158		80												
11:15	156		77												
11:30	153		64												
11:45	144	611	76	297											
Total	3022		6787												
Percent			100.0 %		0.0%		0.0%								
Day Total		9809													
Peak	10:45	-	12:00	-	-	-	-	-	-	-	-	-	-	-	
Vol.	611	-	713	-	-	-	-	-	-	-	-	-	-	-	
P.H.F.	0.967		0.974												

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

Market Street NB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford
NB

165274 A NB Class
Site Code: 12305

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/13/1														
6	1	43	1	2	1	0	0	0	0	0	0	0	0	48
01:00	2	34	0	0	1	0	0	0	0	0	0	0	0	37
02:00	0	22	0	0	1	0	0	0	0	0	0	0	0	23
03:00	0	21	2	0	1	1	0	0	1	0	0	0	0	26
04:00	0	30	3	1	1	3	0	0	0	0	0	0	0	38
05:00	0	109	19	1	3	0	0	0	0	0	0	0	0	132
06:00	4	236	55	5	8	3	0	0	1	0	0	0	0	312
07:00	16	485	37	8	15	3	0	0	1	0	0	0	0	565
08:00	16	556	68	6	17	6	0	0	2	0	0	0	0	671
09:00	8	455	77	12	19	3	0	1	1	1	0	0	0	577
10:00	2	398	66	8	10	0	1	2	0	0	0	0	0	487
11:00	7	398	80	8	24	7	0	4	1	0	0	0	0	529
12 PM	12	404	71	4	13	5	0	2	3	0	1	0	0	515
13:00	7	419	85	5	9	3	0	0	1	0	0	0	0	529
14:00	12	417	74	10	10	4	0	2	1	0	0	0	0	530
15:00	9	473	72	9	11	1	0	4	0	0	1	0	0	580
16:00	6	477	59	7	7	1	0	1	0	0	0	0	0	558
17:00	10	526	48	8	10	1	0	2	0	1	0	0	0	606
18:00	7	491	33	5	15	0	0	1	0	0	0	0	0	552
19:00	0	391	23	3	18	0	0	0	0	0	0	0	0	435
20:00	1	320	16	3	2	1	0	0	1	0	0	0	0	344
21:00	1	193	4	2	0	0	0	0	0	0	0	0	0	200
22:00	1	183	7	2	1	0	0	0	0	0	0	0	0	194
23:00	0	81	4	1	0	0	0	0	0	0	0	0	0	86
Percent	1.4%	83.5%	10.5%	1.3%	2.3%	0.5%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	11:00	09:00	11:00	11:00	10:00	11:00	08:00	09:00				08:00
Vol.	16	556	80	12	24	7	1	4	2	1				671
PM Peak	12:00	17:00	13:00	14:00	19:00	12:00		15:00	12:00	17:00	12:00			17:00
Vol.	12	526	85	10	18	5		4	3	1	1			606

PRECISION
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Market Street NB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford
NB

165274 A NB Class
Site Code: 12305

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/14/1														
6	3	54	6	2	0	1	0	0	0	0	0	0	0	66
01:00	0	40	1	0	0	0	0	0	0	0	0	0	0	41
02:00	2	22	2	0	1	0	0	0	0	0	0	0	0	27
03:00	0	22	2	1	1	0	0	0	0	0	0	0	0	26
04:00	0	36	2	0	2	0	0	0	0	0	0	0	0	40
05:00	1	89	15	1	3	3	0	0	0	0	0	0	0	112
06:00	2	245	40	3	14	0	0	2	0	0	0	0	0	306
07:00	6	480	48	5	11	2	0	0	2	0	0	0	0	554
08:00	7	522	64	7	16	7	1	2	0	0	0	0	0	626
09:00	8	432	58	6	14	2	0	1	0	0	0	0	0	521
10:00	6	408	58	8	10	1	1	2	1	0	0	0	0	495
11:00	12	381	79	11	17	5	3	4	3	0	0	0	0	515
12 PM	5	432	72	5	20	4	0	3	2	0	0	0	0	543
13:00	7	424	73	10	13	6	0	3	1	0	0	0	0	537
14:00	5	449	68	10	8	2	0	0	0	0	0	0	0	542
15:00	7	496	72	7	9	1	0	2	0	0	0	0	0	594
16:00	4	456	58	6	10	0	0	1	0	0	0	0	0	535
17:00	4	489	52	5	6	0	1	0	0	0	0	0	0	557
18:00	4	434	34	5	11	1	0	0	0	0	0	0	0	489
19:00	0	431	18	6	16	0	0	1	0	0	0	0	0	472
20:00	1	313	16	2	6	0	0	0	0	0	0	0	0	338
21:00	2	271	13	2	1	2	0	0	0	0	0	0	0	291
22:00	2	198	5	2	0	0	0	0	0	0	0	0	0	207
23:00	0	151	8	1	0	0	0	0	0	0	0	0	0	160
Percent	1.0%	84.7%	10.1%	1.2%	2.2%	0.4%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	11:00	11:00	11:00	08:00	11:00	11:00	11:00					08:00
Vol.	12	522	79	11	17	7	3	4	3					626
PM Peak	13:00	15:00	13:00	13:00	12:00	13:00	17:00	12:00	12:00					15:00
Vol.	7	496	73	10	20	6	1	3	2					594

PRECISION
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Market Street NB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford
NB

165274 A NB Class
Site Code: 12305

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/15/1														
6	0	101	3	2	3	0	0	0	0	0	0	0	0	109
01:00	0	63	6	0	1	0	0	0	1	0	0	0	0	71
02:00	0	50	5	1	2	0	0	0	0	0	0	0	0	58
03:00	0	36	0	0	2	0	0	0	1	0	0	0	0	39
04:00	0	25	1	0	2	1	0	0	0	0	0	0	0	29
05:00	1	39	8	1	1	0	0	0	0	0	0	0	0	50
06:00	0	101	27	2	6	0	1	0	0	0	0	0	0	137
07:00	3	198	18	0	6	0	1	0	0	0	0	0	0	226
08:00	2	268	33	4	4	0	0	0	0	0	0	0	0	311
09:00	0	371	37	5	8	0	0	1	0	0	0	0	0	422
10:00	9	460	44	5	9	3	0	0	0	0	0	0	0	530
11:00	8	483	45	5	12	1	2	0	0	0	0	0	0	556
12 PM	9	525	53	5	6	2	0	2	0	0	0	0	0	602
13:00	9	502	39	9	4	1	0	0	0	0	0	0	0	564
14:00	8	493	41	9	3	0	0	0	0	0	0	0	0	554
15:00	5	486	31	5	3	0	0	1	0	0	0	0	0	531
16:00	6	488	33	4	4	0	0	1	0	0	0	0	0	536
17:00	9	432	25	2	7	0	0	0	0	0	0	0	0	475
18:00	0	419	25	4	4	0	0	0	0	0	0	0	0	452
19:00	0	332	7	4	2	1	0	0	0	0	0	0	0	346
20:00	2	243	15	3	6	0	0	0	0	0	0	0	0	269
21:00	0	221	10	1	3	0	0	0	0	0	0	0	0	235
22:00	0	197	13	1	1	0	0	0	0	0	0	0	0	212
23:00	1	160	5	1	0	0	0	0	0	0	0	0	0	167
Percent	1.0%	89.5%	7.0%	1.0%	1.3%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	11:00	11:00	09:00	11:00	10:00	11:00	09:00	01:00					11:00
Vol.	9	483	45	5	12	3	2	1	1					556
PM Peak	12:00	12:00	12:00	13:00	17:00	12:00		12:00						12:00
Vol.	9	525	53	9	7	2		2						602

PRECISION
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Market Street NB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford
NB

165274 A NB Speed
Site Code: 12305

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/13/ 16	0	2	15	21	9	1	0	0	0	0	0	0	0	48	30	26
01:00	3	1	11	16	4	1	1	0	0	0	0	0	0	37	29	25
02:00	0	3	7	9	4	0	0	0	0	0	0	0	0	23	29	25
03:00	0	0	11	14	1	0	0	0	0	0	0	0	0	26	27	25
04:00	0	2	10	18	3	4	0	**1**	0	0	0	0	0	38	32	27
05:00	1	0	28	59	33	**8**	**3**	0	0	0	0	0	0	132	32	28
06:00	5	32	96	131	**39**	8	1	0	0	0	0	0	0	312	29	25
07:00	71	103	222	134	34	1	0	0	0	0	0	0	0	565	27	21
08:00	**89**	**112**	**281**	165	19	5	0	0	0	0	0	0	0	**671**	26	21
09:00	80	97	236	140	24	0	0	0	0	0	0	0	0	577	26	21
10:00	19	61	166	**195**	38	7	1	0	0	0	0	0	0	487	28	24
11:00	35	95	190	181	25	3	0	0	0	0	0	0	0	529	27	22
12 PM	36	98	215	135	25	6	0	0	0	0	0	0	0	515	27	22
13:00	45	72	204	169	35	3	0	**1**	0	0	0	0	0	529	27	22
14:00	41	68	197	184	39	1	0	0	0	0	0	0	0	530	27	23
15:00	43	70	196	197	**64**	**8**	**1**	0	**1**	0	0	0	0	580	28	23
16:00	42	**106**	233	150	27	0	0	0	0	0	0	0	0	558	27	22
17:00	**83**	92	**241**	166	24	0	0	0	0	0	0	0	0	**606**	26	21
18:00	25	62	176	**223**	61	5	0	0	0	0	0	0	0	552	28	24
19:00	20	53	176	146	37	2	1	0	0	0	0	0	0	435	28	23
20:00	6	37	156	129	13	3	0	0	0	0	0	0	0	344	27	24
21:00	0	15	77	84	22	1	1	0	0	0	0	0	0	200	28	25
22:00	0	13	60	105	16	0	0	0	0	0	0	0	0	194	28	25
23:00	0	3	26	38	17	1	1	0	0	0	0	0	0	86	30	26
Total	644	1197	3230	2809	613	68	10	2	1	0	0	0	0	8574		
%	7.5%	14.0%	37.7%	32.8%	7.1%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	10:00	06:00	05:00	05:00	04:00						08:00		
Vol.	89	112	281	195	39	8	3	1						671		
PM Peak	17:00	16:00	17:00	18:00	15:00	15:00	15:00	13:00	15:00					17:00		
Vol.	83	106	241	223	64	8	1	1	1					606		

Stats

15th Percentile :	16 MPH
50th Percentile :	22 MPH
85th Percentile :	27 MPH
95th Percentile :	31 MPH
Mean Speed(Average) :	23 MPH
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	6039
Percent in Pace :	70.4%
Number of Vehicles > 25 MPH :	2941
Percent of Vehicles > 25 MPH :	34.3%

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

Market Street NB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford
NB

165274 A NB Speed
Site Code: 12305

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/14/ 16	0	6	20	32	8	0	0	0	0	0	0	0	0	66	28	25
01:00	0	0	13	19	6	1	**1**	**1**	0	0	0	0	0	41	31	27
02:00	0	1	5	13	7	1	0	0	0	0	0	0	0	27	31	27
03:00	0	1	8	10	6	1	0	0	0	0	0	0	0	26	31	27
04:00	0	1	10	15	11	2	1	0	0	0	0	0	0	40	32	28
05:00	0	5	27	49	23	**8**	0	0	0	0	0	0	0	112	32	27
06:00	8	23	99	130	**40**	6	0	0	0	0	0	0	0	306	29	25
07:00	45	81	218	179	30	1	0	0	0	0	0	0	0	554	27	22
08:00	65	86	**236**	**207**	30	1	1	0	0	0	0	0	0	**626**	27	22
09:00	**68**	**87**	168	165	29	3	1	0	0	0	0	0	0	521	27	22
10:00	25	64	214	157	31	4	0	0	0	0	0	0	0	495	27	23
11:00	50	79	201	151	31	3	0	0	0	0	0	0	0	515	27	22
12 PM	40	74	198	190	39	2	0	0	0	0	0	0	0	543	27	23
13:00	**56**	77	179	191	32	2	0	0	0	0	0	0	0	537	27	22
14:00	35	56	179	**225**	39	8	0	0	0	0	0	0	0	542	28	24
15:00	21	71	210	194	**80**	**12**	**4**	**1**	**1**	0	0	0	0	**594**	29	24
16:00	40	100	**214**	156	22	3	0	0	0	0	0	0	0	535	27	22
17:00	49	**104**	208	167	27	2	0	0	0	0	0	0	0	557	27	22
18:00	20	51	176	182	49	9	1	1	0	0	0	0	0	489	28	24
19:00	22	52	199	155	39	5	0	0	0	0	0	0	0	472	28	23
20:00	4	19	108	146	50	8	2	1	0	0	0	0	0	338	30	26
21:00	2	16	86	140	45	2	0	0	0	0	0	0	0	291	29	26
22:00	3	8	65	98	31	2	0	0	0	0	0	0	0	207	29	26
23:00	0	4	39	84	30	1	1	1	0	0	0	0	0	160	30	27
Total	553	1066	3080	3055	735	87	12	5	1	0	0	0	0	8594		
%	6.4%	12.4%	35.8%	35.5%	8.6%	1.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	09:00	08:00	08:00	06:00	05:00	01:00	01:00						08:00		
Vol.	68	87	236	207	40	8	1	1						626		
PM Peak	13:00	17:00	16:00	14:00	15:00	15:00	15:00	15:00	15:00					15:00		
Vol.	56	104	214	225	80	12	4	1	1					594		

Stats

15th Percentile :	17 MPH
50th Percentile :	23 MPH
85th Percentile :	28 MPH
95th Percentile :	31 MPH
Mean Speed(Average) :	23 MPH
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	6135
Percent in Pace :	71.4%
Number of Vehicles > 25 MPH :	3284
Percent of Vehicles > 25 MPH :	38.2%

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Market Street NB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford
NB

165274 A NB Speed
Site Code: 12305

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/15/ 16	0	0	22	58	26	1	2	0	0	0	0	0	0	109	31	28
01:00	0	4	13	39	14	1	0	0	0	0	0	0	0	71	30	27
02:00	0	1	11	31	11	4	0	0	0	0	0	0	0	58	31	28
03:00	1	2	5	19	9	3	0	0	0	0	0	0	0	39	32	27
04:00	0	2	9	9	8	1	0	0	0	0	0	0	0	29	31	26
05:00	0	3	7	21	15	4	0	0	0	0	0	0	0	50	32	28
06:00	1	11	39	56	25	4	1	0	0	0	0	0	0	137	30	26
07:00	0	9	39	114	52	**12**	0	0	0	0	0	0	0	226	31	27
08:00	4	8	70	150	**69**	8	2	0	0	0	0	0	0	311	31	27
09:00	8	32	131	177	63	9	2	0	0	0	0	0	0	422	29	25
10:00	36	69	180	179	54	11	1	0	0	0	0	0	0	530	28	23
11:00	**37**	**81**	**185**	**188**	57	4	**3**	**1**	0	0	0	0	0	**556**	28	23
12 PM	49	**92**	**227**	186	47	1	0	0	0	0	0	0	0	**602**	27	22
13:00	**50**	73	225	159	47	9	**1**	0	0	0	0	0	0	564	28	23
14:00	34	73	171	181	**85**	**10**	0	0	0	0	0	0	0	554	29	24
15:00	36	76	182	170	58	8	1	0	0	0	0	0	0	531	28	23
16:00	23	48	192	**215**	52	5	1	0	0	0	0	0	0	536	28	24
17:00	33	64	168	176	30	3	1	0	0	0	0	0	0	475	27	23
18:00	11	53	161	178	48	1	0	0	0	0	0	0	0	452	28	24
19:00	14	27	119	140	37	8	1	0	0	0	0	0	0	346	28	25
20:00	7	16	81	116	41	8	0	0	0	0	0	0	0	269	30	25
21:00	1	15	75	107	35	2	0	0	0	0	0	0	0	235	29	26
22:00	1	4	77	90	33	7	0	0	0	0	0	0	0	212	30	26
23:00	1	4	47	79	31	4	1	0	0	0	0	0	0	167	30	26
Total	347	767	2436	2838	947	128	17	1	0	0	0	0	0	7481		
%	4.6%	10.3%	32.6%	37.9%	12.7%	1.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	11:00	11:00	08:00	07:00	11:00	11:00						11:00		
Vol.	37	81	185	188	69	12	3	1						556		
PM Peak	13:00	12:00	12:00	16:00	14:00	14:00	13:00							12:00		
Vol.	50	92	227	215	85	10	1							602		

Stats

15th Percentile :	19 MPH
50th Percentile :	24 MPH
85th Percentile :	28 MPH
95th Percentile :	32 MPH
Mean Speed(Average) :	24 MPH
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	5274
Percent in Pace :	70.5%
Number of Vehicles > 25 MPH :	3363
Percent of Vehicles > 25 MPH :	45.0%

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
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Market Street SB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford
SB

165274 A SB Class
Site Code: 12305

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/13/1														
6	0	83	5	1	3	0	0	0	0	0	0	0	0	92
01:00	0	38	2	0	1	0	0	0	0	0	0	0	0	41
02:00	0	29	1	0	2	0	0	0	0	0	0	0	0	32
03:00	0	21	3	2	1	0	0	0	1	0	0	0	0	28
04:00	0	27	7	0	4	3	0	0	0	0	0	0	0	41
05:00	1	71	9	2	3	0	0	0	0	0	0	0	0	86
06:00	7	233	44	10	11	6	0	0	1	0	0	0	0	312
07:00	9	413	97	5	24	4	0	1	0	0	0	0	0	553
08:00	8	411	96	12	30	3	1	4	4	0	1	0	0	570
09:00	6	431	110	6	46	6	1	1	2	0	0	0	0	609
10:00	2	376	92	8	38	5	1	1	1	0	0	0	0	524
11:00	15	416	86	2	23	2	2	3	1	0	1	0	0	551
12 PM	4	465	86	7	20	4	2	0	1	0	0	0	0	589
13:00	10	485	104	3	32	4	0	1	1	0	0	0	0	640
14:00	18	462	97	5	34	3	0	8	0	0	2	0	0	629
15:00	4	557	114	6	20	1	0	2	0	0	0	0	0	704
16:00	13	644	74	3	22	1	0	4	0	0	0	0	0	761
17:00	28	713	62	7	13	4	0	3	0	0	0	0	0	830
18:00	13	714	59	1	9	3	1	4	0	0	1	0	0	805
19:00	21	503	43	2	4	3	0	2	0	0	0	0	0	578
20:00	5	407	37	2	2	2	0	0	0	0	0	0	0	455
21:00	5	422	37	1	3	0	0	0	0	0	1	0	0	469
22:00	3	296	25	1	2	0	0	0	0	0	2	0	0	329
23:00	2	194	16	2	0	1	0	0	0	0	0	0	0	215
Percent	1.7%	80.5%	12.5%	0.8%	3.3%	0.5%	0.1%	0.3%	0.1%	0.0%	0.1%	0.0%	0.0%	
AM Peak	11:00	09:00	09:00	08:00	09:00	06:00	11:00	08:00	08:00		08:00			09:00
Vol.	15	431	110	12	46	6	2	4	4		1			609
PM Peak	17:00	18:00	15:00	12:00	14:00	12:00	12:00	14:00	12:00		14:00			17:00
Vol.	28	714	114	7	34	4	2	8	1		2			830

PRECISION
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Market Street SB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford
SB

165274 A SB Class
Site Code: 12305

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/14/1														
6	1	114	14	1	1	0	0	0	0	0	0	0	0	131
01:00	0	76	13	0	2	0	0	0	0	0	0	0	0	91
02:00	0	40	5	0	1	1	0	0	0	0	0	0	0	47
03:00	0	26	3	0	1	0	0	0	0	0	0	0	0	30
04:00	1	25	5	0	3	2	0	0	0	0	0	0	0	36
05:00	0	75	8	5	6	2	0	1	0	0	0	0	0	97
06:00	3	280	47	7	14	5	1	1	0	0	0	0	0	358
07:00	8	407	90	8	25	6	0	1	0	0	0	0	0	545
08:00	3	398	87	11	21	1	0	4	2	0	0	0	0	527
09:00	14	432	99	5	58	1	0	1	2	0	0	0	0	612
10:00	14	415	112	10	23	1	1	3	1	0	0	0	0	580
11:00	14	423	95	6	31	2	0	1	2	0	0	0	0	574
12 PM	10	497	95	4	22	3	0	3	3	0	0	0	0	637
13:00	12	488	80	8	19	1	1	5	0	0	0	0	0	614
14:00	17	509	121	4	34	8	1	2	4	0	0	0	0	700
15:00	7	628	87	4	19	2	0	5	0	0	0	0	0	752
16:00	28	695	71	4	16	2	0	3	0	1	0	0	0	820
17:00	15	714	63	3	12	2	2	4	0	0	1	0	0	816
18:00	8	683	50	4	10	3	1	2	0	0	0	0	0	761
19:00	9	584	51	3	10	0	0	1	0	0	1	0	0	659
20:00	8	489	53	5	2	0	0	1	0	0	1	0	0	559
21:00	7	378	41	2	4	0	0	0	0	0	0	0	0	432
22:00	3	402	32	2	3	0	0	0	0	0	0	0	0	442
23:00	3	261	21	2	4	0	0	0	0	0	0	0	0	291
Percent	1.7%	81.4%	12.1%	0.9%	3.1%	0.4%	0.1%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	09:00	10:00	08:00	09:00	07:00	06:00	08:00	08:00					09:00
Vol.	14	432	112	11	58	6	1	4	2					612
PM Peak	16:00	17:00	14:00	13:00	14:00	14:00	17:00	13:00	14:00	16:00	17:00			16:00
Vol.	28	714	121	8	34	8	2	5	4	1	1			820

PRECISION
D A T A
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Market Street SB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford
SB

165274 A SB Class
Site Code: 12305

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/15/1														
6	1	193	9	1	0	0	0	1	0	0	0	0	0	205
01:00	0	164	16	0	3	0	0	0	0	0	0	0	0	183
02:00	0	105	12	0	3	0	0	0	0	0	0	0	1	121
03:00	0	49	4	0	3	0	0	1	0	0	0	0	0	57
04:00	0	36	1	0	3	0	0	0	1	0	0	0	0	41
05:00	0	29	6	1	1	0	0	0	0	0	0	0	0	37
06:00	0	95	9	2	6	2	0	2	1	0	0	0	0	117
07:00	3	194	30	2	14	1	0	2	1	0	0	0	0	247
08:00	2	269	61	2	19	0	0	1	1	0	0	0	0	355
09:00	3	411	50	3	19	1	0	1	0	0	0	0	0	488
10:00	6	466	73	2	7	2	0	3	0	0	1	0	0	560
11:00	11	507	75	2	11	3	1	1	0	0	0	0	0	611
12 PM	8	624	65	3	7	0	0	4	1	0	1	0	0	713
13:00	12	599	63	2	14	0	0	5	0	0	0	0	0	695
14:00	12	562	67	3	9	1	0	4	0	0	0	0	0	658
15:00	10	620	58	5	13	0	0	3	0	0	0	0	0	709
16:00	17	616	60	1	7	0	0	1	0	0	0	0	0	702
17:00	10	565	55	2	11	1	1	1	0	0	0	0	0	646
18:00	6	550	51	3	5	1	1	1	0	0	0	0	0	618
19:00	7	456	37	1	11	0	0	0	0	0	0	0	1	513
20:00	2	409	41	1	6	0	0	1	0	0	0	0	0	460
21:00	5	361	41	1	3	0	0	2	0	0	0	0	0	413
22:00	6	320	33	0	3	0	0	1	0	0	0	0	0	363
23:00	0	273	21	1	1	0	0	1	0	0	0	0	0	297
Percent	1.2%	86.4%	9.6%	0.4%	1.8%	0.1%	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	11:00	09:00	08:00	11:00	11:00	10:00	04:00		10:00		02:00	11:00
Vol.	11	507	75	3	19	3	1	3	1		1		1	611
PM Peak	16:00	12:00	14:00	15:00	13:00	14:00	17:00	13:00	12:00		12:00		19:00	12:00
Vol.	17	624	67	5	14	1	1	5	1		1		1	713

PRECISION
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Market Street SB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford
SB

165274 A SB Speed
Site Code: 12305

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/13/ 16	0	0	9	43	27	10	**3**	0	0	0	0	0	0	92	33	30
01:00	0	0	5	18	11	6	1	0	0	0	0	0	0	41	34	30
02:00	0	0	3	10	15	4	0	0	0	0	0	0	0	32	33	30
03:00	0	1	3	6	14	4	0	0	0	0	0	0	0	28	33	30
04:00	0	0	3	15	7	12	3	0	**1**	0	0	0	0	41	38	32
05:00	0	1	3	20	40	18	3	**1**	0	0	0	0	0	86	36	32
06:00	4	10	63	112	87	**31**	3	1	0	0	0	0	**1**	312	33	28
07:00	5	21	129	**260**	**116**	20	2	0	0	0	0	0	0	553	31	27
08:00	11	46	154	252	83	24	0	0	0	0	0	0	0	570	30	26
09:00	**16**	**64**	**221**	235	66	6	1	0	0	0	0	0	0	**609**	28	24
10:00	9	55	184	180	71	22	2	1	0	0	0	0	0	524	30	25
11:00	11	45	198	210	73	12	1	1	0	0	0	0	0	551	29	25
12 PM	14	69	180	215	85	21	**5**	0	0	0	0	0	0	589	30	25
13:00	37	95	268	181	45	12	1	**1**	0	0	0	0	0	640	27	23
14:00	29	124	233	183	51	7	1	0	**1**	0	0	0	0	629	28	23
15:00	29	71	229	**237**	**110**	**24**	4	0	0	0	0	0	0	704	30	25
16:00	88	138	**314**	168	42	9	2	0	0	0	0	0	0	761	27	21
17:00	**186**	**222**	302	88	27	4	1	0	0	0	0	0	0	**830**	23	18
18:00	98	157	296	187	55	9	3	0	0	0	0	0	0	805	27	21
19:00	79	79	222	142	47	7	1	0	0	0	0	0	**1**	578	27	22
20:00	89	78	169	87	30	2	0	0	0	0	0	0	0	455	26	20
21:00	47	110	142	109	51	10	0	0	0	0	0	0	0	469	28	22
22:00	2	22	98	126	67	14	0	0	0	0	0	0	0	329	31	26
23:00	3	8	40	87	57	19	1	0	0	0	0	0	0	215	32	28
Total	757	1416	3468	3171	1277	307	38	5	2	0	0	0	2	10443		
%	7.2%	13.6%	33.2%	30.4%	12.2%	2.9%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	09:00	09:00	07:00	07:00	06:00	00:00	05:00	04:00				06:00	09:00		
Vol.	16	64	221	260	116	31	3	1	1				1	609		
PM Peak	17:00	17:00	16:00	15:00	15:00	15:00	12:00	13:00	14:00				19:00	17:00		
Vol.	186	222	314	237	110	24	5	1	1				1	830		

Stats

15th Percentile :	16 MPH
50th Percentile :	23 MPH
85th Percentile :	29 MPH
95th Percentile :	33 MPH
Mean Speed(Average) :	24 MPH
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	6639
Percent in Pace :	63.6%
Number of Vehicles > 25 MPH :	4168
Percent of Vehicles > 25 MPH :	39.9%

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

Market Street SB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford
SB

165274 A SB Speed
Site Code: 12305

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/14/ 16	0	2	17	60	47	5	0	0	0	0	0	0	0	131	32	28
01:00	0	0	4	35	39	11	2	0	0	0	0	0	0	91	33	30
02:00	0	1	9	17	13	4	3	0	0	0	0	0	0	47	33	29
03:00	0	0	4	7	11	6	2	0	0	0	0	0	0	30	36	31
04:00	0	0	6	10	13	5	2	0	0	0	0	0	0	36	35	30
05:00	0	0	15	35	30	15	2	0	0	0	0	0	0	97	34	30
06:00	0	9	66	145	**84**	**40**	**14**	0	0	0	0	0	0	358	34	29
07:00	15	43	187	205	72	18	3	**2**	0	0	0	0	0	545	29	25
08:00	18	48	**213**	181	53	14	0	0	0	0	0	0	0	527	28	24
09:00	**54**	**67**	210	**207**	64	9	1	0	0	0	0	0	0	**612**	28	23
10:00	11	55	196	204	79	28	7	0	0	0	0	0	0	580	30	25
11:00	11	64	195	191	83	25	4	1	0	0	0	0	0	574	30	25
12 PM	22	96	214	211	74	17	3	0	0	0	0	0	0	637	28	24
13:00	17	67	195	230	90	14	0	1	0	0	0	0	0	614	29	25
14:00	35	80	247	196	**109**	28	3	1	**1**	0	0	0	0	700	30	24
15:00	25	110	236	**258**	98	20	**5**	0	0	0	0	0	0	752	29	24
16:00	110	157	324	175	48	5	1	0	0	0	0	0	0	**820**	27	21
17:00	**153**	**203**	299	118	36	5	2	0	0	0	0	0	0	816	25	19
18:00	39	136	**337**	182	58	9	0	0	0	0	0	0	0	761	27	22
19:00	13	99	215	235	79	18	0	0	0	0	0	0	0	659	28	24
20:00	6	63	176	194	98	22	0	0	0	0	0	0	0	559	30	25
21:00	1	28	94	177	106	24	2	0	0	0	0	0	0	432	32	27
22:00	6	39	122	152	101	15	5	**2**	0	0	0	0	0	442	31	26
23:00	1	10	30	123	92	**31**	4	0	0	0	0	0	0	291	33	29
Total	537	1377	3611	3548	1577	388	65	7	1	0	0	0	0	11111		
%	4.8%	12.4%	32.5%	31.9%	14.2%	3.5%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	09:00	08:00	09:00	06:00	06:00	06:00	07:00						09:00		
Vol.	54	67	213	207	84	40	14	2						612		
PM Peak	17:00	17:00	18:00	15:00	14:00	23:00	15:00	22:00	14:00					16:00		
Vol.	153	203	337	258	109	31	5	2	1					820		

Stats

15th Percentile :	18 MPH
50th Percentile :	24 MPH
85th Percentile :	30 MPH
95th Percentile :	33 MPH
Mean Speed(Average) :	24 MPH
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	7159
Percent in Pace :	64.4%
Number of Vehicles > 25 MPH :	4876
Percent of Vehicles > 25 MPH :	43.9%

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

Market Street SB
north of N. Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford
SB

165274 A SB Speed
Site Code: 12305

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/15/ 16	0	1	20	76	81	18	7	**2**	0	0	0	0	0	205	33	30
01:00	0	2	10	53	78	33	6	1	0	0	0	0	0	183	35	31
02:00	0	1	7	34	52	22	5	0	0	0	0	0	0	121	36	31
03:00	0	0	3	21	20	10	2	0	**1**	0	0	0	0	57	36	31
04:00	0	0	3	19	10	5	4	0	0	0	0	0	0	41	36	31
05:00	0	0	4	7	15	8	2	1	0	0	0	0	0	37	37	32
06:00	0	0	14	25	48	26	4	0	0	0	0	0	0	117	36	31
07:00	2	6	26	72	90	40	**9**	2	0	0	0	0	0	247	35	30
08:00	1	11	56	142	94	**45**	5	1	0	0	0	0	0	355	33	29
09:00	1	15	118	173	**142**	34	4	1	0	0	0	0	0	488	32	28
10:00	14	53	**163**	187	103	35	4	1	0	0	0	0	0	560	31	26
11:00	**16**	**76**	163	**210**	114	27	5	0	0	0	0	0	0	**611**	31	25
12 PM	34	99	259	**231**	75	14	1	0	0	0	0	0	0	**713**	28	24
13:00	26	90	**272**	225	69	11	2	0	0	0	0	0	0	695	28	24
14:00	**37**	87	218	204	94	14	3	0	0	0	**1**	0	0	658	29	24
15:00	24	99	253	230	86	17	0	0	0	0	0	0	0	709	28	24
16:00	26	107	252	219	85	13	0	0	0	0	0	0	0	702	28	24
17:00	35	**116**	235	182	68	9	1	0	0	0	0	0	0	646	28	23
18:00	20	82	236	204	65	10	1	0	0	0	0	0	0	618	28	24
19:00	7	45	151	181	**105**	21	3	0	0	0	0	0	0	513	31	26
20:00	1	20	99	208	101	**29**	2	0	0	0	0	0	0	460	32	27
21:00	3	30	90	168	101	15	**6**	0	0	0	0	0	0	413	31	27
22:00	0	14	68	170	86	20	3	**2**	0	0	0	0	0	363	32	28
23:00	3	11	33	122	104	22	2	0	0	0	0	0	0	297	33	28
Total	250	965	2753	3363	1886	498	81	11	1	0	1	0	0	9809		
%	2.5%	9.8%	28.1%	34.3%	19.2%	5.1%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	10:00	11:00	09:00	08:00	07:00	00:00	03:00					11:00		
Vol.	16	76	163	210	142	45	9	2	1					611		
PM Peak	14:00	17:00	13:00	12:00	19:00	20:00	21:00	22:00			14:00			12:00		
Vol.	37	116	272	231	105	29	6	2			1			713		

Stats

15th Percentile :	19 MPH
50th Percentile :	25 MPH
85th Percentile :	31 MPH
95th Percentile :	35 MPH
Mean Speed(Average) :	26 MPH
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	6116
Percent in Pace :	62.4%
Number of Vehicles > 25 MPH :	5168
Percent of Vehicles > 25 MPH :	52.7%

Arthur Street
north of North Beacon Street
City, State: Brighton, MA
Client: VHB/ P. Dunford

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

165274 B Volume
Site Code: 12305

Start	SB				NB				Combined				11/3/2016 Thu
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		
12:00	3		60		1		39		4		99		
12:15	1		57		3		36		4		93		
12:30	0		60		2		30		2		90		
12:45	2	6	39	216	1	7	27	132	3	13	66	348	
01:00	0		53		0		33		0		86		
01:15	3		51		0		45		3		96		
01:30	0		46		2		33		2		79		
01:45	1	4	52	202	0	2	32	143	1	6	84	345	
02:00	1		57		0		32		1		89		
02:15	1		58		1		33		2		91		
02:30	0		62		0		39		0		101		
02:45	0	2	51	228	0	1	37	141	0	3	88	369	
03:00	1		65		1		46		2		111		
03:15	0		53		0		43		0		96		
03:30	0		66		0		34		0		100		
03:45	0	1	58	242	0	1	40	163	0	2	98	405	
04:00	0		64		0		43		0		107		
04:15	1		69		0		44		1		113		
04:30	1		68		3		44		4		112		
04:45	2	4	79	280	5	8	46	177	7	12	125	457	
05:00	0		78		1		55		1		133		
05:15	1		94		3		50		4		144		
05:30	4		90		4		52		8		142		
05:45	2	7	77	339	9	17	41	198	11	24	118	537	
06:00	3		88		6		34		9		122		
06:15	4		65		6		29		10		94		
06:30	8		64		14		31		22		95		
06:45	5	20	54	271	13	39	50	144	18	59	104	415	
07:00	10		62		25		37		35		99		
07:15	19		53		33		26		52		79		
07:30	21		44		20		30		41		74		
07:45	17	67	31	190	30	108	18	111	47	175	49	301	
08:00	13		44		47		24		60		68		
08:15	31		23		40		16		71		39		
08:30	32		25		47		19		79		44		
08:45	20	96	26	118	49	183	20	79	69	279	46	197	
09:00	31		30		62		17		93		47		
09:15	30		25		35		12		65		37		
09:30	28		20		29		8		57		28		
09:45	38	127	16	91	25	151	12	49	63	278	28	140	
10:00	31		18		39		9		70		27		
10:15	38		11		20		10		58		21		
10:30	41		10		27		2		68		12		
10:45	29	139	6	45	30	116	1	22	59	255	7	67	
11:00	38		8		37		4		75		12		
11:15	55		6		39		3		94		9		
11:30	61		3		32		1		93		4		
11:45	64	218	4	21	35	143	1	9	99	361	5	30	
Total	691		2243		776		1368		1467		3611		
Percent	47.1%		62.1%		52.9%		37.9%						
Day Total		2934				2144				5078			
Peak	11:00	-	05:15	-	08:15	-	04:45	-	11:00	-	04:45	-	-	-
Vol.	218	-	349	-	198	-	203	-	361	-	544	-	-	-
P.H.F.	0.852		0.928		0.798		0.923		0.912		0.944			

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

Arthur Street
north of North Beacon Street
City, State: Brighton, MA
Client: VHB/ P. Dunford

165274 B Volume
Site Code: 12305

Start	SB				NB				Combined				11/4/2016 Fri
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		
12:00	0		60		4		48		4		108		
12:15	1		86		1		40		2		126		
12:30	0		73		0		57		0		130		
12:45	2	3	65	284	1	6	46	191	3	9	111	475	
01:00	0		61		1		55		1		116		
01:15	0		54		0		49		0		103		
01:30	0		52		1		54		1		106		
01:45	1	1	66	233	0	2	48	206	1	3	114	439	
02:00	0		61		2		46		2		107		
02:15	2		70		1		57		3		127		
02:30	0		74		0		53		0		127		
02:45	1	3	63	268	1	4	52	208	2	7	115	476	
03:00	0		67		0		40		0		107		
03:15	1		69		0		51		1		120		
03:30	1		73		0		59		1		132		
03:45	0	2	61	270	1	1	45	195	1	3	106	465	
04:00	1		82		1		42		2		124		
04:15	0		75		1		42		1		117		
04:30	0		70		1		45		1		115		
04:45	0	1	69	296	3	6	46	175	3	7	115	471	
05:00	1		93		5		40		6		133		
05:15	1		91		6		57		7		148		
05:30	1		80		3		54		4		134		
05:45	3	6	72	336	5	19	58	209	8	25	130	545	
06:00	2		95		6		56		8		151		
06:15	6		75		11		43		17		118		
06:30	6		56		17		44		23		100		
06:45	3	17	50	276	20	54	38	181	23	71	88	457	
07:00	14		61		21		27		35		88		
07:15	18		47		18		32		36		79		
07:30	30		47		22		34		52		81		
07:45	17	79	54	209	25	86	25	118	42	165	79	327	
08:00	19		40		28		18		47		58		
08:15	23		33		49		26		72		59		
08:30	24		31		52		24		76		55		
08:45	30	96	25	129	46	175	13	81	76	271	38	210	
09:00	24		33		46		10		70		43		
09:15	30		19		41		7		71		26		
09:30	32		27		30		16		62		43		
09:45	40	126	16	95	22	139	11	44	62	265	27	139	
10:00	39		24		46		15		85		39		
10:15	45		16		42		11		87		27		
10:30	45		17		36		6		81		23		
10:45	37	166	11	68	61	185	6	38	98	351	17	106	
11:00	49		10		47		1		96		11		
11:15	49		5		29		3		78		8		
11:30	44		4		46		0		90		4		
11:45	50	192	1	20	31	153	1	5	81	345	2	25	
Total	692		2484		830		1651		1522		4135		
Percent	45.5%		60.1%		54.5%		39.9%						
Day Total		3176				2481				5657			
Peak	11:00	-	05:15	-	08:15	-	05:15	-	10:15	-	05:15	-	-	-
Vol.	192	-	338	-	193	-	225	-	362	-	563	-	-	-
P.H.F.	0.960		0.889		0.928		0.970		0.923		0.932			

Arthur Street
north of North Beacon Street
City, State: Brighton, MA
Client: VHB/ P. Dunford

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

165274 B Volume
Site Code: 12305

Start	SB				NB				Combined				11/5/2016
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Sat
12:00	1		65		1		46		2		111		
12:15	2		67		3		59		5		126		
12:30	1		71		1		53		2		124		
12:45	2	6	71	274	2	7	51	209	4	13	122	483	
01:00	1		84		0		41		1		125		
01:15	1		56		0		45		1		101		
01:30	2		63		3		41		5		104		
01:45	2	6	64	267	1	4	55	182	3	10	119	449	
02:00	1		72		1		47		2		119		
02:15	0		64		4		61		4		125		
02:30	1		78		1		54		2		132		
02:45	0	2	100	314	0	6	50	212	0	8	150	526	
03:00	0		89		0		50		0		139		
03:15	0		80		0		59		0		139		
03:30	0		72		0		42		0		114		
03:45	0	0	64	305	0	0	36	187	0	0	100	492	
04:00	0		66		0		44		0		110		
04:15	0		74		0		48		0		122		
04:30	0		54		0		38		0		92		
04:45	0	0	69	263	0	0	56	186	0	0	125	449	
05:00	0		72		0		40		0		112		
05:15	1		68		0		46		1		114		
05:30	0		56		3		30		3		86		
05:45	1	2	68	264	2	5	52	168	3	7	120	432	
06:00	1		57		3		38		4		95		
06:15	1		64		5		23		6		87		
06:30	6		64		14		31		20		95		
06:45	5	13	45	230	9	31	39	131	14	44	84	361	
07:00	9		41		8		24		17		65		
07:15	10		48		3		26		13		74		
07:30	7		29		12		28		19		57		
07:45	12	38	44	162	18	41	19	97	30	79	63	259	
08:00	13		47		15		22		28		69		
08:15	14		32		11		23		25		55		
08:30	16		35		23		15		39		50		
08:45	22	65	25	139	21	70	9	69	43	135	34	208	
09:00	27		16		24		16		51		32		
09:15	25		16		34		8		59		24		
09:30	27		19		29		8		56		27		
09:45	38	117	17	68	39	126	15	47	77	243	32	115	
10:00	44		19		42		8		86		27		
10:15	43		14		50		4		93		18		
10:30	39		11		27		9		66		20		
10:45	52	178	9	53	40	159	4	25	92	337	13	78	
11:00	40		11		49		2		89		13		
11:15	51		3		56		2		107		5		
11:30	52		2		51		4		103		6		
11:45	61	204	2	18	55	211	0	8	116	415	2	26	
Total	631		2357		660		1521		1291		3878		
Percent	48.9%		60.8%		51.1%		39.2%						
Day Total		2988				2181				5169			
Peak	11:00	-	02:30	-	11:00	-	01:45	-	11:00	-	02:30	-	-	-
Vol.	204	-	347	-	211	-	217	-	415	-	560	-	-	-
P.H.F.	0.836		0.868		0.942		0.889		0.894		0.933			

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Email: datarequests@pdillc.com

Arthur Street
north of North Beacon Street
City, State: Brighton, MA
Client: VHB/ P. Dunford
SB

165274 B Class
Site Code: 12305

Start Time	Cars	Medium Heavy	Large Heavy											Total
11/03/1														
6	5	1	0	0	0	0	0	0	0	0	0	0	0	6
01:00	3	1	0	0	0	0	0	0	0	0	0	0	0	4
02:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2
03:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00	1	2	1	0	0	0	0	0	0	0	0	0	0	4
05:00	7	0	0	0	0	0	0	0	0	0	0	0	0	7
06:00	12	8	0	0	0	0	0	0	0	0	0	0	0	20
07:00	56	11	0	0	0	0	0	0	0	0	0	0	0	67
08:00	84	10	2	0	0	0	0	0	0	0	0	0	0	96
09:00	113	13	1	0	0	0	0	0	0	0	0	0	0	127
10:00	130	8	1	0	0	0	0	0	0	0	0	0	0	139
11:00	207	9	2	0	0	0	0	0	0	0	0	0	0	218
12 PM	207	8	1	0	0	0	0	0	0	0	0	0	0	216
13:00	198	4	0	0	0	0	0	0	0	0	0	0	0	202
14:00	226	2	0	0	0	0	0	0	0	0	0	0	0	228
15:00	239	2	1	0	0	0	0	0	0	0	0	0	0	242
16:00	278	2	0	0	0	0	0	0	0	0	0	0	0	280
17:00	338	1	0	0	0	0	0	0	0	0	0	0	0	339
18:00	269	2	0	0	0	0	0	0	0	0	0	0	0	271
19:00	189	0	1	0	0	0	0	0	0	0	0	0	0	190
20:00	117	1	0	0	0	0	0	0	0	0	0	0	0	118
21:00	91	0	0	0	0	0	0	0	0	0	0	0	0	91
22:00	44	0	1	0	0	0	0	0	0	0	0	0	0	45
23:00	21	0	0	0	0	0	0	0	0	0	0	0	0	21
Total	2837	86	11	0	0	0	0	0	0	0	0	0	0	2934
Percent	96.7%	2.9%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	09:00	08:00											11:00
Vol.	207	13	2											218
PM Peak	17:00	12:00	12:00											17:00
Vol.	338	8	1											339

PRECISION
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Arthur Street
north of North Beacon Street
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SB

165274 B Class
Site Code: 12305

Start Time	Cars	Medium Heavy	Large Heavy											Total
11/04/1														
6	2	1	0	0	0	0	0	0	0	0	0	0	0	3
01:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00	2	1	0	0	0	0	0	0	0	0	0	0	0	3
03:00	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:00	4	1	1	0	0	0	0	0	0	0	0	0	0	6
06:00	11	4	2	0	0	0	0	0	0	0	0	0	0	17
07:00	69	10	0	0	0	0	0	0	0	0	0	0	0	79
08:00	90	6	0	0	0	0	0	0	0	0	0	0	0	96
09:00	116	9	1	0	0	0	0	0	0	0	0	0	0	126
10:00	152	13	1	0	0	0	0	0	0	0	0	0	0	166
11:00	179	13	0	0	0	0	0	0	0	0	0	0	0	192
12 PM	272	9	3	0	0	0	0	0	0	0	0	0	0	284
13:00	227	6	0	0	0	0	0	0	0	0	0	0	0	233
14:00	264	4	0	0	0	0	0	0	0	0	0	0	0	268
15:00	268	2	0	0	0	0	0	0	0	0	0	0	0	270
16:00	293	3	0	0	0	0	0	0	0	0	0	0	0	296
17:00	335	0	1	0	0	0	0	0	0	0	0	0	0	336
18:00	274	2	0	0	0	0	0	0	0	0	0	0	0	276
19:00	206	1	2	0	0	0	0	0	0	0	0	0	0	209
20:00	128	1	0	0	0	0	0	0	0	0	0	0	0	129
21:00	95	0	0	0	0	0	0	0	0	0	0	0	0	95
22:00	68	0	0	0	0	0	0	0	0	0	0	0	0	68
23:00	20	0	0	0	0	0	0	0	0	0	0	0	0	20
Total	3078	86	12	0	0	0	0	0	0	0	0	0	0	3176
Percent	96.9%	2.7%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	10:00	06:00											11:00
Vol.	179	13	2											192
PM Peak	17:00	12:00	12:00											17:00
Vol.	335	9	3											336

PRECISION
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Arthur Street
north of North Beacon Street
City, State: Brighton, MA
Client: VHB/ P. Dunford
SB

165274 B Class
Site Code: 12305

Start Time	Cars	Medium Heavy	Large Heavy											Total
11/05/1														
6	6	0	0	0	0	0	0	0	0	0	0	0	0	6
01:00	6	0	0	0	0	0	0	0	0	0	0	0	0	6
02:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	2	0	0	0	0	0	0	0	0	0	0	0	0	2
06:00	12	1	0	0	0	0	0	0	0	0	0	0	0	13
07:00	36	2	0	0	0	0	0	0	0	0	0	0	0	38
08:00	62	3	0	0	0	0	0	0	0	0	0	0	0	65
09:00	112	4	1	0	0	0	0	0	0	0	0	0	0	117
10:00	170	8	0	0	0	0	0	0	0	0	0	0	0	178
11:00	202	2	0	0	0	0	0	0	0	0	0	0	0	204
12 PM	270	2	2	0	0	0	0	0	0	0	0	0	0	274
13:00	265	2	0	0	0	0	0	0	0	0	0	0	0	267
14:00	308	6	0	0	0	0	0	0	0	0	0	0	0	314
15:00	296	9	0	0	0	0	0	0	0	0	0	0	0	305
16:00	262	1	0	0	0	0	0	0	0	0	0	0	0	263
17:00	262	2	0	0	0	0	0	0	0	0	0	0	0	264
18:00	229	1	0	0	0	0	0	0	0	0	0	0	0	230
19:00	162	0	0	0	0	0	0	0	0	0	0	0	0	162
20:00	139	0	0	0	0	0	0	0	0	0	0	0	0	139
21:00	68	0	0	0	0	0	0	0	0	0	0	0	0	68
22:00	53	0	0	0	0	0	0	0	0	0	0	0	0	53
23:00	18	0	0	0	0	0	0	0	0	0	0	0	0	18
Total	2941	44	3	0	0	0	0	0	0	0	0	0	0	2988
Percent	98.4%	1.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	10:00	09:00											11:00
Vol.	202	8	1											204
PM Peak	14:00	15:00	12:00											14:00
Vol.	308	9	2											314

PRECISION
D A T A
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Arthur Street
north of North Beacon Street
City, State: Brighton, MA
Client: VHB/ P. Dunford
NB

165274 B Class
Site Code: 12305

Start Time	Cars	Medium Heavy	Large Heavy											Total
11/03/1														
6	6	1	0	0	0	0	0	0	0	0	0	0	0	7
01:00	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00	6	1	1	0	0	0	0	0	0	0	0	0	0	8
05:00	15	2	0	0	0	0	0	0	0	0	0	0	0	17
06:00	35	3	1	0	0	0	0	0	0	0	0	0	0	39
07:00	99	8	1	0	0	0	0	0	0	0	0	0	0	108
08:00	170	12	1	0	0	0	0	0	0	0	0	0	0	183
09:00	143	8	0	0	0	0	0	0	0	0	0	0	0	151
10:00	106	10	0	0	0	0	0	0	0	0	0	0	0	116
11:00	133	9	1	0	0	0	0	0	0	0	0	0	0	143
12 PM	125	7	0	0	0	0	0	0	0	0	0	0	0	132
13:00	141	2	0	0	0	0	0	0	0	0	0	0	0	143
14:00	140	0	1	0	0	0	0	0	0	0	0	0	0	141
15:00	161	2	0	0	0	0	0	0	0	0	0	0	0	163
16:00	175	2	0	0	0	0	0	0	0	0	0	0	0	177
17:00	195	3	0	0	0	0	0	0	0	0	0	0	0	198
18:00	141	1	2	0	0	0	0	0	0	0	0	0	0	144
19:00	110	0	1	0	0	0	0	0	0	0	0	0	0	111
20:00	79	0	0	0	0	0	0	0	0	0	0	0	0	79
21:00	48	0	1	0	0	0	0	0	0	0	0	0	0	49
22:00	22	0	0	0	0	0	0	0	0	0	0	0	0	22
23:00	9	0	0	0	0	0	0	0	0	0	0	0	0	9
Total	2062	72	10	0	0	0	0	0	0	0	0	0	0	2144
Percent	96.2%	3.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	04:00											08:00
Vol.	170	12	1											183
PM Peak	17:00	12:00	18:00											17:00
Vol.	195	7	2											198

PRECISION
D A T A
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Arthur Street
north of North Beacon Street
City, State: Brighton, MA
Client: VHB/ P. Dunford
NB

165274 B Class
Site Code: 12305

Start Time	Cars	Medium Heavy	Large Heavy											Total
11/04/1														
6	5	1	0	0	0	0	0	0	0	0	0	0	0	6
01:00	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	3	1	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00	4	1	1	0	0	0	0	0	0	0	0	0	0	6
05:00	13	1	5	0	0	0	0	0	0	0	0	0	0	19
06:00	51	3	0	0	0	0	0	0	0	0	0	0	0	54
07:00	82	4	0	0	0	0	0	0	0	0	0	0	0	86
08:00	161	12	2	0	0	0	0	0	0	0	0	0	0	175
09:00	133	4	2	0	0	0	0	0	0	0	0	0	0	139
10:00	175	10	0	0	0	0	0	0	0	0	0	0	0	185
11:00	142	7	4	0	0	0	0	0	0	0	0	0	0	153
12 PM	184	7	0	0	0	0	0	0	0	0	0	0	0	191
13:00	200	6	0	0	0	0	0	0	0	0	0	0	0	206
14:00	203	4	1	0	0	0	0	0	0	0	0	0	0	208
15:00	192	3	0	0	0	0	0	0	0	0	0	0	0	195
16:00	175	0	0	0	0	0	0	0	0	0	0	0	0	175
17:00	205	3	1	0	0	0	0	0	0	0	0	0	0	209
18:00	179	1	1	0	0	0	0	0	0	0	0	0	0	181
19:00	116	1	1	0	0	0	0	0	0	0	0	0	0	118
20:00	81	0	0	0	0	0	0	0	0	0	0	0	0	81
21:00	44	0	0	0	0	0	0	0	0	0	0	0	0	44
22:00	38	0	0	0	0	0	0	0	0	0	0	0	0	38
23:00	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	2393	69	19	0	0	0	0	0	0	0	0	0	0	2481
Percent	96.5%	2.8%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	08:00	05:00											10:00
Vol.	175	12	5											185
PM Peak	17:00	12:00	14:00											17:00
Vol.	205	7	1											209

PRECISION
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Arthur Street
north of North Beacon Street
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NB

165274 B Class
Site Code: 12305

Start Time	Cars	Medium Heavy	Large Heavy											Total
11/05/1														
6	6	1	0	0	0	0	0	0	0	0	0	0	0	7
01:00	4	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00	5	1	0	0	0	0	0	0	0	0	0	0	0	6
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	3	1	1	0	0	0	0	0	0	0	0	0	0	5
06:00	30	1	0	0	0	0	0	0	0	0	0	0	0	31
07:00	33	8	0	0	0	0	0	0	0	0	0	0	0	41
08:00	54	16	0	0	0	0	0	0	0	0	0	0	0	70
09:00	116	10	0	0	0	0	0	0	0	0	0	0	0	126
10:00	151	8	0	0	0	0	0	0	0	0	0	0	0	159
11:00	194	16	1	0	0	0	0	0	0	0	0	0	0	211
12 PM	200	9	0	0	0	0	0	0	0	0	0	0	0	209
13:00	177	5	0	0	0	0	0	0	0	0	0	0	0	182
14:00	211	1	0	0	0	0	0	0	0	0	0	0	0	212
15:00	186	1	0	0	0	0	0	0	0	0	0	0	0	187
16:00	184	2	0	0	0	0	0	0	0	0	0	0	0	186
17:00	167	1	0	0	0	0	0	0	0	0	0	0	0	168
18:00	130	1	0	0	0	0	0	0	0	0	0	0	0	131
19:00	96	0	1	0	0	0	0	0	0	0	0	0	0	97
20:00	69	0	0	0	0	0	0	0	0	0	0	0	0	69
21:00	47	0	0	0	0	0	0	0	0	0	0	0	0	47
22:00	25	0	0	0	0	0	0	0	0	0	0	0	0	25
23:00	8	0	0	0	0	0	0	0	0	0	0	0	0	8
Total	2096	82	3	0	0	0	0	0	0	0	0	0	0	2181
Percent	96.1%	3.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	05:00											11:00
Vol.	194	16	1											211
PM Peak	14:00	12:00	19:00											14:00
Vol.	211	9	1											212

N/S: Birmingham Pkwy/Market Street
E/W: Lincoln Street/ Birmingham Pkwy
City, State: Brighton, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 A
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Leo Birmingham Parkway From North				Lincoln Street From East				Market Street From South				Leo Birmingham Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	5	140	0	2	9	30	22	0	0	110	6	0	18	0	34	0	376
07:15 AM	13	145	0	0	5	36	33	0	0	153	5	0	23	0	65	0	478
07:30 AM	18	146	0	1	12	47	35	0	0	146	5	0	20	0	72	0	502
07:45 AM	25	153	0	1	10	47	32	0	0	164	8	0	23	0	88	0	551
Total	61	584	0	4	36	160	122	0	0	573	24	0	84	0	259	0	1907
08:00 AM	19	150	0	1	18	40	30	0	0	180	10	0	23	0	83	0	554
08:15 AM	21	175	0	3	14	36	30	0	0	174	13	0	21	0	91	0	578
08:30 AM	22	179	0	4	6	51	37	0	0	156	12	0	27	0	88	0	582
08:45 AM	18	190	0	2	14	36	30	0	0	155	11	0	32	0	84	0	572
Total	80	694	0	10	52	163	127	0	0	665	46	0	103	0	346	0	2286
Grand Total	141	1278	0	14	88	323	249	0	0	1238	70	0	187	0	605	0	4193
Apprch %	9.8	89.2	0	1	13.3	48.9	37.7	0	0	94.6	5.4	0	23.6	0	76.4	0	
Total %	3.4	30.5	0	0.3	2.1	7.7	5.9	0	0	29.5	1.7	0	4.5	0	14.4	0	
Cars	131	1213	0	13	86	302	232	0	0	1175	66	0	187	0	588	0	3993
% Cars	92.9	94.9	0	92.9	97.7	93.5	93.2	0	0	94.9	94.3	0	100	0	97.2	0	95.2
Heavy Vehicles	10	65	0	1	2	21	17	0	0	63	4	0	0	0	17	0	200
% Heavy Vehicles	7.1	5.1	0	7.1	2.3	6.5	6.8	0	0	5.1	5.7	0	0	0	2.8	0	4.8

	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	19	150	0	1	170	18	40	30	0	88	0	180	10	0	190	23	0	83	0	106	554
08:15 AM	21	175	0	3	199	14	36	30	0	80	0	174	13	0	187	21	0	91	0	112	578
08:30 AM	22	179	0	4	205	6	51	37	0	94	0	156	12	0	168	27	0	88	0	115	582
08:45 AM	18	190	0	2	210	14	36	30	0	80	0	155	11	0	166	32	0	84	0	116	572
Total Volume	80	694	0	10	784	52	163	127	0	342	0	665	46	0	711	103	0	346	0	449	2286
% App. Total	10.2	88.5	0	1.3		15.2	47.7	37.1	0		0	93.5	6.5	0		22.9	0	77.1	0		
PHF	.909	.913	.000	.625	.933	.722	.799	.858	.000	.910	.000	.924	.885	.000	.936	.805	.000	.951	.000	.968	.982
Cars	71	654	0	9	734	52	150	117	0	319	0	629	45	0	674	103	0	340	0	443	2170
% Cars	88.8	94.2	0	90.0	93.6	100	92.0	92.1	0	93.3	0	94.6	97.8	0	94.8	100	0	98.3	0	98.7	94.9
Heavy Vehicles	9	40	0	1	50	0	13	10	0	23	0	36	1	0	37	0	0	6	0	6	116
% Heavy Vehicles	11.3	5.8	0	10.0	6.4	0	8.0	7.9	0	6.7	0	5.4	2.2	0	5.2	0	0	1.7	0	1.3	5.1

N/S: Birmingham Pkwy/Market Street
E/W: Lincoln Street/ Birmingham Pkwy
City, State: Brighton, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
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File Name : 165274 A
Site Code : 12305
Start Date : 10/13/2016
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Groups Printed- Cars

	Leo Birmingham Parkway From North				Lincoln Street From East				Market Street From South				Leo Birmingham Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	4	136	0	2	9	29	21	0	0	107	5	0	18	0	33	0	364
07:15 AM	13	138	0	0	5	34	32	0	0	147	5	0	23	0	61	0	458
07:30 AM	18	142	0	1	12	45	32	0	0	140	4	0	20	0	71	0	485
07:45 AM	25	143	0	1	8	44	30	0	0	152	7	0	23	0	83	0	516
Total	60	559	0	4	34	152	115	0	0	546	21	0	84	0	248	0	1823
08:00 AM	16	141	0	1	18	38	29	0	0	171	10	0	23	0	82	0	529
08:15 AM	20	165	0	3	14	33	27	0	0	168	13	0	21	0	91	0	555
08:30 AM	21	168	0	3	6	47	32	0	0	151	12	0	27	0	86	0	553
08:45 AM	14	180	0	2	14	32	29	0	0	139	10	0	32	0	81	0	533
Total	71	654	0	9	52	150	117	0	0	629	45	0	103	0	340	0	2170
Grand Total	131	1213	0	13	86	302	232	0	0	1175	66	0	187	0	588	0	3993
Apprch %	9.7	89.4	0	1	13.9	48.7	37.4	0	0	94.7	5.3	0	24.1	0	75.9	0	
Total %	3.3	30.4	0	0.3	2.2	7.6	5.8	0	0	29.4	1.7	0	4.7	0	14.7	0	

	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	16	141	0	1	158	18	38	29	0	85	0	171	10	0	181	23	0	82	0	105	529
08:15 AM	20	165	0	3	188	14	33	27	0	74	0	168	13	0	181	21	0	91	0	112	555
08:30 AM	21	168	0	3	192	6	47	32	0	85	0	151	12	0	163	27	0	86	0	113	553
08:45 AM	14	180	0	2	196	14	32	29	0	75	0	139	10	0	149	32	0	81	0	113	533
Total Volume	71	654	0	9	734	52	150	117	0	319	0	629	45	0	674	103	0	340	0	443	2170
% App. Total	9.7	89.1	0	1.2		16.3	47	36.7	0		0	93.3	6.7	0		23.3	0	76.7	0		
PHF	.845	.908	.000	.750	.936	.722	.798	.914	.000	.938	.000	.920	.865	.000	.931	.805	.000	.934	.000	.980	.977

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Groups Printed- Heavy Vehicles

	Leo Birmingham Parkway From North				Lincoln Street From East				Market Street From South				Leo Birmingham Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	4	0	0	0	1	1	0	0	3	1	0	0	0	1	0	12
07:15 AM	0	7	0	0	0	2	1	0	0	6	0	0	0	0	4	0	20
07:30 AM	0	4	0	0	0	2	3	0	0	6	1	0	0	0	1	0	17
07:45 AM	0	10	0	0	2	3	2	0	0	12	1	0	0	0	5	0	35
Total	1	25	0	0	2	8	7	0	0	27	3	0	0	0	11	0	84
08:00 AM	3	9	0	0	0	2	1	0	0	9	0	0	0	0	1	0	25
08:15 AM	1	10	0	0	0	3	3	0	0	6	0	0	0	0	0	0	23
08:30 AM	1	11	0	1	0	4	5	0	0	5	0	0	0	0	2	0	29
08:45 AM	4	10	0	0	0	4	1	0	0	16	1	0	0	0	3	0	39
Total	9	40	0	1	0	13	10	0	0	36	1	0	0	0	6	0	116
Grand Total	10	65	0	1	2	21	17	0	0	63	4	0	0	0	17	0	200
Apprch %	13.2	85.5	0	1.3	5	52.5	42.5	0	0	94	6	0	0	0	100	0	
Total %	5	32.5	0	0.5	1	10.5	8.5	0	0	31.5	2	0	0	0	8.5	0	

	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	3	9	0	0	12	0	2	1	0	3	0	9	0	0	9	0	0	1	0	1	25
08:15 AM	1	10	0	0	11	0	3	3	0	6	0	6	0	0	6	0	0	0	0	0	23
08:30 AM	1	11	0	1	13	0	4	5	0	9	0	5	0	0	5	0	0	2	0	2	29
08:45 AM	4	10	0	0	14	0	4	1	0	5	0	16	1	0	17	0	0	3	0	3	39
Total Volume	9	40	0	1	50	0	13	10	0	23	0	36	1	0	37	0	0	6	0	6	116
% App. Total	18	80	0	2		0	56.5	43.5	0		0	97.3	2.7	0		0	0	100	0		
PHF	.563	.909	.000	.250	.893	.000	.813	.500	.000	.639	.000	.563	.250	.000	.544	.000	.000	.500	.000	.500	.744

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Groups Printed- Peds and Bikes

	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	1	0	0	0	0	0	0	7	7	0	1	0	0	2	1	0	0	0	0	19
07:15 AM	0	0	0	0	1	0	0	0	6	3	0	2	0	1	0	0	0	0	0	0	13
07:30 AM	0	1	0	0	0	0	0	1	8	3	1	4	0	0	1	0	0	0	1	0	20
07:45 AM	0	1	0	0	0	0	0	0	7	7	0	7	0	1	0	0	0	0	0	0	23
Total	0	3	0	0	1	0	0	1	28	20	1	14	0	2	3	1	0	0	1	0	75
08:00 AM	0	1	0	0	0	0	0	0	2	2	0	5	0	0	0	0	0	0	0	0	10
08:15 AM	0	2	0	0	0	0	0	0	5	2	1	2	0	0	0	0	0	2	0	0	14
08:30 AM	0	3	0	0	0	1	0	0	6	4	0	8	0	0	0	0	0	0	0	0	22
08:45 AM	0	2	0	0	0	0	0	0	3	3	0	5	0	0	0	0	0	0	0	0	13
Total	0	8	0	0	0	1	0	0	16	11	1	20	0	0	0	0	0	2	0	0	59
Grand Total	0	11	0	0	1	1	0	1	44	31	2	34	0	2	3	1	0	2	1	0	134
Apprch %	0	91.7	0	0	8.3	1.3	0	1.3	57.1	40.3	4.9	82.9	0	4.9	7.3	25	0	50	25	0	
Total %	0	8.2	0	0	0.7	0.7	0	0.7	32.8	23.1	1.5	25.4	0	1.5	2.2	0.7	0	1.5	0.7	0	

	Leo Birmingham Parkway From North						Lincoln Street From East						Market Street From South						Leo Birmingham Parkway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	0	0	1	0	0	0	7	7	14	0	1	0	0	2	3	1	0	0	0	0	1	19
07:15 AM	0	0	0	0	1	1	0	0	0	6	3	9	0	2	0	1	0	3	0	0	0	0	0	0	13
07:30 AM	0	1	0	0	0	1	0	0	1	8	3	12	1	4	0	0	1	6	0	0	0	1	0	1	20
07:45 AM	0	1	0	0	0	1	0	0	0	7	7	14	0	7	0	1	0	8	0	0	0	0	0	0	23
Total Volume	0	3	0	0	1	4	0	0	1	28	20	49	1	14	0	2	3	20	1	0	0	1	0	2	75
% App. Total	0	75	0	0	25		0	0	2	57.1	40.8		5	70	0	10	15		50	0	0	50	0		
PHF	.000	.750	.000	.000	.250	1.00	.000	.000	.250	.875	.714	.875	.250	.500	.000	.500	.375	.625	.250	.000	.000	.250	.000	.500	.815

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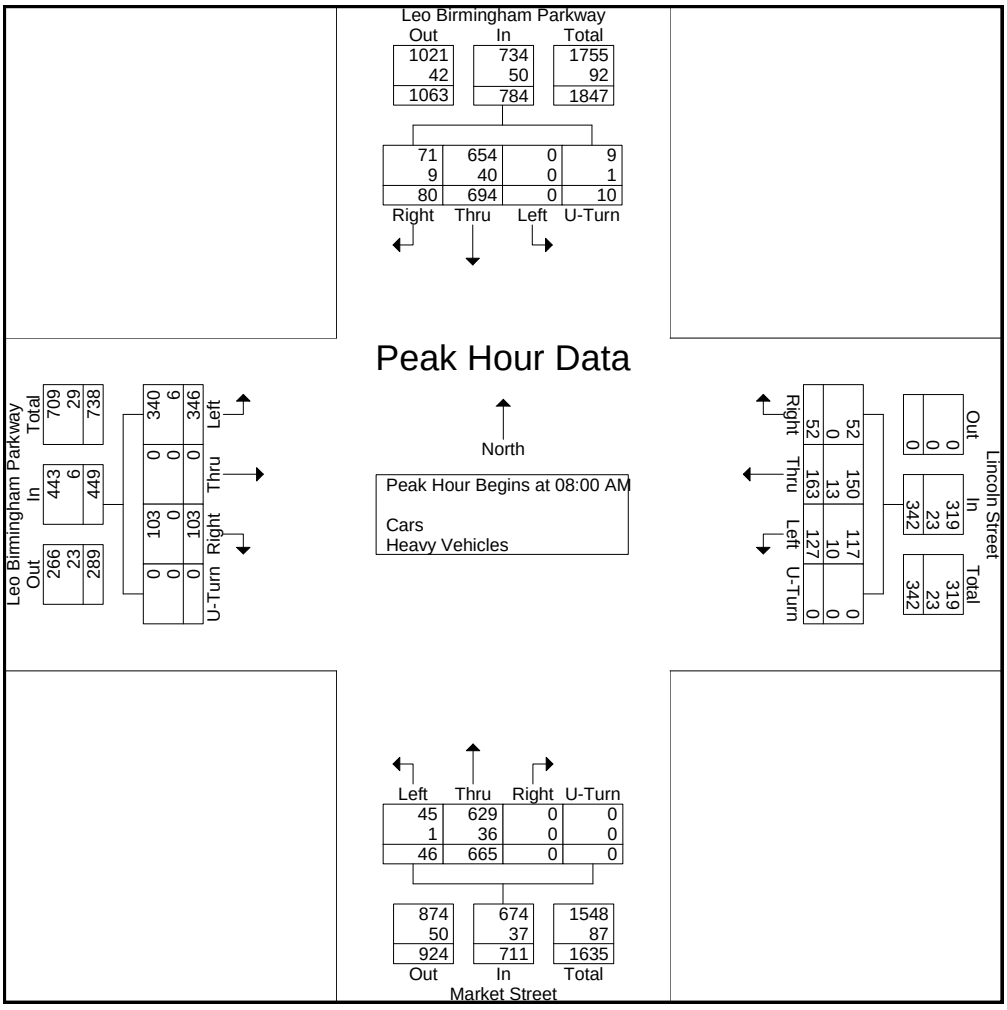
	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	19	150	0	1	170	18	40	30	0	88	0	180	10	0	190	23	0	83	0	106	554
08:15 AM	21	175	0	3	199	14	36	30	0	80	0	174	13	0	187	21	0	91	0	112	578
08:30 AM	22	179	0	4	205	6	51	37	0	94	0	156	12	0	168	27	0	88	0	115	582
08:45 AM	18	190	0	2	210	14	36	30	0	80	0	155	11	0	166	32	0	84	0	116	572
Total Volume	80	694	0	10	784	52	163	127	0	342	0	665	46	0	711	103	0	346	0	449	2286
% App. Total	10.2	88.5	0	1.3		15.2	47.7	37.1	0		0	93.5	6.5	0		22.9	0	77.1	0		
PHF	.909	.913	.000	.625	.933	.722	.799	.858	.000	.910	.000	.924	.885	.000	.936	.805	.000	.951	.000	.968	.982
Cars	71	654	0	9	734	52	150	117	0	319	0	629	45	0	674	103	0	340	0	443	2170
% Cars	88.8	94.2	0	90.0	93.6	100	92.0	92.1	0	93.3	0	94.6	97.8	0	94.8	100	0	98.3	0	98.7	94.9
Heavy Vehicles	9	40	0	1	50	0	13	10	0	23	0	36	1	0	37	0	0	6	0	6	116
% Heavy Vehicles	11.3	5.8	0	10.0	6.4	0	8.0	7.9	0	6.7	0	5.4	2.2	0	5.2	0	0	1.7	0	1.3	5.1



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Groups Printed- Cars - Heavy Vehicles

	Leo Birmingham Parkway From North				Lincoln Street From East				Market Street From South				Leo Birmingham Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	38	168	0	6	20	52	17	0	0	175	33	0	6	0	20	0	535
04:15 PM	24	183	0	1	19	50	29	0	0	219	31	0	6	0	33	0	595
04:30 PM	35	164	0	1	11	55	16	0	0	196	45	0	12	0	26	1	562
04:45 PM	36	197	0	1	10	58	27	0	0	224	32	0	5	0	33	0	623
Total	133	712	0	9	60	215	89	0	0	814	141	0	29	0	112	1	2315
05:00 PM	57	182	0	2	11	49	39	0	0	190	47	0	16	0	43	0	636
05:15 PM	51	204	0	2	17	56	35	0	0	211	46	0	16	0	52	0	690
05:30 PM	71	210	0	0	12	52	26	0	0	237	54	0	12	0	53	0	727
05:45 PM	75	195	0	2	19	54	29	0	0	191	41	0	3	0	57	0	666
Total	254	791	0	6	59	211	129	0	0	829	188	0	47	0	205	0	2719
Grand Total	387	1503	0	15	119	426	218	0	0	1643	329	0	76	0	317	1	5034
Apprch %	20.3	78.9	0	0.8	15.6	55.8	28.6	0	0	83.3	16.7	0	19.3	0	80.5	0.3	
Total %	7.7	29.9	0	0.3	2.4	8.5	4.3	0	0	32.6	6.5	0	1.5	0	6.3	0	
Cars	383	1474	0	15	116	415	213	0	0	1593	326	0	76	0	306	1	4918
% Cars	99	98.1	0	100	97.5	97.4	97.7	0	0	97	99.1	0	100	0	96.5	100	97.7
Heavy Vehicles	4	29	0	0	3	11	5	0	0	50	3	0	0	0	11	0	116
% Heavy Vehicles	1	1.9	0	0	2.5	2.6	2.3	0	0	3	0.9	0	0	0	3.5	0	2.3

	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	57	182	0	2	241	11	49	39	0	99	0	190	47	0	237	16	0	43	0	59	636
05:15 PM	51	204	0	2	257	17	56	35	0	108	0	211	46	0	257	16	0	52	0	68	690
05:30 PM	71	210	0	0	281	12	52	26	0	90	0	237	54	0	291	12	0	53	0	65	727
05:45 PM	75	195	0	2	272	19	54	29	0	102	0	191	41	0	232	3	0	57	0	60	666
Total Volume	254	791	0	6	1051	59	211	129	0	399	0	829	188	0	1017	47	0	205	0	252	2719
% App. Total	24.2	75.3	0	0.6		14.8	52.9	32.3	0		0	81.5	18.5	0		18.7	0	81.3	0		
PHF	.847	.942	.000	.750	.935	.776	.942	.827	.000	.924	.000	.874	.870	.000	.874	.734	.000	.899	.000	.926	.935
Cars	254	775	0	6	1035	58	207	128	0	393	0	806	188	0	994	47	0	198	0	245	2667
% Cars	100	98.0	0	100	98.5	98.3	98.1	99.2	0	98.5	0	97.2	100	0	97.7	100	0	96.6	0	97.2	98.1
Heavy Vehicles	0	16	0	0	16	1	4	1	0	6	0	23	0	0	23	0	0	7	0	7	52
% Heavy Vehicles	0	2.0	0	0	1.5	1.7	1.9	0.8	0	1.5	0	2.8	0	0	2.3	0	0	3.4	0	2.8	1.9

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Groups Printed- Cars

	Leo Birmingham Parkway From North				Lincoln Street From East				Market Street From South				Leo Birmingham Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	37	163	0	6	20	50	16	0	0	168	33	0	6	0	18	0	517
04:15 PM	24	181	0	1	19	49	26	0	0	215	30	0	6	0	31	0	582
04:30 PM	34	161	0	1	10	53	16	0	0	188	43	0	12	0	26	1	545
04:45 PM	34	194	0	1	9	56	27	0	0	216	32	0	5	0	33	0	607
Total	129	699	0	9	58	208	85	0	0	787	138	0	29	0	108	1	2251
05:00 PM	57	180	0	2	11	47	38	0	0	184	47	0	16	0	42	0	624
05:15 PM	51	197	0	2	17	55	35	0	0	204	46	0	16	0	51	0	674
05:30 PM	71	208	0	0	12	51	26	0	0	232	54	0	12	0	48	0	714
05:45 PM	75	190	0	2	18	54	29	0	0	186	41	0	3	0	57	0	655
Total	254	775	0	6	58	207	128	0	0	806	188	0	47	0	198	0	2667
Grand Total	383	1474	0	15	116	415	213	0	0	1593	326	0	76	0	306	1	4918
Apprch %	20.5	78.7	0	0.8	15.6	55.8	28.6	0	0	83	17	0	19.8	0	79.9	0.3	
Total %	7.8	30	0	0.3	2.4	8.4	4.3	0	0	32.4	6.6	0	1.5	0	6.2	0	

	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	57	180	0	2	239	11	47	38	0	96	0	184	47	0	231	16	0	42	0	58	624
05:15 PM	51	197	0	2	250	17	55	35	0	107	0	204	46	0	250	16	0	51	0	67	674
05:30 PM	71	208	0	0	279	12	51	26	0	89	0	232	54	0	286	12	0	48	0	60	714
05:45 PM	75	190	0	2	267	18	54	29	0	101	0	186	41	0	227	3	0	57	0	60	655
Total Volume	254	775	0	6	1035	58	207	128	0	393	0	806	188	0	994	47	0	198	0	245	2667
% App. Total	24.5	74.9	0	0.6		14.8	52.7	32.6	0		0	81.1	18.9	0		19.2	0	80.8	0		
PHF	.847	.931	.000	.750	.927	.806	.941	.842	.000	.918	.000	.869	.870	.000	.869	.734	.000	.868	.000	.914	.934

N/S: Birmingham Pkwy/Market Street
E/W: Lincoln Street/ Birmingham Pkwy
City, State: Brighton, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 AA
Site Code : 12305
Start Date : 10/13/2016
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Groups Printed- Heavy Vehicles

	Leo Birmingham Parkway From North				Lincoln Street From East				Market Street From South				Leo Birmingham Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	1	5	0	0	0	2	1	0	0	7	0	0	0	0	2	0	18
04:15 PM	0	2	0	0	0	1	3	0	0	4	1	0	0	0	2	0	13
04:30 PM	1	3	0	0	1	2	0	0	0	8	2	0	0	0	0	0	17
04:45 PM	2	3	0	0	1	2	0	0	0	8	0	0	0	0	0	0	16
Total	4	13	0	0	2	7	4	0	0	27	3	0	0	0	4	0	64
05:00 PM	0	2	0	0	0	2	1	0	0	6	0	0	0	0	1	0	12
05:15 PM	0	7	0	0	0	1	0	0	0	7	0	0	0	0	1	0	16
05:30 PM	0	2	0	0	0	1	0	0	0	5	0	0	0	0	5	0	13
05:45 PM	0	5	0	0	1	0	0	0	0	5	0	0	0	0	0	0	11
Total	0	16	0	0	1	4	1	0	0	23	0	0	0	0	7	0	52
Grand Total	4	29	0	0	3	11	5	0	0	50	3	0	0	0	11	0	116
Apprch %	12.1	87.9	0	0	15.8	57.9	26.3	0	0	94.3	5.7	0	0	0	100	0	
Total %	3.4	25	0	0	2.6	9.5	4.3	0	0	43.1	2.6	0	0	0	9.5	0	

	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	1	5	0	0	6	0	2	1	0	3	0	7	0	0	7	0	0	2	0	2	18
04:15 PM	0	2	0	0	2	0	1	3	0	4	0	4	1	0	5	0	0	2	0	2	13
04:30 PM	1	3	0	0	4	1	2	0	0	3	0	8	2	0	10	0	0	0	0	0	17
04:45 PM	2	3	0	0	5	1	2	0	0	3	0	8	0	0	8	0	0	0	0	0	16
Total Volume	4	13	0	0	17	2	7	4	0	13	0	27	3	0	30	0	0	4	0	4	64
% App. Total	23.5	76.5	0	0		15.4	53.8	30.8	0		0	90	10	0		0	0	100	0		
PHF	.500	.650	.000	.000	.708	.500	.875	.333	.000	.813	.000	.844	.375	.000	.750	.000	.000	.500	.000	.500	.889

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Groups Printed- Peds and Bikes

	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	1	0	0	0	0	0	0	6	5	0	2	0	1	0	0	0	0	0	1	16
04:15 PM	0	2	0	4	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	9
04:30 PM	0	2	0	0	0	0	0	1	6	3	0	2	1	0	0	0	0	0	0	0	15
04:45 PM	0	5	0	2	0	0	0	0	5	7	0	1	0	0	0	0	0	2	3	2	27
Total	0	10	0	6	0	0	0	1	18	15	0	7	1	1	0	0	0	2	3	3	67
05:00 PM	0	1	0	1	2	0	0	2	3	9	0	6	1	1	1	0	0	0	1	0	28
05:15 PM	0	0	0	0	0	0	0	1	9	9	1	6	0	0	0	0	0	0	0	0	26
05:30 PM	0	4	0	1	1	0	0	0	8	1	0	2	0	1	0	0	0	0	0	0	18
05:45 PM	0	0	0	0	0	0	0	1	8	2	1	6	0	0	0	0	0	0	0	0	18
Total	0	5	0	2	3	0	0	4	28	21	2	20	1	2	1	0	0	0	1	0	90
Grand Total	0	15	0	8	3	0	0	5	46	36	2	27	2	3	1	0	0	2	4	3	157
Apprch %	0	57.7	0	30.8	11.5	0	0	5.7	52.9	41.4	5.7	77.1	5.7	8.6	2.9	0	0	22.2	44.4	33.3	
Total %	0	9.6	0	5.1	1.9	0	0	3.2	29.3	22.9	1.3	17.2	1.3	1.9	0.6	0	0	1.3	2.5	1.9	

	Leo Birmingham Parkway From North						Lincoln Street From East						Market Street From South						Leo Birmingham Parkway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:45 PM																									
04:45 PM	0	5	0	2	0	7	0	0	0	5	7	12	0	1	0	0	0	1	0	0	2	3	2	7	27
05:00 PM	0	1	0	1	2	4	0	0	2	3	9	14	0	6	1	1	1	9	0	0	0	1	0	1	28
05:15 PM	0	0	0	0	0	0	0	0	1	9	9	19	1	6	0	0	0	7	0	0	0	0	0	0	26
05:30 PM	0	4	0	1	1	6	0	0	0	8	1	9	0	2	0	1	0	3	0	0	0	0	0	0	18
Total Volume	0	10	0	4	3	17	0	0	3	25	26	54	1	15	1	2	1	20	0	0	2	4	2	8	99
% App. Total	0	58.8	0	23.5	17.6		0	0	5.6	46.3	48.1		5	75	5	10	5		0	0	25	50	25		
PHF	.000	.500	.000	.500	.375	.607	.000	.000	.375	.694	.722	.711	.250	.625	.250	.500	.250	.556	.000	.000	.250	.333	.250	.286	.884

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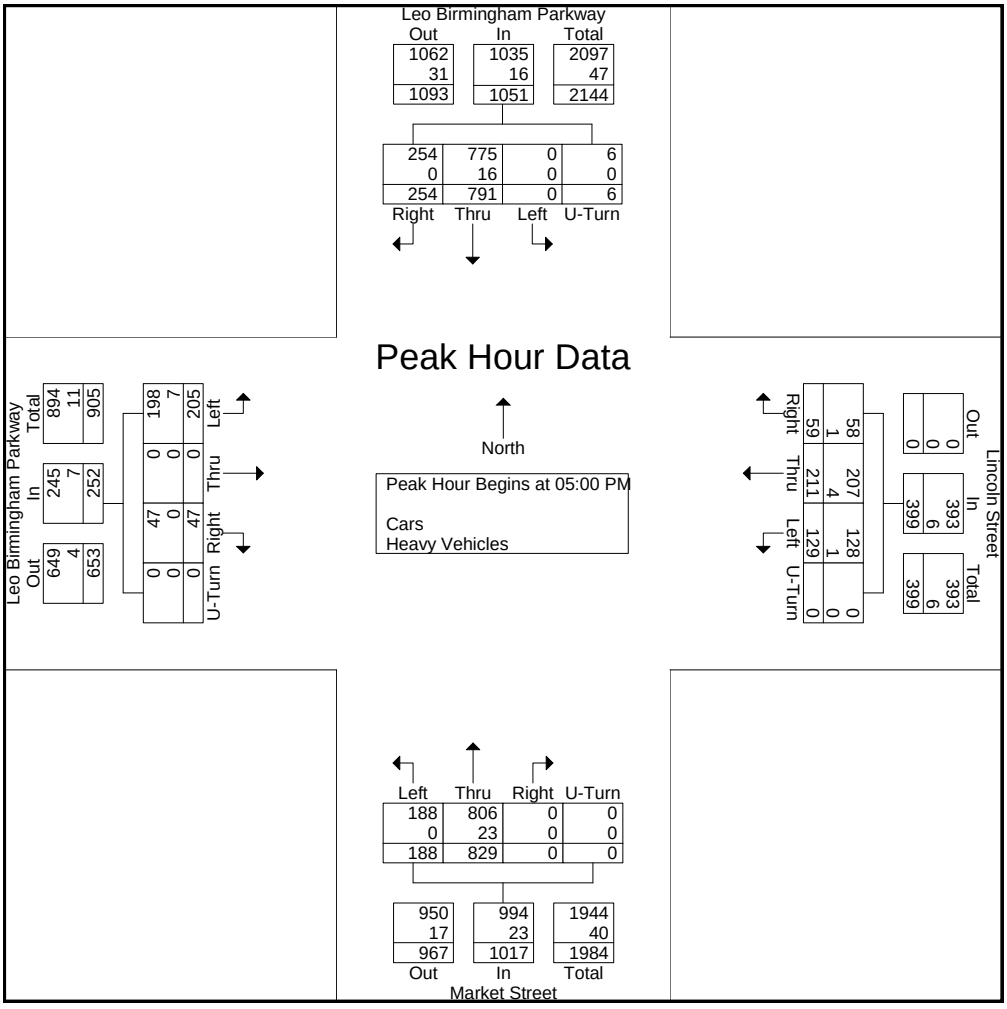
	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	57	182	0	2	241	11	49	39	0	99	0	190	47	0	237	16	0	43	0	59	636
05:15 PM	51	204	0	2	257	17	56	35	0	108	0	211	46	0	257	16	0	52	0	68	690
05:30 PM	71	210	0	0	281	12	52	26	0	90	0	237	54	0	291	12	0	53	0	65	727
05:45 PM	75	195	0	2	272	19	54	29	0	102	0	191	41	0	232	3	0	57	0	60	666
Total Volume	254	791	0	6	1051	59	211	129	0	399	0	829	188	0	1017	47	0	205	0	252	2719
% App. Total	24.2	75.3	0	0.6		14.8	52.9	32.3	0		0	81.5	18.5	0		18.7	0	81.3	0		
PHF	.847	.942	.000	.750	.935	.776	.942	.827	.000	.924	.000	.874	.870	.000	.874	.734	.000	.899	.000	.926	.935
Cars	254	775	0	6	1035	58	207	128	0	393	0	806	188	0	994	47	0	198	0	245	2667
% Cars	100	98.0	0	100	98.5	98.3	98.1	99.2	0	98.5	0	97.2	100	0	97.7	100	0	96.6	0	97.2	98.1
Heavy Vehicles	0	16	0	0	16	1	4	1	0	6	0	23	0	0	23	0	0	7	0	7	52
% Heavy Vehicles	0	2.0	0	0	1.5	1.7	1.9	0.8	0	1.5	0	2.8	0	0	2.3	0	0	3.4	0	2.8	1.9



N/S: Birmingham Pkwy/Market Street
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File Name : 165274 AAA
Site Code : 12305
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Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Leo Birmingham Parkway From North				Lincoln Street From East				Market Street From South				Leo Birmingham Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	16	149	0	1	7	20	30	0	0	114	14	0	5	0	0	0	356
11:15 AM	22	148	0	3	10	19	19	0	0	166	8	0	8	0	7	0	410
11:30 AM	17	141	0	2	11	11	23	0	0	169	10	0	7	0	25	0	416
11:45 AM	9	128	0	0	6	24	12	0	0	176	10	0	10	0	25	0	400
Total	64	566	0	6	34	74	84	0	0	625	42	0	30	0	57	0	1582
12:00 PM	13	159	0	2	9	27	20	0	0	155	6	0	8	0	24	0	423
12:15 PM	17	168	0	4	10	22	20	0	0	165	15	0	13	0	20	0	454
12:30 PM	14	172	0	1	10	26	17	0	0	156	16	0	9	0	9	0	430
12:45 PM	24	169	0	1	9	19	21	0	0	168	11	0	7	0	28	0	457
Total	68	668	0	8	38	94	78	0	0	644	48	0	37	0	81	0	1764
01:00 PM	13	170	0	1	9	31	21	0	0	161	12	0	9	0	19	0	446
01:15 PM	18	177	0	1	10	25	27	0	0	153	10	0	11	0	27	0	459
01:30 PM	14	152	0	4	8	23	21	0	0	166	10	0	5	0	22	0	425
01:45 PM	9	166	0	1	16	18	19	0	0	150	15	0	14	0	18	0	426
Total	54	665	0	7	43	97	88	0	0	630	47	0	39	0	86	0	1756
Grand Total	186	1899	0	21	115	265	250	0	0	1899	137	0	106	0	224	0	5102
Apprch %	8.8	90.2	0	1	18.3	42.1	39.7	0	0	93.3	6.7	0	32.1	0	67.9	0	
Total %	3.6	37.2	0	0.4	2.3	5.2	4.9	0	0	37.2	2.7	0	2.1	0	4.4	0	
Cars	183	1865	0	21	115	264	248	0	0	1867	131	0	103	0	218	0	5015
% Cars	98.4	98.2	0	100	100	99.6	99.2	0	0	98.3	95.6	0	97.2	0	97.3	0	98.3
Heavy Vehicles	3	34	0	0	0	1	2	0	0	32	6	0	3	0	6	0	87
% Heavy Vehicles	1.6	1.8	0	0	0	0.4	0.8	0	0	1.7	4.4	0	2.8	0	2.7	0	1.7

	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	14	172	0	1	187	10	26	17	0	53	0	156	16	0	172	9	0	9	0	18	430
12:45 PM	24	169	0	1	194	9	19	21	0	49	0	168	11	0	179	7	0	28	0	35	457
01:00 PM	13	170	0	1	184	9	31	21	0	61	0	161	12	0	173	9	0	19	0	28	446
01:15 PM	18	177	0	1	196	10	25	27	0	62	0	153	10	0	163	11	0	27	0	38	459
Total Volume	69	688	0	4	761	38	101	86	0	225	0	638	49	0	687	36	0	83	0	119	1792
% App. Total	9.1	90.4	0	0.5		16.9	44.9	38.2	0		0	92.9	7.1	0		30.3	0	69.7	0		
PHF	.719	.972	.000	1.00	.971	.950	.815	.796	.000	.907	.000	.949	.766	.000	.959	.818	.000	.741	.000	.783	.976
Cars	68	675	0	4	747	38	101	86	0	225	0	629	46	0	675	36	0	79	0	115	1762
% Cars	98.6	98.1	0	100	98.2	100	100	100	0	100	0	98.6	93.9	0	98.3	100	0	95.2	0	96.6	98.3
Heavy Vehicles	1	13	0	0	14	0	0	0	0	0	0	9	3	0	12	0	0	4	0	4	30
% Heavy Vehicles	1.4	1.9	0	0	1.8	0	0	0	0	0	0	1.4	6.1	0	1.7	0	0	4.8	0	3.4	1.7

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Groups Printed- Cars

	Leo Birmingham Parkway From North				Lincoln Street From East				Market Street From South				Leo Birmingham Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	16	148	0	1	7	20	28	0	0	113	14	0	5	0	0	0	352
11:15 AM	22	145	0	3	10	18	19	0	0	163	8	0	8	0	7	0	403
11:30 AM	17	141	0	2	11	11	23	0	0	165	9	0	7	0	24	0	410
11:45 AM	8	125	0	0	6	24	12	0	0	173	9	0	10	0	24	0	391
Total	63	559	0	6	34	73	82	0	0	614	40	0	30	0	55	0	1556
12:00 PM	13	156	0	2	9	27	20	0	0	151	6	0	8	0	24	0	416
12:15 PM	17	165	0	4	10	22	20	0	0	162	14	0	12	0	20	0	446
12:30 PM	13	169	0	1	10	26	17	0	0	155	16	0	9	0	7	0	423
12:45 PM	24	164	0	1	9	19	21	0	0	166	11	0	7	0	28	0	450
Total	67	654	0	8	38	94	78	0	0	634	47	0	36	0	79	0	1735
01:00 PM	13	169	0	1	9	31	21	0	0	158	9	0	9	0	18	0	438
01:15 PM	18	173	0	1	10	25	27	0	0	150	10	0	11	0	26	0	451
01:30 PM	13	149	0	4	8	23	21	0	0	164	10	0	5	0	22	0	419
01:45 PM	9	161	0	1	16	18	19	0	0	147	15	0	12	0	18	0	416
Total	53	652	0	7	43	97	88	0	0	619	44	0	37	0	84	0	1724
Grand Total	183	1865	0	21	115	264	248	0	0	1867	131	0	103	0	218	0	5015
Apprch %	8.8	90.1	0	1	18.3	42.1	39.6	0	0	93.4	6.6	0	32.1	0	67.9	0	
Total %	3.6	37.2	0	0.4	2.3	5.3	4.9	0	0	37.2	2.6	0	2.1	0	4.3	0	

	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	13	169	0	1	183	10	26	17	0	53	0	155	16	0	171	9	0	7	0	16	423
12:45 PM	24	164	0	1	189	9	19	21	0	49	0	166	11	0	177	7	0	28	0	35	450
01:00 PM	13	169	0	1	183	9	31	21	0	61	0	158	9	0	167	9	0	18	0	27	438
01:15 PM	18	173	0	1	192	10	25	27	0	62	0	150	10	0	160	11	0	26	0	37	451
Total Volume	68	675	0	4	747	38	101	86	0	225	0	629	46	0	675	36	0	79	0	115	1762
% App. Total	9.1	90.4	0	0.5		16.9	44.9	38.2	0		0	93.2	6.8	0		31.3	0	68.7	0		
PHF	.708	.975	.000	1.00	.973	.950	.815	.796	.000	.907	.000	.947	.719	.000	.953	.818	.000	.705	.000	.777	.977

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Groups Printed- Heavy Vehicles

	Leo Birmingham Parkway From North				Lincoln Street From East				Market Street From South				Leo Birmingham Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	1	0	0	0	0	2	0	0	1	0	0	0	0	0	0	4
11:15 AM	0	3	0	0	0	1	0	0	0	3	0	0	0	0	0	0	7
11:30 AM	0	0	0	0	0	0	0	0	0	4	1	0	0	0	1	0	6
11:45 AM	1	3	0	0	0	0	0	0	0	3	1	0	0	0	1	0	9
Total	1	7	0	0	0	1	2	0	0	11	2	0	0	0	2	0	26
12:00 PM	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0	0	7
12:15 PM	0	3	0	0	0	0	0	0	0	3	1	0	1	0	0	0	8
12:30 PM	1	3	0	0	0	0	0	0	0	1	0	0	0	0	2	0	7
12:45 PM	0	5	0	0	0	0	0	0	0	2	0	0	0	0	0	0	7
Total	1	14	0	0	0	0	0	0	0	10	1	0	1	0	2	0	29
01:00 PM	0	1	0	0	0	0	0	0	0	3	3	0	0	0	1	0	8
01:15 PM	0	4	0	0	0	0	0	0	0	3	0	0	0	0	1	0	8
01:30 PM	1	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	6
01:45 PM	0	5	0	0	0	0	0	0	0	3	0	0	2	0	0	0	10
Total	1	13	0	0	0	0	0	0	0	11	3	0	2	0	2	0	32
Grand Total	3	34	0	0	0	1	2	0	0	32	6	0	3	0	6	0	87
Apprch %	8.1	91.9	0	0	0	33.3	66.7	0	0	84.2	15.8	0	33.3	0	66.7	0	
Total %	3.4	39.1	0	0	0	1.1	2.3	0	0	36.8	6.9	0	3.4	0	6.9	0	

	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	1	0	0	1	0	0	0	0	0	0	3	3	0	6	0	0	1	0	1	8
01:15 PM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	8
01:30 PM	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
01:45 PM	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	2	0	0	0	2	10
Total Volume	1	13	0	0	14	0	0	0	0	0	0	11	3	0	14	2	0	2	0	4	32
% App. Total	7.1	92.9	0	0		0	0	0	0		0	78.6	21.4	0		50	0	50	0		
PHF	.250	.650	.000	.000	.700	.000	.000	.000	.000	.000	.000	.917	.250	.000	.583	.250	.000	.500	.000	.500	.800

N/S: Birmingham Pkwy/Market Street
E/W: Lincoln Street/ Birmingham Pkwy
City, State: Brighton, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 AAA
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Peds and Bikes

	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	3	0	0	0	0	0	0	2	1	0	1	0	0	0	0	0	0	1	0	8
11:15 AM	0	0	0	0	0	0	0	0	2	3	0	1	0	0	0	0	0	0	0	0	6
11:30 AM	0	1	0	0	0	0	0	0	6	1	0	0	0	1	0	0	0	0	0	0	9
11:45 AM	0	4	0	0	0	0	0	0	4	3	0	0	0	0	0	0	0	1	0	0	12
Total	0	8	0	0	0	0	0	0	14	8	0	2	0	1	0	0	0	1	1	0	35
12:00 PM	0	0	0	0	0	0	0	0	6	3	0	1	0	0	0	0	0	0	0	0	10
12:15 PM	0	0	0	0	0	0	0	0	6	0	0	3	0	1	0	0	0	0	0	0	10
12:30 PM	0	1	0	0	0	0	0	0	3	2	1	1	0	0	0	0	0	0	0	0	8
12:45 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	1	0	0	0	0	0	0	5
Total	0	1	0	0	0	0	0	0	17	7	1	5	0	2	0	0	0	0	0	0	33
01:00 PM	0	0	0	0	0	0	0	0	0	6	0	2	0	0	0	0	0	0	0	0	8
01:15 PM	0	2	0	0	1	0	0	0	3	9	0	6	0	0	1	0	0	0	0	0	22
01:30 PM	0	3	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	2	0	13
01:45 PM	0	3	0	1	0	0	0	0	6	4	0	3	0	0	0	0	0	0	0	0	17
Total	0	8	0	1	1	0	0	3	10	23	0	11	0	0	1	0	0	0	2	0	60
Grand Total	0	17	0	1	1	0	0	3	41	38	1	18	0	3	1	0	0	1	3	0	128
Apprch %	0	89.5	0	5.3	5.3	0	0	3.7	50	46.3	4.3	78.3	0	13	4.3	0	0	25	75	0	
Total %	0	13.3	0	0.8	0.8	0	0	2.3	32	29.7	0.8	14.1	0	2.3	0.8	0	0	0.8	2.3	0	

	Leo Birmingham Parkway From North						Lincoln Street From East						Market Street From South						Leo Birmingham Parkway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 01:00 PM																									
01:00 PM	0	0	0	0	0	0	0	0	0	0	6	6	0	2	0	0	0	2	0	0	0	0	0	0	8
01:15 PM	0	2	0	0	1	3	0	0	0	3	9	12	0	6	0	0	1	7	0	0	0	0	0	0	22
01:30 PM	0	3	0	0	0	3	0	0	3	1	4	8	0	0	0	0	0	0	0	0	0	2	0	2	13
01:45 PM	0	3	0	1	0	4	0	0	0	6	4	10	0	3	0	0	0	3	0	0	0	0	0	0	17
Total Volume	0	8	0	1	1	10	0	0	3	10	23	36	0	11	0	0	1	12	0	0	0	2	0	2	60
% App. Total	0	80	0	10	10		0	0	8.3	27.8	63.9		0	91.7	0	0	8.3		0	0	0	100	0		
PHF	.000	.667	.000	.250	.250	.625	.000	.000	.250	.417	.639	.750	.000	.458	.000	.000	.250	.429	.000	.000	.000	.250	.000	.250	.682

N/S: Birmingham Pkwy/Market Street
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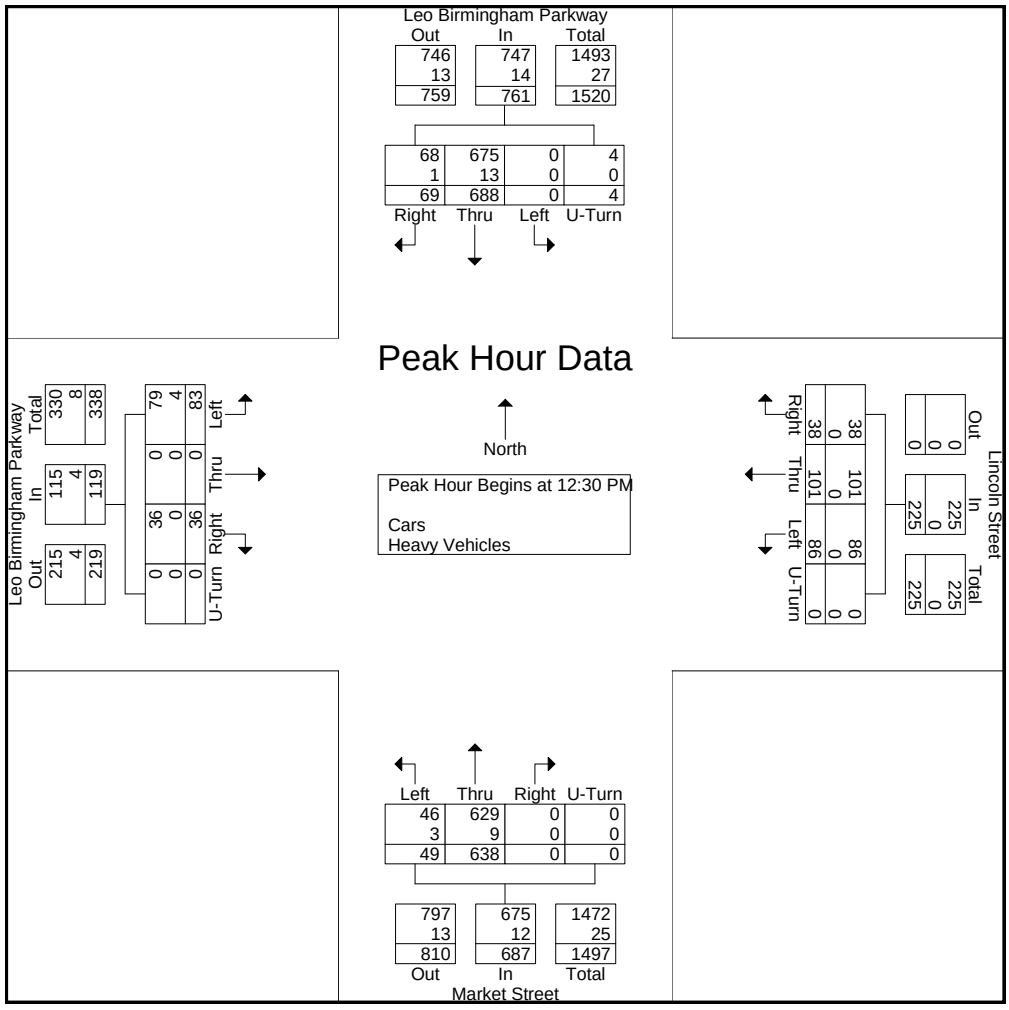
	Leo Birmingham Parkway From North					Lincoln Street From East					Market Street From South					Leo Birmingham Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	14	172	0	1	187	10	26	17	0	53	0	156	16	0	172	9	0	9	0	18	430
12:45 PM	24	169	0	1	194	9	19	21	0	49	0	168	11	0	179	7	0	28	0	35	457
01:00 PM	13	170	0	1	184	9	31	21	0	61	0	161	12	0	173	9	0	19	0	28	446
01:15 PM	18	177	0	1	196	10	25	27	0	62	0	153	10	0	163	11	0	27	0	38	459
Total Volume	69	688	0	4	761	38	101	86	0	225	0	638	49	0	687	36	0	83	0	119	1792
% App. Total	9.1	90.4	0	0.5		16.9	44.9	38.2	0		0	92.9	7.1	0		30.3	0	69.7	0		
PHF	.719	.972	.000	1.00	.971	.950	.815	.796	.000	.907	.000	.949	.766	.000	.959	.818	.000	.741	.000	.783	.976
Cars	68	675	0	4	747	38	101	86	0	225	0	629	46	0	675	36	0	79	0	115	1762
% Cars	98.6	98.1	0	100	98.2	100	100	100	0	100	0	98.6	93.9	0	98.3	100	0	95.2	0	96.6	98.3
Heavy Vehicles	1	13	0	0	14	0	0	0	0	0	0	9	3	0	12	0	0	4	0	4	30
% Heavy Vehicles	1.4	1.9	0	0	1.8	0	0	0	0	0	0	1.4	6.1	0	1.7	0	0	4.8	0	3.4	1.7



N/S: Market Street
W: Faneuil Street
City, State: Brighton, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 B
Site Code : 12305
Start Date : 10/13/2016
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Groups Printed- Cars - Heavy Vehicles

	Market Street From North			Market Street From South			Faneuil Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:00 AM	15	109	0	111	13	0	10	34	0	292
07:15 AM	25	130	0	130	13	0	7	40	0	345
07:30 AM	20	117	0	139	8	0	29	57	0	370
07:45 AM	26	133	0	152	16	0	29	56	0	412
Total	86	489	0	532	50	0	75	187	0	1419
08:00 AM	23	115	0	162	6	0	13	67	0	386
08:15 AM	23	105	0	135	14	0	10	72	0	359
08:30 AM	25	107	0	149	6	0	7	64	0	358
08:45 AM	19	119	0	125	10	0	31	55	0	359
Total	90	446	0	571	36	0	61	258	0	1462
Grand Total	176	935	0	1103	86	0	136	445	0	2881
Apprch %	15.8	84.2	0	92.8	7.2	0	23.4	76.6	0	
Total %	6.1	32.5	0	38.3	3	0	4.7	15.4	0	
Cars	163	870	0	1062	81	0	131	427	0	2734
% Cars	92.6	93	0	96.3	94.2	0	96.3	96	0	94.9
Heavy Vehicles	13	65	0	41	5	0	5	18	0	147
% Heavy Vehicles	7.4	7	0	3.7	5.8	0	3.7	4	0	5.1

	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	20	117	0	137	139	8	0	147	29	57	0	86	370
07:45 AM	26	133	0	159	152	16	0	168	29	56	0	85	412
08:00 AM	23	115	0	138	162	6	0	168	13	67	0	80	386
08:15 AM	23	105	0	128	135	14	0	149	10	72	0	82	359
Total Volume	92	470	0	562	588	44	0	632	81	252	0	333	1527
% App. Total	16.4	83.6	0		93	7	0		24.3	75.7	0		
PHF	.885	.883	.000	.884	.907	.688	.000	.940	.698	.875	.000	.968	.927
Cars	86	434	0	520	566	43	0	609	79	244	0	323	1452
% Cars	93.5	92.3	0	92.5	96.3	97.7	0	96.4	97.5	96.8	0	97.0	95.1
Heavy Vehicles	6	36	0	42	22	1	0	23	2	8	0	10	75
% Heavy Vehicles	6.5	7.7	0	7.5	3.7	2.3	0	3.6	2.5	3.2	0	3.0	4.9

N/S: Market Street
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Page No : 1

Groups Printed- Cars

	Market Street From North			Market Street From South			Faneuil Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:00 AM	15	103	0	109	13	0	10	33	0	283
07:15 AM	23	121	0	126	12	0	7	39	0	328
07:30 AM	18	108	0	136	7	0	27	56	0	352
07:45 AM	25	121	0	141	16	0	29	52	0	384
Total	81	453	0	512	48	0	73	180	0	1347
08:00 AM	22	108	0	159	6	0	13	67	0	375
08:15 AM	21	97	0	130	14	0	10	69	0	341
08:30 AM	21	98	0	144	4	0	7	61	0	335
08:45 AM	18	114	0	117	9	0	28	50	0	336
Total	82	417	0	550	33	0	58	247	0	1387
Grand Total	163	870	0	1062	81	0	131	427	0	2734
Apprch %	15.8	84.2	0	92.9	7.1	0	23.5	76.5	0	
Total %	6	31.8	0	38.8	3	0	4.8	15.6	0	

	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	18	108	0	126	136	7	0	143	27	56	0	83	352
07:45 AM	25	121	0	146	141	16	0	157	29	52	0	81	384
08:00 AM	22	108	0	130	159	6	0	165	13	67	0	80	375
08:15 AM	21	97	0	118	130	14	0	144	10	69	0	79	341
Total Volume	86	434	0	520	566	43	0	609	79	244	0	323	1452
% App. Total	16.5	83.5	0		92.9	7.1	0		24.5	75.5	0		
PHF	.860	.897	.000	.890	.890	.672	.000	.923	.681	.884	.000	.973	.945

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Groups Printed- Heavy Vehicles

	Market Street From North			Market Street From South			Faneuil Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:00 AM	0	6	0	2	0	0	0	1	0	9
07:15 AM	2	9	0	4	1	0	0	1	0	17
07:30 AM	2	9	0	3	1	0	2	1	0	18
07:45 AM	1	12	0	11	0	0	0	4	0	28
Total	5	36	0	20	2	0	2	7	0	72
08:00 AM	1	7	0	3	0	0	0	0	0	11
08:15 AM	2	8	0	5	0	0	0	3	0	18
08:30 AM	4	9	0	5	2	0	0	3	0	23
08:45 AM	1	5	0	8	1	0	3	5	0	23
Total	8	29	0	21	3	0	3	11	0	75
Grand Total	13	65	0	41	5	0	5	18	0	147
Apprch %	16.7	83.3	0	89.1	10.9	0	21.7	78.3	0	
Total %	8.8	44.2	0	27.9	3.4	0	3.4	12.2	0	

	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	1	12	0	13	11	0	0	11	0	4	0	4	28
08:00 AM	1	7	0	8	3	0	0	3	0	0	0	0	11
08:15 AM	2	8	0	10	5	0	0	5	0	3	0	3	18
08:30 AM	4	9	0	13	5	2	0	7	0	3	0	3	23
Total Volume	8	36	0	44	24	2	0	26	0	10	0	10	80
% App. Total	18.2	81.8	0		92.3	7.7	0		0	100	0		
PHF	.500	.750	.000	.846	.545	.250	.000	.591	.000	.625	.000	.625	.714

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Groups Printed- Peds and Bikes

	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	Peds EB	Peds WB	Thru	Left	Peds WB	Peds EB	Right	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	1	0	0	0	0	2	0	0	1	1	5
07:15 AM	0	1	1	0	3	0	0	3	0	4	1	2	15
07:30 AM	0	2	0	2	5	0	2	2	0	4	2	1	20
07:45 AM	0	1	0	0	3	0	1	1	0	3	1	0	10
Total	0	4	2	2	11	0	3	8	0	11	5	4	50
08:00 AM	0	2	1	0	2	0	0	4	1	3	1	2	16
08:15 AM	1	0	1	0	3	0	2	2	0	1	0	0	10
08:30 AM	0	0	0	0	6	0	1	0	0	3	0	1	11
08:45 AM	0	1	1	0	3	0	1	1	0	2	4	0	13
Total	1	3	3	0	14	0	4	7	1	9	5	3	50
Grand Total	1	7	5	2	25	0	7	15	1	20	10	7	100
Apprch %	6.7	46.7	33.3	13.3	53.2	0	14.9	31.9	2.6	52.6	26.3	18.4	
Total %	1	7	5	2	25	0	7	15	1	20	10	7	

	Market Street From North					Market Street From South					Faneuil Street From West					
Start Time	Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Peds WB	Peds EB	App. Total	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:15 AM																
07:15 AM	0	1	1	0	2	3	0	0	3	6	0	4	1	2	7	15
07:30 AM	0	2	0	2	4	5	0	2	2	9	0	4	2	1	7	20
07:45 AM	0	1	0	0	1	3	0	1	1	5	0	3	1	0	4	10
08:00 AM	0	2	1	0	3	2	0	0	4	6	1	3	1	2	7	16
Total Volume	0	6	2	2	10	13	0	3	10	26	1	14	5	5	25	61
% App. Total	0	60	20	20		50	0	11.5	38.5		4	56	20	20		
PHF	.000	.750	.500	.250	.625	.650	.000	.375	.625	.722	.250	.875	.625	.625	.893	.763

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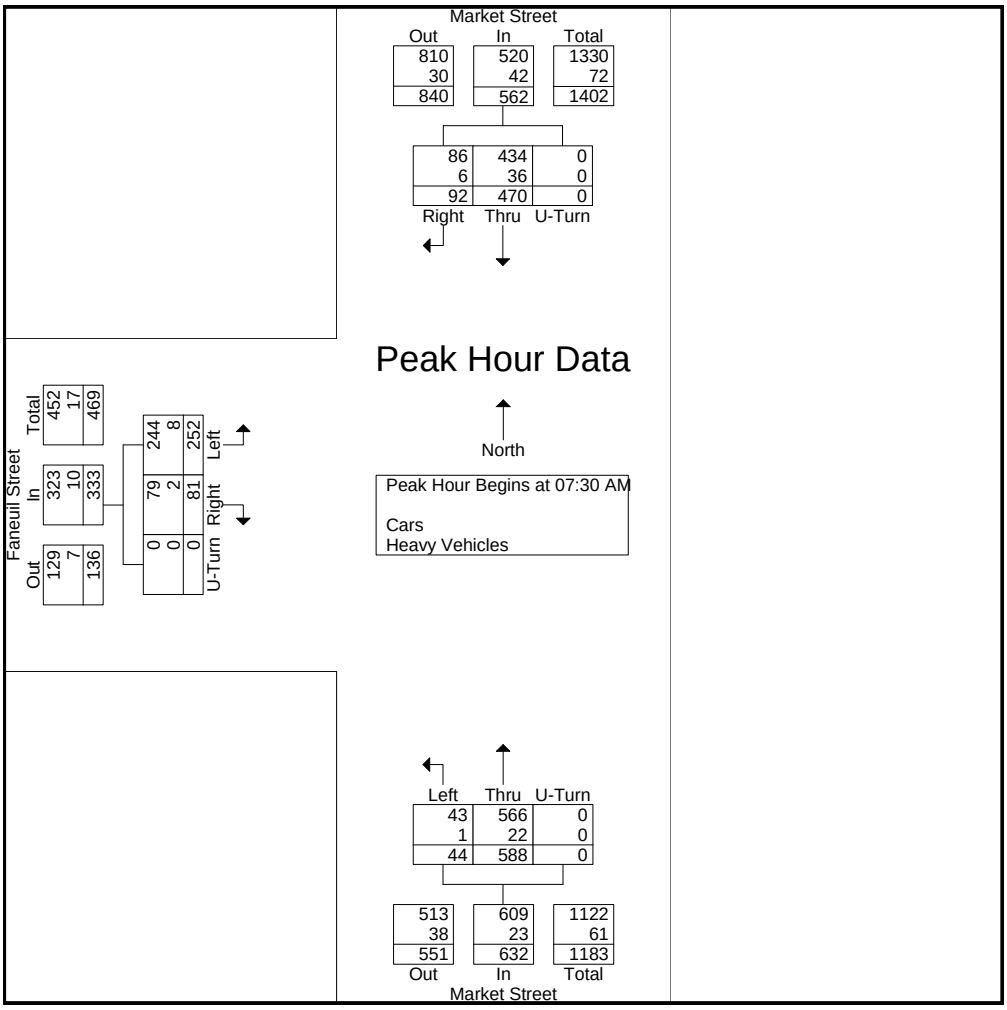
	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	20	117	0	137	139	8	0	147	29	57	0	86	370
07:45 AM	26	133	0	159	152	16	0	168	29	56	0	85	412
08:00 AM	23	115	0	138	162	6	0	168	13	67	0	80	386
08:15 AM	23	105	0	128	135	14	0	149	10	72	0	82	359
Total Volume	92	470	0	562	588	44	0	632	81	252	0	333	1527
% App. Total	16.4	83.6	0		93	7	0		24.3	75.7	0		
PHF	.885	.883	.000	.884	.907	.688	.000	.940	.698	.875	.000	.968	.927
Cars	86	434	0	520	566	43	0	609	79	244	0	323	1452
% Cars	93.5	92.3	0	92.5	96.3	97.7	0	96.4	97.5	96.8	0	97.0	95.1
Heavy Vehicles	6	36	0	42	22	1	0	23	2	8	0	10	75
% Heavy Vehicles	6.5	7.7	0	7.5	3.7	2.3	0	3.6	2.5	3.2	0	3.0	4.9



N/S: Market Street
W: Faneuil Street
City, State: Brighton, MA
Client: VHB/ P. Dunford

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

File Name : 165274 BB
Site Code : 12305
Start Date : 10/13/2016
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Groups Printed- Cars - Heavy Vehicles

	Market Street From North			Market Street From South			Faneuil Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:00 PM	42	153	0	109	8	0	10	34	0	356
04:15 PM	66	147	0	135	6	0	13	25	0	392
04:30 PM	39	140	0	128	8	0	14	32	0	361
04:45 PM	60	161	0	140	14	1	10	32	0	418
Total	207	601	0	512	36	1	47	123	0	1527
05:00 PM	79	188	0	125	9	0	15	30	0	446
05:15 PM	63	151	0	128	16	0	13	35	0	406
05:30 PM	74	143	0	126	13	0	10	58	0	424
05:45 PM	88	152	0	132	8	0	12	43	0	435
Total	304	634	0	511	46	0	50	166	0	1711
Grand Total	511	1235	0	1023	82	1	97	289	0	3238
Apprch %	29.3	70.7	0	92.5	7.4	0.1	25.1	74.9	0	
Total %	15.8	38.1	0	31.6	2.5	0	3	8.9	0	
Cars	500	1211	0	995	79	1	93	278	0	3157
% Cars	97.8	98.1	0	97.3	96.3	100	95.9	96.2	0	97.5
Heavy Vehicles	11	24	0	28	3	0	4	11	0	81
% Heavy Vehicles	2.2	1.9	0	2.7	3.7	0	4.1	3.8	0	2.5

	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	79	188	0	267	125	9	0	134	15	30	0	45	446
05:15 PM	63	151	0	214	128	16	0	144	13	35	0	48	406
05:30 PM	74	143	0	217	126	13	0	139	10	58	0	68	424
05:45 PM	88	152	0	240	132	8	0	140	12	43	0	55	435
Total Volume	304	634	0	938	511	46	0	557	50	166	0	216	1711
% App. Total	32.4	67.6	0		91.7	8.3	0		23.1	76.9	0		
PHF	.864	.843	.000	.878	.968	.719	.000	.967	.833	.716	.000	.794	.959
Cars	299	620	0	919	500	44	0	544	49	163	0	212	1675
% Cars	98.4	97.8	0	98.0	97.8	95.7	0	97.7	98.0	98.2	0	98.1	97.9
Heavy Vehicles	5	14	0	19	11	2	0	13	1	3	0	4	36
% Heavy Vehicles	1.6	2.2	0	2.0	2.2	4.3	0	2.3	2.0	1.8	0	1.9	2.1

N/S: Market Street
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Site Code : 12305
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Page No : 1

Groups Printed- Cars

	Market Street From North			Market Street From South			Faneuil Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:00 PM	39	149	0	104	8	0	9	31	0	340
04:15 PM	65	144	0	131	6	0	13	25	0	384
04:30 PM	39	139	0	124	8	0	12	29	0	351
04:45 PM	58	159	0	136	13	1	10	30	0	407
Total	201	591	0	495	35	1	44	115	0	1482
05:00 PM	76	185	0	124	8	0	15	29	0	437
05:15 PM	63	144	0	124	15	0	12	33	0	391
05:30 PM	73	141	0	123	13	0	10	58	0	418
05:45 PM	87	150	0	129	8	0	12	43	0	429
Total	299	620	0	500	44	0	49	163	0	1675
Grand Total	500	1211	0	995	79	1	93	278	0	3157
Apprch %	29.2	70.8	0	92.6	7.3	0.1	25.1	74.9	0	
Total %	15.8	38.4	0	31.5	2.5	0	2.9	8.8	0	

	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	76	185	0	261	124	8	0	132	15	29	0	44	437
05:15 PM	63	144	0	207	124	15	0	139	12	33	0	45	391
05:30 PM	73	141	0	214	123	13	0	136	10	58	0	68	418
05:45 PM	87	150	0	237	129	8	0	137	12	43	0	55	429
Total Volume	299	620	0	919	500	44	0	544	49	163	0	212	1675
% App. Total	32.5	67.5	0		91.9	8.1	0		23.1	76.9	0		
PHF	.859	.838	.000	.880	.969	.733	.000	.978	.817	.703	.000	.779	.958

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Groups Printed- Heavy Vehicles

	Market Street From North			Market Street From South			Faneuil Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:00 PM	3	4	0	5	0	0	1	3	0	16
04:15 PM	1	3	0	4	0	0	0	0	0	8
04:30 PM	0	1	0	4	0	0	2	3	0	10
04:45 PM	2	2	0	4	1	0	0	2	0	11
Total	6	10	0	17	1	0	3	8	0	45
05:00 PM	3	3	0	1	1	0	0	1	0	9
05:15 PM	0	7	0	4	1	0	1	2	0	15
05:30 PM	1	2	0	3	0	0	0	0	0	6
05:45 PM	1	2	0	3	0	0	0	0	0	6
Total	5	14	0	11	2	0	1	3	0	36
Grand Total	11	24	0	28	3	0	4	11	0	81
Apprch %	31.4	68.6	0	90.3	9.7	0	26.7	73.3	0	
Total %	13.6	29.6	0	34.6	3.7	0	4.9	13.6	0	

	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	3	4	0	7	5	0	0	5	1	3	0	4	16
04:15 PM	1	3	0	4	4	0	0	4	0	0	0	0	8
04:30 PM	0	1	0	1	4	0	0	4	2	3	0	5	10
04:45 PM	2	2	0	4	4	1	0	5	0	2	0	2	11
Total Volume	6	10	0	16	17	1	0	18	3	8	0	11	45
% App. Total	37.5	62.5	0		94.4	5.6	0		27.3	72.7	0		
PHF	.500	.625	.000	.571	.850	.250	.000	.900	.375	.667	.000	.550	.703

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Site Code : 12305
Start Date : 10/13/2016
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Groups Printed- Peds and Bikes

	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	Peds EB	Peds WB	Thru	Left	Peds WB	Peds EB	Right	Left	Peds NB	Peds SB	Int. Total
04:00 PM	2	1	4	2	0	0	0	3	0	0	1	2	15
04:15 PM	2	3	2	3	1	0	1	4	0	2	0	1	19
04:30 PM	1	3	0	2	4	0	0	4	0	0	3	1	18
04:45 PM	3	5	1	3	1	0	1	1	0	0	3	5	23
Total	8	12	7	10	6	0	2	12	0	2	7	9	75
05:00 PM	2	4	5	0	3	0	2	5	0	0	2	4	27
05:15 PM	0	1	1	1	1	0	2	5	0	0	0	2	13
05:30 PM	0	1	4	3	0	0	6	1	0	0	4	1	20
05:45 PM	3	0	7	6	2	0	3	2	0	2	2	1	28
Total	5	6	17	10	6	0	13	13	0	2	8	8	88
Grand Total	13	18	24	20	12	0	15	25	0	4	15	17	163
Apprch %	17.3	24	32	26.7	23.1	0	28.8	48.1	0	11.1	41.7	47.2	
Total %	8	11	14.7	12.3	7.4	0	9.2	15.3	0	2.5	9.2	10.4	

	Market Street From North					Market Street From South					Faneuil Street From West					
Start Time	Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Peds WB	Peds EB	App. Total	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:00 PM																
05:00 PM	2	4	5	0	11	3	0	2	5	10	0	0	2	4	6	27
05:15 PM	0	1	1	1	3	1	0	2	5	8	0	0	0	2	2	13
05:30 PM	0	1	4	3	8	0	0	6	1	7	0	0	4	1	5	20
05:45 PM	3	0	7	6	16	2	0	3	2	7	0	2	2	1	5	28
Total Volume	5	6	17	10	38	6	0	13	13	32	0	2	8	8	18	88
% App. Total	13.2	15.8	44.7	26.3		18.8	0	40.6	40.6		0	11.1	44.4	44.4		
PHF	.417	.375	.607	.417	.594	.500	.000	.542	.650	.800	.000	.250	.500	.500	.750	.786

N/S: Market Street
W: Faneuil Street
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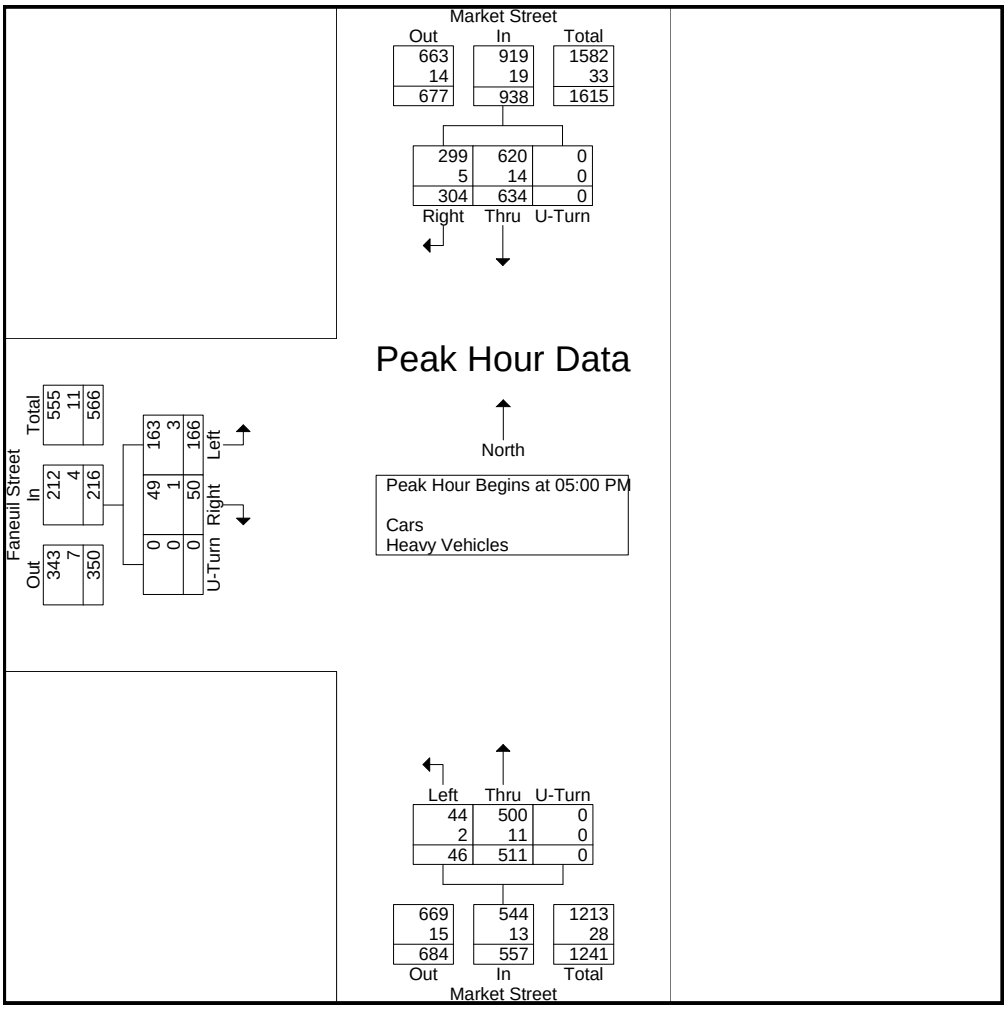
	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	79	188	0	267	125	9	0	134	15	30	0	45	446
05:15 PM	63	151	0	214	128	16	0	144	13	35	0	48	406
05:30 PM	74	143	0	217	126	13	0	139	10	58	0	68	424
05:45 PM	88	152	0	240	132	8	0	140	12	43	0	55	435
Total Volume	304	634	0	938	511	46	0	557	50	166	0	216	1711
% App. Total	32.4	67.6	0		91.7	8.3	0		23.1	76.9	0		
PHF	.864	.843	.000	.878	.968	.719	.000	.967	.833	.716	.000	.794	.959
Cars	299	620	0	919	500	44	0	544	49	163	0	212	1675
% Cars	98.4	97.8	0	98.0	97.8	95.7	0	97.7	98.0	98.2	0	98.1	97.9
Heavy Vehicles	5	14	0	19	11	2	0	13	1	3	0	4	36
% Heavy Vehicles	1.6	2.2	0	2.0	2.2	4.3	0	2.3	2.0	1.8	0	1.9	2.1



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Groups Printed- Cars - Heavy Vehicles

	Market Street From North			Market Street From South			Faneuil Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
11:00 AM	26	140	0	83	8	0	9	37	0	303
11:15 AM	26	119	0	143	6	0	15	29	0	338
11:30 AM	36	123	0	136	9	0	17	39	0	360
11:45 AM	26	123	0	144	6	0	6	45	0	350
Total	114	505	0	506	29	0	47	150	0	1351
12:00 PM	37	117	0	128	9	0	16	43	0	350
12:15 PM	40	139	0	131	4	0	17	37	0	368
12:30 PM	42	150	0	136	15	0	11	39	0	393
12:45 PM	43	147	0	146	6	0	9	46	0	397
Total	162	553	0	541	34	0	53	165	0	1508
01:00 PM	34	120	0	114	6	0	5	27	0	306
01:15 PM	42	136	0	127	1	0	15	53	0	374
01:30 PM	36	137	0	123	4	0	10	40	0	350
01:45 PM	25	147	0	126	2	0	12	39	0	351
Total	137	540	0	490	13	0	42	159	0	1381
Grand Total	413	1598	0	1537	76	0	142	474	0	4240
Apprch %	20.5	79.5	0	95.3	4.7	0	23.1	76.9	0	
Total %	9.7	37.7	0	36.2	1.8	0	3.3	11.2	0	
Cars	406	1570	0	1515	76	0	138	464	0	4169
% Cars	98.3	98.2	0	98.6	100	0	97.2	97.9	0	98.3
Heavy Vehicles	7	28	0	22	0	0	4	10	0	71
% Heavy Vehicles	1.7	1.8	0	1.4	0	0	2.8	2.1	0	1.7

	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:00 PM													
12:00 PM	37	117	0	154	128	9	0	137	16	43	0	59	350
12:15 PM	40	139	0	179	131	4	0	135	17	37	0	54	368
12:30 PM	42	150	0	192	136	15	0	151	11	39	0	50	393
12:45 PM	43	147	0	190	146	6	0	152	9	46	0	55	397
Total Volume	162	553	0	715	541	34	0	575	53	165	0	218	1508
% App. Total	22.7	77.3	0		94.1	5.9	0		24.3	75.7	0		
PHF	.942	.922	.000	.931	.926	.567	.000	.946	.779	.897	.000	.924	.950
Cars	155	541	0	696	534	34	0	568	51	160	0	211	1475
% Cars	95.7	97.8	0	97.3	98.7	100	0	98.8	96.2	97.0	0	96.8	97.8
Heavy Vehicles	7	12	0	19	7	0	0	7	2	5	0	7	33
% Heavy Vehicles	4.3	2.2	0	2.7	1.3	0	0	1.2	3.8	3.0	0	3.2	2.2

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Groups Printed- Cars

	Market Street From North			Market Street From South			Faneuil Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
11:00 AM	26	137	0	81	8	0	9	36	0	297
11:15 AM	26	117	0	140	6	0	14	28	0	331
11:30 AM	36	123	0	134	9	0	17	38	0	357
11:45 AM	26	121	0	141	6	0	6	45	0	345
Total	114	498	0	496	29	0	46	147	0	1330
12:00 PM	36	115	0	126	9	0	16	43	0	345
12:15 PM	36	137	0	131	4	0	17	36	0	361
12:30 PM	41	146	0	134	15	0	10	37	0	383
12:45 PM	42	143	0	143	6	0	8	44	0	386
Total	155	541	0	534	34	0	51	160	0	1475
01:00 PM	34	118	0	114	6	0	5	27	0	304
01:15 PM	42	134	0	126	1	0	14	52	0	369
01:30 PM	36	135	0	121	4	0	10	39	0	345
01:45 PM	25	144	0	124	2	0	12	39	0	346
Total	137	531	0	485	13	0	41	157	0	1364
Grand Total	406	1570	0	1515	76	0	138	464	0	4169
Apprch %	20.5	79.5	0	95.2	4.8	0	22.9	77.1	0	
Total %	9.7	37.7	0	36.3	1.8	0	3.3	11.1	0	

	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:00 PM													
12:00 PM	36	115	0	151	126	9	0	135	16	43	0	59	345
12:15 PM	36	137	0	173	131	4	0	135	17	36	0	53	361
12:30 PM	41	146	0	187	134	15	0	149	10	37	0	47	383
12:45 PM	42	143	0	185	143	6	0	149	8	44	0	52	386
Total Volume	155	541	0	696	534	34	0	568	51	160	0	211	1475
% App. Total	22.3	77.7	0		94	6	0		24.2	75.8	0		
PHF	.923	.926	.000	.930	.934	.567	.000	.953	.750	.909	.000	.894	.955

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Groups Printed- Heavy Vehicles

	Market Street From North			Market Street From South			Faneuil Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
11:00 AM	0	3	0	2	0	0	0	1	0	6
11:15 AM	0	2	0	3	0	0	1	1	0	7
11:30 AM	0	0	0	2	0	0	0	1	0	3
11:45 AM	0	2	0	3	0	0	0	0	0	5
Total	0	7	0	10	0	0	1	3	0	21
12:00 PM	1	2	0	2	0	0	0	0	0	5
12:15 PM	4	2	0	0	0	0	0	1	0	7
12:30 PM	1	4	0	2	0	0	1	2	0	10
12:45 PM	1	4	0	3	0	0	1	2	0	11
Total	7	12	0	7	0	0	2	5	0	33
01:00 PM	0	2	0	0	0	0	0	0	0	2
01:15 PM	0	2	0	1	0	0	1	1	0	5
01:30 PM	0	2	0	2	0	0	0	1	0	5
01:45 PM	0	3	0	2	0	0	0	0	0	5
Total	0	9	0	5	0	0	1	2	0	17
Grand Total	7	28	0	22	0	0	4	10	0	71
Apprch %	20	80	0	100	0	0	28.6	71.4	0	
Total %	9.9	39.4	0	31	0	0	5.6	14.1	0	

	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:00 PM													
12:00 PM	1	2	0	3	2	0	0	2	0	0	0	0	5
12:15 PM	4	2	0	6	0	0	0	0	0	1	0	1	7
12:30 PM	1	4	0	5	2	0	0	2	1	2	0	3	10
12:45 PM	1	4	0	5	3	0	0	3	1	2	0	3	11
Total Volume	7	12	0	19	7	0	0	7	2	5	0	7	33
% App. Total	36.8	63.2	0		100	0	0		28.6	71.4	0		
PHF	.438	.750	.000	.792	.583	.000	.000	.583	.500	.625	.000	.583	.750

N/S: Market Street
W: Faneuil Street
City, State: Brighton, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 BBB
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Peds and Bikes

	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	Peds EB	Peds WB	Thru	Left	Peds WB	Peds EB	Right	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	2	2	0	1	0	1	5	0	1	0	4	16
11:15 AM	0	0	2	4	1	1	0	0	0	0	2	0	10
11:30 AM	0	0	3	1	1	1	0	4	1	0	4	2	17
11:45 AM	3	1	0	8	3	0	0	0	0	2	4	2	23
Total	3	3	7	13	6	2	1	9	1	3	10	8	66
12:00 PM	0	0	0	0	0	0	1	3	0	0	2	1	7
12:15 PM	1	0	1	0	4	0	4	4	0	0	2	1	17
12:30 PM	0	0	0	0	0	0	5	4	0	1	2	7	19
12:45 PM	0	0	1	0	0	0	2	4	0	0	4	2	13
Total	1	0	2	0	4	0	12	15	0	1	10	11	56
01:00 PM	0	0	0	0	3	0	0	4	0	2	3	1	13
01:15 PM	1	0	0	3	3	0	0	4	0	1	0	2	14
01:30 PM	0	5	2	1	0	0	0	2	0	0	0	3	13
01:45 PM	0	0	0	3	0	0	2	4	0	1	1	3	14
Total	1	5	2	7	6	0	2	14	0	4	4	9	54
Grand Total	5	8	11	20	16	2	15	38	1	8	24	28	176
Apprch %	11.4	18.2	25	45.5	22.5	2.8	21.1	53.5	1.6	13.1	39.3	45.9	
Total %	2.8	4.5	6.2	11.4	9.1	1.1	8.5	21.6	0.6	4.5	13.6	15.9	

	Market Street From North					Market Street From South					Faneuil Street From West					
Start Time	Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Peds WB	Peds EB	App. Total	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 11:00 AM																
11:00 AM	0	2	2	0	4	1	0	1	5	7	0	1	0	4	5	16
11:15 AM	0	0	2	4	6	1	1	0	0	2	0	0	2	0	2	10
11:30 AM	0	0	3	1	4	1	1	0	4	6	1	0	4	2	7	17
11:45 AM	3	1	0	8	12	3	0	0	0	3	0	2	4	2	8	23
Total Volume	3	3	7	13	26	6	2	1	9	18	1	3	10	8	22	66
% App. Total	11.5	11.5	26.9	50		33.3	11.1	5.6	50		4.5	13.6	45.5	36.4		
PHF	.250	.375	.583	.406	.542	.500	.500	.250	.450	.643	.250	.375	.625	.500	.688	.717

N/S: Market Street
W: Faneuil Street
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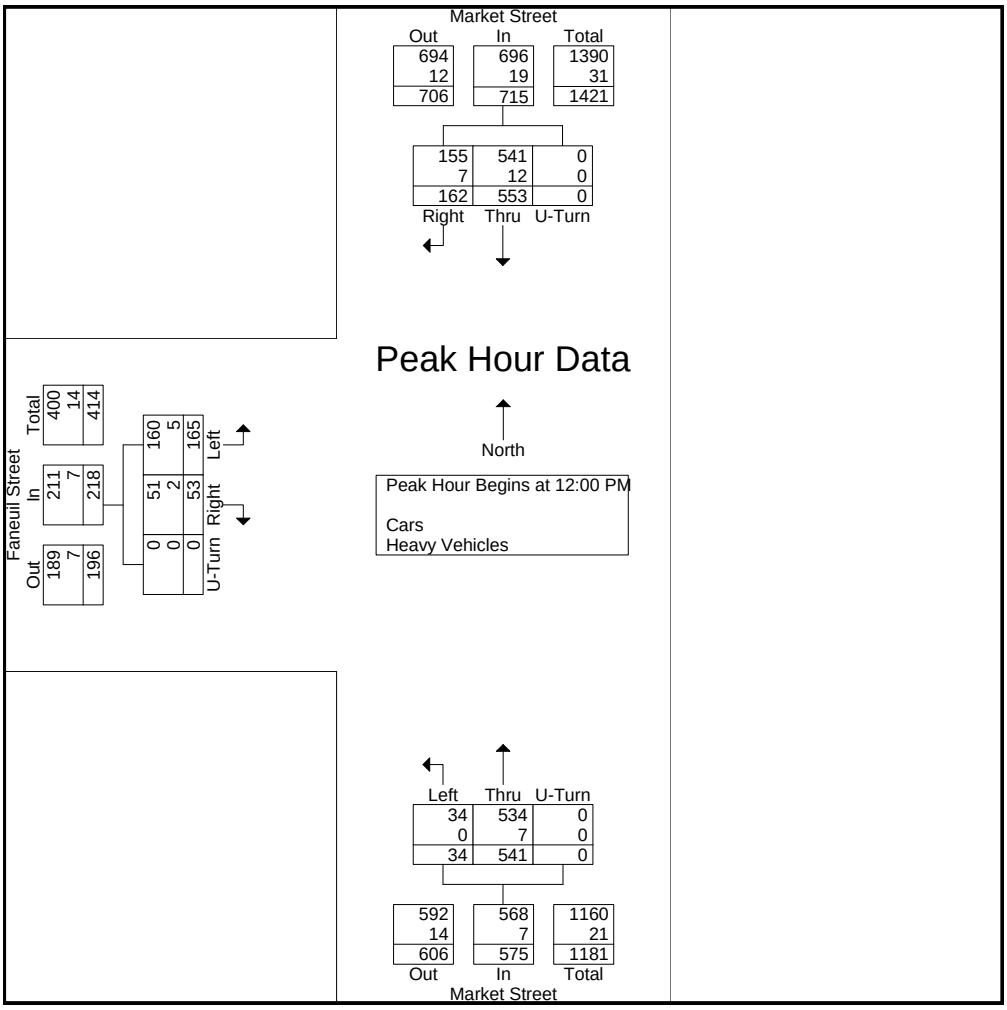
	Market Street From North				Market Street From South				Faneuil Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:00 PM													
12:00 PM	37	117	0	154	128	9	0	137	16	43	0	59	350
12:15 PM	40	139	0	179	131	4	0	135	17	37	0	54	368
12:30 PM	42	150	0	192	136	15	0	151	11	39	0	50	393
12:45 PM	43	147	0	190	146	6	0	152	9	46	0	55	397
Total Volume	162	553	0	715	541	34	0	575	53	165	0	218	1508
% App. Total	22.7	77.3	0		94.1	5.9	0		24.3	75.7	0		
PHF	.942	.922	.000	.931	.926	.567	.000	.946	.779	.897	.000	.924	.950
Cars	155	541	0	696	534	34	0	568	51	160	0	211	1475
% Cars	95.7	97.8	0	97.3	98.7	100	0	98.8	96.2	97.0	0	96.8	97.8
Heavy Vehicles	7	12	0	19	7	0	0	7	2	5	0	7	33
% Heavy Vehicles	4.3	2.2	0	2.7	1.3	0	0	1.2	3.8	3.0	0	3.2	2.2



N/S: Market Street
E/W: Sparhawk Street/ Arlington Street
City, State: Brighton, MA
Client: VHB/ P. Dunford

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File Name : 165274 C
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Market Street From North				Sparhawk Street From East				Market Street From South				Arlington Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	5	73	31	0	28	33	1	0	2	87	2	0	16	56	7	0	341
07:15 AM	4	100	24	0	31	47	2	0	0	94	1	0	9	56	15	0	383
07:30 AM	8	96	22	0	40	45	4	0	1	84	4	0	16	46	21	0	387
07:45 AM	8	116	17	0	54	47	2	0	0	83	1	0	16	46	17	0	407
Total	25	385	94	0	153	172	9	0	3	348	8	0	57	204	60	0	1518
08:00 AM	4	93	29	0	33	59	5	0	2	104	1	0	20	59	15	0	424
08:15 AM	3	100	21	0	41	49	4	0	2	88	7	0	28	65	6	0	414
08:30 AM	5	88	16	0	42	55	7	0	0	107	3	0	29	54	10	0	416
08:45 AM	8	85	22	0	38	42	5	0	1	91	4	0	20	54	20	0	390
Total	20	366	88	0	154	205	21	0	5	390	15	0	97	232	51	0	1644
Grand Total	45	751	182	0	307	377	30	0	8	738	23	0	154	436	111	0	3162
Apprch %	4.6	76.8	18.6	0	43	52.8	4.2	0	1	96	3	0	22	62.2	15.8	0	
Total %	1.4	23.8	5.8	0	9.7	11.9	0.9	0	0.3	23.3	0.7	0	4.9	13.8	3.5	0	
Cars	43	696	176	0	302	367	30	0	8	702	22	0	152	425	110	0	3033
% Cars	95.6	92.7	96.7	0	98.4	97.3	100	0	100	95.1	95.7	0	98.7	97.5	99.1	0	95.9
Heavy Vehicles	2	55	6	0	5	10	0	0	0	36	1	0	2	11	1	0	129
% Heavy Vehicles	4.4	7.3	3.3	0	1.6	2.7	0	0	0	4.9	4.3	0	1.3	2.5	0.9	0	4.1

	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	8	116	17	0	141	54	47	2	0	103	0	83	1	0	84	16	46	17	0	79	407
08:00 AM	4	93	29	0	126	33	59	5	0	97	2	104	1	0	107	20	59	15	0	94	424
08:15 AM	3	100	21	0	124	41	49	4	0	94	2	88	7	0	97	28	65	6	0	99	414
08:30 AM	5	88	16	0	109	42	55	7	0	104	0	107	3	0	110	29	54	10	0	93	416
Total Volume	20	397	83	0	500	170	210	18	0	398	4	382	12	0	398	93	224	48	0	365	1661
% App. Total	4	79.4	16.6	0		42.7	52.8	4.5	0		1	96	3	0		25.5	61.4	13.2	0		
PHF	.625	.856	.716	.000	.887	.787	.890	.643	.000	.957	.500	.893	.429	.000	.905	.802	.862	.706	.000	.922	.979
Cars	20	362	80	0	462	167	205	18	0	390	4	360	11	0	375	93	219	47	0	359	1586
% Cars	100	91.2	96.4	0	92.4	98.2	97.6	100	0	98.0	100	94.2	91.7	0	94.2	100	97.8	97.9	0	98.4	95.5
Heavy Vehicles	0	35	3	0	38	3	5	0	0	8	0	22	1	0	23	0	5	1	0	6	75
% Heavy Vehicles	0	8.8	3.6	0	7.6	1.8	2.4	0	0	2.0	0	5.8	8.3	0	5.8	0	2.2	2.1	0	1.6	4.5

N/S: Market Street
E/W: Sparhawk Street/ Arlington Street
City, State: Brighton, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
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File Name : 165274 C
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Cars

	Market Street From North				Sparhawk Street From East				Market Street From South				Arlington Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	4	70	30	0	28	33	1	0	2	85	2	0	15	54	7	0	331
07:15 AM	3	96	24	0	31	46	2	0	0	88	1	0	9	55	15	0	370
07:30 AM	8	89	21	0	39	44	4	0	1	82	4	0	16	45	21	0	374
07:45 AM	8	106	17	0	53	46	2	0	0	75	1	0	16	46	17	0	387
Total	23	361	92	0	151	169	9	0	3	330	8	0	56	200	60	0	1462
08:00 AM	4	86	29	0	32	58	5	0	2	100	1	0	20	57	15	0	409
08:15 AM	3	90	20	0	41	49	4	0	2	83	6	0	28	64	5	0	395
08:30 AM	5	80	14	0	41	52	7	0	0	102	3	0	29	52	10	0	395
08:45 AM	8	79	21	0	37	39	5	0	1	87	4	0	19	52	20	0	372
Total	20	335	84	0	151	198	21	0	5	372	14	0	96	225	50	0	1571
Grand Total	43	696	176	0	302	367	30	0	8	702	22	0	152	425	110	0	3033
Apprch %	4.7	76.1	19.2	0	43.2	52.5	4.3	0	1.1	95.9	3	0	22.1	61.9	16	0	
Total %	1.4	22.9	5.8	0	10	12.1	1	0	0.3	23.1	0.7	0	5	14	3.6	0	

	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	8	106	17	0	131	53	46	2	0	101	0	75	1	0	76	16	46	17	0	79	387
08:00 AM	4	86	29	0	119	32	58	5	0	95	2	100	1	0	103	20	57	15	0	92	409
08:15 AM	3	90	20	0	113	41	49	4	0	94	2	83	6	0	91	28	64	5	0	97	395
08:30 AM	5	80	14	0	99	41	52	7	0	100	0	102	3	0	105	29	52	10	0	91	395
Total Volume	20	362	80	0	462	167	205	18	0	390	4	360	11	0	375	93	219	47	0	359	1586
% App. Total	4.3	78.4	17.3	0		42.8	52.6	4.6	0		1.1	96	2.9	0		25.9	61	13.1	0		
PHF	.625	.854	.690	.000	.882	.788	.884	.643	.000	.965	.500	.882	.458	.000	.893	.802	.855	.691	.000	.925	.969

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Page No : 1

Groups Printed- Heavy Vehicles

	Market Street From North				Sparhawk Street From East				Market Street From South				Arlington Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	3	1	0	0	0	0	0	0	2	0	0	1	2	0	0	10
07:15 AM	1	4	0	0	0	1	0	0	0	6	0	0	0	1	0	0	13
07:30 AM	0	7	1	0	1	1	0	0	0	2	0	0	0	1	0	0	13
07:45 AM	0	10	0	0	1	1	0	0	0	8	0	0	0	0	0	0	20
Total	2	24	2	0	2	3	0	0	0	18	0	0	1	4	0	0	56
08:00 AM	0	7	0	0	1	1	0	0	0	4	0	0	0	2	0	0	15
08:15 AM	0	10	1	0	0	0	0	0	0	5	1	0	0	1	1	0	19
08:30 AM	0	8	2	0	1	3	0	0	0	5	0	0	0	2	0	0	21
08:45 AM	0	6	1	0	1	3	0	0	0	4	0	0	1	2	0	0	18
Total	0	31	4	0	3	7	0	0	0	18	1	0	1	7	1	0	73
Grand Total	2	55	6	0	5	10	0	0	0	36	1	0	2	11	1	0	129
Apprch %	3.2	87.3	9.5	0	33.3	66.7	0	0	0	97.3	2.7	0	14.3	78.6	7.1	0	
Total %	1.6	42.6	4.7	0	3.9	7.8	0	0	0	27.9	0.8	0	1.6	8.5	0.8	0	

	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	10	0	0	10	1	1	0	0	2	0	8	0	0	8	0	0	0	0	0	20
08:00 AM	0	7	0	0	7	1	1	0	0	2	0	4	0	0	4	0	2	0	0	2	15
08:15 AM	0	10	1	0	11	0	0	0	0	0	0	5	1	0	6	0	1	1	0	2	19
08:30 AM	0	8	2	0	10	1	3	0	0	4	0	5	0	0	5	0	2	0	0	2	21
Total Volume	0	35	3	0	38	3	5	0	0	8	0	22	1	0	23	0	5	1	0	6	75
% App. Total	0	92.1	7.9	0		37.5	62.5	0	0		0	95.7	4.3	0		0	83.3	16.7	0		
PHF	.000	.875	.375	.000	.864	.750	.417	.000	.000	.500	.000	.688	.250	.000	.719	.000	.625	.250	.000	.750	.893

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Groups Printed- Peds and Bikes

	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	5	2	0	0	0	1	1	0	0	0	3	3	15
07:15 AM	1	0	0	5	1	1	1	0	5	0	0	2	0	3	19	0	2	0	7	5	52
07:30 AM	0	1	0	1	3	1	2	0	1	2	0	0	0	7	1	0	4	0	4	5	32
07:45 AM	0	2	0	2	3	1	1	0	5	5	0	0	0	2	1	0	3	0	5	10	40
Total	1	3	0	8	7	3	4	0	16	9	0	2	0	13	22	0	9	0	19	23	139
08:00 AM	0	2	1	7	1	0	0	0	4	2	0	2	1	1	2	0	0	0	3	6	32
08:15 AM	0	1	0	4	0	0	2	0	11	4	0	1	0	2	9	0	2	0	1	2	39
08:30 AM	0	0	0	3	2	0	1	0	5	3	0	6	0	1	7	0	2	0	2	9	41
08:45 AM	0	1	2	5	0	0	1	0	2	8	0	1	0	0	6	0	2	0	15	2	45
Total	0	4	3	19	3	0	4	0	22	17	0	10	1	4	24	0	6	0	21	19	157
Grand Total	1	7	3	27	10	3	8	0	38	26	0	12	1	17	46	0	15	0	40	42	296
Apprch %	2.1	14.6	6.2	56.2	20.8	4	10.7	0	50.7	34.7	0	15.8	1.3	22.4	60.5	0	15.5	0	41.2	43.3	
Total %	0.3	2.4	1	9.1	3.4	1	2.7	0	12.8	8.8	0	4.1	0.3	5.7	15.5	0	5.1	0	13.5	14.2	

	Market Street From North						Sparhawk Street From East						Market Street From South						Arlington Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:00 AM																									
08:00 AM	0	2	1	7	1	11	0	0	0	4	2	6	0	2	1	1	2	6	0	0	0	3	6	9	32
08:15 AM	0	1	0	4	0	5	0	2	0	11	4	17	0	1	0	2	9	12	0	2	0	1	2	5	39
08:30 AM	0	0	0	3	2	5	0	1	0	5	3	9	0	6	0	1	7	14	0	2	0	2	9	13	41
08:45 AM	0	1	2	5	0	8	0	1	0	2	8	11	0	1	0	0	6	7	0	2	0	15	2	19	45
Total Volume	0	4	3	19	3	29	0	4	0	22	17	43	0	10	1	4	24	39	0	6	0	21	19	46	157
% App. Total	0	13.8	10.3	65.5	10.3		0	9.3	0	51.2	39.5		0	25.6	2.6	10.3	61.5		0	13	0	45.7	41.3		
PHF	.000	.500	.375	.679	.375	.659	.000	.500	.000	.500	.531	.632	.000	.417	.250	.500	.667	.696	.000	.750	.000	.350	.528	.605	.872

N/S: Market Street
E/W: Sparhawk Street/ Arlington Street
City, State: Brighton, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 C
Site Code : 12305
Start Date : 10/13/2016
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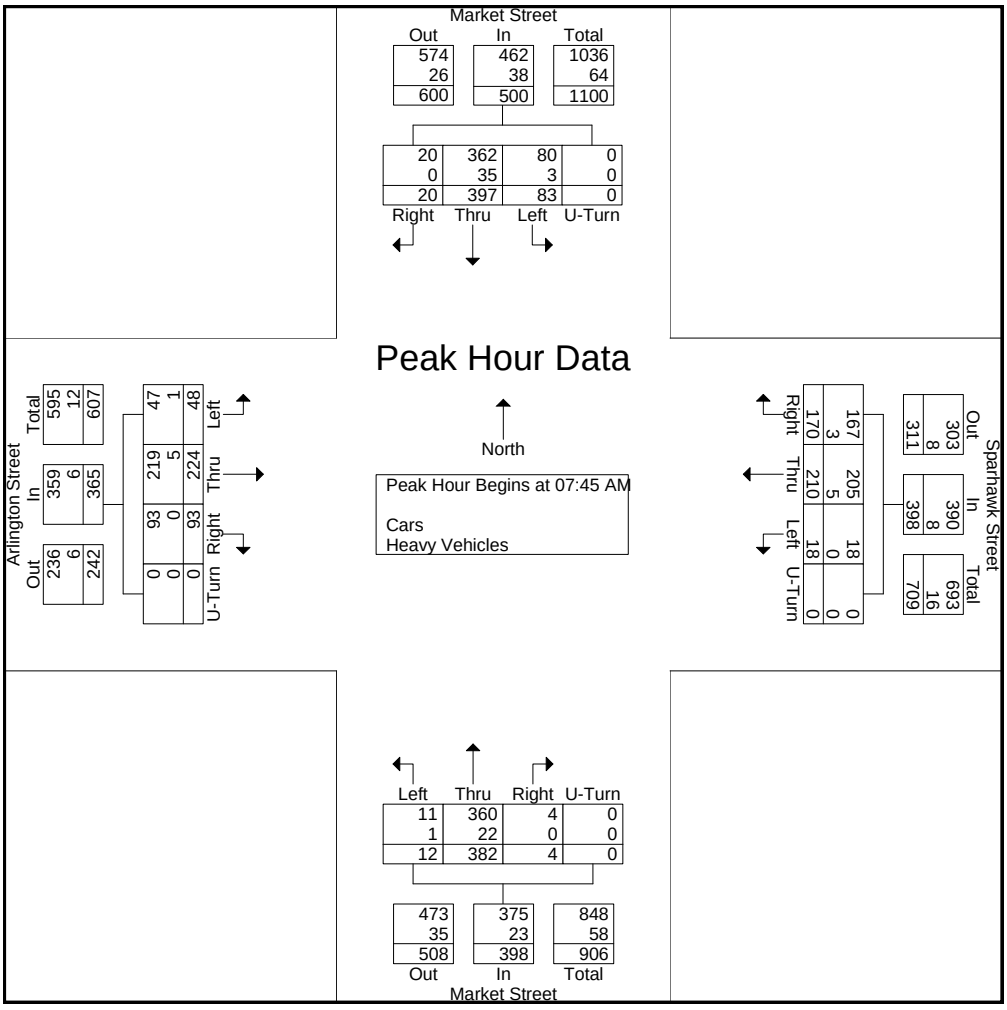
	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	8	116	17	0	141	54	47	2	0	103	0	83	1	0	84	16	46	17	0	79	407
08:00 AM	4	93	29	0	126	33	59	5	0	97	2	104	1	0	107	20	59	15	0	94	424
08:15 AM	3	100	21	0	124	41	49	4	0	94	2	88	7	0	97	28	65	6	0	99	414
08:30 AM	5	88	16	0	109	42	55	7	0	104	0	107	3	0	110	29	54	10	0	93	416
Total Volume	20	397	83	0	500	170	210	18	0	398	4	382	12	0	398	93	224	48	0	365	1661
% App. Total	4	79.4	16.6	0		42.7	52.8	4.5	0		1	96	3	0		25.5	61.4	13.2	0		
PHF	.625	.856	.716	.000	.887	.787	.890	.643	.000	.957	.500	.893	.429	.000	.905	.802	.862	.706	.000	.922	.979
Cars	20	362	80	0	462	167	205	18	0	390	4	360	11	0	375	93	219	47	0	359	1586
% Cars	100	91.2	96.4	0	92.4	98.2	97.6	100	0	98.0	100	94.2	91.7	0	94.2	100	97.8	97.9	0	98.4	95.5
Heavy Vehicles	0	35	3	0	38	3	5	0	0	8	0	22	1	0	23	0	5	1	0	6	75
% Heavy Vehicles	0	8.8	3.6	0	7.6	1.8	2.4	0	0	2.0	0	5.8	8.3	0	5.8	0	2.2	2.1	0	1.6	4.5



N/S: Market Street
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City, State: Brighton, MA
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PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 CC
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Market Street From North				Sparhawk Street From East				Market Street From South				Arlington Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	6	114	17	0	25	79	10	0	3	83	4	0	22	34	6	0	403
04:15 PM	6	131	14	0	44	64	8	0	7	91	3	0	20	40	8	0	436
04:30 PM	4	118	20	0	37	74	4	0	1	100	2	0	13	55	14	0	442
04:45 PM	6	129	18	0	36	62	3	0	1	100	2	0	23	48	15	0	443
Total	22	492	69	0	142	279	25	0	12	374	11	0	78	177	43	0	1724
05:00 PM	6	143	22	0	29	64	5	0	1	92	4	0	23	58	14	0	461
05:15 PM	4	119	20	0	42	73	2	0	3	87	5	0	21	65	15	0	456
05:30 PM	3	118	17	0	26	69	10	0	2	79	4	0	15	65	15	0	423
05:45 PM	4	133	18	0	35	70	6	0	1	97	3	0	10	58	16	0	451
Total	17	513	77	0	132	276	23	0	7	355	16	0	69	246	60	0	1791
Grand Total	39	1005	146	0	274	555	48	0	19	729	27	0	147	423	103	0	3515
Apprch %	3.3	84.5	12.3	0	31.2	63.3	5.5	0	2.5	94.1	3.5	0	21.8	62.9	15.3	0	
Total %	1.1	28.6	4.2	0	7.8	15.8	1.4	0	0.5	20.7	0.8	0	4.2	12	2.9	0	
Cars	39	982	143	0	270	552	48	0	19	705	26	0	144	419	101	0	3448
% Cars	100	97.7	97.9	0	98.5	99.5	100	0	100	96.7	96.3	0	98	99.1	98.1	0	98.1
Heavy Vehicles	0	23	3	0	4	3	0	0	0	24	1	0	3	4	2	0	67
% Heavy Vehicles	0	2.3	2.1	0	1.5	0.5	0	0	0	3.3	3.7	0	2	0.9	1.9	0	1.9

	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	4	118	20	0	142	37	74	4	0	115	1	100	2	0	103	13	55	14	0	82	442
04:45 PM	6	129	18	0	153	36	62	3	0	101	1	100	2	0	103	23	48	15	0	86	443
05:00 PM	6	143	22	0	171	29	64	5	0	98	1	92	4	0	97	23	58	14	0	95	461
05:15 PM	4	119	20	0	143	42	73	2	0	117	3	87	5	0	95	21	65	15	0	101	456
Total Volume	20	509	80	0	609	144	273	14	0	431	6	379	13	0	398	80	226	58	0	364	1802
% App. Total	3.3	83.6	13.1	0		33.4	63.3	3.2	0		1.5	95.2	3.3	0		22	62.1	15.9	0		
PHF	.833	.890	.909	.000	.890	.857	.922	.700	.000	.921	.500	.948	.650	.000	.966	.870	.869	.967	.000	.901	.977
Cars	20	496	78	0	594	142	272	14	0	428	6	367	12	0	385	79	224	57	0	360	1767
% Cars	100	97.4	97.5	0	97.5	98.6	99.6	100	0	99.3	100	96.8	92.3	0	96.7	98.8	99.1	98.3	0	98.9	98.1
Heavy Vehicles	0	13	2	0	15	2	1	0	0	3	0	12	1	0	13	1	2	1	0	4	35
% Heavy Vehicles	0	2.6	2.5	0	2.5	1.4	0.4	0	0	0.7	0	3.2	7.7	0	3.3	1.3	0.9	1.7	0	1.1	1.9

N/S: Market Street
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File Name : 165274 CC
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Cars

	Market Street From North				Sparhawk Street From East				Market Street From South				Arlington Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	6	112	16	0	25	79	10	0	3	78	4	0	20	34	6	0	393
04:15 PM	6	127	14	0	43	62	8	0	7	88	3	0	20	38	8	0	424
04:30 PM	4	115	18	0	37	73	4	0	1	98	2	0	13	54	14	0	433
04:45 PM	6	126	18	0	36	62	3	0	1	95	2	0	22	48	14	0	433
Total	22	480	66	0	141	276	25	0	12	359	11	0	75	174	42	0	1683
05:00 PM	6	142	22	0	29	64	5	0	1	90	3	0	23	58	14	0	457
05:15 PM	4	113	20	0	40	73	2	0	3	84	5	0	21	64	15	0	444
05:30 PM	3	115	17	0	26	69	10	0	2	76	4	0	15	65	15	0	417
05:45 PM	4	132	18	0	34	70	6	0	1	96	3	0	10	58	15	0	447
Total	17	502	77	0	129	276	23	0	7	346	15	0	69	245	59	0	1765
Grand Total	39	982	143	0	270	552	48	0	19	705	26	0	144	419	101	0	3448
Apprch %	3.4	84.4	12.3	0	31	63.4	5.5	0	2.5	94	3.5	0	21.7	63.1	15.2	0	
Total %	1.1	28.5	4.1	0	7.8	16	1.4	0	0.6	20.4	0.8	0	4.2	12.2	2.9	0	

	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	4	115	18	0	137	37	73	4	0	114	1	98	2	0	101	13	54	14	0	81	433
04:45 PM	6	126	18	0	150	36	62	3	0	101	1	95	2	0	98	22	48	14	0	84	433
05:00 PM	6	142	22	0	170	29	64	5	0	98	1	90	3	0	94	23	58	14	0	95	457
05:15 PM	4	113	20	0	137	40	73	2	0	115	3	84	5	0	92	21	64	15	0	100	444
Total Volume	20	496	78	0	594	142	272	14	0	428	6	367	12	0	385	79	224	57	0	360	1767
% App. Total	3.4	83.5	13.1	0		33.2	63.6	3.3	0		1.6	95.3	3.1	0		21.9	62.2	15.8	0		
PHF	.833	.873	.886	.000	.874	.888	.932	.700	.000	.930	.500	.936	.600	.000	.953	.859	.875	.950	.000	.900	.967

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File Name : 165274 CC
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Page No : 1

Groups Printed- Heavy Vehicles

	Market Street From North				Sparhawk Street From East				Market Street From South				Arlington Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	2	1	0	0	0	0	0	0	5	0	0	2	0	0	0	10
04:15 PM	0	4	0	0	1	2	0	0	0	3	0	0	0	2	0	0	12
04:30 PM	0	3	2	0	0	1	0	0	0	2	0	0	0	1	0	0	9
04:45 PM	0	3	0	0	0	0	0	0	0	5	0	0	1	0	1	0	10
Total	0	12	3	0	1	3	0	0	0	15	0	0	3	3	1	0	41
05:00 PM	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	4
05:15 PM	0	6	0	0	2	0	0	0	0	3	0	0	0	1	0	0	12
05:30 PM	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	6
05:45 PM	0	1	0	0	1	0	0	0	0	1	0	0	0	0	1	0	4
Total	0	11	0	0	3	0	0	0	0	9	1	0	0	1	1	0	26
Grand Total	0	23	3	0	4	3	0	0	0	24	1	0	3	4	2	0	67
Apprch %	0	88.5	11.5	0	57.1	42.9	0	0	0	96	4	0	33.3	44.4	22.2	0	
Total %	0	34.3	4.5	0	6	4.5	0	0	0	35.8	1.5	0	4.5	6	3	0	

	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	2	1	0	3	0	0	0	0	0	0	5	0	0	5	2	0	0	0	2	10
04:15 PM	0	4	0	0	4	1	2	0	0	3	0	3	0	0	3	0	2	0	0	2	12
04:30 PM	0	3	2	0	5	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	9
04:45 PM	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	1	0	1	0	2	10
Total Volume	0	12	3	0	15	1	3	0	0	4	0	15	0	0	15	3	3	1	0	7	41
% App. Total	0	80	20	0		25	75	0	0		0	100	0	0		42.9	42.9	14.3	0		
PHF	.000	.750	.375	.000	.750	.250	.375	.000	.000	.333	.000	.750	.000	.000	.750	.375	.375	.250	.000	.875	.854

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Page No : 1

Groups Printed- Peds and Bikes

	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	1	0	5	2	1	2	0	9	4	0	1	0	4	0	0	1	1	3	4	38
04:15 PM	0	3	0	0	3	0	2	0	2	6	0	1	0	0	1	0	0	1	4	1	24
04:30 PM	0	3	0	2	2	1	0	0	4	3	0	2	0	4	2	0	0	0	6	3	32
04:45 PM	0	3	0	6	3	1	1	0	2	7	0	0	0	2	6	1	0	0	5	3	40
Total	0	10	0	13	10	3	5	0	17	20	0	4	0	10	9	1	1	2	18	11	134
05:00 PM	0	1	0	2	1	0	1	1	6	2	0	4	0	2	0	0	0	0	3	3	26
05:15 PM	0	1	0	1	1	0	2	0	6	1	0	1	0	2	3	0	0	0	5	5	28
05:30 PM	0	0	0	4	4	0	3	0	6	8	0	1	0	2	1	0	2	0	7	0	38
05:45 PM	0	2	0	3	1	0	3	0	5	4	0	2	0	0	0	1	1	0	3	2	27
Total	0	4	0	10	7	0	9	1	23	15	0	8	0	6	4	1	3	0	18	10	119
Grand Total	0	14	0	23	17	3	14	1	40	35	0	12	0	16	13	2	4	2	36	21	253
Apprch %	0	25.9	0	42.6	31.5	3.2	15.1	1.1	43	37.6	0	29.3	0	39	31.7	3.1	6.2	3.1	55.4	32.3	
Total %	0	5.5	0	9.1	6.7	1.2	5.5	0.4	15.8	13.8	0	4.7	0	6.3	5.1	0.8	1.6	0.8	14.2	8.3	

	Market Street From North						Sparhawk Street From East						Market Street From South						Arlington Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:00 PM																									
04:00 PM	0	1	0	5	2	8	1	2	0	9	4	16	0	1	0	4	0	5	0	1	1	3	4	9	38
04:15 PM	0	3	0	0	3	6	0	2	0	2	6	10	0	1	0	0	1	2	0	0	1	4	1	6	24
04:30 PM	0	3	0	2	2	7	1	0	0	4	3	8	0	2	0	4	2	8	0	0	0	6	3	9	32
04:45 PM	0	3	0	6	3	12	1	1	0	2	7	11	0	0	0	2	6	8	1	0	0	5	3	9	40
Total Volume	0	10	0	13	10	33	3	5	0	17	20	45	0	4	0	10	9	23	1	1	2	18	11	33	134
% App. Total	0	30.3	0	39.4	30.3		6.7	11.1	0	37.8	44.4		0	17.4	0	43.5	39.1		3	3	6.1	54.5	33.3		
PHF	.000	.833	.000	.542	.833	.688	.750	.625	.000	.472	.714	.703	.000	.500	.000	.625	.375	.719	.250	.250	.500	.750	.688	.917	.838

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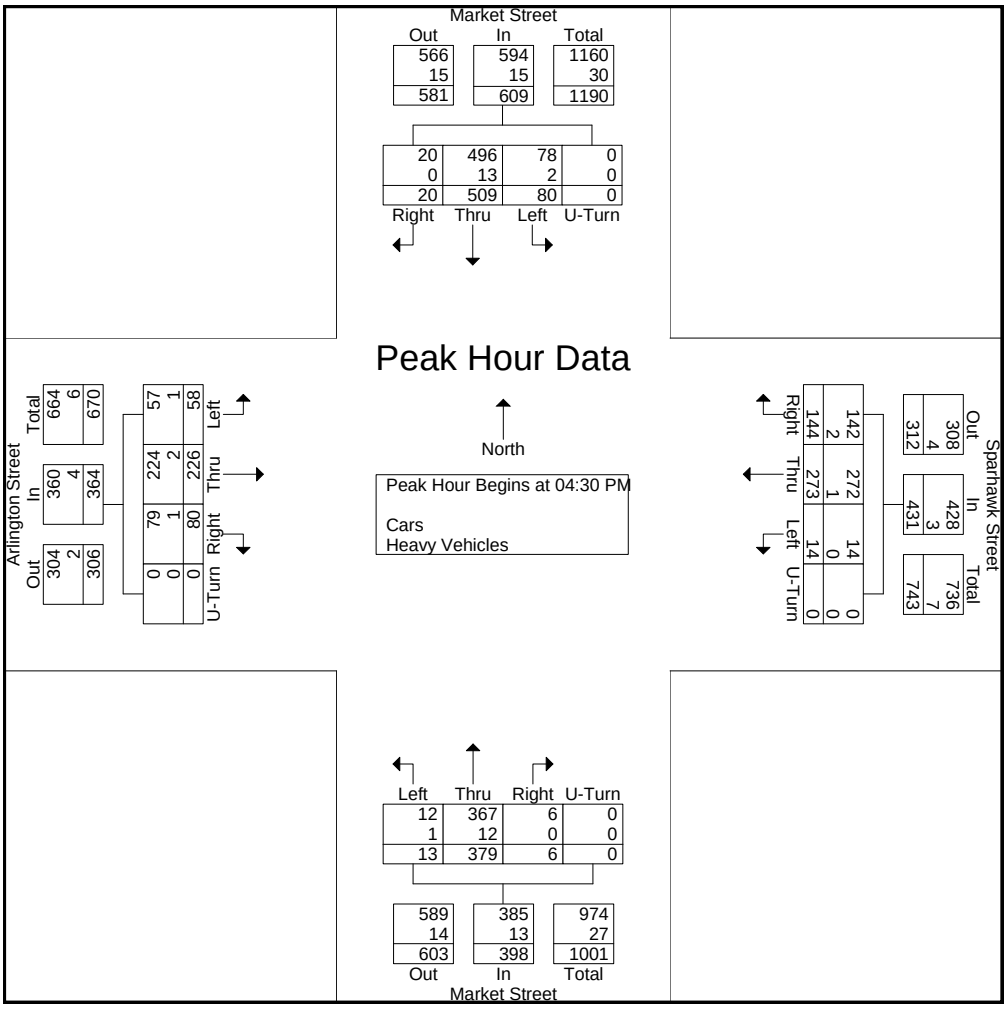
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	4	118	20	0	142	37	74	4	0	115	1	100	2	0	103	13	55	14	0	82	442
04:45 PM	6	129	18	0	153	36	62	3	0	101	1	100	2	0	103	23	48	15	0	86	443
05:00 PM	6	143	22	0	171	29	64	5	0	98	1	92	4	0	97	23	58	14	0	95	461
05:15 PM	4	119	20	0	143	42	73	2	0	117	3	87	5	0	95	21	65	15	0	101	456
Total Volume	20	509	80	0	609	144	273	14	0	431	6	379	13	0	398	80	226	58	0	364	1802
% App. Total	3.3	83.6	13.1	0		33.4	63.3	3.2	0		1.5	95.2	3.3	0		22	62.1	15.9	0		
PHF	.833	.890	.909	.000	.890	.857	.922	.700	.000	.921	.500	.948	.650	.000	.966	.870	.869	.967	.000	.901	.977
Cars	20	496	78	0	594	142	272	14	0	428	6	367	12	0	385	79	224	57	0	360	1767
% Cars	100	97.4	97.5	0	97.5	98.6	99.6	100	0	99.3	100	96.8	92.3	0	96.7	98.8	99.1	98.3	0	98.9	98.1
Heavy Vehicles	0	13	2	0	15	2	1	0	0	3	0	12	1	0	13	1	2	1	0	4	35
% Heavy Vehicles	0	2.6	2.5	0	2.5	1.4	0.4	0	0	0.7	0	3.2	7.7	0	3.3	1.3	0.9	1.7	0	1.1	1.9



N/S: Market Street
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City, State: Brighton, MA
Client: VHB/ P. Dunford

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

File Name : 165274 CCC
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Market Street From North				Sparhawk Street From East				Market Street From South				Arlington Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	6	116	14	0	14	40	3	0	0	76	10	0	22	38	7	0	346
11:15 AM	13	102	16	0	31	41	5	0	3	101	4	0	20	41	12	0	389
11:30 AM	6	121	16	0	30	39	1	0	1	99	3	0	14	34	10	0	374
11:45 AM	3	106	8	0	24	35	3	0	2	112	9	0	31	26	6	0	365
Total	28	445	54	0	99	155	12	0	6	388	26	0	87	139	35	0	1474
12:00 PM	9	106	16	0	18	51	3	0	2	105	6	0	22	35	3	0	376
12:15 PM	3	132	17	0	35	61	5	0	1	96	7	0	25	26	9	0	417
12:30 PM	5	136	13	0	23	36	4	0	1	106	10	0	17	34	6	0	391
12:45 PM	3	138	18	0	29	53	3	0	1	90	3	0	18	47	10	0	413
Total	20	512	64	0	105	201	15	0	5	397	26	0	82	142	28	0	1597
01:00 PM	7	113	13	0	24	45	4	0	2	94	13	0	8	28	7	0	358
01:15 PM	8	125	16	0	19	50	5	0	4	97	4	0	14	46	8	0	396
01:30 PM	4	105	17	0	26	46	4	0	3	101	11	0	9	34	10	0	370
01:45 PM	7	132	13	0	22	31	5	0	2	113	4	0	18	26	9	0	382
Total	26	475	59	0	91	172	18	0	11	405	32	0	49	134	34	0	1506
Grand Total	74	1432	177	0	295	528	45	0	22	1190	84	0	218	415	97	0	4577
Apprch %	4.4	85.1	10.5	0	34	60.8	5.2	0	1.7	91.8	6.5	0	29.9	56.8	13.3	0	
Total %	1.6	31.3	3.9	0	6.4	11.5	1	0	0.5	26	1.8	0	4.8	9.1	2.1	0	
Cars	73	1405	175	0	291	519	43	0	22	1163	84	0	213	413	94	0	4495
% Cars	98.6	98.1	98.9	0	98.6	98.3	95.6	0	100	97.7	100	0	97.7	99.5	96.9	0	98.2
Heavy Vehicles	1	27	2	0	4	9	2	0	0	27	0	0	5	2	3	0	82
% Heavy Vehicles	1.4	1.9	1.1	0	1.4	1.7	4.4	0	0	2.3	0	0	2.3	0.5	3.1	0	1.8

	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	9	106	16	0	131	18	51	3	0	72	2	105	6	0	113	22	35	3	0	60	376
12:15 PM	3	132	17	0	152	35	61	5	0	101	1	96	7	0	104	25	26	9	0	60	417
12:30 PM	5	136	13	0	154	23	36	4	0	63	1	106	10	0	117	17	34	6	0	57	391
12:45 PM	3	138	18	0	159	29	53	3	0	85	1	90	3	0	94	18	47	10	0	75	413
Total Volume	20	512	64	0	596	105	201	15	0	321	5	397	26	0	428	82	142	28	0	252	1597
% App. Total	3.4	85.9	10.7	0		32.7	62.6	4.7	0		1.2	92.8	6.1	0		32.5	56.3	11.1	0		
PHF	.556	.928	.889	.000	.937	.750	.824	.750	.000	.795	.625	.936	.650	.000	.915	.820	.755	.700	.000	.840	.957
Cars	20	500	63	0	583	104	199	15	0	318	5	388	26	0	419	82	141	27	0	250	1570
% Cars	100	97.7	98.4	0	97.8	99.0	99.0	100	0	99.1	100	97.7	100	0	97.9	100	99.3	96.4	0	99.2	98.3
Heavy Vehicles	0	12	1	0	13	1	2	0	0	3	0	9	0	0	9	0	1	1	0	2	27
% Heavy Vehicles	0	2.3	1.6	0	2.2	1.0	1.0	0	0	0.9	0	2.3	0	0	2.1	0	0.7	3.6	0	0.8	1.7

N/S: Market Street
E/W: Sparhawk Street/ Arlington Street
City, State: Brighton, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 CCC
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Cars

	Market Street From North				Sparhawk Street From East				Market Street From South				Arlington Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	6	115	14	0	14	39	3	0	0	71	10	0	20	38	7	0	337
11:15 AM	13	99	15	0	30	40	4	0	3	101	4	0	19	41	11	0	380
11:30 AM	6	121	16	0	28	38	1	0	1	96	3	0	14	34	9	0	367
11:45 AM	3	105	8	0	24	34	3	0	2	109	9	0	30	26	6	0	359
Total	28	440	53	0	96	151	11	0	6	377	26	0	83	139	33	0	1443
12:00 PM	9	103	16	0	18	49	3	0	2	101	6	0	22	35	3	0	367
12:15 PM	3	130	17	0	35	61	5	0	1	95	7	0	25	26	9	0	414
12:30 PM	5	133	12	0	23	36	4	0	1	104	10	0	17	34	6	0	385
12:45 PM	3	134	18	0	28	53	3	0	1	88	3	0	18	46	9	0	404
Total	20	500	63	0	104	199	15	0	5	388	26	0	82	141	27	0	1570
01:00 PM	6	111	13	0	24	45	4	0	2	94	13	0	8	27	7	0	354
01:15 PM	8	123	16	0	19	50	5	0	4	95	4	0	14	46	8	0	392
01:30 PM	4	103	17	0	26	45	3	0	3	98	11	0	8	34	10	0	362
01:45 PM	7	128	13	0	22	29	5	0	2	111	4	0	18	26	9	0	374
Total	25	465	59	0	91	169	17	0	11	398	32	0	48	133	34	0	1482
Grand Total	73	1405	175	0	291	519	43	0	22	1163	84	0	213	413	94	0	4495
Apprch %	4.4	85	10.6	0	34.1	60.8	5	0	1.7	91.6	6.6	0	29.6	57.4	13.1	0	
Total %	1.6	31.3	3.9	0	6.5	11.5	1	0	0.5	25.9	1.9	0	4.7	9.2	2.1	0	

	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	9	103	16	0	128	18	49	3	0	70	2	101	6	0	109	22	35	3	0	60	367
12:15 PM	3	130	17	0	150	35	61	5	0	101	1	95	7	0	103	25	26	9	0	60	414
12:30 PM	5	133	12	0	150	23	36	4	0	63	1	104	10	0	115	17	34	6	0	57	385
12:45 PM	3	134	18	0	155	28	53	3	0	84	1	88	3	0	92	18	46	9	0	73	404
Total Volume	20	500	63	0	583	104	199	15	0	318	5	388	26	0	419	82	141	27	0	250	1570
% App. Total	3.4	85.8	10.8	0		32.7	62.6	4.7	0		1.2	92.6	6.2	0		32.8	56.4	10.8	0		
PHF	.556	.933	.875	.000	.940	.743	.816	.750	.000	.787	.625	.933	.650	.000	.911	.820	.766	.750	.000	.856	.948

N/S: Market Street
E/W: Sparhawk Street/ Arlington Street
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Client: VHB/ P. Dunford

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Email: datarequests@pdillc.com

File Name : 165274 CCC
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Market Street From North				Sparhawk Street From East				Market Street From South				Arlington Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	1	0	0	0	1	0	0	0	5	0	0	2	0	0	0	9
11:15 AM	0	3	1	0	1	1	1	0	0	0	0	0	1	0	1	0	9
11:30 AM	0	0	0	0	2	1	0	0	0	3	0	0	0	0	1	0	7
11:45 AM	0	1	0	0	0	1	0	0	0	3	0	0	1	0	0	0	6
Total	0	5	1	0	3	4	1	0	0	11	0	0	4	0	2	0	31
12:00 PM	0	3	0	0	0	2	0	0	0	4	0	0	0	0	0	0	9
12:15 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3
12:30 PM	0	3	1	0	0	0	0	0	0	2	0	0	0	0	0	0	6
12:45 PM	0	4	0	0	1	0	0	0	0	2	0	0	0	1	1	0	9
Total	0	12	1	0	1	2	0	0	0	9	0	0	0	1	1	0	27
01:00 PM	1	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4
01:15 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4
01:30 PM	0	2	0	0	0	1	1	0	0	3	0	0	1	0	0	0	8
01:45 PM	0	4	0	0	0	2	0	0	0	2	0	0	0	0	0	0	8
Total	1	10	0	0	0	3	1	0	0	7	0	0	1	1	0	0	24
Grand Total	1	27	2	0	4	9	2	0	0	27	0	0	5	2	3	0	82
Apprch %	3.3	90	6.7	0	26.7	60	13.3	0	0	100	0	0	50	20	30	0	
Total %	1.2	32.9	2.4	0	4.9	11	2.4	0	0	32.9	0	0	6.1	2.4	3.7	0	

	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	0	1	0	0	1	0	1	0	0	1	0	5	0	0	5	2	0	0	0	2	9
11:15 AM	0	3	1	0	4	1	1	1	0	3	0	0	0	0	0	1	0	1	0	2	9
11:30 AM	0	0	0	0	0	2	1	0	0	3	0	3	0	0	3	0	0	1	0	1	7
11:45 AM	0	1	0	0	1	0	1	0	0	1	0	3	0	0	3	1	0	0	0	1	6
Total Volume	0	5	1	0	6	3	4	1	0	8	0	11	0	0	11	4	0	2	0	6	31
% App. Total	0	83.3	16.7	0		37.5	50	12.5	0		0	100	0	0		66.7	0	33.3	0		
PHF	.000	.417	.250	.000	.375	.375	1.00	.250	.000	.667	.000	.550	.000	.000	.550	.500	.000	.500	.000	.750	.861

N/S: Market Street
E/W: Sparhawk Street/ Arlington Street
City, State: Brighton, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 CCC
Site Code : 12305
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Page No : 1

Groups Printed- Peds and Bikes

	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	1	0	2	0	0	0	0	5	3	0	1	0	0	5	0	1	0	2	6	26
11:15 AM	0	1	0	1	3	0	0	0	11	2	0	2	0	1	1	0	0	1	1	2	26
11:30 AM	0	0	0	2	2	0	0	0	3	4	0	1	0	4	7	0	3	0	10	9	45
11:45 AM	0	0	0	1	1	0	0	0	7	5	0	3	0	1	1	0	2	0	6	1	28
Total	0	2	0	6	6	0	0	0	26	14	0	7	0	6	14	0	6	1	19	18	125
12:00 PM	0	0	0	1	0	1	0	0	6	4	0	0	0	5	2	0	0	0	4	0	23
12:15 PM	0	0	0	2	1	0	1	0	5	4	0	4	0	1	1	0	0	0	7	2	28
12:30 PM	0	1	0	3	1	0	0	0	3	5	0	0	0	0	1	0	0	0	6	8	28
12:45 PM	0	1	1	0	1	0	0	0	6	3	0	1	0	3	4	1	1	0	5	2	29
Total	0	2	1	6	3	1	1	0	20	16	0	5	0	9	8	1	1	0	22	12	108
01:00 PM	0	1	0	5	0	0	0	0	0	3	0	1	0	0	0	0	0	0	5	3	18
01:15 PM	0	0	0	1	0	0	0	0	5	5	0	2	0	6	6	0	0	0	2	2	29
01:30 PM	0	7	0	4	0	0	0	0	1	1	0	0	0	2	0	1	0	0	6	7	29
01:45 PM	0	0	0	1	2	0	0	0	6	3	1	0	0	2	0	0	1	0	12	7	35
Total	0	8	0	11	2	0	0	0	12	12	1	3	0	10	6	1	1	0	25	19	111
Grand Total	0	12	1	23	11	1	1	0	58	42	1	15	0	25	28	2	8	1	66	49	344
Apprch %	0	25.5	2.1	48.9	23.4	1	1	0	56.9	41.2	1.4	21.7	0	36.2	40.6	1.6	6.3	0.8	52.4	38.9	
Total %	0	3.5	0.3	6.7	3.2	0.3	0.3	0	16.9	12.2	0.3	4.4	0	7.3	8.1	0.6	2.3	0.3	19.2	14.2	

	Market Street From North						Sparhawk Street From East						Market Street From South						Arlington Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 11:00 AM																									
11:00 AM	0	1	0	2	0	3	0	0	0	5	3	8	0	1	0	0	5	6	0	1	0	2	6	9	26
11:15 AM	0	1	0	1	3	5	0	0	0	11	2	13	0	2	0	1	1	4	0	0	1	1	2	4	26
11:30 AM	0	0	0	2	2	4	0	0	0	3	4	7	0	1	0	4	7	12	0	3	0	10	9	22	45
11:45 AM	0	0	0	1	1	2	0	0	0	7	5	12	0	3	0	1	1	5	0	2	0	6	1	9	28
Total Volume	0	2	0	6	6	14	0	0	0	26	14	40	0	7	0	6	14	27	0	6	1	19	18	44	125
% App. Total	0	14.3	0	42.9	42.9		0	0	0	65	35		0	25.9	0	22.2	51.9		0	13.6	2.3	43.2	40.9		
PHF	.000	.500	.000	.750	.500	.700	.000	.000	.000	.591	.700	.769	.000	.583	.000	.375	.500	.563	.000	.500	.250	.475	.500	.500	.694

N/S: Market Street
E/W: Sparhawk Street/ Arlington Street
City, State: Brighton, MA
Client: VHB/ P. Dunford

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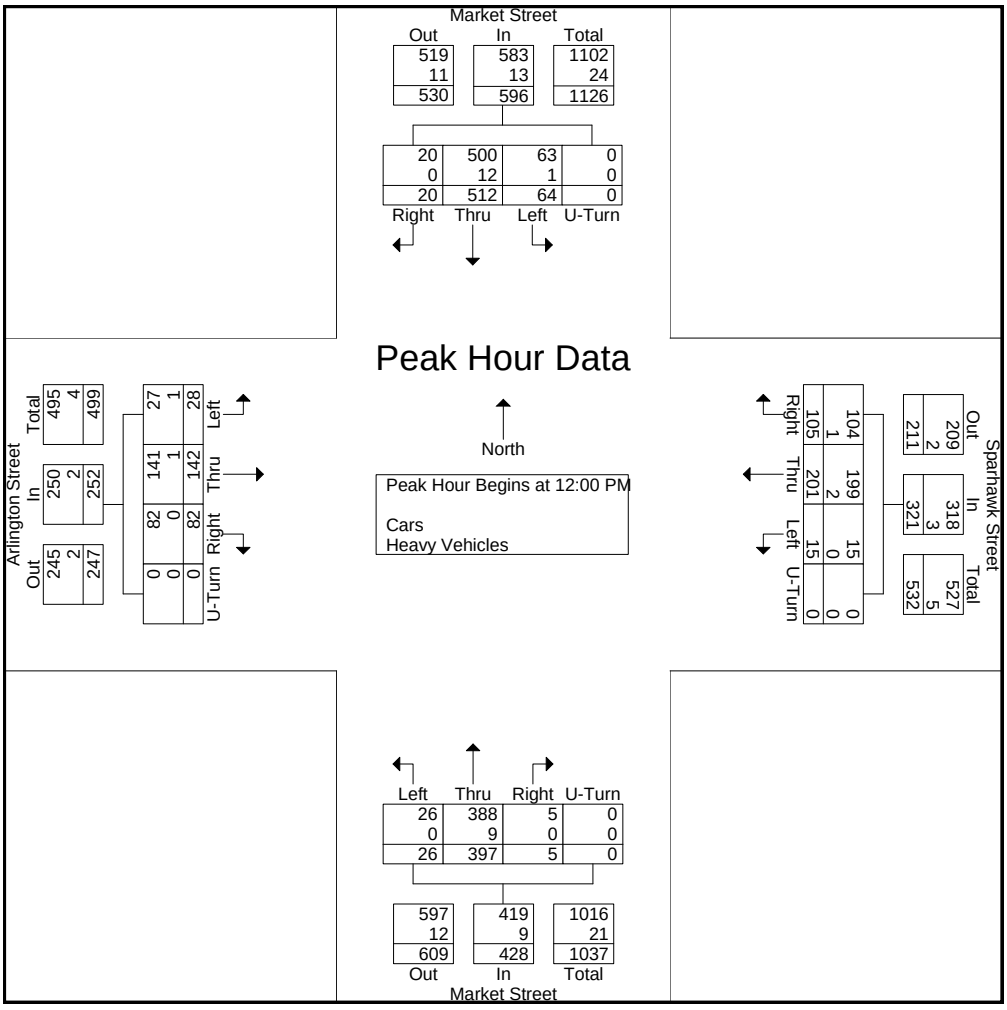
	Market Street From North					Sparhawk Street From East					Market Street From South					Arlington Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	9	106	16	0	131	18	51	3	0	72	2	105	6	0	113	22	35	3	0	60	376
12:15 PM	3	132	17	0	152	35	61	5	0	101	1	96	7	0	104	25	26	9	0	60	417
12:30 PM	5	136	13	0	154	23	36	4	0	63	1	106	10	0	117	17	34	6	0	57	391
12:45 PM	3	138	18	0	159	29	53	3	0	85	1	90	3	0	94	18	47	10	0	75	413
Total Volume	20	512	64	0	596	105	201	15	0	321	5	397	26	0	428	82	142	28	0	252	1597
% App. Total	3.4	85.9	10.7	0		32.7	62.6	4.7	0		1.2	92.8	6.1	0		32.5	56.3	11.1	0		
PHF	.556	.928	.889	.000	.937	.750	.824	.750	.000	.795	.625	.936	.650	.000	.915	.820	.755	.700	.000	.840	.957
Cars	20	500	63	0	583	104	199	15	0	318	5	388	26	0	419	82	141	27	0	250	1570
% Cars	100	97.7	98.4	0	97.8	99.0	99.0	100	0	99.1	100	97.7	100	0	97.9	100	99.3	96.4	0	99.2	98.3
Heavy Vehicles	0	12	1	0	13	1	2	0	0	3	0	9	0	0	9	0	1	1	0	2	27
% Heavy Vehicles	0	2.3	1.6	0	2.2	1.0	1.0	0	0	0.9	0	2.3	0	0	2.1	0	0.7	3.6	0	0.8	1.7



S: Saunders Street
E/W: North Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
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File Name : 165274 D
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	North Beacon Street (Route 20) From East			Saunders Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	76	0	0	7	4	0	0	121	0	208
07:15 AM	82	0	0	10	6	0	0	141	0	239
07:30 AM	100	0	0	7	4	0	0	159	0	270
07:45 AM	103	0	0	16	5	0	0	138	0	262
Total	361	0	0	40	19	0	0	559	0	979
08:00 AM	105	0	0	10	6	0	0	153	0	274
08:15 AM	128	0	0	17	8	0	0	135	0	288
08:30 AM	101	0	0	11	4	0	0	159	0	275
08:45 AM	115	0	0	17	8	0	0	150	0	290
Total	449	0	0	55	26	0	0	597	0	1127
Grand Total	810	0	0	95	45	0	0	1156	0	2106
Apprch %	100	0	0	67.9	32.1	0	0	100	0	
Total %	38.5	0	0	4.5	2.1	0	0	54.9	0	
Cars	741	0	0	92	45	0	0	1084	0	1962
% Cars	91.5	0	0	96.8	100	0	0	93.8	0	93.2
Heavy Vehicles	69	0	0	3	0	0	0	72	0	144
% Heavy Vehicles	8.5	0	0	3.2	0	0	0	6.2	0	6.8

	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	105	0	0	105	10	6	0	16	0	153	0	153	274
08:15 AM	128	0	0	128	17	8	0	25	0	135	0	135	288
08:30 AM	101	0	0	101	11	4	0	15	0	159	0	159	275
08:45 AM	115	0	0	115	17	8	0	25	0	150	0	150	290
Total Volume	449	0	0	449	55	26	0	81	0	597	0	597	1127
% App. Total	100	0	0		67.9	32.1	0		0	100	0		
PHF	.877	.000	.000	.877	.809	.813	.000	.810	.000	.939	.000	.939	.972
Cars	416	0	0	416	55	26	0	81	0	564	0	564	1061
% Cars	92.7	0	0	92.7	100	100	0	100	0	94.5	0	94.5	94.1
Heavy Vehicles	33	0	0	33	0	0	0	0	0	33	0	33	66
% Heavy Vehicles	7.3	0	0	7.3	0	0	0	0	0	5.5	0	5.5	5.9

S: Saunders Street
E/W: North Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
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Groups Printed- Cars

	North Beacon Street (Route 20) From East			Saunders Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	67	0	0	5	4	0	0	115	0	191
07:15 AM	71	0	0	10	6	0	0	130	0	217
07:30 AM	94	0	0	7	4	0	0	149	0	254
07:45 AM	93	0	0	15	5	0	0	126	0	239
Total	325	0	0	37	19	0	0	520	0	901
08:00 AM	96	0	0	10	6	0	0	147	0	259
08:15 AM	118	0	0	17	8	0	0	125	0	268
08:30 AM	94	0	0	11	4	0	0	149	0	258
08:45 AM	108	0	0	17	8	0	0	143	0	276
Total	416	0	0	55	26	0	0	564	0	1061
Grand Total	741	0	0	92	45	0	0	1084	0	1962
Apprch %	100	0	0	67.2	32.8	0	0	100	0	
Total %	37.8	0	0	4.7	2.3	0	0	55.2	0	

	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	96	0	0	96	10	6	0	16	0	147	0	147	259
08:15 AM	118	0	0	118	17	8	0	25	0	125	0	125	268
08:30 AM	94	0	0	94	11	4	0	15	0	149	0	149	258
08:45 AM	108	0	0	108	17	8	0	25	0	143	0	143	276
Total Volume	416	0	0	416	55	26	0	81	0	564	0	564	1061
% App. Total	100	0	0		67.9	32.1	0		0	100	0		
PHF	.881	.000	.000	.881	.809	.813	.000	.810	.000	.946	.000	.946	.961

S: Saunders Street
E/W: North Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

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Groups Printed- Heavy Vehicles

	North Beacon Street (Route 20) From East			Saunders Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	9	0	0	2	0	0	0	6	0	17
07:15 AM	11	0	0	0	0	0	0	11	0	22
07:30 AM	6	0	0	0	0	0	0	10	0	16
07:45 AM	10	0	0	1	0	0	0	12	0	23
Total	36	0	0	3	0	0	0	39	0	78
08:00 AM	9	0	0	0	0	0	0	6	0	15
08:15 AM	10	0	0	0	0	0	0	10	0	20
08:30 AM	7	0	0	0	0	0	0	10	0	17
08:45 AM	7	0	0	0	0	0	0	7	0	14
Total	33	0	0	0	0	0	0	33	0	66
Grand Total	69	0	0	3	0	0	0	72	0	144
Apprch %	100	0	0	100	0	0	0	100	0	
Total %	47.9	0	0	2.1	0	0	0	50	0	

	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	9	0	0	9	2	0	0	2	0	6	0	6	17
07:15 AM	11	0	0	11	0	0	0	0	0	11	0	11	22
07:30 AM	6	0	0	6	0	0	0	0	0	10	0	10	16
07:45 AM	10	0	0	10	1	0	0	1	0	12	0	12	23
Total Volume	36	0	0	36	3	0	0	3	0	39	0	39	78
% App. Total	100	0	0		100	0	0		0	100	0		
PHF	.818	.000	.000	.818	.375	.000	.000	.375	.000	.813	.000	.813	.848

S: Saunders Street
E/W: North Beacon Street (Route 20)
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Groups Printed- Peds and Bikes

	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	0	1	0	2	5	0	4	0	0	12
07:15 AM	2	0	0	1	0	0	3	9	0	3	0	0	18
07:30 AM	3	0	0	0	0	0	0	7	0	9	0	0	19
07:45 AM	4	0	0	0	0	1	3	3	0	10	0	0	21
Total	9	0	0	1	1	1	8	24	0	26	0	0	70
08:00 AM	1	0	0	1	0	0	4	2	0	7	0	0	15
08:15 AM	1	0	0	3	0	1	1	6	0	5	0	0	17
08:30 AM	1	0	0	3	2	0	7	2	0	4	0	0	19
08:45 AM	2	0	0	2	0	1	4	3	0	3	0	0	15
Total	5	0	0	9	2	2	16	13	0	19	0	0	66
Grand Total	14	0	0	10	3	3	24	37	0	45	0	0	136
Apprch %	58.3	0	0	41.7	4.5	4.5	35.8	55.2	0	100	0	0	
Total %	10.3	0	0	7.4	2.2	2.2	17.6	27.2	0	33.1	0	0	

	North Beacon Street (Route 20) From East					Saunders Street From South					North Beacon Street (Route 20) From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:15 AM																
07:15 AM	2	0	0	1	3	0	0	3	9	12	0	3	0	0	3	18
07:30 AM	3	0	0	0	3	0	0	0	7	7	0	9	0	0	9	19
07:45 AM	4	0	0	0	4	0	1	3	3	7	0	10	0	0	10	21
08:00 AM	1	0	0	1	2	0	0	4	2	6	0	7	0	0	7	15
Total Volume	10	0	0	2	12	0	1	10	21	32	0	29	0	0	29	73
% App. Total	83.3	0	0	16.7		0	3.1	31.2	65.6		0	100	0	0		
PHF	.625	.000	.000	.500	.750	.000	.250	.625	.583	.667	.000	.725	.000	.000	.725	.869

S: Saunders Street
E/W: North Beacon Street (Route 20)
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Client: VHB/ P. Dunford

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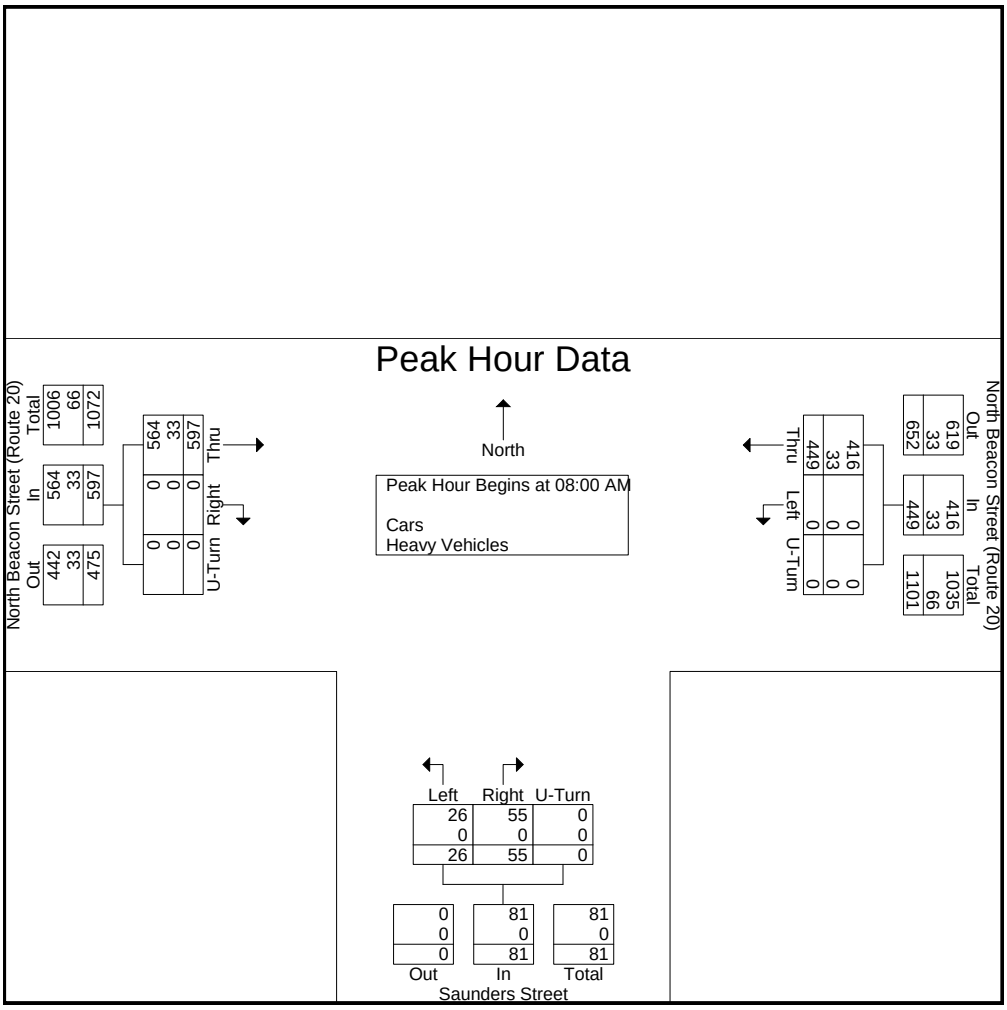
	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	105	0	0	105	10	6	0	16	0	153	0	153	274
08:15 AM	128	0	0	128	17	8	0	25	0	135	0	135	288
08:30 AM	101	0	0	101	11	4	0	15	0	159	0	159	275
08:45 AM	115	0	0	115	17	8	0	25	0	150	0	150	290
Total Volume	449	0	0	449	55	26	0	81	0	597	0	597	1127
% App. Total	100	0	0		67.9	32.1	0		0	100	0		
PHF	.877	.000	.000	.877	.809	.813	.000	.810	.000	.939	.000	.939	.972
Cars	416	0	0	416	55	26	0	81	0	564	0	564	1061
% Cars	92.7	0	0	92.7	100	100	0	100	0	94.5	0	94.5	94.1
Heavy Vehicles	33	0	0	33	0	0	0	0	0	33	0	33	66
% Heavy Vehicles	7.3	0	0	7.3	0	0	0	0	0	5.5	0	5.5	5.9



S: Saunders Street
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Groups Printed- Cars - Heavy Vehicles

	North Beacon Street (Route 20) From East			Saunders Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	146	0	0	5	3	0	0	155	0	309
04:15 PM	127	0	0	10	5	0	0	120	0	262
04:30 PM	142	0	0	5	3	0	0	153	0	303
04:45 PM	128	0	0	7	7	0	0	159	0	301
Total	543	0	0	27	18	0	0	587	0	1175
05:00 PM	148	0	0	5	1	0	0	159	0	313
05:15 PM	146	0	0	4	2	0	0	172	0	324
05:30 PM	124	0	0	12	2	0	0	179	0	317
05:45 PM	116	0	0	6	4	0	0	165	0	291
Total	534	0	0	27	9	0	0	675	0	1245
Grand Total	1077	0	0	54	27	0	0	1262	0	2420
Apprch %	100	0	0	66.7	33.3	0	0	100	0	
Total %	44.5	0	0	2.2	1.1	0	0	52.1	0	
Cars	1048	0	0	52	27	0	0	1234	0	2361
% Cars	97.3	0	0	96.3	100	0	0	97.8	0	97.6
Heavy Vehicles	29	0	0	2	0	0	0	28	0	59
% Heavy Vehicles	2.7	0	0	3.7	0	0	0	2.2	0	2.4

	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	128	0	0	128	7	7	0	14	0	159	0	159	301
05:00 PM	148	0	0	148	5	1	0	6	0	159	0	159	313
05:15 PM	146	0	0	146	4	2	0	6	0	172	0	172	324
05:30 PM	124	0	0	124	12	2	0	14	0	179	0	179	317
Total Volume	546	0	0	546	28	12	0	40	0	669	0	669	1255
% App. Total	100	0	0		70	30	0		0	100	0		
PHF	.922	.000	.000	.922	.583	.429	.000	.714	.000	.934	.000	.934	.968
Cars	534	0	0	534	26	12	0	38	0	655	0	655	1227
% Cars	97.8	0	0	97.8	92.9	100	0	95.0	0	97.9	0	97.9	97.8
Heavy Vehicles	12	0	0	12	2	0	0	2	0	14	0	14	28
% Heavy Vehicles	2.2	0	0	2.2	7.1	0	0	5.0	0	2.1	0	2.1	2.2

S: Saunders Street
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Groups Printed- Cars

	North Beacon Street (Route 20) From East			Saunders Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	144	0	0	5	3	0	0	148	0	300
04:15 PM	121	0	0	10	5	0	0	118	0	254
04:30 PM	138	0	0	5	3	0	0	152	0	298
04:45 PM	123	0	0	6	7	0	0	152	0	288
Total	526	0	0	26	18	0	0	570	0	1140
05:00 PM	144	0	0	5	1	0	0	159	0	309
05:15 PM	144	0	0	4	2	0	0	167	0	317
05:30 PM	123	0	0	11	2	0	0	177	0	313
05:45 PM	111	0	0	6	4	0	0	161	0	282
Total	522	0	0	26	9	0	0	664	0	1221
Grand Total	1048	0	0	52	27	0	0	1234	0	2361
Apprch %	100	0	0	65.8	34.2	0	0	100	0	
Total %	44.4	0	0	2.2	1.1	0	0	52.3	0	

	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	123	0	0	123	6	7	0	13	0	152	0	152	288
05:00 PM	144	0	0	144	5	1	0	6	0	159	0	159	309
05:15 PM	144	0	0	144	4	2	0	6	0	167	0	167	317
05:30 PM	123	0	0	123	11	2	0	13	0	177	0	177	313
Total Volume	534	0	0	534	26	12	0	38	0	655	0	655	1227
% App. Total	100	0	0		68.4	31.6	0		0	100	0		
PHF	.927	.000	.000	.927	.591	.429	.000	.731	.000	.925	.000	.925	.968

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Groups Printed- Heavy Vehicles

	North Beacon Street (Route 20) From East			Saunders Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	2	0	0	0	0	0	0	7	0	9
04:15 PM	6	0	0	0	0	0	0	2	0	8
04:30 PM	4	0	0	0	0	0	0	1	0	5
04:45 PM	5	0	0	1	0	0	0	7	0	13
Total	17	0	0	1	0	0	0	17	0	35
05:00 PM	4	0	0	0	0	0	0	0	0	4
05:15 PM	2	0	0	0	0	0	0	5	0	7
05:30 PM	1	0	0	1	0	0	0	2	0	4
05:45 PM	5	0	0	0	0	0	0	4	0	9
Total	12	0	0	1	0	0	0	11	0	24
Grand Total	29	0	0	2	0	0	0	28	0	59
Apprch %	100	0	0	100	0	0	0	100	0	
Total %	49.2	0	0	3.4	0	0	0	47.5	0	

	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	2	0	0	2	0	0	0	0	0	7	0	7	9
04:15 PM	6	0	0	6	0	0	0	0	0	2	0	2	8
04:30 PM	4	0	0	4	0	0	0	0	0	1	0	1	5
04:45 PM	5	0	0	5	1	0	0	1	0	7	0	7	13
Total Volume	17	0	0	17	1	0	0	1	0	17	0	17	35
% App. Total	100	0	0		100	0	0		0	100	0		
PHF	.708	.000	.000	.708	.250	.000	.000	.250	.000	.607	.000	.607	.673

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Groups Printed- Peds and Bikes

	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
04:00 PM	5	0	1	2	0	0	3	2	0	1	0	0	14
04:15 PM	3	0	1	0	0	0	5	2	0	0	0	0	11
04:30 PM	3	0	1	0	0	0	5	11	0	5	0	0	25
04:45 PM	1	0	0	1	0	0	3	7	1	0	0	0	13
Total	12	0	3	3	0	0	16	22	1	6	0	0	63
05:00 PM	4	0	0	0	0	0	4	6	0	2	0	0	16
05:15 PM	7	0	1	3	0	0	3	6	0	3	0	0	23
05:30 PM	7	0	2	3	0	0	5	12	0	3	0	0	32
05:45 PM	8	0	0	2	0	0	12	7	0	3	0	0	32
Total	26	0	3	8	0	0	24	31	0	11	0	0	103
Grand Total	38	0	6	11	0	0	40	53	1	17	0	0	166
Apprch %	69.1	0	10.9	20	0	0	43	57	5.6	94.4	0	0	
Total %	22.9	0	3.6	6.6	0	0	24.1	31.9	0.6	10.2	0	0	

	North Beacon Street (Route 20) From East					Saunders Street From South					North Beacon Street (Route 20) From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:00 PM																
05:00 PM	4	0	0	0	4	0	0	4	6	10	0	2	0	0	2	16
05:15 PM	7	0	1	3	11	0	0	3	6	9	0	3	0	0	3	23
05:30 PM	7	0	2	3	12	0	0	5	12	17	0	3	0	0	3	32
05:45 PM	8	0	0	2	10	0	0	12	7	19	0	3	0	0	3	32
Total Volume	26	0	3	8	37	0	0	24	31	55	0	11	0	0	11	103
% App. Total	70.3	0	8.1	21.6		0	0	43.6	56.4		0	100	0	0		
PHF	.813	.000	.375	.667	.771	.000	.000	.500	.646	.724	.000	.917	.000	.000	.917	.805

S: Saunders Street
E/W: North Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Site Code : 12305
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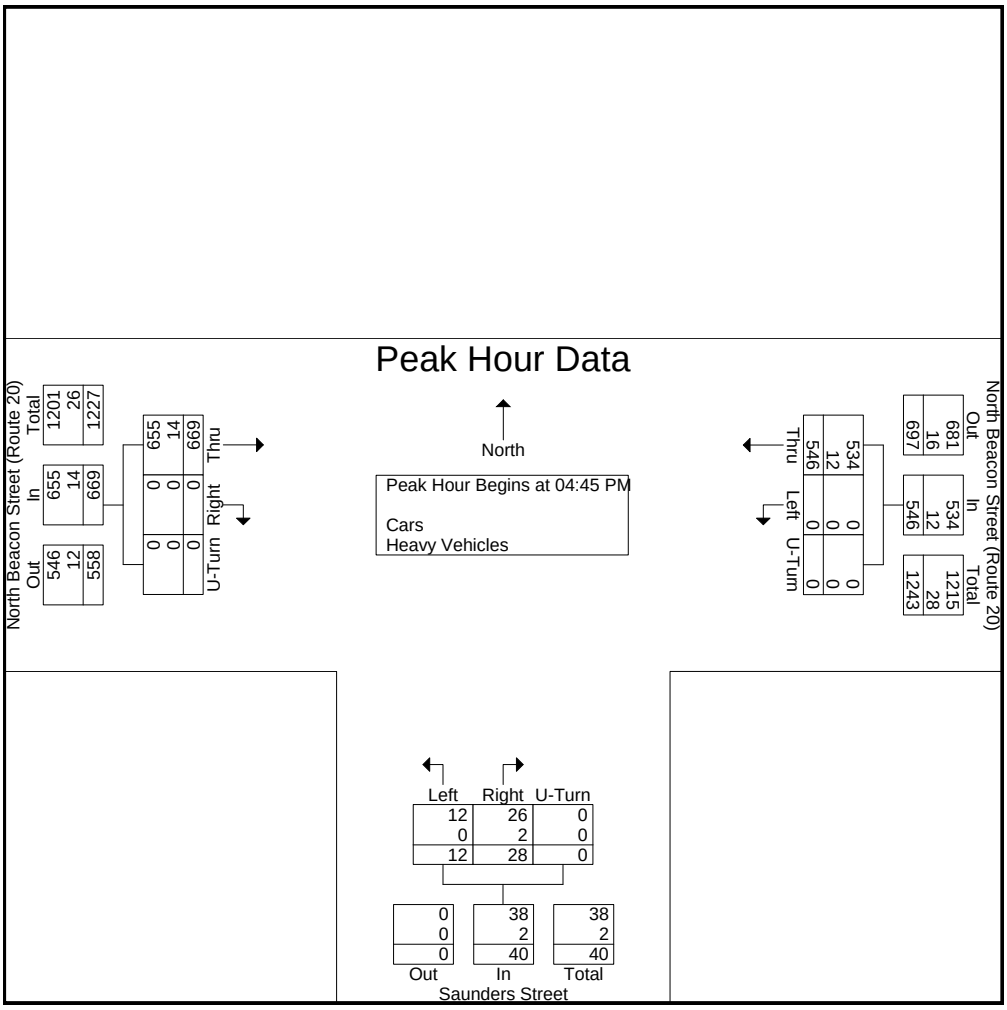
	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	128	0	0	128	7	7	0	14	0	159	0	159	301
05:00 PM	148	0	0	148	5	1	0	6	0	159	0	159	313
05:15 PM	146	0	0	146	4	2	0	6	0	172	0	172	324
05:30 PM	124	0	0	124	12	2	0	14	0	179	0	179	317
Total Volume	546	0	0	546	28	12	0	40	0	669	0	669	1255
% App. Total	100	0	0		70	30	0		0	100	0		
PHF	.922	.000	.000	.922	.583	.429	.000	.714	.000	.934	.000	.934	.968
Cars	534	0	0	534	26	12	0	38	0	655	0	655	1227
% Cars	97.8	0	0	97.8	92.9	100	0	95.0	0	97.9	0	97.9	97.8
Heavy Vehicles	12	0	0	12	2	0	0	2	0	14	0	14	28
% Heavy Vehicles	2.2	0	0	2.2	7.1	0	0	5.0	0	2.1	0	2.1	2.2



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S: Saunders Street
E/W: North Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

File Name : 165274 DDD
Site Code : 12305
Start Date : 10/15/2016
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Groups Printed- Cars - Heavy Vehicles

	North Beacon Street (Route 20) From East			Saunders Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
11:00 AM	85	0	0	8	2	0	0	151	0	246
11:15 AM	88	0	0	2	2	0	0	123	0	215
11:30 AM	93	0	0	7	4	0	0	153	0	257
11:45 AM	105	0	0	4	2	0	0	135	0	246
Total	371	0	0	21	10	0	0	562	0	964
12:00 PM	91	0	0	7	4	0	0	146	0	248
12:15 PM	123	0	0	4	6	0	0	144	0	277
12:30 PM	94	0	0	10	3	0	0	134	0	241
12:45 PM	93	0	0	9	0	0	0	122	0	224
Total	401	0	0	30	13	0	0	546	0	990
01:00 PM	90	0	0	6	2	0	0	126	0	224
01:15 PM	121	0	0	2	2	0	0	155	0	280
01:30 PM	95	0	0	5	2	0	0	124	0	226
01:45 PM	100	0	0	4	2	0	0	132	0	238
Total	406	0	0	17	8	0	0	537	0	968
Grand Total	1178	0	0	68	31	0	0	1645	0	2922
Apprch %	100	0	0	68.7	31.3	0	0	100	0	
Total %	40.3	0	0	2.3	1.1	0	0	56.3	0	
Cars	1151	0	0	68	31	0	0	1606	0	2856
% Cars	97.7	0	0	100	100	0	0	97.6	0	97.7
Heavy Vehicles	27	0	0	0	0	0	0	39	0	66
% Heavy Vehicles	2.3	0	0	0	0	0	0	2.4	0	2.3

	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:30 AM													
11:30 AM	93	0	0	93	7	4	0	11	0	153	0	153	257
11:45 AM	105	0	0	105	4	2	0	6	0	135	0	135	246
12:00 PM	91	0	0	91	7	4	0	11	0	146	0	146	248
12:15 PM	123	0	0	123	4	6	0	10	0	144	0	144	277
Total Volume	412	0	0	412	22	16	0	38	0	578	0	578	1028
% App. Total	100	0	0		57.9	42.1	0		0	100	0		
PHF	.837	.000	.000	.837	.786	.667	.000	.864	.000	.944	.000	.944	.928
Cars	403	0	0	403	22	16	0	38	0	565	0	565	1006
% Cars	97.8	0	0	97.8	100	100	0	100	0	97.8	0	97.8	97.9
Heavy Vehicles	9	0	0	9	0	0	0	0	0	13	0	13	22
% Heavy Vehicles	2.2	0	0	2.2	0	0	0	0	0	2.2	0	2.2	2.1

S: Saunders Street
E/W: North Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

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File Name : 165274 DDD
Site Code : 12305
Start Date : 10/15/2016
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Groups Printed- Cars

	North Beacon Street (Route 20) From East			Saunders Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
11:00 AM	84	0	0	8	2	0	0	146	0	240
11:15 AM	87	0	0	2	2	0	0	121	0	212
11:30 AM	90	0	0	7	4	0	0	152	0	253
11:45 AM	102	0	0	4	2	0	0	132	0	240
Total	363	0	0	21	10	0	0	551	0	945
12:00 PM	90	0	0	7	4	0	0	141	0	242
12:15 PM	121	0	0	4	6	0	0	140	0	271
12:30 PM	91	0	0	10	3	0	0	130	0	234
12:45 PM	90	0	0	9	0	0	0	119	0	218
Total	392	0	0	30	13	0	0	530	0	965
01:00 PM	86	0	0	6	2	0	0	124	0	218
01:15 PM	117	0	0	2	2	0	0	150	0	271
01:30 PM	94	0	0	5	2	0	0	122	0	223
01:45 PM	99	0	0	4	2	0	0	129	0	234
Total	396	0	0	17	8	0	0	525	0	946
Grand Total	1151	0	0	68	31	0	0	1606	0	2856
Apprch %	100	0	0	68.7	31.3	0	0	100	0	
Total %	40.3	0	0	2.4	1.1	0	0	56.2	0	

	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:30 AM													
11:30 AM	90	0	0	90	7	4	0	11	0	152	0	152	253
11:45 AM	102	0	0	102	4	2	0	6	0	132	0	132	240
12:00 PM	90	0	0	90	7	4	0	11	0	141	0	141	242
12:15 PM	121	0	0	121	4	6	0	10	0	140	0	140	271
Total Volume	403	0	0	403	22	16	0	38	0	565	0	565	1006
% App. Total	100	0	0		57.9	42.1	0		0	100	0		
PHF	.833	.000	.000	.833	.786	.667	.000	.864	.000	.929	.000	.929	.928

S: Saunders Street
E/W: North Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
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File Name : 165274 DDD
Site Code : 12305
Start Date : 10/15/2016
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Groups Printed- Heavy Vehicles

	North Beacon Street (Route 20) From East			Saunders Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
11:00 AM	1	0	0	0	0	0	0	5	0	6
11:15 AM	1	0	0	0	0	0	0	2	0	3
11:30 AM	3	0	0	0	0	0	0	1	0	4
11:45 AM	3	0	0	0	0	0	0	3	0	6
Total	8	0	0	0	0	0	0	11	0	19
12:00 PM	1	0	0	0	0	0	0	5	0	6
12:15 PM	2	0	0	0	0	0	0	4	0	6
12:30 PM	3	0	0	0	0	0	0	4	0	7
12:45 PM	3	0	0	0	0	0	0	3	0	6
Total	9	0	0	0	0	0	0	16	0	25
01:00 PM	4	0	0	0	0	0	0	2	0	6
01:15 PM	4	0	0	0	0	0	0	5	0	9
01:30 PM	1	0	0	0	0	0	0	2	0	3
01:45 PM	1	0	0	0	0	0	0	3	0	4
Total	10	0	0	0	0	0	0	12	0	22
Grand Total	27	0	0	0	0	0	0	39	0	66
Apprch %	100	0	0	0	0	0	0	100	0	
Total %	40.9	0	0	0	0	0	0	59.1	0	

	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:30 PM													
12:30 PM	3	0	0	3	0	0	0	0	0	4	0	4	7
12:45 PM	3	0	0	3	0	0	0	0	0	3	0	3	6
01:00 PM	4	0	0	4	0	0	0	0	0	2	0	2	6
01:15 PM	4	0	0	4	0	0	0	0	0	5	0	5	9
Total Volume	14	0	0	14	0	0	0	0	0	14	0	14	28
% App. Total	100	0	0		0	0	0		0	100	0		
PHF	.875	.000	.000	.875	.000	.000	.000	.000	.000	.700	.000	.700	.778

S: Saunders Street
E/W: North Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

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Site Code : 12305
Start Date : 10/15/2016
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Groups Printed- Peds and Bikes

	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
11:00 AM	1	0	0	0	0	0	1	3	0	1	0	0	6
11:15 AM	1	0	0	0	0	0	2	6	0	0	0	0	9
11:30 AM	1	0	0	0	1	0	1	10	0	4	0	0	17
11:45 AM	1	0	1	0	0	0	5	7	0	2	0	0	16
Total	4	0	1	0	1	0	9	26	0	7	0	0	48
12:00 PM	3	0	0	1	0	0	2	11	0	0	0	0	17
12:15 PM	4	0	1	0	0	0	3	7	0	0	0	0	15
12:30 PM	0	0	0	0	0	0	4	11	0	2	2	0	19
12:45 PM	3	0	0	0	0	0	4	2	0	1	0	0	10
Total	10	0	1	1	0	0	13	31	0	3	2	0	61
01:00 PM	1	0	0	0	0	0	2	5	0	2	1	2	13
01:15 PM	0	0	0	0	0	0	2	1	0	4	0	0	7
01:30 PM	0	0	1	0	0	0	3	2	0	2	0	0	8
01:45 PM	1	0	0	0	0	0	8	4	0	2	0	0	15
Total	2	0	1	0	0	0	15	12	0	10	1	2	43
Grand Total	16	0	3	1	1	0	37	69	0	20	3	2	152
Apprch %	80	0	15	5	0.9	0	34.6	64.5	0	80	12	8	
Total %	10.5	0	2	0.7	0.7	0	24.3	45.4	0	13.2	2	1.3	

	North Beacon Street (Route 20) From East					Saunders Street From South					North Beacon Street (Route 20) From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 11:45 AM																
11:45 AM	1	0	1	0	2	0	0	5	7	12	0	2	0	0	2	16
12:00 PM	3	0	0	1	4	0	0	2	11	13	0	0	0	0	0	17
12:15 PM	4	0	1	0	5	0	0	3	7	10	0	0	0	0	0	15
12:30 PM	0	0	0	0	0	0	0	4	11	15	0	2	2	0	4	19
Total Volume	8	0	2	1	11	0	0	14	36	50	0	4	2	0	6	67
% App. Total	72.7	0	18.2	9.1		0	0	28	72		0	66.7	33.3	0		
PHF	.500	.000	.500	.250	.550	.000	.000	.700	.818	.833	.000	.500	.250	.000	.375	.882

S: Saunders Street
E/W: North Beacon Street (Route 20)
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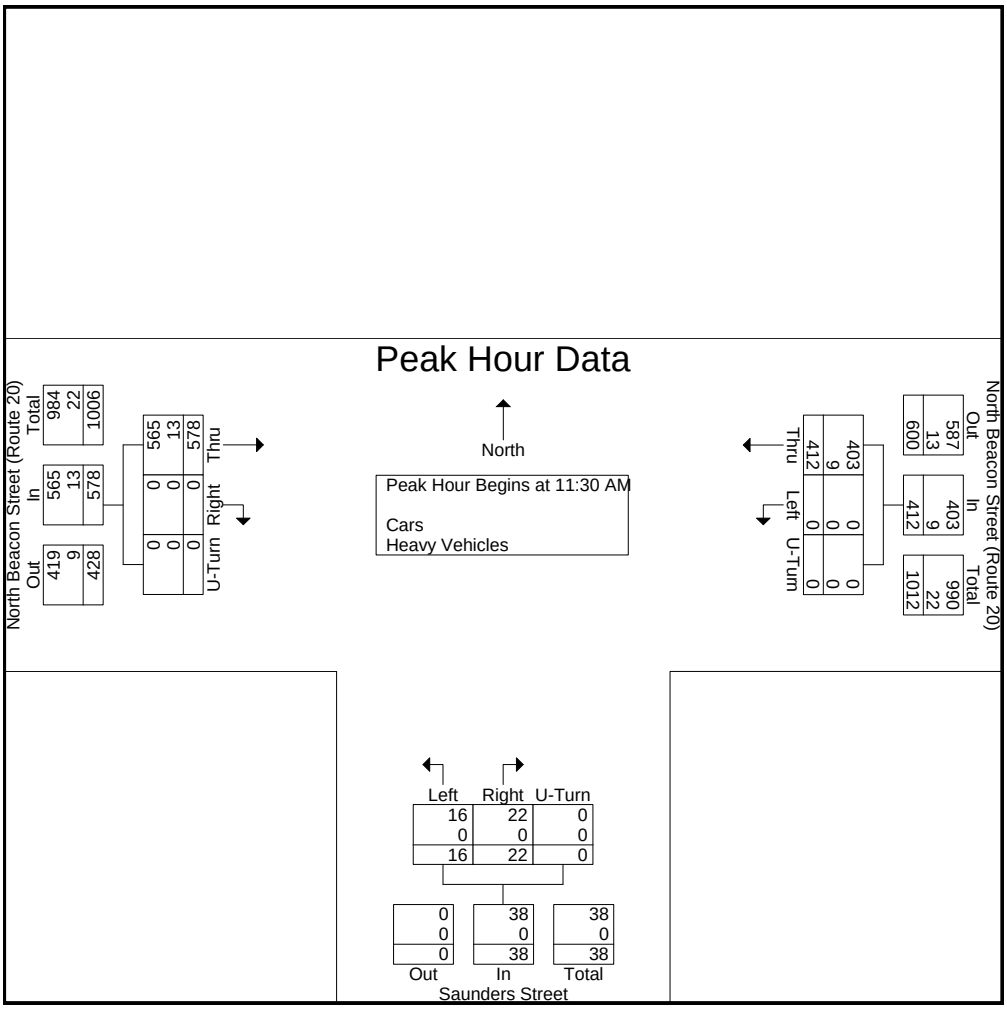
	North Beacon Street (Route 20) From East				Saunders Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:30 AM													
11:30 AM	93	0	0	93	7	4	0	11	0	153	0	153	257
11:45 AM	105	0	0	105	4	2	0	6	0	135	0	135	246
12:00 PM	91	0	0	91	7	4	0	11	0	146	0	146	248
12:15 PM	123	0	0	123	4	6	0	10	0	144	0	144	277
Total Volume	412	0	0	412	22	16	0	38	0	578	0	578	1028
% App. Total	100	0	0		57.9	42.1	0		0	100	0		
PHF	.837	.000	.000	.837	.786	.667	.000	.864	.000	.944	.000	.944	.928
Cars	403	0	0	403	22	16	0	38	0	565	0	565	1006
% Cars	97.8	0	0	97.8	100	100	0	100	0	97.8	0	97.8	97.9
Heavy Vehicles	9	0	0	9	0	0	0	0	0	13	0	13	22
% Heavy Vehicles	2.2	0	0	2.2	0	0	0	0	0	2.2	0	2.2	2.1



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S: Gordon Street
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City, State: Allston, MA
Client: VHB/ P. Dunford

File Name : 165274 E
Site Code : 12305
Start Date : 10/13/2016
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Groups Printed- Cars - Heavy Vehicles

	North Beacon Street (Route 20) From East			Gordon Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	71	24	0	23	6	0	19	107	0	250
07:15 AM	74	14	0	34	8	0	15	137	0	282
07:30 AM	85	12	0	36	16	0	12	156	0	317
07:45 AM	93	10	0	50	12	0	22	129	0	316
Total	323	60	0	143	42	0	68	529	0	1165
08:00 AM	94	19	0	40	14	0	8	157	0	332
08:15 AM	117	23	0	42	14	0	10	141	0	347
08:30 AM	91	12	0	43	10	0	15	157	0	328
08:45 AM	102	16	0	50	16	0	25	143	0	352
Total	404	70	0	175	54	0	58	598	0	1359
Grand Total	727	130	0	318	96	0	126	1127	0	2524
Apprch %	84.8	15.2	0	76.8	23.2	0	10.1	89.9	0	
Total %	28.8	5.2	0	12.6	3.8	0	5	44.7	0	
Cars	665	112	0	305	94	0	117	1064	0	2357
% Cars	91.5	86.2	0	95.9	97.9	0	92.9	94.4	0	93.4
Heavy Vehicles	62	18	0	13	2	0	9	63	0	167
% Heavy Vehicles	8.5	13.8	0	4.1	2.1	0	7.1	5.6	0	6.6

	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	94	19	0	113	40	14	0	54	8	157	0	165	332
08:15 AM	117	23	0	140	42	14	0	56	10	141	0	151	347
08:30 AM	91	12	0	103	43	10	0	53	15	157	0	172	328
08:45 AM	102	16	0	118	50	16	0	66	25	143	0	168	352
Total Volume	404	70	0	474	175	54	0	229	58	598	0	656	1359
% App. Total	85.2	14.8	0		76.4	23.6	0		8.8	91.2	0		
PHF	.863	.761	.000	.846	.875	.844	.000	.867	.580	.952	.000	.953	.965
Cars	375	65	0	440	167	53	0	220	54	569	0	623	1283
% Cars	92.8	92.9	0	92.8	95.4	98.1	0	96.1	93.1	95.2	0	95.0	94.4
Heavy Vehicles	29	5	0	34	8	1	0	9	4	29	0	33	76
% Heavy Vehicles	7.2	7.1	0	7.2	4.6	1.9	0	3.9	6.9	4.8	0	5.0	5.6

S: Gordon Street
E/W: North Beacon Street (Route 20)
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Groups Printed- Cars

	North Beacon Street (Route 20) From East			Gordon Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	63	12	0	21	6	0	17	101	0	220
07:15 AM	63	14	0	32	8	0	14	127	0	258
07:30 AM	79	11	0	36	16	0	12	146	0	300
07:45 AM	85	10	0	49	11	0	20	121	0	296
Total	290	47	0	138	41	0	63	495	0	1074
08:00 AM	87	16	0	36	14	0	8	151	0	312
08:15 AM	108	22	0	42	14	0	9	132	0	327
08:30 AM	85	11	0	42	10	0	13	149	0	310
08:45 AM	95	16	0	47	15	0	24	137	0	334
Total	375	65	0	167	53	0	54	569	0	1283
Grand Total	665	112	0	305	94	0	117	1064	0	2357
Apprch %	85.6	14.4	0	76.4	23.6	0	9.9	90.1	0	
Total %	28.2	4.8	0	12.9	4	0	5	45.1	0	

	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	87	16	0	103	36	14	0	50	8	151	0	159	312
08:15 AM	108	22	0	130	42	14	0	56	9	132	0	141	327
08:30 AM	85	11	0	96	42	10	0	52	13	149	0	162	310
08:45 AM	95	16	0	111	47	15	0	62	24	137	0	161	334
Total Volume	375	65	0	440	167	53	0	220	54	569	0	623	1283
% App. Total	85.2	14.8	0		75.9	24.1	0		8.7	91.3	0		
PHF	.868	.739	.000	.846	.888	.883	.000	.887	.563	.942	.000	.961	.960

S: Gordon Street
E/W: North Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

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Groups Printed- Heavy Vehicles

	North Beacon Street (Route 20) From East			Gordon Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	8	12	0	2	0	0	2	6	0	30
07:15 AM	11	0	0	2	0	0	1	10	0	24
07:30 AM	6	1	0	0	0	0	0	10	0	17
07:45 AM	8	0	0	1	1	0	2	8	0	20
Total	33	13	0	5	1	0	5	34	0	91
08:00 AM	7	3	0	4	0	0	0	6	0	20
08:15 AM	9	1	0	0	0	0	1	9	0	20
08:30 AM	6	1	0	1	0	0	2	8	0	18
08:45 AM	7	0	0	3	1	0	1	6	0	18
Total	29	5	0	8	1	0	4	29	0	76
Grand Total	62	18	0	13	2	0	9	63	0	167
Apprch %	77.5	22.5	0	86.7	13.3	0	12.5	87.5	0	
Total %	37.1	10.8	0	7.8	1.2	0	5.4	37.7	0	

	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	8	12	0	20	2	0	0	2	2	6	0	8	30
07:15 AM	11	0	0	11	2	0	0	2	1	10	0	11	24
07:30 AM	6	1	0	7	0	0	0	0	0	10	0	10	17
07:45 AM	8	0	0	8	1	1	0	2	2	8	0	10	20
Total Volume	33	13	0	46	5	1	0	6	5	34	0	39	91
% App. Total	71.7	28.3	0		83.3	16.7	0		12.8	87.2	0		
PHF	.750	.271	.000	.575	.625	.250	.000	.750	.625	.850	.000	.886	.758

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Groups Printed- Peds and Bikes

	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	0	1	0	2	5	0	5	0	0	13
07:15 AM	2	1	0	0	0	0	4	9	0	4	1	0	21
07:30 AM	3	0	0	0	0	0	0	7	0	9	0	0	19
07:45 AM	4	1	0	0	0	0	0	5	0	9	0	1	20
Total	9	2	0	0	1	0	6	26	0	27	1	1	73
08:00 AM	1	0	0	0	0	0	7	3	0	7	1	0	19
08:15 AM	1	0	0	0	0	0	2	5	0	7	0	0	15
08:30 AM	1	0	0	0	1	0	3	4	0	6	0	0	15
08:45 AM	2	0	0	0	1	0	5	5	0	4	0	0	17
Total	5	0	0	0	2	0	17	17	0	24	1	0	66
Grand Total	14	2	0	0	3	0	23	43	0	51	2	1	139
Apprch %	87.5	12.5	0	0	4.3	0	33.3	62.3	0	94.4	3.7	1.9	
Total %	10.1	1.4	0	0	2.2	0	16.5	30.9	0	36.7	1.4	0.7	

	North Beacon Street (Route 20) From East					Gordon Street From South					North Beacon Street (Route 20) From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:15 AM																
07:15 AM	2	1	0	0	3	0	0	4	9	13	0	4	1	0	5	21
07:30 AM	3	0	0	0	3	0	0	0	7	7	0	9	0	0	9	19
07:45 AM	4	1	0	0	5	0	0	0	5	5	0	9	0	1	10	20
08:00 AM	1	0	0	0	1	0	0	7	3	10	0	7	1	0	8	19
Total Volume	10	2	0	0	12	0	0	11	24	35	0	29	2	1	32	79
% App. Total	83.3	16.7	0	0		0	0	31.4	68.6		0	90.6	6.2	3.1		
PHF	.625	.500	.000	.000	.600	.000	.000	.393	.667	.673	.000	.806	.500	.250	.800	.940

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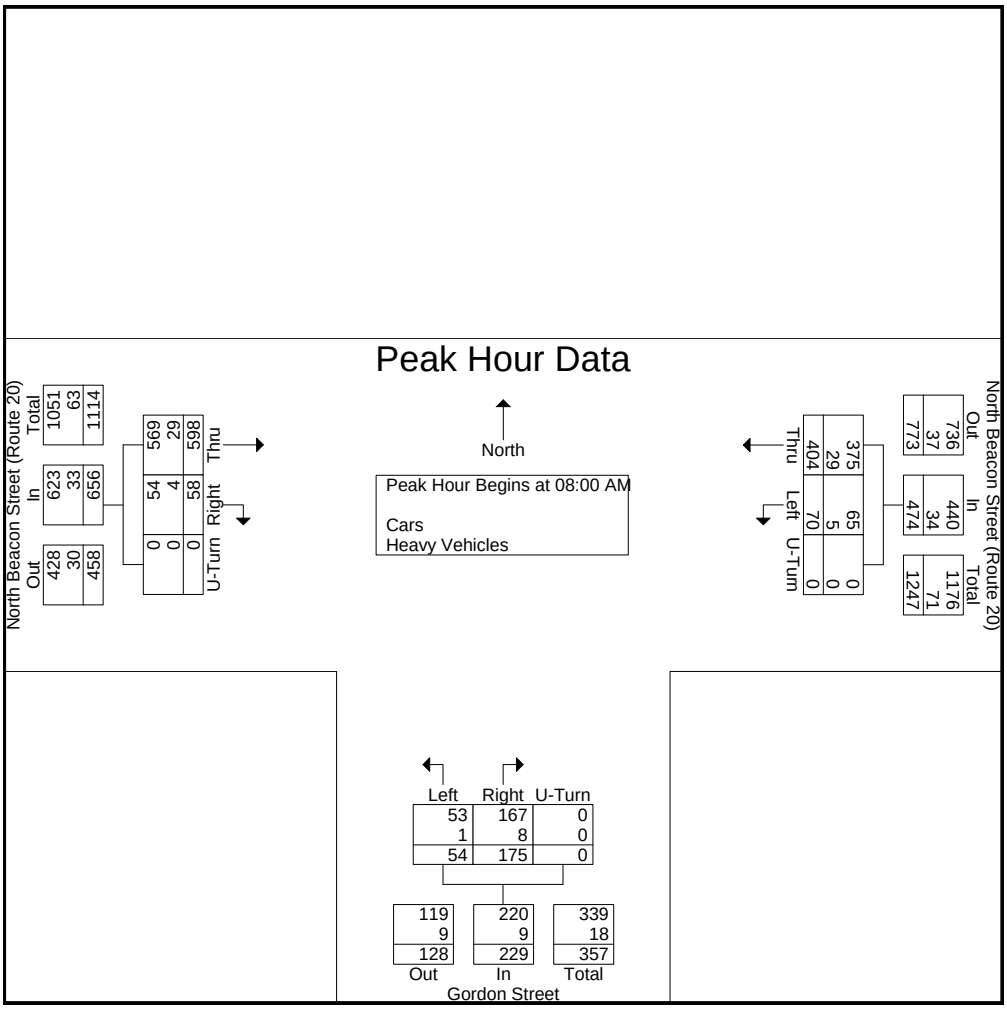
	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	94	19	0	113	40	14	0	54	8	157	0	165	332
08:15 AM	117	23	0	140	42	14	0	56	10	141	0	151	347
08:30 AM	91	12	0	103	43	10	0	53	15	157	0	172	328
08:45 AM	102	16	0	118	50	16	0	66	25	143	0	168	352
Total Volume	404	70	0	474	175	54	0	229	58	598	0	656	1359
% App. Total	85.2	14.8	0		76.4	23.6	0		8.8	91.2	0		
PHF	.863	.761	.000	.846	.875	.844	.000	.867	.580	.952	.000	.953	.965
Cars	375	65	0	440	167	53	0	220	54	569	0	623	1283
% Cars	92.8	92.9	0	92.8	95.4	98.1	0	96.1	93.1	95.2	0	95.0	94.4
Heavy Vehicles	29	5	0	34	8	1	0	9	4	29	0	33	76
% Heavy Vehicles	7.2	7.1	0	7.2	4.6	1.9	0	3.9	6.9	4.8	0	5.0	5.6



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Groups Printed- Cars - Heavy Vehicles

	North Beacon Street (Route 20) From East			Gordon Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	136	22	0	25	12	0	20	139	0	354
04:15 PM	116	18	0	23	10	0	10	120	0	297
04:30 PM	142	30	0	19	7	0	15	141	0	354
04:45 PM	116	10	0	26	6	0	24	139	0	321
Total	510	80	0	93	35	0	69	539	0	1326
05:00 PM	137	28	0	35	14	0	24	140	0	378
05:15 PM	136	29	0	28	9	0	27	149	0	378
05:30 PM	119	25	0	29	7	0	37	156	0	373
05:45 PM	108	34	1	35	7	0	28	143	0	356
Total	500	116	1	127	37	0	116	588	0	1485
Grand Total	1010	196	1	220	72	0	185	1127	0	2811
Apprch %	83.7	16.2	0.1	75.3	24.7	0	14.1	85.9	0	
Total %	35.9	7	0	7.8	2.6	0	6.6	40.1	0	
Cars	979	193	1	214	71	0	184	1095	0	2737
% Cars	96.9	98.5	100	97.3	98.6	0	99.5	97.2	0	97.4
Heavy Vehicles	31	3	0	6	1	0	1	32	0	74
% Heavy Vehicles	3.1	1.5	0	2.7	1.4	0	0.5	2.8	0	2.6

	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	137	28	0	165	35	14	0	49	24	140	0	164	378
05:15 PM	136	29	0	165	28	9	0	37	27	149	0	176	378
05:30 PM	119	25	0	144	29	7	0	36	37	156	0	193	373
05:45 PM	108	34	1	143	35	7	0	42	28	143	0	171	356
Total Volume	500	116	1	617	127	37	0	164	116	588	0	704	1485
% App. Total	81	18.8	0.2		77.4	22.6	0		16.5	83.5	0		
PHF	.912	.853	.250	.935	.907	.661	.000	.837	.784	.942	.000	.912	.982
Cars	486	114	1	601	124	37	0	161	115	575	0	690	1452
% Cars	97.2	98.3	100	97.4	97.6	100	0	98.2	99.1	97.8	0	98.0	97.8
Heavy Vehicles	14	2	0	16	3	0	0	3	1	13	0	14	33
% Heavy Vehicles	2.8	1.7	0	2.6	2.4	0	0	1.8	0.9	2.2	0	2.0	2.2

S: Gordon Street
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Groups Printed- Cars

	North Beacon Street (Route 20) From East			Gordon Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	134	21	0	24	12	0	20	131	0	342
04:15 PM	110	18	0	22	9	0	10	118	0	287
04:30 PM	138	30	0	18	7	0	15	140	0	348
04:45 PM	111	10	0	26	6	0	24	131	0	308
Total	493	79	0	90	34	0	69	520	0	1285
05:00 PM	132	27	0	34	14	0	24	140	0	371
05:15 PM	133	29	0	28	9	0	27	143	0	369
05:30 PM	118	24	0	28	7	0	37	153	0	367
05:45 PM	103	34	1	34	7	0	27	139	0	345
Total	486	114	1	124	37	0	115	575	0	1452
Grand Total	979	193	1	214	71	0	184	1095	0	2737
Apprch %	83.5	16.5	0.1	75.1	24.9	0	14.4	85.6	0	
Total %	35.8	7.1	0	7.8	2.6	0	6.7	40	0	

	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	132	27	0	159	34	14	0	48	24	140	0	164	371
05:15 PM	133	29	0	162	28	9	0	37	27	143	0	170	369
05:30 PM	118	24	0	142	28	7	0	35	37	153	0	190	367
05:45 PM	103	34	1	138	34	7	0	41	27	139	0	166	345
Total Volume	486	114	1	601	124	37	0	161	115	575	0	690	1452
% App. Total	80.9	19	0.2		77	23	0		16.7	83.3	0		
PHF	.914	.838	.250	.927	.912	.661	.000	.839	.777	.940	.000	.908	.978

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Groups Printed- Heavy Vehicles

	North Beacon Street (Route 20) From East			Gordon Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	2	1	0	1	0	0	0	8	0	12
04:15 PM	6	0	0	1	1	0	0	2	0	10
04:30 PM	4	0	0	1	0	0	0	1	0	6
04:45 PM	5	0	0	0	0	0	0	8	0	13
Total	17	1	0	3	1	0	0	19	0	41
05:00 PM	5	1	0	1	0	0	0	0	0	7
05:15 PM	3	0	0	0	0	0	0	6	0	9
05:30 PM	1	1	0	1	0	0	0	3	0	6
05:45 PM	5	0	0	1	0	0	1	4	0	11
Total	14	2	0	3	0	0	1	13	0	33
Grand Total	31	3	0	6	1	0	1	32	0	74
Apprch %	91.2	8.8	0	85.7	14.3	0	3	97	0	
Total %	41.9	4.1	0	8.1	1.4	0	1.4	43.2	0	

	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	2	1	0	3	1	0	0	1	0	8	0	8	12
04:15 PM	6	0	0	6	1	1	0	2	0	2	0	2	10
04:30 PM	4	0	0	4	1	0	0	1	0	1	0	1	6
04:45 PM	5	0	0	5	0	0	0	0	0	8	0	8	13
Total Volume	17	1	0	18	3	1	0	4	0	19	0	19	41
% App. Total	94.4	5.6	0		75	25	0		0	100	0		
PHF	.708	.250	.000	.750	.750	.250	.000	.500	.000	.594	.000	.594	.788

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Groups Printed- Peds and Bikes

	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
04:00 PM	5	0	0	0	0	0	12	2	0	1	0	0	20
04:15 PM	3	0	0	0	0	0	6	2	0	0	0	0	11
04:30 PM	3	0	0	0	0	0	2	10	0	5	0	0	20
04:45 PM	1	0	0	0	0	0	2	10	0	0	0	0	13
Total	12	0	0	0	0	0	22	24	0	6	0	0	64
05:00 PM	4	2	0	0	0	0	3	4	0	3	0	0	16
05:15 PM	6	0	0	0	0	0	6	3	0	3	0	0	18
05:30 PM	6	0	0	0	1	0	5	7	1	3	0	0	23
05:45 PM	7	0	0	0	0	0	9	7	0	2	0	0	25
Total	23	2	0	0	1	0	23	21	1	11	0	0	82
Grand Total	35	2	0	0	1	0	45	45	1	17	0	0	146
Apprch %	94.6	5.4	0	0	1.1	0	49.5	49.5	5.6	94.4	0	0	
Total %	24	1.4	0	0	0.7	0	30.8	30.8	0.7	11.6	0	0	

	North Beacon Street (Route 20) From East					Gordon Street From South					North Beacon Street (Route 20) From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:00 PM																
05:00 PM	4	2	0	0	6	0	0	3	4	7	0	3	0	0	3	16
05:15 PM	6	0	0	0	6	0	0	6	3	9	0	3	0	0	3	18
05:30 PM	6	0	0	0	6	1	0	5	7	13	1	3	0	0	4	23
05:45 PM	7	0	0	0	7	0	0	9	7	16	0	2	0	0	2	25
Total Volume	23	2	0	0	25	1	0	23	21	45	1	11	0	0	12	82
% App. Total	92	8	0	0		2.2	0	51.1	46.7		8.3	91.7	0	0		
PHF	.821	.250	.000	.000	.893	.250	.000	.639	.750	.703	.250	.917	.000	.000	.750	.820

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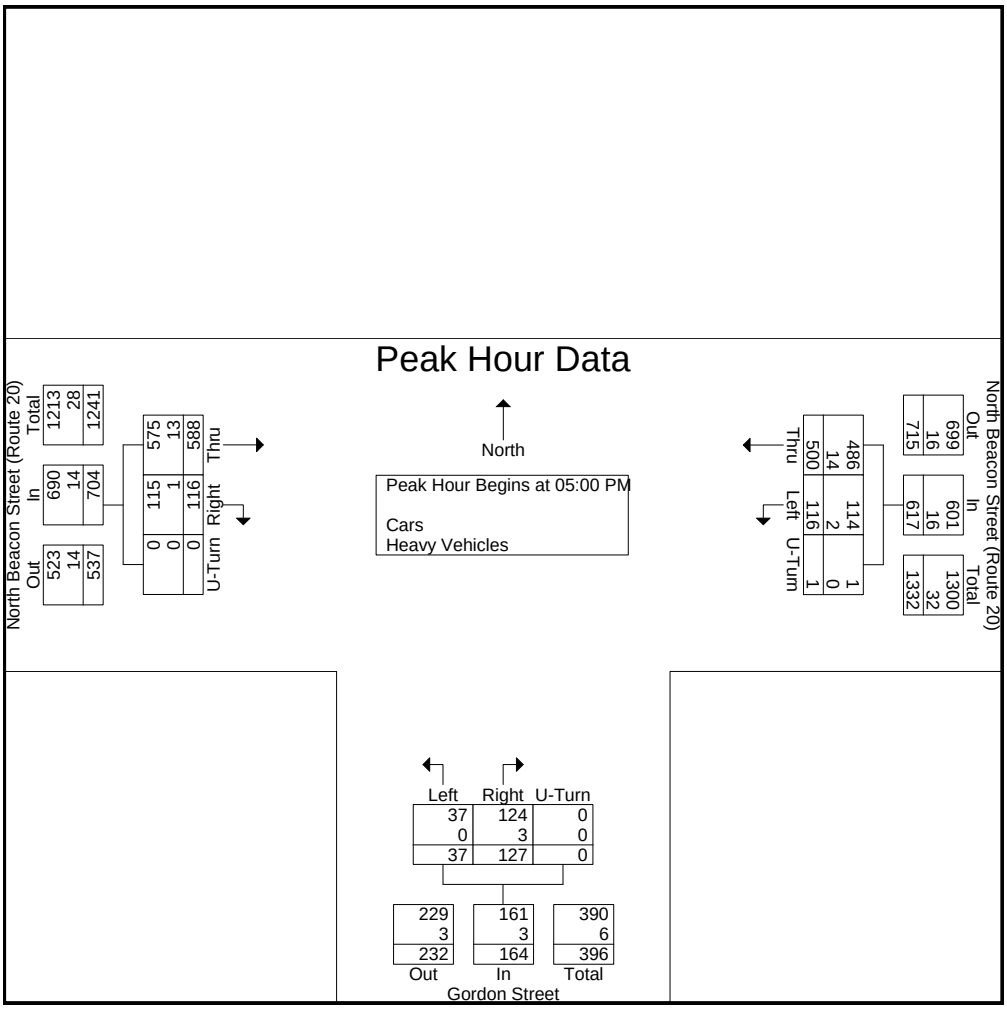
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	137	28	0	165	35	14	0	49	24	140	0	164	378
05:15 PM	136	29	0	165	28	9	0	37	27	149	0	176	378
05:30 PM	119	25	0	144	29	7	0	36	37	156	0	193	373
05:45 PM	108	34	1	143	35	7	0	42	28	143	0	171	356
Total Volume	500	116	1	617	127	37	0	164	116	588	0	704	1485
% App. Total	81	18.8	0.2		77.4	22.6	0		16.5	83.5	0		
PHF	.912	.853	.250	.935	.907	.661	.000	.837	.784	.942	.000	.912	.982
Cars	486	114	1	601	124	37	0	161	115	575	0	690	1452
% Cars	97.2	98.3	100	97.4	97.6	100	0	98.2	99.1	97.8	0	98.0	97.8
Heavy Vehicles	14	2	0	16	3	0	0	3	1	13	0	14	33
% Heavy Vehicles	2.8	1.7	0	2.6	2.4	0	0	1.8	0.9	2.2	0	2.0	2.2



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File Name : 165274 EEE
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	North Beacon Street (Route 20) From East			Gordon Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
11:00 AM	78	13	1	24	7	0	18	141	0	282
11:15 AM	88	9	0	18	6	0	11	113	0	245
11:30 AM	77	12	0	32	11	0	21	138	0	291
11:45 AM	104	14	0	20	8	0	9	131	0	286
Total	347	48	1	94	32	0	59	523	0	1104
12:00 PM	89	16	0	23	1	0	15	138	0	282
12:15 PM	113	17	0	29	10	0	11	137	0	317
12:30 PM	92	12	0	33	6	0	4	139	0	286
12:45 PM	92	10	0	28	3	0	7	123	0	263
Total	386	55	0	113	20	0	37	537	0	1148
01:00 PM	84	11	0	24	4	0	15	118	0	256
01:15 PM	111	20	0	23	9	0	16	139	0	318
01:30 PM	88	20	0	18	7	0	16	114	0	263
01:45 PM	103	20	0	30	4	0	12	122	0	291
Total	386	71	0	95	24	0	59	493	0	1128
Grand Total	1119	174	1	302	76	0	155	1553	0	3380
Apprch %	86.5	13.4	0.1	79.9	20.1	0	9.1	90.9	0	
Total %	33.1	5.1	0	8.9	2.2	0	4.6	45.9	0	
Cars	1091	169	1	299	76	0	154	1518	0	3308
% Cars	97.5	97.1	100	99	100	0	99.4	97.7	0	97.9
Heavy Vehicles	28	5	0	3	0	0	1	35	0	72
% Heavy Vehicles	2.5	2.9	0	1	0	0	0.6	2.3	0	2.1

	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:30 AM													
11:30 AM	77	12	0	89	32	11	0	43	21	138	0	159	291
11:45 AM	104	14	0	118	20	8	0	28	9	131	0	140	286
12:00 PM	89	16	0	105	23	1	0	24	15	138	0	153	282
12:15 PM	113	17	0	130	29	10	0	39	11	137	0	148	317
Total Volume	383	59	0	442	104	30	0	134	56	544	0	600	1176
% App. Total	86.7	13.3	0		77.6	22.4	0		9.3	90.7	0		
PHF	.847	.868	.000	.850	.813	.682	.000	.779	.667	.986	.000	.943	.927
Cars	373	54	0	427	103	30	0	133	56	531	0	587	1147
% Cars	97.4	91.5	0	96.6	99.0	100	0	99.3	100	97.6	0	97.8	97.5
Heavy Vehicles	10	5	0	15	1	0	0	1	0	13	0	13	29
% Heavy Vehicles	2.6	8.5	0	3.4	1.0	0	0	0.7	0	2.4	0	2.2	2.5

S: Gordon Street
E/W: North Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 EEE
Site Code : 12305
Start Date : 10/15/2016
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Groups Printed- Cars

	North Beacon Street (Route 20) From East			Gordon Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
11:00 AM	77	13	1	24	7	0	18	136	0	276
11:15 AM	87	9	0	18	6	0	11	111	0	242
11:30 AM	74	12	0	31	11	0	21	137	0	286
11:45 AM	100	11	0	20	8	0	9	128	0	276
Total	338	45	1	93	32	0	59	512	0	1080
12:00 PM	88	15	0	23	1	0	15	133	0	275
12:15 PM	111	16	0	29	10	0	11	133	0	310
12:30 PM	89	12	0	33	6	0	4	135	0	279
12:45 PM	89	10	0	27	3	0	7	121	0	257
Total	377	53	0	112	20	0	37	522	0	1121
01:00 PM	80	11	0	23	4	0	15	116	0	249
01:15 PM	107	20	0	23	9	0	15	135	0	309
01:30 PM	88	20	0	18	7	0	16	112	0	261
01:45 PM	101	20	0	30	4	0	12	121	0	288
Total	376	71	0	94	24	0	58	484	0	1107
Grand Total	1091	169	1	299	76	0	154	1518	0	3308
Apprch %	86.5	13.4	0.1	79.7	20.3	0	9.2	90.8	0	
Total %	33	5.1	0	9	2.3	0	4.7	45.9	0	

	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:30 AM													
11:30 AM	74	12	0	86	31	11	0	42	21	137	0	158	286
11:45 AM	100	11	0	111	20	8	0	28	9	128	0	137	276
12:00 PM	88	15	0	103	23	1	0	24	15	133	0	148	275
12:15 PM	111	16	0	127	29	10	0	39	11	133	0	144	310
Total Volume	373	54	0	427	103	30	0	133	56	531	0	587	1147
% App. Total	87.4	12.6	0		77.4	22.6	0		9.5	90.5	0		
PHF	.840	.844	.000	.841	.831	.682	.000	.792	.667	.969	.000	.929	.925

S: Gordon Street
E/W: North Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 EEE
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Heavy Vehicles

	North Beacon Street (Route 20) From East			Gordon Street From South			North Beacon Street (Route 20) From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
11:00 AM	1	0	0	0	0	0	0	5	0	6
11:15 AM	1	0	0	0	0	0	0	2	0	3
11:30 AM	3	0	0	1	0	0	0	1	0	5
11:45 AM	4	3	0	0	0	0	0	3	0	10
Total	9	3	0	1	0	0	0	11	0	24
12:00 PM	1	1	0	0	0	0	0	5	0	7
12:15 PM	2	1	0	0	0	0	0	4	0	7
12:30 PM	3	0	0	0	0	0	0	4	0	7
12:45 PM	3	0	0	1	0	0	0	2	0	6
Total	9	2	0	1	0	0	0	15	0	27
01:00 PM	4	0	0	1	0	0	0	2	0	7
01:15 PM	4	0	0	0	0	0	1	4	0	9
01:30 PM	0	0	0	0	0	0	0	2	0	2
01:45 PM	2	0	0	0	0	0	0	1	0	3
Total	10	0	0	1	0	0	1	9	0	21
Grand Total	28	5	0	3	0	0	1	35	0	72
Apprch %	84.8	15.2	0	100	0	0	2.8	97.2	0	
Total %	38.9	6.9	0	4.2	0	0	1.4	48.6	0	

	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:45 AM													
11:45 AM	4	3	0	7	0	0	0	0	0	3	0	3	10
12:00 PM	1	1	0	2	0	0	0	0	0	5	0	5	7
12:15 PM	2	1	0	3	0	0	0	0	0	4	0	4	7
12:30 PM	3	0	0	3	0	0	0	0	0	4	0	4	7
Total Volume	10	5	0	15	0	0	0	0	0	16	0	16	31
% App. Total	66.7	33.3	0		0	0	0		0	100	0		
PHF	.625	.417	.000	.536	.000	.000	.000	.000	.000	.800	.000	.800	.775

S: Gordon Street
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File Name : 165274 EEE
Site Code : 12305
Start Date : 10/15/2016
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Groups Printed- Peds and Bikes

	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
11:00 AM	1	0	0	0	0	0	5	3	0	1	2	0	12
11:15 AM	1	0	0	0	0	0	2	11	0	0	0	0	14
11:30 AM	1	0	0	0	0	0	2	3	0	5	0	0	11
11:45 AM	1	1	0	0	0	0	2	10	0	2	3	1	20
Total	4	1	0	0	0	0	11	27	0	8	5	1	57
12:00 PM	3	1	0	0	0	0	2	12	0	0	0	0	18
12:15 PM	3	1	0	0	0	0	3	10	0	0	0	0	17
12:30 PM	0	0	0	0	0	0	4	10	0	3	0	0	17
12:45 PM	2	1	0	0	1	0	5	3	0	1	0	0	13
Total	8	3	0	0	1	0	14	35	0	4	0	0	65
01:00 PM	1	0	0	0	0	0	4	5	0	2	0	0	12
01:15 PM	2	1	0	0	0	0	7	4	0	4	0	0	18
01:30 PM	0	0	0	0	2	0	5	3	0	2	1	0	13
01:45 PM	2	0	0	0	0	0	11	4	0	3	0	0	20
Total	5	1	0	0	2	0	27	16	0	11	1	0	63
Grand Total	17	5	0	0	3	0	52	78	0	23	6	1	185
Apprch %	77.3	22.7	0	0	2.3	0	39.1	58.6	0	76.7	20	3.3	
Total %	9.2	2.7	0	0	1.6	0	28.1	42.2	0	12.4	3.2	0.5	

	North Beacon Street (Route 20) From East					Gordon Street From South					North Beacon Street (Route 20) From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 11:45 AM																
11:45 AM	1	1	0	0	2	0	0	2	10	12	0	2	3	1	6	20
12:00 PM	3	1	0	0	4	0	0	2	12	14	0	0	0	0	0	18
12:15 PM	3	1	0	0	4	0	0	3	10	13	0	0	0	0	0	17
12:30 PM	0	0	0	0	0	0	0	4	10	14	0	3	0	0	3	17
Total Volume	7	3	0	0	10	0	0	11	42	53	0	5	3	1	9	72
% App. Total	70	30	0	0		0	0	20.8	79.2		0	55.6	33.3	11.1		
PHF	.583	.750	.000	.000	.625	.000	.000	.688	.875	.946	.000	.417	.250	.250	.375	.900

S: Gordon Street
E/W: North Beacon Street (Route 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

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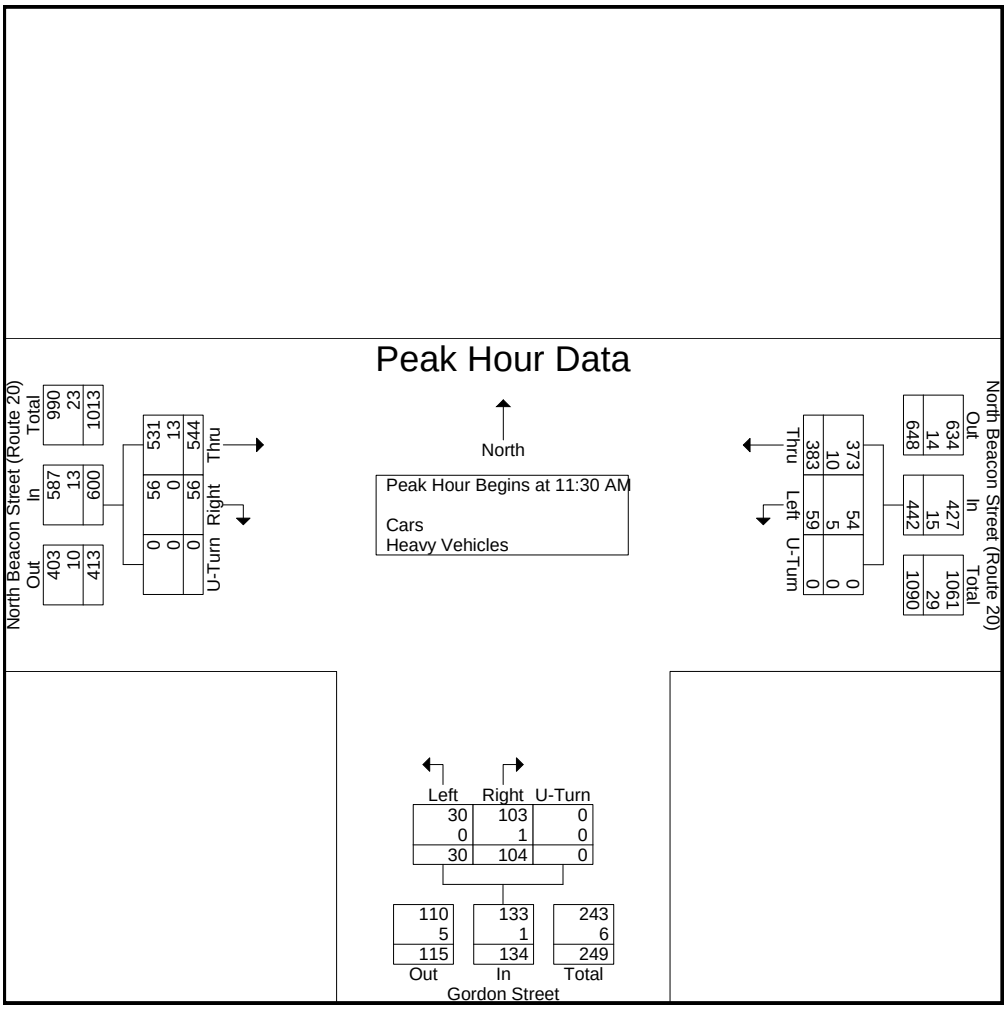
	North Beacon Street (Route 20) From East				Gordon Street From South				North Beacon Street (Route 20) From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:30 AM													
11:30 AM	77	12	0	89	32	11	0	43	21	138	0	159	291
11:45 AM	104	14	0	118	20	8	0	28	9	131	0	140	286
12:00 PM	89	16	0	105	23	1	0	24	15	138	0	153	282
12:15 PM	113	17	0	130	29	10	0	39	11	137	0	148	317
Total Volume	383	59	0	442	104	30	0	134	56	544	0	600	1176
% App. Total	86.7	13.3	0		77.6	22.4	0		9.3	90.7	0		
PHF	.847	.868	.000	.850	.813	.682	.000	.779	.667	.986	.000	.943	.927
Cars	373	54	0	427	103	30	0	133	56	531	0	587	1147
% Cars	97.4	91.5	0	96.6	99.0	100	0	99.3	100	97.6	0	97.8	97.5
Heavy Vehicles	10	5	0	15	1	0	0	1	0	13	0	13	29
% Heavy Vehicles	2.6	8.5	0	3.4	1.0	0	0	0.7	0	2.4	0	2.2	2.5



N/S: Cambridge Street
E/W: Brighton Ave/ N. Beacon St (Rt 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 F
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Start Date : 10/13/2016
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Groups Printed- Cars - Heavy Vehicles

	Cambridge Street From North				Brighton Avenue (Route 20) From East				Cambridge Street From South				North Beacon Street (Route 20) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	36	72	20	0	16	62	32	6	32	71	1	0	4	70	30	0	452
07:15 AM	24	91	13	0	12	77	27	4	36	80	0	0	5	97	29	0	495
07:30 AM	22	93	12	0	15	100	15	2	44	81	1	0	3	120	25	0	533
07:45 AM	21	87	11	0	21	101	25	2	49	75	0	0	4	89	32	0	517
Total	103	343	56	0	64	340	99	14	161	307	2	0	16	376	116	0	1997
08:00 AM	16	111	10	0	5	120	37	2	43	77	0	0	1	100	38	0	560
08:15 AM	33	93	7	0	20	118	27	3	33	70	0	0	8	93	29	0	534
08:30 AM	27	77	11	0	15	98	25	1	61	65	0	0	4	109	39	0	532
08:45 AM	37	100	19	0	13	111	31	2	41	67	0	0	6	101	33	0	561
Total	113	381	47	0	53	447	120	8	178	279	0	0	19	403	139	0	2187
Grand Total	216	724	103	0	117	787	219	22	339	586	2	0	35	779	255	0	4184
Apprch %	20.7	69.4	9.9	0	10.2	68.7	19.1	1.9	36.6	63.2	0.2	0	3.3	72.9	23.9	0	
Total %	5.2	17.3	2.5	0	2.8	18.8	5.2	0.5	8.1	14	0	0	0.8	18.6	6.1	0	
Cars	180	649	88	0	97	736	174	22	308	561	2	0	32	741	225	0	3815
% Cars	83.3	89.6	85.4	0	82.9	93.5	79.5	100	90.9	95.7	100	0	91.4	95.1	88.2	0	91.2
Heavy Vehicles	36	75	15	0	20	51	45	0	31	25	0	0	3	38	30	0	369
% Heavy Vehicles	16.7	10.4	14.6	0	17.1	6.5	20.5	0	9.1	4.3	0	0	8.6	4.9	11.8	0	8.8

	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	16	111	10	0	137	5	120	37	2	164	43	77	0	0	120	1	100	38	0	139	560
08:15 AM	33	93	7	0	133	20	118	27	3	168	33	70	0	0	103	8	93	29	0	130	534
08:30 AM	27	77	11	0	115	15	98	25	1	139	61	65	0	0	126	4	109	39	0	152	532
08:45 AM	37	100	19	0	156	13	111	31	2	157	41	67	0	0	108	6	101	33	0	140	561
Total Volume	113	381	47	0	541	53	447	120	8	628	178	279	0	0	457	19	403	139	0	561	2187
% App. Total	20.9	70.4	8.7	0		8.4	71.2	19.1	1.3		38.9	61.1	0	0		3.4	71.8	24.8	0		
PHF	.764	.858	.618	.000	.867	.663	.931	.811	.667	.935	.730	.906	.000	.000	.907	.594	.924	.891	.000	.923	.975
Cars	102	344	39	0	485	44	428	99	8	579	162	264	0	0	426	18	389	124	0	531	2021
% Cars	90.3	90.3	83.0	0	89.6	83.0	95.7	82.5	100	92.2	91.0	94.6	0	0	93.2	94.7	96.5	89.2	0	94.7	92.4
Heavy Vehicles	11	37	8	0	56	9	19	21	0	49	16	15	0	0	31	1	14	15	0	30	166
% Heavy Vehicles	9.7	9.7	17.0	0	10.4	17.0	4.3	17.5	0	7.8	9.0	5.4	0	0	6.8	5.3	3.5	10.8	0	5.3	7.6

N/S: Cambridge Street
E/W: Brighton Ave/ N. Beacon St (Rt 20)
City, State: Allston, MA
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Page No : 1

Groups Printed- Cars

	Cambridge Street From North				Brighton Avenue (Route 20) From East				Cambridge Street From South				North Beacon Street (Route 20) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	23	67	17	0	16	53	23	6	28	68	1	0	3	67	27	0	399
07:15 AM	18	78	12	0	8	69	19	4	32	78	0	0	4	88	24	0	434
07:30 AM	19	87	11	0	11	91	11	2	39	77	1	0	3	112	21	0	485
07:45 AM	18	73	9	0	18	95	22	2	47	74	0	0	4	85	29	0	476
Total	78	305	49	0	53	308	75	14	146	297	2	0	14	352	101	0	1794
08:00 AM	16	103	6	0	5	114	31	2	40	76	0	0	1	97	34	0	525
08:15 AM	28	81	6	0	18	114	20	3	28	67	0	0	8	90	25	0	488
08:30 AM	26	71	10	0	11	94	22	1	56	60	0	0	3	103	35	0	492
08:45 AM	32	89	17	0	10	106	26	2	38	61	0	0	6	99	30	0	516
Total	102	344	39	0	44	428	99	8	162	264	0	0	18	389	124	0	2021
Grand Total	180	649	88	0	97	736	174	22	308	561	2	0	32	741	225	0	3815
Apprch %	19.6	70.8	9.6	0	9.4	71.5	16.9	2.1	35.4	64.4	0.2	0	3.2	74.2	22.5	0	
Total %	4.7	17	2.3	0	2.5	19.3	4.6	0.6	8.1	14.7	0.1	0	0.8	19.4	5.9	0	

	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	16	103	6	0	125	5	114	31	2	152	40	76	0	0	116	1	97	34	0	132	525
08:15 AM	28	81	6	0	115	18	114	20	3	155	28	67	0	0	95	8	90	25	0	123	488
08:30 AM	26	71	10	0	107	11	94	22	1	128	56	60	0	0	116	3	103	35	0	141	492
08:45 AM	32	89	17	0	138	10	106	26	2	144	38	61	0	0	99	6	99	30	0	135	516
Total Volume	102	344	39	0	485	44	428	99	8	579	162	264	0	0	426	18	389	124	0	531	2021
% App. Total	21	70.9	8	0		7.6	73.9	17.1	1.4		38	62	0	0		3.4	73.3	23.4	0		
PHF	.797	.835	.574	.000	.879	.611	.939	.798	.667	.934	.723	.868	.000	.000	.918	.563	.944	.886	.000	.941	.962

N/S: Cambridge Street
E/W: Brighton Ave/ N. Beacon St (Rt 20)
City, State: Allston, MA
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File Name : 165274 F
Site Code : 12305
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Groups Printed- Heavy Vehicles

	Cambridge Street From North				Brighton Avenue (Route 20) From East				Cambridge Street From South				North Beacon Street (Route 20) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	13	5	3	0	0	9	9	0	4	3	0	0	1	3	3	0	53
07:15 AM	6	13	1	0	4	8	8	0	4	2	0	0	1	9	5	0	61
07:30 AM	3	6	1	0	4	9	4	0	5	4	0	0	0	8	4	0	48
07:45 AM	3	14	2	0	3	6	3	0	2	1	0	0	0	4	3	0	41
Total	25	38	7	0	11	32	24	0	15	10	0	0	2	24	15	0	203
08:00 AM	0	8	4	0	0	6	6	0	3	1	0	0	0	3	4	0	35
08:15 AM	5	12	1	0	2	4	7	0	5	3	0	0	0	3	4	0	46
08:30 AM	1	6	1	0	4	4	3	0	5	5	0	0	1	6	4	0	40
08:45 AM	5	11	2	0	3	5	5	0	3	6	0	0	0	2	3	0	45
Total	11	37	8	0	9	19	21	0	16	15	0	0	1	14	15	0	166
Grand Total	36	75	15	0	20	51	45	0	31	25	0	0	3	38	30	0	369
Apprch %	28.6	59.5	11.9	0	17.2	44	38.8	0	55.4	44.6	0	0	4.2	53.5	42.3	0	
Total %	9.8	20.3	4.1	0	5.4	13.8	12.2	0	8.4	6.8	0	0	0.8	10.3	8.1	0	

	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	13	5	3	0	21	0	9	9	0	18	4	3	0	0	7	1	3	3	0	7	53
07:15 AM	6	13	1	0	20	4	8	8	0	20	4	2	0	0	6	1	9	5	0	15	61
07:30 AM	3	6	1	0	10	4	9	4	0	17	5	4	0	0	9	0	8	4	0	12	48
07:45 AM	3	14	2	0	19	3	6	3	0	12	2	1	0	0	3	0	4	3	0	7	41
Total Volume	25	38	7	0	70	11	32	24	0	67	15	10	0	0	25	2	24	15	0	41	203
% App. Total	35.7	54.3	10	0		16.4	47.8	35.8	0		60	40	0	0		4.9	58.5	36.6	0		
PHF	.481	.679	.583	.000	.833	.688	.889	.667	.000	.838	.750	.625	.000	.000	.694	.500	.667	.750	.000	.683	.832

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File Name : 165274 F
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Groups Printed- Peds and Bikes

	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	2	0	2	5	0	0	0	19	8	5	0	0	4	9	0	3	0	5	18	80
07:15 AM	0	2	0	7	4	0	0	1	10	9	5	2	0	1	5	0	3	0	3	19	71
07:30 AM	1	2	0	5	4	0	1	0	6	5	6	0	0	5	13	0	8	0	6	12	74
07:45 AM	0	1	0	15	5	0	3	0	6	3	11	3	0	1	7	0	9	0	5	27	96
Total	1	7	0	29	18	0	4	1	41	25	27	5	0	11	34	0	23	0	19	76	321
08:00 AM	0	1	0	3	5	0	2	0	1	2	6	1	0	4	4	0	7	0	2	10	48
08:15 AM	0	2	0	7	8	0	1	0	0	5	6	5	0	7	8	0	7	0	4	12	72
08:30 AM	0	0	0	7	5	0	0	0	1	4	2	7	0	6	0	0	7	1	7	10	57
08:45 AM	0	2	0	11	7	0	2	0	6	4	9	5	0	2	5	0	6	0	4	5	68
Total	0	5	0	28	25	0	5	0	8	15	23	18	0	19	17	0	27	1	17	37	245
Grand Total	1	12	0	57	43	0	9	1	49	40	50	23	0	30	51	0	50	1	36	113	566
Apprch %	0.9	10.6	0	50.4	38.1	0	9.1	1	49.5	40.4	32.5	14.9	0	19.5	33.1	0	25	0.5	18	56.5	
Total %	0.2	2.1	0	10.1	7.6	0	1.6	0.2	8.7	7.1	8.8	4.1	0	5.3	9	0	8.8	0.2	6.4	20	

	Cambridge Street From North						Brighton Avenue (Route 20) From East						Cambridge Street From South						North Beacon Street (Route 20) From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:00 AM																									
07:00 AM	0	2	0	2	5	9	0	0	0	19	8	27	5	0	0	4	9	18	0	3	0	5	18	26	80
07:15 AM	0	2	0	7	4	13	0	0	1	10	9	20	5	2	0	1	5	13	0	3	0	3	19	25	71
07:30 AM	1	2	0	5	4	12	0	1	0	6	5	12	6	0	0	5	13	24	0	8	0	6	12	26	74
07:45 AM	0	1	0	15	5	21	0	3	0	6	3	12	11	3	0	1	7	22	0	9	0	5	27	41	96
Total Volume	1	7	0	29	18	55	0	4	1	41	25	71	27	5	0	11	34	77	0	23	0	19	76	118	321
% App. Total	1.8	12.7	0	52.7	32.7		0	5.6	1.4	57.7	35.2		35.1	6.5	0	14.3	44.2		0	19.5	0	16.1	64.4		
PHF	.250	.875	.000	.483	.900	.655	.000	.333	.250	.539	.694	.657	.614	.417	.000	.550	.654	.802	.000	.639	.000	.792	.704	.720	.836

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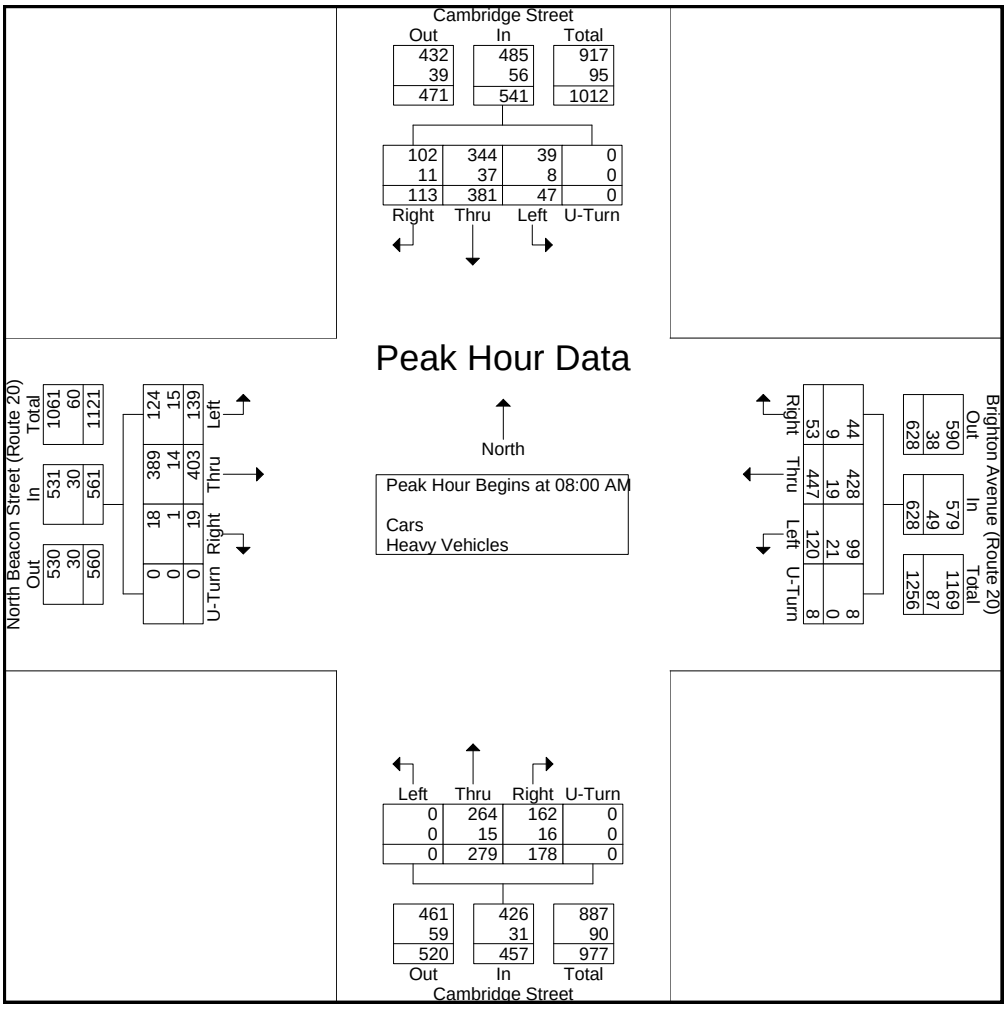
	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	16	111	10	0	137	5	120	37	2	164	43	77	0	0	120	1	100	38	0	139	560
08:15 AM	33	93	7	0	133	20	118	27	3	168	33	70	0	0	103	8	93	29	0	130	534
08:30 AM	27	77	11	0	115	15	98	25	1	139	61	65	0	0	126	4	109	39	0	152	532
08:45 AM	37	100	19	0	156	13	111	31	2	157	41	67	0	0	108	6	101	33	0	140	561
Total Volume	113	381	47	0	541	53	447	120	8	628	178	279	0	0	457	19	403	139	0	561	2187
% App. Total	20.9	70.4	8.7	0		8.4	71.2	19.1	1.3		38.9	61.1	0	0		3.4	71.8	24.8	0		
PHF	.764	.858	.618	.000	.867	.663	.931	.811	.667	.935	.730	.906	.000	.000	.907	.594	.924	.891	.000	.923	.975
Cars	102	344	39	0	485	44	428	99	8	579	162	264	0	0	426	18	389	124	0	531	2021
% Cars	90.3	90.3	83.0	0	89.6	83.0	95.7	82.5	100	92.2	91.0	94.6	0	0	93.2	94.7	96.5	89.2	0	94.7	92.4
Heavy Vehicles	11	37	8	0	56	9	19	21	0	49	16	15	0	0	31	1	14	15	0	30	166
% Heavy Vehicles	9.7	9.7	17.0	0	10.4	17.0	4.3	17.5	0	7.8	9.0	5.4	0	0	6.8	5.3	3.5	10.8	0	5.3	7.6



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Groups Printed- Cars - Heavy Vehicles

	Cambridge Street From North				Brighton Avenue (Route 20) From East				Cambridge Street From South				North Beacon Street (Route 20) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	41	90	27	0	11	117	46	5	35	79	0	0	2	117	33	0	603
04:15 PM	29	81	31	1	11	120	30	2	28	73	0	0	0	112	25	0	543
04:30 PM	32	106	29	0	12	122	47	2	31	59	0	0	2	127	42	0	611
04:45 PM	36	92	30	0	19	122	47	4	32	78	0	0	4	115	30	0	609
Total	138	369	117	1	53	481	170	13	126	289	0	0	8	471	130	0	2366
05:00 PM	26	103	37	0	15	142	24	6	37	74	0	0	4	135	30	0	633
05:15 PM	37	84	37	0	16	138	39	2	42	74	1	0	3	120	42	0	635
05:30 PM	25	72	36	0	15	128	54	2	38	71	1	1	3	154	36	0	636
05:45 PM	34	99	34	1	21	118	42	6	56	72	0	0	2	126	26	0	637
Total	122	358	144	1	67	526	159	16	173	291	2	1	12	535	134	0	2541
Grand Total	260	727	261	2	120	1007	329	29	299	580	2	1	20	1006	264	0	4907
Apprch %	20.8	58.2	20.9	0.2	8.1	67.8	22.2	2	33.9	65.8	0.2	0.1	1.6	78	20.5	0	
Total %	5.3	14.8	5.3	0	2.4	20.5	6.7	0.6	6.1	11.8	0	0	0.4	20.5	5.4	0	
Cars	249	713	246	2	107	979	305	29	278	547	2	1	19	989	244	0	4710
% Cars	95.8	98.1	94.3	100	89.2	97.2	92.7	100	93	94.3	100	100	95	98.3	92.4	0	96
Heavy Vehicles	11	14	15	0	13	28	24	0	21	33	0	0	1	17	20	0	197
% Heavy Vehicles	4.2	1.9	5.7	0	10.8	2.8	7.3	0	7	5.7	0	0	5	1.7	7.6	0	4

	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	26	103	37	0	166	15	142	24	6	187	37	74	0	0	111	4	135	30	0	169	633
05:15 PM	37	84	37	0	158	16	138	39	2	195	42	74	1	0	117	3	120	42	0	165	635
05:30 PM	25	72	36	0	133	15	128	54	2	199	38	71	1	1	111	3	154	36	0	193	636
05:45 PM	34	99	34	1	168	21	118	42	6	187	56	72	0	0	128	2	126	26	0	154	637
Total Volume	122	358	144	1	625	67	526	159	16	768	173	291	2	1	467	12	535	134	0	681	2541
% App. Total	19.5	57.3	23	0.2		8.7	68.5	20.7	2.1		37	62.3	0.4	0.2		1.8	78.6	19.7	0		
PHF	.824	.869	.973	.250	.930	.798	.926	.736	.667	.965	.772	.983	.500	.250	.912	.750	.869	.798	.000	.882	.997
Cars	117	355	133	1	606	63	512	148	16	739	160	269	2	1	432	11	526	127	0	664	2441
% Cars	95.9	99.2	92.4	100	97.0	94.0	97.3	93.1	100	96.2	92.5	92.4	100	100	92.5	91.7	98.3	94.8	0	97.5	96.1
Heavy Vehicles	5	3	11	0	19	4	14	11	0	29	13	22	0	0	35	1	9	7	0	17	100
% Heavy Vehicles	4.1	0.8	7.6	0	3.0	6.0	2.7	6.9	0	3.8	7.5	7.6	0	0	7.5	8.3	1.7	5.2	0	2.5	3.9

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Groups Printed- Cars

	Cambridge Street From North				Brighton Avenue (Route 20) From East				Cambridge Street From South				North Beacon Street (Route 20) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	39	86	26	0	10	117	45	5	32	77	0	0	2	113	31	0	583
04:15 PM	27	77	29	1	10	116	26	2	25	70	0	0	0	110	22	0	515
04:30 PM	32	105	28	0	9	117	43	2	29	56	0	0	2	126	40	0	589
04:45 PM	34	90	30	0	15	117	43	4	32	75	0	0	4	114	24	0	582
Total	132	358	113	1	44	467	157	13	118	278	0	0	8	463	117	0	2269
05:00 PM	24	101	34	0	15	138	22	6	34	70	0	0	3	132	29	0	608
05:15 PM	36	83	34	0	14	136	36	2	39	71	1	0	3	118	40	0	613
05:30 PM	24	72	33	0	13	124	50	2	34	62	1	1	3	152	35	0	606
05:45 PM	33	99	32	1	21	114	40	6	53	66	0	0	2	124	23	0	614
Total	117	355	133	1	63	512	148	16	160	269	2	1	11	526	127	0	2441
Grand Total	249	713	246	2	107	979	305	29	278	547	2	1	19	989	244	0	4710
Apprch %	20.6	58.9	20.3	0.2	7.5	68.9	21.5	2	33.6	66.1	0.2	0.1	1.5	79	19.5	0	
Total %	5.3	15.1	5.2	0	2.3	20.8	6.5	0.6	5.9	11.6	0	0	0.4	21	5.2	0	

	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	24	101	34	0	159	15	138	22	6	181	34	70	0	0	104	3	132	29	0	164	608
05:15 PM	36	83	34	0	153	14	136	36	2	188	39	71	1	0	111	3	118	40	0	161	613
05:30 PM	24	72	33	0	129	13	124	50	2	189	34	62	1	1	98	3	152	35	0	190	606
05:45 PM	33	99	32	1	165	21	114	40	6	181	53	66	0	0	119	2	124	23	0	149	614
Total Volume	117	355	133	1	606	63	512	148	16	739	160	269	2	1	432	11	526	127	0	664	2441
% App. Total	19.3	58.6	21.9	0.2		8.5	69.3	20	2.2		37	62.3	0.5	0.2		1.7	79.2	19.1	0		
PHF	.813	.879	.978	.250	.918	.750	.928	.740	.667	.978	.755	.947	.500	.250	.908	.917	.865	.794	.000	.874	.994

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	Cambridge Street From North				Brighton Avenue (Route 20) From East				Cambridge Street From South				North Beacon Street (Route 20) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	2	4	1	0	1	0	1	0	3	2	0	0	0	4	2	0	20
04:15 PM	2	4	2	0	1	4	4	0	3	3	0	0	0	2	3	0	28
04:30 PM	0	1	1	0	3	5	4	0	2	3	0	0	0	1	2	0	22
04:45 PM	2	2	0	0	4	5	4	0	0	3	0	0	0	1	6	0	27
Total	6	11	4	0	9	14	13	0	8	11	0	0	0	8	13	0	97
05:00 PM	2	2	3	0	0	4	2	0	3	4	0	0	1	3	1	0	25
05:15 PM	1	1	3	0	2	2	3	0	3	3	0	0	0	2	2	0	22
05:30 PM	1	0	3	0	2	4	4	0	4	9	0	0	0	2	1	0	30
05:45 PM	1	0	2	0	0	4	2	0	3	6	0	0	0	2	3	0	23
Total	5	3	11	0	4	14	11	0	13	22	0	0	1	9	7	0	100
Grand Total	11	14	15	0	13	28	24	0	21	33	0	0	1	17	20	0	197
Apprch %	27.5	35	37.5	0	20	43.1	36.9	0	38.9	61.1	0	0	2.6	44.7	52.6	0	
Total %	5.6	7.1	7.6	0	6.6	14.2	12.2	0	10.7	16.8	0	0	0.5	8.6	10.2	0	

	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	2	2	0	0	4	4	5	4	0	13	0	3	0	0	3	0	1	6	0	7	27
05:00 PM	2	2	3	0	7	0	4	2	0	6	3	4	0	0	7	1	3	1	0	5	25
05:15 PM	1	1	3	0	5	2	2	3	0	7	3	3	0	0	6	0	2	2	0	4	22
05:30 PM	1	0	3	0	4	2	4	4	0	10	4	9	0	0	13	0	2	1	0	3	30
Total Volume	6	5	9	0	20	8	15	13	0	36	10	19	0	0	29	1	8	10	0	19	104
% App. Total	30	25	45	0		22.2	41.7	36.1	0		34.5	65.5	0	0		5.3	42.1	52.6	0		
PHF	.750	.625	.750	.000	.714	.500	.750	.813	.000	.692	.625	.528	.000	.000	.558	.250	.667	.417	.000	.679	.867

N/S: Cambridge Street
E/W: Brighton Ave/ N. Beacon St (Rt 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

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

File Name : 165274 FF
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Peds and Bikes

	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	2	1	1	14	6	1	5	1	4	8	3	2	0	5	4	0	1	0	9	3	70
04:15 PM	0	0	0	30	10	0	3	2	6	14	1	0	0	4	4	0	0	0	8	16	98
04:30 PM	0	2	0	10	11	0	2	1	4	3	6	1	0	4	9	0	3	0	8	10	74
04:45 PM	0	1	0	14	11	0	1	3	8	7	3	0	0	4	11	1	0	1	11	9	85
Total	2	4	1	68	38	1	11	7	22	32	13	3	0	17	28	1	4	1	36	38	327
05:00 PM	0	4	0	9	4	0	3	2	2	6	1	0	0	6	2	0	0	0	8	13	60
05:15 PM	0	6	1	13	5	0	7	5	5	10	2	1	0	9	7	0	2	0	8	15	96
05:30 PM	1	6	0	14	14	0	7	8	9	3	3	0	0	8	4	0	1	0	4	18	100
05:45 PM	0	9	0	16	13	0	5	6	13	9	6	5	0	6	11	0	2	1	13	7	122
Total	1	25	1	52	36	0	22	21	29	28	12	6	0	29	24	0	5	1	33	53	378
Grand Total	3	29	2	120	74	1	33	28	51	60	25	9	0	46	52	1	9	2	69	91	705
Apprch %	1.3	12.7	0.9	52.6	32.5	0.6	19.1	16.2	29.5	34.7	18.9	6.8	0	34.8	39.4	0.6	5.2	1.2	40.1	52.9	
Total %	0.4	4.1	0.3	17	10.5	0.1	4.7	4	7.2	8.5	3.5	1.3	0	6.5	7.4	0.1	1.3	0.3	9.8	12.9	

	Cambridge Street From North						Brighton Avenue (Route 20) From East						Cambridge Street From South						North Beacon Street (Route 20) From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	0	4	0	9	4	17	0	3	2	2	6	13	1	0	0	6	2	9	0	0	0	8	13	21	60
05:15 PM	0	6	1	13	5	25	0	7	5	5	10	27	2	1	0	9	7	19	0	2	0	8	15	25	96
05:30 PM	1	6	0	14	14	35	0	7	8	9	3	27	3	0	0	8	4	15	0	1	0	4	18	23	100
05:45 PM	0	9	0	16	13	38	0	5	6	13	9	33	6	5	0	6	11	28	0	2	1	13	7	23	122
Total Volume	1	25	1	52	36	115	0	22	21	29	28	100	12	6	0	29	24	71	0	5	1	33	53	92	378
% App. Total	0.9	21.7	0.9	45.2	31.3		0	22	21	29	28		16.9	8.5	0	40.8	33.8		0	5.4	1.1	35.9	57.6		
PHF	.250	.694	.250	.813	.643	.757	.000	.786	.656	.558	.700	.758	.500	.300	.000	.806	.545	.634	.000	.625	.250	.635	.736	.920	.775

N/S: Cambridge Street
E/W: Brighton Ave/ N. Beacon St (Rt 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

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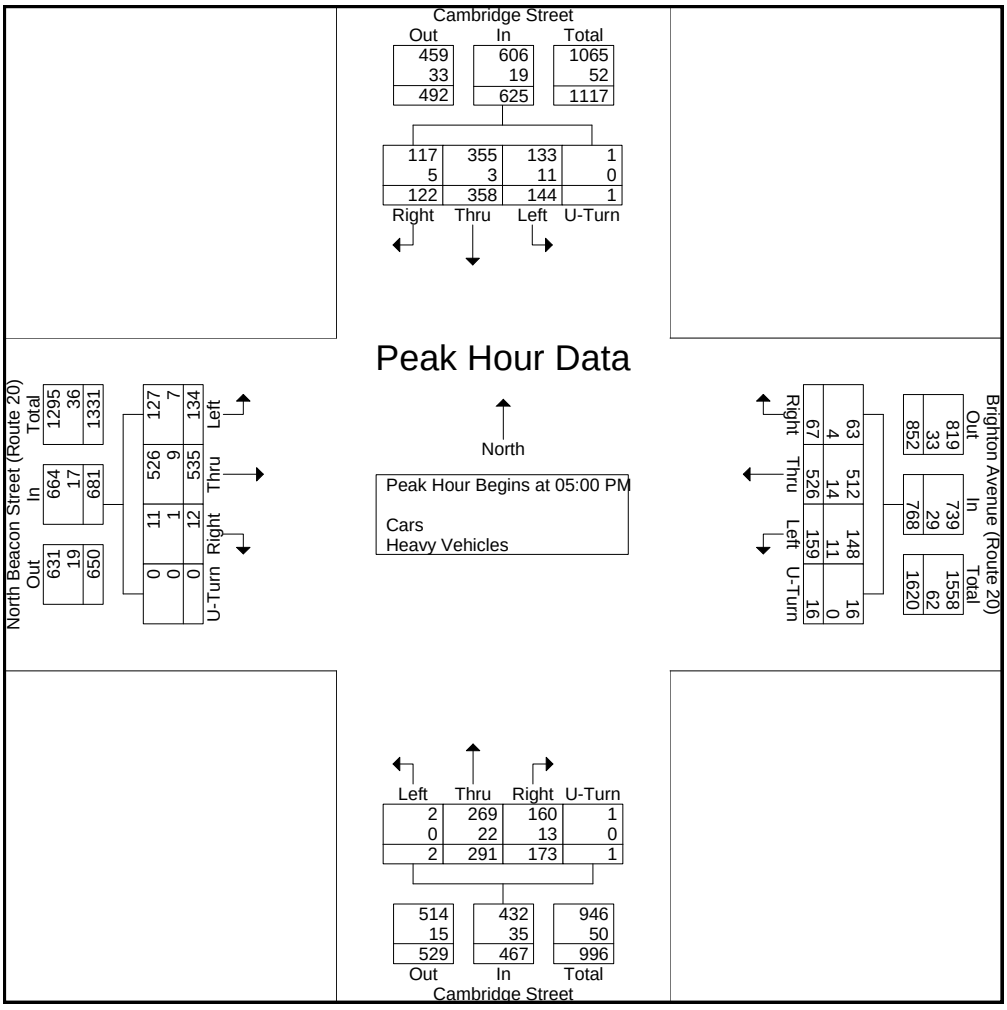
	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	26	103	37	0	166	15	142	24	6	187	37	74	0	0	111	4	135	30	0	169	633
05:15 PM	37	84	37	0	158	16	138	39	2	195	42	74	1	0	117	3	120	42	0	165	635
05:30 PM	25	72	36	0	133	15	128	54	2	199	38	71	1	1	111	3	154	36	0	193	636
05:45 PM	34	99	34	1	168	21	118	42	6	187	56	72	0	0	128	2	126	26	0	154	637
Total Volume	122	358	144	1	625	67	526	159	16	768	173	291	2	1	467	12	535	134	0	681	2541
% App. Total	19.5	57.3	23	0.2		8.7	68.5	20.7	2.1		37	62.3	0.4	0.2		1.8	78.6	19.7	0		
PHF	.824	.869	.973	.250	.930	.798	.926	.736	.667	.965	.772	.983	.500	.250	.912	.750	.869	.798	.000	.882	.997
Cars	117	355	133	1	606	63	512	148	16	739	160	269	2	1	432	11	526	127	0	664	2441
% Cars	95.9	99.2	92.4	100	97.0	94.0	97.3	93.1	100	96.2	92.5	92.4	100	100	92.5	91.7	98.3	94.8	0	97.5	96.1
Heavy Vehicles	5	3	11	0	19	4	14	11	0	29	13	22	0	0	35	1	9	7	0	17	100
% Heavy Vehicles	4.1	0.8	7.6	0	3.0	6.0	2.7	6.9	0	3.8	7.5	7.6	0	0	7.5	8.3	1.7	5.2	0	2.5	3.9



N/S: Cambridge Street
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File Name : 165274 FFF
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Cambridge Street From North				Brighton Avenue (Route 20) From East				Cambridge Street From South				North Beacon Street (Route 20) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	29	67	24	0	19	82	36	5	28	69	1	0	4	95	37	0	496
11:15 AM	26	65	24	0	22	99	31	0	40	88	1	0	8	104	43	0	551
11:30 AM	31	61	25	0	20	95	35	1	42	70	2	0	4	83	45	0	514
11:45 AM	31	54	24	0	29	118	49	2	45	79	0	0	8	95	38	0	572
Total	117	247	97	0	90	394	151	8	155	306	4	0	24	377	163	0	2133
12:00 PM	32	53	31	0	21	74	32	4	33	63	2	0	5	117	31	0	498
12:15 PM	35	61	28	0	19	94	36	9	40	86	1	0	7	107	43	0	566
12:30 PM	28	64	19	0	15	106	31	4	50	72	0	0	9	103	42	0	543
12:45 PM	32	71	30	0	29	128	39	3	37	55	1	0	7	96	31	0	559
Total	127	249	108	0	84	402	138	20	160	276	4	0	28	423	147	0	2166
01:00 PM	29	74	26	0	29	83	21	2	46	71	0	0	4	103	32	0	520
01:15 PM	42	53	22	0	29	114	27	4	40	61	1	0	4	105	38	0	540
01:30 PM	26	66	26	0	18	94	25	4	39	64	0	0	4	104	40	0	510
01:45 PM	36	51	15	0	21	112	32	5	39	72	0	0	2	92	22	0	499
Total	133	244	89	0	97	403	105	15	164	268	1	0	14	404	132	0	2069
Grand Total	377	740	294	0	271	1199	394	43	479	850	9	0	66	1204	442	0	6368
Apprch %	26.7	52.4	20.8	0	14.2	62.9	20.7	2.3	35.8	63.5	0.7	0	3.9	70.3	25.8	0	
Total %	5.9	11.6	4.6	0	4.3	18.8	6.2	0.7	7.5	13.3	0.1	0	1	18.9	6.9	0	
Cars	364	729	283	0	257	1174	370	43	453	835	9	0	64	1189	420	0	6190
% Cars	96.6	98.5	96.3	0	94.8	97.9	93.9	100	94.6	98.2	100	0	97	98.8	95	0	97.2
Heavy Vehicles	13	11	11	0	14	25	24	0	26	15	0	0	2	15	22	0	178
% Heavy Vehicles	3.4	1.5	3.7	0	5.2	2.1	6.1	0	5.4	1.8	0	0	3	1.2	5	0	2.8

	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	31	54	24	0	109	29	118	49	2	198	45	79	0	0	124	8	95	38	0	141	572
12:00 PM	32	53	31	0	116	21	74	32	4	131	33	63	2	0	98	5	117	31	0	153	498
12:15 PM	35	61	28	0	124	19	94	36	9	158	40	86	1	0	127	7	107	43	0	157	566
12:30 PM	28	64	19	0	111	15	106	31	4	156	50	72	0	0	122	9	103	42	0	154	543
Total Volume	126	232	102	0	460	84	392	148	19	643	168	300	3	0	471	29	422	154	0	605	2179
% App. Total	27.4	50.4	22.2	0		13.1	61	23	3		35.7	63.7	0.6	0		4.8	69.8	25.5	0		
PHF	.900	.906	.823	.000	.927	.724	.831	.755	.528	.812	.840	.872	.375	.000	.927	.806	.902	.895	.000	.963	.952
Cars	120	230	98	0	448	80	381	140	19	620	161	293	3	0	457	28	418	144	0	590	2115
% Cars	95.2	99.1	96.1	0	97.4	95.2	97.2	94.6	100	96.4	95.8	97.7	100	0	97.0	96.6	99.1	93.5	0	97.5	97.1
Heavy Vehicles	6	2	4	0	12	4	11	8	0	23	7	7	0	0	14	1	4	10	0	15	64
% Heavy Vehicles	4.8	0.9	3.9	0	2.6	4.8	2.8	5.4	0	3.6	4.2	2.3	0	0	3.0	3.4	0.9	6.5	0	2.5	2.9

N/S: Cambridge Street
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Groups Printed- Cars

	Cambridge Street From North				Brighton Avenue (Route 20) From East				Cambridge Street From South				North Beacon Street (Route 20) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	29	67	23	0	19	81	34	5	24	68	1	0	3	93	34	0	481
11:15 AM	26	65	24	0	20	98	29	0	37	86	1	0	8	101	42	0	537
11:30 AM	27	61	24	0	19	94	32	1	41	69	2	0	4	83	44	0	501
11:45 AM	29	52	23	0	27	115	47	2	43	77	0	0	8	95	36	0	554
Total	111	245	94	0	85	388	142	8	145	300	4	0	23	372	156	0	2073
12:00 PM	30	53	30	0	20	72	30	4	32	62	2	0	5	114	29	0	483
12:15 PM	33	61	27	0	18	93	36	9	38	83	1	0	7	106	40	0	552
12:30 PM	28	64	18	0	15	101	27	4	48	71	0	0	8	103	39	0	526
12:45 PM	32	68	29	0	27	125	37	3	35	55	1	0	7	95	30	0	544
Total	123	246	104	0	80	391	130	20	153	271	4	0	27	418	138	0	2105
01:00 PM	27	72	26	0	27	81	18	2	45	70	0	0	4	102	31	0	505
01:15 PM	42	52	22	0	28	111	26	4	37	59	1	0	4	102	34	0	522
01:30 PM	26	65	23	0	17	92	24	4	36	63	0	0	4	104	39	0	497
01:45 PM	35	49	14	0	20	111	30	5	37	72	0	0	2	91	22	0	488
Total	130	238	85	0	92	395	98	15	155	264	1	0	14	399	126	0	2012
Grand Total	364	729	283	0	257	1174	370	43	453	835	9	0	64	1189	420	0	6190
Apprch %	26.5	53	20.6	0	13.9	63.7	20.1	2.3	34.9	64.4	0.7	0	3.8	71.1	25.1	0	
Total %	5.9	11.8	4.6	0	4.2	19	6	0.7	7.3	13.5	0.1	0	1	19.2	6.8	0	

	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	29	52	23	0	104	27	115	47	2	191	43	77	0	0	120	8	95	36	0	139	554
12:00 PM	30	53	30	0	113	20	72	30	4	126	32	62	2	0	96	5	114	29	0	148	483
12:15 PM	33	61	27	0	121	18	93	36	9	156	38	83	1	0	122	7	106	40	0	153	552
12:30 PM	28	64	18	0	110	15	101	27	4	147	48	71	0	0	119	8	103	39	0	150	526
Total Volume	120	230	98	0	448	80	381	140	19	620	161	293	3	0	457	28	418	144	0	590	2115
% App. Total	26.8	51.3	21.9	0		12.9	61.5	22.6	3.1		35.2	64.1	0.7	0		4.7	70.8	24.4	0		
PHF	.909	.898	.817	.000	.926	.741	.828	.745	.528	.812	.839	.883	.375	.000	.936	.875	.917	.900	.000	.964	.954

N/S: Cambridge Street
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Groups Printed- Heavy Vehicles

	Cambridge Street From North				Brighton Avenue (Route 20) From East				Cambridge Street From South				North Beacon Street (Route 20) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	1	0	0	1	2	0	4	1	0	0	1	2	3	0	15
11:15 AM	0	0	0	0	2	1	2	0	3	2	0	0	0	3	1	0	14
11:30 AM	4	0	1	0	1	1	3	0	1	1	0	0	0	0	1	0	13
11:45 AM	2	2	1	0	2	3	2	0	2	2	0	0	0	0	2	0	18
Total	6	2	3	0	5	6	9	0	10	6	0	0	1	5	7	0	60
12:00 PM	2	0	1	0	1	2	2	0	1	1	0	0	0	3	2	0	15
12:15 PM	2	0	1	0	1	1	0	0	2	3	0	0	0	1	3	0	14
12:30 PM	0	0	1	0	0	5	4	0	2	1	0	0	1	0	3	0	17
12:45 PM	0	3	1	0	2	3	2	0	2	0	0	0	0	1	1	0	15
Total	4	3	4	0	4	11	8	0	7	5	0	0	1	5	9	0	61
01:00 PM	2	2	0	0	2	2	3	0	1	1	0	0	0	1	1	0	15
01:15 PM	0	1	0	0	1	3	1	0	3	2	0	0	0	3	4	0	18
01:30 PM	0	1	3	0	1	2	1	0	3	1	0	0	0	0	1	0	13
01:45 PM	1	2	1	0	1	1	2	0	2	0	0	0	0	1	0	0	11
Total	3	6	4	0	5	8	7	0	9	4	0	0	0	5	6	0	57
Grand Total	13	11	11	0	14	25	24	0	26	15	0	0	2	15	22	0	178
Apprch %	37.1	31.4	31.4	0	22.2	39.7	38.1	0	63.4	36.6	0	0	5.1	38.5	56.4	0	
Total %	7.3	6.2	6.2	0	7.9	14	13.5	0	14.6	8.4	0	0	1.1	8.4	12.4	0	

	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	2	2	1	0	5	2	3	2	0	7	2	2	0	0	4	0	0	2	0	2	18
12:00 PM	2	0	1	0	3	1	2	2	0	5	1	1	0	0	2	0	3	2	0	5	15
12:15 PM	2	0	1	0	3	1	1	0	0	2	2	3	0	0	5	0	1	3	0	4	14
12:30 PM	0	0	1	0	1	0	5	4	0	9	2	1	0	0	3	1	0	3	0	4	17
Total Volume	6	2	4	0	12	4	11	8	0	23	7	7	0	0	14	1	4	10	0	15	64
% App. Total	50	16.7	33.3	0		17.4	47.8	34.8	0		50	50	0	0		6.7	26.7	66.7	0		
PHF	.750	.250	1.00	.000	.600	.500	.550	.500	.000	.639	.875	.583	.000	.000	.700	.250	.333	.833	.000	.750	.889

N/S: Cambridge Street
E/W: Brighton Ave/ N. Beacon St (Rt 20)
City, State: Allston, MA
Client: VHB/ P. Dunford

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

File Name : 165274 FFF
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Peds and Bikes

	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	1	0	3	12	0	2	0	2	2	3	0	0	4	5	0	0	0	11	10	55
11:15 AM	0	0	0	14	10	0	1	0	10	11	3	2	0	5	9	0	0	0	6	4	75
11:30 AM	0	2	0	7	22	1	0	1	19	3	1	1	0	10	4	0	0	0	14	13	98
11:45 AM	0	0	0	18	13	0	1	0	7	12	4	0	0	5	14	0	0	0	10	9	93
Total	0	3	0	42	57	1	4	1	38	28	11	3	0	24	32	0	0	0	41	36	321
12:00 PM	0	1	0	12	8	0	3	1	7	4	0	0	0	9	7	0	0	0	22	15	89
12:15 PM	0	1	0	19	22	0	1	1	2	11	0	3	0	17	13	0	0	0	18	14	122
12:30 PM	0	0	0	9	25	0	2	0	7	12	2	0	0	6	8	0	1	0	14	18	104
12:45 PM	0	1	0	18	10	0	3	0	2	5	3	0	0	8	13	0	2	0	9	14	88
Total	0	3	0	58	65	0	9	2	18	32	5	3	0	40	41	0	3	0	63	61	403
01:00 PM	0	0	0	7	18	0	0	0	9	7	3	0	0	13	12	0	0	0	13	10	92
01:15 PM	0	0	0	23	11	0	0	2	4	8	1	0	0	2	7	0	1	0	14	16	89
01:30 PM	0	1	0	23	13	0	0	0	7	8	4	0	0	10	12	0	1	0	3	13	95
01:45 PM	0	1	0	19	18	0	0	1	16	9	1	2	0	5	8	0	1	0	12	13	106
Total	0	2	0	72	60	0	0	3	36	32	9	2	0	30	39	0	3	0	42	52	382
Grand Total	0	8	0	172	182	1	13	6	92	92	25	8	0	94	112	0	6	0	146	149	1106
Apprch %	0	2.2	0	47.5	50.3	0.5	6.4	2.9	45.1	45.1	10.5	3.3	0	39.3	46.9	0	2	0	48.5	49.5	
Total %	0	0.7	0	15.6	16.5	0.1	1.2	0.5	8.3	8.3	2.3	0.7	0	8.5	10.1	0	0.5	0	13.2	13.5	

	Cambridge Street From North						Brighton Avenue (Route 20) From East						Cambridge Street From South						North Beacon Street (Route 20) From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 11:45 AM																									
11:45 AM	0	0	0	18	13	31	0	1	0	7	12	20	4	0	0	5	14	23	0	0	0	10	9	19	93
12:00 PM	0	1	0	12	8	21	0	3	1	7	4	15	0	0	0	9	7	16	0	0	0	22	15	37	89
12:15 PM	0	1	0	19	22	42	0	1	1	2	11	15	0	3	0	17	13	33	0	0	0	18	14	32	122
12:30 PM	0	0	0	9	25	34	0	2	0	7	12	21	2	0	0	6	8	16	0	1	0	14	18	33	104
Total Volume	0	2	0	58	68	128	0	7	2	23	39	71	6	3	0	37	42	88	0	1	0	64	56	121	408
% App. Total	0	1.6	0	45.3	53.1		0	9.9	2.8	32.4	54.9		6.8	3.4	0	42	47.7		0	0.8	0	52.9	46.3		
PHF	.000	.500	.000	.763	.680	.762	.000	.583	.500	.821	.813	.845	.375	.250	.000	.544	.750	.667	.000	.250	.000	.727	.778	.818	.836

N/S: Cambridge Street
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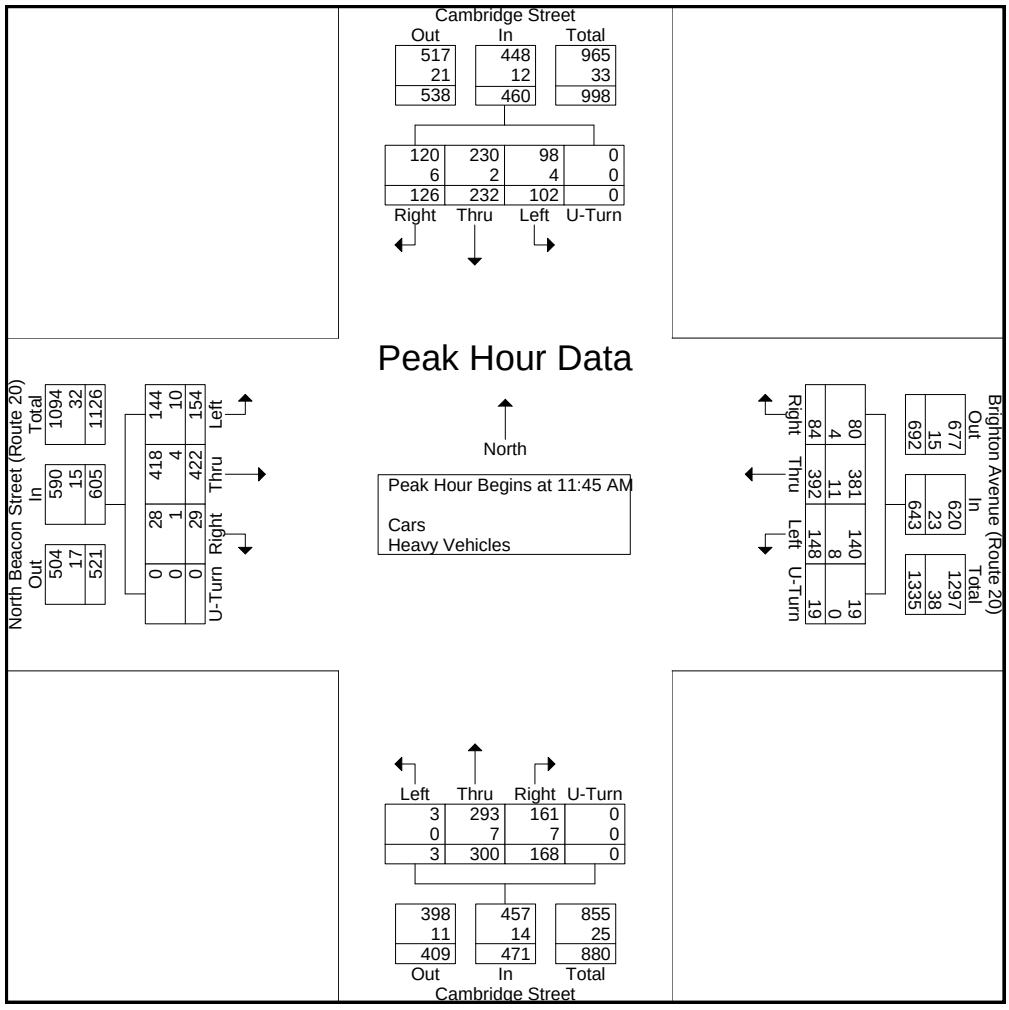
Page No : 1

	Cambridge Street From North					Brighton Avenue (Route 20) From East					Cambridge Street From South					North Beacon Street (Route 20) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	31	54	24	0	109	29	118	49	2	198	45	79	0	0	124	8	95	38	0	141	572
12:00 PM	32	53	31	0	116	21	74	32	4	131	33	63	2	0	98	5	117	31	0	153	498
12:15 PM	35	61	28	0	124	19	94	36	9	158	40	86	1	0	127	7	107	43	0	157	566
12:30 PM	28	64	19	0	111	15	106	31	4	156	50	72	0	0	122	9	103	42	0	154	543
Total Volume	126	232	102	0	460	84	392	148	19	643	168	300	3	0	471	29	422	154	0	605	2179
% App. Total	27.4	50.4	22.2	0		13.1	61	23	3		35.7	63.7	0.6	0		4.8	69.8	25.5	0		
PHF	.900	.906	.823	.000	.927	.724	.831	.755	.528	.812	.840	.872	.375	.000	.927	.806	.902	.895	.000	.963	.952
Cars	120	230	98	0	448	80	381	140	19	620	161	293	3	0	457	28	418	144	0	590	2115
% Cars	95.2	99.1	96.1	0	97.4	95.2	97.2	94.6	100	96.4	95.8	97.7	100	0	97.0	96.6	99.1	93.5	0	97.5	97.1
Heavy Vehicles	6	2	4	0	12	4	11	8	0	23	7	7	0	0	14	1	4	10	0	15	64
% Heavy Vehicles	4.8	0.9	3.9	0	2.6	4.8	2.8	5.4	0	3.6	4.2	2.3	0	0	3.0	3.4	0.9	6.5	0	2.5	2.9



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

N: Hano Street
E/W: Cambridge Street
City, State: Allston, MA
Client: VHB/ P. Dunford

File Name : 165274 G
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Hano Street From North			Cambridge Street From East			Cambridge Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:00 AM	8	2	0	2	120	0	104	7	1	244
07:15 AM	8	1	0	4	117	0	123	8	0	261
07:30 AM	3	0	0	1	128	0	112	11	0	255
07:45 AM	9	0	0	2	114	0	113	16	1	255
Total	28	3	0	9	479	0	452	42	2	1015
08:00 AM	4	1	0	2	129	0	109	10	0	255
08:15 AM	2	0	0	0	138	0	107	13	0	260
08:30 AM	7	1	0	3	113	0	103	13	0	240
08:45 AM	14	0	0	3	135	0	106	9	0	267
Total	27	2	0	8	515	0	425	45	0	1022
Grand Total	55	5	0	17	994	0	877	87	2	2037
Apprch %	91.7	8.3	0	1.7	98.3	0	90.8	9	0.2	
Total %	2.7	0.2	0	0.8	48.8	0	43.1	4.3	0.1	
Cars	54	5	0	15	865	0	807	82	2	1830
% Cars	98.2	100	0	88.2	87	0	92	94.3	100	89.8
Heavy Vehicles	1	0	0	2	129	0	70	5	0	207
% Heavy Vehicles	1.8	0	0	11.8	13	0	8	5.7	0	10.2

	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	8	1	0	9	4	117	0	121	123	8	0	131	261
07:30 AM	3	0	0	3	1	128	0	129	112	11	0	123	255
07:45 AM	9	0	0	9	2	114	0	116	113	16	1	130	255
08:00 AM	4	1	0	5	2	129	0	131	109	10	0	119	255
Total Volume	24	2	0	26	9	488	0	497	457	45	1	503	1026
% App. Total	92.3	7.7	0		1.8	98.2	0		90.9	8.9	0.2		
PHF	.667	.500	.000	.722	.563	.946	.000	.948	.929	.703	.250	.960	.983
Cars	24	2	0	26	7	424	0	431	425	40	1	466	923
% Cars	100	100	0	100	77.8	86.9	0	86.7	93.0	88.9	100	92.6	90.0
Heavy Vehicles	0	0	0	0	2	64	0	66	32	5	0	37	103
% Heavy Vehicles	0	0	0	0	22.2	13.1	0	13.3	7.0	11.1	0	7.4	10.0

N: Hano Street
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Client: VHB/ P. Dunford

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File Name : 165274 G
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Cars

	Hano Street From North			Cambridge Street From East			Cambridge Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:00 AM	8	2	0	2	98	0	99	7	1	217
07:15 AM	8	1	0	4	97	0	116	6	0	232
07:30 AM	3	0	0	1	118	0	101	9	0	232
07:45 AM	9	0	0	1	92	0	105	15	1	223
Total	28	3	0	8	405	0	421	37	2	904
08:00 AM	4	1	0	1	117	0	103	10	0	236
08:15 AM	2	0	0	0	120	0	99	13	0	234
08:30 AM	6	1	0	3	108	0	91	13	0	222
08:45 AM	14	0	0	3	115	0	93	9	0	234
Total	26	2	0	7	460	0	386	45	0	926
Grand Total	54	5	0	15	865	0	807	82	2	1830
Apprch %	91.5	8.5	0	1.7	98.3	0	90.6	9.2	0.2	
Total %	3	0.3	0	0.8	47.3	0	44.1	4.5	0.1	

	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	4	1	0	5	1	117	0	118	103	10	0	113	236
08:15 AM	2	0	0	2	0	120	0	120	99	13	0	112	234
08:30 AM	6	1	0	7	3	108	0	111	91	13	0	104	222
08:45 AM	14	0	0	14	3	115	0	118	93	9	0	102	234
Total Volume	26	2	0	28	7	460	0	467	386	45	0	431	926
% App. Total	92.9	7.1	0		1.5	98.5	0		89.6	10.4	0		
PHF	.464	.500	.000	.500	.583	.958	.000	.973	.937	.865	.000	.954	.981

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Page No : 1

Groups Printed- Heavy Vehicles

	Hano Street From North			Cambridge Street From East			Cambridge Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	22	0	5	0	0	27
07:15 AM	0	0	0	0	20	0	7	2	0	29
07:30 AM	0	0	0	0	10	0	11	2	0	23
07:45 AM	0	0	0	1	22	0	8	1	0	32
Total	0	0	0	1	74	0	31	5	0	111
08:00 AM	0	0	0	1	12	0	6	0	0	19
08:15 AM	0	0	0	0	18	0	8	0	0	26
08:30 AM	1	0	0	0	5	0	12	0	0	18
08:45 AM	0	0	0	0	20	0	13	0	0	33
Total	1	0	0	1	55	0	39	0	0	96
Grand Total	1	0	0	2	129	0	70	5	0	207
Apprch %	100	0	0	1.5	98.5	0	93.3	6.7	0	
Total %	0.5	0	0	1	62.3	0	33.8	2.4	0	

	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	22	0	22	5	0	0	5	27
07:15 AM	0	0	0	0	0	20	0	20	7	2	0	9	29
07:30 AM	0	0	0	0	0	10	0	10	11	2	0	13	23
07:45 AM	0	0	0	0	1	22	0	23	8	1	0	9	32
Total Volume	0	0	0	0	1	74	0	75	31	5	0	36	111
% App. Total	0	0	0		1.3	98.7	0		86.1	13.9	0		
PHF	.000	.000	.000	.000	.250	.841	.000	.815	.705	.625	.000	.692	.867

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Start Date : 10/13/2016
Page No : 1

Groups Printed- Peds and Bikes

	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	2	15	0	1	3	3	0	1	0	2	27
07:15 AM	0	0	3	5	0	2	5	4	6	0	2	3	30
07:30 AM	1	0	7	5	0	3	4	4	0	0	0	0	24
07:45 AM	0	0	10	9	0	1	6	5	3	0	1	1	36
Total	1	0	22	34	0	7	18	16	9	1	3	6	117
08:00 AM	0	0	2	5	0	1	3	3	4	0	1	0	19
08:15 AM	0	0	8	9	0	1	2	6	8	0	2	0	36
08:30 AM	0	0	4	5	0	0	8	4	7	1	1	0	30
08:45 AM	0	0	1	2	1	1	6	4	6	0	0	0	21
Total	0	0	15	21	1	3	19	17	25	1	4	0	106
Grand Total	1	0	37	55	1	10	37	33	34	2	7	6	223
Apprch %	1.1	0	39.8	59.1	1.2	12.3	45.7	40.7	69.4	4.1	14.3	12.2	
Total %	0.4	0	16.6	24.7	0.4	4.5	16.6	14.8	15.2	0.9	3.1	2.7	

	Hano Street From North					Cambridge Street From East					Cambridge Street From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:45 AM																
07:45 AM	0	0	10	9	19	0	1	6	5	12	3	0	1	1	5	36
08:00 AM	0	0	2	5	7	0	1	3	3	7	4	0	1	0	5	19
08:15 AM	0	0	8	9	17	0	1	2	6	9	8	0	2	0	10	36
08:30 AM	0	0	4	5	9	0	0	8	4	12	7	1	1	0	9	30
Total Volume	0	0	24	28	52	0	3	19	18	40	22	1	5	1	29	121
% App. Total	0	0	46.2	53.8		0	7.5	47.5	45		75.9	3.4	17.2	3.4		
PHF	.000	.000	.600	.778	.684	.000	.750	.594	.750	.833	.688	.250	.625	.250	.725	.840

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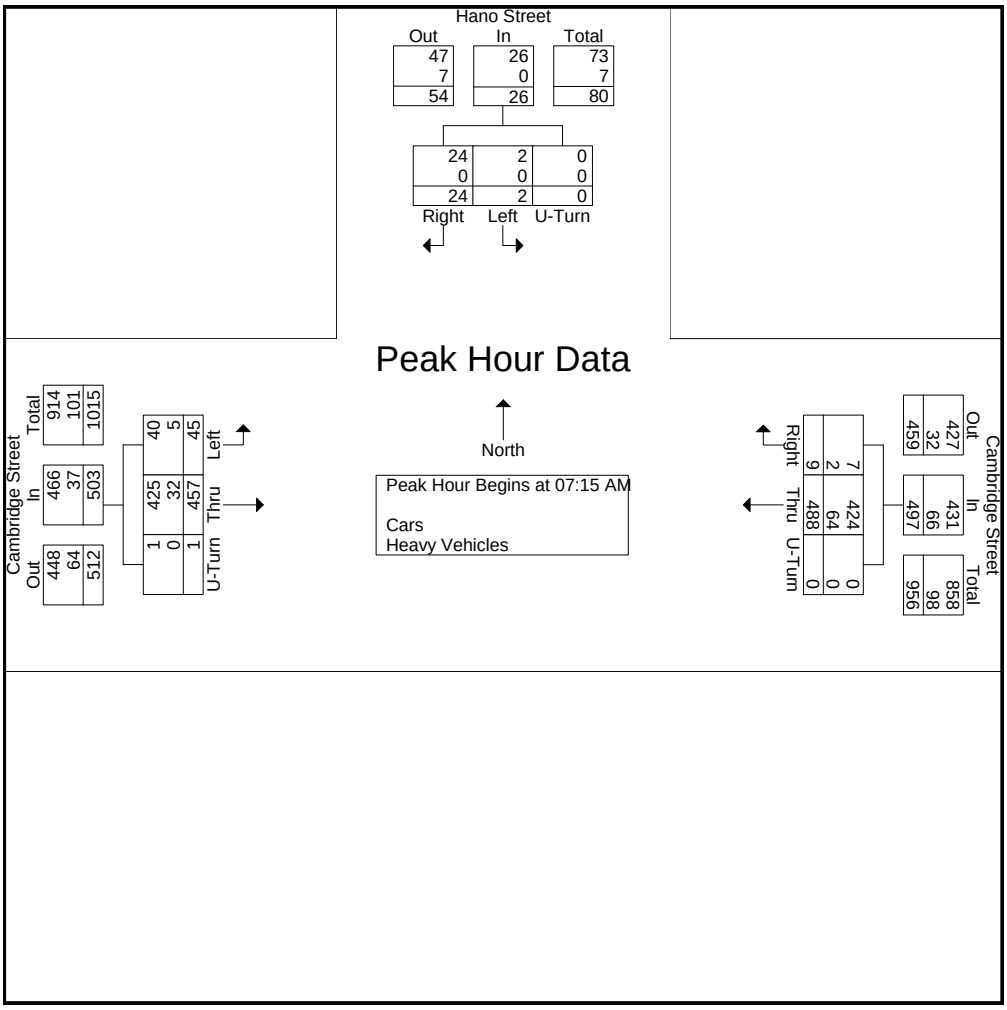
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	8	1	0	9	4	117	0	121	123	8	0	131	261
07:30 AM	3	0	0	3	1	128	0	129	112	11	0	123	255
07:45 AM	9	0	0	9	2	114	0	116	113	16	1	130	255
08:00 AM	4	1	0	5	2	129	0	131	109	10	0	119	255
Total Volume	24	2	0	26	9	488	0	497	457	45	1	503	1026
% App. Total	92.3	7.7	0		1.8	98.2	0		90.9	8.9	0.2		
PHF	.667	.500	.000	.722	.563	.946	.000	.948	.929	.703	.250	.960	.983
Cars	24	2	0	26	7	424	0	431	425	40	1	466	923
% Cars	100	100	0	100	77.8	86.9	0	86.7	93.0	88.9	100	92.6	90.0
Heavy Vehicles	0	0	0	0	2	64	0	66	32	5	0	37	103
% Heavy Vehicles	0	0	0	0	22.2	13.1	0	13.3	7.0	11.1	0	7.4	10.0



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File Name : 165274 GG
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Groups Printed- Cars - Heavy Vehicles

	Hano Street From North			Cambridge Street From East			Cambridge Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:00 PM	5	0	0	4	150	0	111	8	0	278
04:15 PM	2	3	0	3	137	0	100	6	0	251
04:30 PM	6	4	0	4	154	0	107	2	0	277
04:45 PM	4	3	0	0	154	0	113	9	1	284
Total	17	10	0	11	595	0	431	25	1	1090
05:00 PM	5	2	0	1	156	0	106	5	1	276
05:15 PM	1	1	0	5	154	0	120	10	0	291
05:30 PM	6	0	0	3	137	0	118	10	0	274
05:45 PM	3	3	0	2	156	0	101	14	0	279
Total	15	6	0	11	603	0	445	39	1	1120
Grand Total	32	16	0	22	1198	0	876	64	2	2210
Apprch %	66.7	33.3	0	1.8	98.2	0	93	6.8	0.2	
Total %	1.4	0.7	0	1	54.2	0	39.6	2.9	0.1	
Cars	32	16	0	22	1160	0	812	63	2	2107
% Cars	100	100	0	100	96.8	0	92.7	98.4	100	95.3
Heavy Vehicles	0	0	0	0	38	0	64	1	0	103
% Heavy Vehicles	0	0	0	0	3.2	0	7.3	1.6	0	4.7

	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	6	4	0	10	4	154	0	158	107	2	0	109	277
04:45 PM	4	3	0	7	0	154	0	154	113	9	1	123	284
05:00 PM	5	2	0	7	1	156	0	157	106	5	1	112	276
05:15 PM	1	1	0	2	5	154	0	159	120	10	0	130	291
Total Volume	16	10	0	26	10	618	0	628	446	26	2	474	1128
% App. Total	61.5	38.5	0		1.6	98.4	0		94.1	5.5	0.4		
PHF	.667	.625	.000	.650	.500	.990	.000	.987	.929	.650	.500	.912	.969
Cars	16	10	0	26	10	602	0	612	413	25	2	440	1078
% Cars	100	100	0	100	100	97.4	0	97.5	92.6	96.2	100	92.8	95.6
Heavy Vehicles	0	0	0	0	0	16	0	16	33	1	0	34	50
% Heavy Vehicles	0	0	0	0	0	2.6	0	2.5	7.4	3.8	0	7.2	4.4

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N: Hano Street
E/W: Cambridge Street
City, State: Allston, MA
Client: VHB/ P. Dunford

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Groups Printed- Cars

	Hano Street From North			Cambridge Street From East			Cambridge Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:00 PM	5	0	0	4	143	0	106	8	0	266
04:15 PM	2	3	0	3	130	0	92	6	0	236
04:30 PM	6	4	0	4	152	0	99	2	0	267
04:45 PM	4	3	0	0	149	0	101	8	1	266
Total	17	10	0	11	574	0	398	24	1	1035
05:00 PM	5	2	0	1	151	0	101	5	1	266
05:15 PM	1	1	0	5	150	0	112	10	0	279
05:30 PM	6	0	0	3	132	0	106	10	0	257
05:45 PM	3	3	0	2	153	0	95	14	0	270
Total	15	6	0	11	586	0	414	39	1	1072
Grand Total	32	16	0	22	1160	0	812	63	2	2107
Apprch %	66.7	33.3	0	1.9	98.1	0	92.6	7.2	0.2	
Total %	1.5	0.8	0	1	55.1	0	38.5	3	0.1	

	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	6	4	0	10	4	152	0	156	99	2	0	101	267
04:45 PM	4	3	0	7	0	149	0	149	101	8	1	110	266
05:00 PM	5	2	0	7	1	151	0	152	101	5	1	107	266
05:15 PM	1	1	0	2	5	150	0	155	112	10	0	122	279
Total Volume	16	10	0	26	10	602	0	612	413	25	2	440	1078
% App. Total	61.5	38.5	0		1.6	98.4	0		93.9	5.7	0.5		
PHF	.667	.625	.000	.650	.500	.990	.000	.981	.922	.625	.500	.902	.966

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Groups Printed- Heavy Vehicles

	Hano Street From North			Cambridge Street From East			Cambridge Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	7	0	5	0	0	12
04:15 PM	0	0	0	0	7	0	8	0	0	15
04:30 PM	0	0	0	0	2	0	8	0	0	10
04:45 PM	0	0	0	0	5	0	12	1	0	18
Total	0	0	0	0	21	0	33	1	0	55
05:00 PM	0	0	0	0	5	0	5	0	0	10
05:15 PM	0	0	0	0	4	0	8	0	0	12
05:30 PM	0	0	0	0	5	0	12	0	0	17
05:45 PM	0	0	0	0	3	0	6	0	0	9
Total	0	0	0	0	17	0	31	0	0	48
Grand Total	0	0	0	0	38	0	64	1	0	103
Apprch %	0	0	0	0	100	0	98.5	1.5	0	
Total %	0	0	0	0	36.9	0	62.1	1	0	

	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	0	0	0	0	0	5	0	5	12	1	0	13	18
05:00 PM	0	0	0	0	0	5	0	5	5	0	0	5	10
05:15 PM	0	0	0	0	0	4	0	4	8	0	0	8	12
05:30 PM	0	0	0	0	0	5	0	5	12	0	0	12	17
Total Volume	0	0	0	0	0	19	0	19	37	1	0	38	57
% App. Total	0	0	0		0	100	0		97.4	2.6	0		
PHF	.000	.000	.000	.000	.000	.950	.000	.950	.771	.250	.000	.731	.792

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Groups Printed- Peds and Bikes

	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	7	5	1	0	3	6	2	0	1	1	26
04:15 PM	0	1	4	6	1	0	3	17	0	0	1	3	36
04:30 PM	0	0	3	12	0	3	7	7	1	0	1	0	34
04:45 PM	0	0	6	7	0	0	4	6	1	0	0	0	24
Total	0	1	20	30	2	3	17	36	4	0	3	4	120
05:00 PM	0	1	1	13	0	3	1	11	0	0	1	0	31
05:15 PM	0	0	10	17	1	8	12	9	0	2	5	1	65
05:30 PM	0	0	11	7	0	8	8	4	0	2	9	1	50
05:45 PM	0	0	4	12	0	10	11	5	5	2	1	0	50
Total	0	1	26	49	1	29	32	29	5	6	16	2	196
Grand Total	0	2	46	79	3	32	49	65	9	6	19	6	316
Apprch %	0	1.6	36.2	62.2	2	21.5	32.9	43.6	22.5	15	47.5	15	
Total %	0	0.6	14.6	25	0.9	10.1	15.5	20.6	2.8	1.9	6	1.9	

	Hano Street From North					Cambridge Street From East					Cambridge Street From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:00 PM																
05:00 PM	0	1	1	13	15	0	3	1	11	15	0	0	1	0	1	31
05:15 PM	0	0	10	17	27	1	8	12	9	30	0	2	5	1	8	65
05:30 PM	0	0	11	7	18	0	8	8	4	20	0	2	9	1	12	50
05:45 PM	0	0	4	12	16	0	10	11	5	26	5	2	1	0	8	50
Total Volume	0	1	26	49	76	1	29	32	29	91	5	6	16	2	29	196
% App. Total	0	1.3	34.2	64.5		1.1	31.9	35.2	31.9		17.2	20.7	55.2	6.9		
PHF	.000	.250	.591	.721	.704	.250	.725	.667	.659	.758	.250	.750	.444	.500	.604	.754

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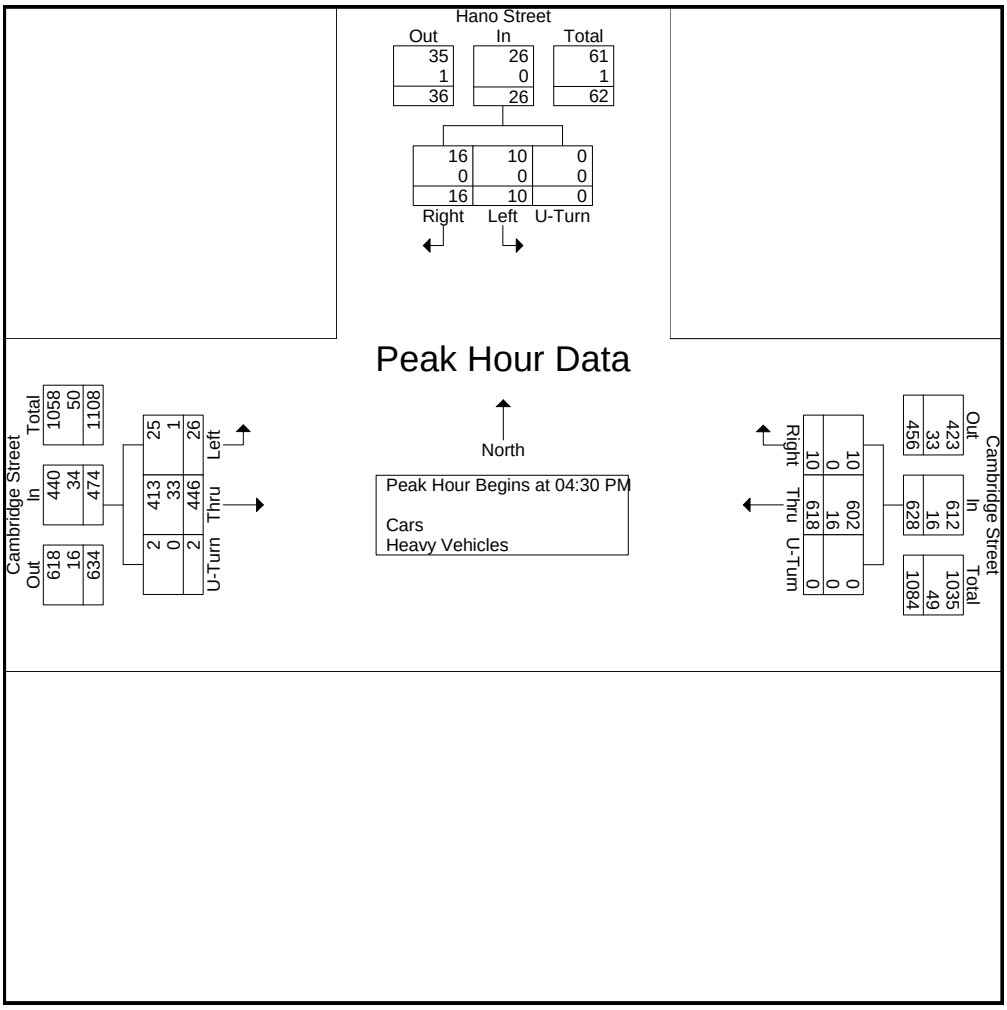
	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	6	4	0	10	4	154	0	158	107	2	0	109	277
04:45 PM	4	3	0	7	0	154	0	154	113	9	1	123	284
05:00 PM	5	2	0	7	1	156	0	157	106	5	1	112	276
05:15 PM	1	1	0	2	5	154	0	159	120	10	0	130	291
Total Volume	16	10	0	26	10	618	0	628	446	26	2	474	1128
% App. Total	61.5	38.5	0		1.6	98.4	0		94.1	5.5	0.4		
PHF	.667	.625	.000	.650	.500	.990	.000	.987	.929	.650	.500	.912	.969
Cars	16	10	0	26	10	602	0	612	413	25	2	440	1078
% Cars	100	100	0	100	100	97.4	0	97.5	92.6	96.2	100	92.8	95.6
Heavy Vehicles	0	0	0	0	0	16	0	16	33	1	0	34	50
% Heavy Vehicles	0	0	0	0	0	2.6	0	2.5	7.4	3.8	0	7.2	4.4



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Groups Printed- Cars - Heavy Vehicles

	Hano Street From North			Cambridge Street From East			Cambridge Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
11:00 AM	2	1	0	4	115	0	121	4	0	247
11:15 AM	4	0	0	5	114	0	125	10	0	258
11:30 AM	4	3	0	5	105	0	134	7	0	258
11:45 AM	3	1	0	3	105	0	138	4	0	254
Total	13	5	0	17	439	0	518	25	0	1017
12:00 PM	2	3	0	5	116	0	107	10	0	243
12:15 PM	8	2	0	5	108	0	121	7	0	251
12:30 PM	1	2	0	4	113	0	119	17	0	256
12:45 PM	4	3	0	2	130	0	107	7	0	253
Total	15	10	0	16	467	0	454	41	0	1003
01:00 PM	6	4	0	4	118	0	124	9	0	265
01:15 PM	2	0	0	3	113	0	116	8	0	242
01:30 PM	3	3	0	3	114	0	110	10	1	244
01:45 PM	6	5	0	3	111	0	104	11	0	240
Total	17	12	0	13	456	0	454	38	1	991
Grand Total	45	27	0	46	1362	0	1426	104	1	3011
Apprch %	62.5	37.5	0	3.3	96.7	0	93.1	6.8	0.1	
Total %	1.5	0.9	0	1.5	45.2	0	47.4	3.5	0	
Cars	44	26	0	44	1320	0	1380	101	1	2916
% Cars	97.8	96.3	0	95.7	96.9	0	96.8	97.1	100	96.8
Heavy Vehicles	1	1	0	2	42	0	46	3	0	95
% Heavy Vehicles	2.2	3.7	0	4.3	3.1	0	3.2	2.9	0	3.2

	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:15 PM													
12:15 PM	8	2	0	10	5	108	0	113	121	7	0	128	251
12:30 PM	1	2	0	3	4	113	0	117	119	17	0	136	256
12:45 PM	4	3	0	7	2	130	0	132	107	7	0	114	253
01:00 PM	6	4	0	10	4	118	0	122	124	9	0	133	265
Total Volume	19	11	0	30	15	469	0	484	471	40	0	511	1025
% App. Total	63.3	36.7	0		3.1	96.9	0		92.2	7.8	0		
PHF	.594	.688	.000	.750	.750	.902	.000	.917	.950	.588	.000	.939	.967
Cars	18	11	0	29	14	455	0	469	453	39	0	492	990
% Cars	94.7	100	0	96.7	93.3	97.0	0	96.9	96.2	97.5	0	96.3	96.6
Heavy Vehicles	1	0	0	1	1	14	0	15	18	1	0	19	35
% Heavy Vehicles	5.3	0	0	3.3	6.7	3.0	0	3.1	3.8	2.5	0	3.7	3.4

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Groups Printed- Cars

	Hano Street From North			Cambridge Street From East			Cambridge Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
11:00 AM	2	1	0	4	114	0	118	4	0	243
11:15 AM	4	0	0	5	114	0	122	9	0	254
11:30 AM	4	3	0	5	100	0	131	7	0	250
11:45 AM	3	1	0	3	99	0	133	4	0	243
Total	13	5	0	17	427	0	504	24	0	990
12:00 PM	2	3	0	4	112	0	103	9	0	233
12:15 PM	7	2	0	4	106	0	114	7	0	240
12:30 PM	1	2	0	4	112	0	115	16	0	250
12:45 PM	4	3	0	2	124	0	103	7	0	243
Total	14	10	0	14	454	0	435	39	0	966
01:00 PM	6	4	0	4	113	0	121	9	0	257
01:15 PM	2	0	0	3	110	0	110	8	0	233
01:30 PM	3	3	0	3	111	0	107	10	1	238
01:45 PM	6	4	0	3	105	0	103	11	0	232
Total	17	11	0	13	439	0	441	38	1	960
Grand Total	44	26	0	44	1320	0	1380	101	1	2916
Apprch %	62.9	37.1	0	3.2	96.8	0	93.1	6.8	0.1	
Total %	1.5	0.9	0	1.5	45.3	0	47.3	3.5	0	

	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:00 AM													
11:00 AM	2	1	0	3	4	114	0	118	118	4	0	122	243
11:15 AM	4	0	0	4	5	114	0	119	122	9	0	131	254
11:30 AM	4	3	0	7	5	100	0	105	131	7	0	138	250
11:45 AM	3	1	0	4	3	99	0	102	133	4	0	137	243
Total Volume	13	5	0	18	17	427	0	444	504	24	0	528	990
% App. Total	72.2	27.8	0		3.8	96.2	0		95.5	4.5	0		
PHF	.813	.417	.000	.643	.850	.936	.000	.933	.947	.667	.000	.957	.974

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Groups Printed- Heavy Vehicles

	Hano Street From North			Cambridge Street From East			Cambridge Street From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	1	0	3	0	0	4
11:15 AM	0	0	0	0	0	0	3	1	0	4
11:30 AM	0	0	0	0	5	0	3	0	0	8
11:45 AM	0	0	0	0	6	0	5	0	0	11
Total	0	0	0	0	12	0	14	1	0	27
12:00 PM	0	0	0	1	4	0	4	1	0	10
12:15 PM	1	0	0	1	2	0	7	0	0	11
12:30 PM	0	0	0	0	1	0	4	1	0	6
12:45 PM	0	0	0	0	6	0	4	0	0	10
Total	1	0	0	2	13	0	19	2	0	37
01:00 PM	0	0	0	0	5	0	3	0	0	8
01:15 PM	0	0	0	0	3	0	6	0	0	9
01:30 PM	0	0	0	0	3	0	3	0	0	6
01:45 PM	0	1	0	0	6	0	1	0	0	8
Total	0	1	0	0	17	0	13	0	0	31
Grand Total	1	1	0	2	42	0	46	3	0	95
Apprch %	50	50	0	4.5	95.5	0	93.9	6.1	0	
Total %	1.1	1.1	0	2.1	44.2	0	48.4	3.2	0	

	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:30 AM													
11:30 AM	0	0	0	0	0	5	0	5	3	0	0	3	8
11:45 AM	0	0	0	0	0	6	0	6	5	0	0	5	11
12:00 PM	0	0	0	0	1	4	0	5	4	1	0	5	10
12:15 PM	1	0	0	1	1	2	0	3	7	0	0	7	11
Total Volume	1	0	0	1	2	17	0	19	19	1	0	20	40
% App. Total	100	0	0		10.5	89.5	0		95	5	0		
PHF	.250	.000	.000	.250	.500	.708	.000	.792	.679	.250	.000	.714	.909

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Groups Printed- Peds and Bikes

	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	10	8	0	2	6	8	2	0	0	0	36
11:15 AM	0	0	20	15	0	1	6	4	2	0	0	2	50
11:30 AM	0	0	15	13	0	1	10	3	2	0	0	0	44
11:45 AM	0	0	20	15	0	2	8	0	1	0	0	0	46
Total	0	0	65	51	0	6	30	15	7	0	0	2	176
12:00 PM	0	0	27	14	0	1	5	1	0	0	0	0	48
12:15 PM	0	0	13	21	0	1	1	4	2	0	1	0	43
12:30 PM	0	0	11	10	0	0	3	1	0	0	0	0	25
12:45 PM	0	0	13	20	0	2	1	12	0	0	2	1	51
Total	0	0	64	65	0	4	10	18	2	0	3	1	167
01:00 PM	0	0	15	15	0	0	6	15	1	0	0	0	52
01:15 PM	0	0	23	20	0	0	12	9	1	1	0	0	66
01:30 PM	0	0	15	18	0	4	10	7	0	1	0	0	55
01:45 PM	1	0	8	17	0	1	7	11	3	0	0	0	48
Total	1	0	61	70	0	5	35	42	5	2	0	0	221
Grand Total	1	0	190	186	0	15	75	75	14	2	3	3	564
Apprch %	0.3	0	50.4	49.3	0	9.1	45.5	45.5	63.6	9.1	13.6	13.6	
Total %	0.2	0	33.7	33	0	2.7	13.3	13.3	2.5	0.4	0.5	0.5	

	Hano Street From North					Cambridge Street From East					Cambridge Street From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 12:45 PM																
12:45 PM	0	0	13	20	33	0	2	1	12	15	0	0	2	1	3	51
01:00 PM	0	0	15	15	30	0	0	6	15	21	1	0	0	0	1	52
01:15 PM	0	0	23	20	43	0	0	12	9	21	1	1	0	0	2	66
01:30 PM	0	0	15	18	33	0	4	10	7	21	0	1	0	0	1	55
Total Volume	0	0	66	73	139	0	6	29	43	78	2	2	2	1	7	224
% App. Total	0	0	47.5	52.5		0	7.7	37.2	55.1		28.6	28.6	28.6	14.3		
PHF	.000	.000	.717	.913	.808	.000	.375	.604	.717	.929	.500	.500	.250	.250	.583	.848

N: Hano Street
E/W: Cambridge Street
City, State: Allston, MA
Client: VHB/ P. Dunford

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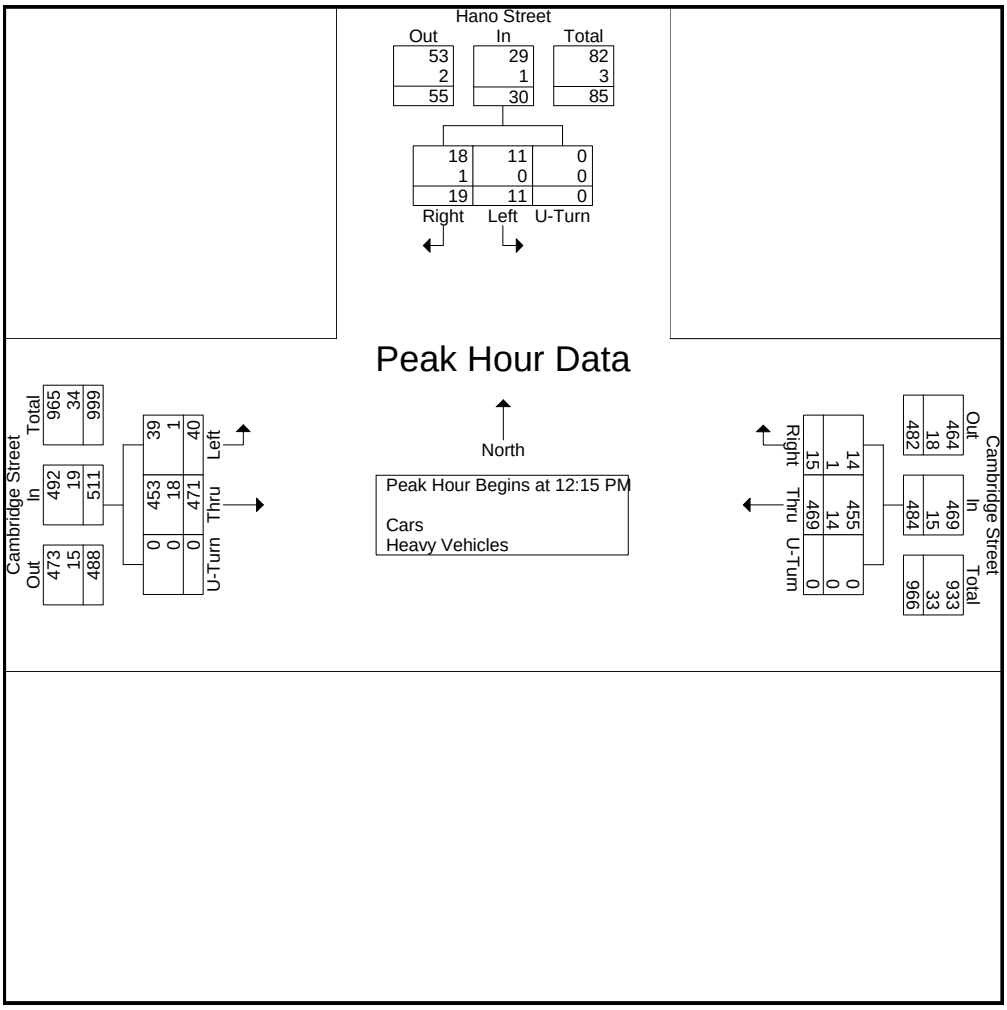
	Hano Street From North				Cambridge Street From East				Cambridge Street From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:15 PM													
12:15 PM	8	2	0	10	5	108	0	113	121	7	0	128	251
12:30 PM	1	2	0	3	4	113	0	117	119	17	0	136	256
12:45 PM	4	3	0	7	2	130	0	132	107	7	0	114	253
01:00 PM	6	4	0	10	4	118	0	122	124	9	0	133	265
Total Volume	19	11	0	30	15	469	0	484	471	40	0	511	1025
% App. Total	63.3	36.7	0		3.1	96.9	0		92.2	7.8	0		
PHF	.594	.688	.000	.750	.750	.902	.000	.917	.950	.588	.000	.939	.967
Cars	18	11	0	29	14	455	0	469	453	39	0	492	990
% Cars	94.7	100	0	96.7	93.3	97.0	0	96.9	96.2	97.5	0	96.3	96.6
Heavy Vehicles	1	0	0	1	1	14	0	15	18	1	0	19	35
% Heavy Vehicles	5.3	0	0	3.3	6.7	3.0	0	3.1	3.8	2.5	0	3.7	3.4



N/S: Denby Road/ Driveway
E/W: Cambridge Street
City, State: Allston, MA
Client: VHB/ P. Dunford

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Site Code : 12305
Start Date : 10/13/2016
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Groups Printed- Cars - Heavy Vehicles

	Denby Road From North				Cambridge Street From East				Driveway From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	1	0	1	123	0	0	0	0	0	0	0	106	2	0	233
07:15 AM	2	0	0	0	3	127	0	0	0	1	0	0	1	113	1	0	248
07:30 AM	2	0	1	0	4	123	0	0	0	0	1	0	0	116	2	0	249
07:45 AM	3	0	2	0	5	118	0	0	0	0	0	0	1	111	6	0	246
Total	7	0	4	0	13	491	0	0	0	1	1	0	2	446	11	0	976
08:00 AM	2	0	0	0	7	135	0	0	1	0	0	0	0	107	2	0	254
08:15 AM	3	0	2	0	7	138	0	0	0	0	0	0	0	105	3	0	258
08:30 AM	8	0	2	0	4	109	2	0	0	1	0	0	0	107	3	0	236
08:45 AM	3	2	3	0	8	143	0	0	1	1	0	0	1	107	4	0	273
Total	16	2	7	0	26	525	2	0	2	2	0	0	1	426	12	0	1021
Grand Total	23	2	11	0	39	1016	2	0	2	3	1	0	3	872	23	0	1997
Apprch %	63.9	5.6	30.6	0	3.7	96.1	0.2	0	33.3	50	16.7	0	0.3	97.1	2.6	0	
Total %	1.2	0.1	0.6	0	2	50.9	0.1	0	0.1	0.2	0.1	0	0.2	43.7	1.2	0	
Cars	20	2	9	0	34	891	2	0	2	3	1	0	3	796	20	0	1783
% Cars	87	100	81.8	0	87.2	87.7	100	0	100	100	100	0	100	91.3	87	0	89.3
Heavy Vehicles	3	0	2	0	5	125	0	0	0	0	0	0	0	76	3	0	214
% Heavy Vehicles	13	0	18.2	0	12.8	12.3	0	0	0	0	0	0	0	8.7	13	0	10.7

	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	2	0	0	0	2	7	135	0	0	142	1	0	0	0	1	0	107	2	0	109	254
08:15 AM	3	0	2	0	5	7	138	0	0	145	0	0	0	0	0	0	105	3	0	108	258
08:30 AM	8	0	2	0	10	4	109	2	0	115	0	1	0	0	1	0	107	3	0	110	236
08:45 AM	3	2	3	0	8	8	143	0	0	151	1	1	0	0	2	1	107	4	0	112	273
Total Volume	16	2	7	0	25	26	525	2	0	553	2	2	0	0	4	1	426	12	0	439	1021
% App. Total	64	8	28	0		4.7	94.9	0.4	0		50	50	0	0		0.2	97	2.7	0		
PHF	.500	.250	.583	.000	.625	.813	.918	.250	.000	.916	.500	.500	.000	.000	.500	.250	.995	.750	.000	.980	.935
Cars	16	2	7	0	25	23	471	2	0	496	2	2	0	0	4	1	387	10	0	398	923
% Cars	100	100	100	0	100	88.5	89.7	100	0	89.7	100	100	0	0	100	100	90.8	83.3	0	90.7	90.4
Heavy Vehicles	0	0	0	0	0	3	54	0	0	57	0	0	0	0	0	0	39	2	0	41	98
% Heavy Vehicles	0	0	0	0	0	11.5	10.3	0	0	10.3	0	0	0	0	0	0	9.2	16.7	0	9.3	9.6

N/S: Denby Road/ Driveway
E/W: Cambridge Street
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Site Code : 12305
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Groups Printed- Cars

	Denby Road From North				Cambridge Street From East				Driveway From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	1	0	1	101	0	0	0	0	0	0	0	98	2	0	203
07:15 AM	2	0	0	0	3	107	0	0	0	1	0	0	1	107	1	0	222
07:30 AM	1	0	1	0	3	114	0	0	0	0	1	0	0	103	1	0	224
07:45 AM	1	0	0	0	4	98	0	0	0	0	0	0	1	101	6	0	211
Total	4	0	2	0	11	420	0	0	0	1	1	0	2	409	10	0	860
08:00 AM	2	0	0	0	7	121	0	0	1	0	0	0	0	102	2	0	235
08:15 AM	3	0	2	0	5	120	0	0	0	0	0	0	0	98	3	0	231
08:30 AM	8	0	2	0	4	100	2	0	0	1	0	0	0	93	2	0	212
08:45 AM	3	2	3	0	7	130	0	0	1	1	0	0	1	94	3	0	245
Total	16	2	7	0	23	471	2	0	2	2	0	0	1	387	10	0	923
Grand Total	20	2	9	0	34	891	2	0	2	3	1	0	3	796	20	0	1783
Apprch %	64.5	6.5	29	0	3.7	96.1	0.2	0	33.3	50	16.7	0	0.4	97.2	2.4	0	
Total %	1.1	0.1	0.5	0	1.9	50	0.1	0	0.1	0.2	0.1	0	0.2	44.6	1.1	0	

	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	2	0	0	0	2	7	121	0	0	128	1	0	0	0	1	0	102	2	0	104	235
08:15 AM	3	0	2	0	5	5	120	0	0	125	0	0	0	0	0	0	98	3	0	101	231
08:30 AM	8	0	2	0	10	4	100	2	0	106	0	1	0	0	1	0	93	2	0	95	212
08:45 AM	3	2	3	0	8	7	130	0	0	137	1	1	0	0	2	1	94	3	0	98	245
Total Volume	16	2	7	0	25	23	471	2	0	496	2	2	0	0	4	1	387	10	0	398	923
% App. Total	64	8	28	0		4.6	95	0.4	0		50	50	0	0		0.3	97.2	2.5	0		
PHF	.500	.250	.583	.000	.625	.821	.906	.250	.000	.905	.500	.500	.000	.000	.500	.250	.949	.833	.000	.957	.942

N/S: Denby Road/ Driveway
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Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Denby Road From North				Cambridge Street From East				Driveway From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	0	22	0	0	0	0	0	0	0	8	0	0	30
07:15 AM	0	0	0	0	0	20	0	0	0	0	0	0	0	6	0	0	26
07:30 AM	1	0	0	0	1	9	0	0	0	0	0	0	0	13	1	0	25
07:45 AM	2	0	2	0	1	20	0	0	0	0	0	0	0	10	0	0	35
Total	3	0	2	0	2	71	0	0	0	0	0	0	0	37	1	0	116
08:00 AM	0	0	0	0	0	14	0	0	0	0	0	0	0	5	0	0	19
08:15 AM	0	0	0	0	2	18	0	0	0	0	0	0	0	7	0	0	27
08:30 AM	0	0	0	0	0	9	0	0	0	0	0	0	0	14	1	0	24
08:45 AM	0	0	0	0	1	13	0	0	0	0	0	0	0	13	1	0	28
Total	0	0	0	0	3	54	0	0	0	0	0	0	0	39	2	0	98
Grand Total	3	0	2	0	5	125	0	0	0	0	0	0	0	76	3	0	214
Apprch %	60	0	40	0	3.8	96.2	0	0	0	0	0	0	0	96.2	3.8	0	
Total %	1.4	0	0.9	0	2.3	58.4	0	0	0	0	0	0	0	35.5	1.4	0	

	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	22	0	0	22	0	0	0	0	0	0	8	0	0	8	30
07:15 AM	0	0	0	0	0	0	20	0	0	20	0	0	0	0	0	0	6	0	0	6	26
07:30 AM	1	0	0	0	1	1	9	0	0	10	0	0	0	0	0	0	13	1	0	14	25
07:45 AM	2	0	2	0	4	1	20	0	0	21	0	0	0	0	0	0	10	0	0	10	35
Total Volume	3	0	2	0	5	2	71	0	0	73	0	0	0	0	0	0	37	1	0	38	116
% App. Total	60	0	40	0		2.7	97.3	0	0		0	0	0	0		0	97.4	2.6	0		
PHF	.375	.000	.250	.000	.313	.500	.807	.000	.000	.830	.000	.000	.000	.000	.000	.000	.712	.250	.000	.679	.829

N/S: Denby Road/ Driveway
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Groups Printed- Peds and Bikes

	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	4	7	0	2	0	3	2	0	0	0	3	4	0	2	0	0	0	27
07:15 AM	1	0	0	0	1	0	2	0	4	1	0	0	0	5	4	0	6	0	1	0	25
07:30 AM	0	0	0	5	8	0	2	0	3	1	0	0	0	8	5	0	0	0	0	0	32
07:45 AM	0	0	0	5	1	0	1	0	2	0	0	0	0	3	6	0	5	0	0	2	25
Total	1	0	0	14	17	0	7	0	12	4	0	0	0	19	19	0	13	0	1	2	109
08:00 AM	0	0	0	1	4	0	2	0	1	2	0	0	0	10	3	0	5	0	0	1	29
08:15 AM	0	0	0	6	2	0	2	0	0	2	0	0	0	1	3	0	8	0	2	3	29
08:30 AM	0	0	0	4	4	0	1	0	1	2	0	0	0	0	4	0	8	0	2	0	26
08:45 AM	0	0	0	2	2	0	2	0	0	1	0	0	0	7	4	0	7	0	0	0	25
Total	0	0	0	13	12	0	7	0	2	7	0	0	0	18	14	0	28	0	4	4	109
Grand Total	1	0	0	27	29	0	14	0	14	11	0	0	0	37	33	0	41	0	5	6	218
Apprch %	1.8	0	0	47.4	50.9	0	35.9	0	35.9	28.2	0	0	0	52.9	47.1	0	78.8	0	9.6	11.5	
Total %	0.5	0	0	12.4	13.3	0	6.4	0	6.4	5	0	0	0	17	15.1	0	18.8	0	2.3	2.8	

	Denby Road From North						Cambridge Street From East						Driveway From South						Cambridge Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	5	8	13	0	2	0	3	1	6	0	0	0	8	5	13	0	0	0	0	0	0	32
07:45 AM	0	0	0	5	1	6	0	1	0	2	0	3	0	0	0	3	6	9	0	5	0	0	2	7	25
08:00 AM	0	0	0	1	4	5	0	2	0	1	2	5	0	0	0	10	3	13	0	5	0	0	1	6	29
08:15 AM	0	0	0	6	2	8	0	2	0	0	2	4	0	0	0	1	3	4	0	8	0	2	3	13	29
Total Volume	0	0	0	17	15	32	0	7	0	6	5	18	0	0	0	22	17	39	0	18	0	2	6	26	115
% App. Total	0	0	0	53.1	46.9		0	38.9	0	33.3	27.8		0	0	0	56.4	43.6		0	69.2	0	7.7	23.1		
PHF	.000	.000	.000	.708	.469	.615	.000	.875	.000	.500	.625	.750	.000	.000	.000	.550	.708	.750	.000	.563	.000	.250	.500	.500	.898

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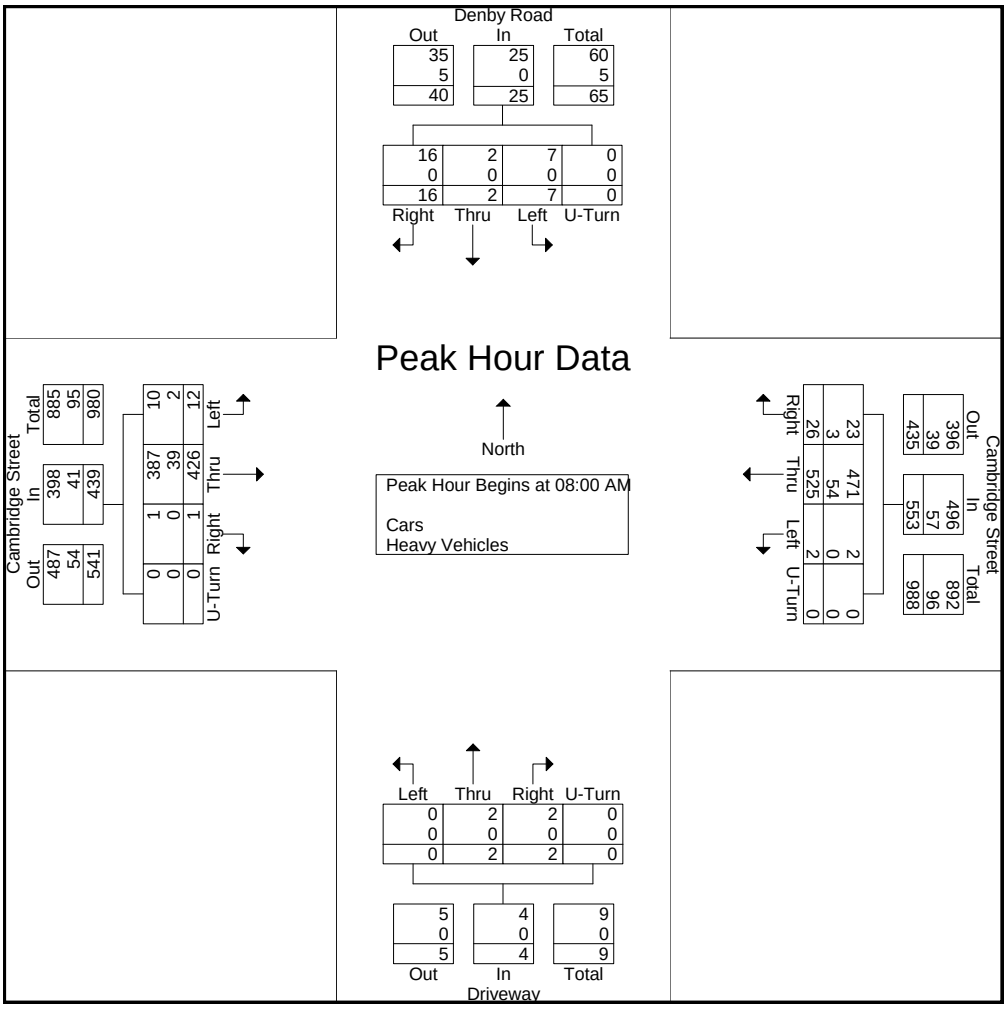
	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	2	0	0	0	2	7	135	0	0	142	1	0	0	0	1	0	107	2	0	109	254
08:15 AM	3	0	2	0	5	7	138	0	0	145	0	0	0	0	0	0	105	3	0	108	258
08:30 AM	8	0	2	0	10	4	109	2	0	115	0	1	0	0	1	0	107	3	0	110	236
08:45 AM	3	2	3	0	8	8	143	0	0	151	1	1	0	0	2	1	107	4	0	112	273
Total Volume	16	2	7	0	25	26	525	2	0	553	2	2	0	0	4	1	426	12	0	439	1021
% App. Total	64	8	28	0		4.7	94.9	0.4	0		50	50	0	0		0.2	97	2.7	0		
PHF	.500	.250	.583	.000	.625	.813	.918	.250	.000	.916	.500	.500	.000	.000	.500	.250	.995	.750	.000	.980	.935
Cars	16	2	7	0	25	23	471	2	0	496	2	2	0	0	4	1	387	10	0	398	923
% Cars	100	100	100	0	100	88.5	89.7	100	0	89.7	100	100	0	0	100	100	90.8	83.3	0	90.7	90.4
Heavy Vehicles	0	0	0	0	0	3	54	0	0	57	0	0	0	0	0	0	39	2	0	41	98
% Heavy Vehicles	0	0	0	0	0	11.5	10.3	0	0	10.3	0	0	0	0	0	0	9.2	16.7	0	9.3	9.6



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E/W: Cambridge Street
City, State: Allston, MA
Client: VHB/ P. Dunford

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

File Name : 165274 HH
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Denby Road From North				Cambridge Street From East				Driveway From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	8	0	5	0	3	144	0	0	0	0	0	0	0	109	0	0	269
04:15 PM	3	0	1	0	4	144	0	1	0	0	0	0	1	103	1	0	258
04:30 PM	3	1	0	0	4	161	0	0	1	0	0	0	1	128	2	0	301
04:45 PM	6	0	0	0	1	142	0	0	0	1	0	0	0	112	2	0	264
Total	20	1	6	0	12	591	0	1	1	1	0	0	2	452	5	0	1092
05:00 PM	2	0	0	0	8	147	0	0	0	0	0	0	0	116	3	0	276
05:15 PM	1	1	5	0	5	163	1	0	0	0	0	0	0	117	0	0	293
05:30 PM	1	0	1	0	3	143	0	0	0	0	1	0	0	118	1	0	268
05:45 PM	2	0	2	0	6	154	0	0	0	0	0	0	0	100	1	0	265
Total	6	1	8	0	22	607	1	0	0	0	1	0	0	451	5	0	1102
Grand Total	26	2	14	0	34	1198	1	1	1	1	1	0	2	903	10	0	2194
Apprch %	61.9	4.8	33.3	0	2.8	97.1	0.1	0.1	33.3	33.3	33.3	0	0.2	98.7	1.1	0	
Total %	1.2	0.1	0.6	0	1.5	54.6	0	0	0	0	0	0	0.1	41.2	0.5	0	
Cars	26	2	13	0	34	1156	1	1	1	1	1	0	2	838	10	0	2086
% Cars	100	100	92.9	0	100	96.5	100	100	100	100	100	0	100	92.8	100	0	95.1
Heavy Vehicles	0	0	1	0	0	42	0	0	0	0	0	0	0	65	0	0	108
% Heavy Vehicles	0	0	7.1	0	0	3.5	0	0	0	0	0	0	0	7.2	0	0	4.9

	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	3	1	0	0	4	4	161	0	0	165	1	0	0	0	1	1	128	2	0	131	301
04:45 PM	6	0	0	0	6	1	142	0	0	143	0	1	0	0	1	0	112	2	0	114	264
05:00 PM	2	0	0	0	2	8	147	0	0	155	0	0	0	0	0	0	116	3	0	119	276
05:15 PM	1	1	5	0	7	5	163	1	0	169	0	0	0	0	0	0	117	0	0	117	293
Total Volume	12	2	5	0	19	18	613	1	0	632	1	1	0	0	2	1	473	7	0	481	1134
% App. Total	63.2	10.5	26.3	0		2.8	97	0.2	0		50	50	0	0		0.2	98.3	1.5	0		
PHF	.500	.500	.250	.000	.679	.563	.940	.250	.000	.935	.250	.250	.000	.000	.500	.250	.924	.583	.000	.918	.942
Cars	12	2	5	0	19	18	594	1	0	613	1	1	0	0	2	1	439	7	0	447	1081
% Cars	100	100	100	0	100	100	96.9	100	0	97.0	100	100	0	0	100	100	92.8	100	0	92.9	95.3
Heavy Vehicles	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	0	34	0	0	34	53
% Heavy Vehicles	0	0	0	0	0	0	3.1	0	0	3.0	0	0	0	0	0	0	7.2	0	0	7.1	4.7

N/S: Denby Road/ Driveway
E/W: Cambridge Street
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File Name : 165274 HH
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Cars

	Denby Road From North				Cambridge Street From East				Driveway From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	8	0	4	0	3	135	0	0	0	0	0	0	0	104	0	0	254
04:15 PM	3	0	1	0	4	138	0	1	0	0	0	0	1	96	1	0	245
04:30 PM	3	1	0	0	4	159	0	0	1	0	0	0	1	118	2	0	289
04:45 PM	6	0	0	0	1	135	0	0	0	1	0	0	0	101	2	0	246
Total	20	1	5	0	12	567	0	1	1	1	0	0	2	419	5	0	1034
05:00 PM	2	0	0	0	8	142	0	0	0	0	0	0	0	109	3	0	264
05:15 PM	1	1	5	0	5	158	1	0	0	0	0	0	0	111	0	0	282
05:30 PM	1	0	1	0	3	138	0	0	0	0	1	0	0	106	1	0	251
05:45 PM	2	0	2	0	6	151	0	0	0	0	0	0	0	93	1	0	255
Total	6	1	8	0	22	589	1	0	0	0	1	0	0	419	5	0	1052
Grand Total	26	2	13	0	34	1156	1	1	1	1	1	0	2	838	10	0	2086
Apprch %	63.4	4.9	31.7	0	2.9	97	0.1	0.1	33.3	33.3	33.3	0	0.2	98.6	1.2	0	
Total %	1.2	0.1	0.6	0	1.6	55.4	0	0	0	0	0	0	0.1	40.2	0.5	0	

	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	3	1	0	0	4	4	159	0	0	163	1	0	0	0	1	1	118	2	0	121	289
04:45 PM	6	0	0	0	6	1	135	0	0	136	0	1	0	0	1	0	101	2	0	103	246
05:00 PM	2	0	0	0	2	8	142	0	0	150	0	0	0	0	0	0	109	3	0	112	264
05:15 PM	1	1	5	0	7	5	158	1	0	164	0	0	0	0	0	0	111	0	0	111	282
Total Volume	12	2	5	0	19	18	594	1	0	613	1	1	0	0	2	1	439	7	0	447	1081
% App. Total	63.2	10.5	26.3	0		2.9	96.9	0.2	0		50	50	0	0		0.2	98.2	1.6	0		
PHF	.500	.500	.250	.000	.679	.563	.934	.250	.000	.934	.250	.250	.000	.000	.500	.250	.930	.583	.000	.924	.935

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Groups Printed- Heavy Vehicles

	Denby Road From North				Cambridge Street From East				Driveway From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	1	0	0	9	0	0	0	0	0	0	0	5	0	0	15
04:15 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	7	0	0	13
04:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	10	0	0	12
04:45 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	11	0	0	18
Total	0	0	1	0	0	24	0	0	0	0	0	0	0	33	0	0	58
05:00 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	7	0	0	12
05:15 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	6	0	0	11
05:30 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	12	0	0	17
05:45 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	7	0	0	10
Total	0	0	0	0	0	18	0	0	0	0	0	0	0	32	0	0	50
Grand Total	0	0	1	0	0	42	0	0	0	0	0	0	0	65	0	0	108
Apprch %	0	0	100	0	0	100	0	0	0	0	0	0	0	100	0	0	
Total %	0	0	0.9	0	0	38.9	0	0	0	0	0	0	0	60.2	0	0	

	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	0	5	0	0	5	15
04:15 PM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	7	0	0	7	13
04:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	10	0	0	10	12
04:45 PM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	11	0	0	11	18
Total Volume	0	0	1	0	1	0	24	0	0	24	0	0	0	0	0	0	33	0	0	33	58
% App. Total	0	0	100	0		0	100	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.250	.000	.250	.000	.667	.000	.000	.667	.000	.000	.000	.000	.000	.000	.750	.000	.000	.750	.806

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File Name : 165274 HH
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Groups Printed- Peds and Bikes

	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	7	3	0	3	0	1	3	0	0	0	14	6	0	2	0	0	0	39
04:15 PM	0	0	0	5	7	1	1	0	3	2	0	0	0	8	11	0	0	0	0	0	38
04:30 PM	0	0	0	4	9	0	4	0	4	2	0	0	0	7	4	0	1	0	0	0	35
04:45 PM	0	0	0	4	6	0	0	0	2	0	0	0	0	5	10	0	2	1	0	2	32
Total	0	0	0	20	25	1	8	0	10	7	0	0	0	34	31	0	5	1	0	2	144
05:00 PM	0	0	0	9	6	0	4	0	1	3	0	0	0	5	13	0	1	0	1	0	43
05:15 PM	0	0	0	4	9	0	8	0	2	6	0	0	0	7	5	0	0	0	1	0	42
05:30 PM	0	0	0	5	6	0	10	0	1	1	0	0	0	2	1	0	1	0	0	1	28
05:45 PM	0	0	0	2	4	0	7	0	4	4	0	0	0	8	6	0	5	0	0	0	40
Total	0	0	0	20	25	0	29	0	8	14	0	0	0	22	25	0	7	0	2	1	153
Grand Total	0	0	0	40	50	1	37	0	18	21	0	0	0	56	56	0	12	1	2	3	297
Apprch %	0	0	0	44.4	55.6	1.3	48.1	0	23.4	27.3	0	0	0	50	50	0	66.7	5.6	11.1	16.7	
Total %	0	0	0	13.5	16.8	0.3	12.5	0	6.1	7.1	0	0	0	18.9	18.9	0	4	0.3	0.7	1	

	Denby Road From North						Cambridge Street From East						Driveway From South						Cambridge Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	9	6	15	0	4	0	1	3	8	0	0	0	5	13	18	0	1	0	1	0	2	43
05:15 PM	0	0	0	4	9	13	0	8	0	2	6	16	0	0	0	7	5	12	0	0	0	1	0	1	42
05:30 PM	0	0	0	5	6	11	0	10	0	1	1	12	0	0	0	2	1	3	0	1	0	0	1	2	28
05:45 PM	0	0	0	2	4	6	0	7	0	4	4	15	0	0	0	8	6	14	0	5	0	0	0	5	40
Total Volume	0	0	0	20	25	45	0	29	0	8	14	51	0	0	0	22	25	47	0	7	0	2	1	10	153
% App. Total	0	0	0	44.4	55.6		0	56.9	0	15.7	27.5		0	0	0	46.8	53.2		0	70	0	20	10		
PHF	.000	.000	.000	.556	.694	.750	.000	.725	.000	.500	.583	.797	.000	.000	.000	.688	.481	.653	.000	.350	.000	.500	.250	.500	.890

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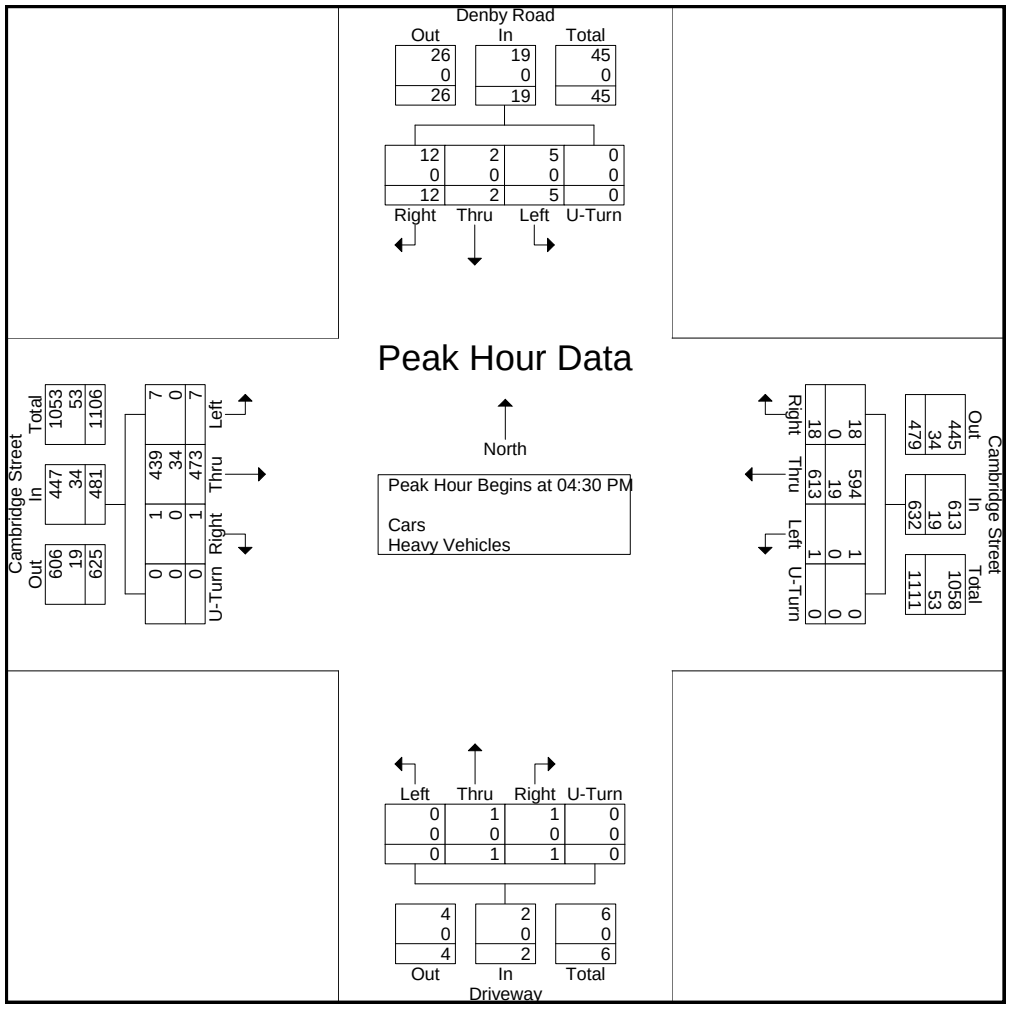
	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	3	1	0	0	4	4	161	0	0	165	1	0	0	0	1	1	128	2	0	131	301
04:45 PM	6	0	0	0	6	1	142	0	0	143	0	1	0	0	1	0	112	2	0	114	264
05:00 PM	2	0	0	0	2	8	147	0	0	155	0	0	0	0	0	0	116	3	0	119	276
05:15 PM	1	1	5	0	7	5	163	1	0	169	0	0	0	0	0	0	117	0	0	117	293
Total Volume	12	2	5	0	19	18	613	1	0	632	1	1	0	0	2	1	473	7	0	481	1134
% App. Total	63.2	10.5	26.3	0		2.8	97	0.2	0		50	50	0	0		0.2	98.3	1.5	0		
PHF	.500	.500	.250	.000	.679	.563	.940	.250	.000	.935	.250	.250	.000	.000	.500	.250	.924	.583	.000	.918	.942
Cars	12	2	5	0	19	18	594	1	0	613	1	1	0	0	2	1	439	7	0	447	1081
% Cars	100	100	100	0	100	100	96.9	100	0	97.0	100	100	0	0	100	100	92.8	100	0	92.9	95.3
Heavy Vehicles	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	0	34	0	0	34	53
% Heavy Vehicles	0	0	0	0	0	0	3.1	0	0	3.0	0	0	0	0	0	0	7.2	0	0	7.1	4.7



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Groups Printed- Cars - Heavy Vehicles

	Denby Road From North				Cambridge Street From East				Driveway From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	2	0	6	126	0	0	0	0	0	0	2	118	1	0	255
11:15 AM	4	0	2	0	5	99	0	0	0	0	0	0	0	111	4	0	225
11:30 AM	7	0	3	0	6	105	0	0	0	0	1	0	0	146	6	1	275
11:45 AM	4	0	3	0	9	106	0	0	0	0	0	0	0	127	2	0	251
Total	15	0	10	0	26	436	0	0	0	0	1	0	2	502	13	1	1006
12:00 PM	4	0	0	0	3	119	0	0	0	0	0	0	1	124	4	0	255
12:15 PM	7	0	2	0	3	103	0	0	0	0	0	0	0	111	5	0	231
12:30 PM	3	0	2	0	7	115	1	0	1	0	1	0	1	126	3	0	260
12:45 PM	0	0	0	0	2	131	0	1	0	0	0	0	1	111	4	0	250
Total	14	0	4	0	15	468	1	1	1	0	1	0	3	472	16	0	996
01:00 PM	3	0	1	0	6	110	1	0	1	1	1	0	0	127	4	1	256
01:15 PM	4	0	0	0	3	118	1	0	0	0	0	0	0	118	1	0	245
01:30 PM	2	0	0	0	2	115	0	0	0	0	0	0	0	125	1	1	246
01:45 PM	1	0	0	0	1	113	0	0	0	0	1	0	0	124	1	0	241
Total	10	0	1	0	12	456	2	0	1	1	2	0	0	494	7	2	988
Grand Total	39	0	15	0	53	1360	3	1	2	1	4	0	5	1468	36	3	2990
Apprch %	72.2	0	27.8	0	3.7	96	0.2	0.1	28.6	14.3	57.1	0	0.3	97.1	2.4	0.2	
Total %	1.3	0	0.5	0	1.8	45.5	0.1	0	0.1	0	0.1	0	0.2	49.1	1.2	0.1	
Cars	38	0	12	0	52	1323	3	1	2	1	4	0	5	1419	35	3	2898
% Cars	97.4	0	80	0	98.1	97.3	100	100	100	100	100	0	100	96.7	97.2	100	96.9
Heavy Vehicles	1	0	3	0	1	37	0	0	0	0	0	0	0	49	1	0	92
% Heavy Vehicles	2.6	0	20	0	1.9	2.7	0	0	0	0	0	0	0	3.3	2.8	0	3.1

	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	7	0	3	0	10	6	105	0	0	111	0	0	1	0	1	0	146	6	1	153	275
11:45 AM	4	0	3	0	7	9	106	0	0	115	0	0	0	0	0	0	127	2	0	129	251
12:00 PM	4	0	0	0	4	3	119	0	0	122	0	0	0	0	0	1	124	4	0	129	255
12:15 PM	7	0	2	0	9	3	103	0	0	106	0	0	0	0	0	0	111	5	0	116	231
Total Volume	22	0	8	0	30	21	433	0	0	454	0	0	1	0	1	1	508	17	1	527	1012
% App. Total	73.3	0	26.7	0		4.6	95.4	0	0		0	0	100	0		0.2	96.4	3.2	0.2		
PHF	.786	.000	.667	.000	.750	.583	.910	.000	.000	.930	.000	.000	.250	.000	.250	.250	.870	.708	.250	.861	.920
Cars	22	0	6	0	28	20	419	0	0	439	0	0	1	0	1	1	491	17	1	510	978
% Cars	100	0	75.0	0	93.3	95.2	96.8	0	0	96.7	0	0	100	0	100	100	96.7	100	100	96.8	96.6
Heavy Vehicles	0	0	2	0	2	1	14	0	0	15	0	0	0	0	0	0	17	0	0	17	34
% Heavy Vehicles	0	0	25.0	0	6.7	4.8	3.2	0	0	3.3	0	0	0	0	0	0	3.3	0	0	3.2	3.4

N/S: Denby Road/ Driveway
E/W: Cambridge Street
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
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File Name : 165274 HHH
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Cars

	Denby Road From North				Cambridge Street From East				Driveway From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	2	0	6	125	0	0	0	0	0	0	2	114	1	0	250
11:15 AM	4	0	2	0	5	99	0	0	0	0	0	0	0	108	4	0	222
11:30 AM	7	0	2	0	5	102	0	0	0	0	1	0	0	144	6	1	268
11:45 AM	4	0	3	0	9	100	0	0	0	0	0	0	0	120	2	0	238
Total	15	0	9	0	25	426	0	0	0	0	1	0	2	486	13	1	978
12:00 PM	4	0	0	0	3	116	0	0	0	0	0	0	1	123	4	0	251
12:15 PM	7	0	1	0	3	101	0	0	0	0	0	0	0	104	5	0	221
12:30 PM	2	0	1	0	7	114	1	0	1	0	1	0	1	121	3	0	252
12:45 PM	0	0	0	0	2	124	0	1	0	0	0	0	1	107	4	0	239
Total	13	0	2	0	15	455	1	1	1	0	1	0	3	455	16	0	963
01:00 PM	3	0	1	0	6	106	1	0	1	1	1	0	0	123	4	1	248
01:15 PM	4	0	0	0	3	114	1	0	0	0	0	0	0	111	1	0	234
01:30 PM	2	0	0	0	2	113	0	0	0	0	0	0	0	123	0	1	241
01:45 PM	1	0	0	0	1	109	0	0	0	0	1	0	0	121	1	0	234
Total	10	0	1	0	12	442	2	0	1	1	2	0	0	478	6	2	957
Grand Total	38	0	12	0	52	1323	3	1	2	1	4	0	5	1419	35	3	2898
Apprch %	76	0	24	0	3.8	95.9	0.2	0.1	28.6	14.3	57.1	0	0.3	97.1	2.4	0.2	
Total %	1.3	0	0.4	0	1.8	45.7	0.1	0	0.1	0	0.1	0	0.2	49	1.2	0.1	

	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:15 AM																					
11:15 AM	4	0	2	0	6	5	99	0	0	104	0	0	0	0	0	0	108	4	0	112	222
11:30 AM	7	0	2	0	9	5	102	0	0	107	0	0	1	0	1	0	144	6	1	151	268
11:45 AM	4	0	3	0	7	9	100	0	0	109	0	0	0	0	0	0	120	2	0	122	238
12:00 PM	4	0	0	0	4	3	116	0	0	119	0	0	0	0	0	1	123	4	0	128	251
Total Volume	19	0	7	0	26	22	417	0	0	439	0	0	1	0	1	1	495	16	1	513	979
% App. Total	73.1	0	26.9	0		5	95	0	0		0	0	100	0		0.2	96.5	3.1	0.2		
PHF	.679	.000	.583	.000	.722	.611	.899	.000	.000	.922	.000	.000	.250	.000	.250	.250	.859	.667	.250	.849	.913

N/S: Denby Road/ Driveway
E/W: Cambridge Street
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 HHH
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Denby Road From North				Cambridge Street From East				Driveway From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	5
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
11:30 AM	0	0	1	0	1	3	0	0	0	0	0	0	0	2	0	0	7
11:45 AM	0	0	0	0	0	6	0	0	0	0	0	0	0	7	0	0	13
Total	0	0	1	0	1	10	0	0	0	0	0	0	0	16	0	0	28
12:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	4
12:15 PM	0	0	1	0	0	2	0	0	0	0	0	0	0	7	0	0	10
12:30 PM	1	0	1	0	0	1	0	0	0	0	0	0	0	5	0	0	8
12:45 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	4	0	0	11
Total	1	0	2	0	0	13	0	0	0	0	0	0	0	17	0	0	33
01:00 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	4	0	0	8
01:15 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	7	0	0	11
01:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	1	0	5
01:45 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	3	0	0	7
Total	0	0	0	0	0	14	0	0	0	0	0	0	0	16	1	0	31
Grand Total	1	0	3	0	1	37	0	0	0	0	0	0	0	49	1	0	92
Apprch %	25	0	75	0	2.6	97.4	0	0	0	0	0	0	0	98	2	0	
Total %	1.1	0	3.3	0	1.1	40.2	0	0	0	0	0	0	0	53.3	1.1	0	

	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	8
12:45 PM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	4	0	0	4	11
01:00 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	8
01:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	7	0	0	7	11
Total Volume	1	0	1	0	2	0	16	0	0	16	0	0	0	0	0	0	20	0	0	20	38
% App. Total	50	0	50	0		0	100	0	0		0	0	0	0		0	100	0	0		
PHF	.250	.000	.250	.000	.250	.000	.571	.000	.000	.571	.000	.000	.000	.000	.000	.000	.714	.000	.000	.714	.864

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File Name : 165274 HHH
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Peds and Bikes

	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	1	8	6	0	2	0	5	6	0	0	0	12	14	0	2	0	0	0	56
11:15 AM	0	0	0	17	14	0	2	0	10	15	0	0	0	5	15	0	1	0	0	2	81
11:30 AM	0	0	0	15	12	0	2	0	8	5	0	0	0	9	6	0	2	0	2	3	64
11:45 AM	0	0	0	14	17	0	1	0	9	7	0	0	0	12	8	0	1	0	0	0	69
Total	0	0	1	54	49	0	7	0	32	33	0	0	0	38	43	0	6	0	2	5	270
12:00 PM	0	0	0	30	31	0	1	0	5	8	0	0	0	5	5	0	0	0	0	0	85
12:15 PM	2	0	0	11	16	0	0	0	5	17	0	0	0	11	14	0	3	0	0	2	81
12:30 PM	0	0	0	24	22	0	0	0	5	9	0	0	0	9	10	0	3	0	0	2	84
12:45 PM	0	0	0	16	16	0	1	0	16	8	0	0	0	12	10	0	0	0	0	0	79
Total	2	0	0	81	85	0	2	0	31	42	0	0	0	37	39	0	6	0	0	4	329
01:00 PM	0	0	0	10	7	0	2	0	6	6	0	0	0	6	9	0	1	0	0	2	49
01:15 PM	0	0	0	6	15	0	0	0	7	5	0	0	0	8	8	0	1	0	0	0	50
01:30 PM	0	0	0	10	11	0	2	0	4	3	0	0	0	5	11	0	0	0	0	1	47
01:45 PM	0	0	0	5	7	0	1	0	8	1	0	0	0	9	3	0	4	0	0	0	38
Total	0	0	0	31	40	0	5	0	25	15	0	0	0	28	31	0	6	0	0	3	184
Grand Total	2	0	1	166	174	0	14	0	88	90	0	0	0	103	113	0	18	0	2	12	783
Apprch %	0.6	0	0.3	48.4	50.7	0	7.3	0	45.8	46.9	0	0	0	47.7	52.3	0	56.2	0	6.2	37.5	
Total %	0.3	0	0.1	21.2	22.2	0	1.8	0	11.2	11.5	0	0	0	13.2	14.4	0	2.3	0	0.3	1.5	

	Denby Road From North						Cambridge Street From East						Driveway From South						Cambridge Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 12:00 PM																									
12:00 PM	0	0	0	30	31	61	0	1	0	5	8	14	0	0	0	5	5	10	0	0	0	0	0	0	85
12:15 PM	2	0	0	11	16	29	0	0	0	5	17	22	0	0	0	11	14	25	0	3	0	0	2	5	81
12:30 PM	0	0	0	24	22	46	0	0	0	5	9	14	0	0	0	9	10	19	0	3	0	0	2	5	84
12:45 PM	0	0	0	16	16	32	0	1	0	16	8	25	0	0	0	12	10	22	0	0	0	0	0	0	79
Total Volume	2	0	0	81	85	168	0	2	0	31	42	75	0	0	0	37	39	76	0	6	0	0	4	10	329
% App. Total	1.2	0	0	48.2	50.6		0	2.7	0	41.3	56		0	0	0	48.7	51.3		0	60	0	0	40		
PHF	.250	.000	.000	.675	.685	.689	.000	.500	.000	.484	.618	.750	.000	.000	.000	.771	.696	.760	.000	.500	.000	.000	.500	.500	.968

N/S: Denby Road/ Driveway
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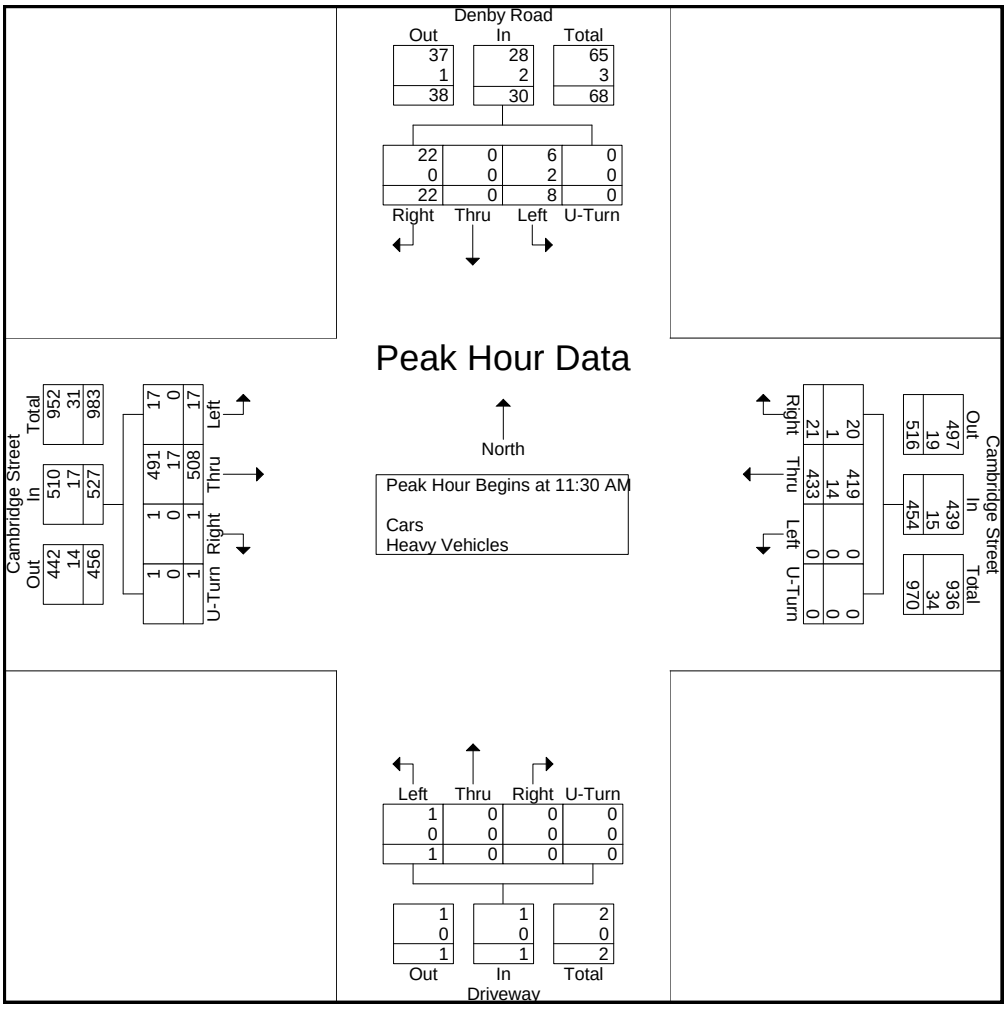
	Denby Road From North					Cambridge Street From East					Driveway From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	7	0	3	0	10	6	105	0	0	111	0	0	1	0	1	0	146	6	1	153	275
11:45 AM	4	0	3	0	7	9	106	0	0	115	0	0	0	0	0	0	127	2	0	129	251
12:00 PM	4	0	0	0	4	3	119	0	0	122	0	0	0	0	0	1	124	4	0	129	255
12:15 PM	7	0	2	0	9	3	103	0	0	106	0	0	0	0	0	0	111	5	0	116	231
Total Volume	22	0	8	0	30	21	433	0	0	454	0	0	1	0	1	1	508	17	1	527	1012
% App. Total	73.3	0	26.7	0		4.6	95.4	0	0		0	0	100	0		0.2	96.4	3.2	0.2		
PHF	.786	.000	.667	.000	.750	.583	.910	.000	.000	.930	.000	.000	.250	.000	.250	.250	.870	.708	.250	.861	.920
Cars	22	0	6	0	28	20	419	0	0	439	0	0	1	0	1	1	491	17	1	510	978
% Cars	100	0	75.0	0	93.3	95.2	96.8	0	0	96.7	0	0	100	0	100	100	96.7	100	100	96.8	96.6
Heavy Vehicles	0	0	2	0	2	1	14	0	0	15	0	0	0	0	0	0	17	0	0	17	34
% Heavy Vehicles	0	0	25.0	0	6.7	4.8	3.2	0	0	3.3	0	0	0	0	0	0	3.3	0	0	3.2	3.4



N/S: Franklin Street/ Harvard Street
E/W: Cambridge Street
City, State: Allston, MA
Client: VHB/ P. Dunford

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File Name : 165274 I
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Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Franklin Street From North				Cambridge Street From East				Harvard Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	3	6	0	16	126	85	0	96	4	3	0	5	97	0	0	442
07:15 AM	1	3	16	0	23	122	77	0	96	2	11	0	6	101	1	0	459
07:30 AM	2	8	22	0	16	117	84	0	122	6	8	0	3	108	1	0	497
07:45 AM	2	12	17	0	25	116	93	0	123	2	12	0	6	99	0	0	507
Total	6	26	61	0	80	481	339	0	437	14	34	0	20	405	2	0	1905
08:00 AM	0	5	29	0	22	134	72	0	128	3	9	0	4	97	0	0	503
08:15 AM	3	5	16	0	20	140	94	0	137	1	6	0	3	98	0	0	523
08:30 AM	2	4	19	0	22	109	108	0	123	4	5	0	4	104	0	0	504
08:45 AM	1	8	27	0	21	137	111	0	90	7	16	0	11	113	0	0	542
Total	6	22	91	0	85	520	385	0	478	15	36	0	22	412	0	0	2072
Grand Total	12	48	152	0	165	1001	724	0	915	29	70	0	42	817	2	0	3977
Apprch %	5.7	22.6	71.7	0	8.7	53	38.3	0	90.2	2.9	6.9	0	4.9	94.9	0.2	0	
Total %	0.3	1.2	3.8	0	4.1	25.2	18.2	0	23	0.7	1.8	0	1.1	20.5	0.1	0	
Cars	10	42	139	0	160	886	660	0	844	29	62	0	37	748	2	0	3619
% Cars	83.3	87.5	91.4	0	97	88.5	91.2	0	92.2	100	88.6	0	88.1	91.6	100	0	91
Heavy Vehicles	2	6	13	0	5	115	64	0	71	0	8	0	5	69	0	0	358
% Heavy Vehicles	16.7	12.5	8.6	0	3	11.5	8.8	0	7.8	0	11.4	0	11.9	8.4	0	0	9

	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	5	29	0	34	22	134	72	0	228	128	3	9	0	140	4	97	0	0	101	503
08:15 AM	3	5	16	0	24	20	140	94	0	254	137	1	6	0	144	3	98	0	0	101	523
08:30 AM	2	4	19	0	25	22	109	108	0	239	123	4	5	0	132	4	104	0	0	108	504
08:45 AM	1	8	27	0	36	21	137	111	0	269	90	7	16	0	113	11	113	0	0	124	542
Total Volume	6	22	91	0	119	85	520	385	0	990	478	15	36	0	529	22	412	0	0	434	2072
% App. Total	5	18.5	76.5	0		8.6	52.5	38.9	0		90.4	2.8	6.8	0		5.1	94.9	0	0		
PHF	.500	.688	.784	.000	.826	.966	.929	.867	.000	.920	.872	.536	.563	.000	.918	.500	.912	.000	.000	.875	.956
Cars	6	19	85	0	110	83	470	357	0	910	452	15	33	0	500	20	375	0	0	395	1915
% Cars	100	86.4	93.4	0	92.4	97.6	90.4	92.7	0	91.9	94.6	100	91.7	0	94.5	90.9	91.0	0	0	91.0	92.4
Heavy Vehicles	0	3	6	0	9	2	50	28	0	80	26	0	3	0	29	2	37	0	0	39	157
% Heavy Vehicles	0	13.6	6.6	0	7.6	2.4	9.6	7.3	0	8.1	5.4	0	8.3	0	5.5	9.1	9.0	0	0	9.0	7.6

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Groups Printed- Cars

	Franklin Street From North				Cambridge Street From East				Harvard Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	3	5	0	15	104	74	0	90	4	3	0	4	94	0	0	397
07:15 AM	0	3	14	0	22	107	66	0	80	2	8	0	6	94	1	0	403
07:30 AM	1	8	21	0	15	109	80	0	111	6	7	0	2	98	1	0	459
07:45 AM	2	9	14	0	25	96	83	0	111	2	11	0	5	87	0	0	445
Total	4	23	54	0	77	416	303	0	392	14	29	0	17	373	2	0	1704
08:00 AM	0	5	29	0	22	124	67	0	122	3	8	0	2	93	0	0	475
08:15 AM	3	4	16	0	20	120	87	0	131	1	6	0	3	93	0	0	484
08:30 AM	2	3	18	0	21	101	98	0	114	4	5	0	4	91	0	0	461
08:45 AM	1	7	22	0	20	125	105	0	85	7	14	0	11	98	0	0	495
Total	6	19	85	0	83	470	357	0	452	15	33	0	20	375	0	0	1915
Grand Total	10	42	139	0	160	886	660	0	844	29	62	0	37	748	2	0	3619
Apprch %	5.2	22	72.8	0	9.4	51.9	38.7	0	90.3	3.1	6.6	0	4.7	95	0.3	0	
Total %	0.3	1.2	3.8	0	4.4	24.5	18.2	0	23.3	0.8	1.7	0	1	20.7	0.1	0	

	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	5	29	0	34	22	124	67	0	213	122	3	8	0	133	2	93	0	0	95	475
08:15 AM	3	4	16	0	23	20	120	87	0	227	131	1	6	0	138	3	93	0	0	96	484
08:30 AM	2	3	18	0	23	21	101	98	0	220	114	4	5	0	123	4	91	0	0	95	461
08:45 AM	1	7	22	0	30	20	125	105	0	250	85	7	14	0	106	11	98	0	0	109	495
Total Volume	6	19	85	0	110	83	470	357	0	910	452	15	33	0	500	20	375	0	0	395	1915
% App. Total	5.5	17.3	77.3	0		9.1	51.6	39.2	0		90.4	3	6.6	0		5.1	94.9	0	0		
PHF	.500	.679	.733	.000	.809	.943	.940	.850	.000	.910	.863	.536	.589	.000	.906	.455	.957	.000	.000	.906	.967

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Site Code : 12305
Start Date : 10/13/2016
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Groups Printed- Heavy Vehicles

	Franklin Street From North				Cambridge Street From East				Harvard Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	1	0	1	22	11	0	6	0	0	0	1	3	0	0	45
07:15 AM	1	0	2	0	1	15	11	0	16	0	3	0	0	7	0	0	56
07:30 AM	1	0	1	0	1	8	4	0	11	0	1	0	1	10	0	0	38
07:45 AM	0	3	3	0	0	20	10	0	12	0	1	0	1	12	0	0	62
Total	2	3	7	0	3	65	36	0	45	0	5	0	3	32	0	0	201
08:00 AM	0	0	0	0	0	10	5	0	6	0	1	0	2	4	0	0	28
08:15 AM	0	1	0	0	0	20	7	0	6	0	0	0	0	5	0	0	39
08:30 AM	0	1	1	0	1	8	10	0	9	0	0	0	0	13	0	0	43
08:45 AM	0	1	5	0	1	12	6	0	5	0	2	0	0	15	0	0	47
Total	0	3	6	0	2	50	28	0	26	0	3	0	2	37	0	0	157
Grand Total	2	6	13	0	5	115	64	0	71	0	8	0	5	69	0	0	358
Apprch %	9.5	28.6	61.9	0	2.7	62.5	34.8	0	89.9	0	10.1	0	6.8	93.2	0	0	
Total %	0.6	1.7	3.6	0	1.4	32.1	17.9	0	19.8	0	2.2	0	1.4	19.3	0	0	

	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	1	0	1	1	22	11	0	34	6	0	0	0	6	1	3	0	0	4	45
07:15 AM	1	0	2	0	3	1	15	11	0	27	16	0	3	0	19	0	7	0	0	7	56
07:30 AM	1	0	1	0	2	1	8	4	0	13	11	0	1	0	12	1	10	0	0	11	38
07:45 AM	0	3	3	0	6	0	20	10	0	30	12	0	1	0	13	1	12	0	0	13	62
Total Volume	2	3	7	0	12	3	65	36	0	104	45	0	5	0	50	3	32	0	0	35	201
% App. Total	16.7	25	58.3	0		2.9	62.5	34.6	0		90	0	10	0		8.6	91.4	0	0		
PHF	.500	.250	.583	.000	.500	.750	.739	.818	.000	.765	.703	.000	.417	.000	.658	.750	.667	.000	.000	.673	.810

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Groups Printed- Peds and Bikes

	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	1	1	0	5	10	0	1	1	5	5	1	0	0	3	1	0	2	0	1	4	41
07:15 AM	0	0	1	6	9	0	2	0	4	7	1	0	0	1	1	0	4	0	3	3	42
07:30 AM	0	2	0	3	9	0	1	3	9	7	2	0	1	5	2	0	0	0	2	5	51
07:45 AM	0	3	0	8	2	1	1	3	10	6	1	0	0	4	3	0	2	1	4	5	54
Total	1	6	1	22	30	1	5	7	28	25	5	0	1	13	7	0	8	1	10	17	188
08:00 AM	0	5	0	3	7	2	4	1	4	7	2	0	1	2	2	0	3	0	2	3	48
08:15 AM	0	3	0	1	4	0	4	2	7	7	3	0	0	3	4	0	4	0	3	2	47
08:30 AM	0	2	0	5	6	0	2	1	7	14	0	0	0	0	2	0	6	0	1	3	49
08:45 AM	0	2	0	4	5	1	5	1	9	2	2	0	0	1	3	0	6	0	1	8	50
Total	0	12	0	13	22	3	15	5	27	30	7	0	1	6	11	0	19	0	7	16	194
Grand Total	1	18	1	35	52	4	20	12	55	55	12	0	2	19	18	0	27	1	17	33	382
Apprch %	0.9	16.8	0.9	32.7	48.6	2.7	13.7	8.2	37.7	37.7	23.5	0	3.9	37.3	35.3	0	34.6	1.3	21.8	42.3	
Total %	0.3	4.7	0.3	9.2	13.6	1	5.2	3.1	14.4	14.4	3.1	0	0.5	5	4.7	0	7.1	0.3	4.5	8.6	

	Franklin Street From North						Cambridge Street From East						Harvard Street From South						Cambridge Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:30 AM																									
07:30 AM	0	2	0	3	9	14	0	1	3	9	7	20	2	0	1	5	2	10	0	0	0	2	5	7	51
07:45 AM	0	3	0	8	2	13	1	1	3	10	6	21	1	0	0	4	3	8	0	2	1	4	5	12	54
08:00 AM	0	5	0	3	7	15	2	4	1	4	7	18	2	0	1	2	2	7	0	3	0	2	3	8	48
08:15 AM	0	3	0	1	4	8	0	4	2	7	7	20	3	0	0	3	4	10	0	4	0	3	2	9	47
Total Volume	0	13	0	15	22	50	3	10	9	30	27	79	8	0	2	14	11	35	0	9	1	11	15	36	200
% App. Total	0	26	0	30	44		3.8	12.7	11.4	38	34.2		22.9	0	5.7	40	31.4		0	25	2.8	30.6	41.7		
PHF	.000	.650	.000	.469	.611	.833	.375	.625	.750	.750	.964	.940	.667	.000	.500	.700	.688	.875	.000	.563	.250	.688	.750	.750	.926

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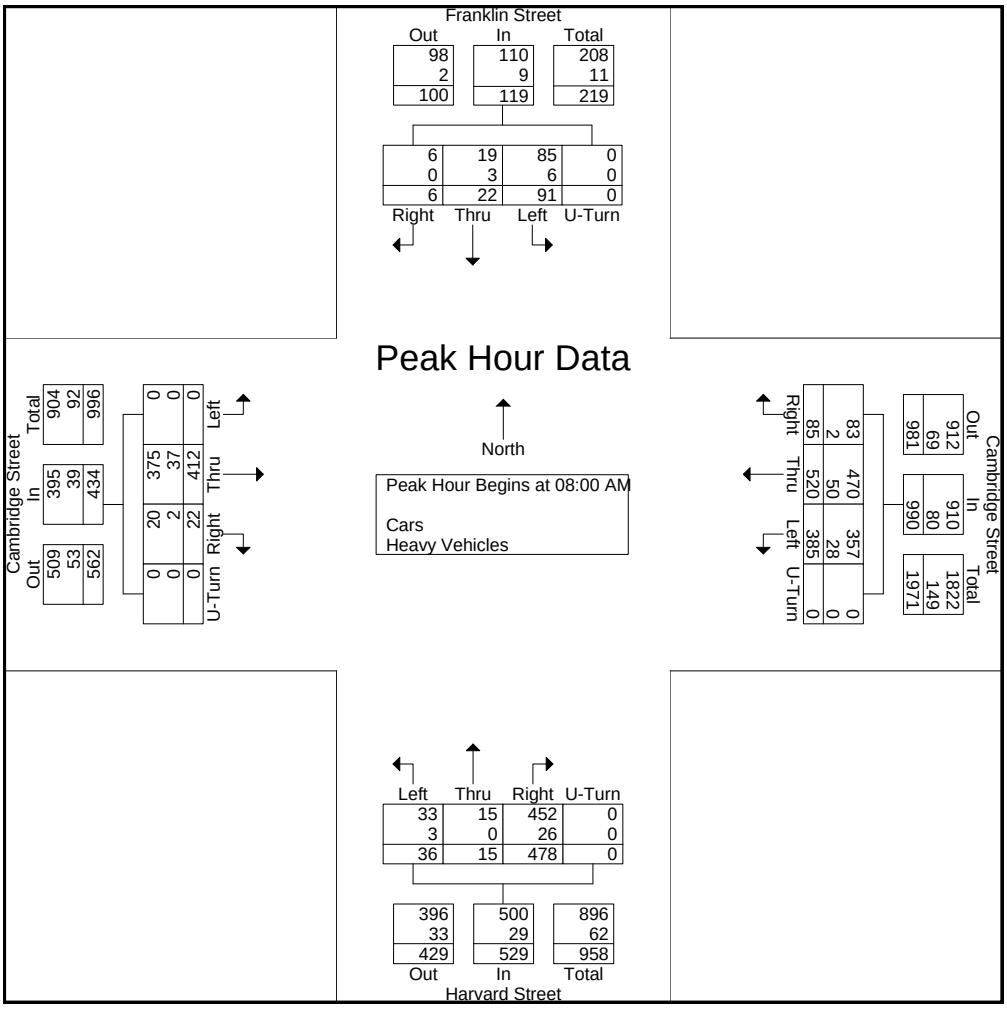
	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	5	29	0	34	22	134	72	0	228	128	3	9	0	140	4	97	0	0	101	503
08:15 AM	3	5	16	0	24	20	140	94	0	254	137	1	6	0	144	3	98	0	0	101	523
08:30 AM	2	4	19	0	25	22	109	108	0	239	123	4	5	0	132	4	104	0	0	108	504
08:45 AM	1	8	27	0	36	21	137	111	0	269	90	7	16	0	113	11	113	0	0	124	542
Total Volume	6	22	91	0	119	85	520	385	0	990	478	15	36	0	529	22	412	0	0	434	2072
% App. Total	5	18.5	76.5	0		8.6	52.5	38.9	0		90.4	2.8	6.8	0		5.1	94.9	0	0		
PHF	.500	.688	.784	.000	.826	.966	.929	.867	.000	.920	.872	.536	.563	.000	.918	.500	.912	.000	.000	.875	.956
Cars	6	19	85	0	110	83	470	357	0	910	452	15	33	0	500	20	375	0	0	395	1915
% Cars	100	86.4	93.4	0	92.4	97.6	90.4	92.7	0	91.9	94.6	100	91.7	0	94.5	90.9	91.0	0	0	91.0	92.4
Heavy Vehicles	0	3	6	0	9	2	50	28	0	80	26	0	3	0	29	2	37	0	0	39	157
% Heavy Vehicles	0	13.6	6.6	0	7.6	2.4	9.6	7.3	0	8.1	5.4	0	8.3	0	5.5	9.1	9.0	0	0	9.0	7.6



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File Name : 165274 II
Site Code : 12305
Start Date : 10/13/2016
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Groups Printed- Cars - Heavy Vehicles

	Franklin Street From North				Cambridge Street From East				Harvard Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	4	7	23	0	17	126	69	0	80	13	12	0	5	100	0	0	456
04:15 PM	4	7	27	0	17	131	89	0	69	7	22	0	6	94	1	0	474
04:30 PM	2	14	30	0	16	144	96	0	80	3	13	0	17	119	0	0	534
04:45 PM	1	14	28	0	15	134	91	0	51	8	12	0	8	91	0	0	453
Total	11	42	108	0	65	535	345	0	280	31	59	0	36	404	1	0	1917
05:00 PM	5	8	41	0	17	140	78	0	82	8	13	0	6	105	0	0	503
05:15 PM	2	16	36	0	16	147	98	0	57	7	18	0	9	105	1	0	512
05:30 PM	5	16	29	0	17	118	83	0	83	7	19	0	11	106	1	0	495
05:45 PM	1	28	30	0	11	144	110	0	68	6	18	0	11	86	0	0	513
Total	13	68	136	0	61	549	369	0	290	28	68	0	37	402	2	0	2023
Grand Total	24	110	244	0	126	1084	714	0	570	59	127	0	73	806	3	0	3940
Apprch %	6.3	29.1	64.6	0	6.5	56.3	37.1	0	75.4	7.8	16.8	0	8.3	91.4	0.3	0	
Total %	0.6	2.8	6.2	0	3.2	27.5	18.1	0	14.5	1.5	3.2	0	1.9	20.5	0.1	0	
Cars	23	108	240	0	121	1047	703	0	554	59	125	0	71	748	3	0	3802
% Cars	95.8	98.2	98.4	0	96	96.6	98.5	0	97.2	100	98.4	0	97.3	92.8	100	0	96.5
Heavy Vehicles	1	2	4	0	5	37	11	0	16	0	2	0	2	58	0	0	138
% Heavy Vehicles	4.2	1.8	1.6	0	4	3.4	1.5	0	2.8	0	1.6	0	2.7	7.2	0	0	3.5

	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	5	8	41	0	54	17	140	78	0	235	82	8	13	0	103	6	105	0	0	111	503
05:15 PM	2	16	36	0	54	16	147	98	0	261	57	7	18	0	82	9	105	1	0	115	512
05:30 PM	5	16	29	0	50	17	118	83	0	218	83	7	19	0	109	11	106	1	0	118	495
05:45 PM	1	28	30	0	59	11	144	110	0	265	68	6	18	0	92	11	86	0	0	97	513
Total Volume	13	68	136	0	217	61	549	369	0	979	290	28	68	0	386	37	402	2	0	441	2023
% App. Total	6	31.3	62.7	0		6.2	56.1	37.7	0		75.1	7.3	17.6	0		8.4	91.2	0.5	0		
PHF	.650	.607	.829	.000	.919	.897	.934	.839	.000	.924	.873	.875	.895	.000	.885	.841	.948	.500	.000	.934	.986
Cars	13	68	135	0	216	59	533	365	0	957	280	28	67	0	375	37	373	2	0	412	1960
% Cars	100	100	99.3	0	99.5	96.7	97.1	98.9	0	97.8	96.6	100	98.5	0	97.2	100	92.8	100	0	93.4	96.9
Heavy Vehicles	0	0	1	0	1	2	16	4	0	22	10	0	1	0	11	0	29	0	0	29	63
% Heavy Vehicles	0	0	0.7	0	0.5	3.3	2.9	1.1	0	2.2	3.4	0	1.5	0	2.8	0	7.2	0	0	6.6	3.1

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Groups Printed- Cars

	Franklin Street From North				Cambridge Street From East				Harvard Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	4	6	22	0	16	118	66	0	78	13	12	0	4	94	0	0	433
04:15 PM	3	7	26	0	17	124	87	0	67	7	21	0	6	88	1	0	454
04:30 PM	2	14	30	0	14	143	94	0	79	3	13	0	17	112	0	0	521
04:45 PM	1	13	27	0	15	129	91	0	50	8	12	0	7	81	0	0	434
Total	10	40	105	0	62	514	338	0	274	31	58	0	34	375	1	0	1842
05:00 PM	5	8	40	0	15	135	77	0	81	8	13	0	6	101	0	0	489
05:15 PM	2	16	36	0	16	140	97	0	53	7	18	0	9	98	1	0	493
05:30 PM	5	16	29	0	17	116	82	0	82	7	18	0	11	97	1	0	481
05:45 PM	1	28	30	0	11	142	109	0	64	6	18	0	11	77	0	0	497
Total	13	68	135	0	59	533	365	0	280	28	67	0	37	373	2	0	1960
Grand Total	23	108	240	0	121	1047	703	0	554	59	125	0	71	748	3	0	3802
Apprch %	6.2	29.1	64.7	0	6.5	56	37.6	0	75.1	8	16.9	0	8.6	91	0.4	0	
Total %	0.6	2.8	6.3	0	3.2	27.5	18.5	0	14.6	1.6	3.3	0	1.9	19.7	0.1	0	

	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	5	8	40	0	53	15	135	77	0	227	81	8	13	0	102	6	101	0	0	107	489
05:15 PM	2	16	36	0	54	16	140	97	0	253	53	7	18	0	78	9	98	1	0	108	493
05:30 PM	5	16	29	0	50	17	116	82	0	215	82	7	18	0	107	11	97	1	0	109	481
05:45 PM	1	28	30	0	59	11	142	109	0	262	64	6	18	0	88	11	77	0	0	88	497
Total Volume	13	68	135	0	216	59	533	365	0	957	280	28	67	0	375	37	373	2	0	412	1960
% App. Total	6	31.5	62.5	0		6.2	55.7	38.1	0		74.7	7.5	17.9	0		9	90.5	0.5	0		
PHF	.650	.607	.844	.000	.915	.868	.938	.837	.000	.913	.854	.875	.931	.000	.876	.841	.923	.500	.000	.945	.986

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Groups Printed- Heavy Vehicles

	Franklin Street From North				Cambridge Street From East				Harvard Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	1	1	0	1	8	3	0	2	0	0	0	1	6	0	0	23
04:15 PM	1	0	1	0	0	7	2	0	2	0	1	0	0	6	0	0	20
04:30 PM	0	0	0	0	2	1	2	0	1	0	0	0	0	7	0	0	13
04:45 PM	0	1	1	0	0	5	0	0	1	0	0	0	1	10	0	0	19
Total	1	2	3	0	3	21	7	0	6	0	1	0	2	29	0	0	75
05:00 PM	0	0	1	0	2	5	1	0	1	0	0	0	0	4	0	0	14
05:15 PM	0	0	0	0	0	7	1	0	4	0	0	0	0	7	0	0	19
05:30 PM	0	0	0	0	0	2	1	0	1	0	1	0	0	9	0	0	14
05:45 PM	0	0	0	0	0	2	1	0	4	0	0	0	0	9	0	0	16
Total	0	0	1	0	2	16	4	0	10	0	1	0	0	29	0	0	63
Grand Total	1	2	4	0	5	37	11	0	16	0	2	0	2	58	0	0	138
Apprch %	14.3	28.6	57.1	0	9.4	69.8	20.8	0	88.9	0	11.1	0	3.3	96.7	0	0	
Total %	0.7	1.4	2.9	0	3.6	26.8	8	0	11.6	0	1.4	0	1.4	42	0	0	

	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	1	1	0	2	1	8	3	0	12	2	0	0	0	2	1	6	0	0	7	23
04:15 PM	1	0	1	0	2	0	7	2	0	9	2	0	1	0	3	0	6	0	0	6	20
04:30 PM	0	0	0	0	0	2	1	2	0	5	1	0	0	0	1	0	7	0	0	7	13
04:45 PM	0	1	1	0	2	0	5	0	0	5	1	0	0	0	1	1	10	0	0	11	19
Total Volume	1	2	3	0	6	3	21	7	0	31	6	0	1	0	7	2	29	0	0	31	75
% App. Total	16.7	33.3	50	0		9.7	67.7	22.6	0		85.7	0	14.3	0		6.5	93.5	0	0		
PHF	.250	.500	.750	.000	.750	.375	.656	.583	.000	.646	.750	.000	.250	.000	.583	.500	.725	.000	.000	.705	.815

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Site Code : 12305
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Groups Printed- Peds and Bikes

	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	11	5	1	5	2	9	10	1	1	0	10	3	0	0	0	9	7	74
04:15 PM	0	1	0	16	5	0	2	1	2	7	1	0	0	7	0	0	0	0	12	2	56
04:30 PM	0	0	0	10	11	0	5	3	3	3	3	2	0	2	4	0	1	0	9	8	64
04:45 PM	0	0	1	3	4	0	1	4	6	9	2	3	0	4	1	0	1	0	7	5	51
Total	0	1	1	40	25	1	13	10	20	29	7	6	0	23	8	0	2	0	37	22	245
05:00 PM	0	3	1	10	5	0	5	0	8	13	3	0	0	5	8	0	1	0	7	25	94
05:15 PM	0	6	1	14	10	0	9	8	13	12	1	2	0	2	6	0	0	0	5	8	97
05:30 PM	0	2	0	7	7	1	7	4	11	18	2	1	0	1	9	0	0	0	5	12	87
05:45 PM	0	3	0	6	6	1	9	2	13	14	0	0	0	5	3	0	2	0	9	15	88
Total	0	14	2	37	28	2	30	14	45	57	6	3	0	13	26	0	3	0	26	60	366
Grand Total	0	15	3	77	53	3	43	24	65	86	13	9	0	36	34	0	5	0	63	82	611
Apprch %	0	10.1	2	52	35.8	1.4	19.5	10.9	29.4	38.9	14.1	9.8	0	39.1	37	0	3.3	0	42	54.7	
Total %	0	2.5	0.5	12.6	8.7	0.5	7	3.9	10.6	14.1	2.1	1.5	0	5.9	5.6	0	0.8	0	10.3	13.4	

	Franklin Street From North						Cambridge Street From East						Harvard Street From South						Cambridge Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	0	3	1	10	5	19	0	5	0	8	13	26	3	0	0	5	8	16	0	1	0	7	25	33	94
05:15 PM	0	6	1	14	10	31	0	9	8	13	12	42	1	2	0	2	6	11	0	0	0	5	8	13	97
05:30 PM	0	2	0	7	7	16	1	7	4	11	18	41	2	1	0	1	9	13	0	0	0	5	12	17	87
05:45 PM	0	3	0	6	6	15	1	9	2	13	14	39	0	0	0	5	3	8	0	2	0	9	15	26	88
Total Volume	0	14	2	37	28	81	2	30	14	45	57	148	6	3	0	13	26	48	0	3	0	26	60	89	366
% App. Total	0	17.3	2.5	45.7	34.6		1.4	20.3	9.5	30.4	38.5		12.5	6.2	0	27.1	54.2		0	3.4	0	29.2	67.4		
PHF	.000	.583	.500	.661	.700	.653	.500	.833	.438	.865	.792	.881	.500	.375	.000	.650	.722	.750	.000	.375	.000	.722	.600	.674	.943

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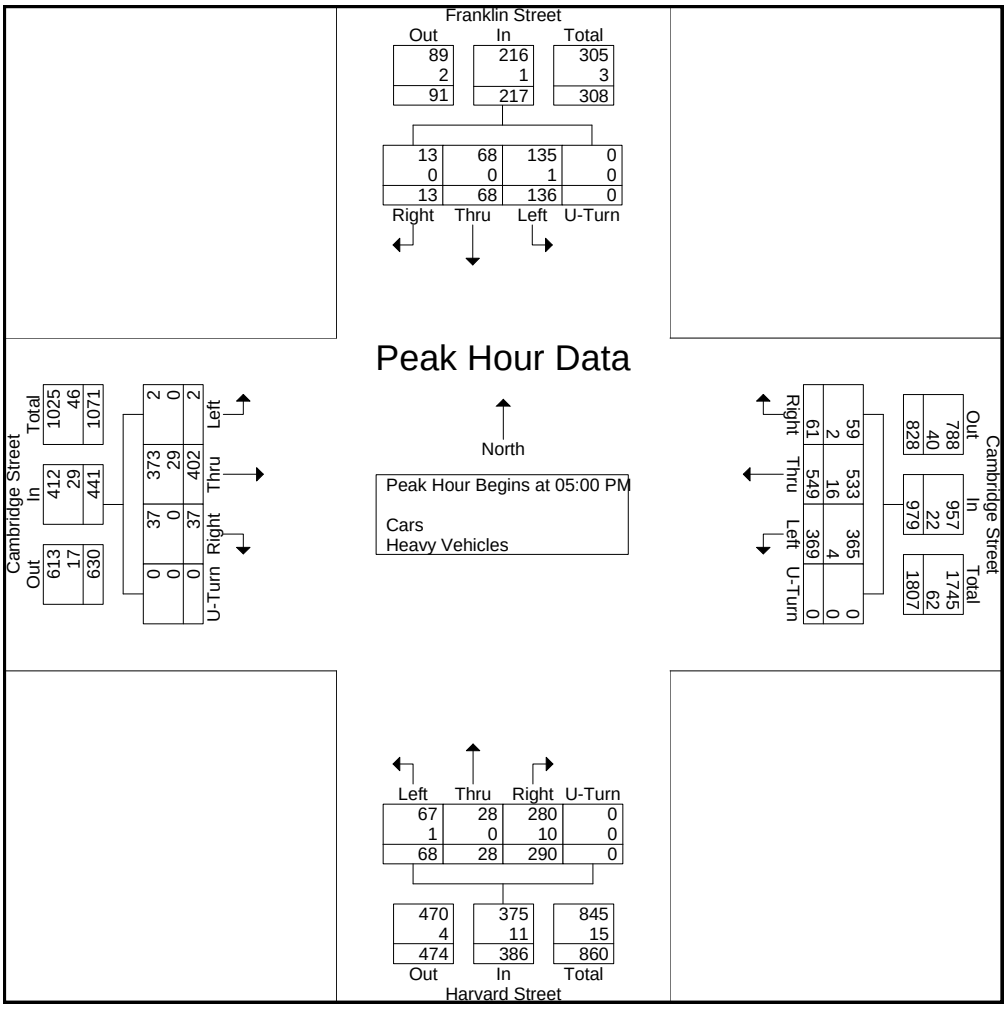
	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	5	8	41	0	54	17	140	78	0	235	82	8	13	0	103	6	105	0	0	111	503
05:15 PM	2	16	36	0	54	16	147	98	0	261	57	7	18	0	82	9	105	1	0	115	512
05:30 PM	5	16	29	0	50	17	118	83	0	218	83	7	19	0	109	11	106	1	0	118	495
05:45 PM	1	28	30	0	59	11	144	110	0	265	68	6	18	0	92	11	86	0	0	97	513
Total Volume	13	68	136	0	217	61	549	369	0	979	290	28	68	0	386	37	402	2	0	441	2023
% App. Total	6	31.3	62.7	0		6.2	56.1	37.7	0		75.1	7.3	17.6	0		8.4	91.2	0.5	0		
PHF	.650	.607	.829	.000	.919	.897	.934	.839	.000	.924	.873	.875	.895	.000	.885	.841	.948	.500	.000	.934	.986
Cars	13	68	135	0	216	59	533	365	0	957	280	28	67	0	375	37	373	2	0	412	1960
% Cars	100	100	99.3	0	99.5	96.7	97.1	98.9	0	97.8	96.6	100	98.5	0	97.2	100	92.8	100	0	93.4	96.9
Heavy Vehicles	0	0	1	0	1	2	16	4	0	22	10	0	1	0	11	0	29	0	0	29	63
% Heavy Vehicles	0	0	0.7	0	0.5	3.3	2.9	1.1	0	2.2	3.4	0	1.5	0	2.8	0	7.2	0	0	6.6	3.1



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File Name : 165274 III
Site Code : 12305
Start Date : 10/15/2016
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Groups Printed- Cars - Heavy Vehicles

	Franklin Street From North				Cambridge Street From East				Harvard Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	3	4	14	0	11	104	69	0	97	6	20	0	9	97	0	0	434
11:15 AM	4	8	12	0	9	94	78	0	93	7	16	0	7	110	1	0	439
11:30 AM	2	4	19	0	13	81	52	0	87	11	24	0	16	123	2	0	434
11:45 AM	8	10	23	0	11	98	67	0	100	9	23	0	18	106	2	0	475
Total	17	26	68	0	44	377	266	0	377	33	83	0	50	436	5	0	1782
12:00 PM	3	12	26	0	21	102	68	0	81	3	16	0	10	108	3	0	453
12:15 PM	3	11	17	0	7	80	73	0	103	4	20	0	18	90	3	0	429
12:30 PM	12	10	29	0	11	98	74	0	90	6	19	0	9	110	1	0	469
12:45 PM	2	6	9	0	10	113	60	0	70	11	17	0	11	92	1	0	402
Total	20	39	81	0	49	393	275	0	344	24	72	0	48	400	8	0	1753
01:00 PM	7	18	13	0	13	96	64	0	82	10	22	0	11	118	2	0	456
01:15 PM	1	7	13	0	12	103	80	0	95	8	16	0	17	97	0	0	449
01:30 PM	4	7	31	0	10	100	67	0	77	8	13	0	11	107	2	0	437
01:45 PM	5	13	14	0	14	93	76	0	76	9	18	1	17	111	0	0	447
Total	17	45	71	0	49	392	287	0	330	35	69	1	56	433	4	0	1789
Grand Total	54	110	220	0	142	1162	828	0	1051	92	224	1	154	1269	17	0	5324
Apprch %	14.1	28.6	57.3	0	6.7	54.5	38.8	0	76.8	6.7	16.4	0.1	10.7	88.1	1.2	0	
Total %	1	2.1	4.1	0	2.7	21.8	15.6	0	19.7	1.7	4.2	0	2.9	23.8	0.3	0	
Cars	54	110	218	0	141	1127	803	0	1026	91	221	1	151	1221	17	0	5181
% Cars	100	100	99.1	0	99.3	97	97	0	97.6	98.9	98.7	100	98.1	96.2	100	0	97.3
Heavy Vehicles	0	0	2	0	1	35	25	0	25	1	3	0	3	48	0	0	143
% Heavy Vehicles	0	0	0.9	0	0.7	3	3	0	2.4	1.1	1.3	0	1.9	3.8	0	0	2.7

	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	8	10	23	0	41	11	98	67	0	176	100	9	23	0	132	18	106	2	0	126	475
12:00 PM	3	12	26	0	41	21	102	68	0	191	81	3	16	0	100	10	108	3	0	121	453
12:15 PM	3	11	17	0	31	7	80	73	0	160	103	4	20	0	127	18	90	3	0	111	429
12:30 PM	12	10	29	0	51	11	98	74	0	183	90	6	19	0	115	9	110	1	0	120	469
Total Volume	26	43	95	0	164	50	378	282	0	710	374	22	78	0	474	55	414	9	0	478	1826
% App. Total	15.9	26.2	57.9	0		7	53.2	39.7	0		78.9	4.6	16.5	0		11.5	86.6	1.9	0		
PHF	.542	.896	.819	.000	.804	.595	.926	.953	.000	.929	.908	.611	.848	.000	.898	.764	.941	.750	.000	.948	.961
Cars	26	43	95	0	164	50	370	273	0	693	365	22	77	0	464	54	395	9	0	458	1779
% Cars	100	100	100	0	100	100	97.9	96.8	0	97.6	97.6	100	98.7	0	97.9	98.2	95.4	100	0	95.8	97.4
Heavy Vehicles	0	0	0	0	0	0	8	9	0	17	9	0	1	0	10	1	19	0	0	20	47
% Heavy Vehicles	0	0	0	0	0	0	2.1	3.2	0	2.4	2.4	0	1.3	0	2.1	1.8	4.6	0	0	4.2	2.6

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Groups Printed- Cars

	Franklin Street From North				Cambridge Street From East				Harvard Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	3	4	14	0	11	103	69	0	94	5	20	0	9	92	0	0	424
11:15 AM	4	8	11	0	9	94	74	0	93	7	16	0	7	107	1	0	431
11:30 AM	2	4	19	0	13	76	51	0	82	11	23	0	15	120	2	0	418
11:45 AM	8	10	23	0	11	95	64	0	98	9	22	0	18	100	2	0	460
Total	17	26	67	0	44	368	258	0	367	32	81	0	49	419	5	0	1733
12:00 PM	3	12	26	0	21	100	65	0	77	3	16	0	10	106	3	0	442
12:15 PM	3	11	17	0	7	78	72	0	102	4	20	0	17	83	3	0	417
12:30 PM	12	10	29	0	11	97	72	0	88	6	19	0	9	106	1	0	460
12:45 PM	2	6	9	0	10	106	55	0	69	11	16	0	10	88	1	0	383
Total	20	39	81	0	49	381	264	0	336	24	71	0	46	383	8	0	1702
01:00 PM	7	18	13	0	12	93	63	0	78	10	22	0	11	116	2	0	445
01:15 PM	1	7	13	0	12	98	79	0	95	8	16	0	17	90	0	0	436
01:30 PM	4	7	31	0	10	98	66	0	76	8	13	0	11	105	2	0	431
01:45 PM	5	13	13	0	14	89	73	0	74	9	18	1	17	108	0	0	434
Total	17	45	70	0	48	378	281	0	323	35	69	1	56	419	4	0	1746
Grand Total	54	110	218	0	141	1127	803	0	1026	91	221	1	151	1221	17	0	5181
Apprch %	14.1	28.8	57.1	0	6.8	54.4	38.8	0	76.6	6.8	16.5	0.1	10.9	87.9	1.2	0	
Total %	1	2.1	4.2	0	2.7	21.8	15.5	0	19.8	1.8	4.3	0	2.9	23.6	0.3	0	

	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	8	10	23	0	41	11	95	64	0	170	98	9	22	0	129	18	100	2	0	120	460
12:00 PM	3	12	26	0	41	21	100	65	0	186	77	3	16	0	96	10	106	3	0	119	442
12:15 PM	3	11	17	0	31	7	78	72	0	157	102	4	20	0	126	17	83	3	0	103	417
12:30 PM	12	10	29	0	51	11	97	72	0	180	88	6	19	0	113	9	106	1	0	116	460
Total Volume	26	43	95	0	164	50	370	273	0	693	365	22	77	0	464	54	395	9	0	458	1779
% App. Total	15.9	26.2	57.9	0		7.2	53.4	39.4	0		78.7	4.7	16.6	0		11.8	86.2	2	0		
PHF	.542	.896	.819	.000	.804	.595	.925	.948	.000	.931	.895	.611	.875	.000	.899	.750	.932	.750	.000	.954	.967

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Groups Printed- Heavy Vehicles

	Franklin Street From North				Cambridge Street From East				Harvard Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	0	0	0	0	1	0	0	3	1	0	0	0	5	0	0	10
11:15 AM	0	0	1	0	0	0	4	0	0	0	0	0	0	3	0	0	8
11:30 AM	0	0	0	0	0	5	1	0	5	0	1	0	1	3	0	0	16
11:45 AM	0	0	0	0	0	3	3	0	2	0	1	0	0	6	0	0	15
Total	0	0	1	0	0	9	8	0	10	1	2	0	1	17	0	0	49
12:00 PM	0	0	0	0	0	2	3	0	4	0	0	0	0	2	0	0	11
12:15 PM	0	0	0	0	0	2	1	0	1	0	0	0	1	7	0	0	12
12:30 PM	0	0	0	0	0	1	2	0	2	0	0	0	0	4	0	0	9
12:45 PM	0	0	0	0	0	7	5	0	1	0	1	0	1	4	0	0	19
Total	0	0	0	0	0	12	11	0	8	0	1	0	2	17	0	0	51
01:00 PM	0	0	0	0	1	3	1	0	4	0	0	0	0	2	0	0	11
01:15 PM	0	0	0	0	0	5	1	0	0	0	0	0	0	7	0	0	13
01:30 PM	0	0	0	0	0	2	1	0	1	0	0	0	0	2	0	0	6
01:45 PM	0	0	1	0	0	4	3	0	2	0	0	0	0	3	0	0	13
Total	0	0	1	0	1	14	6	0	7	0	0	0	0	14	0	0	43
Grand Total	0	0	2	0	1	35	25	0	25	1	3	0	3	48	0	0	143
Apprch %	0	0	100	0	1.6	57.4	41	0	86.2	3.4	10.3	0	5.9	94.1	0	0	
Total %	0	0	1.4	0	0.7	24.5	17.5	0	17.5	0.7	2.1	0	2.1	33.6	0	0	

	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	0	0	0	0	0	0	5	1	0	6	5	0	1	0	6	1	3	0	0	4	16
11:45 AM	0	0	0	0	0	0	3	3	0	6	2	0	1	0	3	0	6	0	0	6	15
12:00 PM	0	0	0	0	0	0	2	3	0	5	4	0	0	0	4	0	2	0	0	2	11
12:15 PM	0	0	0	0	0	0	2	1	0	3	1	0	0	0	1	1	7	0	0	8	12
Total Volume	0	0	0	0	0	0	12	8	0	20	12	0	2	0	14	2	18	0	0	20	54
% App. Total	0	0	0	0		0	60	40	0		85.7	0	14.3	0		10	90	0	0		
PHF	.000	.000	.000	.000	.000	.000	.600	.667	.000	.833	.600	.000	.500	.000	.583	.500	.643	.000	.000	.625	.844

N/S: Franklin Street/ Harvard Street
E/W: Cambridge Street
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 III
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Peds and Bikes

	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	3	7	0	2	0	7	13	0	0	0	17	4	1	3	0	13	9	79
11:15 AM	0	1	0	0	5	0	2	3	3	7	3	0	0	4	1	0	0	0	4	4	37
11:30 AM	0	2	0	9	11	0	1	5	14	9	0	0	0	4	5	0	2	0	3	9	74
11:45 AM	0	2	0	13	8	0	1	3	10	6	2	1	0	12	5	0	0	1	7	7	78
Total	0	5	0	25	31	0	6	11	34	35	5	1	0	37	15	1	5	1	27	29	268
12:00 PM	0	0	0	10	6	0	1	2	11	8	3	1	0	7	1	0	0	0	28	6	84
12:15 PM	0	1	0	8	14	1	0	4	6	9	0	0	0	7	6	1	2	0	5	12	76
12:30 PM	0	4	1	6	18	1	5	2	11	4	0	0	0	5	3	1	2	0	9	22	94
12:45 PM	0	3	0	9	10	2	6	5	15	7	2	0	0	9	5	0	2	0	9	11	95
Total	0	8	1	33	48	4	12	13	43	28	5	1	0	28	15	2	6	0	51	51	349
01:00 PM	0	3	1	4	6	0	2	0	5	4	1	0	0	8	1	0	0	0	9	5	49
01:15 PM	0	3	0	7	9	0	1	0	18	5	1	0	0	2	10	1	1	0	7	12	77
01:30 PM	0	4	0	12	4	0	4	1	7	9	0	0	0	3	6	0	0	0	9	17	76
01:45 PM	0	1	0	7	4	1	1	2	10	17	0	1	0	4	4	0	2	0	9	10	73
Total	0	11	1	30	23	1	8	3	40	35	2	1	0	17	21	1	3	0	34	44	275
Grand Total	0	24	2	88	102	5	26	27	117	98	12	3	0	82	51	4	14	1	112	124	892
Apprch %	0	11.1	0.9	40.7	47.2	1.8	9.5	9.9	42.9	35.9	8.1	2	0	55.4	34.5	1.6	5.5	0.4	43.9	48.6	
Total %	0	2.7	0.2	9.9	11.4	0.6	2.9	3	13.1	11	1.3	0.3	0	9.2	5.7	0.4	1.6	0.1	12.6	13.9	

	Franklin Street From North						Cambridge Street From East						Harvard Street From South						Cambridge Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 12:00 PM																									
12:00 PM	0	0	0	10	6	16	0	1	2	11	8	22	3	1	0	7	1	12	0	0	0	28	6	34	84
12:15 PM	0	1	0	8	14	23	1	0	4	6	9	20	0	0	0	7	6	13	1	2	0	5	12	20	76
12:30 PM	0	4	1	6	18	29	1	5	2	11	4	23	0	0	0	5	3	8	1	2	0	9	22	34	94
12:45 PM	0	3	0	9	10	22	2	6	5	15	7	35	2	0	0	9	5	16	0	2	0	9	11	22	95
Total Volume	0	8	1	33	48	90	4	12	13	43	28	100	5	1	0	28	15	49	2	6	0	51	51	110	349
% App. Total	0	8.9	1.1	36.7	53.3		4	12	13	43	28		10.2	2	0	57.1	30.6		1.8	5.5	0	46.4	46.4		
PHF	.000	.500	.250	.825	.667	.776	.500	.500	.650	.717	.778	.714	.417	.250	.000	.778	.625	.766	.500	.750	.000	.455	.580	.809	.918

N/S: Franklin Street/ Harvard Street
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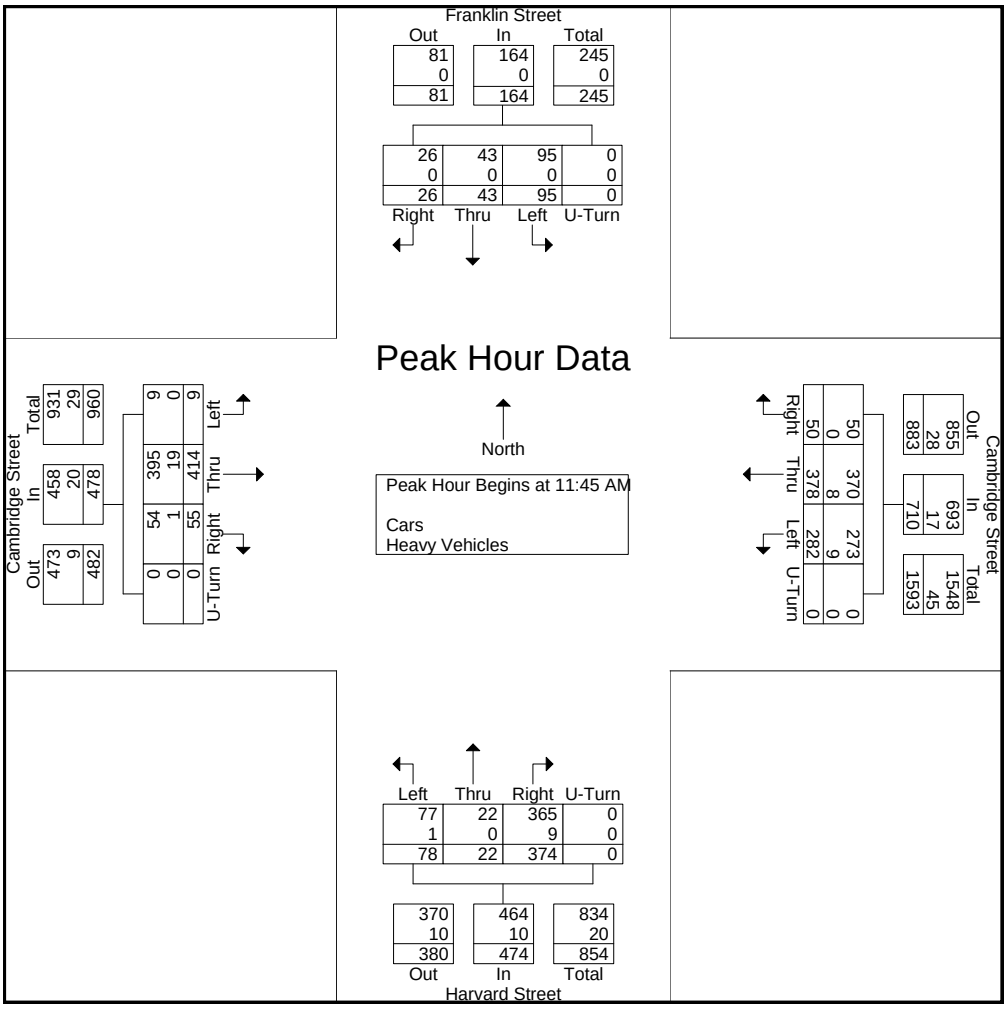
	Franklin Street From North					Cambridge Street From East					Harvard Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	8	10	23	0	41	11	98	67	0	176	100	9	23	0	132	18	106	2	0	126	475
12:00 PM	3	12	26	0	41	21	102	68	0	191	81	3	16	0	100	10	108	3	0	121	453
12:15 PM	3	11	17	0	31	7	80	73	0	160	103	4	20	0	127	18	90	3	0	111	429
12:30 PM	12	10	29	0	51	11	98	74	0	183	90	6	19	0	115	9	110	1	0	120	469
Total Volume	26	43	95	0	164	50	378	282	0	710	374	22	78	0	474	55	414	9	0	478	1826
% App. Total	15.9	26.2	57.9	0		7	53.2	39.7	0		78.9	4.6	16.5	0		11.5	86.6	1.9	0		
PHF	.542	.896	.819	.000	.804	.595	.926	.953	.000	.929	.908	.611	.848	.000	.898	.764	.941	.750	.000	.948	.961
Cars	26	43	95	0	164	50	370	273	0	693	365	22	77	0	464	54	395	9	0	458	1779
% Cars	100	100	100	0	100	100	97.9	96.8	0	97.6	97.6	100	98.7	0	97.9	98.2	95.4	100	0	95.8	97.4
Heavy Vehicles	0	0	0	0	0	0	8	9	0	17	9	0	1	0	10	1	19	0	0	20	47
% Heavy Vehicles	0	0	0	0	0	0	2.1	3.2	0	2.4	2.4	0	1.3	0	2.1	1.8	4.6	0	0	4.2	2.6



PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Email: datarequests@pdillc.com

S: Rugg Road
E/W: Braintree Street
City, State: Allston, MA
Client: VHB/ P. Dunford

File Name : 165274 J
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Braintree Street From East			Rugg Road From South			Braintree Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	12	5	0	1	1	0	0	9	0	28
07:15 AM	24	3	0	1	1	0	3	18	0	50
07:30 AM	21	0	0	4	0	0	2	31	0	58
07:45 AM	22	3	0	8	4	0	3	23	0	63
Total	79	11	0	14	6	0	8	81	0	199
08:00 AM	21	2	0	3	1	0	2	24	0	53
08:15 AM	20	3	0	1	1	0	10	25	0	60
08:30 AM	20	4	0	6	2	0	4	20	0	56
08:45 AM	32	2	0	9	5	0	4	20	0	72
Total	93	11	0	19	9	0	20	89	0	241
Grand Total	172	22	0	33	15	0	28	170	0	440
Apprch %	88.7	11.3	0	68.8	31.2	0	14.1	85.9	0	
Total %	39.1	5	0	7.5	3.4	0	6.4	38.6	0	
Cars	168	21	0	25	14	0	27	159	0	414
% Cars	97.7	95.5	0	75.8	93.3	0	96.4	93.5	0	94.1
Heavy Vehicles	4	1	0	8	1	0	1	11	0	26
% Heavy Vehicles	2.3	4.5	0	24.2	6.7	0	3.6	6.5	0	5.9

	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	21	2	0	23	3	1	0	4	2	24	0	26	53
08:15 AM	20	3	0	23	1	1	0	2	10	25	0	35	60
08:30 AM	20	4	0	24	6	2	0	8	4	20	0	24	56
08:45 AM	32	2	0	34	9	5	0	14	4	20	0	24	72
Total Volume	93	11	0	104	19	9	0	28	20	89	0	109	241
% App. Total	89.4	10.6	0		67.9	32.1	0		18.3	81.7	0		
PHF	.727	.688	.000	.765	.528	.450	.000	.500	.500	.890	.000	.779	.837
Cars	92	10	0	102	14	8	0	22	20	84	0	104	228
% Cars	98.9	90.9	0	98.1	73.7	88.9	0	78.6	100	94.4	0	95.4	94.6
Heavy Vehicles	1	1	0	2	5	1	0	6	0	5	0	5	13
% Heavy Vehicles	1.1	9.1	0	1.9	26.3	11.1	0	21.4	0	5.6	0	4.6	5.4

S: Rugg Road
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Page No : 1

Groups Printed- Cars

	Braintree Street From East			Rugg Road From South			Braintree Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	12	5	0	1	1	0	0	9	0	28
07:15 AM	23	3	0	1	1	0	3	16	0	47
07:30 AM	19	0	0	2	0	0	2	30	0	53
07:45 AM	22	3	0	7	4	0	2	20	0	58
Total	76	11	0	11	6	0	7	75	0	186
08:00 AM	21	2	0	3	1	0	2	24	0	53
08:15 AM	20	3	0	1	1	0	10	23	0	58
08:30 AM	19	3	0	5	1	0	4	18	0	50
08:45 AM	32	2	0	5	5	0	4	19	0	67
Total	92	10	0	14	8	0	20	84	0	228
Grand Total	168	21	0	25	14	0	27	159	0	414
Apprch %	88.9	11.1	0	64.1	35.9	0	14.5	85.5	0	
Total %	40.6	5.1	0	6	3.4	0	6.5	38.4	0	

	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	21	2	0	23	3	1	0	4	2	24	0	26	53
08:15 AM	20	3	0	23	1	1	0	2	10	23	0	33	58
08:30 AM	19	3	0	22	5	1	0	6	4	18	0	22	50
08:45 AM	32	2	0	34	5	5	0	10	4	19	0	23	67
Total Volume	92	10	0	102	14	8	0	22	20	84	0	104	228
% App. Total	90.2	9.8	0		63.6	36.4	0		19.2	80.8	0		
PHF	.719	.833	.000	.750	.700	.400	.000	.550	.500	.875	.000	.788	.851

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Groups Printed- Heavy Vehicles

	Braintree Street From East			Rugg Road From South			Braintree Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	1	0	0	0	0	0	0	2	0	3
07:30 AM	2	0	0	2	0	0	0	1	0	5
07:45 AM	0	0	0	1	0	0	1	3	0	5
Total	3	0	0	3	0	0	1	6	0	13
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	2	0	2
08:30 AM	1	1	0	1	1	0	0	2	0	6
08:45 AM	0	0	0	4	0	0	0	1	0	5
Total	1	1	0	5	1	0	0	5	0	13
Grand Total	4	1	0	8	1	0	1	11	0	26
Apprch %	80	20	0	88.9	11.1	0	8.3	91.7	0	
Total %	15.4	3.8	0	30.8	3.8	0	3.8	42.3	0	

	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	0	0	0
07:15 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
07:30 AM	2	0	0	2	2	0	0	2	0	1	0	1	5
07:45 AM	0	0	0	0	1	0	0	1	1	3	0	4	5
Total Volume	3	0	0	3	3	0	0	3	1	6	0	7	13
% App. Total	100	0	0		100	0	0		14.3	85.7	0		
PHF	.375	.000	.000	.375	.375	.000	.000	.375	.250	.500	.000	.438	.650

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Groups Printed- Peds and Bikes

	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	0	0	0	0	1	0	0	1	2	4
07:15 AM	1	0	0	0	0	0	1	3	1	1	1	0	8
07:30 AM	0	0	0	0	0	0	3	4	0	2	2	1	12
07:45 AM	0	0	0	0	0	0	0	2	0	2	0	0	4
Total	1	0	0	0	0	0	4	10	1	5	4	3	28
08:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	3	2	0	1	0	0	6
08:30 AM	0	0	0	1	2	0	1	0	1	0	0	0	5
08:45 AM	2	0	0	0	0	0	1	2	0	0	0	0	5
Total	2	0	0	3	2	0	5	4	1	1	0	0	18
Grand Total	3	0	0	3	2	0	9	14	2	6	4	3	46
Apprch %	50	0	0	50	8	0	36	56	13.3	40	26.7	20	
Total %	6.5	0	0	6.5	4.3	0	19.6	30.4	4.3	13	8.7	6.5	

	Braintree Street From East					Rugg Road From South					Braintree Street From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	1	1	0	0	1	2	3	4
07:15 AM	1	0	0	0	1	0	0	1	3	4	1	1	1	0	3	8
07:30 AM	0	0	0	0	0	0	0	3	4	7	0	2	2	1	5	12
07:45 AM	0	0	0	0	0	0	0	0	2	2	0	2	0	0	2	4
Total Volume	1	0	0	0	1	0	0	4	10	14	1	5	4	3	13	28
% App. Total	100	0	0	0		0	0	28.6	71.4		7.7	38.5	30.8	23.1		
PHF	.250	.000	.000	.000	.250	.000	.000	.333	.625	.500	.250	.625	.500	.375	.650	.583

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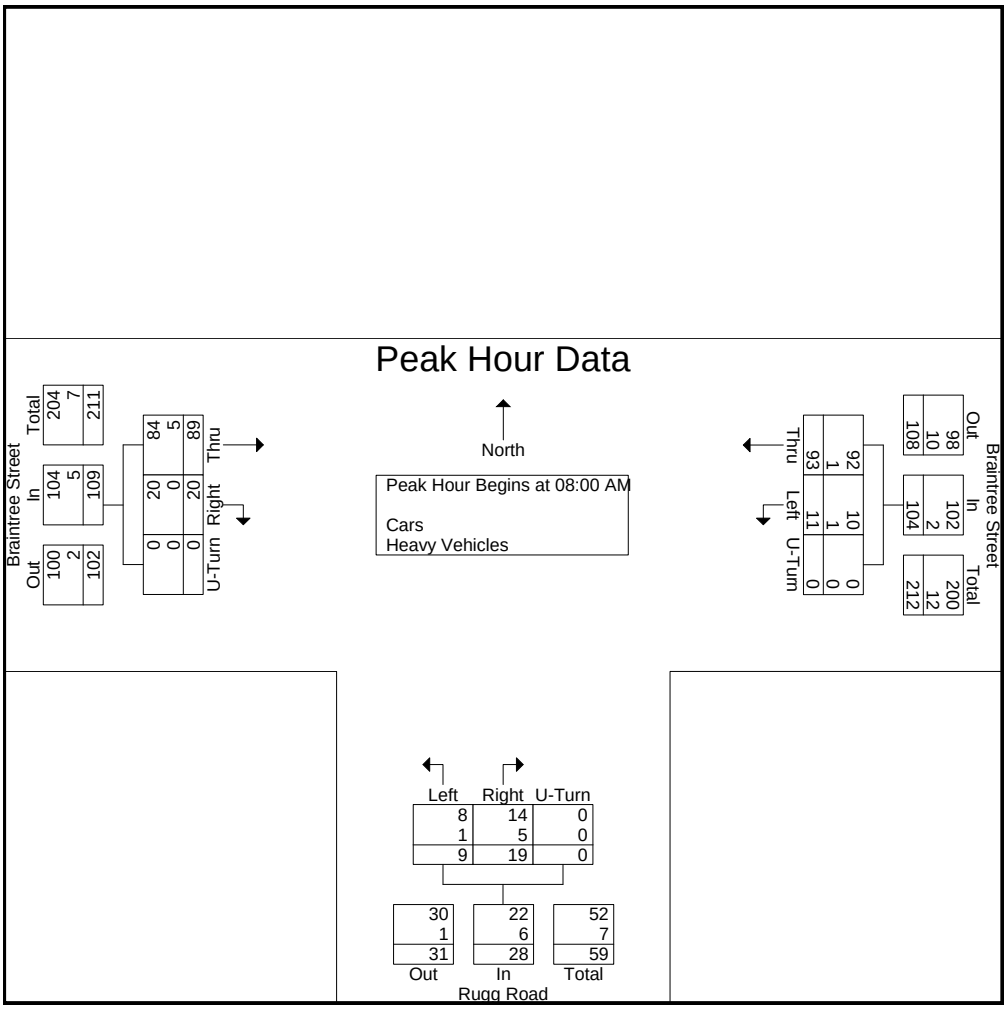
	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	21	2	0	23	3	1	0	4	2	24	0	26	53
08:15 AM	20	3	0	23	1	1	0	2	10	25	0	35	60
08:30 AM	20	4	0	24	6	2	0	8	4	20	0	24	56
08:45 AM	32	2	0	34	9	5	0	14	4	20	0	24	72
Total Volume	93	11	0	104	19	9	0	28	20	89	0	109	241
% App. Total	89.4	10.6	0		67.9	32.1	0		18.3	81.7	0		
PHF	.727	.688	.000	.765	.528	.450	.000	.500	.500	.890	.000	.779	.837
Cars	92	10	0	102	14	8	0	22	20	84	0	104	228
% Cars	98.9	90.9	0	98.1	73.7	88.9	0	78.6	100	94.4	0	95.4	94.6
Heavy Vehicles	1	1	0	2	5	1	0	6	0	5	0	5	13
% Heavy Vehicles	1.1	9.1	0	1.9	26.3	11.1	0	21.4	0	5.6	0	4.6	5.4



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File Name : 165274 JJ
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Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Braintree Street From East			Rugg Road From South			Braintree Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	31	3	0	2	5	0	3	30	0	74
04:15 PM	28	1	0	9	4	0	5	20	0	67
04:30 PM	22	2	0	11	3	0	1	26	0	65
04:45 PM	23	3	0	9	5	0	4	31	0	75
Total	104	9	0	31	17	0	13	107	0	281
05:00 PM	28	1	0	10	4	0	1	40	0	84
05:15 PM	17	4	0	9	4	0	4	37	0	75
05:30 PM	21	1	0	3	4	0	3	42	0	74
05:45 PM	19	1	0	9	1	0	3	47	0	80
Total	85	7	0	31	13	0	11	166	0	313
Grand Total	189	16	0	62	30	0	24	273	0	594
Apprch %	92.2	7.8	0	67.4	32.6	0	8.1	91.9	0	
Total %	31.8	2.7	0	10.4	5.1	0	4	46	0	
Cars	186	13	0	61	28	0	23	271	0	582
% Cars	98.4	81.2	0	98.4	93.3	0	95.8	99.3	0	98
Heavy Vehicles	3	3	0	1	2	0	1	2	0	12
% Heavy Vehicles	1.6	18.8	0	1.6	6.7	0	4.2	0.7	0	2

	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	28	1	0	29	10	4	0	14	1	40	0	41	84
05:15 PM	17	4	0	21	9	4	0	13	4	37	0	41	75
05:30 PM	21	1	0	22	3	4	0	7	3	42	0	45	74
05:45 PM	19	1	0	20	9	1	0	10	3	47	0	50	80
Total Volume	85	7	0	92	31	13	0	44	11	166	0	177	313
% App. Total	92.4	7.6	0		70.5	29.5	0		6.2	93.8	0		
PHF	.759	.438	.000	.793	.775	.813	.000	.786	.688	.883	.000	.885	.932
Cars	85	5	0	90	31	13	0	44	11	165	0	176	310
% Cars	100	71.4	0	97.8	100	100	0	100	100	99.4	0	99.4	99.0
Heavy Vehicles	0	2	0	2	0	0	0	0	0	1	0	1	3
% Heavy Vehicles	0	28.6	0	2.2	0	0	0	0	0	0.6	0	0.6	1.0

S: Rugg Road
E/W: Braintree Street
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
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File Name : 165274 JJ
Site Code : 12305
Start Date : 10/13/2016
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Groups Printed- Cars

	Braintree Street From East			Rugg Road From South			Braintree Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	30	3	0	2	5	0	3	30	0	73
04:15 PM	28	1	0	9	2	0	4	20	0	64
04:30 PM	21	1	0	11	3	0	1	26	0	63
04:45 PM	22	3	0	8	5	0	4	30	0	72
Total	101	8	0	30	15	0	12	106	0	272
05:00 PM	28	0	0	10	4	0	1	39	0	82
05:15 PM	17	3	0	9	4	0	4	37	0	74
05:30 PM	21	1	0	3	4	0	3	42	0	74
05:45 PM	19	1	0	9	1	0	3	47	0	80
Total	85	5	0	31	13	0	11	165	0	310
Grand Total	186	13	0	61	28	0	23	271	0	582
Apprch %	93.5	6.5	0	68.5	31.5	0	7.8	92.2	0	
Total %	32	2.2	0	10.5	4.8	0	4	46.6	0	

	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	28	0	0	28	10	4	0	14	1	39	0	40	82
05:15 PM	17	3	0	20	9	4	0	13	4	37	0	41	74
05:30 PM	21	1	0	22	3	4	0	7	3	42	0	45	74
05:45 PM	19	1	0	20	9	1	0	10	3	47	0	50	80
Total Volume	85	5	0	90	31	13	0	44	11	165	0	176	310
% App. Total	94.4	5.6	0		70.5	29.5	0		6.2	93.8	0		
PHF	.759	.417	.000	.804	.775	.813	.000	.786	.688	.878	.000	.880	.945

S: Rugg Road
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File Name : 165274 JJ
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Start Date : 10/13/2016
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Groups Printed- Heavy Vehicles

	Braintree Street From East			Rugg Road From South			Braintree Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	2	0	1	0	0	3
04:30 PM	1	1	0	0	0	0	0	0	0	2
04:45 PM	1	0	0	1	0	0	0	1	0	3
Total	3	1	0	1	2	0	1	1	0	9
05:00 PM	0	1	0	0	0	0	0	1	0	2
05:15 PM	0	1	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	0	0	0	1	0	3
Grand Total	3	3	0	1	2	0	1	2	0	12
Apprch %	50	50	0	33.3	66.7	0	33.3	66.7	0	
Total %	25	25	0	8.3	16.7	0	8.3	16.7	0	

	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	2	0	2	1	0	0	1	3
04:30 PM	1	1	0	2	0	0	0	0	0	0	0	0	2
04:45 PM	1	0	0	1	1	0	0	1	0	1	0	1	3
05:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Volume	2	2	0	4	1	2	0	3	1	2	0	3	10
% App. Total	50	50	0		33.3	66.7	0		33.3	66.7	0		
PHF	.500	.500	.000	.500	.250	.250	.000	.375	.250	.500	.000	.750	.833

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S: Rugg Road
E/W: Braintree Street
City, State: Allston, MA
Client: VHB/ P. Dunford

File Name : 165274 JJ
Site Code : 12305
Start Date : 10/13/2016
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Groups Printed- Peds and Bikes

	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
04:00 PM	2	0	0	0	0	0	1	2	0	0	1	0	6
04:15 PM	2	0	0	0	0	0	3	0	0	2	0	0	7
04:30 PM	1	0	0	0	0	0	2	5	0	1	0	0	9
04:45 PM	3	0	1	0	0	1	0	3	0	0	0	0	8
Total	8	0	1	0	0	1	6	10	0	3	1	0	30
05:00 PM	2	0	0	0	0	0	0	1	0	5	0	0	8
05:15 PM	1	0	0	0	0	0	0	2	0	5	0	0	8
05:30 PM	1	0	0	0	0	0	1	3	0	1	0	0	6
05:45 PM	0	1	0	0	0	0	0	4	0	1	0	0	6
Total	4	1	0	0	0	0	1	10	0	12	0	0	28
Grand Total	12	1	1	0	0	1	7	20	0	15	1	0	58
Apprch %	85.7	7.1	7.1	0	0	3.6	25	71.4	0	93.8	6.2	0	
Total %	20.7	1.7	1.7	0	0	1.7	12.1	34.5	0	25.9	1.7	0	

	Braintree Street From East					Rugg Road From South					Braintree Street From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:30 PM																
04:30 PM	1	0	0	0	1	0	0	2	5	7	0	1	0	0	1	9
04:45 PM	3	0	1	0	4	0	1	0	3	4	0	0	0	0	0	8
05:00 PM	2	0	0	0	2	0	0	0	1	1	0	5	0	0	5	8
05:15 PM	1	0	0	0	1	0	0	0	2	2	0	5	0	0	5	8
Total Volume	7	0	1	0	8	0	1	2	11	14	0	11	0	0	11	33
% App. Total	87.5	0	12.5	0		0	7.1	14.3	78.6		0	100	0	0		
PHF	.583	.000	.250	.000	.500	.000	.250	.250	.550	.500	.000	.550	.000	.000	.550	.917

S: Rugg Road
E/W: Braintree Street
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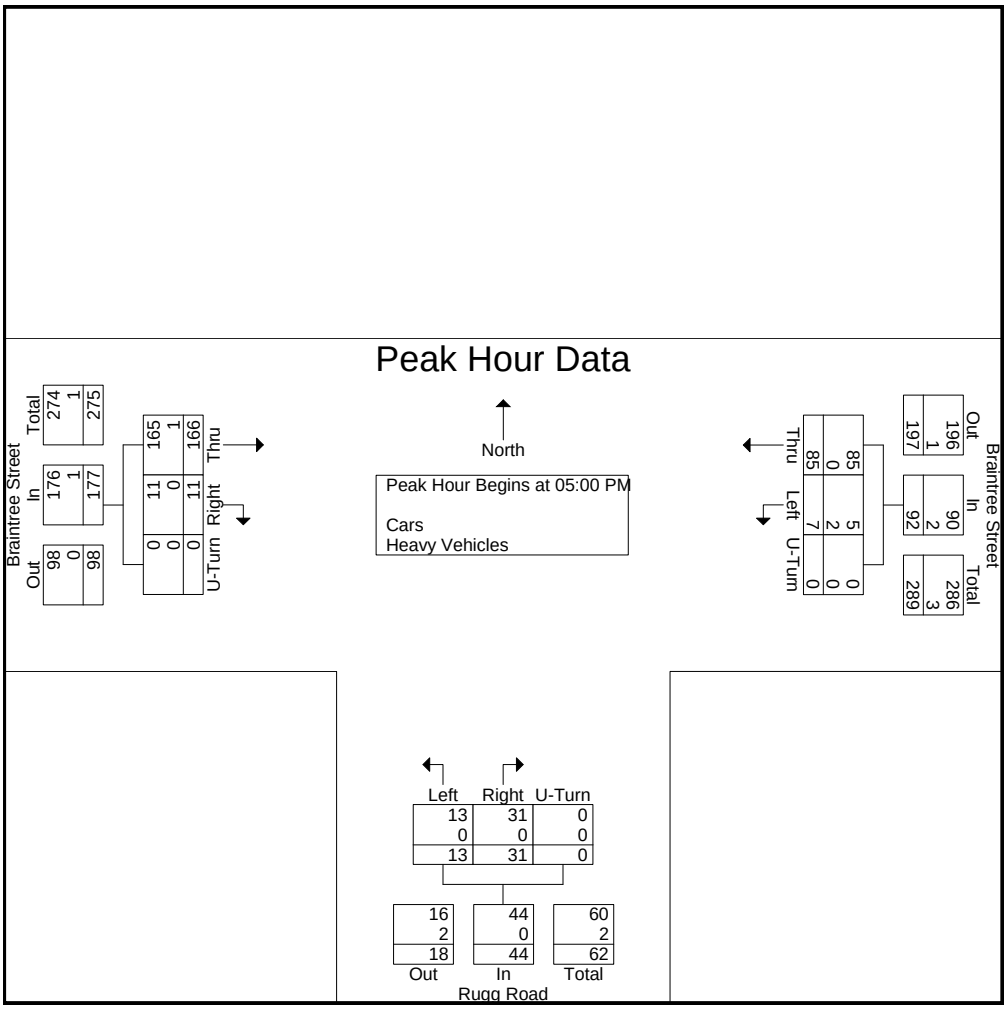
	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	28	1	0	29	10	4	0	14	1	40	0	41	84
05:15 PM	17	4	0	21	9	4	0	13	4	37	0	41	75
05:30 PM	21	1	0	22	3	4	0	7	3	42	0	45	74
05:45 PM	19	1	0	20	9	1	0	10	3	47	0	50	80
Total Volume	85	7	0	92	31	13	0	44	11	166	0	177	313
% App. Total	92.4	7.6	0		70.5	29.5	0		6.2	93.8	0		
PHF	.759	.438	.000	.793	.775	.813	.000	.786	.688	.883	.000	.885	.932
Cars	85	5	0	90	31	13	0	44	11	165	0	176	310
% Cars	100	71.4	0	97.8	100	100	0	100	100	99.4	0	99.4	99.0
Heavy Vehicles	0	2	0	2	0	0	0	0	0	1	0	1	3
% Heavy Vehicles	0	28.6	0	2.2	0	0	0	0	0	0.6	0	0.6	1.0



S: Rugg Road
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File Name : 165274 JJJ
Site Code : 12305
Start Date : 10/15/2016
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Groups Printed- Cars - Heavy Vehicles

	Braintree Street From East			Rugg Road From South			Braintree Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
11:00 AM	16	2	0	3	2	0	0	19	0	42
11:15 AM	14	3	0	6	3	0	8	22	0	56
11:30 AM	25	0	0	3	5	1	5	18	0	57
11:45 AM	19	4	0	8	3	0	6	27	0	67
Total	74	9	0	20	13	1	19	86	0	222
12:00 PM	23	5	0	7	8	0	3	23	0	69
12:15 PM	8	1	0	9	2	0	5	22	0	47
12:30 PM	15	4	0	6	5	0	3	35	0	68
12:45 PM	15	0	0	0	4	0	3	16	0	38
Total	61	10	0	22	19	0	14	96	0	222
01:00 PM	16	2	0	8	5	0	5	19	0	55
01:15 PM	20	2	0	4	3	0	2	17	0	48
01:30 PM	22	0	0	3	1	0	5	29	0	60
01:45 PM	22	0	0	5	5	0	3	22	0	57
Total	80	4	0	20	14	0	15	87	0	220
Grand Total	215	23	0	62	46	1	48	269	0	664
Apprch %	90.3	9.7	0	56.9	42.2	0.9	15.1	84.9	0	
Total %	32.4	3.5	0	9.3	6.9	0.2	7.2	40.5	0	
Cars	213	22	0	61	46	1	45	268	0	656
% Cars	99.1	95.7	0	98.4	100	100	93.8	99.6	0	98.8
Heavy Vehicles	2	1	0	1	0	0	3	1	0	8
% Heavy Vehicles	0.9	4.3	0	1.6	0	0	6.2	0.4	0	1.2

	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:45 AM													
11:45 AM	19	4	0	23	8	3	0	11	6	27	0	33	67
12:00 PM	23	5	0	28	7	8	0	15	3	23	0	26	69
12:15 PM	8	1	0	9	9	2	0	11	5	22	0	27	47
12:30 PM	15	4	0	19	6	5	0	11	3	35	0	38	68
Total Volume	65	14	0	79	30	18	0	48	17	107	0	124	251
% App. Total	82.3	17.7	0		62.5	37.5	0		13.7	86.3	0		
PHF	.707	.700	.000	.705	.833	.563	.000	.800	.708	.764	.000	.816	.909
Cars	65	13	0	78	30	18	0	48	16	107	0	123	249
% Cars	100	92.9	0	98.7	100	100	0	100	94.1	100	0	99.2	99.2
Heavy Vehicles	0	1	0	1	0	0	0	0	1	0	0	1	2
% Heavy Vehicles	0	7.1	0	1.3	0	0	0	0	5.9	0	0	0.8	0.8

S: Rugg Road
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File Name : 165274 JJJ
Site Code : 12305
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Groups Printed- Cars

	Braintree Street From East			Rugg Road From South			Braintree Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
11:00 AM	15	2	0	3	2	0	0	19	0	41
11:15 AM	14	3	0	6	3	0	7	21	0	54
11:30 AM	25	0	0	3	5	1	5	18	0	57
11:45 AM	19	4	0	8	3	0	6	27	0	67
Total	73	9	0	20	13	1	18	85	0	219
12:00 PM	23	5	0	7	8	0	3	23	0	69
12:15 PM	8	1	0	9	2	0	5	22	0	47
12:30 PM	15	3	0	6	5	0	2	35	0	66
12:45 PM	15	0	0	0	4	0	2	16	0	37
Total	61	9	0	22	19	0	12	96	0	219
01:00 PM	15	2	0	8	5	0	5	19	0	54
01:15 PM	20	2	0	4	3	0	2	17	0	48
01:30 PM	22	0	0	3	1	0	5	29	0	60
01:45 PM	22	0	0	4	5	0	3	22	0	56
Total	79	4	0	19	14	0	15	87	0	218
Grand Total	213	22	0	61	46	1	45	268	0	656
Apprch %	90.6	9.4	0	56.5	42.6	0.9	14.4	85.6	0	
Total %	32.5	3.4	0	9.3	7	0.2	6.9	40.9	0	

	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:45 AM													
11:45 AM	19	4	0	23	8	3	0	11	6	27	0	33	67
12:00 PM	23	5	0	28	7	8	0	15	3	23	0	26	69
12:15 PM	8	1	0	9	9	2	0	11	5	22	0	27	47
12:30 PM	15	3	0	18	6	5	0	11	2	35	0	37	66
Total Volume	65	13	0	78	30	18	0	48	16	107	0	123	249
% App. Total	83.3	16.7	0		62.5	37.5	0		13	87	0		
PHF	.707	.650	.000	.696	.833	.563	.000	.800	.667	.764	.000	.831	.902

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Groups Printed- Heavy Vehicles

	Braintree Street From East			Rugg Road From South			Braintree Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
11:00 AM	1	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	0	0	1	1	0	2
11:30 AM	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	1	1	0	3
12:00 PM	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	1	0	0	0	0	1	0	0	2
12:45 PM	0	0	0	0	0	0	1	0	0	1
Total	0	1	0	0	0	0	2	0	0	3
01:00 PM	1	0	0	0	0	0	0	0	0	1
01:15 PM	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	1	0	0	0	0	0	1
Total	1	0	0	1	0	0	0	0	0	2
Grand Total	2	1	0	1	0	0	3	1	0	8
Apprch %	66.7	33.3	0	100	0	0	75	25	0	
Total %	25	12.5	0	12.5	0	0	37.5	12.5	0	

	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:15 PM													
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	1	0	1	0	0	0	0	1	0	0	1	2
12:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
01:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	1	1	0	2	0	0	0	0	2	0	0	2	4
% App. Total	50	50	0		0	0	0		100	0	0		
PHF	.250	.250	.000	.500	.000	.000	.000	.000	.500	.000	.000	.500	.500

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Groups Printed- Peds and Bikes

	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
11:00 AM	1	0	0	0	0	0	0	5	0	0	0	0	6
11:15 AM	0	0	0	1	0	0	0	2	0	0	0	0	3
11:30 AM	0	0	0	0	0	0	2	2	0	0	0	0	4
11:45 AM	0	0	0	0	0	0	1	3	0	0	0	0	4
Total	1	0	0	1	0	0	3	12	0	0	0	0	17
12:00 PM	1	0	0	0	0	0	5	2	0	0	0	0	8
12:15 PM	1	0	0	0	0	0	2	2	0	0	0	0	5
12:30 PM	1	1	0	0	0	0	1	3	0	1	0	0	7
12:45 PM	0	0	1	0	0	0	3	4	0	0	0	0	8
Total	3	1	1	0	0	0	11	11	0	1	0	0	28
01:00 PM	0	0	0	0	0	1	4	3	0	1	0	0	9
01:15 PM	0	0	0	0	0	0	1	3	0	2	0	0	6
01:30 PM	0	0	0	0	0	0	3	2	0	2	0	0	7
01:45 PM	2	0	0	0	0	0	0	2	1	1	0	0	6
Total	2	0	0	0	0	1	8	10	1	6	0	0	28
Grand Total	6	1	1	1	0	1	22	33	1	7	0	0	73
Apprch %	66.7	11.1	11.1	11.1	0	1.8	39.3	58.9	12.5	87.5	0	0	
Total %	8.2	1.4	1.4	1.4	0	1.4	30.1	45.2	1.4	9.6	0	0	

	Braintree Street From East					Rugg Road From South					Braintree Street From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 12:30 PM																
12:30 PM	1	1	0	0	2	0	0	1	3	4	0	1	0	0	1	7
12:45 PM	0	0	1	0	1	0	0	3	4	7	0	0	0	0	0	8
01:00 PM	0	0	0	0	0	0	1	4	3	8	0	1	0	0	1	9
01:15 PM	0	0	0	0	0	0	0	1	3	4	0	2	0	0	2	6
Total Volume	1	1	1	0	3	0	1	9	13	23	0	4	0	0	4	30
% App. Total	33.3	33.3	33.3	0		0	4.3	39.1	56.5		0	100	0	0		
PHF	.250	.250	.250	.000	.375	.000	.250	.563	.813	.719	.000	.500	.000	.000	.500	.833

S: Rugg Road
E/W: Braintree Street
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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File Name : 165274 JJJ
Site Code : 12305
Start Date : 10/15/2016
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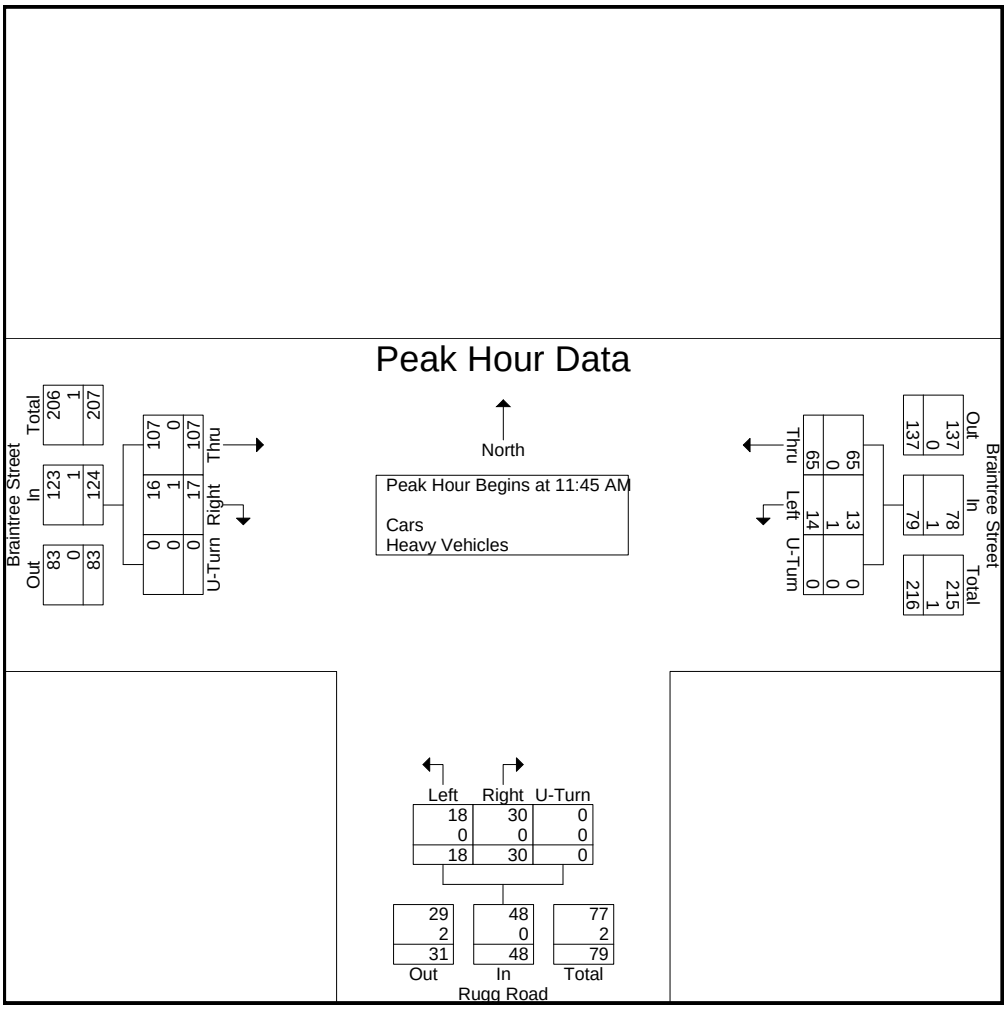
	Braintree Street From East				Rugg Road From South				Braintree Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:45 AM													
11:45 AM	19	4	0	23	8	3	0	11	6	27	0	33	67
12:00 PM	23	5	0	28	7	8	0	15	3	23	0	26	69
12:15 PM	8	1	0	9	9	2	0	11	5	22	0	27	47
12:30 PM	15	4	0	19	6	5	0	11	3	35	0	38	68
Total Volume	65	14	0	79	30	18	0	48	17	107	0	124	251
% App. Total	82.3	17.7	0		62.5	37.5	0		13.7	86.3	0		
PHF	.707	.700	.000	.705	.833	.563	.000	.800	.708	.764	.000	.816	.909
Cars	65	13	0	78	30	18	0	48	16	107	0	123	249
% Cars	100	92.9	0	98.7	100	100	0	100	94.1	100	0	99.2	99.2
Heavy Vehicles	0	1	0	1	0	0	0	0	1	0	0	1	2
% Heavy Vehicles	0	7.1	0	1.3	0	0	0	0	5.9	0	0	0.8	0.8



N/S: Everett Street
E/W: Old Everett Street/ Driveway
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Groups Printed- Cars - Heavy Vehicles

	Everett Street From North				Old Everett Street From East				Everett Street From South				Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	46	13	0	5	0	7	0	8	55	1	0	2	0	0	0	137
07:15 AM	0	48	12	0	9	1	13	0	10	86	0	0	1	0	0	0	180
07:30 AM	0	58	10	0	8	1	10	0	12	97	0	0	2	0	1	0	199
07:45 AM	0	56	12	0	13	0	3	0	14	113	0	0	0	0	0	0	211
Total	0	208	47	0	35	2	33	0	44	351	1	0	5	0	1	0	727
08:00 AM	0	61	16	0	7	0	4	0	13	101	3	0	1	0	0	0	206
08:15 AM	0	88	12	0	11	0	6	0	14	93	0	0	1	0	1	0	226
08:30 AM	0	68	16	0	11	0	11	0	14	109	0	0	0	0	0	0	229
08:45 AM	0	77	14	0	13	0	9	0	15	99	0	0	1	0	0	0	228
Total	0	294	58	0	42	0	30	0	56	402	3	0	3	0	1	0	889
Grand Total	0	502	105	0	77	2	63	0	100	753	4	0	8	0	2	0	1616
Apprch %	0	82.7	17.3	0	54.2	1.4	44.4	0	11.7	87.9	0.5	0	80	0	20	0	
Total %	0	31.1	6.5	0	4.8	0.1	3.9	0	6.2	46.6	0.2	0	0.5	0	0.1	0	
Cars	0	481	100	0	71	2	61	0	98	728	4	0	4	0	1	0	1550
% Cars	0	95.8	95.2	0	92.2	100	96.8	0	98	96.7	100	0	50	0	50	0	95.9
Heavy Vehicles	0	21	5	0	6	0	2	0	2	25	0	0	4	0	1	0	66
% Heavy Vehicles	0	4.2	4.8	0	7.8	0	3.2	0	2	3.3	0	0	50	0	50	0	4.1

	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	61	16	0	77	7	0	4	0	11	13	101	3	0	117	1	0	0	0	1	206
08:15 AM	0	88	12	0	100	11	0	6	0	17	14	93	0	0	107	1	0	1	0	2	226
08:30 AM	0	68	16	0	84	11	0	11	0	22	14	109	0	0	123	0	0	0	0	0	229
08:45 AM	0	77	14	0	91	13	0	9	0	22	15	99	0	0	114	1	0	0	0	1	228
Total Volume	0	294	58	0	352	42	0	30	0	72	56	402	3	0	461	3	0	1	0	4	889
% App. Total	0	83.5	16.5	0		58.3	0	41.7	0		12.1	87.2	0.7	0		75	0	25	0		
PHF	.000	.835	.906	.000	.880	.808	.000	.682	.000	.818	.933	.922	.250	.000	.937	.750	.000	.250	.000	.500	.971
Cars	0	281	56	0	337	39	0	30	0	69	55	391	3	0	449	2	0	1	0	3	858
% Cars	0	95.6	96.6	0	95.7	92.9	0	100	0	95.8	98.2	97.3	100	0	97.4	66.7	0	100	0	75.0	96.5
Heavy Vehicles	0	13	2	0	15	3	0	0	0	3	1	11	0	0	12	1	0	0	0	1	31
% Heavy Vehicles	0	4.4	3.4	0	4.3	7.1	0	0	0	4.2	1.8	2.7	0	0	2.6	33.3	0	0	0	25.0	3.5

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E/W: Old Everett Street/ Driveway
City, State: Allston, MA
Client: VHB/ P. Dunford

File Name : 165274 K
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Cars

	Everett Street From North				Old Everett Street From East				Everett Street From South				Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	44	11	0	4	0	6	0	7	53	1	0	0	0	0	0	126
07:15 AM	0	45	11	0	8	1	13	0	10	80	0	0	1	0	0	0	169
07:30 AM	0	56	10	0	8	1	9	0	12	94	0	0	1	0	0	0	191
07:45 AM	0	55	12	0	12	0	3	0	14	110	0	0	0	0	0	0	206
Total	0	200	44	0	32	2	31	0	43	337	1	0	2	0	0	0	692
08:00 AM	0	57	15	0	5	0	4	0	12	99	3	0	0	0	0	0	195
08:15 AM	0	82	12	0	11	0	6	0	14	91	0	0	1	0	1	0	218
08:30 AM	0	65	16	0	10	0	11	0	14	106	0	0	0	0	0	0	222
08:45 AM	0	77	13	0	13	0	9	0	15	95	0	0	1	0	0	0	223
Total	0	281	56	0	39	0	30	0	55	391	3	0	2	0	1	0	858
Grand Total	0	481	100	0	71	2	61	0	98	728	4	0	4	0	1	0	1550
Apprch %	0	82.8	17.2	0	53	1.5	45.5	0	11.8	87.7	0.5	0	80	0	20	0	
Total %	0	31	6.5	0	4.6	0.1	3.9	0	6.3	47	0.3	0	0.3	0	0.1	0	

	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	57	15	0	72	5	0	4	0	9	12	99	3	0	114	0	0	0	0	0	195
08:15 AM	0	82	12	0	94	11	0	6	0	17	14	91	0	0	105	1	0	1	0	2	218
08:30 AM	0	65	16	0	81	10	0	11	0	21	14	106	0	0	120	0	0	0	0	0	222
08:45 AM	0	77	13	0	90	13	0	9	0	22	15	95	0	0	110	1	0	0	0	1	223
Total Volume	0	281	56	0	337	39	0	30	0	69	55	391	3	0	449	2	0	1	0	3	858
% App. Total	0	83.4	16.6	0		56.5	0	43.5	0		12.2	87.1	0.7	0		66.7	0	33.3	0		
PHF	.000	.857	.875	.000	.896	.750	.000	.682	.000	.784	.917	.922	.250	.000	.935	.500	.000	.250	.000	.375	.962

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City, State: Allston, MA
Client: VHB/ P. Dunford

File Name : 165274 K
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Everett Street From North				Old Everett Street From East				Everett Street From South				Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	2	2	0	1	0	1	0	1	2	0	0	2	0	0	0	11
07:15 AM	0	3	1	0	1	0	0	0	0	6	0	0	0	0	0	0	11
07:30 AM	0	2	0	0	0	0	1	0	0	3	0	0	1	0	1	0	8
07:45 AM	0	1	0	0	1	0	0	0	0	3	0	0	0	0	0	0	5
Total	0	8	3	0	3	0	2	0	1	14	0	0	3	0	1	0	35
08:00 AM	0	4	1	0	2	0	0	0	1	2	0	0	1	0	0	0	11
08:15 AM	0	6	0	0	0	0	0	0	0	2	0	0	0	0	0	0	8
08:30 AM	0	3	0	0	1	0	0	0	0	3	0	0	0	0	0	0	7
08:45 AM	0	0	1	0	0	0	0	0	0	4	0	0	0	0	0	0	5
Total	0	13	2	0	3	0	0	0	1	11	0	0	1	0	0	0	31
Grand Total	0	21	5	0	6	0	2	0	2	25	0	0	4	0	1	0	66
Apprch %	0	80.8	19.2	0	75	0	25	0	7.4	92.6	0	0	80	0	20	0	
Total %	0	31.8	7.6	0	9.1	0	3	0	3	37.9	0	0	6.1	0	1.5	0	

	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	0	4	1	0	1	0	2	1	2	0	0	3	2	0	0	0	2	11
07:15 AM	0	3	1	0	4	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	11
07:30 AM	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	1	0	1	0	2	8
07:45 AM	0	1	0	0	1	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	5
Total Volume	0	8	3	0	11	3	0	2	0	5	1	14	0	0	15	3	0	1	0	4	35
% App. Total	0	72.7	27.3	0		60	0	40	0		6.7	93.3	0	0		75	0	25	0		
PHF	.000	.667	.375	.000	.688	.750	.000	.500	.000	.625	.250	.583	.000	.000	.625	.375	.000	.250	.000	.500	.795

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Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Peds and Bikes

	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	1	0	4	9
07:15 AM	0	1	0	0	0	0	0	0	1	1	0	1	0	0	1	0	0	0	3	5	13
07:30 AM	0	4	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	1	0	4	13
07:45 AM	0	1	0	0	0	0	0	0	1	1	0	2	0	1	0	0	0	0	6	5	17
Total	0	6	0	0	0	0	0	1	3	6	0	5	0	1	1	0	0	2	9	18	52
08:00 AM	0	2	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	2	2	9
08:15 AM	0	5	0	0	0	0	0	0	1	2	1	2	0	0	0	0	0	0	2	2	15
08:30 AM	0	4	0	1	0	0	0	0	1	2	0	4	0	0	1	0	0	0	2	4	19
08:45 AM	0	1	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	0	1	1	8
Total	0	12	0	1	0	0	0	0	2	7	1	11	0	0	1	0	0	0	7	9	51
Grand Total	0	18	0	1	0	0	0	1	5	13	1	16	0	1	2	0	0	2	16	27	103
Apprch %	0	94.7	0	5.3	0	0	0	5.3	26.3	68.4	5	80	0	5	10	0	0	4.4	35.6	60	
Total %	0	17.5	0	1	0	0	0	1	4.9	12.6	1	15.5	0	1	1.9	0	0	1.9	15.5	26.2	

	Everett Street From North						Old Everett Street From East						Everett Street From South						Driveway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:45 AM																									
07:45 AM	0	1	0	0	0	1	0	0	0	1	1	2	0	2	0	1	0	3	0	0	0	6	5	11	17
08:00 AM	0	2	0	0	0	2	0	0	0	0	1	1	0	2	0	0	0	2	0	0	0	2	2	4	9
08:15 AM	0	5	0	0	0	5	0	0	0	1	2	3	1	2	0	0	0	3	0	0	0	2	2	4	15
08:30 AM	0	4	0	1	0	5	0	0	0	1	2	3	0	4	0	0	1	5	0	0	0	2	4	6	19
Total Volume	0	12	0	1	0	13	0	0	0	3	6	9	1	10	0	1	1	13	0	0	0	12	13	25	60
% App. Total	0	92.3	0	7.7	0		0	0	0	33.3	66.7		7.7	76.9	0	7.7	7.7		0	0	0	48	52		
PHF	.000	.600	.000	.250	.000	.650	.000	.000	.000	.750	.750	.750	.250	.625	.000	.250	.250	.650	.000	.000	.000	.500	.650	.568	.789

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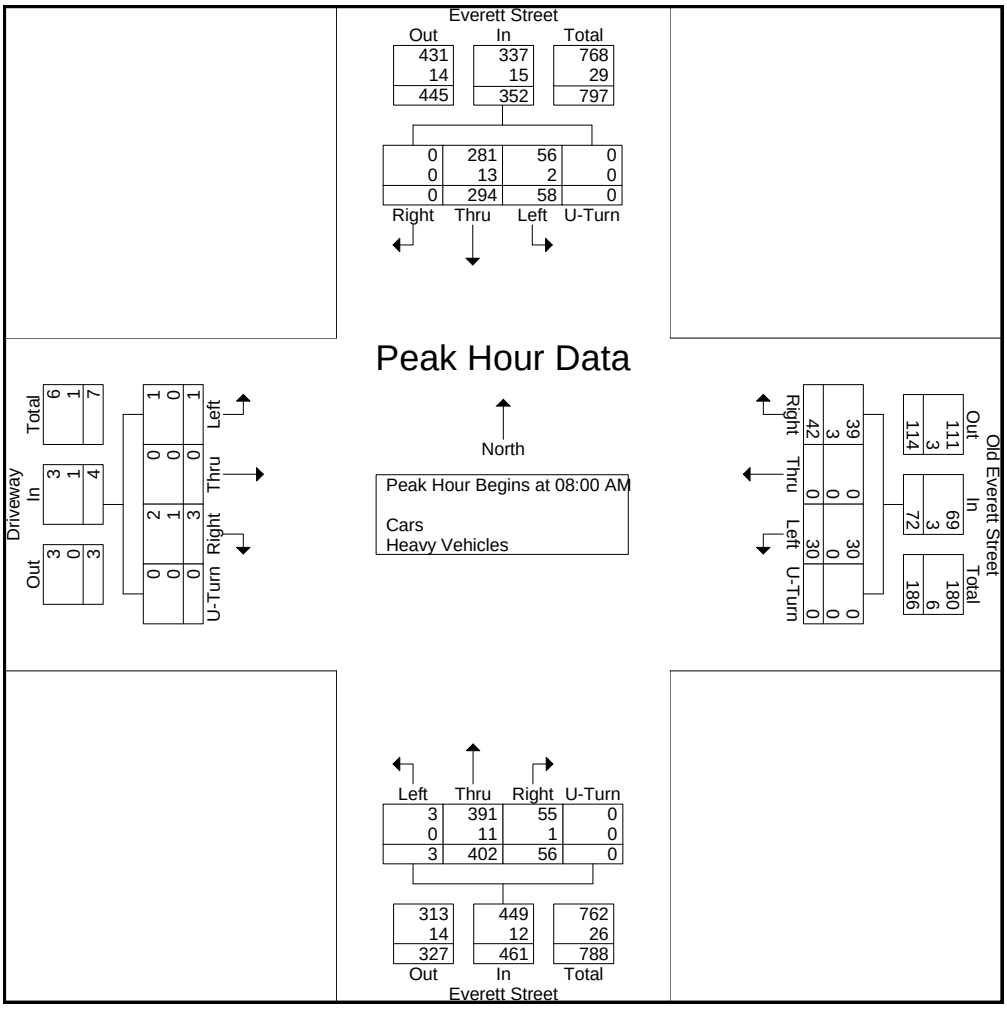
	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	61	16	0	77	7	0	4	0	11	13	101	3	0	117	1	0	0	0	1	206
08:15 AM	0	88	12	0	100	11	0	6	0	17	14	93	0	0	107	1	0	1	0	2	226
08:30 AM	0	68	16	0	84	11	0	11	0	22	14	109	0	0	123	0	0	0	0	0	229
08:45 AM	0	77	14	0	91	13	0	9	0	22	15	99	0	0	114	1	0	0	0	1	228
Total Volume	0	294	58	0	352	42	0	30	0	72	56	402	3	0	461	3	0	1	0	4	889
% App. Total	0	83.5	16.5	0		58.3	0	41.7	0		12.1	87.2	0.7	0		75	0	25	0		
PHF	.000	.835	.906	.000	.880	.808	.000	.682	.000	.818	.933	.922	.250	.000	.937	.750	.000	.250	.000	.500	.971
Cars	0	281	56	0	337	39	0	30	0	69	55	391	3	0	449	2	0	1	0	3	858
% Cars	0	95.6	96.6	0	95.7	92.9	0	100	0	95.8	98.2	97.3	100	0	97.4	66.7	0	100	0	75.0	96.5
Heavy Vehicles	0	13	2	0	15	3	0	0	0	3	1	11	0	0	12	1	0	0	0	1	31
% Heavy Vehicles	0	4.4	3.4	0	4.3	7.1	0	0	0	4.2	1.8	2.7	0	0	2.6	33.3	0	0	0	25.0	3.5



N/S: Everett Street
E/W: Old Everett Street/ Driveway
City, State: Allston, MA
Client: VHB/ P. Dunford

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

File Name : 165274 KK
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Everett Street From North				Old Everett Street From East				Everett Street From South				Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	1	87	8	0	16	0	8	0	10	58	2	0	1	1	1	0	193
04:15 PM	1	77	11	0	23	0	9	0	12	74	0	0	2	1	1	0	211
04:30 PM	1	87	13	0	14	1	11	0	11	75	1	0	0	0	0	0	214
04:45 PM	1	77	11	0	11	0	11	0	12	84	2	0	0	0	2	0	211
Total	4	328	43	0	64	1	39	0	45	291	5	0	3	2	4	0	829
05:00 PM	0	107	10	0	16	1	16	0	10	102	4	0	6	0	0	0	272
05:15 PM	1	117	13	0	20	0	10	0	9	80	7	0	2	0	0	0	259
05:30 PM	0	139	8	0	16	0	24	0	11	90	4	0	6	0	0	0	298
05:45 PM	0	120	11	0	17	1	11	0	17	102	3	0	1	0	0	0	283
Total	1	483	42	0	69	2	61	0	47	374	18	0	15	0	0	0	1112
Grand Total	5	811	85	0	133	3	100	0	92	665	23	0	18	2	4	0	1941
Apprch %	0.6	90	9.4	0	56.4	1.3	42.4	0	11.8	85.3	2.9	0	75	8.3	16.7	0	
Total %	0.3	41.8	4.4	0	6.9	0.2	5.2	0	4.7	34.3	1.2	0	0.9	0.1	0.2	0	
Cars	5	802	81	0	129	3	99	0	88	653	22	0	18	1	3	0	1904
% Cars	100	98.9	95.3	0	97	100	99	0	95.7	98.2	95.7	0	100	50	75	0	98.1
Heavy Vehicles	0	9	4	0	4	0	1	0	4	12	1	0	0	1	1	0	37
% Heavy Vehicles	0	1.1	4.7	0	3	0	1	0	4.3	1.8	4.3	0	0	50	25	0	1.9

	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	107	10	0	117	16	1	16	0	33	10	102	4	0	116	6	0	0	0	6	272
05:15 PM	1	117	13	0	131	20	0	10	0	30	9	80	7	0	96	2	0	0	0	2	259
05:30 PM	0	139	8	0	147	16	0	24	0	40	11	90	4	0	105	6	0	0	0	6	298
05:45 PM	0	120	11	0	131	17	1	11	0	29	17	102	3	0	122	1	0	0	0	1	283
Total Volume	1	483	42	0	526	69	2	61	0	132	47	374	18	0	439	15	0	0	0	15	1112
% App. Total	0.2	91.8	8	0		52.3	1.5	46.2	0		10.7	85.2	4.1	0		100	0	0	0		
PHF	.250	.869	.808	.000	.895	.863	.500	.635	.000	.825	.691	.917	.643	.000	.900	.625	.000	.000	.000	.625	.933
Cars	1	481	41	0	523	68	2	61	0	131	47	368	18	0	433	15	0	0	0	15	1102
% Cars	100	99.6	97.6	0	99.4	98.6	100	100	0	99.2	100	98.4	100	0	98.6	100	0	0	0	100	99.1
Heavy Vehicles	0	2	1	0	3	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	10
% Heavy Vehicles	0	0.4	2.4	0	0.6	1.4	0	0	0	0.8	0	1.6	0	0	1.4	0	0	0	0	0	0.9

N/S: Everett Street
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File Name : 165274 KK
Site Code : 12305
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Page No : 1

Groups Printed- Cars

	Everett Street From North				Old Everett Street From East				Everett Street From South				Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	1	86	6	0	15	0	8	0	9	57	1	0	1	0	1	0	185
04:15 PM	1	75	11	0	23	0	9	0	12	72	0	0	2	1	1	0	207
04:30 PM	1	84	12	0	12	1	10	0	9	74	1	0	0	0	0	0	204
04:45 PM	1	76	11	0	11	0	11	0	11	82	2	0	0	0	1	0	206
Total	4	321	40	0	61	1	38	0	41	285	4	0	3	1	3	0	802
05:00 PM	0	107	9	0	16	1	16	0	10	101	4	0	6	0	0	0	270
05:15 PM	1	116	13	0	19	0	10	0	9	80	7	0	2	0	0	0	257
05:30 PM	0	138	8	0	16	0	24	0	11	87	4	0	6	0	0	0	294
05:45 PM	0	120	11	0	17	1	11	0	17	100	3	0	1	0	0	0	281
Total	1	481	41	0	68	2	61	0	47	368	18	0	15	0	0	0	1102
Grand Total	5	802	81	0	129	3	99	0	88	653	22	0	18	1	3	0	1904
Apprch %	0.6	90.3	9.1	0	55.8	1.3	42.9	0	11.5	85.6	2.9	0	81.8	4.5	13.6	0	
Total %	0.3	42.1	4.3	0	6.8	0.2	5.2	0	4.6	34.3	1.2	0	0.9	0.1	0.2	0	

	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	107	9	0	116	16	1	16	0	33	10	101	4	0	115	6	0	0	0	6	270
05:15 PM	1	116	13	0	130	19	0	10	0	29	9	80	7	0	96	2	0	0	0	2	257
05:30 PM	0	138	8	0	146	16	0	24	0	40	11	87	4	0	102	6	0	0	0	6	294
05:45 PM	0	120	11	0	131	17	1	11	0	29	17	100	3	0	120	1	0	0	0	1	281
Total Volume	1	481	41	0	523	68	2	61	0	131	47	368	18	0	433	15	0	0	0	15	1102
% App. Total	0.2	92	7.8	0		51.9	1.5	46.6	0		10.9	85	4.2	0		100	0	0	0		
PHF	.250	.871	.788	.000	.896	.895	.500	.635	.000	.819	.691	.911	.643	.000	.902	.625	.000	.000	.000	.625	.937

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E/W: Old Everett Street/ Driveway
City, State: Allston, MA
Client: VHB/ P. Dunford

File Name : 165274 KK
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Everett Street From North				Old Everett Street From East				Everett Street From South				Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	1	2	0	1	0	0	0	1	1	1	0	0	1	0	0	8
04:15 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4
04:30 PM	0	3	1	0	2	0	1	0	2	1	0	0	0	0	0	0	10
04:45 PM	0	1	0	0	0	0	0	0	1	2	0	0	0	0	1	0	5
Total	0	7	3	0	3	0	1	0	4	6	1	0	0	1	1	0	27
05:00 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	4
05:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Total	0	2	1	0	1	0	0	0	0	6	0	0	0	0	0	0	10
Grand Total	0	9	4	0	4	0	1	0	4	12	1	0	0	1	1	0	37
Apprch %	0	69.2	30.8	0	80	0	20	0	23.5	70.6	5.9	0	0	50	50	0	
Total %	0	24.3	10.8	0	10.8	0	2.7	0	10.8	32.4	2.7	0	0	2.7	2.7	0	

	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	1	2	0	3	1	0	0	0	1	1	1	1	0	3	0	1	0	0	1	8
04:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
04:30 PM	0	3	1	0	4	2	0	1	0	3	2	1	0	0	3	0	0	0	0	0	10
04:45 PM	0	1	0	0	1	0	0	0	0	0	1	2	0	0	3	0	0	1	0	1	5
Total Volume	0	7	3	0	10	3	0	1	0	4	4	6	1	0	11	0	1	1	0	2	27
% App. Total	0	70	30	0		75	0	25	0		36.4	54.5	9.1	0		0	50	50	0		
PHF	.000	.583	.375	.000	.625	.375	.000	.250	.000	.333	.500	.750	.250	.000	.917	.000	.250	.250	.000	.500	.675

N/S: Everett Street
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File Name : 165274 KK
Site Code : 12305
Start Date : 10/13/2016
Page No : 1

Groups Printed- Peds and Bikes

	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	1	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	5	2	13
04:15 PM	0	3	0	0	0	1	0	0	3	4	0	1	0	0	1	0	0	0	3	4	20
04:30 PM	0	2	0	0	0	0	0	0	1	3	2	0	0	3	0	0	0	0	5	5	21
04:45 PM	0	1	0	0	0	0	0	0	1	1	0	1	0	0	0	1	0	0	7	4	16
Total	0	7	0	0	0	1	0	0	8	10	2	2	0	3	1	1	0	0	20	15	70
05:00 PM	0	3	0	0	0	0	0	0	2	2	0	3	0	0	0	0	0	0	4	2	16
05:15 PM	0	4	1	0	0	1	0	0	4	4	1	5	0	0	0	0	0	0	3	7	30
05:30 PM	0	4	0	0	0	0	0	0	1	1	2	3	1	0	4	0	0	0	7	9	32
05:45 PM	0	5	0	0	0	0	0	1	2	1	0	6	0	0	0	0	0	0	7	5	27
Total	0	16	1	0	0	1	0	1	9	8	3	17	1	0	4	0	0	0	21	23	105
Grand Total	0	23	1	0	0	2	0	1	17	18	5	19	1	3	5	1	0	0	41	38	175
Apprch %	0	95.8	4.2	0	0	5.3	0	2.6	44.7	47.4	15.2	57.6	3	9.1	15.2	1.2	0	0	51.2	47.5	
Total %	0	13.1	0.6	0	0	1.1	0	0.6	9.7	10.3	2.9	10.9	0.6	1.7	2.9	0.6	0	0	23.4	21.7	

	Everett Street From North						Old Everett Street From East						Everett Street From South						Driveway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	0	3	0	0	0	3	0	0	0	2	2	4	0	3	0	0	0	3	0	0	0	4	2	6	16
05:15 PM	0	4	1	0	0	5	1	0	0	4	4	9	1	5	0	0	0	6	0	0	0	3	7	10	30
05:30 PM	0	4	0	0	0	4	0	0	0	1	1	2	2	3	1	0	4	10	0	0	0	7	9	16	32
05:45 PM	0	5	0	0	0	5	0	0	1	2	1	4	0	6	0	0	0	6	0	0	0	7	5	12	27
Total Volume	0	16	1	0	0	17	1	0	1	9	8	19	3	17	1	0	4	25	0	0	0	21	23	44	105
% App. Total	0	94.1	5.9	0	0		5.3	0	5.3	47.4	42.1		12	68	4	0	16		0	0	0	47.7	52.3		
PHF	.000	.800	.250	.000	.000	.850	.250	.000	.250	.563	.500	.528	.375	.708	.250	.000	.250	.625	.000	.000	.000	.750	.639	.688	.820

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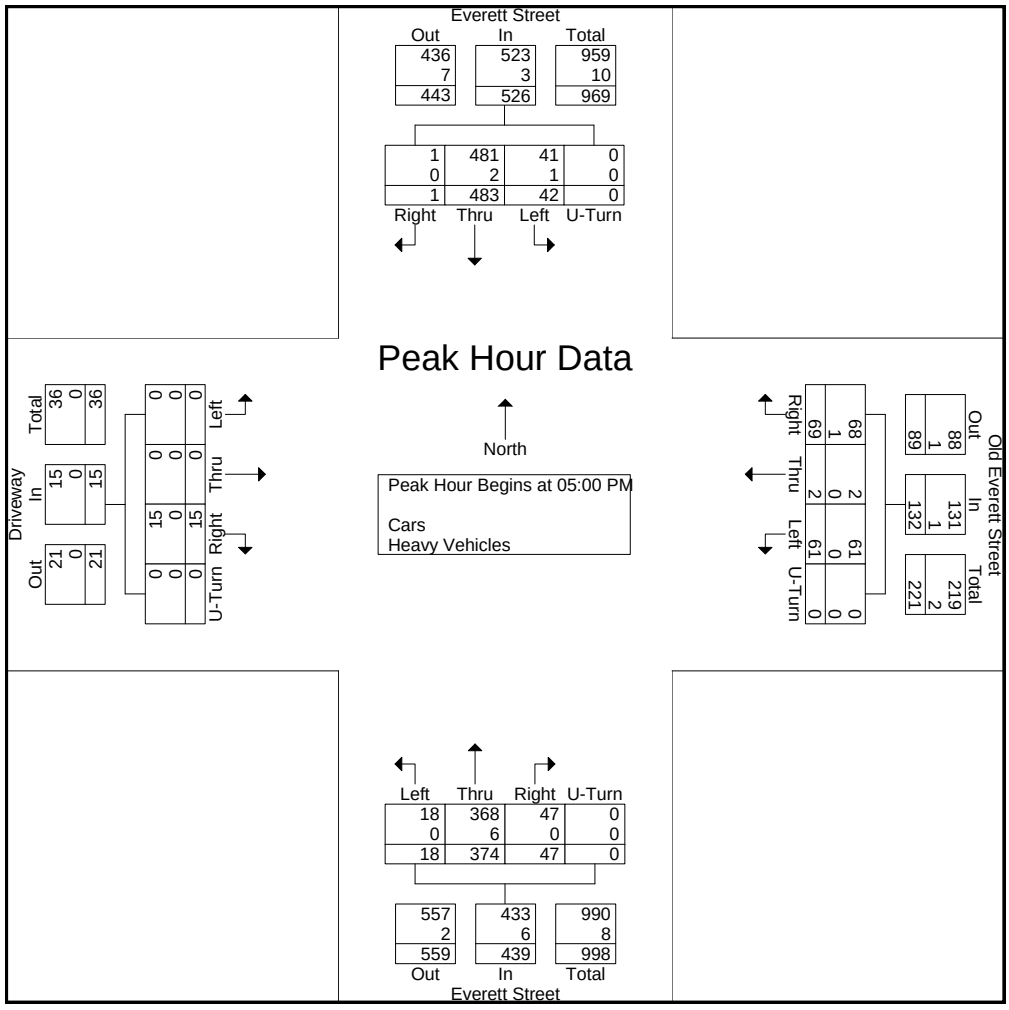
	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	107	10	0	117	16	1	16	0	33	10	102	4	0	116	6	0	0	0	6	272
05:15 PM	1	117	13	0	131	20	0	10	0	30	9	80	7	0	96	2	0	0	0	2	259
05:30 PM	0	139	8	0	147	16	0	24	0	40	11	90	4	0	105	6	0	0	0	6	298
05:45 PM	0	120	11	0	131	17	1	11	0	29	17	102	3	0	122	1	0	0	0	1	283
Total Volume	1	483	42	0	526	69	2	61	0	132	47	374	18	0	439	15	0	0	0	15	1112
% App. Total	0.2	91.8	8	0		52.3	1.5	46.2	0		10.7	85.2	4.1	0		100	0	0	0		
PHF	.250	.869	.808	.000	.895	.863	.500	.635	.000	.825	.691	.917	.643	.000	.900	.625	.000	.000	.000	.625	.933
Cars	1	481	41	0	523	68	2	61	0	131	47	368	18	0	433	15	0	0	0	15	1102
% Cars	100	99.6	97.6	0	99.4	98.6	100	100	0	99.2	100	98.4	100	0	98.6	100	0	0	0	100	99.1
Heavy Vehicles	0	2	1	0	3	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	10
% Heavy Vehicles	0	0.4	2.4	0	0.6	1.4	0	0	0	0.8	0	1.6	0	0	1.4	0	0	0	0	0	0.9



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Groups Printed- Cars - Heavy Vehicles

	Everett Street From North				Old Everett Street From East				Everett Street From South				Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	66	10	0	8	1	1	0	5	63	2	0	4	0	0	0	160
11:15 AM	0	64	10	0	2	0	4	0	5	64	3	0	0	0	0	0	152
11:30 AM	0	56	15	0	7	0	5	0	10	90	2	0	2	0	0	0	187
11:45 AM	0	74	10	0	11	0	5	0	4	68	1	0	2	2	0	0	177
Total	0	260	45	0	28	1	15	0	24	285	8	0	8	2	0	0	676
12:00 PM	1	66	14	0	10	0	6	0	5	71	2	0	1	0	2	0	178
12:15 PM	0	79	2	0	9	0	8	0	7	66	2	0	3	0	2	0	178
12:30 PM	3	68	4	0	9	0	9	0	18	78	4	0	3	0	0	0	196
12:45 PM	1	64	10	0	12	0	7	0	14	76	4	0	0	0	0	0	188
Total	5	277	30	0	40	0	30	0	44	291	12	0	7	0	4	0	740
01:00 PM	1	74	3	0	7	0	10	0	6	77	3	0	2	1	2	0	186
01:15 PM	1	77	9	0	11	0	6	0	11	64	1	1	1	0	2	0	184
01:30 PM	0	65	12	0	17	0	7	0	9	70	2	0	2	0	3	0	187
01:45 PM	1	80	11	0	8	1	12	0	15	68	2	0	1	0	1	0	200
Total	3	296	35	0	43	1	35	0	41	279	8	1	6	1	8	0	757
Grand Total	8	833	110	0	111	2	80	0	109	855	28	1	21	3	12	0	2173
Apprch %	0.8	87.6	11.6	0	57.5	1	41.5	0	11	86.1	2.8	0.1	58.3	8.3	33.3	0	
Total %	0.4	38.3	5.1	0	5.1	0.1	3.7	0	5	39.3	1.3	0	1	0.1	0.6	0	
Cars	8	823	105	0	106	2	79	0	107	841	25	1	20	3	12	0	2132
% Cars	100	98.8	95.5	0	95.5	100	98.8	0	98.2	98.4	89.3	100	95.2	100	100	0	98.1
Heavy Vehicles	0	10	5	0	5	0	1	0	2	14	3	0	1	0	0	0	41
% Heavy Vehicles	0	1.2	4.5	0	4.5	0	1.2	0	1.8	1.6	10.7	0	4.8	0	0	0	1.9

	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	1	74	3	0	78	7	0	10	0	17	6	77	3	0	86	2	1	2	0	5	186
01:15 PM	1	77	9	0	87	11	0	6	0	17	11	64	1	1	77	1	0	2	0	3	184
01:30 PM	0	65	12	0	77	17	0	7	0	24	9	70	2	0	81	2	0	3	0	5	187
01:45 PM	1	80	11	0	92	8	1	12	0	21	15	68	2	0	85	1	0	1	0	2	200
Total Volume	3	296	35	0	334	43	1	35	0	79	41	279	8	1	329	6	1	8	0	15	757
% App. Total	0.9	88.6	10.5	0		54.4	1.3	44.3	0		12.5	84.8	2.4	0.3		40	6.7	53.3	0		
PHF	.750	.925	.729	.000	.908	.632	.250	.729	.000	.823	.683	.906	.667	.250	.956	.750	.250	.667	.000	.750	.946
Cars	3	293	32	0	328	41	1	34	0	76	41	272	7	1	321	5	1	8	0	14	739
% Cars	100	99.0	91.4	0	98.2	95.3	100	97.1	0	96.2	100	97.5	87.5	100	97.6	83.3	100	100	0	93.3	97.6
Heavy Vehicles	0	3	3	0	6	2	0	1	0	3	0	7	1	0	8	1	0	0	0	1	18
% Heavy Vehicles	0	1.0	8.6	0	1.8	4.7	0	2.9	0	3.8	0	2.5	12.5	0	2.4	16.7	0	0	0	6.7	2.4

N/S: Everett Street
E/W: Old Everett Street/ Driveway
City, State: Allston, MA
Client: VHB/ P. Dunford

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

File Name : 165274 KKK
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Cars

	Everett Street From North				Old Everett Street From East				Everett Street From South				Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	65	10	0	8	1	1	0	5	62	2	0	4	0	0	0	158
11:15 AM	0	64	10	0	1	0	4	0	5	64	3	0	0	0	0	0	151
11:30 AM	0	56	13	0	6	0	5	0	10	89	2	0	2	0	0	0	183
11:45 AM	0	71	10	0	11	0	5	0	4	67	1	0	2	2	0	0	173
Total	0	256	43	0	26	1	15	0	24	282	8	0	8	2	0	0	665
12:00 PM	1	64	14	0	10	0	6	0	4	69	2	0	1	0	2	0	173
12:15 PM	0	79	2	0	8	0	8	0	7	66	2	0	3	0	2	0	177
12:30 PM	3	67	4	0	9	0	9	0	17	78	4	0	3	0	0	0	194
12:45 PM	1	64	10	0	12	0	7	0	14	74	2	0	0	0	0	0	184
Total	5	274	30	0	39	0	30	0	42	287	10	0	7	0	4	0	728
01:00 PM	1	72	3	0	7	0	9	0	6	73	2	0	1	1	2	0	177
01:15 PM	1	76	8	0	10	0	6	0	11	64	1	1	1	0	2	0	181
01:30 PM	0	65	12	0	17	0	7	0	9	69	2	0	2	0	3	0	186
01:45 PM	1	80	9	0	7	1	12	0	15	66	2	0	1	0	1	0	195
Total	3	293	32	0	41	1	34	0	41	272	7	1	5	1	8	0	739
Grand Total	8	823	105	0	106	2	79	0	107	841	25	1	20	3	12	0	2132
Apprch %	0.9	87.9	11.2	0	56.7	1.1	42.2	0	11	86.3	2.6	0.1	57.1	8.6	34.3	0	
Total %	0.4	38.6	4.9	0	5	0.1	3.7	0	5	39.4	1.2	0	0.9	0.1	0.6	0	

	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	1	72	3	0	76	7	0	9	0	16	6	73	2	0	81	1	1	2	0	4	177
01:15 PM	1	76	8	0	85	10	0	6	0	16	11	64	1	1	77	1	0	2	0	3	181
01:30 PM	0	65	12	0	77	17	0	7	0	24	9	69	2	0	80	2	0	3	0	5	186
01:45 PM	1	80	9	0	90	7	1	12	0	20	15	66	2	0	83	1	0	1	0	2	195
Total Volume	3	293	32	0	328	41	1	34	0	76	41	272	7	1	321	5	1	8	0	14	739
% App. Total	0.9	89.3	9.8	0		53.9	1.3	44.7	0		12.8	84.7	2.2	0.3		35.7	7.1	57.1	0		
PHF	.750	.916	.667	.000	.911	.603	.250	.708	.000	.792	.683	.932	.875	.250	.967	.625	.250	.667	.000	.700	.947

N/S: Everett Street
E/W: Old Everett Street/ Driveway
City, State: Allston, MA
Client: VHB/ P. Dunford

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Email: datarequests@pdillc.com

File Name : 165274 KKK
Site Code : 12305
Start Date : 10/15/2016
Page No : 1

Groups Printed- Heavy Vehicles

	Everett Street From North				Old Everett Street From East				Everett Street From South				Driveway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
11:00 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
11:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	2	0	1	0	0	0	0	1	0	0	0	0	0	0	4
11:45 AM	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4
Total	0	4	2	0	2	0	0	0	0	3	0	0	0	0	0	0	11
12:00 PM	0	2	0	0	0	0	0	0	1	2	0	0	0	0	0	0	5
12:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	4
Total	0	3	0	0	1	0	0	0	2	4	2	0	0	0	0	0	12
01:00 PM	0	2	0	0	0	0	1	0	0	4	1	0	1	0	0	0	9
01:15 PM	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3
01:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
01:45 PM	0	0	2	0	1	0	0	0	0	2	0	0	0	0	0	0	5
Total	0	3	3	0	2	0	1	0	0	7	1	0	1	0	0	0	18
Grand Total	0	10	5	0	5	0	1	0	2	14	3	0	1	0	0	0	41
Apprch %	0	66.7	33.3	0	83.3	0	16.7	0	10.5	73.7	15.8	0	100	0	0	0	
Total %	0	24.4	12.2	0	12.2	0	2.4	0	4.9	34.1	7.3	0	2.4	0	0	0	

	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	4
01:00 PM	0	2	0	0	2	0	0	1	0	1	0	4	1	0	5	1	0	0	0	1	9
01:15 PM	0	1	1	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Total Volume	0	4	1	0	5	1	0	1	0	2	1	6	3	0	10	1	0	0	0	1	18
% App. Total	0	80	20	0		50	0	50	0		10	60	30	0		100	0	0	0		
PHF	.000	.500	.250	.000	.625	.250	.000	.250	.000	.500	.250	.375	.375	.000	.500	.250	.000	.000	.000	.250	.500

N/S: Everett Street
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Page No : 1

Groups Printed- Peds and Bikes

	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
11:00 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2	0	4
11:15 AM	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	3	16	22
11:30 AM	0	1	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	5	9
11:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4
Total	0	3	0	0	0	1	1	0	1	1	1	2	0	0	0	0	0	0	5	24	39
12:00 PM	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	2	0	8
12:15 PM	0	2	0	0	0	1	0	0	2	2	1	0	0	0	0	0	0	0	6	5	19
12:30 PM	0	2	0	0	0	0	0	0	1	3	0	1	0	0	0	0	0	0	0	5	12
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	5
Total	0	6	0	0	0	1	0	0	3	9	1	1	0	0	0	0	0	0	10	13	44
01:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	6	2	9
01:15 PM	0	0	0	1	0	0	0	0	1	2	0	2	0	2	0	0	0	0	4	1	13
01:30 PM	0	0	0	0	0	0	0	0	0	2	0	4	1	0	1	0	0	0	1	9	18
01:45 PM	0	1	0	0	1	1	0	0	0	3	0	3	0	0	0	0	0	0	4	1	14
Total	0	1	0	1	1	1	0	0	1	8	0	9	1	2	1	0	0	0	15	13	54
Grand Total	0	10	0	1	1	3	1	0	5	18	2	12	1	2	1	0	0	0	30	50	137
Apprch %	0	83.3	0	8.3	8.3	11.1	3.7	0	18.5	66.7	11.1	66.7	5.6	11.1	5.6	0	0	0	37.5	62.5	
Total %	0	7.3	0	0.7	0.7	2.2	0.7	0	3.6	13.1	1.5	8.8	0.7	1.5	0.7	0	0	0	21.9	36.5	

	Everett Street From North						Old Everett Street From East						Everett Street From South						Driveway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 01:00 PM																									
01:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	6	2	8	9
01:15 PM	0	0	0	1	0	1	0	0	0	1	2	3	0	2	0	2	0	4	0	0	0	4	1	5	13
01:30 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	4	1	0	1	6	0	0	0	1	9	10	18
01:45 PM	0	1	0	0	1	2	1	0	0	0	3	4	0	3	0	0	0	3	0	0	0	4	1	5	14
Total Volume	0	1	0	1	1	3	1	0	0	1	8	10	0	9	1	2	1	13	0	0	0	15	13	28	54
% App. Total	0	33.3	0	33.3	33.3		10	0	0	10	80		0	69.2	7.7	15.4	7.7		0	0	0	53.6	46.4		
PHF	.000	.250	.000	.250	.250	.375	.250	.000	.000	.250	.667	.625	.000	.563	.250	.250	.250	.542	.000	.000	.000	.625	.361	.700	.750

N/S: Everett Street
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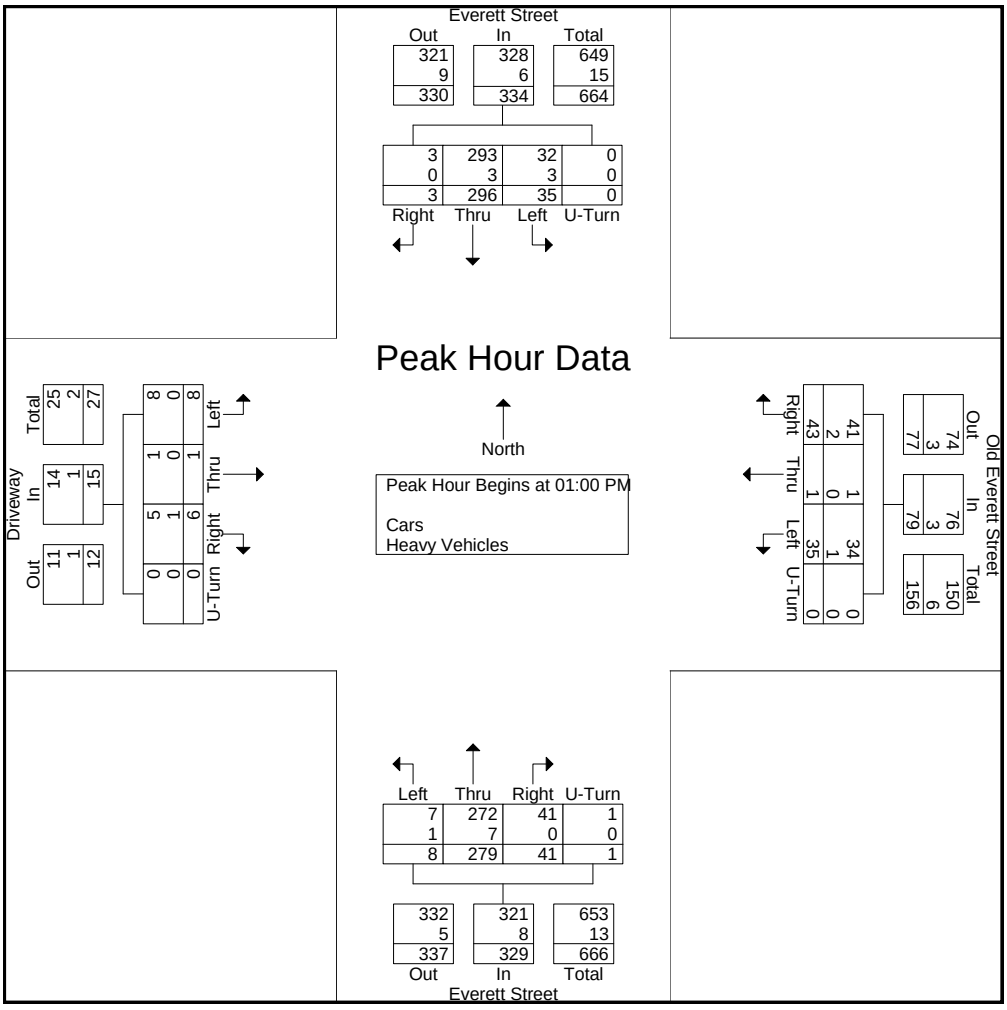
	Everett Street From North					Old Everett Street From East					Everett Street From South					Driveway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	1	74	3	0	78	7	0	10	0	17	6	77	3	0	86	2	1	2	0	5	186
01:15 PM	1	77	9	0	87	11	0	6	0	17	11	64	1	1	77	1	0	2	0	3	184
01:30 PM	0	65	12	0	77	17	0	7	0	24	9	70	2	0	81	2	0	3	0	5	187
01:45 PM	1	80	11	0	92	8	1	12	0	21	15	68	2	0	85	1	0	1	0	2	200
Total Volume	3	296	35	0	334	43	1	35	0	79	41	279	8	1	329	6	1	8	0	15	757
% App. Total	0.9	88.6	10.5	0		54.4	1.3	44.3	0		12.5	84.8	2.4	0.3		40	6.7	53.3	0		
PHF	.750	.925	.729	.000	.908	.632	.250	.729	.000	.823	.683	.906	.667	.250	.956	.750	.250	.667	.000	.750	.946
Cars	3	293	32	0	328	41	1	34	0	76	41	272	7	1	321	5	1	8	0	14	739
% Cars	100	99.0	91.4	0	98.2	95.3	100	97.1	0	96.2	100	97.5	87.5	100	97.6	83.3	100	100	0	93.3	97.6
Heavy Vehicles	0	3	3	0	6	2	0	1	0	3	0	7	1	0	8	1	0	0	0	1	18
% Heavy Vehicles	0	1.0	8.6	0	1.8	4.7	0	2.9	0	3.8	0	2.5	12.5	0	2.4	16.7	0	0	0	6.7	2.4



- ***March 2017***

PRECISION DATA INDUSTRIES, LLC
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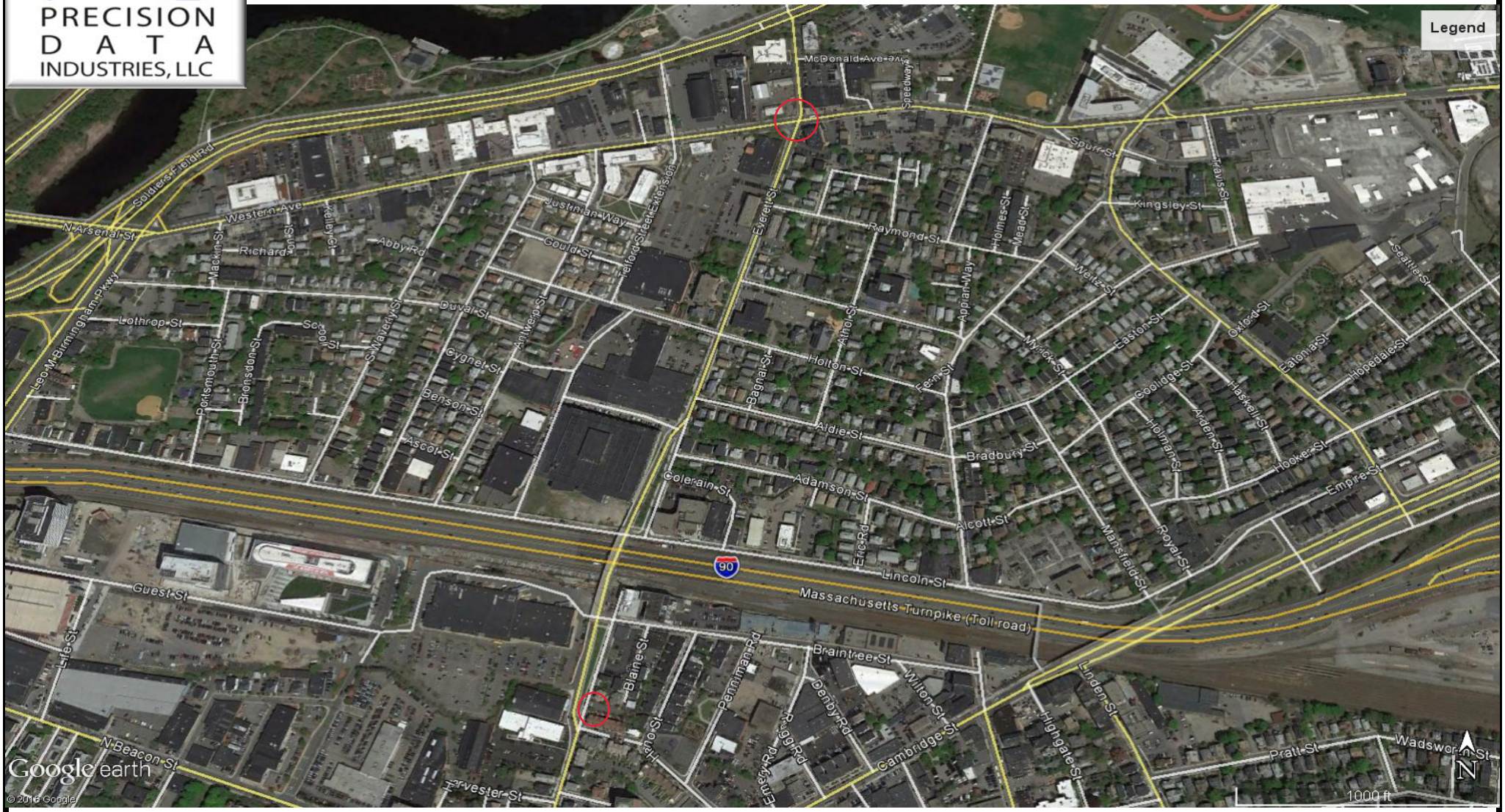
Traffic Counts with Precision



Client:	Engineer:	Site Code:	Date:	PDI Job Number:	City, State:
VHB	P. Dunford	12305.01	Thurs 3/9 & Sat 3/11/17	175533	Allston, MA

PDI File #: **175533 A**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

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

Cars and Heavy Vehicles

	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	4	22	6	0	32	4	56	16	0	76	19	48	8	0	75	16	82	6	0	104	287
7:15 AM	8	24	7	0	39	12	72	17	0	101	10	62	9	0	81	19	120	8	0	147	368
7:30 AM	4	29	7	0	40	10	55	24	0	89	16	70	19	0	105	20	112	14	0	146	380
7:45 AM	6	29	6	0	41	11	101	14	0	126	20	78	17	0	115	23	117	12	0	152	434
Total	22	104	26	0	152	37	284	71	0	392	65	258	53	0	376	78	431	40	0	549	1469
8:00 AM	8	37	7	0	52	11	74	28	0	113	16	71	22	0	109	17	127	13	0	157	431
8:15 AM	6	40	5	0	51	12	101	35	0	148	27	65	22	0	114	33	132	13	0	178	491
8:30 AM	9	33	9	0	51	14	85	26	0	125	47	72	19	0	138	21	147	13	0	181	495
8:45 AM	7	36	14	0	57	11	75	29	0	115	25	63	19	0	107	20	110	10	0	140	419
Total	30	146	35	0	211	48	335	118	0	501	115	271	82	0	468	91	516	49	0	656	1836
Grand Total	52	250	61	0	363	85	619	189	0	893	180	529	135	0	844	169	947	89	0	1205	3305
Approach %	14.3	68.9	16.8	0.0		9.5	69.3	21.2	0.0		21.3	62.7	16.0	0.0		14.0	78.6	7.4	0.0		
Total %	1.6	7.6	1.8	0.0	11.0	2.6	18.7	5.7	0.0	27.0	5.4	16.0	4.1	0.0	25.5	5.1	28.7	2.7	0.0	36.5	
Exiting Leg Total					703					1188					608					806	3305
Cars	50	246	57	0	353	84	550	187	0	821	167	523	127	0	817	161	827	85	0	1073	3064
% Cars	96.2	98.4	93.4	0.0	97.2	98.8	88.9	98.9	0.0	91.9	92.8	98.9	94.1	0.0	96.8	95.3	87.3	95.5	0.0	89.0	92.7
Exiting Leg Total					692					1051					594					727	3064
Heavy Vehicles	2	4	4	0	10	1	69	2	0	72	13	6	8	0	27	8	120	4	0	132	241
% Heavy Vehicles	3.8	1.6	6.6	0.0	2.8	1.2	11.1	1.1	0.0	8.1	7.2	1.1	5.9	0.0	3.2	4.7	12.7	4.5	0.0	11.0	7.3
Exiting Leg Total					11					137					14					79	241

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

7:45 AM	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:45 AM	6	29	6	0	41	11	101	14	0	126	20	78	17	0	115	23	117	12	0	152	434
8:00 AM	8	37	7	0	52	11	74	28	0	113	16	71	22	0	109	17	127	13	0	157	431
8:15 AM	6	40	5	0	51	12	101	35	0	148	27	65	22	0	114	33	132	13	0	178	491
8:30 AM	9	33	9	0	51	14	85	26	0	125	47	72	19	0	138	21	147	13	0	181	495
Total Volume	29	139	27	0	195	48	361	103	0	512	110	286	80	0	476	94	523	51	0	668	1851
% Approach Total	14.9	71.3	13.8	0.0		9.4	70.5	20.1	0.0		23.1	60.1	16.8	0.0		14.1	78.3	7.6	0.0		
PHF	0.806	0.869	0.750	0.000	0.938	0.857	0.894	0.736	0.000	0.865	0.585	0.917	0.909	0.000	0.862	0.712	0.889	0.981	0.000	0.923	0.935
Cars	28	137	25	0	190	48	320	102	0	470	102	283	75	0	460	88	459	49	0	596	1716
Cars %	96.6	98.6	92.6	0.0	97.4	100.0	88.6	99.0	0.0	91.8	92.7	99.0	93.8	0.0	96.6	93.6	87.8	96.1	0.0	89.2	92.7
Heavy Vehicles	1	2	2	0	5	0	41	1	0	42	8	3	5	0	16	6	64	2	0	72	135
Heavy Vehicles %	3.4	1.4	7.4	0.0	2.6	0.0	11.4	1.0	0.0	8.2	7.3	1.0	6.3	0.0	3.4	6.4	12.2	3.9	0.0	10.8	7.3
Cars Enter Leg	28	137	25	0	190	48	320	102	0	470	102	283	75	0	460	88	459	49	0	596	1716
Heavy Enter Leg	1	2	2	0	5	0	41	1	0	42	8	3	5	0	16	6	64	2	0	72	135
Total Entering Leg	29	139	27	0	195	48	361	103	0	512	110	286	80	0	476	94	523	51	0	668	1851
Cars Exiting Leg					380					586					327					423	1716
Heavy Exit Leg					5					74					9					47	135
Total Exiting Leg					385					660					336					470	1851

PDI File #: **175533 A**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

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

Cars

	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	4	21	6	0	31	4	46	16	0	66	17	47	8	0	72	15	69	6	0	90	259
7:15 AM	8	24	7	0	39	11	67	16	0	94	10	60	9	0	79	18	110	8	0	136	348
7:30 AM	3	28	7	0	38	10	49	24	0	83	14	70	16	0	100	20	98	13	0	131	352
7:45 AM	5	29	5	0	39	11	93	14	0	118	19	78	16	0	113	20	104	12	0	136	406
Total	20	102	25	0	147	36	255	70	0	361	60	255	49	0	364	73	381	39	0	493	1365
8:00 AM	8	37	7	0	52	11	65	28	0	104	15	69	19	0	103	17	106	13	0	136	395
8:15 AM	6	39	5	0	50	12	91	34	0	137	24	64	21	0	109	31	117	12	0	160	456
8:30 AM	9	32	8	0	49	14	71	26	0	111	44	72	19	0	135	20	132	12	0	164	459
8:45 AM	7	36	12	0	55	11	68	29	0	108	24	63	19	0	106	20	91	9	0	120	389
Total	30	144	32	0	206	48	295	117	0	460	107	268	78	0	453	88	446	46	0	580	1699
Grand Total	50	246	57	0	353	84	550	187	0	821	167	523	127	0	817	161	827	85	0	1073	3064
Approach %	14.2	69.7	16.1	0.0		10.2	67.0	22.8	0.0		20.4	64.0	15.5	0.0		15.0	77.1	7.9	0.0		
Total %	1.6	8.0	1.9	0.0	11.5	2.7	18.0	6.1	0.0	26.8	5.5	17.1	4.1	0.0	26.7	5.3	27.0	2.8	0.0	35.0	
Exiting Leg Total					692					1051					594					727	3064

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

7:45 AM	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:45 AM	5	29	5	0	39	11	93	14	0	118	19	78	16	0	113	20	104	12	0	136	406
8:00 AM	8	37	7	0	52	11	65	28	0	104	15	69	19	0	103	17	106	13	0	136	395
8:15 AM	6	39	5	0	50	12	91	34	0	137	24	64	21	0	109	31	117	12	0	160	456
8:30 AM	9	32	8	0	49	14	71	26	0	111	44	72	19	0	135	20	132	12	0	164	459
Total Volume	28	137	25	0	190	48	320	102	0	470	102	283	75	0	460	88	459	49	0	596	1716
% Approach Total	14.7	72.1	13.2	0.0		10.2	68.1	21.7	0.0		22.2	61.5	16.3	0.0		14.8	77.0	8.2	0.0		
PHF	0.778	0.878	0.781	0.000	0.913	0.857	0.860	0.750	0.000	0.858	0.580	0.907	0.893	0.000	0.852	0.710	0.869	0.942	0.000	0.909	0.935
Entering Leg	28	137	25	0	190	48	320	102	0	470	102	283	75	0	460	88	459	49	0	596	1716
Exiting Leg					380					586					327					423	1716
Total					570					1056					787					1019	3432

PDI File #: **175533 A**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

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

Heavy Vehicles

	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	1	0	0	1	0	10	0	0	10	2	1	0	0	3	1	13	0	0	14	28
7:15 AM	0	0	0	0	0	1	5	1	0	7	0	2	0	0	2	1	10	0	0	11	20
7:30 AM	1	1	0	0	2	0	6	0	0	6	2	0	3	0	5	0	14	1	0	15	28
7:45 AM	1	0	1	0	2	0	8	0	0	8	1	0	1	0	2	3	13	0	0	16	28
Total	2	2	1	0	5	1	29	1	0	31	5	3	4	0	12	5	50	1	0	56	104
8:00 AM	0	0	0	0	0	0	9	0	0	9	1	2	3	0	6	0	21	0	0	21	36
8:15 AM	0	1	0	0	1	0	10	1	0	11	3	1	1	0	5	2	15	1	0	18	35
8:30 AM	0	1	1	0	2	0	14	0	0	14	3	0	0	0	3	1	15	1	0	17	36
8:45 AM	0	0	2	0	2	0	7	0	0	7	1	0	0	0	1	0	19	1	0	20	30
Total	0	2	3	0	5	0	40	1	0	41	8	3	4	0	15	3	70	3	0	76	137
Grand Total	2	4	4	0	10	1	69	2	0	72	13	6	8	0	27	8	120	4	0	132	241
Approach %	20.0	40.0	40.0	0.0		1.4	95.8	2.8	0.0		48.1	22.2	29.6	0.0		6.1	90.9	3.0	0.0		
Total %	0.8	1.7	1.7	0.0	4.1	0.4	28.6	0.8	0.0	29.9	5.4	2.5	3.3	0.0	11.2	3.3	49.8	1.7	0.0	54.8	
Exiting Leg Total					11					137					14					79	241

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

8:00 AM	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	9	0	0	9	1	2	3	0	6	0	21	0	0	21	36
8:15 AM	0	1	0	0	1	0	10	1	0	11	3	1	1	0	5	2	15	1	0	18	35
8:30 AM	0	1	1	0	2	0	14	0	0	14	3	0	0	0	3	1	15	1	0	17	36
8:45 AM	0	0	2	0	2	0	7	0	0	7	1	0	0	0	1	0	19	1	0	20	30
Total Volume	0	2	3	0	5	0	40	1	0	41	8	3	4	0	15	3	70	3	0	76	137
% Approach Total	0.0	40.0	60.0	0.0		0.0	97.6	2.4	0.0		53.3	20.0	26.7	0.0		3.9	92.1	3.9	0.0		
PHF	0.000	0.500	0.375	0.000	0.625	0.000	0.714	0.250	0.000	0.732	0.667	0.375	0.333	0.000	0.625	0.375	0.833	0.750	0.000	0.905	0.951
Entering Leg	0	2	3	0	5	0	40	1	0	41	8	3	4	0	15	3	70	3	0	76	137
Exiting Leg					6					81					6					44	137
Total					11					122					21					120	274

PDI File #: **175533 A**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

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

Bicycles (on Roadway and Crosswalks)

	Everett Street							Western Avenue							Everett Street							Western Avenue							
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	7
7:15 AM	0	0	0	0	1	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	4	0	0	0	0	4	7
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	1	0	0	0	2	3	0	5	0	0	0	0	5	10
7:45 AM	0	0	1	0	0	0	1	0	3	0	0	0	0	3	0	0	0	0	1	0	1	2	7	0	0	0	0	9	14
Total	0	0	2	0	1	0	3	0	6	0	0	0	1	7	0	1	0	0	1	2	4	2	22	0	0	0	0	24	38
8:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	7
8:15 AM	0	0	0	0	0	0	0	0	3	1	0	0	0	4	0	0	1	0	0	1	2	0	8	0	0	0	0	8	14
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7
8:45 AM	0	0	0	0	0	0	0	0	6	0	0	0	0	6	0	0	0	0	0	0	0	0	3	0	0	0	0	3	9
Total	0	1	0	0	0	0	1	0	9	1	0	0	0	10	0	0	1	0	0	1	2	0	24	0	0	0	0	24	37
Grand Total	0	1	2	0	1	0	4	0	15	1	0	0	1	17	0	1	1	0	1	3	6	2	46	0	0	0	0	48	75
Approach %	0.0	25.0	50.0	0.0	25.0	0.0		0.0	88.2	5.9	0.0	0.0	5.9		0.0	16.7	16.7	0.0	16.7	50.0		4.2	95.8	0.0	0.0	0.0	0.0		
Total %	0.0	1.3	2.7	0.0	1.3	0.0	5.3	0.0	20.0	1.3	0.0	0.0	1.3	22.7	0.0	1.3	1.3	0.0	1.3	4.0	8.0	2.7	61.3	0.0	0.0	0.0	0.0	64.0	
Exiting Leg Total							2							49							8							16	75

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

7:30 AM	Everett Street							Western Avenue							Everett Street							Western Avenue							
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	1	0	0	0	2	3	0	5	0	0	0	0	5	10
7:45 AM	0	0	1	0	0	0	1	0	3	0	0	0	0	3	0	0	0	0	1	0	1	2	7	0	0	0	0	9	14
8:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	7
8:15 AM	0	0	0	0	0	0	0	0	3	1	0	0	0	4	0	0	1	0	0	1	2	0	8	0	0	0	0	8	14
Total Volume	0	1	1	0	0	0	2	0	7	1	0	0	1	9	0	1	1	0	1	3	6	2	26	0	0	0	0	28	45
% Approach Total	0.0	50.0	50.0	0.0	0.0	0.0		0.0	77.8	11.1	0.0	0.0	11.1		0.0	16.7	16.7	0.0	16.7	50.0		7.1	92.9	0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.250	0.000	0.000	0.000	0.500	0.000	0.583	0.250	0.000	0.000	0.250	0.563	0.000	0.250	0.250	0.000	0.250	0.375	0.500	0.250	0.813	0.000	0.000	0.000	0.000	0.778	0.804
Entering Leg	0	1	1	0	0	0	2	0	7	1	0	0	1	9	0	1	1	0	1	3	6	2	26	0	0	0	0	28	45
Exiting Leg							1							28							8							8	45
Total							3							37							14							36	90

PDI File #: **175533 A**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

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

Pedestrians

	Everett Street							Western Avenue							Everett Street							Western Avenue							
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	1	1	4
7:15 AM	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
7:30 AM	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	2	0	2	5
7:45 AM	0	0	0	0	0	2	2	0	0	0	0	1	1	2	0	0	0	0	0	3	3	0	0	0	0	0	1	1	8
Total	0	0	0	0	1	3	4	0	0	0	0	2	2	4	0	0	0	0	2	5	7	0	0	0	0	3	2	5	20
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	3	3	0	0	0	0	1	5	6	11
8:15 AM	0	0	0	0	2	0	2	0	0	0	0	2	1	3	0	0	0	0	3	0	3	0	0	0	0	1	1	2	10
8:30 AM	0	0	0	0	3	2	5	0	0	0	0	4	3	7	0	0	0	0	1	2	3	0	0	0	0	4	2	6	21
8:45 AM	0	0	0	0	1	2	3	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	2	1	3	8
Total	0	0	0	0	6	4	10	0	0	0	0	6	7	13	0	0	0	0	5	5	10	0	0	0	0	8	9	17	50
Grand Total	0	0	0	0	7	7	14	0	0	0	0	8	9	17	0	0	0	0	7	10	17	0	0	0	0	11	11	22	70
Approach %	0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	47.1	52.9		0.0	0.0	0.0	0.0	41.2	58.8		0.0	0.0	0.0	0.0	50.0	50.0		
Total %	0.0	0.0	0.0	0.0	10.0	10.0	20.0	0.0	0.0	0.0	0.0	11.4	12.9	24.3	0.0	0.0	0.0	0.0	10.0	14.3	24.3	0.0	0.0	0.0	0.0	15.7	15.7	31.4	
Exiting Leg Total							14							17							17							22	70

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

7:45 AM	Everett Street							Western Avenue							Everett Street							Western Avenue							
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:45 AM	0	0	0	0	0	2	2	0	0	0	0	1	1	2	0	0	0	0	0	3	3	0	0	0	0	0	1	1	8
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	3	3	0	0	0	0	1	5	6	11
8:15 AM	0	0	0	0	2	0	2	0	0	0	0	2	1	3	0	0	0	0	3	0	3	0	0	0	0	1	1	2	10
8:30 AM	0	0	0	0	3	2	5	0	0	0	0	4	3	7	0	0	0	0	1	2	3	0	0	0	0	4	2	6	21
Total Volume	0	0	0	0	5	4	9	0	0	0	0	7	7	14	0	0	0	0	4	8	12	0	0	0	0	6	9	15	50
% Approach Total	0.0	0.0	0.0	0.0	55.6	44.4		0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	33.3	66.7		0.0	0.0	0.0	0.0	40.0	60.0		
PHF	0.000	0.000	0.000	0.000	0.417	0.500	0.450	0.000	0.000	0.000	0.000	0.438	0.583	0.500	0.000	0.000	0.000	0.000	0.333	0.667	1.000	0.000	0.000	0.000	0.000	0.375	0.450	0.625	0.595
Entering Leg	0	0	0	0	5	4	9	0	0	0	0	7	7	14	0	0	0	0	4	8	12	0	0	0	0	6	9	15	50
Exiting Leg							9							14							12							15	50
Total							18							28							24							30	100

PDI File #: **175533 AA**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

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

Cars and Heavy Vehicles

	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	12	47	7	0	66	14	97	24	0	135	24	37	26	0	87	34	110	5	0	149	437
4:15 PM	7	49	3	0	59	16	98	29	0	143	21	42	11	0	74	32	93	10	0	135	411
4:30 PM	9	52	11	0	72	16	79	20	0	115	20	44	16	0	80	25	97	7	0	129	396
4:45 PM	13	44	5	0	62	15	106	31	0	152	20	50	26	0	96	30	87	1	0	118	428
Total	41	192	26	0	259	61	380	104	0	545	85	173	79	0	337	121	387	23	0	531	1672
5:00 PM	15	50	8	0	73	31	140	27	0	198	18	45	28	0	91	35	93	5	0	133	495
5:15 PM	7	49	6	0	62	11	116	41	0	168	21	39	28	0	88	48	98	7	0	153	471
5:30 PM	9	71	4	0	84	21	117	36	0	174	23	54	17	0	94	46	97	5	0	148	500
5:45 PM	13	62	7	0	82	20	123	41	0	184	22	48	16	0	86	35	87	11	0	133	485
Total	44	232	25	0	301	83	496	145	0	724	84	186	89	0	359	164	375	28	0	567	1951
Grand Total	85	424	51	0	560	144	876	249	0	1269	169	359	168	0	696	285	762	51	0	1098	3623
Approach %	15.2	75.7	9.1	0.0		11.3	69.0	19.6	0.0		24.3	51.6	24.1	0.0		26.0	69.4	4.6	0.0		
Total %	2.3	11.7	1.4	0.0	15.5	4.0	24.2	6.9	0.0	35.0	4.7	9.9	4.6	0.0	19.2	7.9	21.0	1.4	0.0	30.3	
Exiting Leg Total					554					982					958					1129	3623
Cars	84	420	49	0	553	143	831	244	0	1218	162	358	164	0	684	279	713	43	0	1035	3490
% Cars	98.8	99.1	96.1	0.0	98.8	99.3	94.9	98.0	0.0	96.0	95.9	99.7	97.6	0.0	98.3	97.9	93.6	84.3	0.0	94.3	96.3
Exiting Leg Total					544					924					943					1079	3490
Heavy Vehicles	1	4	2	0	7	1	45	5	0	51	7	1	4	0	12	6	49	8	0	63	133
% Heavy Vehicles	1.2	0.9	3.9	0.0	1.3	0.7	5.1	2.0	0.0	4.0	4.1	0.3	2.4	0.0	1.7	2.1	6.4	15.7	0.0	5.7	3.7
Exiting Leg Total					10					58					15					50	133

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

5:00 PM	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	15	50	8	0	73	31	140	27	0	198	18	45	28	0	91	35	93	5	0	133	495
5:15 PM	7	49	6	0	62	11	116	41	0	168	21	39	28	0	88	48	98	7	0	153	471
5:30 PM	9	71	4	0	84	21	117	36	0	174	23	54	17	0	94	46	97	5	0	148	500
5:45 PM	13	62	7	0	82	20	123	41	0	184	22	48	16	0	86	35	87	11	0	133	485
Total Volume	44	232	25	0	301	83	496	145	0	724	84	186	89	0	359	164	375	28	0	567	1951
% Approach Total	14.6	77.1	8.3	0.0		11.5	68.5	20.0	0.0		23.4	51.8	24.8	0.0		28.9	66.1	4.9	0.0		
PHF	0.733	0.817	0.781	0.000	0.896	0.669	0.886	0.884	0.000	0.914	0.913	0.861	0.795	0.000	0.955	0.854	0.957	0.636	0.000	0.926	0.976
Cars	43	231	24	0	298	82	477	145	0	704	83	186	87	0	356	163	358	22	0	543	1901
Cars %	97.7	99.6	96.0	0.0	99.0	98.8	96.2	100.0	0.0	97.2	98.8	100.0	97.8	0.0	99.2	99.4	95.5	78.6	0.0	95.8	97.4
Heavy Vehicles	1	1	1	0	3	1	19	0	0	20	1	0	2	0	3	1	17	6	0	24	50
Heavy Vehicles %	2.3	0.4	4.0	0.0	1.0	1.2	3.8	0.0	0.0	2.8	1.2	0.0	2.2	0.0	0.8	0.6	4.5	21.4	0.0	4.2	2.6
Cars Enter Leg	43	231	24	0	298	82	477	145	0	704	83	186	87	0	356	163	358	22	0	543	1901
Heavy Enter Leg	1	1	1	0	3	1	19	0	0	20	1	0	2	0	3	1	17	6	0	24	50
Total Entering Leg	44	232	25	0	301	83	496	145	0	724	84	186	89	0	359	164	375	28	0	567	1951
Cars Exiting Leg					290					465					539					607	1901
Heavy Exit Leg					7					19					2					22	50
Total Exiting Leg					297					484					541					629	1951

PDI File #: **175533 AA**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

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

Cars

	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	12	47	6	0	65	14	92	24	0	130	22	36	26	0	84	33	102	5	0	140	419
4:15 PM	7	47	3	0	57	16	89	24	0	129	19	42	11	0	72	29	84	10	0	123	381
4:30 PM	9	51	11	0	71	16	75	20	0	111	18	44	15	0	77	25	91	5	0	121	380
4:45 PM	13	44	5	0	62	15	98	31	0	144	20	50	25	0	95	29	78	1	0	108	409
Total	41	189	25	0	255	61	354	99	0	514	79	172	77	0	328	116	355	21	0	492	1589
5:00 PM	15	49	8	0	72	31	136	27	0	194	18	45	27	0	90	35	90	5	0	130	486
5:15 PM	7	49	5	0	61	11	114	41	0	166	21	39	27	0	87	47	93	5	0	145	459
5:30 PM	9	71	4	0	84	20	112	36	0	168	22	54	17	0	93	46	91	4	0	141	486
5:45 PM	12	62	7	0	81	20	115	41	0	176	22	48	16	0	86	35	84	8	0	127	470
Total	43	231	24	0	298	82	477	145	0	704	83	186	87	0	356	163	358	22	0	543	1901
Grand Total	84	420	49	0	553	143	831	244	0	1218	162	358	164	0	684	279	713	43	0	1035	3490
Approach %	15.2	75.9	8.9	0.0		11.7	68.2	20.0	0.0		23.7	52.3	24.0	0.0		27.0	68.9	4.2	0.0		
Total %	2.4	12.0	1.4	0.0	15.8	4.1	23.8	7.0	0.0	34.9	4.6	10.3	4.7	0.0	19.6	8.0	20.4	1.2	0.0	29.7	
Exiting Leg Total					544					924					943					1079	3490

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

5:00 PM	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	15	49	8	0	72	31	136	27	0	194	18	45	27	0	90	35	90	5	0	130	486
5:15 PM	7	49	5	0	61	11	114	41	0	166	21	39	27	0	87	47	93	5	0	145	459
5:30 PM	9	71	4	0	84	20	112	36	0	168	22	54	17	0	93	46	91	4	0	141	486
5:45 PM	12	62	7	0	81	20	115	41	0	176	22	48	16	0	86	35	84	8	0	127	470
Total Volume	43	231	24	0	298	82	477	145	0	704	83	186	87	0	356	163	358	22	0	543	1901
% Approach Total	14.4	77.5	8.1	0.0		11.6	67.8	20.6	0.0		23.3	52.2	24.4	0.0		30.0	65.9	4.1	0.0		
PHF	0.717	0.813	0.750	0.000	0.887	0.661	0.877	0.884	0.000	0.907	0.943	0.861	0.806	0.000	0.957	0.867	0.962	0.688	0.000	0.936	0.978
Entering Leg	43	231	24	0	298	82	477	145	0	704	83	186	87	0	356	163	358	22	0	543	1901
Exiting Leg					290					465					539					607	1901
Total					588					1169					895					1150	3802

PDI File #: **175533 AA**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

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

Heavy Vehicles

	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	1	0	1	0	5	0	0	5	2	1	0	0	3	1	8	0	0	9	18
4:15 PM	0	2	0	0	2	0	9	5	0	14	2	0	0	0	2	3	9	0	0	12	30
4:30 PM	0	1	0	0	1	0	4	0	0	4	2	0	1	0	3	0	6	2	0	8	16
4:45 PM	0	0	0	0	0	0	8	0	0	8	0	0	1	0	1	1	9	0	0	10	19
Total	0	3	1	0	4	0	26	5	0	31	6	1	2	0	9	5	32	2	0	39	83
5:00 PM	0	1	0	0	1	0	4	0	0	4	0	0	1	0	1	0	3	0	0	3	9
5:15 PM	0	0	1	0	1	0	2	0	0	2	0	0	1	0	1	1	5	2	0	8	12
5:30 PM	0	0	0	0	0	1	5	0	0	6	1	0	0	0	1	0	6	1	0	7	14
5:45 PM	1	0	0	0	1	0	8	0	0	8	0	0	0	0	0	0	3	3	0	6	15
Total	1	1	1	0	3	1	19	0	0	20	1	0	2	0	3	1	17	6	0	24	50
Grand Total	1	4	2	0	7	1	45	5	0	51	7	1	4	0	12	6	49	8	0	63	133
Approach %	14.3	57.1	28.6	0.0		2.0	88.2	9.8	0.0		58.3	8.3	33.3	0.0		9.5	77.8	12.7	0.0		
Total %	0.8	3.0	1.5	0.0	5.3	0.8	33.8	3.8	0.0	38.3	5.3	0.8	3.0	0.0	9.0	4.5	36.8	6.0	0.0	47.4	
Exiting Leg Total					10					58					15					50	133

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

4:00 PM	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	1	0	1	0	5	0	0	5	2	1	0	0	3	1	8	0	0	9	18
4:15 PM	0	2	0	0	2	0	9	5	0	14	2	0	0	0	2	3	9	0	0	12	30
4:30 PM	0	1	0	0	1	0	4	0	0	4	2	0	1	0	3	0	6	2	0	8	16
4:45 PM	0	0	0	0	0	0	8	0	0	8	0	0	1	0	1	1	9	0	0	10	19
Total Volume	0	3	1	0	4	0	26	5	0	31	6	1	2	0	9	5	32	2	0	39	83
% Approach Total	0.0	75.0	25.0	0.0		0.0	83.9	16.1	0.0		66.7	11.1	22.2	0.0		12.8	82.1	5.1	0.0		
PHF	0.000	0.375	0.250	0.000	0.500	0.000	0.722	0.250	0.000	0.554	0.750	0.250	0.500	0.000	0.750	0.417	0.889	0.250	0.000	0.813	0.692
Entering Leg	0	3	1	0	4	0	26	5	0	31	6	1	2	0	9	5	32	2	0	39	83
Exiting Leg					3					39					13					28	83
Total					7					70					22					67	166

PDI File #: **175533 AA**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

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

Bicycles (on Roadway and Crosswalks)

	Everett Street							Western Avenue							Everett Street							Western Avenue							
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	2	3
4:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	2	3
4:30 PM	0	0	0	0	0	0	0	0	3	1	0	0	0	4	1	0	1	0	0	0	2	0	0	0	0	0	0	0	6
4:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	5	3	0	0	0	8	1	0	1	0	0	0	2	1	3	0	0	0	0	4	14
5:00 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	1	1	4	6
5:15 PM	0	0	0	0	0	0	0	0	5	1	0	0	0	6	0	0	0	0	0	3	3	0	2	0	0	0	0	2	11
5:30 PM	0	0	0	0	0	0	0	0	8	0	0	0	0	8	0	0	0	0	1	0	1	0	2	0	0	0	0	2	11
5:45 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	3	0	0	0	0	3	6
Total	0	0	0	0	0	0	0	0	18	1	0	0	0	19	0	0	0	0	1	3	4	0	9	0	0	1	1	11	34
Grand Total	0	0	0	0	0	0	0	0	23	4	0	0	0	27	1	0	1	0	1	3	6	1	12	0	0	1	1	15	48
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	85.2	14.8	0.0	0.0	0.0		16.7	0.0	16.7	0.0	16.7	50.0		6.7	80.0	0.0	0.0	6.7	6.7		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.9	8.3	0.0	0.0	0.0	56.3	2.1	0.0	2.1	0.0	2.1	6.3	12.5	2.1	25.0	0.0	0.0	2.1	2.1	31.3	
Exiting Leg Total							0							13							9							26	48

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

5:00 PM	Everett Street							Western Avenue							Everett Street							Western Avenue							
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	1	1	4	6
5:15 PM	0	0	0	0	0	0	0	0	5	1	0	0	0	6	0	0	0	0	0	3	3	0	2	0	0	0	0	2	11
5:30 PM	0	0	0	0	0	0	0	0	8	0	0	0	0	8	0	0	0	0	1	0	1	0	2	0	0	0	0	2	11
5:45 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	3	0	0	0	0	3	6
Total Volume	0	0	0	0	0	0	0	0	18	1	0	0	0	19	0	0	0	0	1	3	4	0	9	0	0	1	1	11	34
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	94.7	5.3	0.0	0.0	0.0		0.0	0.0	0.0	0.0	25.0	75.0		0.0	81.8	0.0	0.0	9.1	9.1		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.563	0.250	0.000	0.000	0.000	0.594	0.000	0.000	0.000	0.000	0.250	0.250	0.333	0.000	0.750	0.000	0.000	0.250	0.250	0.688	0.773
Entering Leg	0	0	0	0	0	0	0	0	18	1	0	0	0	19	0	0	0	0	1	3	4	0	9	0	0	1	1	11	34
Exiting Leg							0							9							5							20	34
Total							0							28							9							31	68

PDI File #: **175533 AA**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

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

Pedestrians

	Everett Street							Western Avenue							Everett Street							Western Avenue							
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	2	0	0	0	0	1	0	1	4
4:15 PM	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	2	3	5	0	0	0	0	0	1	1	9
4:30 PM	0	0	0	0	1	1	2	0	0	0	0	0	1	1	0	0	0	0	2	4	6	0	0	0	0	0	0	0	9
4:45 PM	0	0	0	0	2	1	3	0	0	0	0	1	0	1	0	0	0	0	1	1	2	0	0	0	0	1	0	1	7
Total	0	0	0	0	5	3	8	0	0	0	0	1	2	3	0	0	0	0	6	9	15	0	0	0	0	2	1	3	29
5:00 PM	0	0	0	0	3	3	6	0	0	0	0	1	0	1	0	0	0	0	3	3	6	0	0	0	0	9	3	12	25
5:15 PM	0	0	0	0	1	2	3	0	0	0	0	1	0	1	0	0	0	0	3	3	6	0	0	0	0	1	4	5	15
5:30 PM	0	0	0	0	2	1	3	0	0	0	0	1	1	2	0	0	0	0	2	3	5	0	0	0	0	1	3	4	14
5:45 PM	0	0	0	0	2	3	5	0	0	0	0	5	1	6	0	0	0	0	3	1	4	0	0	0	0	0	4	4	19
Total	0	0	0	0	8	9	17	0	0	0	0	8	2	10	0	0	0	0	11	10	21	0	0	0	0	11	14	25	73
Grand Total	0	0	0	0	13	12	25	0	0	0	0	9	4	13	0	0	0	0	17	19	36	0	0	0	0	13	15	28	102
Approach %	0.0	0.0	0.0	0.0	52.0	48.0		0.0	0.0	0.0	0.0	69.2	30.8		0.0	0.0	0.0	0.0	47.2	52.8		0.0	0.0	0.0	0.0	46.4	53.6		
Total %	0.0	0.0	0.0	0.0	12.7	11.8	24.5	0.0	0.0	0.0	0.0	8.8	3.9	12.7	0.0	0.0	0.0	0.0	16.7	18.6	35.3	0.0	0.0	0.0	0.0	12.7	14.7	27.5	
Exiting Leg Total							25							13							36							28	102

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

5:00 PM	Everett Street							Western Avenue							Everett Street							Western Avenue							
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	0	0	3	3	6	0	0	0	0	1	0	1	0	0	0	0	3	3	6	0	0	0	0	9	3	12	25
5:15 PM	0	0	0	0	1	2	3	0	0	0	0	1	0	1	0	0	0	0	3	3	6	0	0	0	0	1	4	5	15
5:30 PM	0	0	0	0	2	1	3	0	0	0	0	1	1	2	0	0	0	0	2	3	5	0	0	0	0	1	3	4	14
5:45 PM	0	0	0	0	2	3	5	0	0	0	0	5	1	6	0	0	0	0	3	1	4	0	0	0	0	0	4	4	19
Total Volume	0	0	0	0	8	9	17	0	0	0	0	8	2	10	0	0	0	0	11	10	21	0	0	0	0	11	14	25	73
% Approach Total	0.0	0.0	0.0	0.0	47.1	52.9		0.0	0.0	0.0	0.0	80.0	20.0		0.0	0.0	0.0	0.0	52.4	47.6		0.0	0.0	0.0	0.0	44.0	56.0		
PHF	0.000	0.000	0.000	0.000	0.667	0.750	0.708	0.000	0.000	0.000	0.000	0.400	0.500	0.417	0.000	0.000	0.000	0.000	0.917	0.833	0.875	0.000	0.000	0.000	0.000	0.306	0.875	0.521	0.730
Entering Leg	0	0	0	0	8	9	17	0	0	0	0	8	2	10	0	0	0	0	11	10	21	0	0	0	0	11	14	25	73
Exiting Leg							17							10							21							25	73
Total							34							20							42							50	146

PDI File #: **175533 AAA**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Saturday, March 11, 2017**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

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

Cars and Heavy Vehicles

	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	3	22	7	0	32	2	68	18	0	88	23	48	24	0	95	27	87	7	0	121	336
11:15 AM	6	21	7	0	34	6	69	26	0	101	23	32	22	0	77	25	69	9	0	103	315
11:30 AM	9	16	9	0	34	6	67	24	1	98	9	22	12	0	43	28	78	6	0	112	287
11:45 AM	5	25	5	0	35	8	88	29	0	125	15	26	17	0	58	21	85	6	0	112	330
Total	23	84	28	0	135	22	292	97	1	412	70	128	75	0	273	101	319	28	0	448	1268
12:00 PM	8	31	9	0	48	13	78	29	0	120	15	34	19	0	68	22	69	9	0	100	336
12:15 PM	3	26	8	0	37	6	85	25	0	116	21	41	18	0	80	29	107	12	0	148	381
12:30 PM	9	27	7	0	43	3	77	22	0	102	15	39	12	0	66	25	93	6	0	124	335
12:45 PM	5	20	6	0	31	10	97	33	0	140	18	38	13	0	69	32	89	5	0	126	366
Total	25	104	30	0	159	32	337	109	0	478	69	152	62	0	283	108	358	32	0	498	1418
1:00 PM	2	26	6	0	34	6	85	25	0	116	26	27	12	0	65	29	104	9	0	142	357
1:15 PM	11	26	7	0	44	7	75	27	0	109	17	37	14	0	68	24	85	7	0	116	337
1:30 PM	9	24	3	0	36	5	84	22	0	111	26	50	21	0	97	25	97	6	0	128	372
1:45 PM	9	32	4	0	45	7	89	26	0	122	14	36	16	0	66	34	97	3	0	134	367
Total	31	108	20	0	159	25	333	100	0	458	83	150	63	0	296	112	383	25	0	520	1433
Grand Total	79	296	78	0	453	79	962	306	1	1348	222	430	200	0	852	321	1060	85	0	1466	4119
Approach %	17.4	65.3	17.2	0.0		5.9	71.4	22.7	0.1		26.1	50.5	23.5	0.0		21.9	72.3	5.8	0.0		
Total %	1.9	7.2	1.9	0.0	11.0	1.9	23.4	7.4	0.0	32.7	5.4	10.4	4.9	0.0	20.7	7.8	25.7	2.1	0.0	35.6	
Exiting Leg Total					594					1361					923					1241	4119
Cars	79	295	77	0	451	78	912	296	1	1287	219	428	196	0	843	315	1007	85	0	1407	3988
% Cars	100.0	99.7	98.7	0.0	99.6	98.7	94.8	96.7	100.0	95.5	98.6	99.5	98.0	0.0	98.9	98.1	95.0	100.0	0.0	96.0	96.8
Exiting Leg Total					591					1304					906					1187	3988
Heavy Vehicles	0	1	1	0	2	1	50	10	0	61	3	2	4	0	9	6	53	0	0	59	131
% Heavy Vehicles	0.0	0.3	1.3	0.0	0.4	1.3	5.2	3.3	0.0	4.5	1.4	0.5	2.0	0.0	1.1	1.9	5.0	0.0	0.0	4.0	3.2
Exiting Leg Total					3					57					17					54	131

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:15 PM	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
12:15 PM	3	26	8	0	37	6	85	25	0	116	21	41	18	0	80	29	107	12	0	148	381
12:30 PM	9	27	7	0	43	3	77	22	0	102	15	39	12	0	66	25	93	6	0	124	335
12:45 PM	5	20	6	0	31	10	97	33	0	140	18	38	13	0	69	32	89	5	0	126	366
1:00 PM	2	26	6	0	34	6	85	25	0	116	26	27	12	0	65	29	104	9	0	142	357
Total Volume	19	99	27	0	145	25	344	105	0	474	80	145	55	0	280	115	393	32	0	540	1439
% Approach Total	13.1	68.3	18.6	0.0		5.3	72.6	22.2	0.0		28.6	51.8	19.6	0.0		21.3	72.8	5.9	0.0		
PHF	0.528	0.917	0.844	0.000	0.843	0.625	0.887	0.795	0.000	0.846	0.769	0.884	0.764	0.000	0.875	0.898	0.918	0.667	0.000	0.912	0.944
Cars	19	98	27	0	144	24	332	100	0	456	79	145	55	0	279	114	373	32	0	519	1398
Cars %	100.0	99.0	100.0	0.0	99.3	96.0	96.5	95.2	0.0	96.2	98.8	100.0	100.0	0.0	99.6	99.1	94.9	100.0	0.0	96.1	97.2
Heavy Vehicles	0	1	0	0	1	1	12	5	0	18	1	0	0	0	1	1	20	0	0	21	41
Heavy Vehicles %	0.0	1.0	0.0	0.0	0.7	4.0	3.5	4.8	0.0	3.8	1.3	0.0	0.0	0.0	0.4	0.9	5.1	0.0	0.0	3.9	2.8
Cars Enter Leg	19	98	27	0	144	24	332	100	0	456	79	145	55	0	279	114	373	32	0	519	1398
Heavy Enter Leg	0	1	0	0	1	1	12	5	0	18	1	0	0	0	1	1	20	0	0	21	41
Total Entering Leg	19	99	27	0	145	25	344	105	0	474	80	145	55	0	280	115	393	32	0	540	1439
Cars Exiting Leg					201					479					312					406	1398
Heavy Exit Leg					1					21					7					12	41
Total Exiting Leg					202					500					319					418	1439

PDI File #: **175533 AAA**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Saturday, March 11, 2017**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

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

Cars

	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	3	22	7	0	32	2	66	17	0	85	23	48	23	0	94	26	81	7	0	114	325
11:15 AM	6	21	7	0	34	6	65	26	0	97	22	32	22	0	76	25	66	9	0	100	307
11:30 AM	9	16	9	0	34	6	59	24	1	90	9	22	12	0	43	27	75	6	0	108	275
11:45 AM	5	25	5	0	35	8	83	28	0	119	15	25	16	0	56	21	83	6	0	110	320
Total	23	84	28	0	135	22	273	95	1	391	69	127	73	0	269	99	305	28	0	432	1227
12:00 PM	8	31	9	0	48	13	72	27	0	112	15	34	19	0	68	22	69	9	0	100	328
12:15 PM	3	26	8	0	37	5	83	24	0	112	21	41	18	0	80	29	99	12	0	140	369
12:30 PM	9	26	7	0	42	3	75	20	0	98	14	39	12	0	65	25	89	6	0	120	325
12:45 PM	5	20	6	0	31	10	92	31	0	133	18	38	13	0	69	32	83	5	0	120	353
Total	25	103	30	0	158	31	322	102	0	455	68	152	62	0	282	108	340	32	0	480	1375
1:00 PM	2	26	6	0	34	6	82	25	0	113	26	27	12	0	65	28	102	9	0	139	351
1:15 PM	11	26	6	0	43	7	70	27	0	104	17	37	14	0	68	24	80	7	0	111	326
1:30 PM	9	24	3	0	36	5	81	22	0	108	25	49	20	0	94	24	91	6	0	121	359
1:45 PM	9	32	4	0	45	7	84	25	0	116	14	36	15	0	65	32	89	3	0	124	350
Total	31	108	19	0	158	25	317	99	0	441	82	149	61	0	292	108	362	25	0	495	1386
Grand Total	79	295	77	0	451	78	912	296	1	1287	219	428	196	0	843	315	1007	85	0	1407	3988
Approach %	17.5	65.4	17.1	0.0		6.1	70.9	23.0	0.1		26.0	50.8	23.3	0.0		22.4	71.6	6.0	0.0		
Total %	2.0	7.4	1.9	0.0	11.3	2.0	22.9	7.4	0.0	32.3	5.5	10.7	4.9	0.0	21.1	7.9	25.3	2.1	0.0	35.3	
Exiting Leg Total					591					1304					906					1187	3988

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:15 PM	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
12:15 PM	3	26	8	0	37	5	83	24	0	112	21	41	18	0	80	29	99	12	0	140	369
12:30 PM	9	26	7	0	42	3	75	20	0	98	14	39	12	0	65	25	89	6	0	120	325
12:45 PM	5	20	6	0	31	10	92	31	0	133	18	38	13	0	69	32	83	5	0	120	353
1:00 PM	2	26	6	0	34	6	82	25	0	113	26	27	12	0	65	28	102	9	0	139	351
Total Volume	19	98	27	0	144	24	332	100	0	456	79	145	55	0	279	114	373	32	0	519	1398
% Approach Total	13.2	68.1	18.8	0.0		5.3	72.8	21.9	0.0		28.3	52.0	19.7	0.0		22.0	71.9	6.2	0.0		
PHF	0.528	0.942	0.844	0.000	0.857	0.600	0.902	0.806	0.000	0.857	0.760	0.884	0.764	0.000	0.872	0.891	0.914	0.667	0.000	0.927	0.947
Entering Leg	19	98	27	0	144	24	332	100	0	456	79	145	55	0	279	114	373	32	0	519	1398
Exiting Leg					201					479					312					406	1398
Total					345					935					591					925	2796

PDI File #: **175533 AAA**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Saturday, March 11, 2017**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

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

Heavy Vehicles

	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	2	1	0	3	0	0	1	0	1	1	6	0	0	7	11
11:15 AM	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	0	3	0	0	3	8
11:30 AM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	1	3	0	0	4	12
11:45 AM	0	0	0	0	0	0	5	1	0	6	0	1	1	0	2	0	2	0	0	2	10
Total	0	0	0	0	0	0	19	2	0	21	1	1	2	0	4	2	14	0	0	16	41
12:00 PM	0	0	0	0	0	0	6	2	0	8	0	0	0	0	0	0	0	0	0	0	8
12:15 PM	0	0	0	0	0	1	2	1	0	4	0	0	0	0	0	0	8	0	0	8	12
12:30 PM	0	1	0	0	1	0	2	2	0	4	1	0	0	0	1	0	4	0	0	4	10
12:45 PM	0	0	0	0	0	0	5	2	0	7	0	0	0	0	0	0	6	0	0	6	13
Total	0	1	0	0	1	1	15	7	0	23	1	0	0	0	1	0	18	0	0	18	43
1:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	6
1:15 PM	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	11
1:30 PM	0	0	0	0	0	0	3	0	0	3	1	1	1	0	3	1	6	0	0	7	13
1:45 PM	0	0	0	0	0	0	5	1	0	6	0	0	1	0	1	2	8	0	0	10	17
Total	0	0	1	0	1	0	16	1	0	17	1	1	2	0	4	4	21	0	0	25	47
Grand Total	0	1	1	0	2	1	50	10	0	61	3	2	4	0	9	6	53	0	0	59	131
Approach %	0.0	50.0	50.0	0.0		1.6	82.0	16.4	0.0		33.3	22.2	44.4	0.0		10.2	89.8	0.0	0.0		
Total %	0.0	0.8	0.8	0.0	1.5	0.8	38.2	7.6	0.0	46.6	2.3	1.5	3.1	0.0	6.9	4.6	40.5	0.0	0.0	45.0	
Exiting Leg Total					3					57					17					54	131

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

1:00 PM	Everett Street					Western Avenue					Everett Street					Western Avenue					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	6
1:15 PM	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	11
1:30 PM	0	0	0	0	0	0	3	0	0	3	1	1	1	0	3	1	6	0	0	7	13
1:45 PM	0	0	0	0	0	0	5	1	0	6	0	0	1	0	1	2	8	0	0	10	17
Total Volume	0	0	1	0	1	0	16	1	0	17	1	1	2	0	4	4	21	0	0	25	47
% Approach Total	0.0	0.0	100.0	0.0		0.0	94.1	5.9	0.0		25.0	25.0	50.0	0.0		16.0	84.0	0.0	0.0		
PHF	0.000	0.000	0.250	0.000	0.250	0.000	0.800	0.250	0.000	0.708	0.250	0.250	0.500	0.000	0.333	0.500	0.656	0.000	0.000	0.625	0.691
Entering Leg	0	0	1	0	1	0	16	1	0	17	1	1	2	0	4	4	21	0	0	25	47
Exiting Leg					1					23					5					18	47
Total					2					40					9					43	94

PDI File #: **175533 AAA**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Saturday, March 11, 2017**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

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

Bicycles (on Roadway and Crosswalks)

	Everett Street							Western Avenue							Everett Street							Western Avenue							
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	2
11:15 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3	4
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
Total	0	0	0	0	0	0	0	0	1	2	0	0	0	3	0	0	1	0	0	0	1	0	1	0	0	0	0	1	5
1:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3
Grand Total	0	0	0	0	0	1	1	0	2	3	0	0	0	5	0	0	1	0	0	0	1	1	4	0	0	0	0	5	12
Approach %	0.0	0.0	0.0	0.0	0.0	100.0		0.0	40.0	60.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0	0.0		20.0	80.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	8.3	8.3	0.0	16.7	25.0	0.0	0.0	0.0	41.7	0.0	0.0	8.3	0.0	0.0	0.0	8.3	8.3	33.3	0.0	0.0	0.0	0.0	41.7	
Exiting Leg Total							1							4							4							3	12

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:15 PM	Everett Street							Western Avenue							Everett Street							Western Avenue							
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
12:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
1:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	2	3	0	0	0	5	0	0	1	0	0	0	1	0	1	0	0	0	0	1	7
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	40.0	60.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.750	0.000	0.000	0.000	0.625	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.875
Entering Leg	0	0	0	0	0	0	0	0	2	3	0	0	0	5	0	0	1	0	0	0	1	0	1	0	0	0	0	1	7
Exiting Leg							0							1							3							3	7
Total							0							6							4							4	14

PDI File #: **175533 AAA**
Location: **N: Everett Street S: Everett Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Brighton, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Saturday, March 11, 2017**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

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

Pedestrians

	Everett Street							Western Avenue							Everett Street							Western Avenue							
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
11:00 AM	0	0	0	0	0	1	1	0	0	0	0	2	0	2	0	0	0	0	13	1	14	0	0	0	0	0	1	1	18
11:15 AM	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	1	1	4
Total	0	0	0	0	0	3	3	0	0	0	0	4	0	4	0	0	0	0	15	3	18	0	0	0	0	0	2	2	27
12:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	1	2	3	0	0	0	0	0	3	3	8
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	4
12:30 PM	0	0	0	0	1	0	1	0	0	0	0	1	2	3	0	0	0	0	1	3	4	0	0	0	0	0	1	1	9
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	2	3	0	0	0	0	0	1	1	5
Total	0	0	0	0	2	0	2	0	0	0	0	2	3	5	0	0	0	0	5	9	14	0	0	0	0	0	5	5	26
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2	1	3	5
1:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
1:30 PM	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0	0	8
1:45 PM	0	0	0	0	2	0	2	0	0	0	0	1	0	1	0	0	0	0	0	2	2	0	0	0	0	0	0	0	5
Total	0	0	0	0	2	4	6	0	0	0	0	1	0	1	0	0	0	0	4	5	9	0	0	0	0	2	2	4	20
Grand Total	0	0	0	0	4	7	11	0	0	0	0	7	3	10	0	0	0	0	24	17	41	0	0	0	0	2	9	11	73
Approach %	0.0	0.0	0.0	0.0	36.4	63.6		0.0	0.0	0.0	0.0	70.0	30.0		0.0	0.0	0.0	0.0	58.5	41.5		0.0	0.0	0.0	0.0	18.2	81.8		
Total %	0.0	0.0	0.0	0.0	5.5	9.6	15.1	0.0	0.0	0.0	0.0	9.6	4.1	13.7	0.0	0.0	0.0	0.0	32.9	23.3	56.2	0.0	0.0	0.0	0.0	2.7	12.3	15.1	
Exiting Leg Total							11							10							41							11	73

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Everett Street							Western Avenue							Everett Street							Western Avenue							
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
11:00 AM	0	0	0	0	0	1	1	0	0	0	0	2	0	2	0	0	0	0	13	1	14	0	0	0	0	0	1	1	18
11:15 AM	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	1	1	4
Total Volume	0	0	0	0	0	3	3	0	0	0	0	4	0	4	0	0	0	0	15	3	18	0	0	0	0	0	2	2	27
% Approach Total	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	83.3	16.7		0.0	0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.375	0.375	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.288	0.375	0.321	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.375
Entering Leg	0	0	0	0	0	3	3	0	0	0	0	4	0	4	0	0	0	0	15	3	18	0	0	0	0	0	2	2	27
Exiting Leg							3							4							18							2	27
Total							6							8							36							4	54

PDI File #: **175533 B**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

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

Cars and Heavy Vehicles

	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	7	0	0	7	0	1	0	1	0	18	0	18	26
7:15 AM	13	0	0	13	0	0	0	0	0	20	0	20	33
7:30 AM	9	0	0	9	0	0	0	0	0	24	0	24	33
7:45 AM	9	0	0	9	0	0	0	0	0	24	0	24	33
Total	38	0	0	38	0	1	0	1	0	86	0	86	125
8:00 AM	11	0	0	11	0	1	0	1	0	25	0	25	37
8:15 AM	11	0	0	11	0	0	0	0	0	24	0	24	35
8:30 AM	11	0	0	11	0	0	0	0	0	24	0	24	35
8:45 AM	10	0	0	10	1	0	0	1	2	40	0	42	53
Total	43	0	0	43	1	1	0	2	2	113	0	115	160
Grand Total	81	0	0	81	1	2	0	3	2	199	0	201	285
Approach %	100.0	0.0	0.0		33.3	66.7	0.0		1.0	99.0	0.0		
Total %	28.4	0.0	0.0	28.4	0.4	0.7	0.0	1.1	0.7	69.8	0.0	70.5	
Exiting Leg Total				200				2				83	285
Cars	79	0	0	79	1	2	0	3	2	195	0	197	279
% Cars	97.5	0.0	0.0	97.5	100.0	100.0	0.0	100.0	100.0	98.0	0.0	98.0	97.9
Exiting Leg Total				196				2				81	279
Heavy Vehicles	2	0	0	2	0	0	0	0	0	4	0	4	6
% Heavy Vehicles	2.5	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.1
Exiting Leg Total				4				0				2	6

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

8:00 AM	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	11	0	0	11	0	1	0	1	0	25	0	25	37
8:15 AM	11	0	0	11	0	0	0	0	0	24	0	24	35
8:30 AM	11	0	0	11	0	0	0	0	0	24	0	24	35
8:45 AM	10	0	0	10	1	0	0	1	2	40	0	42	53
Total Volume	43	0	0	43	1	1	0	2	2	113	0	115	160
% Approach Total	100.0	0.0	0.0		50.0	50.0	0.0		1.7	98.3	0.0		
PHF	0.977	0.000	0.000	0.977	0.250	0.250	0.000	0.500	0.250	0.706	0.000	0.685	0.755
Cars	43	0	0	43	1	1	0	2	2	112	0	114	159
Cars %	100.0	0.0	0.0	100.0	100.0	100.0	0.0	100.0	100.0	99.1	0.0	99.1	99.4
Heavy Vehicles	0	0	0	0	0	0	0	0	0	1	0	1	1
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.9	0.6
Cars Enter Leg	43	0	0	43	1	1	0	2	2	112	0	114	159
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Entering Leg	43	0	0	43	1	1	0	2	2	113	0	115	160
Cars Exiting Leg				113				2				44	159
Heavy Exit Leg				1				0				0	1
Total Exiting Leg				114				2				44	160

PDI File #: **175533 B**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

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

Cars

	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	6	0	0	6	0	1	0	1	0	17	0	17	24
7:15 AM	13	0	0	13	0	0	0	0	0	19	0	19	32
7:30 AM	8	0	0	8	0	0	0	0	0	23	0	23	31
7:45 AM	9	0	0	9	0	0	0	0	0	24	0	24	33
Total	36	0	0	36	0	1	0	1	0	83	0	83	120
8:00 AM	11	0	0	11	0	1	0	1	0	24	0	24	36
8:15 AM	11	0	0	11	0	0	0	0	0	24	0	24	35
8:30 AM	11	0	0	11	0	0	0	0	0	24	0	24	35
8:45 AM	10	0	0	10	1	0	0	1	2	40	0	42	53
Total	43	0	0	43	1	1	0	2	2	112	0	114	159
Grand Total	79	0	0	79	1	2	0	3	2	195	0	197	279
Approach %	100.0	0.0	0.0		33.3	66.7	0.0		1.0	99.0	0.0		
Total %	28.3	0.0	0.0	28.3	0.4	0.7	0.0	1.1	0.7	69.9	0.0	70.6	
Exiting Leg Total				196				2				81	279

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

8:00 AM	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	11	0	0	11	0	1	0	1	0	24	0	24	36
8:15 AM	11	0	0	11	0	0	0	0	0	24	0	24	35
8:30 AM	11	0	0	11	0	0	0	0	0	24	0	24	35
8:45 AM	10	0	0	10	1	0	0	1	2	40	0	42	53
Total Volume	43	0	0	43	1	1	0	2	2	112	0	114	159
% Approach Total	100.0	0.0	0.0		50.0	50.0	0.0		1.8	98.2	0.0		
PHF	0.977	0.000	0.000	0.977	0.250	0.250	0.000	0.500	0.250	0.700	0.000	0.679	0.750
Entering Leg	43	0	0	43	1	1	0	2	2	112	0	114	159
Exiting Leg				113				2				44	159
Total				156				4				158	318

PDI File #: **175533 B**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

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

Heavy Vehicles

	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	2	0	0	0	0	0	3	0	3	5
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	2	0	0	2	0	0	0	0	0	4	0	4	6
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	66.7	0.0	66.7	
Exiting Leg Total				4				0				2	6

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

6:45 AM	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total Volume	2	0	0	2	0	0	0	0	0	3	0	3	5
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.625
Entering Leg	2	0	0	2	0	0	0	0	0	3	0	3	5
Exiting Leg				3				0				2	5
Total				5				0				5	10

PDI File #: **175533 B**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**

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

Class:

Bicycles (on Roadway and Crosswalks)

	Old Everett Street						Blaine Street Extension						Old Everett Street						
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	2	0	2	0	4	0	0	0	0	0	0	4
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	50.0	0.0	50.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						2						2	4

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

7:15 AM	Old Everett Street						Blaine Street Extension						Old Everett Street						
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	2	0	2	0	4	0	0	0	0	0	0	4
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	50.0	0.0	50.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	0	0	0	0	0	0	2	0	2	0	4	0	0	0	0	0	0	4
Exiting Leg						0						2						2	4
Total						0						6						2	8

PDI File #: **175533 B**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

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

Pedestrians

	Old Everett Street						Blaine Street Extension						Old Everett Street						
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	0	2	4
Total	0	0	0	0	0	0	0	0	0	4	1	5	0	0	0	2	0	2	7
8:00 AM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	2	6	8	0	0	0	0	0	0	8
Grand Total	0	0	0	0	0	0	0	0	0	6	7	13	0	0	0	2	0	2	15
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	46.2	53.8		0.0	0.0	0.0	100.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	46.7	86.7	0.0	0.0	0.0	13.3	0.0	13.3	
Exiting Leg Total						0						13						2	15

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

7:30 AM	Old Everett Street						Blaine Street Extension						Old Everett Street						
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:30 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	0	2	4
8:00 AM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	4	5	9	0	0	0	2	0	2	11
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	44.4	55.6		0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.625	0.750	0.000	0.000	0.000	0.250	0.000	0.250	0.688
Entering Leg	0	0	0	0	0	0	0	0	0	4	5	9	0	0	0	2	0	2	11
Exiting Leg						0						9						2	11
Total						0						18						4	22

PDI File #: **175533 BB**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

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

Cars and Heavy Vehicles

	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	14	0	0	14	0	0	0	0	0	25	0	25	39
4:15 PM	12	0	0	12	1	1	0	2	0	28	0	28	42
4:30 PM	15	0	0	15	0	1	0	1	0	37	0	37	53
4:45 PM	12	0	0	12	0	3	0	3	0	28	0	28	43
Total	53	0	0	53	1	5	0	6	0	118	0	118	177
5:00 PM	17	0	0	17	0	4	0	4	1	32	0	33	54
5:15 PM	24	0	1	25	0	1	0	1	3	38	0	41	67
5:30 PM	2	0	0	2	0	1	0	1	0	39	0	39	42
5:45 PM	16	0	0	16	1	2	0	3	0	31	0	31	50
Total	59	0	1	60	1	8	0	9	4	140	0	144	213
Grand Total	112	0	1	113	2	13	0	15	4	258	0	262	390
Approach %	99.1	0.0	0.9		13.3	86.7	0.0		1.5	98.5	0.0		
Total %	28.7	0.0	0.3	29.0	0.5	3.3	0.0	3.8	1.0	66.2	0.0	67.2	
Exiting Leg Total				261				4				125	390
Cars	112	0	1	113	2	13	0	15	4	256	0	260	388
% Cars	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	99.2	0.0	99.2	99.5
Exiting Leg Total				259				4				125	388
Heavy Vehicles	0	0	0	0	0	0	0	0	0	2	0	2	2
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.8	0.5
Exiting Leg Total				2				0				0	2

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

4:30 PM	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:30 PM	15	0	0	15	0	1	0	1	0	37	0	37	53
4:45 PM	12	0	0	12	0	3	0	3	0	28	0	28	43
5:00 PM	17	0	0	17	0	4	0	4	1	32	0	33	54
5:15 PM	24	0	1	25	0	1	0	1	3	38	0	41	67
Total Volume	68	0	1	69	0	9	0	9	4	135	0	139	217
% Approach Total	98.6	0.0	1.4		0.0	100.0	0.0		2.9	97.1	0.0		
PHF	0.708	0.000	0.250	0.690	0.000	0.563	0.000	0.563	0.333	0.888	0.000	0.848	0.810
Cars	68	0	1	69	0	9	0	9	4	133	0	137	215
Cars %	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	98.5	0.0	98.6	99.1
Heavy Vehicles	0	0	0	0	0	0	0	0	0	2	0	2	2
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	1.4	0.9
Cars Enter Leg	68	0	1	69	0	9	0	9	4	133	0	137	215
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Entering Leg	68	0	1	69	0	9	0	9	4	135	0	139	217
Cars Exiting Leg				134				4				77	215
Heavy Exit Leg				2				0				0	2
Total Exiting Leg				136				4				77	217

PDI File #: **175533 BB**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

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

Cars

	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	14	0	0	14	0	0	0	0	0	25	0	25	39
4:15 PM	12	0	0	12	1	1	0	2	0	28	0	28	42
4:30 PM	15	0	0	15	0	1	0	1	0	36	0	36	52
4:45 PM	12	0	0	12	0	3	0	3	0	27	0	27	42
Total	53	0	0	53	1	5	0	6	0	116	0	116	175
5:00 PM	17	0	0	17	0	4	0	4	1	32	0	33	54
5:15 PM	24	0	1	25	0	1	0	1	3	38	0	41	67
5:30 PM	2	0	0	2	0	1	0	1	0	39	0	39	42
5:45 PM	16	0	0	16	1	2	0	3	0	31	0	31	50
Total	59	0	1	60	1	8	0	9	4	140	0	144	213
Grand Total	112	0	1	113	2	13	0	15	4	256	0	260	388
Approach %	99.1	0.0	0.9		13.3	86.7	0.0		1.5	98.5	0.0		
Total %	28.9	0.0	0.3	29.1	0.5	3.4	0.0	3.9	1.0	66.0	0.0	67.0	
Exiting Leg Total				259				4				125	388

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

4:30 PM	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:30 PM	15	0	0	15	0	1	0	1	0	36	0	36	52
4:45 PM	12	0	0	12	0	3	0	3	0	27	0	27	42
5:00 PM	17	0	0	17	0	4	0	4	1	32	0	33	54
5:15 PM	24	0	1	25	0	1	0	1	3	38	0	41	67
Total Volume	68	0	1	69	0	9	0	9	4	133	0	137	215
% Approach Total	98.6	0.0	1.4		0.0	100.0	0.0		2.9	97.1	0.0		
PHF	0.708	0.000	0.250	0.690	0.000	0.563	0.000	0.563	0.333	0.875	0.000	0.835	0.802
Entering Leg	68	0	1	69	0	9	0	9	4	133	0	137	215
Exiting Leg				134				4				77	215
Total				203				13				214	430

PDI File #: **175533 BB**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

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

Heavy Vehicles

	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	2	0	2	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	2	0	2	2
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	
Exiting Leg Total				2				0				0	2

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

6:15 AM	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total Volume	1	0	0	1	0	0	0	0	0	1	0	1	2
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250
Entering Leg	1	0	0	1	0	0	0	0	0	1	0	1	2
Exiting Leg				1				0				1	2
Total				2				0				2	4

PDI File #: **175533 BB**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**

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

Class:

Bicycles (on Roadway and Crosswalks)

	Old Everett Street						Blaine Street Extension						Old Everett Street						
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		66.7	33.3	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	33.3	0.0	0.0	0.0	100.0	
Exiting Leg Total						1						2						0	3

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

4:00 PM	Old Everett Street						Blaine Street Extension						Old Everett Street						
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Exiting Leg						0						1						0	1
Total						0						1						1	2

PDI File #: **175533 BB**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Thursday, March 9, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

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

Pedestrians

	Old Everett Street						Blaine Street Extension						Old Everett Street						
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	1	1	5
5:00 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	4
5:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	7	1	8	0	0	0	0	0	0	8
Grand Total	0	0	0	0	0	0	0	0	0	7	5	12	0	0	0	0	1	1	13
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	58.3	41.7		0.0	0.0	0.0	0.0	100.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.8	38.5	92.3	0.0	0.0	0.0	0.0	7.7	7.7	
Exiting Leg Total						0						12						1	13

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

4:00 PM	Old Everett Street						Blaine Street Extension						Old Everett Street						
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	1	1	5
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.000	0.000	0.000	0.250	0.250	0.625
Entering Leg	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	1	1	5
Exiting Leg						0						4						1	5
Total						0						8						2	10

PDI File #: **175533 BBB**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Saturday, March 11, 2017**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

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

Cars and Heavy Vehicles

	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
11:00 AM	12	0	0	12	0	0	0	0	0	10	0	10	22
11:15 AM	5	0	0	5	0	0	0	0	0	15	1	16	21
11:30 AM	6	0	0	6	0	0	0	0	0	17	1	18	24
11:45 AM	8	0	0	8	1	1	0	2	0	20	0	20	30
Total	31	0	0	31	1	1	0	2	0	62	2	64	97
12:00 PM	17	1	0	18	1	0	0	1	0	18	0	18	37
12:15 PM	7	0	0	7	1	2	0	3	0	16	0	16	26
12:30 PM	7	0	0	7	0	1	0	1	0	18	0	18	26
12:45 PM	8	0	0	8	1	1	0	2	0	26	0	26	36
Total	39	1	0	40	3	4	0	7	0	78	0	78	125
1:00 PM	10	1	1	12	3	0	0	3	0	16	0	16	31
1:15 PM	11	0	0	11	0	2	0	2	0	21	0	21	34
1:30 PM	11	0	0	11	0	0	0	0	0	18	0	18	29
1:45 PM	11	0	0	11	0	0	0	0	0	16	1	17	28
Total	43	1	1	45	3	2	0	5	0	71	1	72	122
Grand Total	113	2	1	116	7	7	0	14	0	211	3	214	344
Approach %	97.4	1.7	0.9		50.0	50.0	0.0		0.0	98.6	1.4		
Total %	32.8	0.6	0.3	33.7	2.0	2.0	0.0	4.1	0.0	61.3	0.9	62.2	
Exiting Leg Total				219				2				123	344
Cars	112	2	1	115	7	7	0	14	0	205	3	208	337
% Cars	99.1	100.0	100.0	99.1	100.0	100.0	0.0	100.0	0.0	97.2	100.0	97.2	98.0
Exiting Leg Total				213				2				122	337
Heavy Vehicles	1	0	0	1	0	0	0	0	0	6	0	6	7
% Heavy Vehicles	0.9	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	2.8	0.0	2.8	2.0
Exiting Leg Total				6				0				1	7

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:45 PM	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
12:45 PM	8	0	0	8	1	1	0	2	0	26	0	26	36
1:00 PM	10	1	1	12	3	0	0	3	0	16	0	16	31
1:15 PM	11	0	0	11	0	2	0	2	0	21	0	21	34
1:30 PM	11	0	0	11	0	0	0	0	0	18	0	18	29
Total Volume	40	1	1	42	4	3	0	7	0	81	0	81	130
% Approach Total	95.2	2.4	2.4		57.1	42.9	0.0		0.0	100.0	0.0		
PHF	0.909	0.250	0.250	0.875	0.333	0.375	0.000	0.583	0.000	0.779	0.000	0.779	0.903
Cars	40	1	1	42	4	3	0	7	0	78	0	78	127
Cars %	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	0.0	96.3	0.0	96.3	97.7
Heavy Vehicles	0	0	0	0	0	0	0	0	0	3	0	3	3
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	3.7	2.3
Cars Enter Leg	40	1	1	42	4	3	0	7	0	78	0	78	127
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	3	0	3	3
Total Entering Leg	40	1	1	42	4	3	0	7	0	81	0	81	130
Cars Exiting Leg				83				1				43	127
Heavy Exit Leg				3				0				0	3
Total Exiting Leg				86				1				43	130

PDI File #: **175533 BBB**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Saturday, March 11, 2017**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

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

Cars

	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
11:00 AM	12	0	0	12	0	0	0	0	0	9	0	9	21
11:15 AM	5	0	0	5	0	0	0	0	0	15	1	16	21
11:30 AM	6	0	0	6	0	0	0	0	0	17	1	18	24
11:45 AM	8	0	0	8	1	1	0	2	0	20	0	20	30
Total	31	0	0	31	1	1	0	2	0	61	2	63	96
12:00 PM	17	1	0	18	1	0	0	1	0	17	0	17	36
12:15 PM	7	0	0	7	1	2	0	3	0	15	0	15	25
12:30 PM	7	0	0	7	0	1	0	1	0	18	0	18	26
12:45 PM	8	0	0	8	1	1	0	2	0	26	0	26	36
Total	39	1	0	40	3	4	0	7	0	76	0	76	123
1:00 PM	10	1	1	12	3	0	0	3	0	15	0	15	30
1:15 PM	11	0	0	11	0	2	0	2	0	20	0	20	33
1:30 PM	11	0	0	11	0	0	0	0	0	17	0	17	28
1:45 PM	10	0	0	10	0	0	0	0	0	16	1	17	27
Total	42	1	1	44	3	2	0	5	0	68	1	69	118
Grand Total	112	2	1	115	7	7	0	14	0	205	3	208	337
Approach %	97.4	1.7	0.9		50.0	50.0	0.0		0.0	98.6	1.4		
Total %	33.2	0.6	0.3	34.1	2.1	2.1	0.0	4.2	0.0	60.8	0.9	61.7	
Exiting Leg Total				213				2				122	337

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:45 PM	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
12:45 PM	8	0	0	8	1	1	0	2	0	26	0	26	36
1:00 PM	10	1	1	12	3	0	0	3	0	15	0	15	30
1:15 PM	11	0	0	11	0	2	0	2	0	20	0	20	33
1:30 PM	11	0	0	11	0	0	0	0	0	17	0	17	28
Total Volume	40	1	1	42	4	3	0	7	0	78	0	78	127
% Approach Total	95.2	2.4	2.4		57.1	42.9	0.0		0.0	100.0	0.0		
PHF	0.909	0.250	0.250	0.875	0.333	0.375	0.000	0.583	0.000	0.750	0.000	0.750	0.882
Entering Leg	40	1	1	42	4	3	0	7	0	78	0	78	127
Exiting Leg				83				1				43	127
Total				125				8				121	254

PDI File #: **175533 BBB**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Saturday, March 11, 2017**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

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

Heavy Vehicles

	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
12:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
12:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	2
1:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
1:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
1:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	0	0	0	0	3	0	3	4
Grand Total	1	0	0	1	0	0	0	0	0	6	0	6	7
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	14.3	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	85.7	0.0	85.7	
Exiting Leg Total				6				0				1	7

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

1:00 PM	Old Everett Street				Blaine Street Extension				Old Everett Street				
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
1:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
1:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	1	0	0	0	0	0	3	0	3	4
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	1.000
Entering Leg	1	0	0	1	0	0	0	0	0	3	0	3	4
Exiting Leg				3				0				1	4
Total				4				0				4	8

PDI File #: **175533 BBB**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Saturday, March 11, 2017**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

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

Bicycles (on Roadway and Crosswalks)

	Old Everett Street						Blaine Street Extension						Old Everett Street						
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Old Everett Street						Blaine Street Extension						Old Everett Street						
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **175533 BBB**
Location: **N: Old Everett Street S: Old Everett Street**
Location: **E: Blaine Street Extension**
City, State: **Allston, MA**
Client: **VHB/ M. Duranleau**
Site Code: **12305.01**
Count Date: **Saturday, March 11, 2017**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

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

Pedestrians

	Old Everett Street						Blaine Street Extension						Old Everett Street						
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
11:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	2	3
11:45 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	4
Total	0	0	0	0	0	0	0	0	0	6	1	7	0	0	0	0	2	2	9
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	2	4	6	0	0	0	1	0	1	7
12:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	5
Total	0	0	0	0	0	0	0	0	0	3	10	13	0	0	0	1	0	1	14
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	1	1	0	0	0	0	2	2	0	0	0	0	1	1	4
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	1	0	0	0	0	2	2	0	0	0	1	2	3	6
Grand Total	0	0	0	0	1	1	0	0	0	9	13	22	0	0	0	2	4	6	29
Approach %	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	40.9	59.1		0.0	0.0	0.0	33.3	66.7		
Total %	0.0	0.0	0.0	0.0	3.4	3.4	0.0	0.0	0.0	31.0	44.8	75.9	0.0	0.0	0.0	6.9	13.8	20.7	
Exiting Leg Total						1						22						6	29

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:30 AM	Old Everett Street						Blaine Street Extension						Old Everett Street						
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
11:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	2	3
11:45 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	4
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	2	4	6	0	0	0	1	0	1	7
Total Volume	0	0	0	0	0	0	0	0	0	7	5	12	0	0	0	1	2	3	15
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	58.3	41.7		0.0	0.0	0.0	33.3	66.7		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.438	0.313	0.500	0.000	0.000	0.000	0.250	0.250	0.375	0.536
Entering Leg	0	0	0	0	0	0	0	0	0	7	5	12	0	0	0	1	2	3	15
Exiting Leg						0						12						3	15
Total						0						24						6	30

Public Transportation

FRAMINGHAM/WORCESTER LINE effective November 20, 2017

REDUCED SCHEDULE

Trains in shaded columns will NOT OPERATE when the Commuter Rail is operating on a REDUCED SCHEDULE

Massachusetts Bay Transportation Authority

KEOLIS

Monday to Friday

Inbound to Boston

			AM												PM													AM
ZONE	STATION	TRAIN #	500	502	582	504	584	506	586	508	588	510	552	590	512	514	516	518	520	592	522	594	524	596	526	528	530	532	534	536
	Bikes Allowed																													
8	Worcester	♿	4:45	5:15	-	5:50	-	6:22	-	6:57	-	7:24	8:00	-	8:50	10:35	12:05	1:55	3:50	-	5:20	-	6:05	-	7:20	8:30	9:00	9:35	11:20	12:20
8	Grafton	♿	4:58	5:28	-	6:03	-	6:35	-	7:10	-	7:37	-	-	9:03	10:48	12:18	2:08	4:03	-	5:33	-	6:18	-	7:33	8:43	9:13	9:48	f 11:33	f 12:33
7	Westborough	♿	5:02	5:32	-	6:07	-	6:39	-	7:14	-	7:41	-	-	9:07	10:52	12:22	2:12	4:07	-	5:37	-	6:22	-	7:37	8:47	9:17	9:52	f 11:37	f 12:37
6	Southborough	♿	5:11	5:41	-	6:16	-	6:48	-	7:23	-	7:50	-	-	9:16	11:01	12:31	2:21	4:16	-	5:46	-	6:31	-	7:46	8:56	9:26	10:01	f 11:46	f12:46
6	Ashland	♿	5:15	5:45	-	6:20	-	6:52	-	7:27	-	7:54	-	8:34	9:20	11:05	12:35	2:25	4:20	-	5:50	-	6:35	-	7:50	9:00	9:30	10:05	f 11:50	f 12:50
5	Framingham	♿	5:26	5:56	6:04	6:31	6:39	7:03	7:15	7:38	7:49	8:05	-	8:45	9:31	11:16	12:46	2:36	4:31	5:40	6:01	6:20	6:46	7:05	8:01	9:11	9:41	10:16	f 12:01	f 1:01
4	West Natick	♿	5:31	6:01	6:09	6:36	6:44	7:08	7:20	7:43	7:54	8:10	-	8:50	9:36	11:21	12:51	2:41	4:36	5:45	6:06	6:25	6:51	7:10	8:06	9:16	9:46	10:21	f 12:06	f 1:06
4	Natick Center		5:36	6:05	6:14	-	6:49	-	7:25	-	7:59	8:15	-	8:55	9:41	11:26	12:56	2:46	4:41	5:50	-	6:30	-	7:15	8:11	9:21	9:51	10:26	f 12:11	f 1:11
3	Wellesley Square		5:41	-	6:19	-	6:54	-	7:30	-	8:04	8:20	-	9:00	9:46	11:30	1:00	2:50	4:45	5:54	-	6:34	-	7:19	8:15	9:25	9:55	10:30	f 12:15	f 1:15
3	Wellesley Hills		5:45	-	6:23	-	6:58	-	7:34	-	8:08	8:24	-	9:04	9:50	11:34	1:04	2:54	4:49	5:58	-	6:38	-	7:23	8:19	9:29	9:59	10:34	f 12:19	f 1:19
3	Wellesley Farms		5:48	-	6:26	-	7:01	-	7:37	-	8:11	8:27	-	9:07	9:53	11:37	1:07	2:57	4:52	6:01	-	6:41	-	7:26	8:22	9:32	10:02	10:37	f 12:22	f 1:22
2	Auburndale		5:53	-	6:31	-	7:06	-	7:42	-	8:16	-	-	9:12	f 9:58	f 11:42	f 1:12	-	-	-	-	-	-	f 7:31	-	-	-	-	f 12:27	f 1:27
2	West Newton		5:56	-	6:34	-	7:09	-	7:45	-	8:19	-	-	9:15	f 10:01	f 11:45	f 1:15	-	-	-	-	-	-	f 7:34	-	-	-	-	f 12:30	f 1:30
1	Newtonville		5:59	-	6:37	-	7:12	-	7:48	-	8:22	-	-	9:18	f 10:04	f 11:48	f 1:18	-	-	-	-	-	-	f 7:37	-	-	-	-	f 12:33	f 1:33
1A	Boston Landing	♿	-	-	L 6:42	-	L 7:17	-	L 7:54	-	L 8:28	L 8:39	-	L 9:23	L 10:09	-	-	L 3:07	L 5:04	L 6:13	L 6:24	L 6:53	L 7:09	L 7:42	L 8:32	L 9:42	L 10:12	L 10:47	L 12:38	-
1A	Yawkey	♿	L 6:07	L 6:24	L 6:47	L 6:59	L 7:22	L 7:34	L 7:59	L 8:09	L 8:33	L 8:44	L 8:55	L 9:28	L 10:14	L 11:56	L 1:26	L 3:12	L 5:09	L 6:18	L 6:29	L 6:58	L 7:14	L 7:47	L 8:37	L 9:47	L 10:17	L 10:52	L 12:43	L 1:41
1A	Back Bay	♿	L 6:12	L 6:29	L 6:52	L 7:04	L 7:27	L 7:39	L 8:04	L 8:14	L 8:38	L 8:49	L 9:00	L 9:33	L 10:19	L 12:01	L 1:31	L 3:17	L 5:14	L 6:23	L 6:34	L 7:03	L 7:19	L 7:52	L 8:42	L 9:52	L 10:22	L 10:57	L 12:48	L 1:46
1A	South Station	♿	6:18	6:35	6:58	7:10	7:33	7:45	8:10	8:20	8:44	8:55	9:06	9:39	10:24	12:06	1:36	3:22	5:19	6:28	6:39	7:08	7:24	7:57	8:47	9:57	10:27	11:02	12:53	1:51

Trains in purple box indicate peak period trains.

Saturday & Sunday

Inbound to Boston

			AM			PM						
		SATURDAY TRAIN #	1500	1502	1504	1506	1508	1510	1512	1514	1516
ZONE	STATION	SUNDAY TRAIN #	2500	2502	2504	2506	2508	2510	2512	2514	2516
	Bikes Allowed										
8	Worcester	♿	7:00	8:50	10:50	12:50	2:30	4:30	6:30	8:30	11:00
8	Grafton	♿	7:13	9:03	11:03	1:03	2:43	4:43	6:43	8:43	f 11:13
7	Westborough	♿	7:17	9:07	11:07	1:07	2:47	4:47	6:47	8:47	f 11:17
6	Southborough	♿	7:25	9:15	11:15	1:15	2:55	4:55	6:55	8:55	f 11:25
6	Ashland	♿	7:30	9:20	11:20	1:20	3:00	5:00	7:00	9:00	f 11:30
5	Framingham	♿	7:40	9:30	11:30	1:30	3:10	5:10	7:10	9:10	f 11:40
4	West Natick	♿	7:44	9:34	11:34	1:34	3:14	5:14	7:14	9:14	f 11:44
4	Natick Center		7:49	9:39	11:39	1:39	3:19	5:19	7:19	9:19	f 11:49
3	Wellesley Square		7:54	9:44	11:44	1:44	3:24	5:24	7:24	9:24	f 11:54
3	Wellesley Hills		7:57	9:47	11:47	1:47	3:27	5:27	7:27	9:27	f 11:57
3	Wellesley Farms		8:00	9:50	11:50	1:50	3:30	5:30	7:30	9:30	f 12:00
2	Auburndale		f 8:04	f 9:54	f 11:54	f 1:54	f 3:34	f 5:34	f 7:34	f 9:34	f 12:04
2	West Newton		f 8:07	f 9:57	f 11:57	f 1:57	f 3:37	f 5:37	f 7:37	f 9:37	f 12:07
1	Newtonville		f 8:10	f 10:00	f 12:00	f 2:00	f 3:40	f 5:40	f 7:40	f 9:40	f 12:10
1A	Boston Landing	♿	L 8:16	L 10:06	L 12:06	L 2:06	L 3:46	L 5:46	L 7:46	L 9:46	L 12:16
1A	Yawkey	♿	L 8:21	L 10:11	L 12:11	L 2:11	L 3:51	L 5:51	L 7:51	L 9:51	L 12:21
1A	Back Bay	♿	L 8:25	L 10:15	L 12:15	L 2:15	L 3:55	L 5:55	L 7:55	L 9:55	L 12:25
1A	South Station	♿	8:30	10:20	12:20	2:20	4:00	6:00	8:00	10:00	12:30

Monday to Friday

Outbound from Boston

			AM											PM													
ZONE	STATION	TRAIN #	501	581	583	503	505	587	507	589	509	511	513	515	517	519	591	521	593	523	595	525	527	551	529	531	533	535	537
	Bikes Allowed																												
1A	South Station	♿	4:50	4:57	5:30	5:55	6:10	6:48	7:20	7:30	8:50	10:15	11:55	2:00	3:30	4:20	4:30	5:00	5:10	5:40	5:50	6:15	6:45	7:35	7:45	8:35	9:35	10:30	11:30
1A	Back Bay	♿	4:55	5:02	5:35	6:00	6:15	6:53	7:25	7:35	8:56	10:21	12:01	2:06	3:36	4:26	4:36	5:06	5:16	5:46	5:56	6:21	6:51	7:41	7:51	8:41	9:41	10:36	11:36
1A	Yawkey	♿	5:00	5:07	5:40	6:05	6:20	6:58	7:30	7:40	9:01	10:26	12:06	2:11	3:41	4:31	4:41	5:11	5:21	5:51	6:01	6:26	6:56	7:46	7:56	8:46	9:46	10:41	11:41
1A	Boston Landing	♿	-	-	-	-	-	7:03	7:35	7:45	9:06	-	-	-	3:46	-	4:46	-	5:26	-	6:06	6:31	7:01	-	8:01	f 8:51	f 9:51	f 10:46	f 11:46
1	Newtonville		-	f 5:16	-	-	-	-	-	-	-	f 10:35	f 12:15	f 2:20	3:51	-	4:51	-	5:31	-	6:11	-	7:06	-	f 8:06	f 8:56	f 9:56	f 10:51	f 11:51
2	West Newton		-	f 5:20	-	-	-	-	-	-	-	f 10:39	f 12:19	f 2:24	3:55	-	4:55	-	5:35	-	6:15	-	7:10	-	f 8:10	f 9:00	f 10:00	f 10:55	f 11:55
2	Auburndale		-	f 5:23	-	-	-	-	-	-	-	f 10:42	f 12:22	f 2:27	3:58	-	4:58	-	5:38	-	6:18	-	7:13	-	f 8:13	f 9:03	f 10:03	f 10:58	f 11:58
3	Wellesley Farms		-	5:26	5:53	-	6:33	7:12	-	7:54	9:15	10:45	12:25	2:30	4:02	-	5:01	-	5:42	-	6:22	6:43	7:16	-	8:16	9:06	10:06	11:01	12:01
3	Wellesley Hills		-	5:29	5:56	-	6:36	7:15	-	7:57	9:18	10:48	12:28	2:33	4:05	-	5:04	-	5:45	-	6:25	6:46	7:19	-	8:19	9:09	10:09	11:04	12:04
3	Wellesley Square		-	5:33	6:00	-	6:40	7:19	-	8:01	9:22	10:52	12:32	2:37	4:09	-	5:08	-	5:49	-	6:29	6:50	7:23	-	8:22	9:12	10:12	11:07	12:07
4	Natick Center		-	5:37	6:05	-	6:44	7:23	-	8:05	9:26	10:56	12:36	2:41	4:14	4:54	5:12	-	5:53	-	6:33	6:54	7:27	-	8:26	9:16	10:16	11:11	12:11
4	West Natick	♿	5:21	5:42	6:10	6:24	6:49	7:28	-	8:10	9:30	11:01	12:41	2:46	4:19	5:00	5:17	5:35	5:59	6:15	6:38	6:59	7:32	-	8:31	9:21	10:21	11:16	12:16
5	Framingham	♿	5:25	5:47	6:15	6:29	6:54	7:33	7:53	8:15	9:35	11:06	12:46	2:51	4:25	5:06	5:23	5:43	6:05	6:22	6:44	7:05	7:37	-	8:36	9:26	10:26	11:21	12:21
6	Ashland	♿	5:31	-	-	6:35	7:00	-	7:59	8:21	9:41	11:12	12:52	2:57	4:32	5:12	-	5:50	-	6:29	-	7:11	7:43	-	8:42	9:32	10:32	11:27	12:27
6	Southborough	♿	5:36	-	-	6:40	7:05	-	8:04	-	9:46	11:17	12:57	3:02	4:37	5:17	-	5:55	-	6:34	-	7:16	7:48	-	8:47	9:37	10:37	11:32	12:32
7	Westborough	♿	5:44	-	-	6:49	7:14	-	8:13	-	9:55	11:26	1:06	3:11	4:46	5:26	-	6:05	-	6:43	-	7:25	7:57	-	8:56	9:46	10:46	11:41	12:41
8	Grafton	♿	5:48	-	-	6:54	7:19	-	8:18	-	10:00	11:31	1:11	3:16	4:51	5:31	-	6:11	-	6:49	-	7:30	8:02	-	9:01	9:51	10:51	11:46	12:46
8	Worcester	♿	6:01	-	-	7:07	7:32	-	8:31	-	10:13	11:45	1:24	3:30	5:04	5:45	-	6:25	-	7:03	-	7:44	8:15	8:45	9:15	10:05	11:05	12:00	1:00

Trains in purple box indicate peak period trains.

Saturday & Sunday

Outbound from Boston

			AM			PM						
		SATURDAY TRAIN #	1501	1503	1505	1507	1509	1511	1513	1515	1517
ZONE	STATION	SUNDAY TRAIN #	2501	2503	2505	2507	2509	2511	2513	2515	2517
	Bikes Allowed										
1A	South Station	♿	6:40	8:40	10:40	12:40	2:20	4:20	6:20	8:20	10:40
1A	Back Bay	♿	6:46	8:46	10:46	12:46	2:26	4:26	6:26	8:26	10:46
1A	Yawkey	♿	6:49	8:49	10:49	12:49	2:29	4:29	6:29	8:29	10:49
1A	Boston Landing	♿	f 6:54	f 8:54	f 10:54	f 12:54	f 2:34	f 4:34	f 6:34	f 8:34	f 10:54
1	Newtonville		f 7:01	f 9:01	f 11:01	f 1:01	f 2:41	f 4:41	f 6:41	f 8:41	f 11:01
2	West Newton		f 7:04	f 9:04	f 11:04	f 1:04	f 2:44	f 4:44	f 6:44	f 8:44	f 11:04
2	Auburndale		f 7:07	f 9:07	f 11:07	f 1:07	f 2:47	f 4:47	f 6:47	f 8:47	f 11:07
3	Wellesley Farms		7:11	9:11	11:11	1:11	2:51	4:51	6:51	8:51	11:11
3	Wellesley Hills		7:14	9:14	11:14	1:14	2:54	4:54	6:54	8:54	11:14
3	Wellesley Square		7:17	9:17	11:17	1:17	2:57	4:57	6:57	8:57	11:17
4	Natick Center		7:22	9:22	11:22	1:22	3:02	5:02	7:02	9:02	11:22
4	West Natick	♿	7:26	9:26	11:26	1:26	3:06	5:06	7:06	9:06	11:26
5	Framingham	♿	7:31	9:31	11:31	1:31	3:11	5:11	7:11	9:11	11:31
6	Ashland	♿	7:37	9:37	11:37	1:37	3:17	5:17	7:17	9:17	11:37
6	Southborough	♿	7:41	9:41	11:41	1:41	3:21	5:21	7:21	9:21	11:41
7	Westborough	♿	7:49	9:49	11:49	1:49	3:29	5:29	7:29	9:29	11:49
8	Grafton	♿	7:55	9:55	11:55	1:55	3:35	5:35	7:35	9:35	11:55
8	Worcester	♿	8:10	10:10	12:10	2:10	3:50	5:50	7:50	9:50	12:10

Keep in Mind:

This schedule will be effective from November 20, 2017, and will replace the schedule of May 22, 2017.

Presidents' Day and 4th of July operate on a **Saturday service schedule.**

New Year's Day, Memorial Day, Labor Day, Thanksgiving Day, and Christmas Day operate on a **Sunday service schedule**.

For all other holiday schedules, please check MBTA.com or call 617-222-3200.

Times in purple with "f" indicate a flag stop: Passengers must tell the conductor that they wish to leave. Passengers waiting to board must be visible on the platform for the train to stop.

Times in blue indicate an early departure (L stop): The train may leave ahead of schedule at these stops.

Bikes: Bicycles are allowed on trains with the bicycle symbol shown below the train number.

PLEASE NOTE: Schedules may change in the event of severe weather

Throughout the winter, the MBTA and Keolis will closely monitor weather forecasts to determine if conditions necessitate any change in schedule for the Commuter Rail.

During this time, these symbols will be used to communicate the system's service level and impact on passengers. The service level for the next day will be announced by mid-afternoon the day prior.

REGULAR SCHEDULE
Trains will operate on a normal schedule.

REDUCED SCHEDULE
Moderate changes to train schedule. Shaded trains **WILL NOT** operate. Express trains may make additional stops.

EXTREMELY REDUCED SCHEDULE
Major changes to train schedule. Schedules will be available in Boston stations and at MBTA.com

NO SERVICE
No passenger service on the Commuter Rail.

Call MBTA Customer Service at 617-222-3200.

@MBTA_CR

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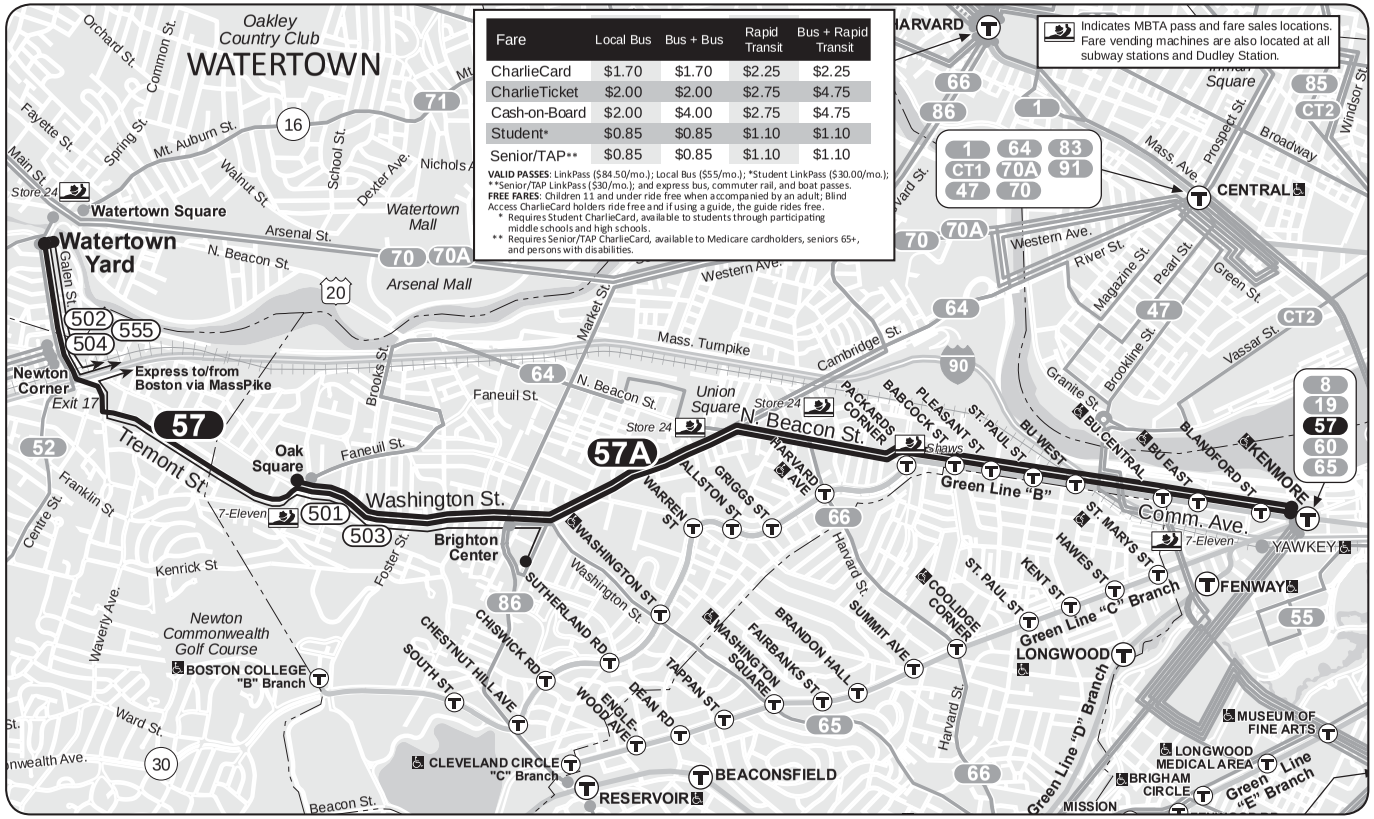
WEB112017V1

Route 57/57A Watertown Yard or Oak Square - Kenmore Station



57•57A

Fall September 3, 2017 - December 30, 2017

Watertown Yard or Oak Square-Kenmore Station

Serving

- Fenway Park
- Boston University
- Packard's Corner
- Union Square (Allston)
- Brighton Center
- Oak Square
- St. Elizabeth's Medical Center
- Newton Corner
- Green Line

Massachusetts Bay Transportation Authority

massDOT Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100
(TTY) 617-222-5146 • www.mbta.com

57 & 57A Weekday

Inbound			Outbound		
Leave Watertown Yard	Lv/Arrive Oak Square	Arrive Kenmore Station	Leave Kenmore Station	Arrive Oak Square	Arrive Watertown Yard
4:33A	4:37A	ad 4:50A	ad 5:16A	5:29A	5:34A
5:03	5:07	5:21	5:33	5:44	5:50
5:28	5:32	5:46	5:55	6:11	6:17
5:45	5:49	6:05	6:13	6:29	6:35
6:00	6:05	6:28	6:28	6:44	6:50
6:14	6:19	6:42	6:43	6:59	7:06
.....	su 6:19	u 6:28	6:55	7:15	7:22
6:24	6:29	6:52	7:05	7:27	7:34
.....	su 6:30	u 6:39	7:15	7:37	7:44
6:34	6:39	7:02	7:26	7:48	7:55
.....	s 6:42	7:06	s 7:35	7:57	8:04
6:44	6:49	7:12	7:37	7:59	8:06
6:54	6:59	7:22	7:43	8:04	.....
.....	7:05	7:29	7:48	8:10	8:17
7:04	7:09	7:33	7:53	8:14	.....
.....	7:15	7:41	7:59	8:21	8:28
7:15	7:20	7:47	8:05	8:26	.....
.....	7:28	7:57	8:10	8:32	8:39
7:26	7:33	8:01	8:16	8:37	.....
.....	7:40	8:09	8:21	8:43	8:50
7:36	7:45	8:13	8:27	8:48	.....
.....	7:51	8:20	8:32	8:54	9:01
7:46	7:55	8:23	8:37	8:58	.....
.....	8:01	8:30	8:42	9:04	9:11
7:56	8:05	8:33	8:52	9:14	9:21
.....	8:12	8:41	9:02	9:24	9:31
8:06	8:15	8:43	9:13	9:35	9:42
.....	8:22	8:51	9:23	9:45	9:52
8:16	8:25	8:53	9:33	9:55	10:02
.....	8:27	8:56	9:43	10:05	10:11
.....	8:32	9:01	9:53	10:16	10:22
8:26	8:35	9:03	10:03	10:27	10:33
.....	8:42	9:12	10:13	10:37	10:43
8:36	8:45	9:15	10:23	10:47	10:53
.....	8:53	9:22	10:33	10:57	11:03
8:47	8:56	9:26	10:43	11:07	11:13
.....	9:03	9:30	10:53	11:17	11:23
9:00	9:06	9:35	11:03	11:27	11:33
9:10	9:16	9:45	11:13	11:37	11:43
9:20	9:26	9:55	11:23	11:47	11:53
9:30	9:36	10:05	11:33	11:57	**12:03P**
9:40	9:46	10:15	11:43	**12:07P**	**12:13**
9:50	9:56	10:25	11:53	**12:17**	**12:23**
10:00	10:06	10:35	**12:03P**	**12:27**	**12:33**
10:10	10:16	10:45	***Every***	***10 Mins.***	***Until***
10:20	10:26	10:55	**2:03**	**2:32**	**2:40**
10:30	10:36	11:05	**us 2:27**	**2:38**	**2:46**
10:40	10:46	11:15	**2:13**	**2:42**	**2:50**
10:50	10:56	11:25	.....	**ls 2:48**	**2:58**
11:00	11:06	11:35	**2:23**	**2:52**	**3:00**
11:10	11:16	11:45	.....	**ps 2:58**	**3:08**
11:20	11:26	11:55	**2:33**	**3:02**	**3:10**
11:30	11:36	**12:05P**	**s 2:40**	**3:09**	**3:17**
11:40	11:46	**12:14**	**2:43**	**3:12**	**3:20**
11:50	11:56	**12:25**	***Every 10 minutes or less***		
12:00N	**12:06P**	**12:36**	**3:50**	**4:19**	**4:27**
Every	***10 Mins.***	***Until***	**4:00**	**4:29**	**4:37**
1:40P	**1:46**	**2:16**	**4:06**	**4:35**	.....
			4:11	**4:40**	**4:48**
			4:18	**4:47**	.....

Shaded trips operate as Route 57A

57 & 57A Weekday

Inbound			Outbound		
Leave Watertown Yard	Lv/Arrive Oak Square	Arrive Kenmore Station	Leave Kenmore Station	Arrive Oak Square	Arrive Watertown Yard
.....	**cs 1:55P**	**2:22P**	**4:23P**	**4:52P**	**5:00P**
1:50P	**1:56**	**2:26**	**4:30**	**4:59**	.....
.....	**s 2:02**	**2:29**	**4:34**	**5:03**	**5:11**
1:59	**2:05**	**2:35**	**4:41**	**5:10**	.....
2:08	**2:14**	**2:44**	**4:46**	**5:15**	**5:23**
Every	***10 minutes***	***or less***	**4:53**	**5:22**	.....
3:30	**3:38**	**4:11**	**4:57**	**5:26**	**5:34**
3:41	**3:49**	**4:22**	**5:04**	**5:33**	.....
3:52	**4:00**	**4:33**	**5:09**	**5:38**	**5:46**
4:03	**4:11**	**4:44**	**5:16**	**5:45**	.....
4:14	**4:22**	**4:55**	**5:20**	**5:49**	**5:57**
4:25	**4:33**	**5:06**	**5:27**	**5:56**	.....
4:36	**4:44**	**5:17**	**5:32**	**6:01**	**6:09**
.....	**4:47**	**5:17**	**5:39**	**6:08**	.....
4:46	**4:54**	**5:27**	**5:45**	**6:14**	**6:22**
.....	**4:58**	**5:29**	**5:52**	**6:21**	.....
4:57	**5:05**	**5:38**	**5:57**	**6:26**	**6:33**
.....	**5:10**	**5:41**	**6:04**	**6:33**	.....
5:08	**5:16**	**5:49**	**6:09**	**6:37**	**6:44**
.....	**5:22**	**5:53**	**6:16**	**6:43**	.....
5:20	**5:28**	**6:00**	**6:21**	**6:48**	**6:55**
.....	**5:34**	**6:05**	**6:28**	**6:54**	.....
5:32	**5:40**	**6:11**	**6:32**	**6:58**	**7:05**
.....	**5:46**	**6:17**	**6:40**	**7:06**	.....
5:43	**5:51**	**6:22**	**6:45**	**7:11**	**7:18**
.....	**5:57**	**6:28**	**6:53**	**7:19**	**7:26**
5:55	**6:03**	**6:34**	**7:01**	**7:27**	**7:34**
.....	**6:08**	**6:39**	**7:09**	**7:35**	**7:42**
6:06	**6:13**	**6:44**	**7:17**	**7:43**	**7:50**
.....	**6:19**	**6:50**	**7:26**	**7:52**	**7:59**
6:18	**6:25**	**6:56**	***Every***	***9 Mins.***	***Until***
6:30	**6:37**	**7:08**	**7:53**	**8:16**	**8:21**
6:42	**6:49**	**7:20**	**8:02**	**8:24**	**8:29**
6:54	**7:01**	**7:31**	**8:11**	**8:33**	**8:38**
7:05	**7:12**	**7:40**	**8:20**	**8:42**	**8:47**
Every	***10 Mins.***	***Until***	**8:29**	**8:51**	**8:56**
7:55	**7:59**	**8:21**	**8:39**	**9:01**	**9:06**
8:07	**8:11**	**8:33**	**8:50**	**9:12**	**9:17**
8:19	**8:23**	**8:45**	**9:01**	**9:23**	**9:28**
8:31	**8:35**	**8:57**	**9:14**	**9:36**	**9:41**
8:43	**8:47**	**9:09**	**9:27**	**9:49**	**9:54**
8:56	**9:00**	**9:22**	**9:40**	**10:02**	**10:07**
9:09	**9:13**	**9:35**	**9:53**	**10:15**	**10:20**
9:22	**9:26**	**9:48**	**10:06**	**10:28**	**10:34**
9:35	**9:39**	**10:01**	**10:19**	**10:40**	**10:46**
9:48	**9:52**	**10:14**	**10:32**	**10:51**	**10:57**
10:01	**10:05**	**10:27**	**10:45**	**11:04**	**11:10**
10:14	**10:18**	**10:40**	**11:00**	**11:19**	**11:25**
10:30	**10:34**	**10:56**	**11:20**	**11:39**	**11:45**
Every	***20 Mins.***	***Until***	**11:40**	**11:59**	12:04A
12:30A	12:34A	12:49A	12:00M	12:15A	12:20
			12:20A	12:35	12:40
			12:45	1:00	1:05
			w 1:10	1:25	1:30

57 Saturday

Inbound			Outbound		
Leave Watertown Yard	Arrive Oak Square	Arrive Kenmore Station	Leave Kenmore Station	Arrive Oak Square	Arrive Watertown Yard
4:33A	4:40A	ad 4:54A	ad 5:16A	5:27A	5:33A
5:05	5:09	5:22	5:33	5:44	5:49
Every	*15 Mins.*	*Until*	*Every*	*15 Mins.*	*Until*
5:50	5:54	6:08	6:33	6:47	6:51
6:03	6:07	6:24	6:45	6:59	7:03
6:15	6:19	6:36	6:57	7:11	7:15
Every	*10 Mins.*	*Until*	7:08	7:22	7:26
9:35	9:40	10:04	*Every*	*10 Mins.*	*Until*
9:46	9:51	10:15	9:18	9:34	9:40
9:57	10:02	10:26	9:29	9:47	9:53
10:08	10:13	10:37	9:41	9:59	10:05
Every	*11 minutes*	*or less*	9:53	10:11	10:17
11:58	**12:04P**	**12:33P**	10:05	10:23	10:29
			Every	*11 minutes*	*or less*
12:08P	**12:14P**	**12:43P**	11:51	**12:12P**	**12:19P**
12:18	**12:24**	**12:53**			
12:28	**12:34**	**1:03**	**12:01P**	**12:23P**	**12:30P**
12:39	**12:45**	**1:14**	***Every***	***10 Mins.***	***Until***
12:48	**12:54**	**1:23**	**5:11**	**5:34**	**5:40**
Every	***10 Mins.***	***Until***	**5:22**	**5:45**	**5:51**
1:48	**1:54**	**2:23**	**5:33**	**5:56**	**6:02**
1:59	**2:04**	**2:32**	**5:44**	**6:07**	**6:13**
Every	***10 Mins.***	***Until***	**5:55**	**6:18**	**6:24**
4:59	**5:04**	**5:30**	**6:06**	**6:29**	**6:35**
5:11	**5:16**	**5:42**	**6:17**	**6:40**	**6:46**
5:23	**5:28**	**5:54**	**6:28**	**6:51**	**6:57**
5:35	**5:40**	**6:06**	**6:39**	**7:02**	**7:08**
5:47	**5:52**	**6:18**	**6:50**	**7:13**	**7:19**
5:58	**6:03**	**6:29**	**7:02**	**7:25**	**7:31**
6:09	**6:14**	**6:40**	**7:15**	**7:38**	**7:44**
6:20	**6:25**	**6:51**	**7:28**	**7:51**	**7:57**
6:31	**6:36**	**7:02**	**7:41**	**8:04**	**8:10**
6:42	**6:47**	**7:13**	**7:54**	**8:17**	**8:23**
6:53	**6:58**	**7:24**	**8:07**	**8:30**	**8:36**
7:07	**7:12**	**7:38**	***Every***	***13 Mins.***	***Until***
Every	***13 Mins.***	***Until***	**9:12**	**9:32**	**9:38**
8:51	**8:56**	**9:18**	**9:25**	**9:45**	**9:51**
9:05	**9:10**	**9:32**	**9:38**	**9:58**	**10:04**
9:18	**9:23**	**9:45**	**9:51**	**10:11**	**10:17**
9:31	**9:36**	**9:58**	**10:04**	**10:24**	**10:30**
9:44	**9:49**	**10:11**	**10:17**	**10:37**	**10:43**
9:57	**10:02**	**10:24**	**10:30**	**10:50**	**10:56**
10:10	**10:15**	**10:37**	**10:43**	**11:03**	**11:09**
10:23	**10:28**	**10:50**	**10:56**	**11:16**	**11:22**
10:36	**10:41**	**11:03**	**11:10**	**11:30**	**11:36**
10:50	**10:55**	**11:17**	**11:25**	**11:45**	**11:51**
11:08	**11:13**	**11:35**	**11:43**	12:03A	12:09A
11:28	**11:32**	**11:52**	12:01A	12:21	12:27
11:47	**11:51**	12:11	12:19	12:39	12:45
12:05	12:09	12:29	12:37	12:57	1:03
12:25	12:29	12:49	w 12:55	1:15	1:21

57 Sunday

Inbound			Outbound		
Leave Watertown Yard	Arrive Oak Square	Arrive Kenmore Station	Leave Kenmore Station	Arrive Oak Square	Arrive Watertown Yard
6:00A	6:04A	6:24A	6:30A	6:44A	6:52A
Every	*20 Mins.*	*Until*	*Every*	*20 Mins.*	*Until*
9:00	9:05	9:29	9:10	9:27	9:35
9:15	9:20	9:44	9:25	9:43	9:52
9:30	9:35	9:59	9:40	9:59	10:08
9:45	9:50	10:15	9:55	10:14	10:23
10:00	10:06	10:33	*Every*	*15 Mins.*	*Until*
Every	*15 Mins.*	*Until*	11:55	**12:14P**	**12:23P**
11:45	11:51	**12:21P**			
			12:10P	**12:29P**	**12:39P**
12:00N	**12:06P**	**12:37P**	***Every***	***15 Mins.***	***Until***
Every	***15 Mins.***	***Until***	**7:10**	**7:33**	**7:42**
7:00	**7:06**	**7:32**	**7:25**	**7:48**	**7:57**
7:15	**7:21**	**7:47**	**7:40**	**8:03**	**8:13**
7:30	**7:36**	**8:02**	**7:55**	**8:17**	**8:27**
7:45	**7:51**	**8:16**	**8:10**	**8:31**	**8:41**
8:00	**8:05**	**8:29**	**8:25**	**8:46**	**8:56**
8:15	**8:20**	**8:44**	**8:40**	**9:01**	**9:10**
8:30	**8:35**	**8:59**	**8:55**	**9:15**	**9:24**
8:45	**8:50**	**9:14**	**9:15**	**9:35**	**9:44**
9:05	**9:10**	**9:34**	**9:35**	**9:55**	**10:04**
9:25	**9:30**	**9:54**	**9:55**	**10:15**	**10:24**
9:45	**9:50**	**10:13**	**10:15**	**10:35**	**10:44**
10:05	**10:10**	**10:31**	**10:35**	**10:55**	**11:04**
10:25	**10:30**	**10:51**	**10:55**	**11:15**	**11:24**
10:45	**10:50**	**11:11**	**11:15**	**11:34**	**11:44**
11:05	**11:10**	**11:31**	**11:35**	**11:53**	12:03A
11:25	**11:30**	**11:49**	**11:55**	12:13A	12:23
11:45	**11:48**	12:07A	12:20A	12:38	12:48
12:05A	12:08A	12:27	12:45	1:02	1:10
12:30	12:33	12:52	w 1:10	1:24	1:32

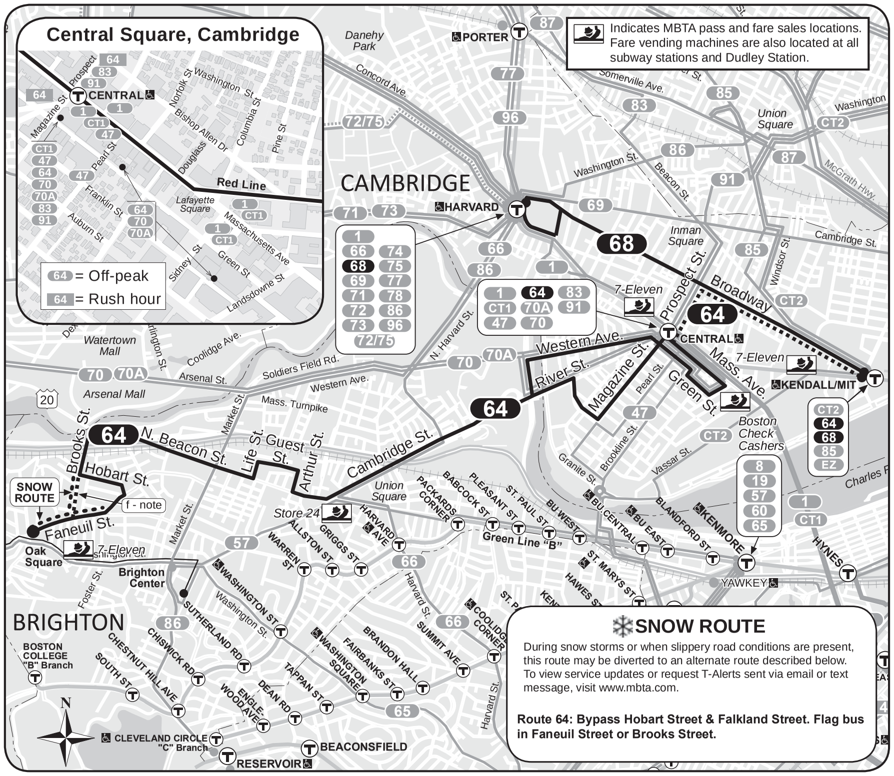
a - To and from Downtown Boston
c - Leaves from Cambridge Street at Warren Street
d - Bus stops outside Kemore
l - Leaves from Avenue Louis Pasteur at 2:15 pm.
p - Leaves from Avenue Louis Pasteur at 2:25 pm.
s - Does NOT run during school vacation
u - To or From Union Square, Allston
w - Waits for last trolley to arrive at Kenmore Station.

All buses are accessible to persons with disabilities

Fall 2017 Holidays

October 9: see Weekday November 11: see Saturday
September 4, November 23 & December 25: see Sunday

Route 64 Oak Square - University Park or Kendall/MIT
Route 68 Harvard Square - Kendall/MIT



SNOW ROUTE

During snow storms or when slippery road conditions are present, this route may be diverted to an alternate route described below. To view service updates or request T-Alerts sent via email or text message, visit www.mbta.com.

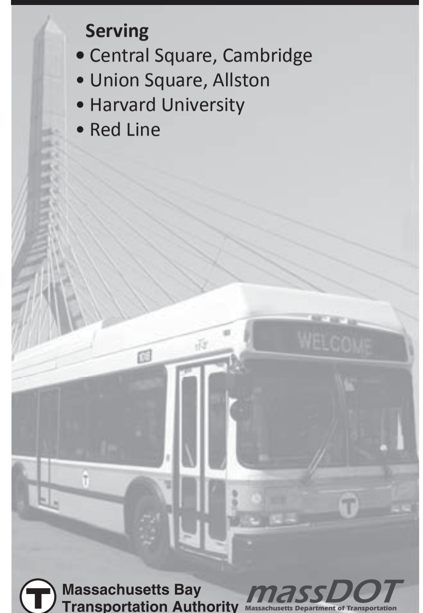
Route 64: Bypass Hobart Street & Falkland Street. Flag bus in Faneuil Street or Brooks Street.

64•68

Fall September 3, 2017 - December 30, 2017

64 Oak Square-University Park or Kendall/MIT
68 Harvard Square-Kendall/MIT

Serving
- Central Square, Cambridge
- Union Square, Allston
- Harvard University
- Red Line



Massachusetts Bay Transportation Authority

massDOT Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100
(TTY) 617-222-5146 • www.mbta.com

64 Weekday

Inbound				Outbound			
Leave Oak Square	Arrive Union Square	Arrive Kendall/ MIT	Arrive University Park	Leave University Park	Leave Kendall/ MIT	Arrive Union Square	Arrive Oak Square
5:31A	5:40A	.....	5:56A	6:00A	.....	6:08A	6:22A
5:54	6:03	.....	6:19	6:23	.....	6:32	6:46
6:17	6:27	6:53A	.....	.....	6:42A	7:02	7:12
6:42	6:52	7:18	.....	.....	7:05	7:24	7:34
7:00	7:10	7:37	.....	.....	7:23	7:42	7:52
7:18	7:28	7:56	.....	.....	7:33	7:52	8:02
7:32	7:45	8:13	.....	.....	7:51	8:10	8:20
7:45	7:58	8:26	.....	.....	8:14	8:33	8:43
7:58	8:11	8:39	.....	.....	8:37	8:56	9:08
8:11	8:24	8:52	.....	.....	8:59	9:22	9:35
8:33	8:46	9:13	.....	.....	9:20	9:43	9:56
8:55	9:07	9:33	.....	9:50	.....	10:04	10:21
9:15	9:25	.....	9:44	10:25	.....	10:39	10:56
9:40	9:50	.....	10:07	11:00	.....	11:13	11:27
10:05	10:14	.....	10:30	11:35	.....	11:48	**12:02P**
10:30	10:39	.....	10:55				
11:05	11:14	.....	11:30				
11:40	11:49	.....	**12:05P**				
				12:10P	**.....**	**12:23P**	**12:37P**
12:15P	**12:24P**	**.....**	**12:40P**	**12:45**	**.....**	**12:58**	**1:12**
12:50	**12:59**	**.....**	**1:15**	**1:20**	**.....**	**1:33**	**1:47**
1:25	**1:34**	**.....**	**1:50**	**1:55**	**.....**	**2:07**	**2:20**
2:00	**2:09**	**.....**	**2:21**	**2:30**	**.....**	**2:42**	**2:55**
2:35	**2:44**	**.....**	**2:56**	**3:05**	**.....**	**3:17**	**3:30**
3:10	**3:19**	**.....**	**3:31**	**3:40**	**.....**	**3:52**	**4:05**
3:45	**4:00**	**4:25**	**.....**	**.....**	**4:05P**	**4:26**	**4:46**
4:15	**4:30**	**4:55**	**.....**	**.....**	**4:35**	**4:56**	**5:16**
4:35	**4:50**	**5:16**	**.....**	**.....**	**5:00**	**5:21**	**5:41**
5:05	**5:20**	**5:46**	**.....**	**.....**	**5:30**	**5:51**	**6:11**
5:35	**5:50**	**6:16**	**.....**	**.....**	**6:00**	**6:21**	**6:41**
6:05	**6:20**	**6:46**	**.....**	**.....**	**6:30**	**6:51**	**7:10**
6:30	**6:39**	**.....**	**6:51**	**.....**	**6:55**	**7:16**	**7:34**
7:40	**7:49**	**.....**	**8:01**	**8:10**	**.....**	**8:21**	**8:34**
8:40	**8:49**	**.....**	**9:01**	**9:10**	**.....**	**9:21**	**9:34**
9:40	**9:49**	**.....**	**10:01**	**10:10**	**.....**	**10:21**	**10:34**
10:40	**10:49**	**.....**	**11:01**	**11:10**	**.....**	**11:21**	**11:34**
11:40	**11:49**	**.....**	12:01A	12:05A	.....	12:16A	12:29A
12:32A	12:41A	.....	12:53	fw1:00	.....	1:13	.....

f - From Central Square to Faneuil Square. Does NOT serve Stop & Shop.
w - Waits for last train to arrive at Central Square Station.

ROUTE 64 NOTE: Running time from Kendall/MIT Station to Central Square is approximately 7 minutes. Running time from University Park to Central Square is approximately 2 minutes.

64 Saturday

Inbound			Outbound		
Leave Oak Square	Arrive Union Square	Arrive University Park	Leave University Park	Arrive Union Square	Arrive Oak Square
5:50A	5:58A	6:13A	5:20A	5:27A	5:40A
6:50	6:58	7:13	6:20	6:27	6:40
7:50	7:58	8:13	7:20	7:27	7:40
8:50	8:58	9:16	8:20	8:27	8:40
9:50	9:59	10:18	9:20	9:29	9:44
10:50	10:59	11:18	10:20	10:29	10:44
11:50	11:59	**12:18P**	11:20	11:29	11:45
12:50P	**12:59P**	**1:19P**	**12:20P**	**12:29P**	**12:46P**
1:50	**1:59**	**2:19**	**1:20**	**1:30**	**1:47**
2:50	**2:59**	**3:19**	**2:20**	**2:30**	**2:47**
3:50	**3:59**	**4:19**	**3:20**	**3:29**	**3:46**
4:50	**4:59**	**5:18**	**4:20**	**4:29**	**4:46**
5:50	**5:58**	**6:17**	**5:20**	**5:29**	**5:46**
6:50	**6:58**	**7:17**	**6:20**	**6:29**	**6:46**
7:50	**7:57**	**8:15**	**7:20**	**7:30**	**7:45**
8:50	**8:57**	**9:15**	**8:20**	**8:30**	**8:44**
9:50	**9:57**	**10:15**	**9:20**	**9:29**	**9:43**
10:50	**10:57**	**11:13**	**10:20**	**10:29**	**10:43**
11:50	**11:55**	12:11A	**11:20**	**11:29**	**11:43**
12:40A	12:44A	12:58	12:15A	12:23A	12:37A
			fw 1:05	1:15	.....

64 Sunday

Inbound			Outbound		
Leave Oak Square	Arrive Union Square	Arrive University Park	Leave University Park	Arrive Union Square	Arrive Oak Square
8:42A	8:51A	9:05A	8:18A	8:26A	8:37A
9:38	9:47	10:01	9:14	9:22	9:33
10:36	10:46	11:03	10:10	10:19	10:31
11:35	11:45	**12:02P**	11:08	11:18	11:30
12:45P	**12:55P**	**1:15P**	**12:12P**	**12:23P**	**12:37P**
1:55	**2:04**	**2:24**	**1:22**	**1:33**	**1:46**
3:05	**3:14**	**3:31**	**2:32**	**2:43**	**2:56**
4:15	**4:24**	**4:41**	**3:42**	**3:53**	**4:06**
5:25	**5:33**	**5:49**	**4:52**	**5:03**	**5:16**
6:35	**6:43**	**6:59**	**6:02**	**6:13**	**6:26**

All buses are accessible to persons with disabilities

Route 64
Oak Square-University Park, Cambridge or Kendall/MIT Station

68 Weekday

Inbound		Outbound	
Leave Harvard Square	Arrive Kendall/ MIT	Leave Kendall/ MIT	Arrive Harvard Square
6:35A	6:46A	6:53A	7:06A
7:15	7:26	7:33	7:47
7:55	8:08	8:13	8:27
8:35	8:50	8:58	9:12
9:15	9:29	9:33	9:47
9:55	10:09	10:13	10:25
10:35	10:49	10:53	11:05
11:15	11:27	11:33	11:45
11:55	**12:07P**		
		12:13P	**12:26P**
12:35P	**12:47P**	**12:53**	**1:06**
1:15	**1:27**	**1:33**	**1:46**
1:55	**2:07**	**2:13**	**2:26**
2:35	**2:47**	**2:53**	**3:07**
3:15	**3:28**	**3:33**	**3:50**
3:55	**4:08**	**4:13**	**4:30**
4:35	**4:48**	**4:53**	**5:10**
5:15	**5:28**	**5:38**	**5:51**
5:55	**6:07**	**6:11**	**6:24**
6:29	**6:41**	**6:45**	**6:58**

Route 68
Harvard/Holyoke Street-Kendall/MIT

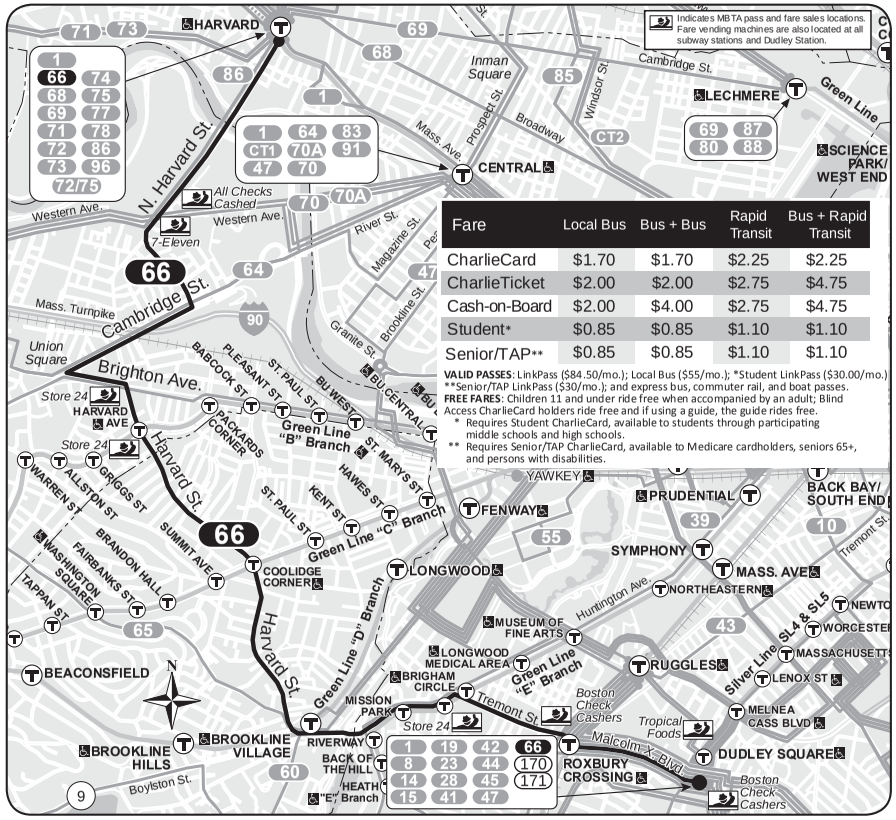
No service on weekends.

Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.70	$1.70	$2.25	$2.25
CharlieTicket	$2.00	$2.00	$2.75	$4.75
Cash-on-Board	$2.00	$4.00	$2.75	$4.75
Student*	$0.85	$0.85	$1.10	$1.10
Senior/TAP**	$0.85	$0.85	$1.10	$1.10

VALID PASSES: LinkPass ($84.50/mo.); Local Bus ($55/mo.); *Student LinkPass ($30.00/mo.); **Senior/TAP LinkPass ($30/mo.); and express bus, commuter rail, and boat passes.
FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.
* Requires Student CharlieCard, available to students through participating middle schools and high schools.
** Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

Fall 2017 Holidays
October 9: see Weekday November 11: see Saturday
September 4, November 23 & December 25: see Sunday

Route 66 Harvard Station - Dudley Station



Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.70	$1.70	$2.25	$2.25
CharlieTicket	$2.00	$2.00	$2.75	$4.75
Cash-on-Board	$2.00	$4.00	$2.75	$4.75
Student*	$0.85	$0.85	$1.10	$1.10
Senior/TAP**	$0.85	$0.85	$1.10	$1.10

66

Fall September 3, 2017 - December 30, 2017

Harvard Square- Dudley Station

Serving

- Brigham and Women's Hospital
- Brigham Circle
- Brookline Village
- Coolidge Corner
- Union Square (Allston)
- Red Line
- Orange Line
- Green Line

Massachusetts Bay Transportation Authority
massDOT Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100
(TTY) 617-222-5146 • www.mbta.com

66 Weekday

Inbound				Outbound			
Leave Harvard/ Dawes Island	Lv/Arrive Union Square	Arrive Brookline Village	Arrive Dudley Station	Leave Dudley Station	Arrive Brookline Village	Arrive Union Square	Arrive Harvard/ Dawes Island
5:00A	5:08A	5:18A	5:27A	4:45A	4:52A	5:03A	5:20A
5:28	5:36	5:46	5:55	5:15	5:22	5:33	5:50
5:45	5:53	6:03	6:12	5:30	5:37	5:48	6:05
6:00	6:08	6:18	6:27	5:45	5:52	6:03	6:20
6:17	6:25	6:37	6:51	6:00	6:12	6:24	6:41
.....	s 6:28	6:38	6:53	6:10	6:22	6:34	6:51
.....	s 6:39	6:49	7:04	bs 6:17	6:26	6:37	.....
6:31	6:41	6:54	7:08	6:18	6:30	6:42	6:59
6:39	6:49	7:02	7:16	bs 6:22	6:31	6:42	.....
6:47	6:57	7:10	7:24	6:26	6:38	6:50	7:07
6:55	7:05	7:18	7:35	bs 6:27	6:36	6:47	.....
Every	*9 Mins.*		*Until*	bs 6:31	6:40	6:51	.....
9:01	9:13	9:30	9:47	bs 6:33	6:42	6:53	.....
9:09	9:21	9:36	9:53	6:34	6:46	6:58	7:15
9:17	9:29	9:44	10:01	bs 6:35	6:44	6:55	.....
9:25	9:37	9:52	10:09	bs 6:38	6:47	6:58	.....
9:33	9:44	9:59	10:16	bs 6:41	6:50	7:01	.....
9:41	9:52	10:07	10:24	bs 6:44	6:53	7:05	.....
Every	*16 Mins.*		*Until*	6:42	6:54	7:06	7:23
11:49	**12:00N**	**12:18P**	**12:37P**	bs 6:47	6:56	7:08	.....
				bs 6:50	6:59	7:11	.....
12:05P	**12:18P**	**12:36P**	**12:55P**	6:51	7:03	7:15	7:34
Every	***16 Mins.***		***Until***	6:58	7:10	7:22	7:44
1:41	**1:54**	**2:14**	**2:34**	7:06	7:18	7:30	7:57
.....	**cs 2:11**	**2:34**	**2:46**	7:12	7:24	7:39	8:06
.....	**cs 2:11**	**2:34**	**2:46**	7:16	7:28	7:45	8:12
1:57	**2:12**	**2:32**	**2:52**	7:24	7:39	7:56	8:23
2:08	**2:24**	**2:44**	**3:04**	*Every*	*9 Mins.*		*Until*
Every	***10 Mins.***		***Until***	8:45	8:59	9:16	9:37
4:58	**5:14**	**5:33**	**5:51**	8:55	9:09	9:26	9:47
5:08	**5:24**	**5:41**	**5:59**	9:06	9:20	9:37	9:58
5:18	**5:33**	**5:50**	**6:08**	9:17	9:31	9:48	10:09
5:28	**5:41**	**5:58**	**6:16**	9:29	9:43	10:00	10:21
5:38	**5:51**	**6:08**	**6:26**	9:44	9:58	10:15	10:36
5:48	**6:01**	**6:18**	**6:36**	*Every*	*16 Mins.*		*Until*
5:59	**6:12**	**6:29**	**6:47**	11:52	**12:06P**	**12:23**	**12:44**
6:10	**6:23**	**6:40**	**6:58**				
6:21	**6:34**	**6:51**	**7:09**	**12:08P**	**12:22P**	**12:39**	**1:00**
6:32	**6:45**	**7:02**	**7:20**	***Every***	***16 Mins.***		***Until***
6:43	**6:56**	**7:13**	**7:30**	**1:44**	**1:59**	**2:19**	**2:43**
6:54	**7:07**	**7:24**	**7:39**	**s 1:51**	**2:08**	**2:26**	**.....**
7:05	**7:18**	**7:34**	**7:47**	**s 1:53**	**2:08**	**2:28**	**2:52**
7:17	**7:30**	**7:43**	**7:56**	**1:59**	**2:14**	**2:34**	**2:58**
7:29	**7:42**	**7:55**	**8:08**	**2:10**	**2:25**	**2:45**	**3:09**
7:41	**7:54**	**8:07**	**8:20**	***Every***	***11 Mins.***	***or Less***	
7:53	**8:06**	**8:19**	**8:32**	**6:56**	**7:09**	**7:25**	**7:45**
8:05	**8:18**	**8:31**	**8:44**	**7:08**	**7:21**	**7:37**	**7:57**
8:20	**8:33**	**8:46**	**8:59**	**7:20**	**7:33**	**7:49**	**8:09**
8:35	**8:48**	**9:01**	**9:14**	**7:35**	**7:48**	**8:04**	**8:24**
8:50	**9:03**	**9:16**	**9:29**	**7:50**	**8:03**	**8:19**	**8:39**
9:05	**9:18**	**9:31**	**9:44**	**8:05**	**8:18**	**8:34**	**8:54**
9:25	**9:38**	**9:51**	**10:04**	**8:20**	**8:33**	**8:49**	**9:05**
9:45	**9:58**	**10:11**	**10:24**	***Every***	***20 Mins.***		***Until***
10:05	**10:18**	**10:31**	**10:44**	**11:20**	**11:30**	**11:43**	**11:57**
Every	***20 Mins.***		***Until***	**11:45**	**11:55**	12:08A	12:22A
12:05A	12:15A	12:25A	12:37A	12:10A	12:20A	12:32	12:44
12:30	12:40	12:50	1:02	12:35	12:42	12:51	1:03
w 1:00	1:10	1:20	1:31	w 1:05	1:12	1:21	1:33

66 Saturday

Inbound			Outbound		
Leave Harvard/ Dawes Island	Arrive Union Square	Arrive Dudley Station	Leave Dudley Station	Arrive Union Square	Arrive Harvard/ Dawes Island
4:40A	4:46A	5:02A	4:42A	4:57A	5:09A
5:12	5:18	5:35	5:12	5:27	5:39
5:42	5:49	6:07	5:42	5:57	6:18
6:00	6:07	6:25	6:12	6:33	6:55
6:15	6:22	6:40	6:32	6:53	7:15
6:30	6:37	6:55	6:47	7:05	7:27
6:48	6:55	7:15	7:02	7:20	7:42
7:06	7:14	7:35	7:15	7:33	7:55
7:19	7:27	7:48	7:30	7:48	8:07
7:32	7:40	8:01	7:45	8:06	8:23
7:45	7:53	8:14	8:00	8:25	8:42
8:00	8:08	8:29	8:15	8:40	8:57
8:16	8:24	8:50	*Every*	*17 Mins.*	*or Less*
8:32	8:42	9:09	11:52	**12:25P**	**12:49P**
Every	*17 Mins.*	*or Less*			
11:49	**12:01P**	**12:36P**	**12:08P**	**12:42P**	**1:06P**
			Every	***17 Mins.***	***or Less***
12:06P	**12:21P**	**12:56P**	**6:32**	**7:04**	**7:23**
12:22	**12:37**	**1:12**	**6:48**	**7:20**	**7:39**
12:38	**12:53**	**1:28**	**7:05**	**7:35**	**7:54**
Every	***17 Mins.***	***or Less***	**7:22**	**7:48**	**8:07**
7:28	**7:40**	**8:13**	**7:38**	**8:03**	**8:22**
7:45	**7:57**	**8:30**	**7:55**	**8:20**	**8:39**
8:01	**8:13**	**8:42**	**8:12**	**8:37**	**8:56**
8:18	**8:30**	**8:55**	**8:28**	**8:53**	**9:12**
8:34	**8:45**	**9:10**	**8:45**	**9:10**	**9:29**
8:50	**9:01**	**9:26**	**9:02**	**9:27**	**9:46**
9:07	**9:18**	**9:43**	**9:18**	**9:43**	**10:02**
9:23	**9:34**	**9:59**	**9:35**	**10:00**	**10:19**
9:40	**9:51**	**10:16**	**9:52**	**10:17**	**10:36**
9:56	**10:07**	**10:32**	**10:08**	**10:33**	**10:52**
10:12	**10:23**	**10:48**	**10:25**	**10:50**	**11:09**
10:29	**10:40**	**11:05**	**10:42**	**11:07**	**11:26**
10:47	**10:58**	**11:23**	**10:58**	**11:23**	**11:36**
11:05	**11:16**	**11:41**	**11:14**	**11:37**	**11:49**
11:23	**11:34**	**11:59**	**11:31**	**11:50**	12:02A
11:41	**11:52**	**12:13A**	**11:49**	12:08A	12:20
11:59	12:09A	12:28	12:07A	12:26	12:37
12:17A	12:27	12:46	12:25	12:42	12:52
12:35	12:45	1:04	12:40	12:56	1:06
w 1:00	1:10	1:29	w 1:10	1:26	1:36

66 Sunday

Inbound			Outbound		
Leave Harvard/ Dawes Island	Arrive Union Square	Arrive Dudley Station	Leave Dudley Station	Arrive Union Square	Arrive Harvard/ Dawes Island
6:25A	6:32A	6:54A	5:50A	6:07A	6:23A
6:45	6:52	7:14	6:10	6:27	6:43
Every	*20 Mins.*	*Until*	*Every*	*20 Mins.*	*Until*
8:45	8:54	9:21	9:10	9:30	9:50
9:05	9:15	9:43	9:27	9:51	10:11
9:22	9:32	10:02	9:43	10:07	10:27
9:39	9:50	10:20	10:00	10:24	10:46
9:56	10:07	10:37	10:16	10:42	11:04
10:13	10:24	10:54	10:33	11:02	11:24
10:30	10:41	11:11	10:49	11:18	11:40
10:47	10:58	11:28	11:06	11:35	11:57
11:04	11:15	11:45	11:22	11:51	**12:16P**
11:21	11:32	**12:02P**	11:39	**12:09P**	**12:34**
11:38	11:49	**12:21**	11:55	**12:26**	**12:51**
11:55	**12:07P**	**12:41**			
			12:12P	**12:43P**	**1:08P**
12:12P	**12:25P**	**12:59P**	**12:28**	**12:59**	**1:24**
Every	***17 Mins.***	***Until***	***Every***	***17 Mins.***	***or Less***
6:26	**6:39**	**7:11**	**5:42**	**6:13**	**6:37**
6:45	**6:58**	**7:30**	**6:00**	**6:31**	**6:53**
7:05	**7:18**	**7:47**	**6:20**	**6:48**	**7:10**
7:25	**7:37**	**8:04**	**6:40**	**7:06**	**7:28**
7:45	**7:56**	**8:23**	**7:00**	**7:26**	**7:48**
8:05	**8:16**	**8:43**	***Every***	***20 Mins.***	***Until***
Every	***20 Mins.***	***Until***	**8:40**	**9:02**	**9:21**
10:05	**10:16**	**10:43**	**8:55**	**9:17**	**9:36**
10:25	**10:36**	**11:03**	**9:15**	**9:37**	**9:56**
10:45	**10:56**	**11:21**	**9:35**	**9:57**	**10:16**
11:05	**11:14**	**11:38**	***Every***	***20 Mins.***	***Until***
11:25	**11:34**	**11:58**	**11:35**	**11:53**	12:09A
11:55	12:04A	12:28A	**11:55**	12:13A	12:29
12:25A	12:34	12:58	12:30A	12:48	1:04
w 1:00	1:09	1:33	w 1:00	1:18	1:34

b - To Brighton Center
c - Leaves from Cambridge Street at Warren Street
s - Does NOT run during school vacation
w - Waits for last Red Line or Silver Line vehicle to arrive at station.

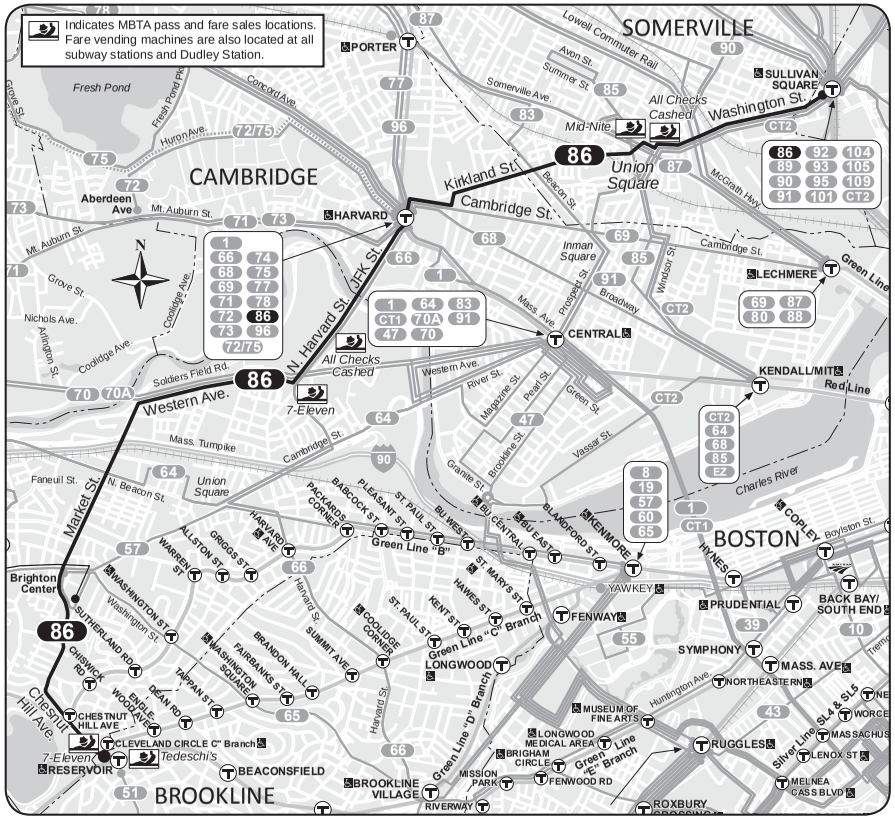
All buses are accessible to persons with disabilities

Fall 2017 Holidays

October 9: see Weekday November 11: see Saturday
September 4, November 23 & December 25: see Sunday

Route 66
Harvard Square - Dudley Station

Route 86 Sullivan Square Station - Reservoir Station (Cleveland Circle)



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Fall September 3, 2017 - December 30, 2017

Sullivan Square Station- Reservoir Station (Cleveland Circle)

Serving

- Union Square, Somerville
- Harvard Square & Station
- Brighton Center
- St. Elizabeth's Medical Center
- Red Line
- Orange Line
- Green Line

Massachusetts Bay Transportation Authority

massDOT Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100
(TTY) 617-222-5146 • www.mbta.com

86 Weekday

Inbound			Outbound		
Leave Sullivan Sq. Station	Arrive Harvard Square	Arrive Reservoir Station	Leave Reservoir Station	Arrive Harvard Station Upper Busway	Arrive Sullivan Sq. Station
5:00A	5:10A	5:27A	5:39A	5:58A	6:11A
5:20	5:30	5:47	6:01	6:20	6:32
5:40	5:50	6:07	6:23	6:47	7:03
5:56	6:06	6:23	6:43	7:10	7:26
6:08	6:18	6:37	6:56	7:23	7:41
6:20	6:31	6:52	7:09	7:36	7:56
6:32	6:46	7:07	7:22	7:56	8:14
6:42	6:56	7:17	7:33	8:10	8:28
6:50	7:04	7:25	7:44	8:20	8:38
6:58	7:12	7:34	7:54	8:28	8:46
7:06	7:20	7:46	8:04	8:38	8:56
7:16	7:30	8:04	8:15	8:49	9:07
7:26	7:45	8:19	8:28	9:02	9:20
7:41	8:02	8:35	8:45	9:19	9:39
7:56	8:17	8:46	9:02	9:34	9:51
8:11	8:31	8:56	9:13	9:43	10:00
8:28	8:43	9:08	9:35	10:00	10:17
8:40	8:55	9:20	9:57	10:22	10:39
9:00	9:15	9:40	10:20	10:45	11:02
9:22	9:37	10:02	10:45	11:10	11:27
9:47	10:02	10:27	11:20	11:45	**12:03P**
10:22	10:37	11:02	11:55	**12:22P**	**12:43**
11:00	11:15	11:40			
11:40	11:55	**12:20P**	**12:30P**	**12:57P**	**1:18P**
			1:05	**1:32**	**1:53**
12:15P	**12:30P**	**12:55P**	**1:25**	**1:52**	**2:13**
12:35	**12:50**	**1:15**	**1:45**	**2:12**	**2:33**
12:55	**1:10**	**1:35**	**2:05**	**2:32**	**2:58**
1:15	**1:30**	**1:55**	**2:20**	**2:45**	**3:12**
1:28	**1:43**	**2:08**	**2:50**	**3:20**	**3:43**
1:45	**2:00**	**2:25**	**3:10**	**3:41**	**4:04**
2:05	**2:20**	**2:47**	**3:30**	**4:01**	**4:24**
2:25	**2:40**	**3:10**	**3:50**	**4:21**	**4:44**
2:45	**3:01**	**3:31**	**4:07**	**4:38**	**5:01**
3:05	**3:21**	**3:51**	**4:25**	**4:56**	**5:19**
3:20	**3:36**	**4:06**	**4:43**	**5:14**	**5:37**
3:38	**3:54**	**4:24**	**5:01**	**5:32**	**5:55**
3:56	**4:12**	**4:42**	**5:19**	**5:50**	**6:13**
4:13	**4:29**	**4:59**	**5:37**	**6:08**	**6:31**
4:32	**4:48**	**5:25**	**5:55**	**6:26**	**6:49**
4:47	**5:03**	**5:36**	**6:07**	**6:38**	**7:01**
4:59	**5:17**	**5:52**	**6:19**	**6:50**	**7:10**
5:11	**5:29**	**6:06**	**6:30**	**7:00**	**7:18**
5:23	**5:44**	**6:18**	**6:50**	**7:14**	**7:32**
5:42	**6:03**	**6:36**	**7:00**	**7:22**	**7:40**
6:00	**6:17**	**6:50**	**7:15**	**7:37**	**7:55**
6:18	**6:35**	**7:07**	**7:37**	**7:59**	**8:17**
6:40	**6:57**	**7:21**	**8:00**	**8:22**	**8:40**
7:08	**7:20**	**7:43**	**8:28**	**8:50**	**9:08**
u 7:36	**7:48**	**8:11**	**9:03**	**9:25**	**9:43**
u 8:04	**8:16**	**8:39**	**9:38**	**10:00**	**10:18**
u 8:32	**8:44**	**9:07**	**10:13**	**10:33**	**10:47**
u 9:15	**9:27**	**9:50**	**10:48**	**11:04**	**11:18**
u 10:00	**10:12**	**10:35**	**11:25**	**11:41**	**11:55**
u 10:45	**10:57**	**11:17**	12:05A	12:21A	12:35A
u 11:25	**11:34**	**11:54**	12:40	12:56	1:10
u 12:05A	12:14A	12:34A			

86 Saturday

Inbound			Outbound		
Leave Sullivan Sq. Station	Arrive Harvard Square	Arrive Reservoir Station	Leave Reservoir Station	Arrive Harvard Station Upper Busway	Arrive Sullivan Sq. Station
5:00A	5:08A	5:22A	5:30A	5:44A	5:57A
6:05	6:14	6:31	6:40	6:56	7:09
7:15	7:24	7:44	7:50	8:09	8:24
7:45	7:56	8:16	8:20	8:39	8:54
8:15	8:26	8:46	8:47	9:07	9:22
8:45	8:56	9:16	9:22	9:46	10:03
9:10	9:21	9:43	9:52	10:16	10:33
9:40	9:53	10:18	10:25	10:49	11:06
10:10	10:23	10:48	10:57	11:21	11:38
10:40	10:53	11:18	11:26	11:50	12:07P
11:06	11:19	11:44	11:55	12:19P	12:37
11:31	11:44	12:09P			
11:56	**12:09P**	**12:35**	**12:22P**	**12:47P**	**1:05P**
			12:49	**1:14**	**1:32**
12:23P	**12:36P**	**1:03P**	**1:16**	**1:41**	**1:59**
12:50	**1:03**	**1:30**	**1:43**	**2:08**	**2:26**
1:17	**1:30**	**1:57**	**2:10**	**2:35**	**2:53**
1:44	**1:57**	**2:26**	**2:37**	**3:02**	**3:20**
2:11	**2:25**	**2:55**	**3:04**	**3:29**	**3:47**
2:38	**2:52**	**3:22**	**3:31**	**3:56**	**4:14**
3:05	**3:19**	**3:49**	**3:58**	**4:23**	**4:41**
3:32	**3:46**	**4:16**	**4:25**	**4:48**	**5:06**
3:59	**4:13**	**4:41**	**4:52**	**5:14**	**5:32**
4:26	**4:40**	**5:08**	**5:17**	**5:39**	**5:57**
4:53	**5:06**	**5:34**	**5:42**	**6:04**	**6:22**
5:20	**5:33**	**5:59**	**6:07**	**6:29**	**6:47**
5:47	**6:00**	**6:26**	**6:32**	**6:54**	**7:12**
6:14	**6:27**	**6:53**	**7:00**	**7:22**	**7:40**
6:41	**6:54**	**7:18**	**7:27**	**7:49**	**8:07**
7:10	**7:23**	**7:46**	**7:55**	**8:17**	**8:34**
u 7:55	**8:06**	**8:28**	**8:35**	**8:54**	**9:10**
u 8:40	**8:50**	**9:12**	**9:20**	**9:39**	**9:55**
u 9:25	**9:35**	**9:57**	**10:05**	**10:24**	**10:40**
u 10:45	**10:55**	**11:17**	**11:20**	**11:39**	**11:54**
u 12:00M	12:09A	12:28A	12:35A	12:50A	1:03A

Harvard Square: board buses to Sullivan Station in Harvard Station upper busway. Board buses to Reservoir on Massachusetts Avenue at Garden Street (Dawes Island) or on Eliot Street at Bennett Street.

Route 86
Sullivan Station-
Reservoir Station (Cleveland Circle)

86 Sunday

Inbound			Outbound		
Leave Sullivan Sq. Station	Arrive Harvard Square	Arrive Reservoir Station	Leave Reservoir Station	Arrive Harvard Station Upper Busway	Arrive Sullivan Sq. Station
7:30A	7:40A	7:56A	8:05A	8:24A	8:37A
8:12	8:23	8:40	8:50	9:11	9:26
8:55	9:06	9:23	9:35	9:58	10:13
9:37	9:49	10:12	10:20	10:45	11:01
10:20	10:33	10:54	11:00	11:25	11:41
10:50	11:03	11:24	11:35	**12:00N**	**12:19P**
11:20	11:34	11:56			
11:55	**12:09P**	**12:31P**	**12:10P**	**12:37P**	**12:56P**
			12:45	**1:12**	**1:31**
12:30P	**12:44P**	**1:05P**	**1:20**	**1:47**	**2:06**
1:05	**1:18**	**1:43**	**1:55**	**2:22**	**2:41**
1:40	**1:53**	**2:18**	**2:30**	**2:57**	**3:16**
2:15	**2:28**	**2:53**	**3:05**	**3:32**	**3:51**
2:50	**3:03**	**3:28**	**3:45**	**4:12**	**4:29**
3:25	**3:38**	**4:03**	**4:20**	**4:46**	**5:03**
4:00	**4:13**	**4:38**	**4:55**	**5:21**	**5:37**
4:35	**4:48**	**5:13**	**5:30**	**5:53**	**6:08**
5:10	**5:23**	**5:48**	**6:05**	**6:28**	**6:43**
5:45	**5:57**	**6:21**	**6:40**	**7:03**	**7:18**
6:20	**6:32**	**6:56**	**7:15**	**7:37**	**7:53**
7:00	**7:11**	**7:35**	**7:50**	**8:10**	**8:26**
u 7:35	**7:46**	**8:07**	**8:15**	**8:35**	**8:51**
u 8:55	**9:06**	**9:27**	**9:35**	**9:55**	**10:11**

u - Trip departs from Sullivan Square upper busway.
All other trips depart from Sullivan Square lower busway.

All buses are accessible to persons with disabilities

Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.70	$1.70	$2.25	$2.25
CharlieTicket	$2.00	$2.00	$2.75	$4.75
Cash-on-Board	$2.00	$4.00	$2.75	$4.75
Student*	$0.85	$0.85	$1.10	$1.10
Senior/TAP**	$0.85	$0.85	$1.10	$1.10

VALID PASSES: LinkPass ($84.50/mo.); Local Bus ($55/mo.); *Student LinkPass ($30.00/mo.); **Senior/TAP LinkPass ($30/mo.); and express bus, commuter rail, and boat passes.
FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.
* Requires Student CharlieCard, available to students through participating middle schools and high schools.
** Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

Fall 2017 Holidays
October 9: see Weekday November 11: see Saturday
September 4, November 23 & December 25: see Sunday

Vehicular Crash Data

Crash Data
Allston Yards

Crash ID	Town	Year	Crash Date	Crash Time	Crash Severity	Total Vehicles	Total Injured	Total Fatals	Collision manner	Road Surface	Lighting	Weather	Street	Intersection	Vehicles Travel Directions	Most Harmful Events	Vehicle Action Prior to Crash	Vehicle Configuration	Non Motorist Type	X Coordinate	Y Coordinate
MARKET STREET AT BIRMINGHAM PARKWAY																					
2569506	BOSTON	2010	2/9/2010	11:08 AM	Non-fatal injury	2	1	0	Rear-end	Dry	Daylight	Clear	BIRMINGHAM PARKWAY	LINCOLN STREET	V1:N / V2:N	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)			
2609505	BOSTON	2010	5/20/2010	2:43 AM	Non-fatal injury	3	1	0	Rear-end	Dry	Dark - lighted roadway	Clear	BIRMINGHAM PARKWAY	LINCOLN STREET	V1:N / V2:N / V3:N	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic) V3:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Slowing or stopped in traffic / V3:Slowing or stopped in traffic	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car) V3:(Passenger car)			
2633994	BOSTON	2010	8/29/2010	4:10 AM	Non-fatal injury	1	1	0	Single vehicle crash	Dry	Dark - lighted roadway	Not Reported	BIRMINGHAM PARKWAY	MARKET STREET	V1:S	V1:(Collision with light pole or other post/support)	V1: Travelling straight ahead	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)			
2690844	BOSTON	2011	1/29/2011	1:02 PM	Property damage only (none injured)	2	0	0	Angle	Wet	Daylight	Clear	BIRMINGHAM PARKWAY / MARKET STREET /		V1:W / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Entering traffic lane / V2:Travelling straight ahead	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)			
2743860	BOSTON	2011	7/12/2011	4:05 PM	Non-fatal injury	2	1	0	Angle	Dry	Daylight	Not Reported	BIRMINGHAM PARKWAY	MARKET STREET	V1:E / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Passenger car) V2:(Passenger car)			
2789418	BOSTON	2011	10/9/2011	11:32 AM	Property damage only (none injured)	2	0	0	Rear-end	Dry	Daylight	Clear	BIRMINGHAM PARKWAY	MARKET STREET	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Slowing or stopped in traffic / V2:Backing	V1:(Motorcycle) V2:(Passenger car)			
2782862	BOSTON	2011	10/14/2011	2:13 PM	Non-fatal injury	2	1	0	Angle	Wet	Daylight	Rain	BIRMINGHAM PARKWAY / MARKET STREET /		V1:E / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Turning left / V2:Travelling straight ahead	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)			
3290486	BOSTON	2012	10/4/2012	1:45 PM	Not Reported	1	0	0	Single vehicle crash	Wet	Dark - lighted roadway	Rain/Rain	MARKET STREET / LINCOLN STREET		V1:S	V1:(Collision with light pole or other post/support)	V1: Turning left	V1:(Passenger car)			
3322829	BOSTON	2012	12/10/2012	12:00 AM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	Wet	Dark - lighted roadway	Not Reported	BIRMINGHAM PARKWAY / MARKET STREET /		V1:N / V2:N	V1:(Collision with other movable object) V2:(Collision with other movable object)	V1: Turning right / V2:Turning right	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)			
3454096	BOSTON	2013	5/14/2013	2:56 PM	Non-fatal injury	2	1	0	Sideswipe, same direction	Dry	Daylight	Clear	BIRMINGHAM PARKWAY / MARKET STREET		V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Entering traffic lane / V2:Entering traffic lane	V1:(Truck/trailer) V2:(Passenger car)			
3479169	BOSTON	2013	6/14/2013	2:39 PM	Non-fatal injury	2	1	0	Angle	Dry	Daylight	Cloudy	BIRMINGHAM PARKWAY / LINCOLN STREET /		V1:N / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Passenger car) V2:(Passenger car)			
3548964	BOSTON	2013	7/23/2013	4:47 PM	Property damage only (none injured)	1	0	0	Single vehicle crash	Wet	Daylight	Cloudy/Rain	BIRMINGHAM PARKWAY Rte UNKNOW	LINCOLN STREET	V1:W	V1:(Collision with light pole or other post/support)	V1: Turning left	V1:(Passenger car)			
3793940	BOSTON	2014	4/8/2014	4:15 PM	Non-fatal injury	2	2	0	Angle	Dry	Daylight	Clear	BIRMINGHAM PARKWAY / LINCOLN STREET / MARKET		V1:W / V2:N	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Passenger car) V2:(Passenger car)			
3963454	BOSTON	2014	10/7/2014	7:10 AM	Property damage only (none injured)	2	0	0	Sideswipe, opposite direction	Dry	Daylight	Clear	MARKET STREET		V1:S / V2:N	V1:() V2:()	V1: Travelling straight ahead / V2:Making U-turn	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)			
3987214	BOSTON	2014	12/6/2014	12:27 PM	Property damage only (none injured)	2	0	0	Angle	Wet	Daylight	Cloudy	BIRMINGHAM PARKWAY Rte UNKNOW	MARKET STREET	V1:W / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)			
MARKET STREET AT GUEST STREET																					
2715563	BOSTON	2010	5/24/2010	3:10 PM	Not Reported	2	0	0	Head-on	Dry	Daylight	Clear/Clear	MARKET STREET / GUEST STREET	MARKET STREET / GUEST STREET	V1:Not reported / V2:Not reported	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Travelling straight ahead / V2:Travelling straight ahead	V1: Passenger car / V2:Passenger car		228973.1799	900829.7331
2661509	BOSTON	2010	11/9/2010	1:35 PM	Non-fatal injury	2	2	0	Rear-end	Wet	Daylight	Cloudy/Rain	MARKET STREET / GUEST STREET	MARKET STREET / GUEST STREET	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car		228973.1799	900829.7331
MARKET STREET AT VINELAND STREET																					
3949219	BOSTON	2014	9/9/2014	9:30 AM	Property damage only (none injured)	2	0	0	Angle	Dry	Daylight	Clear	MARKET STREET / VINELAND STREET		V1:N / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)			
MARKET STREET AT NORTH BEACON STREET																					
2750172	BOSTON	2011	7/25/2011	7:35 PM	Non-fatal injury	3	1	0	Angle	Wet	Dusk	Rain	MARKET STREET / NORTH BEACON STREET	MARKET STREET / NORTH BEACON STREET	V1:Northbound / V2:Eastbound / V3:Southbound	V1: Not reported / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Not reported / V2:Slowing or stopped in traffic / V3:Travelling straight ahead	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V3:Passenger car		228910.1562	900687.5625
3243860	BOSTON	2012	6/13/2012	9:50 AM	Non-fatal injury	1	1	0	Single vehicle crash	Wet	Daylight	Rain	MARKET STREET / NORTH BEACON STREET	MARKET STREET / NORTH BEACON STREET	V1:Not reported	V1: Collision with pedestrian	V1: Travelling straight ahead	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	P2:Pedestrian	228910.1562	900687.5625
3391668	BOSTON	2013	2/13/2013	2:18 PM	Property damage only (none injured)	2	0	0	Angle	Wet	Daylight	Clear	MARKET STREET		V1:E / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Entering traffic lane / V2:Slowing or stopped in traffic	V1:(Passenger car) V2:(Passenger car)			
3442832	BOSTON	2013	5/23/2013	8:42 AM	Non-fatal injury	3	1	0	Rear-end	Dry	Daylight	Cloudy/ Cloudy	NORTH BEACON STREET / MARKET STREET	NORTH BEACON STREET / MARKET STREET	V1:Not reported / V2:Not reported / V3:Not reported	V1: Not reported / V2: Collision with motor vehicle in traffic / V3: Not reported	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Not reported	V1: Passenger car / V2:Passenger car / V3:Unknown heavy truck, cannot classify		228910.1562	900687.5625
3452206	BOSTON (BRIGHTON)	2013	6/10/2013	10:15 AM	Property damage only (none injured)	2	0	0	Angle	Dry	Daylight	Clear	NORTH BEACON STREET / MARKET STREET	NORTH BEACON STREET / MARKET STREET	V1:Northbound / V2:Westbound	V1: Collision with impact attenuator/crash cushion / V2: Collision with impact attenuator/crash cushion	V1: Travelling straight ahead / V2:Travelling straight ahead	V1: Passenger car / V2:Passenger car		228910.1562	900687.5625
3600334	BOSTON (BRIGHTON)	2013	9/13/2013	7:00 AM	Not Reported	2	0	0	Angle	Wet	Daylight	Rain	MARKET STREET / NORTH BEACON STREET	MARKET STREET / NORTH BEACON STREET	V1:Northbound / V2:Southbound	V1: Not reported / V2: Not reported	V1: Not reported / V2:Not reported	V1: Unknown vehicle configuration / V2:Unknown vehicle configuration		228910.1562	900687.5625
3847532	BOSTON	2014	5/14/2014	8:45 AM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	Dry	Daylight	Clear/Clear	MARKET STREET	NORTH BEACON STREET	V1:8 / V2:8	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Changing lanes	V1:(Passenger car) V2:(Passenger car)			

Crash Data
Allston Yards

Crash ID	Town	Year	Crash Date	Crash Time	Crash Severity	Total Vehicles	Total Injured	Total Fatals	Collision manner	Road Surface	Lighting	Weather	Street	Intersection	Vehicles Travel Directions	Most Harmful Events	Vehicle Action Prior to Crash	Vehicle Configuration	Non Motorist Type	X Coordinate	Y Coordinate
MARKET STREET AT FANEUIL STREET																					
2754589	BOSTON	2011	8/5/2011	8:50 AM	Non-fatal injury	1	1	0	Angle	Dry	Daylight	Clear	MARKET STREET / SAYBROOK STREET		V1:N	V1:(Collision with cyclist (bicycle, tricycle, unicycle, pedal car))	V1: Turning right	V1:(Passenger car)	P2:Pedalcyclist (bicycle, tricycle, unicycle, pedal car)		
2754590	BOSTON	2011	8/5/2011	2:36 PM	Non-fatal injury	2	1	0	Rear-end	Dry	Daylight	Clear	MARKET STREET		V1:8 / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Passenger car) V2:(Passenger car)			
2798732	BOSTON	2011	9/23/2011	6:30 PM	Property damage only (none injured)	2	0	0	Angle	Wet	Dark - lighted roadway	Rain	MARKET STREET / FANEUIL STREET		V1:S / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Turning left	V1:(Passenger car) V2:(Passenger car)			
3322528	BOSTON	2012	10/23/2012	4:04 PM	Not Reported	2	0	0	Angle	Dry	Daylight	Clear	MARKET STREET / SAYBROOK STREET		V1:N / V2:N	V1:() V2:()	V1: Turning right / V2:Turning right	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(MOPED)			
3424278	BOSTON	2013	4/29/2013	12:50 PM	Property damage only (none injured)	1	0	0	Unknown	Dry	Daylight	Clear/Clear	MARKET STREET / SAYBROOK STREET		V1:8	V1:(Collision with motor vehicle in traffic)	V1: Turning left	V1:(Passenger car)			
MARKET STREET AT ARLINGTON STREET / SPARHAWK STREET																					
2617108	BOSTON	2010	6/26/2010	6:05 AM	Non-fatal injury	2	1	0	Sideswipe, opposite direction	Dry	Daylight	Clear	MARKET STREET / ARLINGTON STREET		V1:N / V2:W	V1:(Overturn/rollover) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)			
2675314	BOSTON	2010	12/25/2010	11:30 PM	Property damage only (none injured)	2	0	0	Angle	Dry	Dark - lighted roadway	Cloudy	MARKET STREET / ARLINGTON STREET /		V1:S / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)			
2731839	BOSTON	2011	6/5/2011	7:45 AM	Unknown	2	0	0	Angle	Dry	Daylight	Clear	MARKET STREET / ARLINGTON STREET		V1:E / V2:N	V1:() V2:()	V1: Not reported / V2:Not reported	V1:() V2:()			
3249437	BOSTON	2012	7/7/2012	1:17 AM	Non-fatal injury	2	1	0	Angle	Dry	Dark - lighted roadway	Clear	ARLINGTON STREET / MARKET STREET / SPARHAWK STREET		V1:8 / V2:8	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Passenger car) V2:(Passenger car)			
3715646	BOSTON	2013	10/17/2013	6:10 PM	Non-fatal injury	1	1	0	Head-on	Dry	Dawn	Clear/Clear	MARKET STREET / ARLINGTON STREET		V1:8	V1:(Collision with pedestrian)	V1: Travelling straight ahead	V1:(Passenger car)	P2:Pedalcyclist (bicycle, tricycle, unicycle, pedal car)		
3737382	BOSTON	2013	12/21/2013	7:55 PM	Not Reported	2	0	0	Sideswipe, opposite direction	Dry	Dark - lighted roadway	Clear	ARLINGTON STREET / MARKET STREET		V1:8 / V2:8	V1:() V2:()	V1: Not reported / V2:Not reported	V1:(Passenger car) V2:(Passenger car)			
NORTH BEACON STREET AT LIFE STREET / ETNA STREET																					
2763625	BOSTON	2010	5/29/2010	9:05 AM	Non-fatal injury	2	2	0	Not reported	Dry	Daylight	Clear	NORTH BEACON STREET		V1:E / V2:N	V1:() V2:()	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:() V2:()			
2617121	BOSTON	2010	7/6/2010	1:30 PM	Not Reported	4	0	0	Angle	Dry	Daylight	Clear	NORTH BEACON STREET Rte 145 N / ETNA STREET	NORTH BEACON STREET Rte 145 N / ETNA STREET	V1:Southbound / V2:Eastbound / V3:Not reported / V4:Not reported	V1: Not reported / V2: Not reported / V3: Not reported / V4: Not reported	V1: Not reported / V2:Not reported / V3:Not reported / V4:Not reported	V1: Not reported / V2:Not reported / V3:Not reported / V4:Not reported		229138.3127	900609.6873
3420650	BOSTON	2013	4/1/2013	10:11 AM	Unknown	2	0	0	Rear-end	Dry	Daylight	Clear/Clear	NORTH BEACON STREET		V1:N / V2:N	V1:(Unknown) V2:(Unknown)	V1: Unknown / V2:Unknown	V1:(Bus (seats for more than 15 people, including driver)) V2:(Passenger car)			
3526099	BOSTON (BRIGHTON)	2013	6/29/2013	2:05 PM	Not Reported	1	0	0	Single vehicle crash	Dry	Daylight	Clear/Other			V1:Not reported	V1: Collision with pedestrian	V1: Slowing or stopped in traffic	V1: Passenger car		229135.0822	900610.7709
NORTH BEACON STREET AT MURDOCK STREET																					
3920641	BOSTON	2014	7/25/2014	5:40 AM	Property damage only (none injured)	1	0	0	Single vehicle crash	Dry	Daylight	Clear	NORTH BEACON STREET / MURDOCK STREET /		V1:8	V1:()	V1: Not reported	V1:(Passenger car)	P2:Pedalcyclist (bicycle, tricycle, unicycle, pedal car)		
NORTH BEACON STREET AT ARTHUR STREET																					
2900738	BOSTON (BRIGHTON)	2011	11/9/2011	2:35 PM	Non-fatal injury	1	1	0	Angle	Dry	Daylight	Clear	NORTH BEACON STREET / ARTHUR STREET	NORTH BEACON STREET / ARTHUR STREET	V1:Northbound	V1: Collision with cyclist (bicycle, tricycle, unicycle, pedal car)	V1: Slowing or stopped in traffic	V1: Passenger car	P3:Pedalcyclist (bicycle, tricycle, unicycle, pedal car)	229446.681	900505.9458
3249444	BOSTON (BRIGHTON)	2012	7/11/2012	1:50 PM	Not Reported	2	0	0	Angle	Dry	Daylight	Clear/Clear			V1:Not reported / V2:Not reported	V1: Collision with impact attenuator/crash cushion / V2: Collision with impact	V1: Turning left / V2:Travelling straight ahead	V1: Passenger car / V2:Passenger car		229428.2331	900511.986
NORTH BEACON STREET AT SAUNDERS STREET																					
3321659	BOSTON (BRIGHTON)	2012	9/27/2012	3:30 PM	Not Reported	1	0	0	Single vehicle crash	Dry	Daylight	Clear	SAUNDERS STREET / NORTH BEACON STREET	SAUNDERS STREET / NORTH BEACON STREET	V1:Not reported	V1: Not reported	V1: Not reported	V1: Passenger car		229522.1877	900480.3126
NORTH BEACON STREET AT GORDON STREET																					
2648228	BOSTON	2010	9/29/2010	3:38 PM	Not Reported	2	0	0	Angle	Dry	Daylight	Clear	NORTH BEACON STREET		V1:W / V2:N	V1:() V2:()	V1: Not reported / V2:Not reported	V1:() V2:()			

Crash Data
Allston Yards

Crash ID	Town	Year	Crash Date	Crash Time	Crash Severity	Total Vehicles	Total Injured	Total Fatals	Collision manner	Road Surface	Lighting	Weather	Street	Intersection	Vehicles Travel Directions	Most Harmful Events	Vehicle Action Prior to Crash	Vehicle Configuration	Non Motorist Type	X Coordinate	Y Coordinate
NORTH BEACON STREET AT EVERETT STREET																					
2731551	BOSTON (BRIGHTON)	2010	11/3/2010	7:00 PM	Property damage only (none injured)	2	0	0		Dry	Dark - lighted roadway	Cloudy			V1:Not reported / V2:Southbound	V1: Not reported / V2: Not reported	V1: Slowing or stopped in traffic / V2:Turning left	V1: Not reported / V2:Not reported		229736.3906	900428.8125
2716567	BOSTON	2011	3/25/2011	3:11 AM	Non-fatal injury	2	1	0	Head-on	Dry	Dark - lighted roadway	Clear	NORTH BEACON STREET		V1:E / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:() V2:()			
3281259	BOSTON (BRIGHTON)	2012	9/11/2012	8:05 AM	Property damage only (none injured)	1	0	0	Not reported	Not reported	Not reported	Not Reported	EVERETT STREET / NORTH BEACON STREET	EVERETT STREET / NORTH BEACON STREET	V1:Not reported	V1: Collision with cyclist (bicycle, tricycle, unicycle, pedal car)	V1: Travelling straight ahead	V1: Passenger car	P2:Pedalcyclist (bicycle, tricycle, unicycle, pedal car)	229736.3906	900428.8125
3430769	BOSTON (BRIGHTON)	2013	5/12/2013	2:38 PM	Not Reported	1	0	0	Single vehicle crash	Dry	Daylight	Clear/Other	NORTH BEACON STREET / EVERETT STREET	NORTH BEACON STREET /	V1:Not reported	V1: Collision with cyclist (bicycle, tricycle, unicycle, pedal car)	V1: Turning left	V1: Passenger car		229736.3906	900428.8125
CAMBRIDGE STREET AT NORTH BEACON STREET / BRIGHTON AVENUE																					
2752962	BOSTON	2010	5/17/2010	11:00 AM	Not Reported	2	0	0	Sideswipe, same direction	Dry	Daylight	Clear	CAMBRIDGE STREET / NORTH BEACON STREET		V1:N / V2:8	V1:() V2:()	V1: Turning right / V2:Not reported	V1:() V2:()			
2614500	BOSTON	2010	6/10/2010	10:58 PM	Non-fatal injury	1	1	0	Single vehicle crash	Wet	Dark - lighted roadway	Cloudy	CAMBRIDGE STREET / NORTH BEACON STREET		V1:W	V1:(Collision with pedestrian)	V1: Travelling straight ahead	V1:(Passenger car)	P2:Pedestrian		
2722887	BOSTON	2010	11/8/2010	6:10 AM	Non-fatal injury	1	1	0	Unknown	Wet	Dark - lighted roadway	Rain	CAMBRIDGE STREET / BRIGHTON AVENUE		V1:S	V1:()	V1: Slowing or stopped in traffic	V1:()	P2:Pedalcyclist (bicycle, tricycle, unicycle, pedal car)		
2678892	BOSTON	2010	12/16/2010	2:23 PM	Property damage only (none injured)	2	0	0	Not reported	Dry	Daylight	Clear	BRIGHTON AVENUE		V1:N / V2:N	V1:(Collision with motor vehicle in traffic) V2:(Collision with parked motor vehicle)	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)			
2705424	BOSTON	2011	3/9/2011	7:31 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	Dry	Dark - lighted roadway	Cloudy/ Cloudy	CAMBRIDGE STREET	NORTH BEACON STREET	V1:S / V2:8	V1:(Collision with motor vehicle in traffic) V2:(Collision with parked motor vehicle)	V1: Travelling straight ahead / V2:Parked	V1:(Bus (seats for more than 15 people, including driver)) V2:(Passenger car)			
2894941	BOSTON	2011	7/10/2011	1:55 PM	Property damage only (none injured)	1	0	0	Single vehicle crash	Dry	Daylight	Clear	CAMBRIDGE STREET / BRIGHTON AVENUE	NORTH BEACON STREET	V1:E	V1:(Collision with light pole or other post/support)	V1: Not reported	V1:(Passenger car)			
2966731	BOSTON	2011	11/17/2011	4:35 PM	Non-fatal injury	2	1	0	Angle	Wet	Dark - lighted roadway	Rain	BRIGHTON AVENUE / CAMBRIDGE STREET		V1:W / V2:W	V1:(Collision with motor vehicle in traffic) V2:()	V1: Turning left / V2:Travelling straight ahead	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)			
3229806	BOSTON	2012	7/1/2012	6:43 PM	Non-fatal injury	2	2	0	Sideswipe, same direction	Dry	Daylight	Clear	BRIGHTON AVENUE		V1:8 / V2:8	V1:() V2:()	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Bus (seats for more than 15 people, including driver)) V2:(Passenger car)			
3253604	BOSTON	2012	7/19/2012	1:39 PM	Non-fatal injury	1	1	0	Not reported	Dry	Daylight	Clear	BRIGHTON AVENUE /		V1:8	V1:(Collision with pedestrian)	V1: Travelling straight ahead	V1:(Passenger car)	P2:Pedestrian		
3275359	BOSTON	2012	9/1/2012	7:41 AM	Property damage only (none injured)	1	0	0	Single vehicle crash	Dry	Daylight	Clear/ Unknown	CAMBRIDGE STREET / NORTH BEACON STREET		V1:W	V1:()	V1: Slowing or stopped in traffic	V1:(Passenger car)	P2:Pedalcyclist (bicycle, tricycle, unicycle, pedal car)		
3344815	BOSTON	2012	12/1/2012	11:22 AM	Not Reported	1	0	0	Rear-end	Wet	Daylight	Blowing sand, snow	NORTH BEACON STREET		V1:8	V1:(Collision with unknown fixed object)	V1: Turning left	V1:(Passenger car)	P2:Other non-motorist (wheelchair, etc.)		
3385041	BOSTON	2013	2/26/2013	1:00 PM	Property damage only (none injured)	2	0	0	Head-on	Dry	Daylight	Clear/ Unknown	NORTH BEACON STREET		V1:8 / V2:8	V1:(Collision with motor vehicle in traffic) V2:()	V1: Travelling straight ahead / V2:Entering traffic lane	V1:(Passenger car) V2:(Passenger car)			
3404792	BOSTON	2013	4/12/2013	2:11 AM	Not Reported	1	0	0	Single vehicle crash	Wet	Dark - lighted roadway	Rain/Rain	NORTH BEACON STREET / CAMBRIDGE STREET		V1:W	V1:(Collision with utility pole)	V1: Not reported	V1:(Passenger car)			
3659855	BOSTON	2013	10/15/2013	4:27 PM	Non-fatal injury	4	3	0	Not reported	Not reported	Not reported	Not Reported	BRIGHTON AVENUE		V1:8 / V2:8 / V3:8 / V4:8	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic) V3:(Collision with motor vehicle in traffic) V4:(Collision with motor vehicle in traffic)	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Slowing or stopped in traffic / V4:Travelling straight ahead	V1:(Passenger car) V2:(Passenger car) V3:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V4:(Passenger car)			
3923320	BOSTON	2014	6/20/2014	4:35 AM	Non-fatal injury	1	1	0	Single vehicle crash	Dry	Daylight	Clear	BRIGHTON AVENUE		V1:E	V1:(Collision with cyclist (bicycle, tricycle, unicycle, pedal car))	V1: Turning right	V1:(Passenger car)	P3:Pedalcyclist (bicycle, tricycle, unicycle, pedal car)		
CAMBRIDGE STREET AT HANO STREET																					
2586874	BOSTON	2010	3/24/2010	2:24 PM	Non-fatal injury	2	4	0	Rear-end	Dry	Daylight	Clear	CAMBRIDGE STREET / HANO STREET		V1:N / V2:N	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)			
2748119	BOSTON	2011	7/28/2011	6:46 PM	Property damage only (none injured)	1	0	0	Angle	Dry	Daylight	Clear/Clear	CAMBRIDGE STREET / HANO STREET		V1:W	V1:(Collision with pedestrian)	V1: Turning right	V1:(Passenger car)	P2:Pedalcyclist (bicycle, tricycle, unicycle, pedal car)		
3243835	BOSTON	2012	6/14/2012	9:00 AM	Property damage only (none injured)	2	0	0	Angle	Dry	Daylight	Cloudy	CAMBRIDGE STREET		V1:N / V2:W	V1:(Collision with parked motor vehicle) V2:(Collision with pedestrian)	V1: Parked / V2:Turning right	V1:(Passenger car) V2:(Unknown heavy truck, cannot classify)			
3290309	BOSTON	2012	9/27/2012	9:55 PM	Non-fatal injury	2	1	0	Rear-end	Dry	Dark - lighted roadway	Clear	CAMBRIDGE STREET	HANO STREET	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Passenger car) V2:(Passenger car)			
3430768	BOSTON	2013	5/9/2013	6:48 PM	Fatal injury	1	0	1	Single vehicle crash	Wet	Dawn	Cloudy/Rain	CAMBRIDGE STREET		V1:N	V1:(Collision with pedestrian)	V1: Travelling straight ahead	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)			

Crash Data
Allston Yards

Crash ID	Town	Year	Crash Date	Crash Time	Crash Severity	Total Vehicles	Total Injured	Total Fatals	Collision manner	Road Surface	Lighting	Weather	Street	Intersection	Vehicles Travel Directions	Most Harmful Events	Vehicle Action Prior to Crash	Vehicle Configuration	Non Motorist Type	X Coordinate	Y Coordinate
CAMBRIDGE STREET AT DENBY STREET																					
2684714	BOSTON	2010	12/31/2010	3:39 PM	Not Reported	2	0	0	Angle	Wet	Dusk	Other/Clear	CAMBRIDGE STREET		V1:W / V2:N	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Entering traffic lane	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)			
3826252	BOSTON	2014	2/3/2014	11:52 AM	Not Reported	2	0	0	Not reported	Snow	Daylight	Snow	CAMBRIDGE STREET		V1:8 / V2:8	V1:() V2:()	V1: Not reported / V2:Not reported	V1:(Passenger car) V2:(Passenger car)			
CAMBRIDGE STREET AT HARVARD AVENUE / FRANKLIN STREET																					
2645583	BOSTON	2010	5/29/2010	11:30 AM	Non-fatal injury	2	1	0	Sideswipe, same direction	Dry	Daylight	Clear	HARVARD AVENUE / CAMBRIDGE STREET		V1:S / V2:8	V1:(Collision with moped) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Passenger car) V2:(MOPED)			
2645609	BOSTON	2010	9/19/2010	2:30 PM	Not Reported	2	0	0	Angle	Water (standing, moving)	Daylight	Clear/ Cloudy	HARVARD AVENUE / CAMBRIDGE STREET		V1:8 / V2:8	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Turning left / V2:Travelling straight ahead	V1:(Passenger car) V2:(Motorcycle)			
2665619	BOSTON	2010	11/17/2010	2:20 PM	Non-fatal injury	2	4	0	Rear-end	Dry	Daylight	Cloudy/Rain	CAMBRIDGE STREET / HARVARD STREET		V1:W / V2:W	V1:() V2:()	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Passenger car) V2:(Bus (seats for more than 15 people, including driver))			
3715634	BOSTON	2013	11/6/2013	10:20 PM	Property damage only (none injured)	2	0	0	Angle	Dry	Dark - lighted roadway	Cloudy	CAMBRIDGE STREET / HARVARD AVENUE		V1:8 / V2:8	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Turning right / V2:Turning right	V1:(Passenger car) V2:(Passenger car)			
3983049	BOSTON	2014	11/26/2014	11:46 AM	Non-fatal injury	2	1	0	Rear-end	Ice	Daylight	Sleet, hail (freezing	CAMBRIDGE STREET	LINDEN STREET	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:(Passenger car) V2:(Passenger car)			
4022123	BOSTON	2014	12/11/2014	7:20 AM	Non-fatal injury	2	1	0	Angle	Wet	Daylight	Rain	CAMBRIDGE STREET / HARVARD AVENUE		V1:8 / V2:8	V1:() V2:()	V1: Not reported / V2:Not reported	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Unknown heavy truck, cannot classify)			
WESTERN AVENUE AT EVERETT STREET																					
2565011	BOSTON	2010	1/5/2010	11:00 AM	Not Reported	2	0	0	Rear-end	Wet	Daylight	Snow/Other	WESTERN AVENUE / EVERETT STREET		V1:8 / V2:8	V1:() V2:(Collision with motor vehicle in traffic)	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)		230039.6252	901472.5
3253611	BOSTON	2012	7/19/2012	9:19 AM	Non-fatal injury	2	1	0	Angle	Dry	Daylight	Clear	WESTERN AVENUE / EVERETT STREET		V1:N / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		230039.6252	901472.5
3393229	BOSTON	2013	2/20/2013	1:24 PM	Unknown	1	0	0	Single vehicle crash	Dry	Daylight	Cloudy	WESTERN AVENUE / EVERETT STREET		V1:8	V1:(Collision with pedestrian)	V1: Turning left	V1:(Passenger car)	P2:Pedestrian	230039.6252	901472.5
3430771	BOSTON	2013	5/16/2013	3:23 PM	Not Reported	2	0	0	Head-on	Dry	Daylight	Clear	WESTERN AVENUE / EVERETT STREET		V1:E / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Turning left / V2:Travelling straight ahead	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		230039.6252	901472.5
3915031	BOSTON	2014	8/10/2014	9:10 AM	Non-fatal injury	2	1	0	Angle	Dry	Daylight	Clear/Clear	WESTERN AVENUE / EVERETT STREET		V1:S / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		230039.6252	901472.5
GUEST STREET AT LIFE STREET																					
2643144	BOSTON (BRIGHTON)	2010	8/10/2010	4:30 PM	Non-fatal injury	2	1	0	Rear-end	Dry	Daylight	Clear/Clear			V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1: Passenger car / V2:Passenger car		229178.477	900791.292
3250319	BOSTON (BRIGHTON)	2012	8/31/2012	9:45 AM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	Dry	Daylight	Clear	GUEST STREET / LIFE STREET	GUEST STREET / LIFE STREET	V1:Eastbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Travelling straight ahead / V2:Travelling straight ahead	V1: Unknown heavy truck, cannot classify / V2:Bus (seats for more than 15 people, including driver)		229187.3438	900789.6251

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : Sept. 2016

DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

0.53 | 0.70

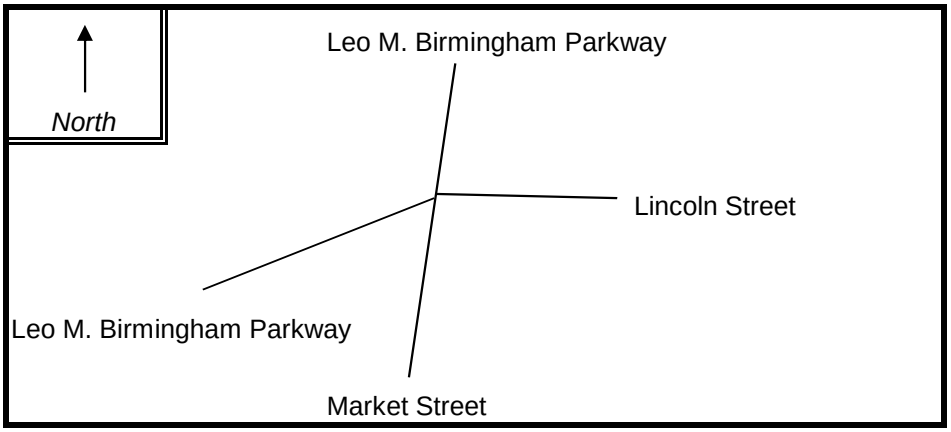
~ INTERSECTION DATA ~

MAJOR STREET : Leo M. Birmingham Parkway

MINOR STREET(S) : Market Street

Lincoln Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	1,017	1,051	399	252		**2,719**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **30,211**

TOTAL # OF CRASHES : 15

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **3.00**

CRASH RATE CALCULATION : **0.27**

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : June 2016

DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

0.53 | 0.70

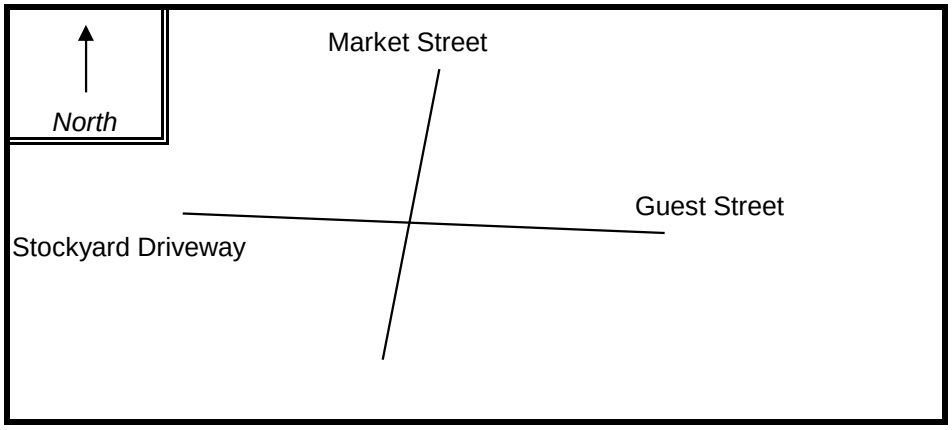
~ INTERSECTION DATA ~

MAJOR STREET : Market Street

MINOR STREET(S) : Guest Street

Stockyard Driveway

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	605	950	15	655		2,225

" K " FACTOR : **0.090** | INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **24,722**

TOTAL # OF CRASHES : 2 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **0.40**

CRASH RATE CALCULATION : 0.04

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : June 2016

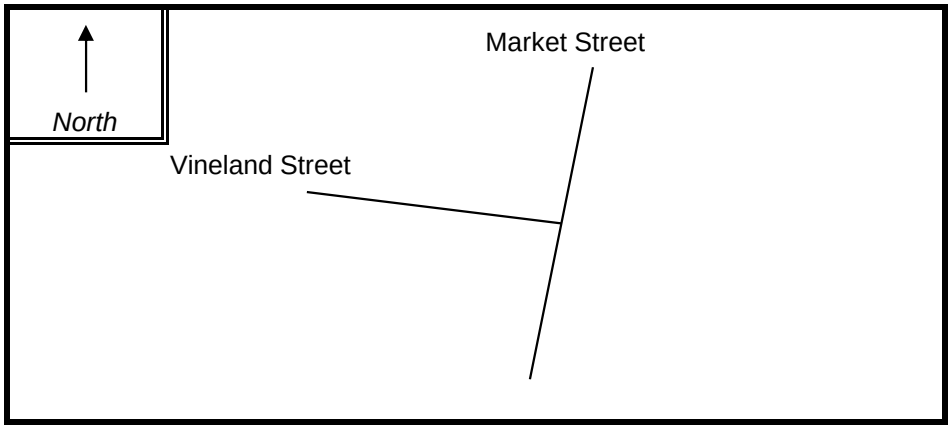
DISTRICT : 6 | UNSIGNALIZED : X (0.53) | SIGNALIZED : (0.70)

~ INTERSECTION DATA ~

MAJOR STREET : Market Street

MINOR STREET(S) : Vineland Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	600	925	20			**1,545**

" K " FACTOR : **0.090** | INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **17,167**

TOTAL # OF CRASHES : 1 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **0.20**

CRASH RATE CALCULATION : 0.03

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : June 2016

DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

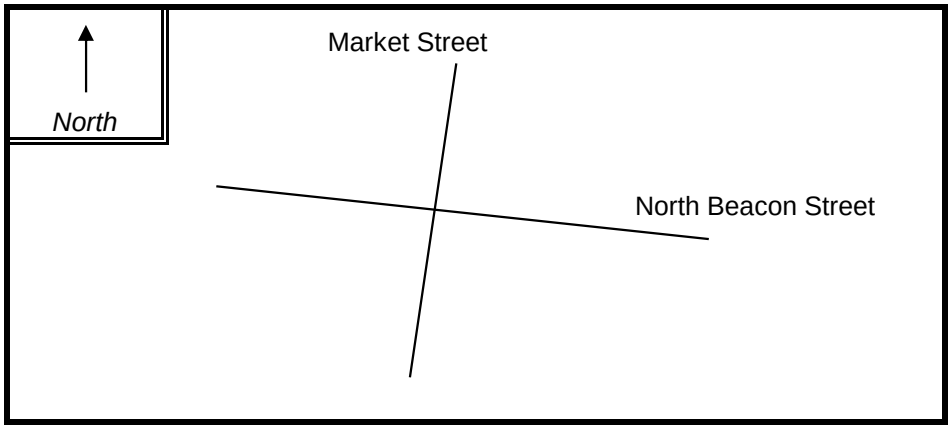
0.53 | 0.70

~ INTERSECTION DATA ~

MAJOR STREET : North Beacon Street

MINOR STREET(S) : Market Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	595	940	435	605		**2,575**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **28,611**

TOTAL # OF CRASHES : 7

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **1.40**

CRASH RATE CALCULATION : **0.13**

RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : Sept. 2016

DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

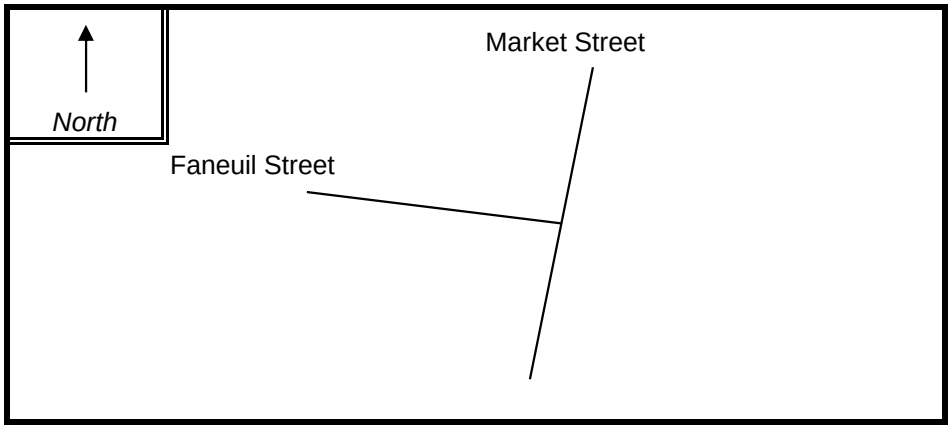
0.53 | 0.70

~ INTERSECTION DATA ~

MAJOR STREET : Market Street

MINOR STREET(S) : Faneuil Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	557	938	216			1,711

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **19,011**

TOTAL # OF CRASHES : 5

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **1.00**

CRASH RATE CALCULATION : 0.14

RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : Sept. 2016

DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

0.53 | 0.70

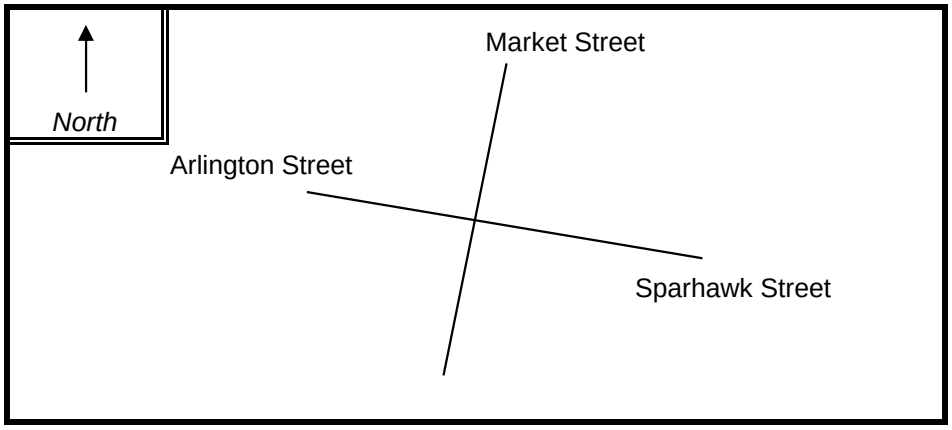
~ INTERSECTION DATA ~

MAJOR STREET : Market Street

MINOR STREET(S) : Arlington Street

Sparhawk Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	378	607	431	375		**1,791**

" K " FACTOR : **0.090** | INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **19,900**

TOTAL # OF CRASHES : 6 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **1.20**

CRASH RATE CALCULATION : **0.17**

RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : June 2016

DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

0.53 | 0.70

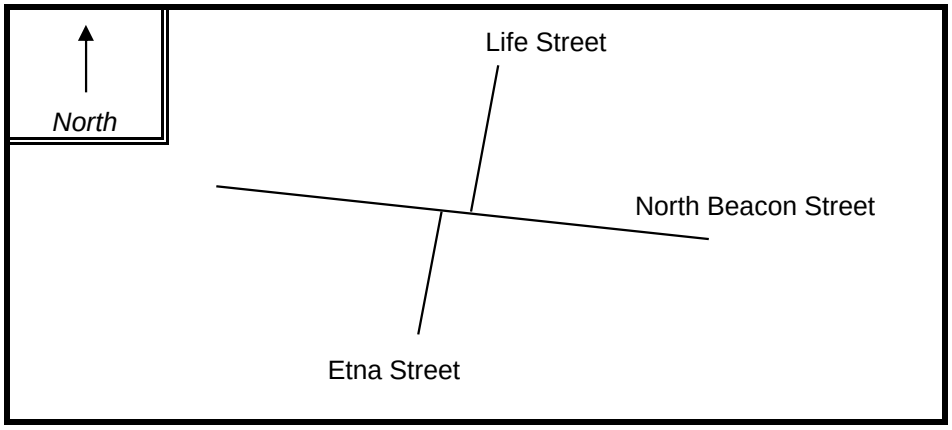
~ INTERSECTION DATA ~

MAJOR STREET : North Beacon Street

MINOR STREET(S) : Life Street

Etna Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :		125	635	600		**1,360**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **15,111**

TOTAL # OF CRASHES : 4

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **0.80**

CRASH RATE CALCULATION : **0.15**

RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : June 2016

DISTRICT : 6 | UNSIGNALIZED : X (0.53) | SIGNALIZED : (0.70)

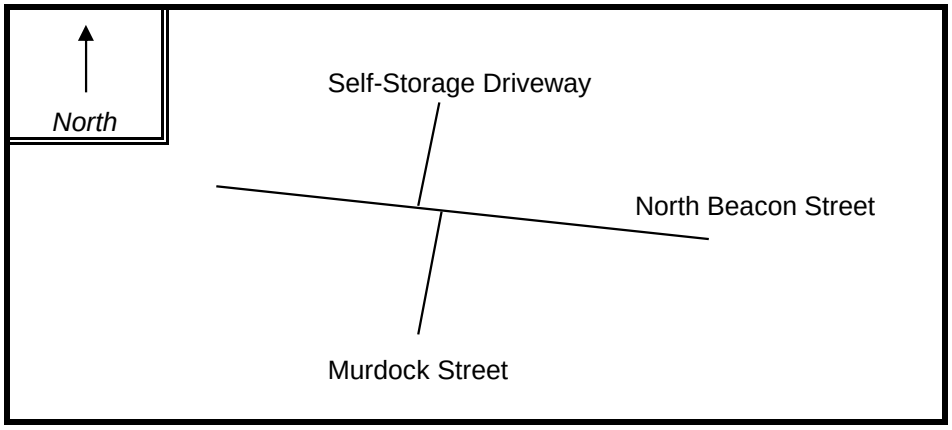
~ INTERSECTION DATA ~

MAJOR STREET : North Beacon Street

MINOR STREET(S) : Murdock Street

Self-Storage Driveway

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :		10	680	730		1,420

" K " FACTOR : **0.090** | INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **15,778**

TOTAL # OF CRASHES : 1 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **0.20**

CRASH RATE CALCULATION : 0.03

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : June 2016

DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

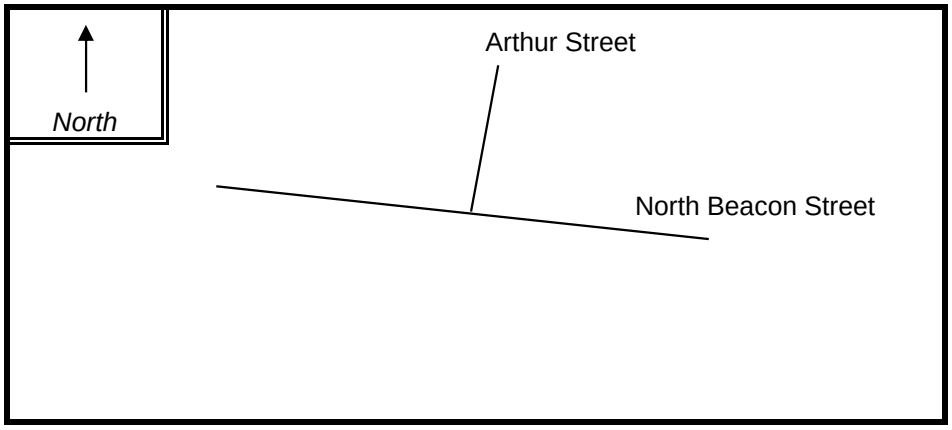
0.53 | 0.70

~ INTERSECTION DATA ~

MAJOR STREET : North Beacon Street

MINOR STREET(S) : Arthur Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :		335	670	535		**1,540**

" K " FACTOR : **0.090** | INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **17,111**

TOTAL # OF CRASHES : 2 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **0.40**

CRASH RATE CALCULATION : 0.06

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : June 2016

DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

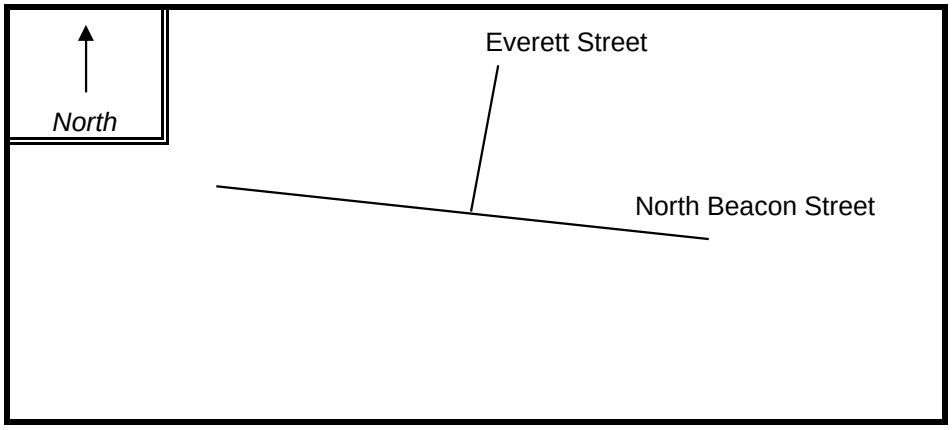
0.53 | 0.70

~ INTERSECTION DATA ~

MAJOR STREET : North Beacon Street

MINOR STREET(S) : Everett Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :		380	640	715		**1,735**

" K " FACTOR : **0.090** | INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **19,278**

TOTAL # OF CRASHES : 4 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **0.80**

CRASH RATE CALCULATION : 0.11

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : Sept. 2016

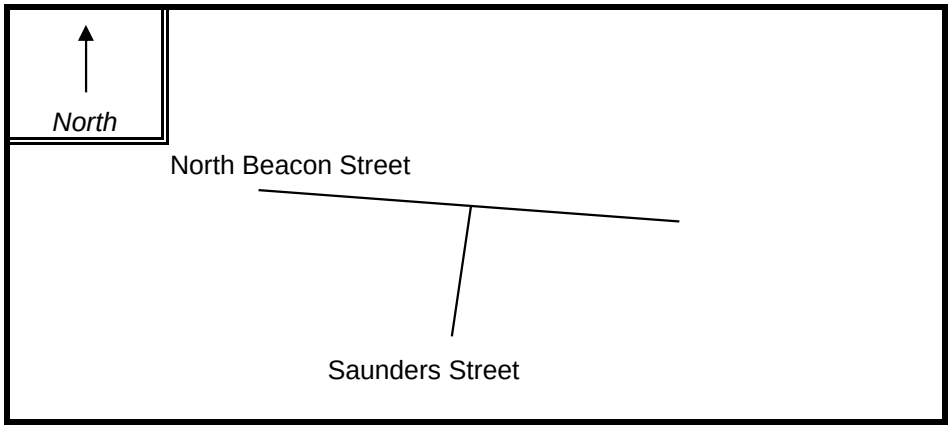
DISTRICT : 6 | UNSIGNALIZED : X (0.53) | SIGNALIZED : (0.70)

~ INTERSECTION DATA ~

MAJOR STREET : North Beacon Street

MINOR STREET(S) : Saunders Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	36		675	534		1,245

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **13,833**

TOTAL # OF CRASHES : 1

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **0.20**

CRASH RATE CALCULATION : 0.04

RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : Sept. 2016

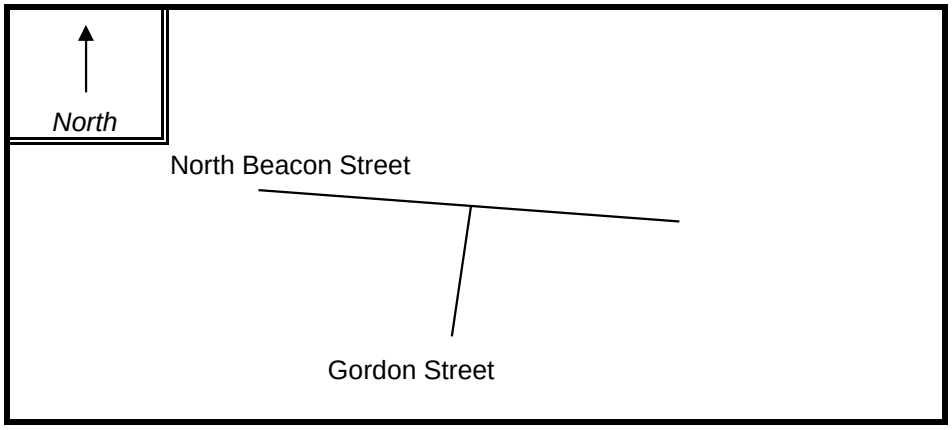
DISTRICT : 6 | UNSIGNALIZED : X (0.53) | SIGNALIZED : (0.70)

~ INTERSECTION DATA ~

MAJOR STREET : North Beacon Street

MINOR STREET(S) : Gordon Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	164		704	617		**1,485**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **16,500**

TOTAL # OF CRASHES : 1

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **0.20**

CRASH RATE CALCULATION : 0.03

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : Sept. 2016

DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

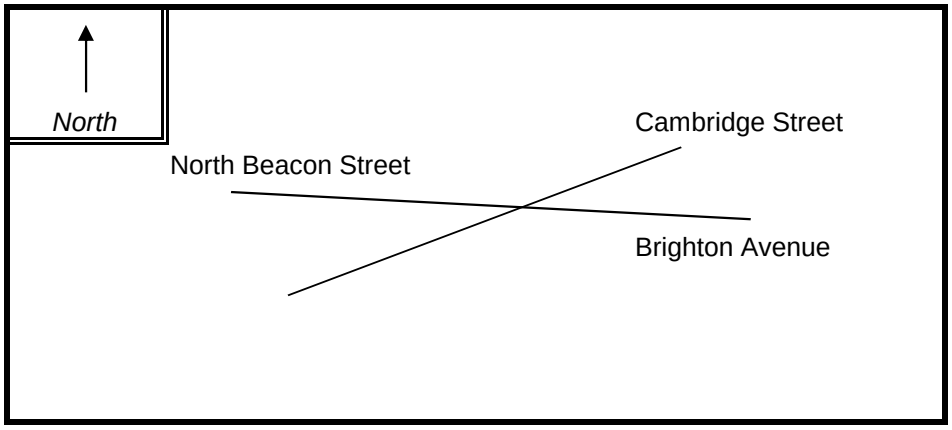
0.53 | 0.70

~ INTERSECTION DATA ~

MAJOR STREET : North Beacon Street / Brighton Avenue

MINOR STREET(S) : Cambridge Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	464	625	768	681		**2,538**

" K " FACTOR : **0.090** | INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **28,200**

TOTAL # OF CRASHES : 15 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **3.00**

CRASH RATE CALCULATION : 0.29 RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : Sept. 2016

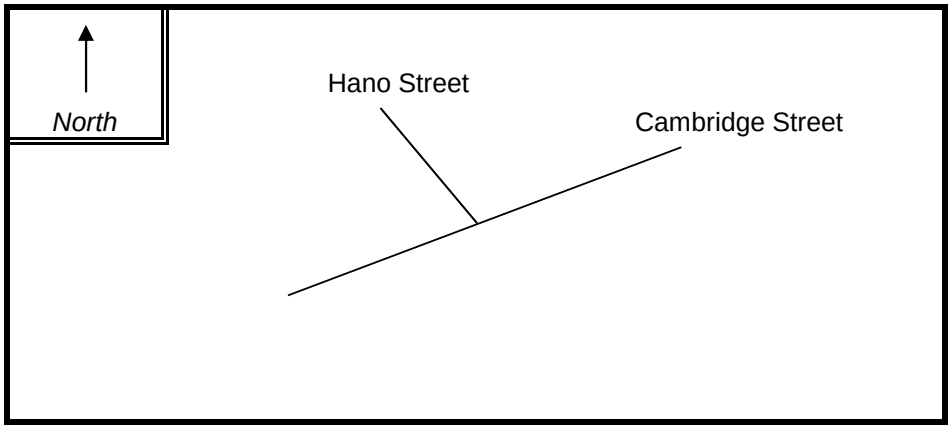
DISTRICT : 6 | UNSIGNALIZED : X (0.53) | SIGNALIZED : (0.70)

~ INTERSECTION DATA ~

MAJOR STREET : Cambridge Street

MINOR STREET(S) : Hano Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	21		485	614		**1,120**

" K " FACTOR : **0.090** | INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **12,444**

TOTAL # OF CRASHES : 5 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **1.00**

CRASH RATE CALCULATION : 0.22

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : Sept. 2016

DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

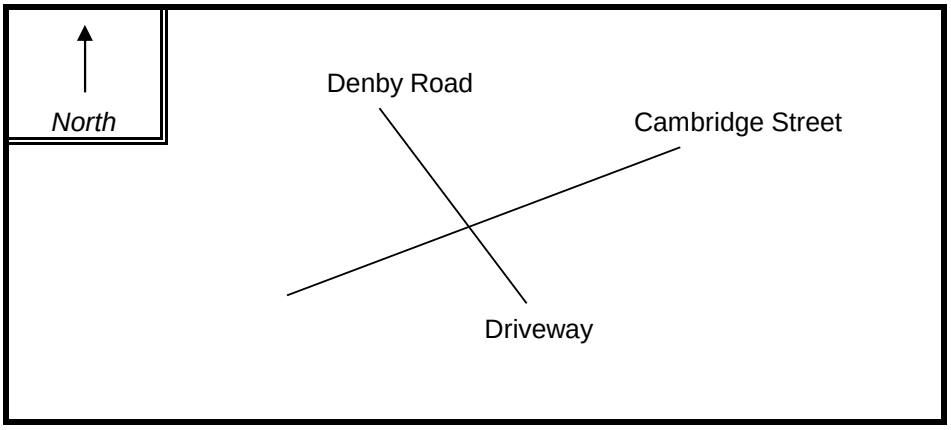
0.53 | 0.70

~ INTERSECTION DATA ~

MAJOR STREET : Cambridge Street

MINOR STREET(S) : Denby Road

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	1	15	630	456		**1,102**

" K " FACTOR : **0.090** | INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **12,244**

TOTAL # OF CRASHES : 2 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **0.40**

CRASH RATE CALCULATION : 0.09

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : Sept. 2016

DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

0.53 | 0.70

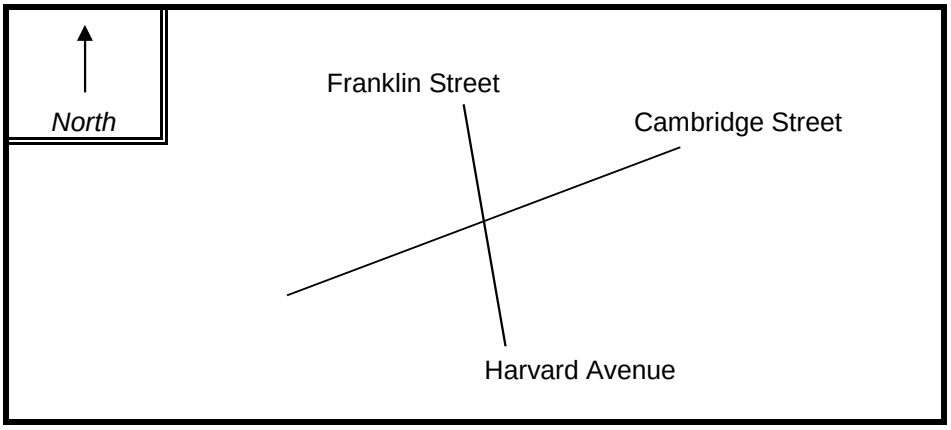
~ INTERSECTION DATA ~

MAJOR STREET : Cambridge Street

MINOR STREET(S) : Harvard Avenue

Franklin Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	386	217	979	441		**2,023**

" K " FACTOR : **0.090** | INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **22,478**

TOTAL # OF CRASHES : 6 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **1.20**

CRASH RATE CALCULATION : 0.15

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : March 2017

DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

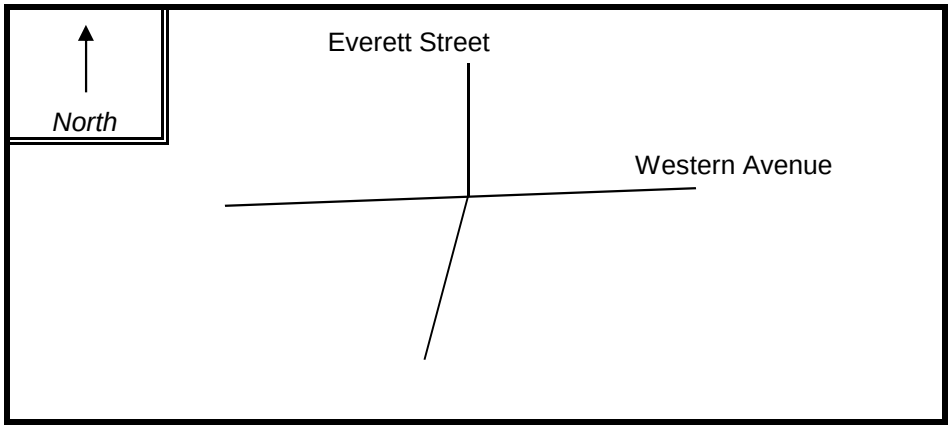
0.53 | 0.70

~ INTERSECTION DATA ~

MAJOR STREET : Western Avenue

MINOR STREET(S) : Everett Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	359	301	567	724		**1,951**

" K " FACTOR : **0.090** | INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **21,678**

TOTAL # OF CRASHES : 5 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **1.00**

CRASH RATE CALCULATION : 0.13

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : June 2016

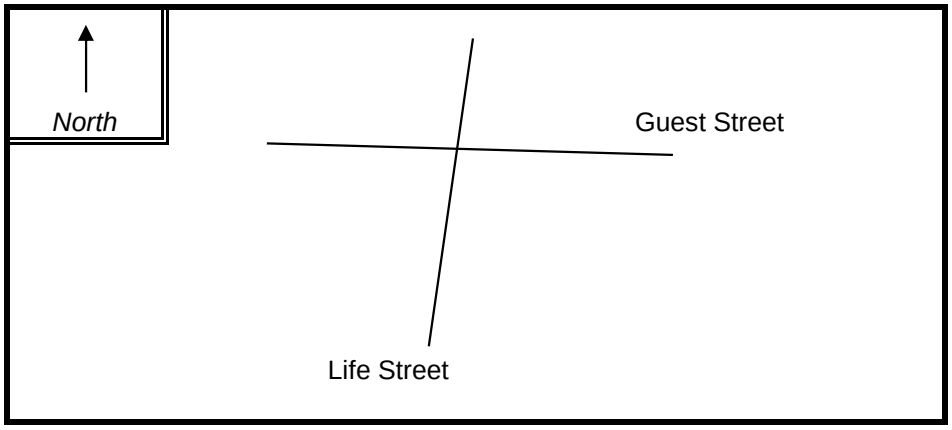
DISTRICT : 6 | UNSIGNALIZED : X (0.53) | SIGNALIZED : (0.70)

~ INTERSECTION DATA ~

MAJOR STREET : Guest Street

MINOR STREET(S) : Life Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	15	10	200	315		**540**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **6,000**

TOTAL # OF CRASHES : 2

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **0.40**

CRASH RATE CALCULATION : 0.18

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2010-2014)

Project Title & Date:

Trip Generation Worksheets

Increase in Site Trips

	Total	Pass-by	New
Weekday Daily Residential - Apts			
In			
Out			
Weekday Daily Office			
In			
Out			
Weekday Daily Supermarket			
In			
Out			
Weekday Daily Retail			
In			
Out			
Total Weekday Daily	**4,635**	**173**	**4,462**
In	**2,317**	**87**	2,231
Out	**2,317**	**87**	2,231
AM Residential - Apts	**179**	-	179
In	25	-	25
Out	154	-	154
AM Office	**237**		237
In	206		206
Out	31		31
~~AM Supermarket~~***Retail***	**12**	**4**	**8**
In	8	2	6
Out	4	2	2
Total AM Peak Hour	**428**	**4**	**424**
In	**239**	**2**	237
Out	**189**	**2**	187
PM Residential - Apts	**175**	-	175
In	127	-	127
Out	48	-	48
PM Office	**207**		207
In	38		38
Out	169		169
~~PM Supermarket~~***Retail***	**9**	**3**	**6**
In	9	2	8
Out	(1)	2	(2)
PM Retail			
In			
Out			
Total PM Peak Hour	**390**	**3**	**387**
In	**174**	**2**	172
Out	**216**	**2**	215
SAT Daily Residential - Apts			
In			
Out			
SAT Daily Office			
In			
Out			
SAT Daily Supermarket			
In			
Out			
SAT Daily Retail			
In			
Out			
Total SAT Daily	**4,783**	**514**	**4,269**
In	**2,391**	**257**	2,134
Out	**2,391**	**257**	2,134
SAT Residential - Apts	**160**	-	160
In	76	-	76
Out	85	-	85
SAT Office	**74**		74
In	43		43
Out	31		31
~~SAT Supermarket~~***Retail***	**80**	**20**	**60**
In	46	10	36
Out	35	10	25
SAT Retail			
In			
Out			
Total SAT Peak Hour	**315**	**20**	**295**
In	**165**	**10**	155
Out	**150**	**10**	140

Notes:
LUC 220 Apartments
LUC 710 - General Office
LUC 820 - Retail
LUC 850 - Supermarket
Mode Split: BTD Zone 17
VOR for Residential based on Census Tract data for area 712 and Retail b

Allston Yards Program Site Trips

Pass-by Rate = 0.25

	Size	Unadjusted Vehicle Trips	VOR	Person Trips	Transit Share	Walk/Other Share	Vehicle Share	Local VOR	Transit Trips	Walk/Other Trips	Vehicle Share Raw Trips	Retail Pass-By Vehicles	NET NEW Vehicle Trips
Weekday Daily Residential - Apts		6,287		6,915					1798	2144	2703		2,703
In	1,017	3,143	1.1	3,458	*26%*	31%	*43%*	1.1	899	1072	1352		1,352
Out	units	3,143	1.1	3,458	*26%*	31%	*43%*	1.1	899	1072	1352		1,352
Weekday Daily Office		3,148		3,462					658	658	1,951		1,951
In	316.000	1,574	1.1	1,731	*19%*	19%	*62%*	1.1	329	329	976		976
Out	ksf	1,574	1.1	1,731	*19%*	19%	*62%*	1.1	329	329	976		976
Weekday Daily Supermarket		6,598		11,876					1,069	4,750	3,365	842	2,523
In	77.764	3,299	1.8	5,938	*9%*	40%	*51%*	1.8	534	2,375	1,682	421	1,261
Out	ksf	3,299	1.8	5,938	*9%*	40%	*51%*	1.8	534	2,375	1,682	421	1,261
Weekday Daily Retail		3,224		5,802					522	2321	1644	412	1,232
In	52	1,612	1.8	2,901	*9%*	40%	*51%*	1.8	261	1160	822	206	616
Out	ksf	1,612	1.8	2,901	*9%*	40%	*51%*	1.8	261	1160	822	206	616
Total Weekday Daily		19,256							4,047	9,873	9,664	1,254	8,410
In		9,628							2,023	4,936	4,832	627	4,205
Out		9,628							2,023	4,936	4,832	627	4,205
AM Residential - Apts		502		552					145	196	193		193
In	1,017	100	1.1	110	*35%*	33%	*32%*	1.1	39	36	32		32
Out	units	402	1.1	442	*24%*	36%	*40%*	1.1	106	159	161		161
AM Office		480		528					142	122	241		241
In	316.000	423	1.1	465	*28%*	23%	*49%*	1.1	130	107	207		207
Out	ksf	58	1.1	63	*19%*	23%	*58%*	1.1	12	15	33		33
AM Supermarket		264		476					78	219	99	24	75
In	77.764	164	1.8	295	*18%*	46%	*36%*	1.8	53	136	59	12	47
Out	ksf	100	1.8	181	*14%*	46%	*40%*	1.8	25	83	40	12	28
AM Retail		73		132					22	61	27	6	21
In	52	45	1.8	82	*18%*	46%	*36%*	1.8	15	38	16	3	13
Out	ksf	28	1.8	50	*14%*	46%	*40%*	1.8	7	23	11	3	8
Total AM Peak Hour		1,320							387	597	560	30	530
In		732							237	317	315	15	300
Out		588							150	280	245	15	230
PM Residential - Apts		577		635					177	222	215		215
In	1,017	375	1.1	413	*24%*	36%	*40%*	1.1	99	149	150		150
Out	units	202	1.1	222	*35%*	33%	*32%*	1.1	78	73	65		65
PM Office		432		476					126	109	218		218
In	316.000	74	1.1	81	*19%*	23%	*58%*	1.1	15	19	43		43
Out	ksf	359	1.1	395	*28%*	23%	*49%*	1.1	111	91	176		176
PM Supermarket		647		1,164					186	535	246	62	184
In	77.764	330	1.8	594	*14%*	46%	*40%*	1.8	83	273	132	31	101
Out	ksf	317	1.8	570	*18%*	46%	*36%*	1.8	103	262	114	31	83
PM Retail		286		515					83	237	108	28	80
In	52	137	1.8	247	*14%*	46%	*40%*	1.8	35	114	55	14	41
Out	ksf	149	1.8	268	*18%*	46%	*36%*	1.8	48	123	54	14	40
Total PM Peak Hour		1,942							571	1,103	787	90	697
In		916							232	554	379	45	334
Out		1,026							339	550	408	45	363
SAT Daily Residential - Apts		7,727		8,500					2210	2635	3323		3,323
In	1,017	3,864	1.1	4,250	*26%*	31%	*43%*	1.1	1105	1317	1661		1,661
Out	units	3,864	1.1	4,250	*26%*	31%	*43%*	1.1	1105	1317	1661		1,661
SAT Daily Office		673		741					141	141	417		417
In	316.000	337	1.1	370	*19%*	19%	*62%*	1.1	70	70	209		209
Out	ksf	337	1.1	370	*19%*	19%	*62%*	1.1	70	70	209		209
SAT Daily Supermarket		13,810		24,858					2,237	9,943	7,043	1760	5,283
In	77.764	6,905	1.8	12,429	*9%*	40%	*51%*	1.8	1,119	4,972	3,522	880	2,642
Out	ksf	6,905	1.8	12,429	*9%*	40%	*51%*	1.8	1,119	4,972	3,522	880	2,642
SAT Daily Retail		4,363		7,854					707	3141	2225	556	1,669
In	52	2,182	1.8	3,927	*9%*	40%	*51%*	1.8	353	1571	1113	278	835
Out	ksf	2,182	1.8	3,927	*9%*	40%	*51%*	1.8	353	1571	1113	278	835
Total SAT Daily		26,574							5,295	15,860	13,008	2,316	10,692
In		13,287							2,647	7,930	6,504	1,158	5,346
Out		13,287							2,647	7,930	6,504	1,158	5,346
SAT Residential - Apts		436		480					122	142	196		196
In	1,017	218	1.1	240	*25%*	31%	*44%*	1.1	60	74	96		96
Out	units	218	1.1	240	*26%*	28%	*46%*	1.1	62	67	100		100
SAT Office		136		149					24	26	91		91
In	316.000	73	1.1	81	*13%*	16%	*71%*	1.1	10	13	52		52
Out	ksf	63	1.1	69	*19%*	19%	*62%*	1.1	13	13	39		39
SAT Supermarket		782		1407					134	563	395	98	297
In	77.764	399	1.8	718	*9%*	40%	*51%*	1.8	65	287	203	49	154
Out	ksf	383	1.8	690	*10%*	40%	*50%*	1.8	69	276	192	49	143
SAT Retail		415		747					71	299	210	52	158
In	52	216	1.8	388	*9%*	40%	*51%*	1.8	35	155	110	26	84
Out	ksf	199	1.8	359	*10%*	40%	*50%*	1.8	36	143	100	26	74
Total SAT Peak Hour		1,769							350	1,029	892	150	742
In		906							170	530	461	75	386
Out		863							180	499	430	75	355

Used for trip sharing:				External Trips						
Residential	Total Office	Total Retail/Grocery	Total Trips	Total	Retail total	Pass-by	Retail new	Office new	Residential new	Total new
2,703	1,951	5,009	**9,664**	**8,272**	**4,333**	**1,083**	**3,250**	**1,757**	**2,183**	**7,189**
1,352	976	2,504	**4,832**	4,136	2,179	542	1,637	901	1,057	3,594
1,352	976	2,504	**4,832**	4,136	2,154	542	1,612	856	1,126	3,594
193	241	127	**560**	**527**	**111**	**28**	**83**	**237**	**179**	**499**
32	207	75	**315**	298	67	14	53	206	25	284
161	33	51	**245**	229	44	14	30	31	154	215
215	218	354	**787**	**690**	**309**	**77**	**232**	**207**	**175**	**613**
150	43	187	**379**	331	166	39	128	38	127	292
65	176	168	**408**	359	142	39	104	169	48	321
3,323	417	9,268	**13,008**	**10,992**	**8,264**	**2,066**	**6,198**	**336**	**2,392**	**8,926**
1,661	209	4,634	**6,504**	5,496	4,171	1,033	3,138	177	1,147	4,463
1,661	209	4,634	**6,504**	5,496	4,093	1,033	3,060	159	1,244	4,463
196	91	605	**892**	**787**	**552**	**138**	**414**	**74**	**160**	**649**
96	52	313	**461**	409	290	69	221	43	76	340
100	39	291	**430**	378	262	69	193	31	85	309

Notes:
LUC 220 Apartments
LUC 710 - General Office
LUC 820 - Retail
LUC 850 - Supermarket
Mode Split: BTD Zone 17
VOR for Residential based on Census Tract data for area 712 and Retail based on local data

Existing Program Site Trips

Pass-by Rate = 0.25

	Size	Unadjusted Vehicle Trips	VOR	Person Trips	Transit Share	Walk/Other Share	Vehicle Share	Local VOR	Transit Trips	Walk/Other Trips	Vehicle Share Raw Trips	Retail Pass-By Vehicles	NET NEW Vehicle Trips	Residential	Total Office	Total Retail/Grocery	Total Trips	pass-by	Retail new	Office new	Residential new	Total new
Weekday Daily Residential - Apts		0		0					0	0	0		0									
In	**0**	0	1.1	0	22%	31%	47%	1.1	0	0	0		0									
Out	**units**	0	1.1	0	22%	31%	47%	1.1	0	0	0		0									
Weekday Daily Office																						
In																						
Out																						
Weekday Daily Supermarket		4,740		8,532					683	3,413	2,465	616	1,849									
In	**77.764**	2,370	1.8	4,266	8%	40%	52%	1.8	341	1,706	1,232	308	924									
Out	**ksf**	2,370	1.8	4,266	8%	40%	52%	1.8	341	1,706	1,232	308	924									
Weekday Daily Retail		2,255		4,059					325	1623	1173	294	879									
In	**34.584**	1,127	1.8	2,029	8%	40%	52%	1.8	162	812	586	147	439									
Out	**ksf**	1,127	1.8	2,029	8%	40%	52%	1.8	162	812	586	147	439									
Total Weekday Daily		6,995							1,007	5,036	3,637	910	2,727	-		**3,637**	**3,637**	**910**	**2,727**		-	**2,727**
In		3,497							504	2,518	1,819	455	1,364	-		1,819	1,819	455	1,364		-	1,364
Out		3,497							504	2,518	1,819	455	1,364	-		1,819	1,819	455	1,364		-	1,364
AM Residential - Apts		0		0					0	0	0		0									
In	**0**	0	1.1	0	30%	33%	37%	1.1	0	0	0		0									
Out	**units**	0	1.1	0	21%	36%	43%	1.1	0	0	0		0									
AM Office																						
In																						
Out																						
AM Supermarket		170		306					29	141	76	18	58									
In	**77.764**	105	1.8	189	11%	46%	43%	1.8	21	87	45	9	36									
Out	**ksf**	65	1.8	117	7%	46%	47%	1.8	8	54	31	9	22									
AM Retail		52		93					9	43	23	6	17									
In	**34.584**	32	1.8	57	11%	46%	43%	1.8	6	26	14	3	11									
Out	**ksf**	20	1.8	35	7%	46%	47%	1.8	2	16	9	3	6									
Total AM Peak Hour		222							38	183	**99**	24	75	-		**99**	**99**	**24**	**75**		-	**75**
In		137							27	113	**59**	12	47	-		59	59	12	47		-	47
Out		85							11	70	**40**	12	28	-		40	40	12	28		-	28
PM Residential - Apts		0		0					0	0	0		0									
In	**0**	0	1.1	0	21%	36%	43%	1.1	0	0	0		0									
Out	**units**	0	1.1	0	30%	33%	37%	1.1	0	0	0		0									
PM Office																						
In																						
Out																						
PM Supermarket		467		841					75	387	210	52	158									
In	**77.764**	238	1.8	428	7%	46%	47%	1.8	30	197	112	26	86									
Out	**ksf**	229	1.8	412	11%	46%	43%	1.8	45	190	98	26	72									
PM Retail		199		359					33	165	90	22	68									
In	**34.584**	96	1.8	172	7%	46%	47%	1.8	12	79	45	11	34									
Out	**ksf**	104	1.8	187	11%	46%	43%	1.8	21	86	45	11	34									
Total PM Peak Hour		666							108	552	**300**	74	226	-		**300**	**300**	**74**	**226**		-	**226**
In		334							42	276	**157**	37	120	-		157	157	37	120		-	120
Out		333							66	275	**143**	37	106	-		143	143	37	106		-	106
SAT Daily Residential - Apts		0		0					0	0	0		0									
In	**0**	0	1.1	0	22%	31%	47%	1.1	0	0	0		0									
Out	**units**	0	1.1	0	22%	31%	47%	1.1	0	0	0		0									
SAT Daily Office																						
In																						
Out																						
SAT Daily Supermarket		8,880		15,984					1,279	6,394	4,618	1154	3,464									
In	**77.764**	4,440	1.8	7,992	8%	40%	52%	1.8	639	3,197	2,309	577	1,732									
Out	**ksf**	4,440	1.8	7,992	8%	40%	52%	1.8	639	3,197	2,309	577	1,732									
SAT Daily Retail		3,061		5,509					441	2204	1592	398	1,194									
In	**34.584**	1,530	1.8	2,755	8%	40%	52%	1.8	220	1102	796	199	597									
Out	**ksf**	1,530	1.8	2,755	8%	40%	52%	1.8	220	1102	796	199	597									
Total SAT Daily		11,941							1,719	8,597	6,209	1,552	4,657	-		**6,209**	**6,209**	**1,552**	**4,657**		-	**4,657**
In		5,970							860	4,299	3,105	776	2,329	-		3,105	3,105	776	2,329		-	2,329
Out		5,970							860	4,299	3,105	776	2,329	-		3,105	3,105	776	2,329		-	2,329
SAT Residential - Apts		436		0					0	0	0		0									
In	**0**	0	1.1	0	22%	31%	47%	1.1	0	0	0		0									
Out	**units**	0	1.1	0	23%	28%	49%	1.1	0	0	0		0									
SAT Office																						
In																						
Out																						
SAT Supermarket		608		1094					82	438	319	80	239									
In	**77.764**	310	1.8	558	7%	40%	53%	1.8	39	223	164	40	124									
Out	**ksf**	298	1.8	536	8%	40%	52%	1.8	43	215	155	40	115									
SAT Retail		290		522					39	209	152	38	114									
In	**34.584**	151	1.8	272	7%	40%	53%	1.8	19	109	80	19	61									
Out	**ksf**	139	1.8	251	8%	40%	52%	1.8	20	100	72	19	53									
Total SAT Peak Hour		1,334							121	647	472	118	354	-		**472**	**472**	**118**	**354**		-	**354**
In		461							58	332	244	59	185	-		244	244	59	185		-	185
Out		437							63	315	227	59	168	-		227	227	59	168		-	168

Notes:
LUC 820 - Retail
LUC 220 Apartments
LUC 850 - Supermarket
Mode Split: BTD Zone 17
VOR for Residential based on Census Tract data for area 712 and Retail based on local data

Trip Generation Traffic Volume Networks

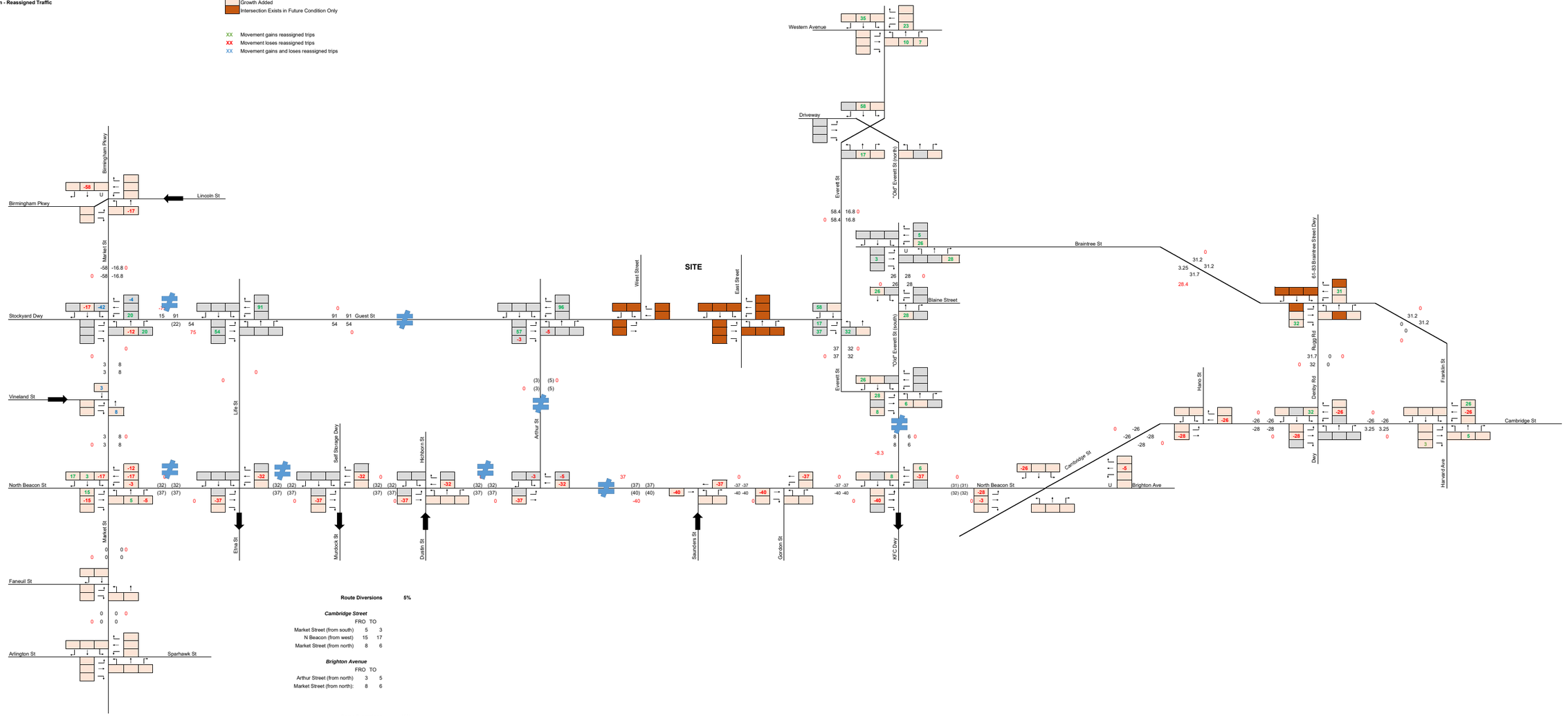
Project Name: Allston Yards
Project Number: 12305.01
Location: Brighton, MA
2023 Build Condition - Reassigned Traffic
8:00 AM - 9:00 AM

Growth= 1.07

Legend
No Growth Added
Growth Added
Intersection Exists in Future Condition Only

XX Movement gains reassigned trips
XX Movement loses reassigned trips
XX Movement gains and loses reassigned trips

** TRAFFIC REASSIGNED DUE TO NEW GUEST STREET CONNECTION**



Route Diversions **5%**

Cambridge Street

	FRO	TO
Market Street (from south)	5	3
N Beacon (from west)	15	17
Market Street (from north)	8	6

Brighton Avenue

	FRO	TO
Arthur Street (from north)	3	5
Market Street (from north):	8	6

Route Diversions **16%**

Guest Street

	FRO	TO
Market Street (and points north)	58	17

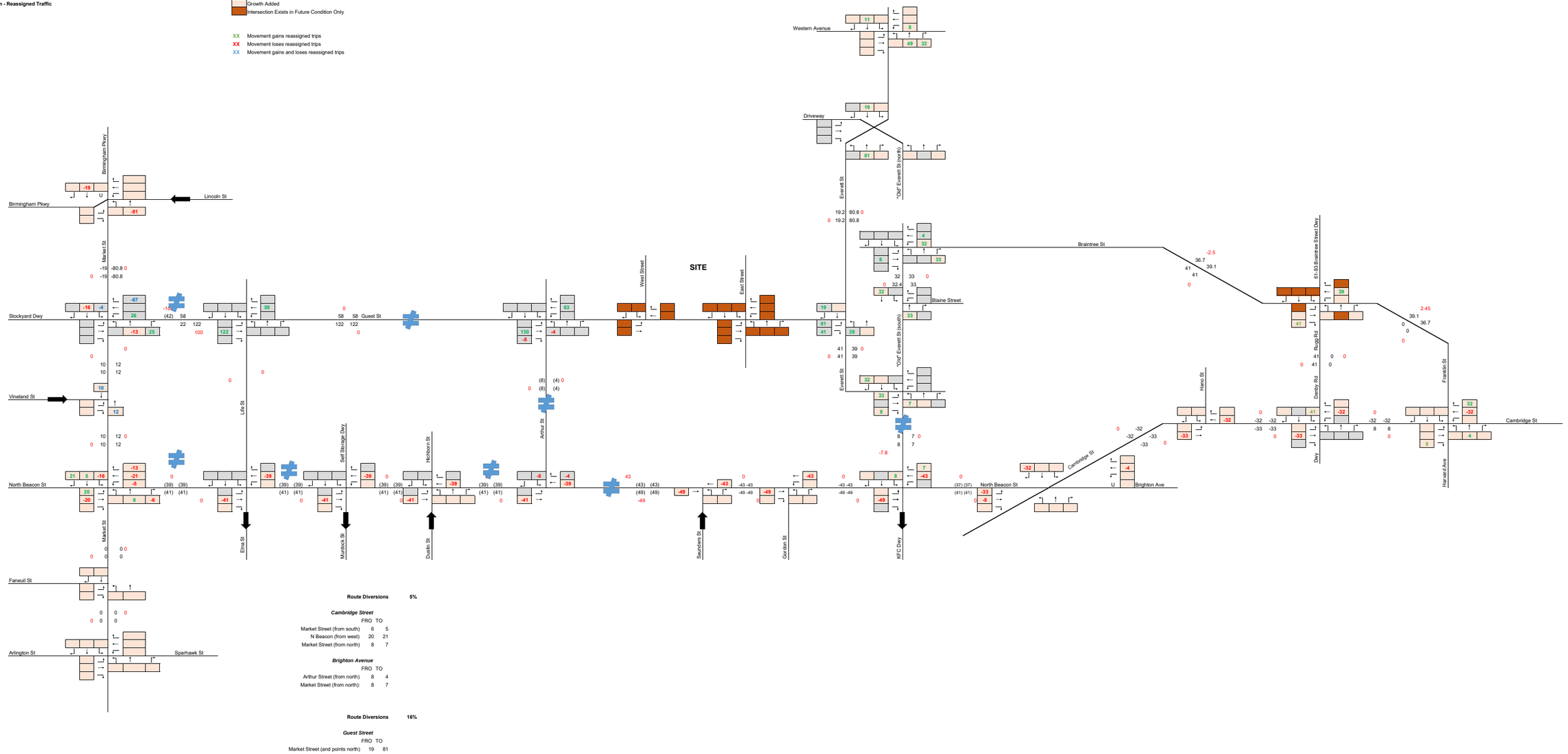
Project Name: Allston Yards
Project Number: 12305.01
Location: Brighton, MA
2023 Build Condition - Reassigned Traffic
5:00 PM - 6:00 PM

Growth= 1.07

Legend
No Growth Added
Growth Added
Intersection Exists in Future Condition Only

XX Movement gains reassigned trips
XX Movement loses reassigned trips
XX Movement gains and loses reassigned trips

** TRAFFIC REASSIGNED DUE TO NEW GUEST STREET CONNECTION**



Route Diversions **5%**

Cambridge Street

	FRO	TO
Market Street (from south)	6	5
N Beacon (from west)	20	21
Market Street (from north)	8	7

Brighton Avenue

	FRO	TO
Arthur Street (from north)	8	4
Market Street (from north):	8	7

Route Diversions **16%**

Guest Street

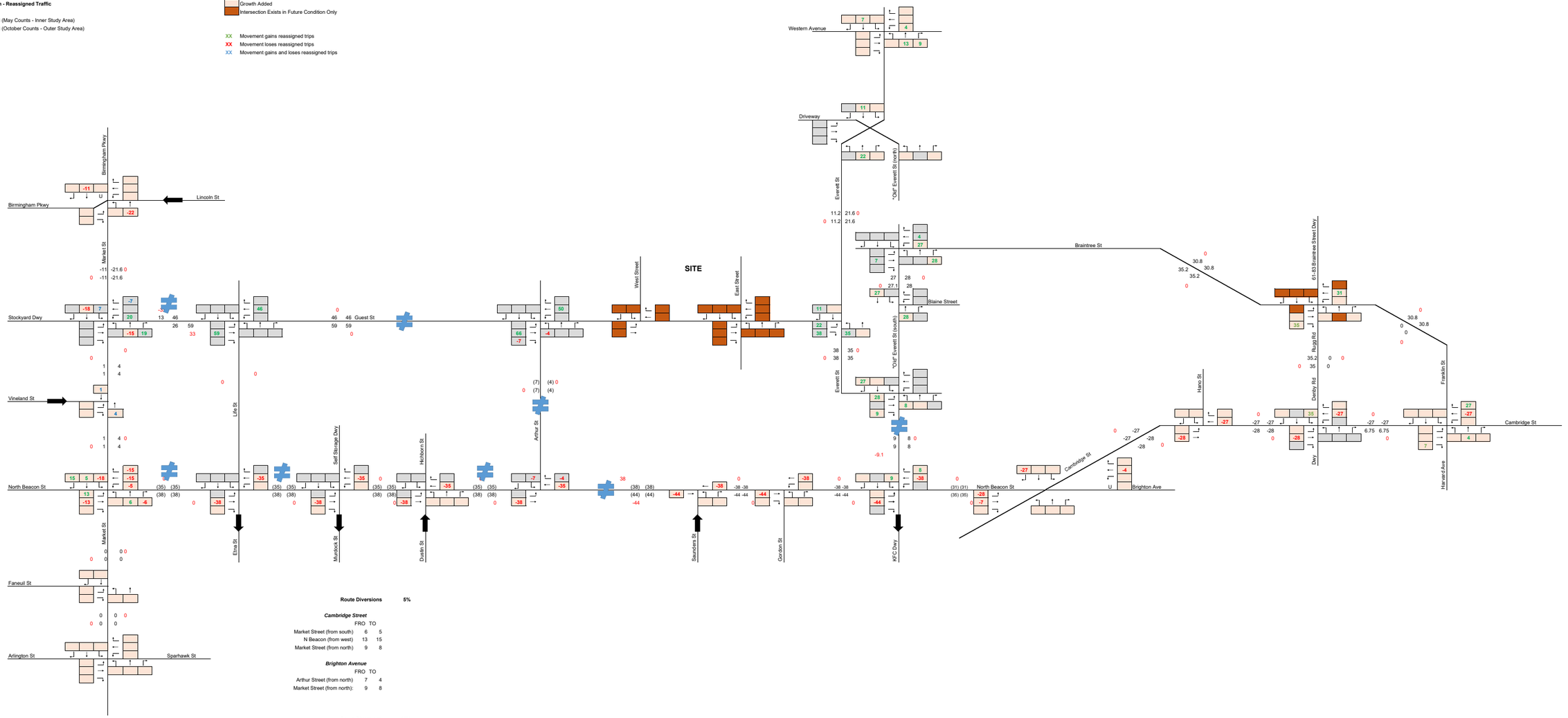
	FRO	TO
Market Street (and points north)	19	81

Project Name: Allston Yards
Project Number: 12305.01
Location: Brighton, MA
2023 Build Condition - Reassigned Traffic
Peak Hour:
12:45 PM - 1:45 PM (May Counts - Inner Study Area)
12:00 PM - 1:00 PM (October Counts - Outer Study Area)

Legend
No Growth Added
Growth Added
Intersection Exists in Future Condition Only

XX Movement gains reassigned trips
XX Movement loses reassigned trips
XX Movement gains and loses reassigned trips

** TRAFFIC REASSIGNED DUE TO NEW GUEST STREET CONNECTION**



Route Diversions **5%**

Cambridge Street

	FRO	TO
Market Street (from south)	6	5
N Beacon (from west)	13	15
Market Street (from north)	9	8

Brighton Avenue

	FRO	TO
Arthur Street (from north)	7	4
Market Street (from north):	9	8

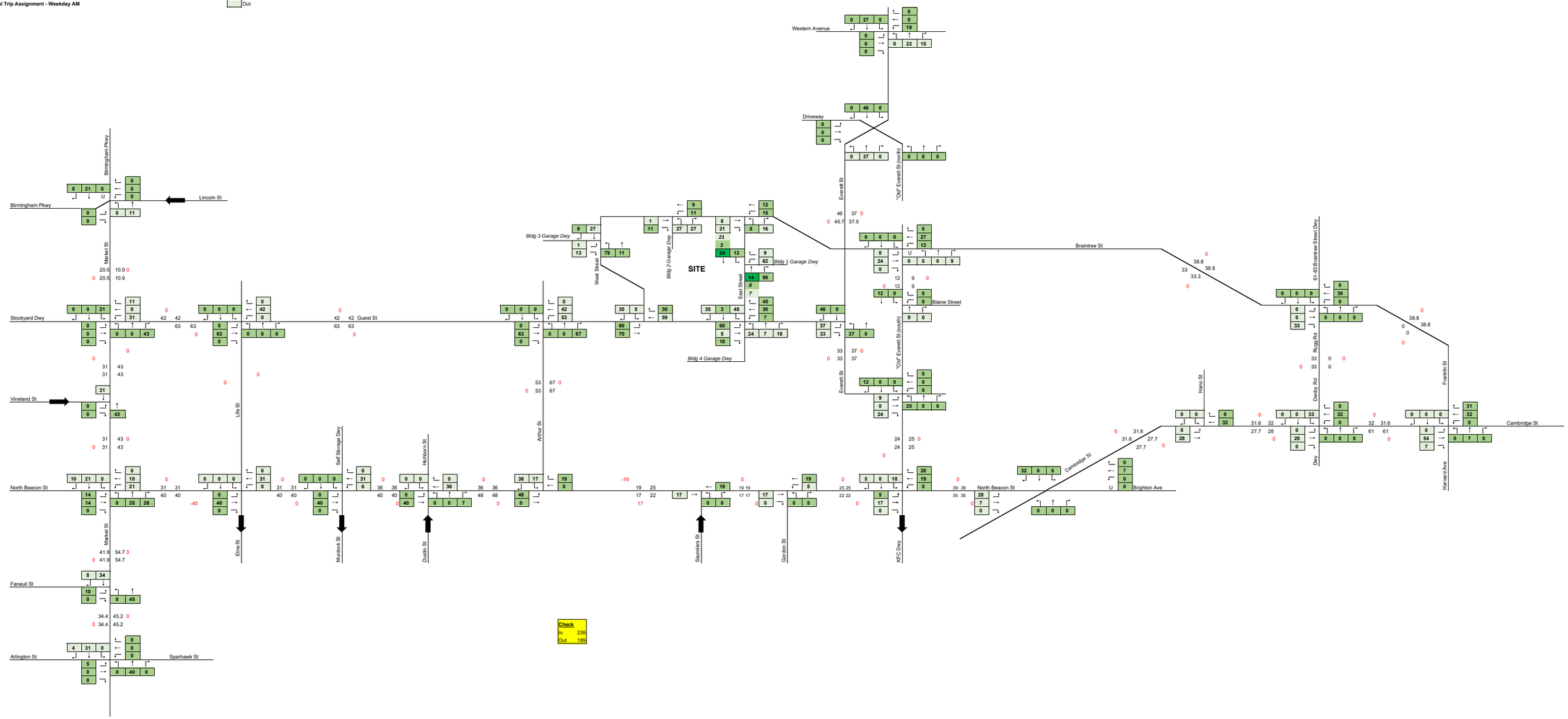
Route Diversions **16%**

Guest Street

	FRO	TO
Market Street (and points north)	11	22

Project Name: Allston Yards
Project Number: 12305.01
Location: Brighton, MA
Allston Yards - Total Trip Assignment - Weekday AM
8:00 AM - 9:00 AM

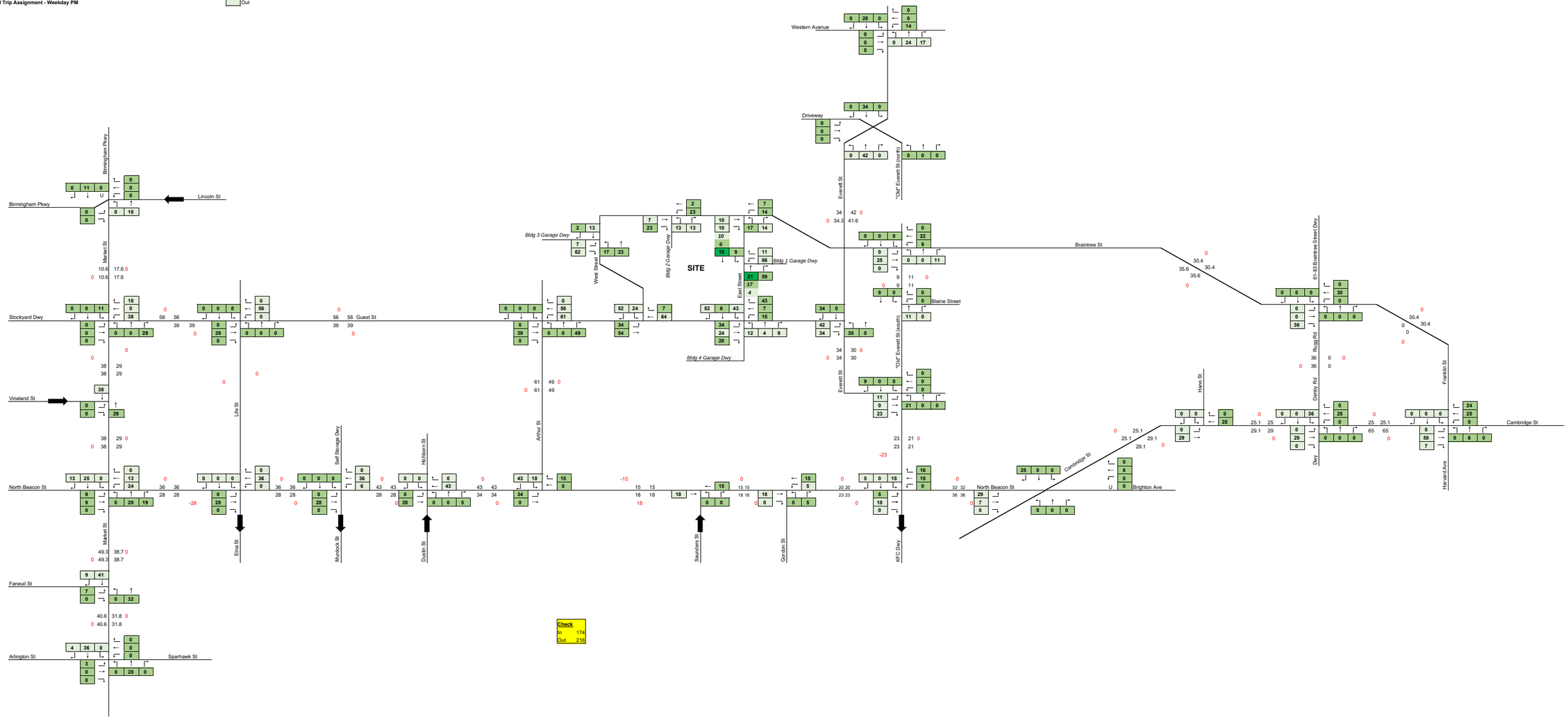
Legend
In
Out



Check
In 239
Out 189

Project Name: Allston Yards
Project Number: 12305.01
Location: Brighton, MA
Allston Yards - Total Trip Assignment - Weekday PM
5:00 PM - 6:00 PM

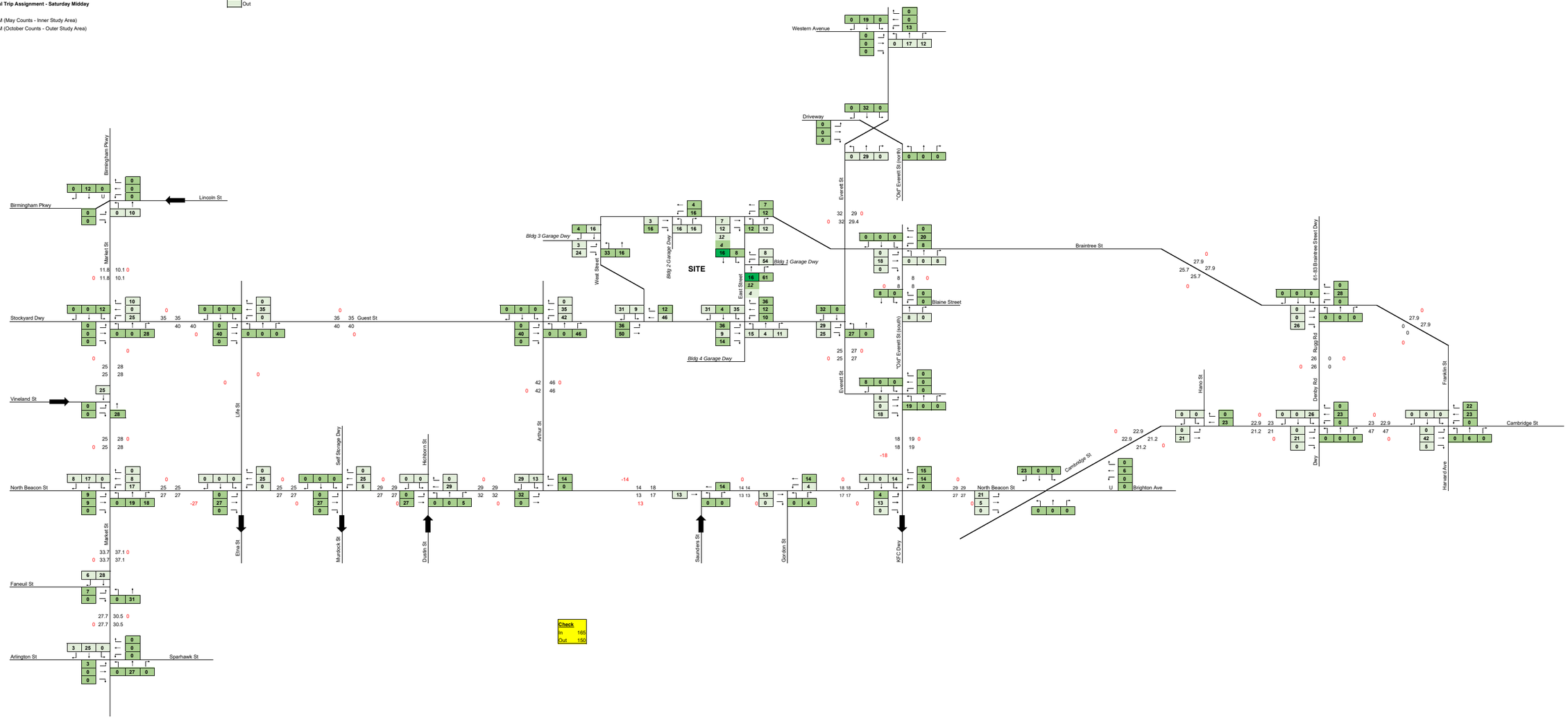
Legend
In
Out



Check
In 174
Out 216

Project Name: Allston Yards
Project Number: 12305.01
Location: Brighton, MA
Allston Yards - Total Trip Assignment - Saturday Midday
Peak Hour:
12:45 PM - 1:45 PM (May Counts - Inner Study Area)
12:00 PM - 1:00 PM (October Counts - Outer Study Area)

Legend
In
Out



Check
In 165
Out 150

Capacity Analysis Worksheets

- ***Existing***

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	345	0	105	125	165	50	45	665	0	10	0	695	80
Future Volume (vph)	345	0	105	125	165	50	45	665	0	10	0	695	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	0		0		0		50
Storage Lanes	2		0	1		0	0		0		0		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		797			420			570				590	
Travel Time (s)		18.1			9.5			13.0				13.4	
Confl. Peds. (#/hr)									27		27		
Confl. Bikes (#/hr)			2						20				8
Peak Hour Factor	0.97	0.97	0.97	0.91	0.91	0.91	0.94	0.94	0.94	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	7%	7%	7%	5%	5%	5%	6%	6%	6%	6%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	356	108	0	137	236	0	0	755	0	0	0	758	86
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Detector Phase	3			2	2		4	1 4		1		1	1 3
Switch Phase													
Minimum Initial (s)	6.0			6.0	6.0		6.0			10.0		10.0	
Minimum Split (s)	24.0			12.0	12.0		12.0			22.0		22.0	
Total Split (s)	24.0			22.0	22.0		22.0			31.0		31.0	
Total Split (%)	24.2%			22.2%	22.2%		22.2%			31.3%		31.3%	
Yellow Time (s)	4.0			4.0	4.0		4.0			4.0		4.0	
All-Red Time (s)	2.0			2.0	2.0		2.0			2.0		2.0	
Lost Time Adjust (s)	0.0			0.0	0.0							0.0	
Total Lost Time (s)	6.0			6.0	6.0							6.0	
Lead/Lag	Lead			Lag	Lag		Lag			Lead		Lead	
Lead-Lag Optimize?													
Recall Mode	None			None	None		Max			C-Max		C-Max	
v/c Ratio	0.71	0.47		0.54	0.87			0.54				0.94	0.13
Control Delay	48.2	0.0		46.7	69.0			17.5				57.5	1.9
Queue Delay	0.0	0.0		0.0	0.0			0.0				0.0	0.0
Total Delay	48.2	0.0		46.7	69.0			17.5				57.5	1.9
Queue Length 50th (ft)	111	0		80	138			150				247	0
Queue Length 95th (ft)	153	0		141	#265			213				#364	10
Internal Link Dist (ft)		717			340			490				510	
Turn Bay Length (ft)				75									50
Base Capacity (vph)	630	231		272	287			1401				805	717
Starvation Cap Reductn	0	0		0	0			0				0	0
Spillback Cap Reductn	0	0		0	0			0				0	0
Storage Cap Reductn	0	0		0	0			0				0	0
Reduced v/c Ratio	0.57	0.47		0.50	0.82			0.54				0.94	0.12

Intersection Summary

Area Type: Other
Cycle Length: 99
Actuated Cycle Length: 99
Offset: 47 (47%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Market Street & Leo M. Birmingham Parkway & Lincoln Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	345	0	105	125	165	50	45	665	0	10	0	695	80
Future Volume (vph)	345	0	105	125	165	50	45	665	0	10	0	695	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	6.0			6.0				6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00			0.95				0.95	1.00
Frpb, ped/bikes	1.00	0.94		1.00	1.00			1.00				1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Frt	1.00	0.85		1.00	0.97			1.00				1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00				1.00	1.00
Satd. Flow (prot)	3467	0		1687	1714			3427				3403	1524
Flt Permitted	0.95	1.00		0.95	1.00			0.79				0.94	1.00
Satd. Flow (perm)	3467	0		1687	1714			2731				3193	1524
Peak-hour factor, PHF	0.97	0.97	0.97	0.91	0.91	0.91	0.94	0.94	0.94	0.93	0.93	0.93	0.93
Adj. Flow (vph)	356	0	108	137	181	55	48	707	0	11	0	747	86
RTOR Reduction (vph)	0	108	0	0	11	0	0	0	0	0	0	0	52
Lane Group Flow (vph)	356	0	0	137	225	0	0	755	0	0	0	758	34
Confl. Peds. (#/hr)									27		27		
Confl. Bikes (#/hr)			2						20				8
Heavy Vehicles (%)	1%	1%	1%	7%	7%	7%	5%	5%	5%	6%	6%	6%	6%
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Actuated Green, G (s)	14.4	0.0		15.1	15.1			45.5				24.9	39.3
Effective Green, g (s)	14.4	0.0		15.1	15.1			45.5				24.9	39.3
Actuated g/C Ratio	0.15	0.00		0.15	0.15			0.46				0.25	0.40
Clearance Time (s)	6.0			6.0	6.0							6.0	
Vehicle Extension (s)	2.0			2.0	2.0							2.0	
Lane Grp Cap (vph)	504	0		257	261			1399				803	604
v/s Ratio Prot	c0.10			0.08	c0.13			c0.11					0.02
v/s Ratio Perm								0.14				c0.24	
v/c Ratio	0.71	0.00		0.53	0.86			0.54				0.94	0.06
Uniform Delay, d1	40.3	49.5		38.7	40.9			19.2				36.4	18.4
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Incremental Delay, d2	3.7	0.0		1.1	23.4			1.5				20.7	0.0
Delay (s)	44.0	49.5		39.8	64.3			20.7				57.1	18.4
Level of Service	D	D		D	E			C				E	B
Approach Delay (s)		45.3			55.3			20.7				53.2	
Approach LOS		D			E			C				D	

Intersection Summary			
HCM 2000 Control Delay	41.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	99.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	5	0	30	1	105	5	640	140	365	580	2
Future Volume (vph)	2	5	0	30	1	105	5	640	140	365	580	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			772			187			570	
Travel Time (s)		5.6			17.5			4.3			13.0	
Confl. Peds. (#/hr)	1		28	28		1	8		27	27		8
Confl. Bikes (#/hr)									13			2
Peak Hour Factor	0.63	0.63	0.63	0.86	0.86	0.86	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	7%	7%	7%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	36	122	0	853	0	0	1052	0
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Detector Phase	2	2		2	2	2 3	1	1		3	1 3	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		6.0		
Minimum Split (s)	21.0	21.0		21.0	21.0		22.0	22.0		11.0		
Total Split (s)	21.0	21.0		21.0	21.0		48.0	48.0		21.0		
Total Split (%)	23.3%	23.3%		23.3%	23.3%		53.3%	53.3%		23.3%		
Yellow Time (s)	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		
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead				
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		None		
v/c Ratio		0.06			0.29	0.22		0.46			0.64	
Control Delay		35.0			42.0	4.5		2.8			5.2	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		35.0			42.0	4.5		2.8			5.2	
Queue Length 50th (ft)		6			20	0		36			61	
Queue Length 95th (ft)		14			43	28		m40			130	
Internal Link Dist (ft)		167			692			107			490	
Turn Bay Length (ft)						125						
Base Capacity (vph)		333			230	578		1845			1708	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.03			0.16	0.21		0.46			0.62	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 85 (94%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 2: Market Street & Stockyard Driveway/Guest Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	5	0	30	1	105	5	640	140	365	580	2
Future Volume (vph)	2	5	0	30	1	105	5	640	140	365	580	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	5.0		4.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	1.00		0.98			1.00	
Flpb, ped/bikes		1.00			0.95	1.00		1.00			1.00	
Frt		1.00			1.00	0.85		0.97			1.00	
Flt Protected		0.99			0.95	1.00		1.00			0.98	
Satd. Flow (prot)		1874			1606	1509		3318			3393	
Flt Permitted		0.93			0.72	1.00		0.95			0.54	
Satd. Flow (perm)		1763			1220	1509		3153			1879	
Peak-hour factor, PHF	0.63	0.63	0.63	0.86	0.86	0.86	0.92	0.92	0.92	0.90	0.90	0.90
Adj. Flow (vph)	3	8	0	35	1	122	5	696	152	406	644	2
RTOR Reduction (vph)	0	0	0	0	0	83	0	17	0	0	0	0
Lane Group Flow (vph)	0	11	0	0	36	39	0	836	0	0	1052	0
Confl. Peds. (#/hr)	1		28	28		1	8		27	27		8
Confl. Bikes (#/hr)									13			2
Heavy Vehicles (%)	0%	0%	0%	7%	7%	7%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Actuated Green, G (s)		8.2			8.2	28.8		51.2			66.8	
Effective Green, g (s)		9.2			9.2	28.8		52.2			66.8	
Actuated g/C Ratio		0.10			0.10	0.32		0.58			0.74	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		180			124	482		1828			1657	
v/s Ratio Prot						0.03					c0.11	
v/s Ratio Perm		0.01			c0.03			0.27			c0.36	
v/c Ratio		0.06			0.29	0.08		0.46			0.63	
Uniform Delay, d1		36.5			37.4	21.4		10.8			5.7	
Progression Factor		1.00			1.00	1.00		0.24			1.00	
Incremental Delay, d2		0.1			0.5	0.0		0.1			0.6	
Delay (s)		36.6			37.9	21.4		2.7			6.2	
Level of Service		D			D	C		A			A	
Approach Delay (s)		36.6			25.1			2.7			6.2	
Approach LOS		D			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	20	0	765	610	0
Future Vol, veh/h	20	20	0	765	610	0
Conflicting Peds, #/hr	5	1	34	0	0	34
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	92	92	96	96
Heavy Vehicles, %	3	3	5	5	6	6
Mvmt Flow	23	23	0	832	635	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1056	319	-	0	-	0
Stage 1	635	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	-	-
Pot Cap-1 Maneuver	219	674	0	-	-	0
Stage 1	487	-	0	-	-	0
Stage 2	627	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	219	673	-	-	-	-
Mov Cap-2 Maneuver	219	-	-	-	-	-
Stage 1	487	-	-	-	-	-
Stage 2	627	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.7	0	0
HCM LOS	C		

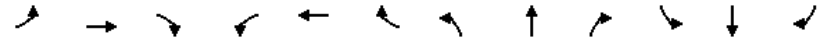
Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	330	-
HCM Lane V/C Ratio	-	0.141	-
HCM Control Delay (s)	-	17.7	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.5	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	35	275	35	55	315	115	90	615	100	155	435	40	
Future Volume (vph)	35	275	35	55	315	115	90	615	100	155	435	40	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		200	0		200	0		100	0		0	
Storage Lanes	0		1	0		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		324			332			559			323		
Travel Time (s)		7.4			7.5			12.7			7.3		
Confl. Peds. (#/hr)	16		29	29		16	11		24	24		11	
Confl. Bikes (#/hr)			7			3			12			1	
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.90	0.90	0.90	0.95	0.95	0.95	
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	4%	4%	4%	5%	5%	5%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	415	0	0	577	0	0	894	0	0	663	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		5.0			1.0
Minimum Split (s)	15.0	15.0		15.0	15.0		15.0	15.0		10.0			20.0
Total Split (s)	28.0	28.0		28.0	28.0		31.0	31.0		11.0			20.0
Total Split (%)	31.1%	31.1%		31.1%	31.1%		34.4%	34.4%		12.2%			22%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0			2.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.0			2.0
Lost Time Adjust (s)		0.0			0.0			0.0					
Total Lost Time (s)		5.0			5.0			5.0					
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?													
Recall Mode	Max	Max		Max	Max		C-Max	C-Max		None			None
v/c Ratio		0.42			0.59			1.41			0.87		
Control Delay		26.0			27.5			215.1			32.9		
Queue Delay		0.0			0.0			0.0			0.0		
Total Delay		26.0			27.5			215.1			32.9		
Queue Length 50th (ft)		104			161			~371			140		
Queue Length 95th (ft)		137			211			#353			#226		
Internal Link Dist (ft)		244			252			479			243		
Turn Bay Length (ft)													
Base Capacity (vph)		991			986			636			765		
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			0.59			1.41			0.87		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Market Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	275	35	55	315	115	90	615	100	155	435	40
Future Volume (vph)	35	275	35	55	315	115	90	615	100	155	435	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			0.99			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.96			0.98			0.99	
Flt Protected		0.99			0.99			0.99			0.99	
Satd. Flow (prot)		3353			3271			3366			3358	
Flt Permitted		0.85			0.85			0.64			0.55	
Satd. Flow (perm)		2858			2787			2164			1859	
Peak-hour factor, PHF	0.83	0.83	0.83	0.84	0.84	0.84	0.90	0.90	0.90	0.95	0.95	0.95
Adj. Flow (vph)	42	331	42	65	375	137	100	683	111	163	458	42
RTOR Reduction (vph)	0	9	0	0	29	0	0	12	0	0	5	0
Lane Group Flow (vph)	0	406	0	0	548	0	0	882	0	0	658	0
Confl. Peds. (#/hr)	16		29	29		16	11		24	24		11
Confl. Bikes (#/hr)			7			3			12			1
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	4%	4%	4%	5%	5%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		31.0			31.0			24.4			31.4	
Effective Green, g (s)		31.0			31.0			24.4			31.4	
Actuated g/C Ratio		0.34			0.34			0.27			0.35	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			4.0				
Lane Grp Cap (vph)		984			959			586			765	
v/s Ratio Prot											c0.07	
v/s Ratio Perm		0.14			c0.20			c0.41			0.23	
v/c Ratio		0.41			0.57			1.50			0.86	
Uniform Delay, d1		22.5			24.1			32.8			27.3	
Progression Factor		1.00			0.99			0.86			0.90	
Incremental Delay, d2		1.3			2.4			233.4			7.8	
Delay (s)		23.8			26.3			261.5			32.3	
Level of Service		C			C			F			C	
Approach Delay (s)		23.8			26.3			261.5			32.3	
Approach LOS		C			C			F			C	

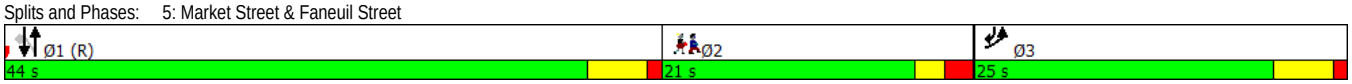
Intersection Summary			
HCM 2000 Control Delay	109.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	260	60	35	570	445	90	
Future Volume (vph)	260	60	35	570	445	90	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Right Turn on Red		Yes				Yes	
Link Speed (mph)	30			30	30		
Link Distance (ft)	420			1276	559		
Travel Time (s)	9.5			29.0	12.7		
Confl. Peds. (#/hr)	3	11	8			8	
Confl. Bikes (#/hr)		9					
Peak Hour Factor	0.93	0.93	0.90	0.90	0.97	0.97	
Heavy Vehicles (%)	4%	4%	4%	4%	7%	7%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	345	0	0	672	459	93	
Turn Type	Prot		Perm	NA	NA	pm+ov	
Protected Phases	3			1	1	3	2
Permitted Phases			1			1	
Detector Phase	3		1	1	1	3	
Switch Phase							
Minimum Initial (s)	6.0		10.0	10.0	10.0	6.0	7.0
Minimum Split (s)	11.0		15.0	15.0	15.0	11.0	21.0
Total Split (s)	25.0		44.0	44.0	44.0	25.0	21.0
Total Split (%)	27.8%		48.9%	48.9%	48.9%	27.8%	23%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	2.0
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	Lead	Lead		Lag
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max	None	None
v/c Ratio	0.83			0.64	0.43	0.07	
Control Delay	50.2			24.0	5.0	0.3	
Queue Delay	0.0			0.0	0.0	0.0	
Total Delay	50.2			24.0	5.0	0.3	
Queue Length 50th (ft)	174			225	12	0	
Queue Length 95th (ft)	#345			m352	m92	m0	
Internal Link Dist (ft)	340			1196	479		
Turn Bay Length (ft)							
Base Capacity (vph)	427			1052	1071	1273	
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	0.81			0.64	0.43	0.07	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 86 (96%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Market Street & Faneuil Street



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	260	60	35	570	445	90
Future Volume (vph)	260	60	35	570	445	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frpb, ped/bikes	0.99			1.00	1.00	0.98
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.97			1.00	1.00	0.85
Flt Protected	0.96			1.00	1.00	1.00
Satd. Flow (prot)	1693			1821	1776	1483
Flt Permitted	0.96			0.96	1.00	1.00
Satd. Flow (perm)	1693			1747	1776	1483
Peak-hour factor, PHF	0.93	0.93	0.90	0.90	0.97	0.97
Adj. Flow (vph)	280	65	39	633	459	93
RTOR Reduction (vph)	9	0	0	0	0	18
Lane Group Flow (vph)	336	0	0	672	459	75
Confl. Peds. (#/hr)	3	11	8			8
Confl. Bikes (#/hr)		9				
Heavy Vehicles (%)	4%	4%	4%	4%	7%	7%
Turn Type	Prot		Perm	NA	NA	pm+ov
Protected Phases	3			1	1	3
Permitted Phases			1			1
Actuated Green, G (s)	21.5			51.1	51.1	72.6
Effective Green, g (s)	21.5			51.1	51.1	72.6
Actuated g/C Ratio	0.24			0.57	0.57	0.81
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	2.0			2.0	2.0	2.0
Lane Grp Cap (vph)	404			991	1008	1278
v/s Ratio Prot	c0.20				0.26	0.01
v/s Ratio Perm				c0.38		0.04
v/c Ratio	0.83			0.68	0.46	0.06
Uniform Delay, d1	32.5			13.7	11.3	1.8
Progression Factor	1.00			1.63	0.35	0.26
Incremental Delay, d2	13.0			1.1	0.9	0.0
Delay (s)	45.5			23.3	4.9	0.5
Level of Service	D			C	A	A
Approach Delay (s)	45.5			23.3	4.1	
Approach LOS	D			C	A	

Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	50	230	95	20	205	155	15	390	5	90	365	20	
Future Volume (vph)	50	230	95	20	205	155	15	390	5	90	365	20	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	0		0	75		0	
Storage Lanes	0		0	0		0	0		0	1		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		448			531			497			1276		
Travel Time (s)		10.2			12.1			11.3			29.0		
Confl. Peds. (#/hr)	22		28	28		22	40		39	39		40	
Confl. Bikes (#/hr)			6			4			10			4	
Peak Hour Factor	0.96	0.96	0.96	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94	
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	5%	5%	5%	7%	7%	7%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	391	0	0	417	0	0	440	0	96	409	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		4.0			7.0
Minimum Split (s)	13.0	13.0		13.0	13.0		15.0	15.0		8.0			22.0
Total Split (s)	32.0	32.0		32.0	32.0		28.0	28.0		8.0			22.0
Total Split (%)	35.6%	35.6%		35.6%	35.6%		31.1%	31.1%		8.9%			24%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		4.0			3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0			1.0
Lost Time Adjust (s)		0.0			0.0			0.0		0.0			
Total Lost Time (s)		5.0			5.0			5.0		4.0			
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes			Yes
Recall Mode	None	None		None	None		C-Max	C-Max		Max			None
v/c Ratio		0.95			0.85			1.12		0.27	0.51		
Control Delay		64.9			44.5			116.5		33.1	32.8		
Queue Delay		0.0			0.0			0.0		0.0	0.0		
Total Delay		64.9			44.5			116.5		33.1	32.8		
Queue Length 50th (ft)		203			199			~292		46	206		
Queue Length 95th (ft)		#377			#352			#478		m#100	m302		
Internal Link Dist (ft)		368			451			417			1196		
Turn Bay Length (ft)										75			
Base Capacity (vph)		433			517			392		352	803		
Starvation Cap Reductn		0			0			0		0	0		
Spillback Cap Reductn		0			0			0		0	0		
Storage Cap Reductn		0			0			0		0	0		
Reduced v/c Ratio		0.90			0.81			1.12		0.27	0.51		

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
~	Volume exceeds capacity, queue is theoretically infinite.
	Queue shown is maximum after two cycles.
#	95th percentile volume exceeds capacity, queue may be longer.
	Queue shown is maximum after two cycles.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Market Street & Arlington Street/Sparhawk Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	230	95	20	205	155	15	390	5	90	365	20
Future Volume (vph)	50	230	95	20	205	155	15	390	5	90	365	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		4.0	5.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.97			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.97			0.94			1.00		1.00	0.99	
Flt Protected		0.99			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1749			1692			1799		1682	1755	
Flt Permitted		0.79			0.96			0.85		0.19	1.00	
Satd. Flow (perm)		1399			1632			1533		332	1755	
Peak-hour factor, PHF	0.96	0.96	0.96	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94
Adj. Flow (vph)	52	240	99	22	225	170	16	419	5	96	388	21
RTOR Reduction (vph)	0	14	0	0	28	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	377	0	0	389	0	0	439	0	96	407	0
Confl. Peds. (#/hr)	22		28	28		22	40		39	39		40
Confl. Bikes (#/hr)			6			4			10			4
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	5%	5%	5%	7%	7%	7%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		25.6			25.6			21.4		35.6	39.6	
Effective Green, g (s)		25.6			25.6			21.4		35.6	35.6	
Actuated g/C Ratio		0.28			0.28			0.24		0.40	0.40	
Clearance Time (s)		5.0			5.0			5.0		4.0		
Vehicle Extension (s)		2.0			2.0			0.2		2.0		
Lane Grp Cap (vph)		397			464			364		344	694	
v/s Ratio Prot										0.04	c0.23	
v/s Ratio Perm		c0.27			0.24			c0.29		0.07		
v/c Ratio		0.95			0.84			1.21		0.28	0.59	
Uniform Delay, d1		31.6			30.3			34.3		19.2	21.4	
Progression Factor		1.00			1.00			1.00		1.55	1.44	
Incremental Delay, d2		32.3			12.0			116.1		1.8	3.2	
Delay (s)		63.9			42.3			150.4		31.6	34.1	
Level of Service		E			D			F		C	C	
Approach Delay (s)		63.9			42.3			150.4			33.6	
Approach LOS		E			D			F			C	

Intersection Summary			
HCM 2000 Control Delay	71.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3
Lane Configurations														
Traffic Volume (vph)	10	530	10	5	460	20	0	0	0	20	2	10		
Future Volume (vph)	10	530	10	5	460	20	0	0	0	20	2	10		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes			Yes		
Link Speed (mph)		30			30			30			30			
Link Distance (ft)		458			334			278			631			
Travel Time (s)		10.4			7.6			6.3			14.3			
Confl. Peds. (#/hr)	15		22	22		15	13					13		
Confl. Bikes (#/hr)			13			5								
Peak Hour Factor	0.87	0.87	0.87	0.89	0.89	0.89	0.92	0.92	0.92	0.83	0.83	0.83		
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	2%	2%	2%	12%	12%	12%		
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	631	0	0	545	0	0	0	0	0	38	0		
Turn Type	Perm	NA		Perm	NA					Perm	NA			
Protected Phases		1			1						5		2	3
Permitted Phases	1			1						5				
Detector Phase	1	1		1	1					5	5			
Switch Phase														
Minimum Initial (s)	10.0	10.0		10.0	10.0					7.0	7.0		7.0	8.0
Minimum Split (s)	15.0	15.0		15.0	15.0					11.0	11.0		20.0	19.0
Total Split (s)	52.0	52.0		52.0	52.0					18.0	18.0		20.0	72.0
Total Split (%)	57.8%	57.8%		57.8%	57.8%					20.0%	20.0%		22%	80%
Yellow Time (s)	3.0	3.0		3.0	3.0					3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0					1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0			0.0						0.0			
Total Lost Time (s)		5.0			5.0						4.0			
Lead/Lag	Lead	Lead		Lead	Lead								Lag	
Lead-Lag Optimize?														
Recall Mode	C-Max	C-Max		C-Max	C-Max					None	None		None	Ped
v/c Ratio		0.42			0.36						0.28			
Control Delay		4.6			5.2						34.6			
Queue Delay		0.0			0.0						0.0			
Total Delay		4.6			5.2						34.6			
Queue Length 50th (ft)		26			54						14			
Queue Length 95th (ft)		m275			253						40			
Internal Link Dist (ft)		378			254			198			551			
Turn Bay Length (ft)														
Base Capacity (vph)		1510			1511						250			
Starvation Cap Reductn		0			0						0			
Spillback Cap Reductn		0			0						0			
Storage Cap Reductn		0			0						0			
Reduced v/c Ratio		0.42			0.36						0.15			

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 3 (3%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Etna Street/Life Street & North Beacon Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	530	10	5	460	20	0	0	0	20	2	10
Future Volume (vph)	10	530	10	5	460	20	0	0	0	20	2	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			1.00						0.95	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		1.00			0.99						0.96	
Flt Protected		1.00			1.00						0.97	
Satd. Flow (prot)		1802			1796						1502	
Flt Permitted		0.99			0.99						0.97	
Satd. Flow (perm)		1787			1788						1502	
Peak-hour factor, PHF	0.87	0.87	0.87	0.89	0.89	0.89	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	11	609	11	6	517	22	0	0	0	24	2	12
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	631	0	0	544	0	0	0	0	0	27	0
Confl. Peds. (#/hr)	15		22	22		15	13					13
Confl. Bikes (#/hr)			13			5						
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	2%	2%	2%	12%	12%	12%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						5	
Permitted Phases	1			1						5		
Actuated Green, G (s)		69.2			69.2						4.6	
Effective Green, g (s)		69.2			69.2						4.6	
Actuated g/C Ratio		0.77			0.77						0.05	
Clearance Time (s)		5.0			5.0						4.0	
Vehicle Extension (s)		2.0			2.0						2.0	
Lane Grp Cap (vph)		1374			1374						76	
v/s Ratio Prot												
v/s Ratio Perm		c0.35			0.30						0.02	
v/c Ratio		0.46			0.40						0.35	
Uniform Delay, d1		3.7			3.5						41.3	
Progression Factor		0.82			1.00						1.00	
Incremental Delay, d2		0.8			0.9						1.0	
Delay (s)		3.8			4.3						42.3	
Level of Service		A			A						D	
Approach Delay (s)		3.8			4.3			0.0			42.3	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	1	540	25	45	485	0	0	0	0	1	0	1
Future Vol, veh/h	1	540	25	45	485	0	0	0	0	1	0	1
Conflicting Peds, #/hr	18	0	20	20	0	18	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	86	86	86	25	25	25	58	58	58
Heavy Vehicles, %	5	5	5	4	4	4	0	0	0	0	0	0
Mvmt Flow	1	614	28	52	564	0	0	0	0	2	0	2

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	582	0	0	662	0	0				1317	1351	583
Stage 1	-	-	-	-	-	-				687	687	-
Stage 2	-	-	-	-	-	-				630	664	-
Critical Hdwy	4.15	-	-	4.14	-	-				6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-				5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.4	5.5	-
Follow-up Hdwy	2.245	-	-	2.236	-	-				3.5	4	3.3
Pot Cap-1 Maneuver	978	-	-	917	-	-				175	152	516
Stage 1	-	-	-	-	-	-				503	450	-
Stage 2	-	-	-	-	-	-				535	461	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	977	-	-	917	-	-				155	0	508
Mov Cap-2 Maneuver	-	-	-	-	-	-				155	0	-
Stage 1	-	-	-	-	-	-				454	0	-
Stage 2	-	-	-	-	-	-				526	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.8	20.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	977	-	-	917	-	-	238
HCM Lane V/C Ratio	0.001	-	-	0.057	-	-	0.014
HCM Control Delay (s)	8.7	0	-	9.2	0	-	20.3
HCM Lane LOS	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	-	-	0.2	-	-	0

Intersection	
Int Delay, s/veh	11.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	535	0	0	420	5	100	2	120	5	0	10
Future Vol, veh/h	5	535	0	0	420	5	100	2	120	5	0	10
Conflicting Peds, #/hr	20	0	19	19	0	20	1	0	10	10	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	91	91	91	94	94	94	75	75	75
Heavy Vehicles, %	5	5	5	6	6	6	1	1	1	17	17	17
Mvmt Flow	6	615	0	0	462	5	106	2	128	7	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	487	0	-	-	-	0	1098	1113	625	1185	1110	485
Stage 1	-	-	-	-	-	-	626	626	-	484	484	-
Stage 2	-	-	-	-	-	-	472	487	-	701	626	-
Critical Hdwy	4.15	-	-	-	-	-	7.11	6.51	6.21	7.27	6.67	6.37
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.27	5.67	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.27	5.67	-
Follow-up Hdwy	2.245	-	-	-	-	-	3.509	4.009	3.309	3.653	4.153	3.453
Pot Cap-1 Maneuver	1061	-	0	0	-	-	191	209	487	155	197	553
Stage 1	-	-	0	0	-	-	474	478	-	537	528	-
Stage 2	-	-	0	0	-	-	574	552	-	406	454	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1060	-	-	-	-	-	185	204	483	110	192	543
Mov Cap-2 Maneuver	-	-	-	-	-	-	185	204	-	110	192	-
Stage 1	-	-	-	-	-	-	470	474	-	523	519	-
Stage 2	-	-	-	-	-	-	559	543	-	292	450	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	62.2	21.7
HCM LOS			F	C

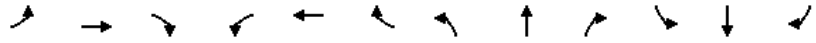
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	278	1060	-	-	-	235
HCM Lane V/C Ratio	0.85	0.005	-	-	-	0.085
HCM Control Delay (s)	62.2	8.4	0	-	-	21.7
HCM Lane LOS	F	A	A	-	-	C
HCM 95th %tile Q(veh)	7.2	0	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	85	575	0	0	380	105	0	0	0	65	0	55	
Future Volume (vph)	85	575	0	0	380	105	0	0	0	65	0	55	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12	
Storage Length (ft)	100		0	0		0	0		0	0		150	
Storage Lanes	1		0	0		1	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		456			284			205			781		
Travel Time (s)		10.4			6.5			4.7			17.8		
Confl. Peds. (#/hr)	16					16	3		1	1		3	
Confl. Bikes (#/hr)			12			6							
Peak Hour Factor	0.91	0.91	0.91	0.86	0.86	0.86	0.92	0.92	0.92	0.81	0.81	0.81	
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	2%	2%	2%	8%	8%	8%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	93	632	0	0	442	122	0	0	0	80	0	68	
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm	
Protected Phases	5	1 5			1		4	4		3			2
Permitted Phases	1 5			1		1						3	
Detector Phase	5	1 5		1	1	1	4	4		3		3	
Switch Phase													
Minimum Initial (s)	4.0			12.0	12.0	12.0	3.0	3.0		5.0		5.0	4.0
Minimum Split (s)	8.0			16.0	16.0	16.0	7.0	7.0		9.0		9.0	17.0
Total Split (s)	11.0			36.0	36.0	36.0	15.0	15.0		21.0		21.0	17.0
Total Split (%)	11.0%			36.0%	36.0%	36.0%	15.0%	15.0%		21.0%		21.0%	17%
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0
All-Red Time (s)	1.0			1.0	1.0	1.0	1.0	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	-1.0				-1.0	-1.0		-1.0		0.0		-1.0	
Total Lost Time (s)	3.0				3.0	3.0		3.0		4.0		3.0	
Lead/Lag				Lead	Lead	Lead	Lag	Lag		Lead		Lead	Lag
Lead-Lag Optimize?													
Recall Mode	None			C-Max	C-Max	C-Max	None	None		None		None	None
v/c Ratio	0.13	0.45			0.44	0.14				0.52		0.25	
Control Delay	4.1	5.9			20.6	6.8				54.8		2.1	
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0	
Total Delay	4.1	5.9			20.6	6.8				54.8		2.1	
Queue Length 50th (ft)	7	72			139	2				49		0	
Queue Length 95th (ft)	41	324			#313	35				83		0	
Internal Link Dist (ft)		376			204			125			701		
Turn Bay Length (ft)	100											150	
Base Capacity (vph)	709	1399			1012	872				284		377	
Starvation Cap Reductn	0	0			0	0				0		0	
Spillback Cap Reductn	0	0			0	0				0		0	
Storage Cap Reductn	0	0			0	0				0		0	
Reduced v/c Ratio	0.13	0.45			0.44	0.14				0.28		0.18	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 35 (35%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Wingate Driveway/Arthur Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	575	0	0	380	105	0	0	0	65	0	55
Future Volume (vph)	85	575	0	0	380	105	0	0	0	65	0	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			3.0	3.0				4.0		3.0
Lane Util. Factor	1.00	1.00			1.00	1.00				1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.96				1.00		0.96
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1601	1689			1657	1356				1671		1441
Flt Permitted	0.41	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	690	1689			1657	1356				1671		1441
Peak-hour factor, PHF	0.91	0.91	0.91	0.86	0.86	0.86	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	93	632	0	0	442	122	0	0	0	80	0	68
RTOR Reduction (vph)	0	0	0	0	0	52	0	0	0	0	0	62
Lane Group Flow (vph)	93	632	0	0	442	70	0	0	0	80	0	6
Confl. Peds. (#/hr)	16					16	3		1	1		3
Confl. Bikes (#/hr)			12			6						
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	2%	2%	2%	8%	8%	8%
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm
Protected Phases	5	1 5			1		4	4		3		
Permitted Phases	1 5			1		1						3
Actuated Green, G (s)	73.3	77.3			56.1	56.1				8.1		8.1
Effective Green, g (s)	75.3	78.3			57.1	57.1				8.1		9.1
Actuated g/C Ratio	0.75	0.78			0.57	0.57				0.08		0.09
Clearance Time (s)	4.0				4.0	4.0				4.0		4.0
Vehicle Extension (s)	2.0				4.0	4.0				2.0		2.0
Lane Grp Cap (vph)	685	1322			946	774				135		131
v/s Ratio Prot	0.02	c0.37			0.27					c0.05		
v/s Ratio Perm	0.08					0.05						0.00
v/c Ratio	0.14	0.48			0.47	0.09				0.59		0.05
Uniform Delay, d1	3.9	3.8			12.6	9.7				44.4		41.5
Progression Factor	1.00	1.00			1.22	2.34				1.00		1.00
Incremental Delay, d2	0.0	0.1			1.5	0.2				4.6		0.1
Delay (s)	3.9	3.9			16.8	22.9				48.9		41.5
Level of Service	A	A			B	C				D		D
Approach Delay (s)		3.9			18.1			0.0			45.5	
Approach LOS		A			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	640	0	0	460	25	55
Future Vol, veh/h	640	0	0	460	25	55
Conflicting Peds, #/hr	0	29	29	0	0	9
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	88	88	81	81
Heavy Vehicles, %	6	6	7	7	0	0
Mvmt Flow	681	0	0	523	31	68

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	942	690
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	261	-
Critical Hdwy	-	-	-	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	0	-	279	449
Stage 1	-	0	0	-	506	-
Stage 2	-	0	0	-	765	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	279	446
Mov Cap-2 Maneuver	-	-	-	-	279	-
Stage 1	-	-	-	-	506	-
Stage 2	-	-	-	-	765	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	376	-	-
HCM Lane V/C Ratio	0.263	-	-
HCM Control Delay (s)	18	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1	-	-

Intersection	
Int Delay, s/veh	15.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	635	60	70	405	55	175
Future Vol, veh/h	635	60	70	405	55	175
Conflicting Peds, #/hr	0	34	34	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	85	85	87	87
Heavy Vehicles, %	5	5	7	7	4	4
Mvmt Flow	668	63	82	476	63	201

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	766	0	1376	734
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	642	-
Critical Hdwy	-	-	4.17	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.263	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	825	-	158	417
Stage 1	-	-	-	-	471	-
Stage 2	-	-	-	-	520	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	825	-	133	405
Mov Cap-2 Maneuver	-	-	-	-	133	-
Stage 1	-	-	-	-	458	-
Stage 2	-	-	-	-	449	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	88.3
HCM LOS			F

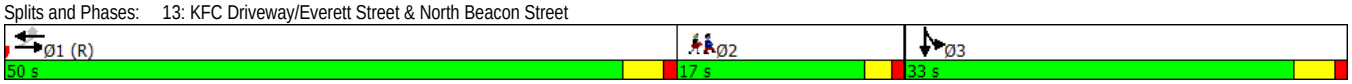
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	272	-	-	825	-
HCM Lane V/C Ratio	0.972	-	-	0.1	-
HCM Control Delay (s)	88.3	-	-	9.8	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	9.5	-	-	0.3	-

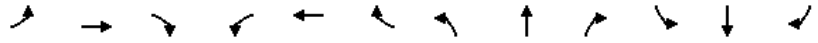
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	320	475	0	0	385	230	0	0	0	145	0	115	
Future Volume (vph)	320	475	0	0	385	230	0	0	0	145	0	115	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		446			477			138			517		
Travel Time (s)		10.1			10.8			3.1			11.8		
Confl. Peds. (#/hr)	12		40	40		12	24		16	16		24	
Confl. Bikes (#/hr)			13			5							
Peak Hour Factor	0.94	0.94	0.94	0.87	0.87	0.87	0.92	0.92	0.92	0.85	0.85	0.85	
Heavy Vehicles (%)	5%	5%	5%	6%	6%	6%	2%	2%	2%	3%	3%	3%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	845	0	0	443	264	0	0	0	0	306	0	
Turn Type	Perm	NA			NA	Perm				Split	NA		
Protected Phases		1			1					3	3		2
Permitted Phases	1					1							
Detector Phase	1	1			1	1				3	3		
Switch Phase													
Minimum Initial (s)	15.0	15.0			15.0	15.0				7.0	7.0		7.0
Minimum Split (s)	19.0	19.0			19.0	19.0				11.0	11.0		17.0
Total Split (s)	50.0	50.0			50.0	50.0				33.0	33.0		17.0
Total Split (%)	50.0%	50.0%			50.0%	50.0%				33.0%	33.0%		17%
Yellow Time (s)	3.0	3.0			3.0	3.0				3.0	3.0		2.0
All-Red Time (s)	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)		4.0			4.0	4.0					4.0		
Lead/Lag	Lead	Lead			Lead	Lead							Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max			C-Max	C-Max				Max	Max		None
v/c Ratio		1.18dl			0.54	0.32					0.50		
Control Delay		40.7			22.4	3.2					26.8		
Queue Delay		0.0			1.4	0.0					0.0		
Total Delay		40.7			23.8	3.2					26.8		
Queue Length 50th (ft)		262			196	0					143		
Queue Length 95th (ft)		#394			276	38					216		
Internal Link Dist (ft)		366			397			58			437		
Turn Bay Length (ft)													
Base Capacity (vph)		924			824	817					616		
Starvation Cap Reductn		0			205	0					0		
Spillback Cap Reductn		0			0	0					0		
Storage Cap Reductn		0			0	0					0		
Reduced v/c Ratio		0.91			0.72	0.32					0.50		

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 35 (35%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: KFC Driveway/Everett Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	320	475	0	0	385	230	0	0	0	145	0	115
Future Volume (vph)	320	475	0	0	385	230	0	0	0	145	0	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0					4.0	
Lane Util. Factor		0.95			1.00	1.00					1.00	
Frpb, ped/bikes		1.00			1.00	0.96					0.98	
Flpb, ped/bikes		1.00			1.00	1.00					1.00	
Frt		1.00			1.00	0.85					0.94	
Flt Protected		0.98			1.00	1.00					0.97	
Satd. Flow (prot)		3362			1792	1467					1648	
Flt Permitted		0.59			1.00	1.00					0.97	
Satd. Flow (perm)		2010			1792	1467					1648	
Peak-hour factor, PHF	0.94	0.94	0.94	0.87	0.87	0.87	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	340	505	0	0	443	264	0	0	0	171	0	135
RTOR Reduction (vph)	0	0	0	0	0	146	0	0	0	0	28	0
Lane Group Flow (vph)	0	845	0	0	443	118	0	0	0	0	278	0
Confl. Peds. (#/hr)	12		40	40		12	24		16	16		24
Confl. Bikes (#/hr)			13			5						
Heavy Vehicles (%)	5%	5%	5%	6%	6%	6%	2%	2%	2%	3%	3%	3%
Turn Type	Perm	NA			NA	Perm				Split	NA	
Protected Phases		1			1					3	3	
Permitted Phases	1					1						
Actuated Green, G (s)		44.8			44.8	44.8					35.8	
Effective Green, g (s)		44.8			44.8	44.8					35.8	
Actuated g/C Ratio		0.45			0.45	0.45					0.36	
Clearance Time (s)		4.0			4.0	4.0					4.0	
Vehicle Extension (s)		2.0			2.0	2.0					2.0	
Lane Grp Cap (vph)		900			802	657					589	
v/s Ratio Prot					0.25						c0.17	
v/s Ratio Perm		c0.42				0.08						
v/c Ratio		1.18dl			0.55	0.18					0.47	
Uniform Delay, d1		26.3			20.2	16.6					24.8	
Progression Factor		0.99			1.00	1.00					1.00	
Incremental Delay, d2		18.0			2.7	0.6					2.7	
Delay (s)		44.0			23.0	17.2					27.5	
Level of Service		D			C	B					C	
Approach Delay (s)		44.0			20.8			0.0			27.5	
Approach LOS		D			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	140	405	20	10	120	445	55	0	280	180	45	380	115
Future Volume (vph)	140	405	20	10	120	445	55	0	280	180	45	380	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		420		0	0		150	0		75
Storage Lanes	0		0		1		0	0		1	0		1
Taper Length (ft)	25				25			25			25		
Right Turn on Red			No				Yes			Yes			No
Link Speed (mph)		30				30			30			30	
Link Distance (ft)		477				1053			361			234	
Travel Time (s)		10.8				23.9			8.2			5.3	
Confl. Peds. (#/hr)	53		36	23	36		53	54		23	23		54
Confl. Bikes (#/hr)			27				5			18			5
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.91	0.91	0.91	0.87	0.87	0.87
Heavy Vehicles (%)	5%	5%	5%	8%	8%	8%	8%	7%	7%	7%	10%	10%	10%
Shared Lane Traffic (%)					10%								
Lane Group Flow (vph)	0	614	0	0	127	550	0	0	308	198	0	489	132
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Detector Phase	3	3		2	2	2			1	1	4	1 4	1
Switch Phase													
Minimum Initial (s)	8.0	8.0		10.0	10.0	10.0			10.0	10.0	4.0		10.0
Minimum Split (s)	26.0	26.0		27.0	27.0	27.0			24.0	24.0	10.0		24.0
Total Split (s)	37.0	37.0		30.0	30.0	30.0			32.0	32.0	11.0		32.0
Total Split (%)	33.6%	33.6%		27.3%	27.3%	27.3%			29.1%	29.1%	10.0%		29.1%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0			4.0	4.0	3.0		4.0
All-Red Time (s)	6.0	6.0		6.0	6.0	6.0			3.0	3.0	3.0		3.0
Lost Time Adjust (s)		0.0			0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag			Lead	Lead	Lag		Lead
Lead-Lag Optimize?													
Recall Mode	None	None		Max	Max	Max			C-Max	C-Max	None		C-Max
v/c Ratio		0.84			0.46	0.96			0.40	0.40		0.57	0.44
Control Delay		52.1			46.4	73.3			37.8	5.3		31.8	40.8
Queue Delay		0.0			0.0	0.0			0.0	0.0		0.0	0.0
Total Delay		52.1			46.4	73.3			37.8	5.3		31.8	40.8
Queue Length 50th (ft)		216			89	209			97	0		97	53
Queue Length 95th (ft)		277			156	#328			140	40		192	129
Internal Link Dist (ft)		397				973			281			154	
Turn Bay Length (ft)					420					150			75
Base Capacity (vph)		826			276	573			777	498		856	298
Starvation Cap Reductn		0			0	0			0	0		0	0
Spillback Cap Reductn		0			0	0			0	0		0	0
Storage Cap Reductn		0			0	0			0	0		0	0
Reduced v/c Ratio		0.74			0.46	0.96			0.40	0.40		0.57	0.44

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 2 (2%), Referenced to phase 1:NESW, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 14: Cambridge Street & North Beacon Street/Brighton Avenue

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	140	405	20	10	120	445	55	0	280	180	45	380	115
Future Volume (vph)	140	405	20	10	120	445	55	0	280	180	45	380	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		10.0			10.0	10.0			7.0	7.0		7.0	7.0
Lane Util. Factor		0.95			0.91	0.91			0.95	1.00		0.95	1.00
Frpb, ped/bikes		1.00			1.00	0.99			1.00	0.93		1.00	0.88
Flpb, ped/bikes		1.00			1.00	1.00			1.00	1.00		1.00	1.00
Frt		0.99			1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected		0.99			0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3365			1521	3107			3374	1401		3256	1294
Flt Permitted		0.99			0.95	1.00			1.00	1.00		0.87	1.00
Satd. Flow (perm)		3365			1521	3107			3374	1401		2850	1294
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.91	0.91	0.91	0.87	0.87	0.87
Adj. Flow (vph)	152	440	22	11	129	478	59	0	308	198	52	437	132
RTOR Reduction (vph)	0	0	0	0	0	8	0	0	0	152	0	0	0
Lane Group Flow (vph)	0	614	0	0	127	542	0	0	308	46	0	489	132
Confl. Peds. (#/hr)	53		36	23	36		53	54		23	23		54
Confl. Bikes (#/hr)			27				5			18			5
Heavy Vehicles (%)	5%	5%	5%	8%	8%	8%	8%	7%	7%	7%	10%	10%	10%
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Actuated Green, G (s)		23.9			20.0	20.0			25.4	25.4		33.1	25.4
Effective Green, g (s)		23.9			20.0	20.0			25.4	25.4		33.1	25.4
Actuated g/C Ratio		0.22			0.18	0.18			0.23	0.23		0.30	0.23
Clearance Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Vehicle Extension (s)		2.0			2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)		731			276	564			779	323		886	298
v/s Ratio Prot		c0.18			0.08	c0.17			0.09			c0.04	
v/s Ratio Perm										0.03		c0.13	0.10
v/c Ratio		0.84			0.46	0.96			0.40	0.14		0.55	0.44
Uniform Delay, d1		41.2			40.2	44.6			35.8	33.6		32.2	36.2
Progression Factor		1.00			1.00	1.00			1.00	1.00		0.93	0.97
Incremental Delay, d2		8.1			5.4	29.3			1.5	0.9		0.4	4.5
Delay (s)		49.3			45.6	73.9			37.3	34.5		30.3	39.8
Level of Service		D			D	E			D	C		C	D
Approach Delay (s)		49.3				68.6			36.2			32.3	
Approach LOS		D				E			D			C	

Intersection Summary			
HCM 2000 Control Delay	47.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	33.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	430	515	10	2	25
Future Vol, veh/h	45	430	515	10	2	25
Conflicting Peds, #/hr	36	0	0	36	36	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	95	95	52	52
Heavy Vehicles, %	8	8	11	11	3	3
Mvmt Flow	46	439	542	11	4	48

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	589	0	-	0	1150	587
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	567	-
Critical Hdwy	4.18	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.272	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	957	-	-	-	218	508
Stage 1	-	-	-	-	556	-
Stage 2	-	-	-	-	566	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	954	-	-	-	192	491
Mov Cap-2 Maneuver	-	-	-	-	192	-
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	514	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	954	-	-	-	440
HCM Lane V/C Ratio	0.048	-	-	-	0.118
HCM Control Delay (s)	9	0	-	-	14.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	425	1	2	525	25	0	0	0	5	2	15
Future Volume (vph)	10	425	1	2	525	25	0	0	0	5	2	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		587			512			200			484	
Travel Time (s)		13.3			11.6			4.5			11.0	
Confl. Peds. (#/hr)	25		9	9		25	8		9	9		8
Confl. Bikes (#/hr)			28			7						
Peak Hour Factor	0.98	0.98	0.98	0.92	0.92	0.92	0.50	0.50	0.50	0.63	0.63	0.63
Heavy Vehicles (%)	9%	9%	9%	10%	10%	10%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	445	0	0	600	0	0	0	0	0	35	0
Turn Type	Perm	NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases	1			1								
Detector Phase	1	1		1	1					5	5	
Switch Phase												
Minimum Initial (s)	20.0	20.0		20.0	20.0					8.0	8.0	
Minimum Split (s)	24.0	24.0		24.0	24.0					22.0	22.0	
Total Split (s)	84.0	84.0		84.0	84.0					26.0	26.0	
Total Split (%)	76.4%	76.4%		76.4%	76.4%					23.6%	23.6%	
Yellow Time (s)	3.0	3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max					None	None	
v/c Ratio		0.29			0.39						0.20	
Control Delay		3.8			11.6						25.0	
Queue Delay		0.0			1.4						0.0	
Total Delay		3.8			13.0						25.0	
Queue Length 50th (ft)		63			302						8	
Queue Length 95th (ft)		m126			493						18	
Internal Link Dist (ft)		507			432			120			404	
Turn Bay Length (ft)												
Base Capacity (vph)		1537			1525						349	
Starvation Cap Reductn		0			686						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.29			0.72						0.10	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: Driveway/Denby Road & Cambridge Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	425	1	2	525	25	0	0	0	5	2	15
Future Volume (vph)	10	425	1	2	525	25	0	0	0	5	2	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			0.99						0.97	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		1.00			0.99						0.91	
Flt Protected		1.00			1.00						0.99	
Satd. Flow (prot)		1739			1707						1653	
Flt Permitted		0.99			1.00						0.99	
Satd. Flow (perm)		1719			1706						1653	
Peak-hour factor, PHF	0.98	0.98	0.98	0.92	0.92	0.92	0.50	0.50	0.50	0.63	0.63	0.63
Adj. Flow (vph)	10	434	1	2	571	27	0	0	0	8	3	24
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	23	0
Lane Group Flow (vph)	0	445	0	0	599	0	0	0	0	0	12	0
Confl. Peds. (#/hr)	25		9	9		25	8		9	9		8
Confl. Bikes (#/hr)			28			7						
Heavy Vehicles (%)	9%	9%	9%	10%	10%	10%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases	1			1								
Actuated Green, G (s)		95.2			95.2						6.8	
Effective Green, g (s)		95.2			95.2						6.8	
Actuated g/C Ratio		0.87			0.87						0.06	
Clearance Time (s)		4.0			4.0						4.0	
Vehicle Extension (s)		0.2			0.2						2.0	
Lane Grp Cap (vph)		1487			1476						102	
v/s Ratio Prot											c0.01	
v/s Ratio Perm		0.26			c0.35							
v/c Ratio		0.30			0.41						0.12	
Uniform Delay, d1		1.3			1.5						48.8	
Progression Factor		1.74			4.92						1.01	
Incremental Delay, d2		0.4			0.7						0.2	
Delay (s)		2.8			8.2						49.2	
Level of Service		A			A						D	
Approach Delay (s)		2.8			8.2			0.0			49.2	
Approach LOS		A			A			A			D	

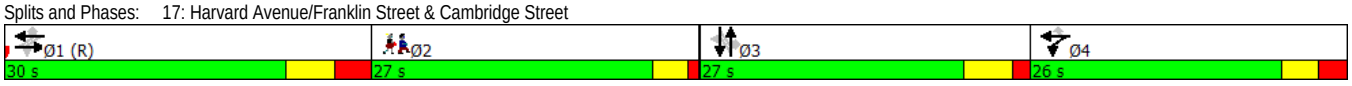
Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

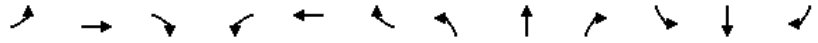
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	0	410	20	385	520	85	35	15	480	90	20	5	
Future Volume (vph)	0	410	20	385	520	85	35	15	480	90	20	5	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		75	0		100	0		75	0		0	
Storage Lanes	0		1	1		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		512			518			381			156		
Travel Time (s)		11.6			11.8			8.7			3.5		
Confl. Peds. (#/hr)	35		17	17		35	23		57	57		23	
Confl. Bikes (#/hr)			19			15						12	
Peak Hour Factor	0.88	0.88	0.88	0.92	0.92	0.92	0.92	0.92	0.92	0.83	0.83	0.83	
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	5%	5%	5%	8%	8%	8%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	489	0	418	565	92	0	54	522	0	138	0	
Turn Type		NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		
Protected Phases		1		4	1 4			3			3		2
Permitted Phases	1			1 4		1 4	3		3	3			
Detector Phase	1	1		4	1 4	1 4	3	3	3	3	3		
Switch Phase													
Minimum Initial (s)	10.0	10.0		8.0			8.0	8.0	8.0	8.0	8.0		7.0
Minimum Split (s)	17.0	17.0		13.5			13.5	13.5	13.5	13.5	13.5		27.0
Total Split (s)	30.0	30.0		26.0			27.0	27.0	27.0	27.0	27.0		27.0
Total Split (%)	27.3%	27.3%		23.6%			24.5%	24.5%	24.5%	24.5%	24.5%		25%
Yellow Time (s)	4.0	4.0		3.0			4.0	4.0	4.0	4.0	4.0		3.0
All-Red Time (s)	3.0	3.0		2.5			1.5	1.5	1.5	1.5	1.5		1.0
Lost Time Adjust (s)		0.0		0.0				0.0	0.0		0.0		
Total Lost Time (s)		7.0		5.5				5.5	5.5		5.5		
Lead/Lag	Lead	Lead		Lag			Lead	Lead	Lead	Lead	Lead		Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		None			None	None	None	None	None		None
v/c Ratio		0.53		0.78	0.60	0.12		0.26	0.80		0.75		
Control Delay		43.2		31.9	24.3	7.3		42.2	13.7		66.7		
Queue Delay		0.0		0.0	0.2	0.0		0.0	0.0		0.0		
Total Delay		43.2		31.9	24.6	7.3		42.2	13.7		66.7		
Queue Length 50th (ft)		153		192	296	10		34	0		92		
Queue Length 95th (ft)		243		#360	455	41		69	114		142		
Internal Link Dist (ft)		432			438			301			76		
Turn Bay Length (ft)						100			75				
Base Capacity (vph)		925		537	924	755		265	691		236		
Starvation Cap Reductn		0		0	0	0		0	0		0		
Spillback Cap Reductn		0		0	54	0		0	0		0		
Storage Cap Reductn		0		0	0	0		0	0		0		
Reduced v/c Ratio		0.53		0.78	0.65	0.12		0.20	0.76		0.58		

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 91 (83%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: Harvard Avenue/Franklin Street & Cambridge Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	410	20	385	520	85	35	15	480	90	20	5
Future Volume (vph)	0	410	20	385	520	85	35	15	480	90	20	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		5.5	7.0	7.0		5.5	5.5		5.5	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00		1.00	1.00	0.93		1.00	0.88		0.99	
Flpb, ped/bikes		1.00		1.00	1.00	1.00		0.97	1.00		0.92	
Frt		0.99		1.00	1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00	1.00		0.97	1.00		0.96	
Satd. Flow (prot)		3277		1666	1759	1395		1687	1351		1538	
Flt Permitted		1.00		0.37	1.00	1.00		0.77	1.00		0.74	
Satd. Flow (perm)		3277		657	1759	1395		1349	1351		1177	
Peak-hour factor, PHF	0.88	0.88	0.88	0.92	0.92	0.92	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	0	466	23	418	565	92	38	16	522	108	24	6
RTOR Reduction (vph)	0	3	0	0	0	33	0	0	442	0	2	0
Lane Group Flow (vph)	0	486	0	418	565	59	0	54	80	0	136	0
Confl. Peds. (#/hr)	35		17	17		35	23		57	57		23
Confl. Bikes (#/hr)			19			15						12
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	5%	5%	5%	8%	8%	8%
Turn Type		NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		1		4	1 4			3			3	
Permitted Phases	1			1 4		1 4	3		3	3		
Actuated Green, G (s)		30.2		52.8	58.3	58.3		16.8	16.8		16.8	
Effective Green, g (s)		30.2		52.8	52.8	52.8		16.8	16.8		16.8	
Actuated g/C Ratio		0.27		0.48	0.48	0.48		0.15	0.15		0.15	
Clearance Time (s)		7.0		5.5				5.5	5.5		5.5	
Vehicle Extension (s)		2.0		2.0				2.0	2.0		2.0	
Lane Grp Cap (vph)		899		522	844	669		206	206		179	
v/s Ratio Prot		0.15		c0.16	0.32							
v/s Ratio Perm				c0.22		0.04		0.04	0.06		c0.12	
v/c Ratio		0.54		0.80	0.67	0.09		0.26	0.39		0.76	
Uniform Delay, d1		34.0		20.2	21.9	15.5		41.1	42.0		44.7	
Progression Factor		1.11		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.3		8.1	1.6	0.0		0.2	0.4		15.7	
Delay (s)		40.1		28.3	23.5	15.5		41.4	42.4		60.4	
Level of Service		D		C	C	B		D	D		E	
Approach Delay (s)		40.1			24.7			42.3			60.4	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	90	20	10	95	10	20
Future Vol, veh/h	90	20	10	95	10	20
Conflicting Peds, #/hr	0	9	9	0	0	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	76	76	50	50
Heavy Vehicles, %	5	5	2	2	21	21
Mvmt Flow	115	26	13	125	20	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	150	0	288	140
Stage 1	-	-	-	-	137	-
Stage 2	-	-	-	-	151	-
Critical Hdwy	-	-	4.12	-	6.61	6.41
Critical Hdwy Stg 1	-	-	-	-	5.61	-
Critical Hdwy Stg 2	-	-	-	-	5.61	-
Follow-up Hdwy	-	-	2.218	-	3.689	3.489
Pot Cap-1 Maneuver	-	-	1431	-	664	860
Stage 1	-	-	-	-	845	-
Stage 2	-	-	-	-	832	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1427	-	652	851
Mov Cap-2 Maneuver	-	-	-	-	652	-
Stage 1	-	-	-	-	839	-
Stage 2	-	-	-	-	824	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	10.1
HCM LOS			B

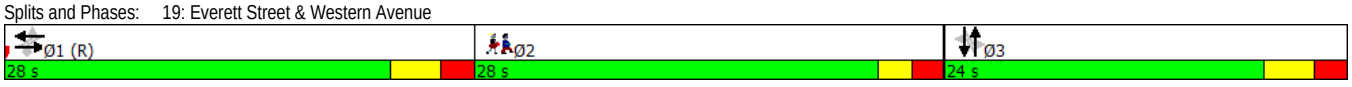
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	772	-	-	1427	-
HCM Lane V/C Ratio	0.078	-	-	0.009	-
HCM Control Delay (s)	10.1	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	50	525	95	105	360	50	80	285	110	25	140	30	
Future Volume (vph)	50	525	95	105	360	50	80	285	110	25	140	30	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		100	75		0	115		0	0		0	
Storage Lanes	0		1	1		0	1		0	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		2049			739			1771			510		
Travel Time (s)		46.6			16.8			40.3			11.6		
Confl. Peds. (#/hr)	9		12	12		9	15		14	14		15	
Confl. Bikes (#/hr)						6						1	
Peak Hour Factor	0.92	0.92	0.92	0.86	0.86	0.86	0.86	0.86	0.86	0.94	0.94	0.94	
Heavy Vehicles (%)	11%	11%	11%	8%	8%	8%	3%	3%	3%	3%	3%	3%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	625	103	122	477	0	93	459	0	0	208	0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA		
Protected Phases		1			1			3			3		2
Permitted Phases	1		1	1			3			3			
Detector Phase	1	1	1	1	1		3	3		3	3		
Switch Phase													
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		8.0	8.0		8.0	8.0		4.0
Minimum Split (s)	17.0	17.0	17.0	17.0	17.0		17.0	17.0		17.0	17.0		28.0
Total Split (s)	28.0	28.0	28.0	28.0	28.0		24.0	24.0		24.0	24.0		28.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%		30.0%	30.0%		30.0%	30.0%		35%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0		2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0		-1.0	-1.0			-1.0		
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0		
Lead/Lag	Lead	Lead	Lead	Lead	Lead								Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None		None
v/c Ratio		0.68	0.12	0.44	0.48		0.41	1.01			0.98		
Control Delay		21.0	5.5	23.0	15.9		31.5	76.7			88.2		
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		21.0	5.5	23.0	15.9		31.5	76.7			88.2		
Queue Length 50th (ft)		158	3	25	98		39	~225			98		
Queue Length 95th (ft)		#605	42	#146	#375		79	#387			#234		
Internal Link Dist (ft)		1969			659			1691			430		
Turn Bay Length (ft)			100	75			115						
Base Capacity (vph)		923	844	278	1000		229	453			213		
Starvation Cap Reductn		0	0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0	0		0	0			0		
Storage Cap Reductn		0	0	0	0		0	0			0		
Reduced v/c Ratio		0.68	0.12	0.44	0.48		0.41	1.01			0.98		

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 19: Everett Street & Western Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	525	95	105	360	50	80	285	110	25	140	30
Future Volume (vph)	50	525	95	105	360	50	80	285	110	25	140	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes		1.00	0.97	1.00	1.00		1.00	0.99			0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		0.98	1.00			1.00	
Frt		1.00	0.85	1.00	0.98		1.00	0.96			0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)		1704	1410	1665	1720		1721	1744			1779	
Flt Permitted		0.93	1.00	0.27	1.00		0.51	1.00			0.46	
Satd. Flow (perm)		1591	1410	479	1720		918	1744			821	
Peak-hour factor, PHF	0.92	0.92	0.92	0.86	0.86	0.86	0.86	0.86	0.86	0.94	0.94	0.94
Adj. Flow (vph)	54	571	103	122	419	58	93	331	128	27	149	32
RTOR Reduction (vph)	0	0	38	0	4	0	0	17	0	0	8	0
Lane Group Flow (vph)	0	625	65	122	473	0	93	442	0	0	200	0
Confl. Peds. (#/hr)	9		12	12		9	15		14	14		15
Confl. Bikes (#/hr)						6						1
Heavy Vehicles (%)	11%	11%	11%	8%	8%	8%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			3			3	
Permitted Phases	1		1	1			3			3		
Actuated Green, G (s)		42.2	42.2	42.2	42.2		19.0	19.0			19.0	
Effective Green, g (s)		43.2	43.2	43.2	43.2		20.0	20.0			20.0	
Actuated g/C Ratio		0.54	0.54	0.54	0.54		0.25	0.25			0.25	
Clearance Time (s)		5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		859	761	258	928		229	436			205	
v/s Ratio Prot					0.27			c0.25				
v/s Ratio Perm		c0.39	0.05	0.25			0.10				0.24	
v/c Ratio		0.73	0.09	0.47	0.51		0.41	1.01			0.97	
Uniform Delay, d1		13.9	8.9	11.4	11.7		25.0	30.0			29.7	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2		5.4	0.2	6.1	2.0		0.4	46.5			54.9	
Delay (s)		19.3	9.1	17.5	13.7		25.5	76.5			84.6	
Level of Service		B	A	B	B		C	E			F	
Approach Delay (s)		17.9			14.4			67.9			84.6	
Approach LOS		B			B			E			F	

Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	5	30	0	40	5	445	55	60	295	0
Future Vol, veh/h	1	0	5	30	0	40	5	445	55	60	295	0
Conflicting Peds, #/hr	1	0	1	1	0	1	16	0	9	9	0	16
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	82	82	82	94	94	94	88	88	88
Heavy Vehicles, %	25	25	25	4	4	4	3	3	3	4	4	4
Mvmt Flow	2	0	10	37	0	49	5	473	59	68	335	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1027	1040	352	1000	1010	513	351	0	0	541	0	0
Stage 1	488	488	-	522	522	-	-	-	-	-	-	-
Stage 2	539	552	-	478	488	-	-	-	-	-	-	-
Critical Hdwy	7.35	6.75	6.45	7.14	6.54	6.24	4.13	-	-	4.14	-	-
Critical Hdwy Stg 1	6.35	5.75	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.35	5.75	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.725	4.225	3.525	3.536	4.036	3.336	2.227	-	-	2.236	-	-
Pot Cap-1 Maneuver	193	210	643	220	238	557	1202	-	-	1018	-	-
Stage 1	520	513	-	534	528	-	-	-	-	-	-	-
Stage 2	487	479	-	565	547	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	162	188	634	200	213	552	1201	-	-	1017	-	-
Mov Cap-2 Maneuver	162	188	-	200	213	-	-	-	-	-	-	-
Stage 1	510	465	-	527	521	-	-	-	-	-	-	-
Stage 2	441	473	-	510	495	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	20.6	0.1	1.5
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1201	-	-	427	315	1017	-	-
HCM Lane V/C Ratio	0.004	-	-	0.028	0.271	0.067	-	-
HCM Control Delay (s)	8	0	-	13.7	20.6	8.8	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.1	0.2	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	500	295	35
Future Vol, veh/h	5	5	5	500	295	35
Conflicting Peds, #/hr	0	0	14	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	42	42	83	83	90	90
Heavy Vehicles, %	0	0	1	1	3	3
Mvmt Flow	12	12	6	602	328	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	975	361	381	0	-	0
Stage 1	361	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.11	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.209	-	-	-
Pot Cap-1 Maneuver	281	688	1183	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	272	680	1183	-	-	-
Mov Cap-2 Maneuver	272	-	-	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	533	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.9	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1183	-	389	-	-
HCM Lane V/C Ratio	0.005	-	0.061	-	-
HCM Control Delay (s)	8.1	0	14.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	20	485	60	45	255
Future Vol, veh/h	20	20	485	60	45	255
Conflicting Peds, #/hr	0	8	0	0	18	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	85	85	95	95
Heavy Vehicles, %	5	5	2	2	2	2
Mvmt Flow	22	22	571	71	47	268

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	987	632	0	0	659	0
Stage 1	624	-	-	-	-	-
Stage 2	363	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.12	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.218	-
Pot Cap-1 Maneuver	271	475	-	-	929	-
Stage 1	528	-	-	-	-	-
Stage 2	697	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	251	465	-	-	923	-
Mov Cap-2 Maneuver	251	-	-	-	-	-
Stage 1	520	-	-	-	-	-
Stage 2	655	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.7	0	1.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	326	923	-
HCM Lane V/C Ratio	-	-	0.132	0.051	-
HCM Control Delay (s)	-	-	17.7	9.1	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.2	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	105	2	0	40
Future Vol, veh/h	1	1	105	2	0	40
Conflicting Peds, #/hr	0	0	0	8	8	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	79	79	95	95
Heavy Vehicles, %	0	0	5	5	2	2
Mvmt Flow	2	2	133	3	0	42

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	184	142	0	0	143	0
Stage 1	142	-	-	-	-	-
Stage 2	42	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	810	911	-	-	1440	-
Stage 1	890	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	805	905	-	-	1440	-
Mov Cap-2 Maneuver	805	-	-	-	-	-
Stage 1	884	-	-	-	-	-
Stage 2	986	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	852	1440	-
HCM Lane V/C Ratio	-	-	0.005	-	-
HCM Control Delay (s)	-	-	9.2	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	5	5	5	0	20	15	2	5	20	10	70	0	0	10	1
Future Vol, veh/h	0	5	5	5	0	20	15	2	5	20	10	70	0	0	10	1
Peak Hour Factor	0.92	0.63	0.63	0.63	0.92	0.83	0.83	0.83	0.79	0.79	0.79	0.79	0.92	0.50	0.50	0.50
Heavy Vehicles, %	2	0	0	0	2	9	9	9	5	5	5	5	2	0	0	0
Mvmt Flow	0	8	8	8	0	24	18	2	6	25	13	89	0	0	20	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.2	7.7	7.4	7.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	33%	54%	0%
Vol Thru, %	10%	33%	41%	91%
Vol Right, %	70%	33%	5%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	105	15	37	11
LT Vol	21	5	20	0
Through Vol	11	5	15	10
RT Vol	73	5	2	1
Lane Flow Rate	133	24	45	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.138	0.027	0.055	0.025
Departure Headway (Hd)	3.741	4.071	4.417	4.066
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	953	871	806	873
Service Time	1.786	2.133	2.471	2.125
HCM Lane V/C Ratio	0.14	0.028	0.056	0.025
HCM Control Delay	7.4	7.2	7.7	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.1	0.2	0.1

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	5	150	25	0	10	135	10	0	15	1	10	0	5	1	5
Future Vol, veh/h	0	5	150	25	0	10	135	10	0	15	1	10	0	5	1	5
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.76	0.76	0.76	0.92	0.60	0.60	0.60	0.92	0.63	0.63	0.63
Heavy Vehicles, %	2	2	2	2	2	7	7	7	2	3	3	3	2	30	30	30
Mvmt Flow	0	5	165	27	0	13	178	13	0	25	2	17	0	8	2	8
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	8.8	8	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	58%	3%	6%	45%
Vol Thru, %	4%	83%	87%	9%
Vol Right, %	38%	14%	6%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	26	180	155	11
LT Vol	15	5	10	5
Through Vol	1	150	135	1
RT Vol	10	25	10	5
Lane Flow Rate	43	198	204	17
Geometry Grp	1	1	1	1
Degree of Util (X)	0.057	0.232	0.247	0.025
Departure Headway (Hd)	4.739	4.219	4.355	5.169
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	757	855	830	694
Service Time	2.762	2.231	2.355	3.193
HCM Lane V/C Ratio	0.057	0.232	0.246	0.024
HCM Control Delay	8	8.5	8.8	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.9	1	0.1

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	100	35	30	0	10	90	50	0	65	50	15	0	2	5	5
Future Vol, veh/h	0	100	35	30	0	10	90	50	0	65	50	15	0	2	5	5
Peak Hour Factor	0.92	0.87	0.87	0.87	0.92	0.80	0.80	0.80	0.92	0.91	0.91	0.91	0.92	0.55	0.55	0.55
Heavy Vehicles, %	2	0	0	0	2	4	4	4	2	11	11	11	2	36	36	36
Mvmt Flow	0	115	40	34	0	13	113	63	0	71	55	16	0	4	9	9
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	8.8	9.3	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	61%	7%	17%
Vol Thru, %	38%	21%	60%	42%
Vol Right, %	12%	18%	33%	42%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	165	150	12
LT Vol	65	100	10	2
Through Vol	50	35	90	5
RT Vol	15	30	50	5
Lane Flow Rate	143	190	188	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.198	0.24	0.23	0.032
Departure Headway (Hd)	4.998	4.547	4.424	5.349
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	717	789	812	667
Service Time	3.038	2.575	2.452	3.398
HCM Lane V/C Ratio	0.199	0.241	0.232	0.033
HCM Control Delay	9.3	9	8.8	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.9	0.9	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	205	0	45	130	210	60	190	830	0	5	0	790	255
Future Volume (vph)	205	0	45	130	210	60	190	830	0	5	0	790	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	0		0		0		50
Storage Lanes	2		0	1		0	0		0		0		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		797			420			570				590	
Travel Time (s)		18.1			9.5			13.0				13.4	
Confl. Peds. (#/hr)	5		3	3		5	1		49	5	49		1
Confl. Bikes (#/hr)									20				5
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.87	0.87	0.87	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	220	48	0	141	293	0	0	1172	0	0	0	845	271
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Detector Phase	3			2	2		4	1 4		1		1	1 3
Switch Phase													
Minimum Initial (s)	6.0			6.0	6.0		6.0			10.0		10.0	
Minimum Split (s)	24.0			12.0	12.0		12.0			22.0		22.0	
Total Split (s)	24.0			22.0	22.0		22.0			31.0		31.0	
Total Split (%)	24.2%			22.2%	22.2%		22.2%			31.3%		31.3%	
Yellow Time (s)	4.0			4.0	4.0		4.0			4.0		4.0	
All-Red Time (s)	2.0			2.0	2.0		2.0			2.0		2.0	
Lost Time Adjust (s)	0.0			0.0	0.0							0.0	
Total Lost Time (s)	6.0			6.0	6.0							6.0	
Lead/Lag	Lead			Lag	Lag		Lag			Lead		Lead	
Lead-Lag Optimize?													
Recall Mode	None			None	None		Max			C-Max		C-Max	
v/c Ratio	0.59	0.21		0.49	0.98			0.90				1.15	0.42
Control Delay	48.5	0.0		44.5	88.5			29.0				116.5	8.4
Queue Delay	0.0	0.0		0.0	0.0			0.0				0.0	0.0
Total Delay	48.5	0.0		44.5	88.5			29.0				116.5	8.4
Queue Length 50th (ft)	69	0		82	179			249				~331	35
Queue Length 95th (ft)	103	0		143	#349			#332				#452	60
Internal Link Dist (ft)		717			340			490				510	
Turn Bay Length (ft)				75									50
Base Capacity (vph)	618	231		286	299			1298				737	753
Starvation Cap Reductn	0	0		0	0			0				0	0
Spillback Cap Reductn	0	0		0	0			0				0	0
Storage Cap Reductn	0	0		0	0			0				0	0
Reduced v/c Ratio	0.36	0.21		0.49	0.98			0.90				1.15	0.36

Intersection Summary

Area Type: Other
Cycle Length: 99
Actuated Cycle Length: 99
Offset: 47 (47%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Market Street & Leo M. Birmingham Parkway & Lincoln Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	205	0	45	130	210	60	190	830	0	5	0	790	255
Future Volume (vph)	205	0	45	130	210	60	190	830	0	5	0	790	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	6.0			6.0				6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00			0.95				0.95	1.00
Frpb, ped/bikes	1.00	0.90		1.00	1.00			1.00				1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Frt	1.00	0.85		1.00	0.97			1.00				1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99				1.00	1.00
Satd. Flow (prot)	3400	0		1770	1792			3507				3538	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.53				0.83	1.00
Satd. Flow (perm)	3400	0		1770	1792			1884				2921	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.92	0.92	0.92	0.87	0.87	0.87	0.94	0.94	0.94	0.94
Adj. Flow (vph)	220	0	48	141	228	65	218	954	0	5	0	840	271
RTOR Reduction (vph)	0	48	0	0	10	0	0	0	0	0	0	0	75
Lane Group Flow (vph)	220	0	0	141	283	0	0	1172	0	0	0	845	196
Confl. Peds. (#/hr)	5		3	3		5	1		49	5	49		1
Confl. Bikes (#/hr)									20				5
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Actuated Green, G (s)	10.8	0.0		16.0	16.0			48.2				25.0	35.8
Effective Green, g (s)	10.8	0.0		16.0	16.0			48.2				25.0	35.8
Actuated g/C Ratio	0.11	0.00		0.16	0.16			0.49				0.25	0.36
Clearance Time (s)	6.0			6.0	6.0							6.0	
Vehicle Extension (s)	2.0			2.0	2.0							2.0	
Lane Grp Cap (vph)	370	0		286	289			1297				737	572
v/s Ratio Prot	c0.06			0.08	c0.16			c0.21					0.12
v/s Ratio Perm								0.23				c0.29	
v/c Ratio	0.59	0.00		0.49	0.98			0.90				1.15	0.34
Uniform Delay, d1	42.0	49.5		37.8	41.3			23.3				37.0	23.0
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Incremental Delay, d2	1.7	0.0		0.5	46.4			10.5				81.4	0.1
Delay (s)	43.7	49.5		38.3	87.8			33.8				118.4	23.2
Level of Service	D	D		D	F			C				F	C
Approach Delay (s)		44.8			71.7			33.8				95.3	
Approach LOS		D			E			C				F	

Intersection Summary			
HCM 2000 Control Delay	63.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	99.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	5	1	135	15	505	30	535	40	120	790	40
Future Volume (vph)	10	5	1	135	15	505	30	535	40	120	790	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			772			187			570	
Travel Time (s)		5.6			17.5			4.3			13.0	
Confl. Peds. (#/hr)	1		37	37		1	17		36	36		17
Confl. Bikes (#/hr)						1			2			7
Peak Hour Factor	0.70	0.70	0.70	0.93	0.93	0.93	0.90	0.90	0.90	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	0	0	161	543	0	671	0	0	1021	0
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Detector Phase	2	2		2	2	2 3	1	1		3	1 3	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		6.0		
Minimum Split (s)	21.0	21.0		21.0	21.0		22.0	22.0		11.0		
Total Split (s)	21.0	21.0		21.0	21.0		48.0	48.0		21.0		
Total Split (%)	23.3%	23.3%		23.3%	23.3%		53.3%	53.3%		23.3%		
Yellow Time (s)	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		
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead				
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		None		
v/c Ratio		0.08			0.69	0.73		0.45			0.55	
Control Delay		30.1			50.8	21.1		15.7			6.6	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		30.1			50.8	21.1		15.7			6.6	
Queue Length 50th (ft)		10			86	167		124			104	
Queue Length 95th (ft)		24			#170	294		170			135	
Internal Link Dist (ft)		167			692			107			490	
Turn Bay Length (ft)						125						
Base Capacity (vph)		290			243	748		1500			1874	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.08			0.66	0.73		0.45			0.54	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 85 (94%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Market Street & Stockyard Driveway/Guest Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	5	1	135	15	505	30	535	40	120	790	40
Future Volume (vph)	10	5	1	135	15	505	30	535	40	120	790	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	5.0		4.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	1.00		0.99			1.00	
Flpb, ped/bikes		1.00			0.94	1.00		1.00			1.00	
Frt		0.99			1.00	0.85		0.99			0.99	
Flt Protected		0.97			0.96	1.00		1.00			0.99	
Satd. Flow (prot)		1822			1688	1599		3434			3475	
Flt Permitted		0.82			0.73	1.00		0.87			0.73	
Satd. Flow (perm)		1533			1290	1599		2983			2552	
Peak-hour factor, PHF	0.70	0.70	0.70	0.93	0.93	0.93	0.90	0.90	0.90	0.93	0.93	0.93
Adj. Flow (vph)	14	7	1	145	16	543	33	594	44	129	849	43
RTOR Reduction (vph)	0	1	0	0	0	110	0	5	0	0	3	0
Lane Group Flow (vph)	0	21	0	0	161	433	0	666	0	0	1018	0
Confl. Peds. (#/hr)	1		37	37		1	17		36	36		17
Confl. Bikes (#/hr)						1			2			7
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Actuated Green, G (s)		15.3			15.3	35.8		44.2			59.7	
Effective Green, g (s)		16.3			16.3	35.8		45.2			59.7	
Actuated g/C Ratio		0.18			0.18	0.40		0.50			0.66	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		277			233	636		1498			1851	
v/s Ratio Prot						c0.27					0.09	
v/s Ratio Perm		0.01			0.12			0.22			c0.27	
v/c Ratio		0.08			0.69	0.68		0.44			0.55	
Uniform Delay, d1		30.6			34.5	22.4		14.4			8.0	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.0			6.9	2.4		1.0			0.2	
Delay (s)		30.6			41.4	24.8		15.3			8.2	
Level of Service		C			D	C		B			A	
Approach Delay (s)		30.6			28.6			15.3			8.2	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	0	600	925	0
Future Vol, veh/h	5	15	0	600	925	0
Conflicting Peds, #/hr	9	0	20	0	0	20
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	91	91	92	92
Heavy Vehicles, %	5	5	3	3	1	1
Mvmt Flow	7	21	0	659	1005	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1344	503	-	0	-	0
Stage 1	1005	-	-	-	-	-
Stage 2	339	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	-	-
Pot Cap-1 Maneuver	139	506	0	-	-	0
Stage 1	308	-	0	-	-	0
Stage 2	684	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	139	506	-	-	-	-
Mov Cap-2 Maneuver	139	-	-	-	-	-
Stage 1	308	-	-	-	-	-
Stage 2	684	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	305	-
HCM Lane V/C Ratio	-	0.092	-
HCM Control Delay (s)	-	18	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.3	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	25	365	45	95	385	125	40	450	105	145	730	65	
Future Volume (vph)	25	365	45	95	385	125	40	450	105	145	730	65	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		200	0		200	0		100	0		0	
Storage Lanes	0		1	0		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		324			332			559			323		
Travel Time (s)		7.4			7.5			12.7			7.3		
Confl. Peds. (#/hr)	12		34	34		12	12		46	46		12	
Confl. Bikes (#/hr)						4						2	
Peak Hour Factor	0.82	0.82	0.82	0.85	0.85	0.85	0.94	0.94	0.94	0.93	0.93	0.93	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	530	0	0	712	0	0	634	0	0	1011	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		5.0			1.0
Minimum Split (s)	15.0	15.0		15.0	15.0		15.0	15.0		10.0			20.0
Total Split (s)	33.0	33.0		33.0	33.0		36.0	36.0		11.0			20.0
Total Split (%)	33.0%	33.0%		33.0%	33.0%		36.0%	36.0%		11.0%			20%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0			2.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.0			2.0
Lost Time Adjust (s)		0.0			0.0			0.0					
Total Lost Time (s)		5.0			5.0			5.0					
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?													
Recall Mode	Max	Max		Max	Max		C-Max	C-Max		None			None
v/c Ratio		0.56			0.94			0.91			1.13		
Control Delay		31.9			48.1			48.4			103.3		
Queue Delay		0.0			0.0			0.0			0.2		
Total Delay		31.9			48.1			48.4			103.5		
Queue Length 50th (ft)		152			~258			146			~328		
Queue Length 95th (ft)		186			#293			#300			#508		
Internal Link Dist (ft)		244			252			479			243		
Turn Bay Length (ft)													
Base Capacity (vph)		940			758			698			891		
Starvation Cap Reductn		0			0			0			0		
Spillback Cap Reductn		0			0			0			38		
Storage Cap Reductn		0			0			0			0		
Reduced v/c Ratio		0.56			0.94			0.91			1.19		

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Market Street & North Beacon Street

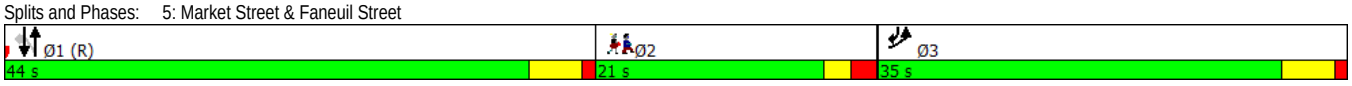
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	365	45	95	385	125	40	450	105	145	730	65
Future Volume (vph)	25	365	45	95	385	125	40	450	105	145	730	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			0.99			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.97			0.99	
Flt Protected		1.00			0.99			1.00			0.99	
Satd. Flow (prot)		3458			3378			3399			3500	
Flt Permitted		0.84			0.68			0.64			0.62	
Satd. Flow (perm)		2916			2303			2192			2179	
Peak-hour factor, PHF	0.82	0.82	0.82	0.85	0.85	0.85	0.94	0.94	0.94	0.93	0.93	0.93
Adj. Flow (vph)	30	445	55	112	453	147	43	479	112	156	785	70
RTOR Reduction (vph)	0	8	0	0	22	0	0	18	0	0	6	0
Lane Group Flow (vph)	0	522	0	0	690	0	0	616	0	0	1005	0
Confl. Peds. (#/hr)	12		34	34		12	12		46	46		12
Confl. Bikes (#/hr)						4						2
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		32.0			32.0			30.2			37.2	
Effective Green, g (s)		32.0			32.0			30.2			37.2	
Actuated g/C Ratio		0.32			0.32			0.30			0.37	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			4.0				
Lane Grp Cap (vph)		933			736			661			903	
v/s Ratio Prot											c0.08	
v/s Ratio Perm		0.18			c0.30			0.28			c0.34	
v/c Ratio		0.56			0.94			0.93			1.11	
Uniform Delay, d1		28.2			33.0			33.9			31.4	
Progression Factor		1.00			0.80			1.04			1.00	
Incremental Delay, d2		2.4			19.1			18.0			66.1	
Delay (s)		30.6			45.7			53.2			97.5	
Level of Service		C			D			D			F	
Approach Delay (s)		30.6			45.7			53.2			97.5	
Approach LOS		C			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	62.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	165	50	45	510	635	305	
Future Volume (vph)	165	50	45	510	635	305	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Right Turn on Red		Yes				Yes	
Link Speed (mph)	30			30	30		
Link Distance (ft)	420			1276	559		
Travel Time (s)	9.5			29.0	12.7		
Confl. Peds. (#/hr)	27	26	16			16	
Confl. Bikes (#/hr)		2					
Peak Hour Factor	0.79	0.79	0.97	0.97	0.88	0.88	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	272	0	0	572	722	347	
Turn Type	Prot		Perm	NA	NA	pm+ov	
Protected Phases	3			1	1	3	2
Permitted Phases			1			1	
Detector Phase	3		1	1	1	3	
Switch Phase							
Minimum Initial (s)	6.0		10.0	10.0	10.0	6.0	7.0
Minimum Split (s)	11.0		15.0	15.0	15.0	11.0	21.0
Total Split (s)	35.0		44.0	44.0	44.0	35.0	21.0
Total Split (%)	35.0%		44.0%	44.0%	44.0%	35.0%	21%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	2.0
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	Lead	Lead		Lag
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max	None	None
v/c Ratio	0.78			0.69	0.67	0.27	
Control Delay	51.3			19.4	9.3	0.2	
Queue Delay	0.0			0.0	0.5	0.0	
Total Delay	51.3			19.4	9.7	0.2	
Queue Length 50th (ft)	156			223	108	0	
Queue Length 95th (ft)	191			m153	m200	m0	
Internal Link Dist (ft)	340			1196	479		
Turn Bay Length (ft)							
Base Capacity (vph)	524			832	1078	1335	
Starvation Cap Reductn	0			0	90	0	
Spillback Cap Reductn	0			0	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.52			0.69	0.73	0.26	

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 7 (7%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 5: Market Street & Faneuil Street



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	165	50	45	510	635	305
Future Volume (vph)	165	50	45	510	635	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frpb, ped/bikes	0.98			1.00	1.00	0.98
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.97			1.00	1.00	0.85
Flt Protected	0.96			1.00	1.00	1.00
Satd. Flow (prot)	1702			1855	1863	1548
Flt Permitted	0.96			0.77	1.00	1.00
Satd. Flow (perm)	1702			1439	1863	1548
Peak-hour factor, PHF	0.79	0.79	0.97	0.97	0.88	0.88
Adj. Flow (vph)	209	63	46	526	722	347
RTOR Reduction (vph)	13	0	0	0	0	84
Lane Group Flow (vph)	259	0	0	572	722	263
Confl. Peds. (#/hr)	27	26	16			16
Confl. Bikes (#/hr)		2				
Turn Type	Prot		Perm	NA	NA	pm+ov
Protected Phases	3			1	1	3
Permitted Phases			1			1
Actuated Green, G (s)	19.5			56.3	56.3	75.8
Effective Green, g (s)	19.5			56.3	56.3	75.8
Actuated g/C Ratio	0.20			0.56	0.56	0.76
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	2.0			2.0	2.0	2.0
Lane Grp Cap (vph)	331			810	1048	1250
v/s Ratio Prot	c0.15				0.39	0.04
v/s Ratio Perm				c0.40		0.13
v/c Ratio	0.78			0.71	0.69	0.21
Uniform Delay, d1	38.2			15.9	15.6	3.5
Progression Factor	1.00			0.90	0.33	0.17
Incremental Delay, d2	10.6			0.5	1.1	0.0
Delay (s)	48.8			14.7	6.3	0.6
Level of Service	D			B	A	A
Approach Delay (s)	48.8			14.7	4.5	
Approach LOS	D			B	A	

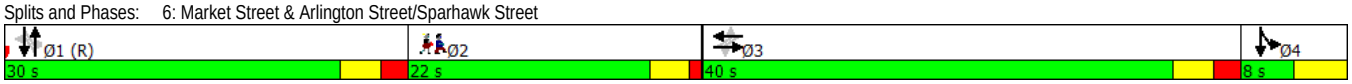
Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	60	245	70	25	275	130	15	355	5	75	515	15	
Future Volume (vph)	60	245	70	25	275	130	15	355	5	75	515	15	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	0		0	75		0	
Storage Lanes	0		0	0		0	0		0	1		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		448			531			497			1276		
Travel Time (s)		10.2			12.1			11.3			29.0		
Confl. Peds. (#/hr)	17		10	10		17	28		38	38		28	
Confl. Bikes (#/hr)			3			9			8			4	
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.94	0.94	0.94	0.89	0.89	0.89	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	403	0	0	467	0	0	399	0	84	596	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		4.0			7.0
Minimum Split (s)	13.0	13.0		13.0	13.0		15.0	15.0		8.0			22.0
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		8.0			22.0
Total Split (%)	40.0%	40.0%		40.0%	40.0%		30.0%	30.0%		8.0%			22%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		4.0			3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0			1.0
Lost Time Adjust (s)		0.0			0.0			0.0		0.0			
Total Lost Time (s)		5.0			5.0			5.0		4.0			
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes			Yes
Recall Mode	None	None		None	None		C-Max	C-Max		Max			None
v/c Ratio		0.96			0.85			2.22		0.26	0.78		
Control Delay		67.0			45.9			587.6		41.8	50.8		
Queue Delay		0.0			0.0			0.0		0.0	0.0		
Total Delay		67.0			45.9			587.6		41.8	50.8		
Queue Length 50th (ft)		232			252			~418		53	0		
Queue Length 95th (ft)		#404			#378			#604		m81	#605		
Internal Link Dist (ft)		368			451			417			1196		
Turn Bay Length (ft)										75			
Base Capacity (vph)		470			609			180		323	762		
Starvation Cap Reductn		0			0			0		0	0		
Spillback Cap Reductn		0			0			0		0	0		
Storage Cap Reductn		0			0			0		0	0		
Reduced v/c Ratio		0.86			0.77			2.22		0.26	0.78		

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
~	Volume exceeds capacity, queue is theoretically infinite.
	Queue shown is maximum after two cycles.
#	95th percentile volume exceeds capacity, queue may be longer.
	Queue shown is maximum after two cycles.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Market Street & Arlington Street/Sparhawk Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	245	70	25	275	130	15	355	5	75	515	15
Future Volume (vph)	60	245	70	25	275	130	15	355	5	75	515	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		4.0	5.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.99			0.98			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.97			0.96			1.00		1.00	1.00	
Flt Protected		0.99			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1803			1768			1834		1762	1852	
Flt Permitted		0.73			0.96			0.39		0.23	1.00	
Satd. Flow (perm)		1319			1697			717		429	1852	
Peak-hour factor, PHF	0.93	0.93	0.93	0.92	0.92	0.92	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	65	263	75	27	299	141	16	378	5	84	579	17
RTOR Reduction (vph)	0	9	0	0	16	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	394	0	0	451	0	0	398	0	84	595	0
Confl. Peds. (#/hr)	17		10	10		17	28		38	38		28
Confl. Bikes (#/hr)			3			9			8			4
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		31.3			31.3			24.2		36.3	40.3	
Effective Green, g (s)		31.3			31.3			24.2		36.3	36.3	
Actuated g/C Ratio		0.31			0.31			0.24		0.36	0.36	
Clearance Time (s)		5.0			5.0			5.0		4.0		
Vehicle Extension (s)		2.0			2.0			0.2		2.0		
Lane Grp Cap (vph)		412			531			173		317	672	
v/s Ratio Prot										0.03	c0.32	
v/s Ratio Perm		c0.30			0.27			c0.56		0.06		
v/c Ratio		0.96			0.85			2.30		0.26	0.89	
Uniform Delay, d1		33.7			32.1			37.9		23.0	29.9	
Progression Factor		1.00			1.00			1.00		1.72	1.56	
Incremental Delay, d2		32.7			11.6			603.7		1.5	12.4	
Delay (s)		66.4			43.7			641.6		41.1	59.2	
Level of Service		E			D			F		D	E	
Approach Delay (s)		66.4			43.7			641.6			56.9	
Approach LOS		E			D			F			E	

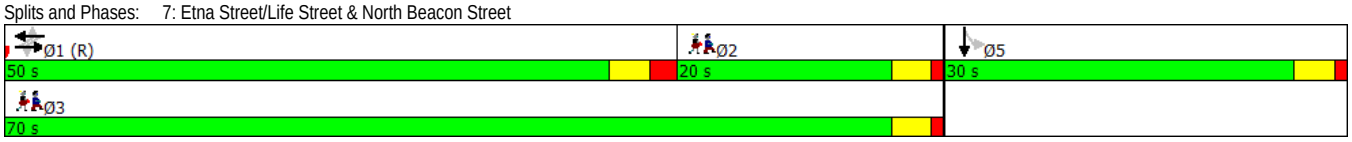
Intersection Summary			
HCM 2000 Control Delay	175.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3
Lane Configurations														
Traffic Volume (vph)	10	610	15	15	575	10	0	0	0	65	15	45		
Future Volume (vph)	10	610	15	15	575	10	0	0	0	65	15	45		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes			Yes		
Link Speed (mph)		30			30			30			30			
Link Distance (ft)		458			334			278			631			
Travel Time (s)		10.4			7.6			6.3			14.3			
Confl. Peds. (#/hr)	23		51	51		23	33		3	3		33		
Confl. Bikes (#/hr)			4			6								
Peak Hour Factor	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.92	0.92	0.81	0.81	0.81		
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	0%	0%	0%		
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	690	0	0	681	0	0	0	0	0	155	0		
Turn Type	Perm	NA		Perm	NA					Perm	NA			
Protected Phases		1			1						5		2	3
Permitted Phases	1			1						5				
Detector Phase	1	1		1	1					5	5			
Switch Phase														
Minimum Initial (s)	10.0	10.0		10.0	10.0					7.0	7.0		7.0	8.0
Minimum Split (s)	15.0	15.0		15.0	15.0					11.0	11.0		20.0	19.0
Total Split (s)	50.0	50.0		50.0	50.0					30.0	30.0		20.0	70.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%					30.0%	30.0%		20%	70%
Yellow Time (s)	3.0	3.0		3.0	3.0					3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0					1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0			0.0						0.0			
Total Lost Time (s)		5.0			5.0						4.0			
Lead/Lag	Lead	Lead		Lead	Lead								Lag	
Lead-Lag Optimize?														
Recall Mode	C-Max	C-Max		C-Max	C-Max					None	None		None	Ped
v/c Ratio		0.53			0.53						0.67			
Control Delay		18.2			12.0						48.1			
Queue Delay		0.0			0.0						0.0			
Total Delay		18.2			12.0						48.1			
Queue Length 50th (ft)		192			114						78			
Queue Length 95th (ft)		m413			428						119			
Internal Link Dist (ft)		378			254			198			551			
Turn Bay Length (ft)														
Base Capacity (vph)		1312			1289						463			
Starvation Cap Reductn		0			0						0			
Spillback Cap Reductn		0			0						0			
Storage Cap Reductn		0			0						0			
Reduced v/c Ratio		0.53			0.53						0.33			

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 39 (39%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Etna Street/Life Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣						✣	
Traffic Volume (vph)	10	610	15	15	575	10	0	0	0	65	15	45
Future Volume (vph)	10	610	15	15	575	10	0	0	0	65	15	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			1.00						0.94	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		1.00			1.00						0.95	
Flt Protected		1.00			1.00						0.97	
Satd. Flow (prot)		1871			1855						1653	
Flt Permitted		0.99			0.98						0.97	
Satd. Flow (perm)		1852			1819						1653	
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	11	663	16	17	653	11	0	0	0	80	19	56
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	25	0
Lane Group Flow (vph)	0	689	0	0	681	0	0	0	0	0	130	0
Confl. Peds. (#/hr)	23		51	51		23	33		3	3		33
Confl. Bikes (#/hr)			4			6						
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						5	
Permitted Phases	1			1						5		
Actuated Green, G (s)		68.5			68.5						12.1	
Effective Green, g (s)		68.5			68.5						12.1	
Actuated g/C Ratio		0.68			0.68						0.12	
Clearance Time (s)		5.0			5.0						4.0	
Vehicle Extension (s)		2.0			2.0						2.0	
Lane Grp Cap (vph)		1268			1246						200	
v/s Ratio Prot												
v/s Ratio Perm		0.37			c0.37						0.08	
v/c Ratio		0.54			0.55						0.65	
Uniform Delay, d1		7.9			7.9						41.9	
Progression Factor		1.65			1.00						1.00	
Incremental Delay, d2		1.1			1.7						5.7	
Delay (s)		14.2			9.7						47.6	
Level of Service		B			A						D	
Approach Delay (s)		14.2			9.7			0.0			47.6	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	1	585	95	120	610	0	0	0	0	5	2	5
Future Vol, veh/h	1	585	95	120	610	0	0	0	0	5	2	5
Conflicting Peds, #/hr	26	0	35	35	0	26	0	0	11	11	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	94	94	94	92	92	92	63	63	63
Heavy Vehicles, %	1	1	1	2	2	2	0	0	0	0	0	0
Mvmt Flow	1	616	100	128	649	0	0	0	0	8	3	8

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	675	0	0	751	0	0				1609	1683	675
Stage 1	-	-	-	-	-	-				930	930	-
Stage 2	-	-	-	-	-	-				679	753	-
Critical Hdwy	4.11	-	-	4.12	-	-				6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-				5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.4	5.5	-
Follow-up Hdwy	2.209	-	-	2.218	-	-				3.5	4	3.3
Pot Cap-1 Maneuver	921	-	-	858	-	-				116	95	457
Stage 1	-	-	-	-	-	-				387	349	-
Stage 2	-	-	-	-	-	-				507	420	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	921	-	-	850	-	-				85	0	447
Mov Cap-2 Maneuver	-	-	-	-	-	-				85	0	-
Stage 1	-	-	-	-	-	-				290	0	-
Stage 2	-	-	-	-	-	-				495	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	1.6	34
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	921	-	-	850	-	-	143
HCM Lane V/C Ratio	0.001	-	-	0.15	-	-	0.133
HCM Control Delay (s)	8.9	0	-	10	0	-	34
HCM Lane LOS	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0	-	-	0.5	-	-	0.4

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	585	0	0	640	5	55	5	75	15	0	35
Future Vol, veh/h	5	585	0	0	640	5	55	5	75	15	0	35
Conflicting Peds, #/hr	25	0	31	31	0	25	0	0	3	3	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	93	93	93	94	94	94	84	84	84
Heavy Vehicles, %	1	1	1	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	650	0	0	688	5	59	5	80	18	0	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	719	0	-	-	-	0	1373	1380	653	1423	1377	716
Stage 1	-	-	-	-	-	-	661	661	-	716	716	-
Stage 2	-	-	-	-	-	-	712	719	-	707	661	-
Critical Hdwy	4.11	-	-	-	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.209	-	-	-	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	887	-	0	0	-	-	123	144	467	114	145	430
Stage 1	-	-	0	0	-	-	452	460	-	421	434	-
Stage 2	-	-	0	0	-	-	423	433	-	426	460	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	887	-	-	-	-	-	110	139	466	89	140	421
Mov Cap-2 Maneuver	-	-	-	-	-	-	110	139	-	89	140	-
Stage 1	-	-	-	-	-	-	447	455	-	408	425	-
Stage 2	-	-	-	-	-	-	381	424	-	344	455	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	63.1	30.6
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	194	887	-	-	-	199
HCM Lane V/C Ratio	0.74	0.006	-	-	-	0.299
HCM Control Delay (s)	63.1	9.1	0	-	-	30.6
HCM Lane LOS	F	A	A	-	-	D
HCM 95th %tile Q(veh)	4.8	0	-	-	-	1.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	140	530	0	0	460	85	0	0	0	160	0	175	
Future Volume (vph)	140	530	0	0	460	85	0	0	0	160	0	175	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12	
Storage Length (ft)	100		0	0		0	0		0	0		150	
Storage Lanes	1		0	0		1	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		456			284			205			781		
Travel Time (s)		10.4			6.5			4.7			17.8		
Confl. Peds. (#/hr)	21					21	11		1	1		11	
Confl. Bikes (#/hr)			4			5							
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	149	564	0	0	500	92	0	0	0	165	0	180	
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm	
Protected Phases	5	1 5			1		4	4		3			2
Permitted Phases	1 5			1		1						3	
Detector Phase	5	1 5		1	1	1	4	4		3		3	
Switch Phase													
Minimum Initial (s)	4.0			12.0	12.0	12.0	3.0	3.0		5.0		5.0	4.0
Minimum Split (s)	8.0			16.0	16.0	16.0	7.0	7.0		9.0		9.0	17.0
Total Split (s)	11.0			42.0	42.0	42.0	15.0	15.0		25.0		25.0	17.0
Total Split (%)	10.0%			38.2%	38.2%	38.2%	13.6%	13.6%		22.7%		22.7%	15%
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0
All-Red Time (s)	1.0			1.0	1.0	1.0	1.0	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	-1.0				-1.0	-1.0		-1.0		0.0		-1.0	
Total Lost Time (s)	3.0				3.0	3.0		3.0		4.0		3.0	
Lead/Lag				Lead	Lead	Lead	Lag	Lag		Lead		Lead	Lag
Lead-Lag Optimize?													
Recall Mode	None			C-Max	C-Max	C-Max	None	None		None		None	None
v/c Ratio	0.25	0.43			0.52	0.11				0.71		0.49	
Control Delay	7.4	9.0			28.0	5.9				61.2		10.6	
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0	
Total Delay	7.4	9.0			28.0	5.9				61.2		10.6	
Queue Length 50th (ft)	18	90			178	9				113		0	
Queue Length 95th (ft)	74	316			#449	m21				175		58	
Internal Link Dist (ft)		376			204			125			701		
Turn Bay Length (ft)	100											150	
Base Capacity (vph)	600	1302			954	825				337		445	
Starvation Cap Reductn	0	0			0	0				0		0	
Spillback Cap Reductn	0	0			0	0				0		0	
Storage Cap Reductn	0	0			0	0				0		0	
Reduced v/c Ratio	0.25	0.43			0.52	0.11				0.49		0.40	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 109 (99%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Wingate Driveway/Arthur Street & North Beacon Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	530	0	0	460	85	0	0	0	160	0	175
Future Volume (vph)	140	530	0	0	460	85	0	0	0	160	0	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			3.0	3.0				4.0		3.0
Lane Util. Factor	1.00	1.00			1.00	1.00				1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.96				1.00		0.94
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1665	1756			1739	1414				1770		1491
Flt Permitted	0.34	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	594	1756			1739	1414				1770		1491
Peak-hour factor, PHF	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97
Adj. Flow (vph)	149	564	0	0	500	92	0	0	0	165	0	180
RTOR Reduction (vph)	0	0	0	0	0	44	0	0	0	0	0	154
Lane Group Flow (vph)	149	564	0	0	500	48	0	0	0	165	0	26
Confl. Peds. (#/hr)	21					21	11		1	1		11
Confl. Bikes (#/hr)			4			5						
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm
Protected Phases	5	1 5			1		4	4		3		
Permitted Phases	1 5			1		1						3
Actuated Green, G (s)	74.2	78.2			56.9	56.9				14.6		14.6
Effective Green, g (s)	76.2	79.2			57.9	57.9				14.6		15.6
Actuated g/C Ratio	0.69	0.72			0.53	0.53				0.13		0.14
Clearance Time (s)	4.0				4.0	4.0				4.0		4.0
Vehicle Extension (s)	2.0				4.0	4.0				2.0		2.0
Lane Grp Cap (vph)	589	1264			915	744				234		211
v/s Ratio Prot	0.04	c0.32			c0.29					c0.09		
v/s Ratio Perm	0.13					0.03						0.02
v/c Ratio	0.25	0.45			0.55	0.07				0.71		0.12
Uniform Delay, d1	7.3	6.4			17.3	12.8				45.6		41.2
Progression Factor	1.00	1.00			1.22	3.37				1.00		1.00
Incremental Delay, d2	0.1	0.1			1.9	0.1				7.7		0.1
Delay (s)	7.4	6.4			23.1	43.2				53.3		41.3
Level of Service	A	A			C	D				D		D
Approach Delay (s)		6.6			26.2			0.0			47.0	
Approach LOS		A			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑↑	↾	
Traffic Vol, veh/h	690	0	0	535	10	25
Future Vol, veh/h	690	0	0	535	10	25
Conflicting Peds, #/hr	0	55	55	0	0	11
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	90	90	64	64
Heavy Vehicles, %	2	2	2	2	3	3
Mvmt Flow	734	0	0	594	16	39

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	1031	745
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	297	-
Critical Hdwy	-	-	-	-	6.645	6.245
Critical Hdwy Stg 1	-	-	-	-	5.445	-
Critical Hdwy Stg 2	-	-	-	-	5.845	-
Follow-up Hdwy	-	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	0	0	-	242	411
Stage 1	-	0	0	-	471	-
Stage 2	-	0	0	-	726	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	242	407
Mov Cap-2 Maneuver	-	-	-	-	242	-
Stage 1	-	-	-	-	471	-
Stage 2	-	-	-	-	726	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	17.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	341	-	-
HCM Lane V/C Ratio	0.16	-	-
HCM Control Delay (s)	17.6	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.6	-	-

Intersection	
Int Delay, s/veh	8.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	600	115	115	500	35	125
Future Vol, veh/h	600	115	115	500	35	125
Conflicting Peds, #/hr	0	44	44	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	93	93	84	84
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	659	126	124	538	42	149

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	830	0	1552	767
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	785	-
Critical Hdwy	-	-	4.13	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.227	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	798	-	125	402
Stage 1	-	-	-	-	458	-
Stage 2	-	-	-	-	449	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	798	-	94	387
Mov Cap-2 Maneuver	-	-	-	-	94	-
Stage 1	-	-	-	-	441	-
Stage 2	-	-	-	-	349	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	67.6
HCM LOS			F

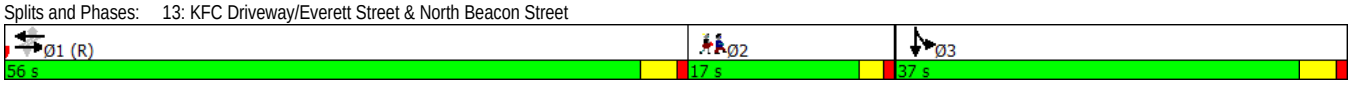
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	230	-	-	798	-
HCM Lane V/C Ratio	0.828	-	-	0.155	-
HCM Control Delay (s)	67.6	-	-	10.3	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	6.3	-	-	0.5	-

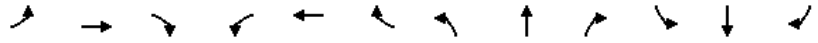
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	185	450	5	5	480	230	0	0	0	275	0	150	
Future Volume (vph)	185	450	5	5	480	230	0	0	0	275	0	150	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		446			477			138			517		
Travel Time (s)		10.1			10.8			3.1			11.8		
Confl. Peds. (#/hr)	29		61	61		29	26		26	26		26	
Confl. Bikes (#/hr)			1			6							
Peak Hour Factor	0.90	0.90	0.90	0.89	0.89	0.89	0.92	0.92	0.92	0.85	0.85	0.85	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	712	0	0	545	258	0	0	0	0	500	0	
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA		
Protected Phases		1			1					3	3		2
Permitted Phases	1			1		1							
Detector Phase	1	1		1	1	1				3	3		
Switch Phase													
Minimum Initial (s)	15.0	15.0		15.0	15.0	15.0				7.0	7.0		7.0
Minimum Split (s)	19.0	19.0		19.0	19.0	19.0				11.0	11.0		17.0
Total Split (s)	56.0	56.0		56.0	56.0	56.0				37.0	37.0		17.0
Total Split (%)	50.9%	50.9%		50.9%	50.9%	50.9%				33.6%	33.6%		15%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0		2.0
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)		4.0			4.0	4.0					4.0		
Lead/Lag	Lead	Lead		Lead	Lead	Lead							Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max				Max	Max		None
v/c Ratio		0.88dl			0.62	0.30					0.78		
Control Delay		29.8			9.7	0.6					40.9		
Queue Delay		0.0			10.9	0.0					0.0		
Total Delay		29.8			20.6	0.6					40.9		
Queue Length 50th (ft)		228			93	0					319		
Queue Length 95th (ft)		306			m90	m0					#475		
Internal Link Dist (ft)		366			397			58			437		
Turn Bay Length (ft)													
Base Capacity (vph)		945			883	850					639		
Starvation Cap Reductn		0			310	0					0		
Spillback Cap Reductn		0			0	0					0		
Storage Cap Reductn		0			0	0					0		
Reduced v/c Ratio		0.75			0.95	0.30					0.78		

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 109 (99%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: KFC Driveway/Everett Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	450	5	5	480	230	0	0	0	275	0	150
Future Volume (vph)	185	450	5	5	480	230	0	0	0	275	0	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0					4.0	
Lane Util. Factor		0.95			1.00	1.00					1.00	
Frpb, ped/bikes		1.00			1.00	0.94					0.98	
Flpb, ped/bikes		1.00			1.00	1.00					1.00	
Frt		1.00			1.00	0.85					0.95	
Flt Protected		0.99			1.00	1.00					0.97	
Satd. Flow (prot)		3505			1880	1510					1702	
Flt Permitted		0.56			0.99	1.00					0.97	
Satd. Flow (perm)		1999			1868	1510					1702	
Peak-hour factor, PHF	0.90	0.90	0.90	0.89	0.89	0.89	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	206	500	6	6	539	258	0	0	0	324	0	176
RTOR Reduction (vph)	0	1	0	0	0	139	0	0	0	0	26	0
Lane Group Flow (vph)	0	711	0	0	545	119	0	0	0	0	474	0
Confl. Peds. (#/hr)	29		61	61		29	26		26	26		26
Confl. Bikes (#/hr)			1			6						
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA	
Protected Phases		1			1					3	3	
Permitted Phases	1			1		1						
Actuated Green, G (s)		50.8			50.8	50.8					39.8	
Effective Green, g (s)		50.8			50.8	50.8					39.8	
Actuated g/C Ratio		0.46			0.46	0.46					0.36	
Clearance Time (s)		4.0			4.0	4.0					4.0	
Vehicle Extension (s)		2.0			2.0	2.0					2.0	
Lane Grp Cap (vph)		923			862	697					615	
v/s Ratio Prot											c0.28	
v/s Ratio Perm		c0.36			0.29	0.08						
v/c Ratio		0.88dl			0.63	0.17					0.77	
Uniform Delay, d1		24.7			22.5	17.3					31.1	
Progression Factor		1.00			0.35	0.01					1.00	
Incremental Delay, d2		5.9			2.2	0.3					9.1	
Delay (s)		30.8			10.0	0.6					40.2	
Level of Service		C			A	A					D	
Approach Delay (s)		30.8			7.0			0.0			40.2	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	135	535	10	15	160	525	65	0	290	175	145	360	120
Future Volume (vph)	135	535	10	15	160	525	65	0	290	175	145	360	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		420		0	0		150	0		75
Storage Lanes	0		0		1		0	0		1	0		1
Taper Length (ft)	25				25			25			25		
Right Turn on Red			Yes				Yes			Yes			Yes
Link Speed (mph)		30				30			30			30	
Link Distance (ft)		477				1053			361			234	
Travel Time (s)		10.8				23.9			8.2			5.3	
Confl. Peds. (#/hr)	88		53	57	53		88	86		57	57		86
Confl. Bikes (#/hr)			5				22			6			25
Peak Hour Factor	0.88	0.88	0.88	0.96	0.96	0.96	0.96	0.91	0.91	0.91	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	7%	7%	7%	3%	3%	3%
Shared Lane Traffic (%)					10%								
Lane Group Flow (vph)	0	772	0	0	166	632	0	0	319	192	0	543	129
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Detector Phase	3	3		2	2	2			1	1	4	1 4	1
Switch Phase													
Minimum Initial (s)	8.0	8.0		10.0	10.0	10.0			10.0	10.0	4.0		10.0
Minimum Split (s)	26.0	26.0		27.0	27.0	27.0			24.0	24.0	10.0		24.0
Total Split (s)	37.0	37.0		30.0	30.0	30.0			32.0	32.0	11.0		32.0
Total Split (%)	33.6%	33.6%		27.3%	27.3%	27.3%			29.1%	29.1%	10.0%		29.1%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0			4.0	4.0	3.0		4.0
All-Red Time (s)	6.0	6.0		6.0	6.0	6.0			3.0	3.0	3.0		3.0
Lost Time Adjust (s)		0.0			0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag			Lead	Lead	Lag		Lead
Lead-Lag Optimize?													
Recall Mode	None	None		Max	Max	Max			C-Max	C-Max	None		C-Max
v/c Ratio		0.93			0.58	1.07			0.42	0.40		0.76	0.28
Control Delay		45.4			50.2	100.8			38.2	5.1		25.4	2.4
Queue Delay		0.0			0.0	0.0			0.0	0.0		0.0	0.0
Total Delay		45.4			50.2	100.8			38.2	5.1		25.4	2.4
Queue Length 50th (ft)		295			118	~269			101	0		63	6
Queue Length 95th (ft)		#368			197	#393			145	36		122	12
Internal Link Dist (ft)		397				973			281			154	
Turn Bay Length (ft)					420					150			75
Base Capacity (vph)		857			287	589			766	476		718	463
Starvation Cap Reductn		0			0	0			0	0		0	0
Spillback Cap Reductn		0			0	0			0	0		0	0
Storage Cap Reductn		0			0	0			0	0		0	0
Reduced v/c Ratio		0.90			0.58	1.07			0.42	0.40		0.76	0.28

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 78 (71%), Referenced to phase 1:NESW, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Cambridge Street & North Beacon Street/Brighton Avenue

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	135	535	10	15	160	525	65	0	290	175	145	360	120
Future Volume (vph)	135	535	10	15	160	525	65	0	290	175	145	360	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		10.0			10.0	10.0			7.0	7.0		7.0	7.0
Lane Util. Factor		0.95			0.91	0.91			0.95	1.00		0.95	1.00
Frpb, ped/bikes		1.00			1.00	0.98			1.00	0.87		1.00	0.81
Flpb, ped/bikes		1.00			1.00	1.00			1.00	1.00		0.99	1.00
Frt		1.00			1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected		0.99			0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3491			1579	3197			3374	1320		3407	1265
Flt Permitted		0.99			0.95	1.00			1.00	1.00		0.73	1.00
Satd. Flow (perm)		3491			1579	3197			3374	1320		2521	1265
Peak-hour factor, PHF	0.88	0.88	0.88	0.96	0.96	0.96	0.96	0.91	0.91	0.91	0.93	0.93	0.93
Adj. Flow (vph)	153	608	11	16	167	547	68	0	319	192	156	387	129
RTOR Reduction (vph)	0	1	0	0	0	8	0	0	0	148	0	0	100
Lane Group Flow (vph)	0	771	0	0	166	624	0	0	319	44	0	543	29
Confl. Peds. (#/hr)	88		53	57	53		88	86		57	57		86
Confl. Bikes (#/hr)			5				22			6			25
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	7%	7%	7%	3%	3%	3%
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Actuated Green, G (s)		26.3			20.0	20.0			25.0	25.0		30.7	25.0
Effective Green, g (s)		26.3			20.0	20.0			25.0	25.0		30.7	25.0
Actuated g/C Ratio		0.24			0.18	0.18			0.23	0.23		0.28	0.23
Clearance Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Vehicle Extension (s)		2.0			2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)		834			287	581			766	300		749	287
v/s Ratio Prot		c0.22			0.11	c0.20			0.09			c0.04	
v/s Ratio Perm										0.03		c0.16	0.02
v/c Ratio		0.92			0.58	1.07			0.42	0.15		0.72	0.10
Uniform Delay, d1		40.9			41.1	45.0			36.3	34.0		35.8	33.6
Progression Factor		0.80			1.00	1.00			1.00	1.00		0.52	1.00
Incremental Delay, d2		10.7			8.2	58.7			1.7	1.0		2.8	0.7
Delay (s)		43.3			49.4	103.7			37.9	35.0		21.5	34.3
Level of Service		D			D	F			D	C		C	C
Approach Delay (s)		43.3				92.4			36.8			23.9	
Approach LOS		D				F			D			C	

Intersection Summary			
HCM 2000 Control Delay	51.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	33.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	40	450	610	10	5	15
Future Vol, veh/h	40	450	610	10	5	15
Conflicting Peds, #/hr	75	0	0	75	61	18
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	97	97	75	75
Heavy Vehicles, %	6	6	3	3	0	0
Mvmt Flow	43	484	629	10	7	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	714	0	-	0	1340	727
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	631	-
Critical Hdwy	4.16	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.254	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	868	-	-	-	170	427
Stage 1	-	-	-	-	491	-
Stage 2	-	-	-	-	534	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	855	-	-	-	139	394
Mov Cap-2 Maneuver	-	-	-	-	139	-
Stage 1	-	-	-	-	460	-
Stage 2	-	-	-	-	466	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	19.8
HCM LOS			C

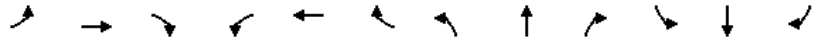
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	855	-	-	-	270
HCM Lane V/C Ratio	0.05	-	-	-	0.099
HCM Control Delay (s)	9.4	0	-	-	19.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣						✣	
Traffic Volume (vph)	5	450	0	1	605	20	0	0	0	10	1	5
Future Volume (vph)	5	450	0	1	605	20	0	0	0	10	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		587			512			134			484	
Travel Time (s)		13.3			11.6			3.0			11.0	
Confl. Peds. (#/hr)	45		47	47		45	3		22	22		3
Confl. Bikes (#/hr)			7			29						
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.25	0.25	0.25	0.54	0.54	0.54
Heavy Vehicles (%)	7%	7%	7%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	474	0	0	674	0	0	0	0	0	30	0
Turn Type	Perm	NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases	1			1								
Detector Phase	1	1		1	1					5	5	
Switch Phase												
Minimum Initial (s)	20.0	20.0		20.0	20.0					8.0	8.0	
Minimum Split (s)	24.0	24.0		24.0	24.0					22.0	22.0	
Total Split (s)	85.0	85.0		85.0	85.0					25.0	25.0	
Total Split (%)	77.3%	77.3%		77.3%	77.3%					22.7%	22.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max					None	None	
v/c Ratio		0.30			0.41						0.18	
Control Delay		3.4			2.1						36.2	
Queue Delay		0.0			0.1						0.0	
Total Delay		3.4			2.2						36.2	
Queue Length 50th (ft)		71			22						14	
Queue Length 95th (ft)		m250			m100						22	
Internal Link Dist (ft)		507			432			54			404	
Turn Bay Length (ft)												
Base Capacity (vph)		1580			1632						341	
Starvation Cap Reductn		0			234						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.30			0.48						0.09	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: Driveway/Denby Road & Cambridge Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣						✣	
Traffic Volume (vph)	5	450	0	1	605	20	0	0	0	10	1	5
Future Volume (vph)	5	450	0	1	605	20	0	0	0	10	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			0.99						0.99	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		1.00			1.00						0.96	
Flt Protected		1.00			1.00						0.97	
Satd. Flow (prot)		1773			1823						1752	
Flt Permitted		1.00			1.00						0.97	
Satd. Flow (perm)		1766			1823						1752	
Peak-hour factor, PHF	0.96	0.96	0.96	0.93	0.93	0.93	0.25	0.25	0.25	0.54	0.54	0.54
Adj. Flow (vph)	5	469	0	1	651	22	0	0	0	19	2	9
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	474	0	0	673	0	0	0	0	0	22	0
Confl. Peds. (#/hr)	45		47	47		45	3		22	22		3
Confl. Bikes (#/hr)			7			29						
Heavy Vehicles (%)	7%	7%	7%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases	1			1								
Actuated Green, G (s)		95.2			95.2						6.8	
Effective Green, g (s)		95.2			95.2						6.8	
Actuated g/C Ratio		0.87			0.87						0.06	
Clearance Time (s)		4.0			4.0						4.0	
Vehicle Extension (s)		0.2			0.2						2.0	
Lane Grp Cap (vph)		1528			1577						108	
v/s Ratio Prot											c0.01	
v/s Ratio Perm		0.27			0.37							
v/c Ratio		0.31			0.43						0.20	
Uniform Delay, d1		1.4			1.6						49.0	
Progression Factor		1.54			0.64						0.99	
Incremental Delay, d2		0.4			0.6						0.3	
Delay (s)		2.5			1.7						49.0	
Level of Service		A			A						D	
Approach Delay (s)		2.5			1.7			0.0			49.0	
Approach LOS		A			A			A			D	

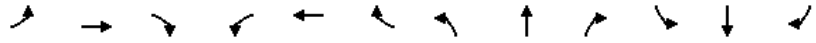
Intersection Summary			
HCM 2000 Control Delay	3.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	2	400	35	370	550	60	70	30	290	135	70	15	
Future Volume (vph)	2	400	35	370	550	60	70	30	290	135	70	15	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		75	0		100	0		75	0		0	
Storage Lanes	0		1	1		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		512			518			381			156		
Travel Time (s)		11.6			11.8			8.7			3.5		
Confl. Peds. (#/hr)	65		39	39		65	86		102	102		86	
Confl. Bikes (#/hr)			3			30			3			14	
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92	
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	3%	3%	3%	0%	0%	0%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	470	0	402	598	65	0	113	326	0	239	0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		
Protected Phases		1		4	1 4			3			3		2
Permitted Phases	1			1 4		1 4	3		3	3			
Detector Phase	1	1		4	1 4	1 4	3	3	3	3	3		
Switch Phase													
Minimum Initial (s)	10.0	10.0		8.0			8.0	8.0	8.0	8.0	8.0		7.0
Minimum Split (s)	17.0	17.0		13.5			13.5	13.5	13.5	13.5	13.5		27.0
Total Split (s)	37.0	37.0		17.0			29.0	29.0	29.0	29.0	29.0		27.0
Total Split (%)	33.6%	33.6%		15.5%			26.4%	26.4%	26.4%	26.4%	26.4%		25%
Yellow Time (s)	4.0	4.0		3.0			4.0	4.0	4.0	4.0	4.0		3.0
All-Red Time (s)	3.0	3.0		2.5			1.5	1.5	1.5	1.5	1.5		1.0
Lost Time Adjust (s)		0.0		0.0				0.0	0.0		0.0		
Total Lost Time (s)		7.0		5.5				5.5	5.5		5.5		
Lead/Lag	Lead	Lead		Lag			Lead	Lead	Lead	Lead	Lead		Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		None			None	None	None	None	None		None
v/c Ratio		0.50		0.86	0.66	0.09		0.48	0.62		0.93		
Control Delay		35.2		45.8	28.6	5.2		46.0	9.7		83.7		
Queue Delay		0.0		0.0	0.0	0.0		0.0	0.0		0.0		
Total Delay		35.2		45.8	28.6	5.2		46.0	9.7		83.7		
Queue Length 50th (ft)		151		~206	349	0		70	0		163		
Queue Length 95th (ft)		200		#428	491	26		127	76		#310		
Internal Link Dist (ft)		432			438			301			76		
Turn Bay Length (ft)						100			75				
Base Capacity (vph)		945		465	907	702		246	539		271		
Starvation Cap Reductn		0		0	0	0		0	0		0		
Spillback Cap Reductn		0		0	0	0		0	0		0		
Storage Cap Reductn		0		0	0	0		0	0		0		
Reduced v/c Ratio		0.50		0.86	0.66	0.09		0.46	0.60		0.88		

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 49 (45%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: Harvard Avenue/Franklin Street & Cambridge Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	400	35	370	550	60	70	30	290	135	70	15
Future Volume (vph)	2	400	35	370	550	60	70	30	290	135	70	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		5.5	7.0	7.0		5.5	5.5		5.5	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		0.99		1.00	1.00	0.88		1.00	0.84		0.98	
Flpb, ped/bikes		1.00		0.99	1.00	1.00		0.92	1.00		0.92	
Frt		0.99		1.00	1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00	1.00		0.97	1.00		0.97	
Satd. Flow (prot)		3308		1755	1863	1397		1645	1313		1655	
Flt Permitted		0.92		0.41	1.00	1.00		0.68	1.00		0.73	
Satd. Flow (perm)		3059		749	1863	1397		1151	1313		1253	
Peak-hour factor, PHF	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	2	430	38	402	598	65	79	34	326	147	76	16
RTOR Reduction (vph)	0	6	0	0	0	36	0	0	260	0	2	0
Lane Group Flow (vph)	0	464	0	402	598	29	0	113	66	0	237	0
Confl. Peds. (#/hr)	65		39	39		65	86		102	102		86
Confl. Bikes (#/hr)			3			30			3			14
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	3%	3%	3%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		1		4	1 4			3			3	
Permitted Phases	1			1 4		1 4	3		3	3		
Actuated Green, G (s)		33.0		47.3	52.8	52.8		22.3	22.3		22.3	
Effective Green, g (s)		33.0		47.3	47.3	47.3		22.3	22.3		22.3	
Actuated g/C Ratio		0.30		0.43	0.43	0.43		0.20	0.20		0.20	
Clearance Time (s)		7.0		5.5				5.5	5.5		5.5	
Vehicle Extension (s)		2.0		2.0				2.0	2.0		2.0	
Lane Grp Cap (vph)		917		452	801	600		233	266		254	
v/s Ratio Prot				c0.12	0.32							
v/s Ratio Perm		0.15		c0.27		0.02		0.10	0.05		c0.19	
v/c Ratio		0.51		0.89	0.75	0.05		0.48	0.25		0.93	
Uniform Delay, d1		31.8		25.2	26.3	18.2		38.8	36.8		43.1	
Progression Factor		1.03		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		1.9		18.3	3.3	0.0		0.6	0.2		37.8	
Delay (s)		34.8		43.5	29.7	18.3		39.4	37.0		80.9	
Level of Service		C		D	C	B		D	D		F	
Approach Delay (s)		34.8			34.2			37.6			80.9	
Approach LOS		C			C			D			F	

Intersection Summary			
HCM 2000 Control Delay	40.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	165	10	5	85	15	30
Future Vol, veh/h	165	10	5	85	15	30
Conflicting Peds, #/hr	0	11	11	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	79	79	79	79
Heavy Vehicles, %	1	1	2	2	0	0
Mvmt Flow	185	11	6	108	19	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	208	0	322	202
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	120	-
Critical Hdwy	-	-	4.12	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1363	-	676	844
Stage 1	-	-	-	-	837	-
Stage 2	-	-	-	-	910	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1363	-	666	836
Mov Cap-2 Maneuver	-	-	-	-	666	-
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	905	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	770	-	-	1363	-
HCM Lane V/C Ratio	0.074	-	-	0.005	-
HCM Control Delay (s)	10	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	30	375	165	145	495	85	90	185	85	25	230	45	
Future Volume (vph)	30	375	165	145	495	85	90	185	85	25	230	45	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		100	75		0	115		0	0		0	
Storage Lanes	0		1	1		0	1		0	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		2049			739			1733			510		
Travel Time (s)		46.6			16.8			39.4			11.6		
Confl. Peds. (#/hr)	17		21	21		17	25		10	10		25	
Confl. Bikes (#/hr)						18							
Peak Hour Factor	0.93	0.93	0.93	0.91	0.91	0.91	0.95	0.95	0.95	0.90	0.90	0.90	
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	1%	1%	1%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	435	177	159	637	0	95	284	0	0	334	0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA		
Protected Phases		1			1			3			3		2
Permitted Phases	1		1	1			3			3			
Detector Phase	1	1	1	1	1		3	3		3	3		
Switch Phase													
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0		4.0
Minimum Split (s)	17.0	17.0	17.0	17.0	17.0		17.0	17.0		17.0	17.0		28.0
Total Split (s)	35.0	35.0	35.0	35.0	35.0		27.0	27.0		27.0	27.0		28.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	38.9%		30.0%	30.0%		30.0%	30.0%		31%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0		2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0		-1.0	-1.0			-1.0		
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0		
Lead/Lag	Lead	Lead	Lead	Lead	Lead								Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None		None
v/c Ratio		0.42	0.19	0.33	0.58		0.76	0.65			0.93		
Control Delay		14.3	5.4	15.5	17.3		68.6	35.6			65.3		
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		14.3	5.4	15.5	17.3		68.6	35.6			65.3		
Queue Length 50th (ft)		101	10	35	169		49	129			176		
Queue Length 95th (ft)		330	67	144	#597		#129	213			#327		
Internal Link Dist (ft)		1969			659			1653			430		
Turn Bay Length (ft)			100	75			115						
Base Capacity (vph)		1047	953	481	1101		136	471			392		
Starvation Cap Reductn		0	0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0	0		0	0			0		
Storage Cap Reductn		0	0	0	0		0	0			0		
Reduced v/c Ratio		0.42	0.19	0.33	0.58		0.70	0.60			0.85		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 19: Everett Street & Western Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	375	165	145	495	85	90	185	85	25	230	45
Future Volume (vph)	30	375	165	145	495	85	90	185	85	25	230	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes		1.00	0.96	1.00	0.99		1.00	0.99			0.99	
Flpb, ped/bikes		1.00	1.00	0.99	1.00		0.98	1.00			1.00	
Frt		1.00	0.85	1.00	0.98		1.00	0.95			0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)		1820	1494	1736	1792		1748	1770			1814	
Flt Permitted		0.93	1.00	0.43	1.00		0.29	1.00			0.83	
Satd. Flow (perm)		1706	1494	787	1792		536	1770			1510	
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	32	403	177	159	544	93	95	195	89	28	256	50
RTOR Reduction (vph)	0	0	52	0	4	0	0	19	0	0	7	0
Lane Group Flow (vph)	0	435	125	159	633	0	95	265	0	0	327	0
Confl. Peds. (#/hr)	17		21	21		17	25		10	10		25
Confl. Bikes (#/hr)						18						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			3			3	
Permitted Phases	1		1	1			3			3		
Actuated Green, G (s)		51.1	51.1	51.1	51.1		20.1	20.1			20.1	
Effective Green, g (s)		52.1	52.1	52.1	52.1		21.1	21.1			21.1	
Actuated g/C Ratio		0.58	0.58	0.58	0.58		0.23	0.23			0.23	
Clearance Time (s)		5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		987	864	455	1037		125	414			354	
v/s Ratio Prot					c0.35			0.15				
v/s Ratio Perm		0.25	0.08	0.20			0.18				c0.22	
v/c Ratio		0.44	0.14	0.35	0.61		0.76	0.64			0.92	
Uniform Delay, d1		10.7	8.7	10.0	12.3		32.1	31.0			33.7	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2		1.4	0.4	2.1	2.7		21.3	2.4			28.8	
Delay (s)		12.1	9.1	12.1	15.0		53.4	33.4			62.4	
Level of Service		B	A	B	B		D	C			E	
Approach Delay (s)		11.3			14.4			38.4			62.4	
Approach LOS		B			B			D			E	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	15	60	2	70	20	375	45	40	485	1
Future Vol, veh/h	0	0	15	60	2	70	20	375	45	40	485	1
Conflicting Peds, #/hr	0	0	4	4	0	0	44	0	17	17	0	44
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	83	83	83	90	90	90	89	89	89
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	0	0	24	72	2	84	22	417	50	45	545	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1208	1207	594	1154	1183	459	590	0	0	484	0	0
Stage 1	679	679	-	503	503	-	-	-	-	-	-	-
Stage 2	529	528	-	651	680	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	161	185	509	175	190	604	990	-	-	1084	-	-
Stage 1	445	454	-	553	543	-	-	-	-	-	-	-
Stage 2	537	531	-	459	452	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	123	160	489	153	165	595	987	-	-	1084	-	-
Mov Cap-2 Maneuver	123	160	-	153	165	-	-	-	-	-	-	-
Stage 1	416	411	-	529	519	-	-	-	-	-	-	-
Stage 2	445	508	-	409	409	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	40.6	0.4	0.6
HCM LOS	B	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	987	-	-	489	253	1084	-	-
HCM Lane V/C Ratio	0.023	-	-	0.049	0.629	0.041	-	-
HCM Control Delay (s)	8.7	0	-	12.7	40.6	8.5	0	-
HCM Lane LOS	A	A	-	B	E	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	3.8	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	15	15	430	435	125
Future Vol, veh/h	10	15	15	430	435	125
Conflicting Peds, #/hr	4	0	29	0	0	29
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	52	52	92	92	86	86
Heavy Vehicles, %	4	4	1	1	1	1
Mvmt Flow	19	29	16	467	506	145

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1111	607	680	0	-	0
Stage 1	607	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.11	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.209	-	-	-
Pot Cap-1 Maneuver	229	493	917	-	-	-
Stage 1	540	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	213	481	917	-	-	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	527	-	-	-	-	-
Stage 2	574	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.2	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	917	-	320	-	-
HCM Lane V/C Ratio	0.018	-	0.15	-	-
HCM Control Delay (s)	9	0	18.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	45	400	45	50	400
Future Vol, veh/h	25	45	400	45	50	400
Conflicting Peds, #/hr	0	27	0	0	45	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	92	92	91	91
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	33	60	435	49	55	440

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1053	531	0	0	529	0
Stage 1	504	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	253	552	-	-	1043	-
Stage 1	611	-	-	-	-	-
Stage 2	583	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	226	519	-	-	1020	-
Mov Cap-2 Maneuver	226	-	-	-	-	-
Stage 1	588	-	-	-	-	-
Stage 2	542	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.7	0	1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	355	1020	-
HCM Lane V/C Ratio	-	-	0.263	0.054	-
HCM Control Delay (s)	-	-	18.7	8.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1	0.2	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	0	90	5	0	65
Future Vol, veh/h	10	0	90	5	0	65
Conflicting Peds, #/hr	0	0	0	7	7	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	56	56	89	89	91	91
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	18	0	101	6	0	71

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	182	111	0	0	114	0
Stage 1	111	-	-	-	-	-
Stage 2	71	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	812	948	-	-	1481	-
Stage 1	919	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	807	942	-	-	1481	-
Mov Cap-2 Maneuver	807	-	-	-	-	-
Stage 1	914	-	-	-	-	-
Stage 2	957	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	807	1481	-
HCM Lane V/C Ratio	-	-	0.022	-	-
HCM Control Delay (s)	-	-	9.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			✣				✣				✣				✣	
Traffic Vol, veh/h	0	0	40	5	0	50	60	0	0	10	35	50	0	5	15	1
Future Vol, veh/h	0	0	40	5	0	50	60	0	0	10	35	50	0	5	15	1
Peak Hour Factor	0.92	0.85	0.85	0.85	0.92	0.80	0.80	0.80	0.79	0.89	0.89	0.89	0.92	0.63	0.63	0.63
Heavy Vehicles, %	2	2	2	2	2	1	1	1	5	1	1	1	2	0	0	0
Mvmt Flow	0	0	47	6	0	63	75	0	0	11	39	56	0	8	24	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.6	8.2	7.7	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	0%	45%	24%
Vol Thru, %	37%	89%	55%	71%
Vol Right, %	53%	11%	0%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	45	110	21
LT Vol	10	0	50	5
Through Vol	35	40	60	15
RT Vol	50	5	0	1
Lane Flow Rate	107	53	138	33
Geometry Grp	1	1	1	1
Degree of Util (X)	0.121	0.064	0.164	0.041
Departure Headway (Hd)	4.095	4.322	4.293	4.466
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	880	832	824	805
Service Time	2.099	2.33	2.38	2.473
HCM Lane V/C Ratio	0.122	0.064	0.167	0.041
HCM Control Delay	7.7	7.6	8.2	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.2	0.6	0.1

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			✣				✣				✣				✣	
Traffic Vol, veh/h	0	1	110	90	0	20	290	5	0	10	1	5	0	5	1	5
Future Vol, veh/h	0	1	110	90	0	20	290	5	0	10	1	5	0	5	1	5
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.87	0.87	0.87	0.92	0.75	0.75	0.75	0.92	0.50	0.50	0.50
Heavy Vehicles, %	2	0	0	0	2	1	1	1	2	0	0	0	2	0	0	0
Mvmt Flow	0	1	139	114	0	23	333	6	0	13	1	7	0	10	2	10
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	10.5	8.4	8.2
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	62%	0%	6%	45%
Vol Thru, %	6%	55%	92%	9%
Vol Right, %	31%	45%	2%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	201	315	11
LT Vol	10	1	20	5
Through Vol	1	110	290	1
RT Vol	5	90	5	5
Lane Flow Rate	21	254	362	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.031	0.29	0.432	0.031
Departure Headway (Hd)	5.167	4.106	4.291	5.047
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	692	878	844	708
Service Time	3.205	2.124	2.291	3.084
HCM Lane V/C Ratio	0.03	0.289	0.429	0.031
HCM Control Delay	8.4	8.8	10.5	8.2
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.1	1.2	2.2	0.1

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	15	60	50	0	60	125	5	0	80	5	25	0	15	30	105
Future Vol, veh/h	0	15	60	50	0	60	125	5	0	80	5	25	0	15	30	105
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88	0.92	0.93	0.93	0.93	0.92	0.70	0.70	0.70
Heavy Vehicles, %	2	0	0	0	2	2	2	2	2	2	2	2	2	1	1	1
Mvmt Flow	0	17	68	57	0	68	142	6	0	86	5	27	0	21	43	150
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	10.1	9.2	9.3
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	73%	12%	32%	10%
Vol Thru, %	5%	48%	66%	20%
Vol Right, %	23%	40%	3%	70%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	125	190	150
LT Vol	80	15	60	15
Through Vol	5	60	125	30
RT Vol	25	50	5	105
Lane Flow Rate	118	142	216	214
Geometry Grp	1	1	1	1
Degree of Util (X)	0.167	0.187	0.296	0.27
Departure Headway (Hd)	5.072	4.746	4.936	4.54
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	701	749	723	784
Service Time	3.148	2.823	3.007	2.605
HCM Lane V/C Ratio	0.168	0.19	0.299	0.273
HCM Control Delay	9.2	8.9	10.1	9.3
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.6	0.7	1.2	1.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	80	0	35	80	95	40	50	645	0	10	0	670	70
Future Volume (vph)	80	0	35	80	95	40	50	645	0	10	0	670	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	0		0		0		50
Storage Lanes	2		0	1		0	0		0		0		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		797			420			570				590	
Travel Time (s)		18.1			9.5			13.0				13.4	
Confl. Peds. (#/hr)			2	2					34		34		
Confl. Bikes (#/hr)									5				1
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	95	42	0	85	144	0	0	724	0	0	0	708	73
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Detector Phase	3			2	2		4	1 4		1		1	1 3
Switch Phase													
Minimum Initial (s)	6.0			6.0	6.0		6.0			10.0		10.0	
Minimum Split (s)	24.0			12.0	12.0		12.0			22.0		22.0	
Total Split (s)	24.0			22.0	22.0		22.0			31.0		31.0	
Total Split (%)	24.2%			22.2%	22.2%		22.2%			31.3%		31.3%	
Yellow Time (s)	4.0			4.0	4.0		4.0			4.0		4.0	
All-Red Time (s)	2.0			2.0	2.0		2.0			2.0		2.0	
Lost Time Adjust (s)	0.0			0.0	0.0							0.0	
Total Lost Time (s)	6.0			6.0	6.0							6.0	
Lead/Lag	Lead			Lag	Lag		Lag			Lead		Lead	
Lead-Lag Optimize?													
Recall Mode	None			None	None		Max			C-Max		C-Max	
v/c Ratio	0.38	0.18		0.42	0.65			0.38				0.84	0.12
Control Delay	47.5	0.0		45.9	50.0			10.1				45.9	1.7
Queue Delay	0.0	0.0		0.0	0.0			0.0				0.0	0.0
Total Delay	47.5	0.0		45.9	50.0			10.1				45.9	1.7
Queue Length 50th (ft)	29	0		51	77			101				223	0
Queue Length 95th (ft)	50	0		93	134			162				#316	9
Internal Link Dist (ft)		717			340			490				510	
Turn Bay Length (ft)				75									50
Base Capacity (vph)	618	231		291	308			1899				839	743
Starvation Cap Reductn	0	0		0	0			0				0	0
Spillback Cap Reductn	0	0		0	0			0				0	0
Storage Cap Reductn	0	0		0	0			0				0	0
Reduced v/c Ratio	0.15	0.18		0.29	0.47			0.38				0.84	0.10

Intersection Summary

Area Type: Other
Cycle Length: 99
Actuated Cycle Length: 99
Offset: 47 (47%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Market Street & Leo M. Birmingham Parkway & Lincoln Street

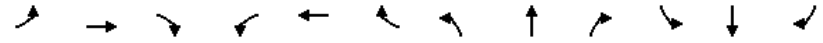
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	80	0	35	80	95	40	50	645	0	10	0	670	70
Future Volume (vph)	80	0	35	80	95	40	50	645	0	10	0	670	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	6.0			6.0				6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00			0.95				0.95	1.00
Frpb, ped/bikes	1.00	0.93		1.00	1.00			1.00				1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Frt	1.00	0.85		1.00	0.96			1.00				1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00				1.00	1.00
Satd. Flow (prot)	3400	0		1805	1815			3527				3537	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.87				0.94	1.00
Satd. Flow (perm)	3400	0		1805	1815			3095				3325	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.94	0.94	0.94	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	95	0	42	85	101	43	52	672	0	10	0	698	73
RTOR Reduction (vph)	0	42	0	0	16	0	0	0	0	0	0	0	49
Lane Group Flow (vph)	95	0	0	85	128	0	0	724	0	0	0	708	24
Confl. Peds. (#/hr)			2	2					34		34		
Confl. Bikes (#/hr)									5				1
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Actuated Green, G (s)	7.4	0.0		11.2	11.2			56.4				25.0	32.4
Effective Green, g (s)	7.4	0.0		11.2	11.2			56.4				25.0	32.4
Actuated g/C Ratio	0.07	0.00		0.11	0.11			0.57				0.25	0.33
Clearance Time (s)	6.0			6.0	6.0							6.0	
Vehicle Extension (s)	2.0			2.0	2.0							2.0	
Lane Grp Cap (vph)	254	0		204	205			1900				839	518
v/s Ratio Prot	c0.03			0.05	c0.07			c0.12					0.02
v/s Ratio Perm								0.10				c0.21	
v/c Ratio	0.37	0.00		0.42	0.62			0.38				0.84	0.05
Uniform Delay, d1	43.6	49.5		40.9	41.9			11.7				35.1	22.7
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Incremental Delay, d2	0.3	0.0		0.5	4.2			0.6				10.1	0.0
Delay (s)	43.9	49.5		41.4	46.1			12.3				45.3	22.8
Level of Service	D	D		D	D			B				D	C
Approach Delay (s)		45.6			44.3			12.3				43.2	
Approach LOS		D			D			B				D	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	99.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	5	60	5	135	25	595	35	70	660	20
Future Volume (vph)	5	1	5	60	5	135	25	595	35	70	660	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			772			187			570	
Travel Time (s)		5.6			17.5			4.3			13.0	
Confl. Peds. (#/hr)	3		16	16		3	9		28	28		9
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	0.46	0.46	0.46	0.75	0.75	0.75	0.92	0.92	0.92	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	24	0	0	87	180	0	712	0	0	824	0
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Detector Phase	2	2		2	2	2 3	1	1		3	1 3	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		6.0		
Minimum Split (s)	19.0	19.0		19.0	19.0		22.0	22.0		11.0		
Total Split (s)	20.0	20.0		20.0	20.0		50.0	50.0		15.0		
Total Split (%)	23.5%	23.5%		23.5%	23.5%		58.8%	58.8%		17.6%		
Yellow Time (s)	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		
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead				
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		None		
v/c Ratio		0.11			0.49	0.29		0.39			0.39	
Control Delay		22.1			41.4	4.7		10.2			4.3	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		22.1			41.4	4.7		10.2			4.3	
Queue Length 50th (ft)		6			41	0		91			52	
Queue Length 95th (ft)		11			68	22		148			97	
Internal Link Dist (ft)		167			692			107			490	
Turn Bay Length (ft)						125						
Base Capacity (vph)		306			263	594		1838			2117	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.08			0.33	0.30		0.39			0.39	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 80.8	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	

Splits and Phases: 2: Market Street & Stockyard Driveway/Guest Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	5	60	5	135	25	595	35	70	660	20
Future Volume (vph)	5	1	5	60	5	135	25	595	35	70	660	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	5.0		4.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		0.98			1.00	1.00		1.00			1.00	
Flpb, ped/bikes		1.00			0.98	1.00		1.00			1.00	
Frt		0.94			1.00	0.85		0.99			1.00	
Flt Protected		0.98			0.96	1.00		1.00			1.00	
Satd. Flow (prot)		1708			1754	1599		3454			3534	
Flt Permitted		0.86			0.73	1.00		0.91			0.83	
Satd. Flow (perm)		1504			1332	1599		3137			2933	
Peak-hour factor, PHF	0.46	0.46	0.46	0.75	0.75	0.75	0.92	0.92	0.92	0.91	0.91	0.91
Adj. Flow (vph)	11	2	11	80	7	180	27	647	38	77	725	22
RTOR Reduction (vph)	0	10	0	0	0	125	0	4	0	0	2	0
Lane Group Flow (vph)	0	14	0	0	87	55	0	708	0	0	822	0
Confl. Peds. (#/hr)	3		16	16		3	9		28	28		9
Confl. Bikes (#/hr)									1			2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Actuated Green, G (s)		9.8			9.8	24.5		46.2			55.9	
Effective Green, g (s)		10.8			10.8	24.5		47.2			55.9	
Actuated g/C Ratio		0.13			0.13	0.30		0.58			0.69	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		201			178	485		1834			2103	
v/s Ratio Prot						0.03					c0.05	
v/s Ratio Perm		0.01			c0.07			c0.23			0.22	
v/c Ratio		0.07			0.49	0.11		0.39			0.39	
Uniform Delay, d1		30.6			32.4	20.3		9.0			5.2	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.1			0.8	0.0		0.6			0.0	
Delay (s)		30.6			33.2	20.3		9.6			5.3	
Level of Service		C			C	C		A			A	
Approach Delay (s)		30.6			24.5			9.6			5.3	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	0	650	725	0
Future Vol, veh/h	5	15	0	650	725	0
Conflicting Peds, #/hr	3	5	15	0	0	15
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	96	96	92	92
Heavy Vehicles, %	6	6	2	2	1	1
Mvmt Flow	7	21	0	677	788	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1130	399	-	0	-	0
Stage 1	788	-	-	-	-	-
Stage 2	342	-	-	-	-	-
Critical Hdwy	6.92	7.02	-	-	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	-	-	-	-
Pot Cap-1 Maneuver	191	589	0	-	-	0
Stage 1	398	-	0	-	-	0
Stage 2	679	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	191	587	-	-	-	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	398	-	-	-	-	-
Stage 2	679	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15	0	0
HCM LOS	C		

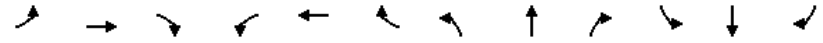
Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	387	-
HCM Lane V/C Ratio	-	0.073	-
HCM Control Delay (s)	-	15	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.2	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	40	250	50	90	275	140	70	470	110	170	530	40	
Future Volume (vph)	40	250	50	90	275	140	70	470	110	170	530	40	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		200	0		200	0		100	0		0	
Storage Lanes	0		1	0		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		324			332			559			323		
Travel Time (s)		7.4			7.5			12.7			7.3		
Confl. Peds. (#/hr)	30		29	29		30	12		32	32		12	
Confl. Bikes (#/hr)			1			1			1			2	
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.91	0.91	0.91	0.89	0.89	0.89	
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	2%	2%	2%	2%	2%	2%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	358	0	0	544	0	0	714	0	0	832	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		5.0			1.0
Minimum Split (s)	15.0	15.0		15.0	15.0		15.0	15.0		10.0			20.0
Total Split (s)	33.0	33.0		33.0	33.0		35.0	35.0		11.0			20.0
Total Split (%)	33.3%	33.3%		33.3%	33.3%		35.4%	35.4%		11.1%			20%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0			2.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.0			2.0
Lost Time Adjust (s)		0.0			0.0			0.0					
Total Lost Time (s)		5.0			5.0			5.0					
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?													
Recall Mode	Max	Max		Max	Max		Max	Max		None			None
v/c Ratio		0.40			0.65			0.95			0.92		
Control Delay		26.6			29.9			54.0			42.4		
Queue Delay		0.0			0.0			0.0			0.0		
Total Delay		26.6			29.9			54.0			42.4		
Queue Length 50th (ft)		91			145			~251			~212		
Queue Length 95th (ft)		135			207			#370			#352		
Internal Link Dist (ft)		244			252			479			243		
Turn Bay Length (ft)													
Base Capacity (vph)		887			841			753			901		
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		0.40			0.65			0.95			0.92		

Intersection Summary	
Area Type:	Other
Cycle Length: 99	
Actuated Cycle Length: 91	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Market Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	250	50	90	275	140	70	470	110	170	530	40
Future Volume (vph)	40	250	50	90	275	140	70	470	110	170	530	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			0.99			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.96			0.97			0.99	
Flt Protected		0.99			0.99			0.99			0.99	
Satd. Flow (prot)		3382			3346			3406			3463	
Flt Permitted		0.82			0.76			0.64			0.57	
Satd. Flow (perm)		2805			2579			2208			1997	
Peak-hour factor, PHF	0.95	0.95	0.95	0.93	0.93	0.93	0.91	0.91	0.91	0.89	0.89	0.89
Adj. Flow (vph)	42	263	53	97	296	151	77	516	121	191	596	45
RTOR Reduction (vph)	0	14	0	0	40	0	0	17	0	0	4	0
Lane Group Flow (vph)	0	344	0	0	504	0	0	697	0	0	828	0
Confl. Peds. (#/hr)	30		29	29		30	12		32	32		12
Confl. Bikes (#/hr)			1			1			1			2
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		28.3			28.3			30.4			37.5	
Effective Green, g (s)		28.3			28.3			30.4			37.5	
Actuated g/C Ratio		0.31			0.31			0.33			0.40	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			4.0				
Lane Grp Cap (vph)		857			788			724			921	
v/s Ratio Prot											c0.07	
v/s Ratio Perm		0.12			c0.20			c0.32			0.29	
v/c Ratio		0.40			0.64			0.96			0.90	
Uniform Delay, d1		25.4			27.8			30.5			25.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.4			4.0			25.5			11.2	
Delay (s)		26.8			31.7			56.1			37.0	
Level of Service		C			C			E			D	
Approach Delay (s)		26.8			31.7			56.1			37.0	
Approach LOS		C			C			E			D	

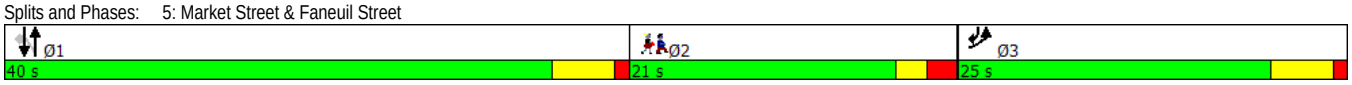
Intersection Summary			
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	92.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	165	55	35	540	555	160	
Future Volume (vph)	165	55	35	540	555	160	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Right Turn on Red		Yes				Yes	
Link Speed (mph)	30			30	30		
Link Distance (ft)	420			1276	559		
Travel Time (s)	9.5			29.0	12.7		
Confl. Peds. (#/hr)	2	27	21			21	
Confl. Bikes (#/hr)		1					
Peak Hour Factor	0.92	0.92	0.95	0.95	0.93	0.93	
Heavy Vehicles (%)	3%	3%	1%	1%	3%	3%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	239	0	0	605	597	172	
Turn Type	Prot		Perm	NA	NA	pm+ov	
Protected Phases	3			1	1	3	2
Permitted Phases			1			1	
Detector Phase	3		1	1	1	3	
Switch Phase							
Minimum Initial (s)	6.0		10.0	10.0	10.0	6.0	7.0
Minimum Split (s)	11.0		15.0	15.0	15.0	11.0	21.0
Total Split (s)	25.0		40.0	40.0	40.0	25.0	21.0
Total Split (%)	29.1%		46.5%	46.5%	46.5%	29.1%	24%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	2.0
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	Lead	Lead		Lag
Lead-Lag Optimize?							
Recall Mode	None		Max	Max	Max	None	None
v/c Ratio	0.70			0.62	0.59	0.15	
Control Delay	36.3			18.9	17.9	1.1	
Queue Delay	0.0			0.0	0.0	0.0	
Total Delay	36.3			18.9	17.9	1.1	
Queue Length 50th (ft)	69			100	96	0	
Queue Length 95th (ft)	183			#476	#451	16	
Internal Link Dist (ft)	340			1196	479		
Turn Bay Length (ft)							
Base Capacity (vph)	541			978	1014	1266	
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	0.44			0.62	0.59	0.14	

Intersection Summary

Area Type: Other
Cycle Length: 86
Actuated Cycle Length: 66.7
Natural Cycle: 75
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Market Street & Faneuil Street



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	165	55	35	540	555	160
Future Volume (vph)	165	55	35	540	555	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frpb, ped/bikes	0.98			1.00	1.00	0.97
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.97			1.00	1.00	0.85
Flt Protected	0.96			1.00	1.00	1.00
Satd. Flow (prot)	1678			1875	1845	1528
Flt Permitted	0.96			0.95	1.00	1.00
Satd. Flow (perm)	1678			1778	1845	1528
Peak-hour factor, PHF	0.92	0.92	0.95	0.95	0.93	0.93
Adj. Flow (vph)	179	60	37	568	597	172
RTOR Reduction (vph)	15	0	0	0	0	48
Lane Group Flow (vph)	224	0	0	605	597	124
Confl. Peds. (#/hr)	2	27	21			21
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	3%	3%	1%	1%	3%	3%
Turn Type	Prot		Perm	NA	NA	pm+ov
Protected Phases	3			1	1	3
Permitted Phases			1			1
Actuated Green, G (s)	13.0			36.7	36.7	49.7
Effective Green, g (s)	13.0			36.7	36.7	49.7
Actuated g/C Ratio	0.19			0.53	0.53	0.72
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	2.0			2.0	2.0	2.0
Lane Grp Cap (vph)	316			945	981	1211
v/s Ratio Prot	c0.13				0.32	0.02
v/s Ratio Perm				c0.34		0.06
v/c Ratio	0.71			0.64	0.61	0.10
Uniform Delay, d1	26.2			11.5	11.2	2.9
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	6.1			3.3	2.8	0.0
Delay (s)	32.4			14.8	14.0	2.9
Level of Service	C			B	B	A
Approach Delay (s)	32.4			14.8	11.5	
Approach LOS	C			B	B	

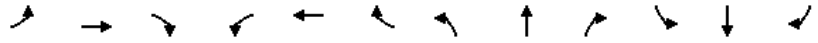
Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	69.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	30	140	80	15	200	105	25	395	5	65	510	20	
Future Volume (vph)	30	140	80	15	200	105	25	395	5	65	510	20	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	0		0	75		0	
Storage Lanes	0		0	0		0	0		0	1		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		448			531			497			1276		
Travel Time (s)		10.2			12.1			11.3			29.0		
Confl. Peds. (#/hr)	9		17	17		9	34		36	36		34	
Confl. Bikes (#/hr)			1			1			5			2	
Peak Hour Factor	0.84	0.84	0.84	0.79	0.79	0.79	0.91	0.91	0.91	0.94	0.94	0.94	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	298	0	0	405	0	0	466	0	69	564	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		4.0			7.0
Minimum Split (s)	13.0	13.0		13.0	13.0		15.0	15.0		8.0			22.0
Total Split (s)	29.0	29.0		29.0	29.0		32.0	32.0		8.0			22.0
Total Split (%)	31.9%	31.9%		31.9%	31.9%		35.2%	35.2%		8.8%			24%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		4.0			3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0			1.0
Lost Time Adjust (s)		0.0			0.0			0.0		0.0			
Total Lost Time (s)		5.0			5.0			5.0		4.0			
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes			Yes
Recall Mode	None	None		None	None		Max	Max		Max			None
v/c Ratio		0.75			0.86			0.97		0.21	0.66		
Control Delay		39.1			47.0			65.6		18.2	25.4		
Queue Delay		0.0			0.0			0.0		0.0	0.0		
Total Delay		39.1			47.0			65.6		18.2	25.4		
Queue Length 50th (ft)		144			208			~322		24	281		
Queue Length 95th (ft)		218			#274			#513		52	#451		
Internal Link Dist (ft)		368			451			417			1196		
Turn Bay Length (ft)										75			
Base Capacity (vph)		481			567			482		323	855		
Starvation Cap Reductn		0			0			0		0	0		
Spillback Cap Reductn		0			0			0		0	0		
Storage Cap Reductn		0			0			0		0	0		
Reduced v/c Ratio		0.62			0.71			0.97		0.21	0.66		

Intersection Summary	
Area Type:	Other
Cycle Length: 91	
Actuated Cycle Length: 78.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Market Street & Arlington Street/Sparhawk Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	140	80	15	200	105	25	395	5	65	510	20
Future Volume (vph)	30	140	80	15	200	105	25	395	5	65	510	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		4.0	5.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		0.99	1.00	
Frt		0.96			0.96			1.00		1.00	0.99	
Flt Protected		0.99			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1757			1769			1852		1760	1848	
Flt Permitted		0.83			0.98			0.73		0.34	1.00	
Satd. Flow (perm)		1464			1734			1349		629	1848	
Peak-hour factor, PHF	0.84	0.84	0.84	0.79	0.79	0.79	0.91	0.91	0.91	0.94	0.94	0.94
Adj. Flow (vph)	36	167	95	19	253	133	27	434	5	69	543	21
RTOR Reduction (vph)	0	19	0	0	19	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	279	0	0	386	0	0	465	0	69	563	0
Confl. Peds. (#/hr)	9		17	17		9	34		36	36		34
Confl. Bikes (#/hr)			1			1			5			2
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		20.5			20.5			28.1		32.3	36.3	
Effective Green, g (s)		20.5			20.5			28.1		32.3	32.3	
Actuated g/C Ratio		0.26			0.26			0.35		0.40	0.40	
Clearance Time (s)		5.0			5.0			5.0		4.0		
Vehicle Extension (s)		2.0			2.0			0.2		2.0		
Lane Grp Cap (vph)		374			443			472		312	744	
v/s Ratio Prot										0.01	c0.30	
v/s Ratio Perm		0.19			c0.22			c0.34		0.08		
v/c Ratio		0.75			0.87			0.99		0.22	0.76	
Uniform Delay, d1		27.5			28.6			25.9		16.1	20.6	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		7.0			16.3			38.1		1.6	7.1	
Delay (s)		34.4			44.9			63.9		17.7	27.6	
Level of Service		C			D			E		B	C	
Approach Delay (s)		34.4			44.9			63.9			26.6	
Approach LOS		C			D			E			C	

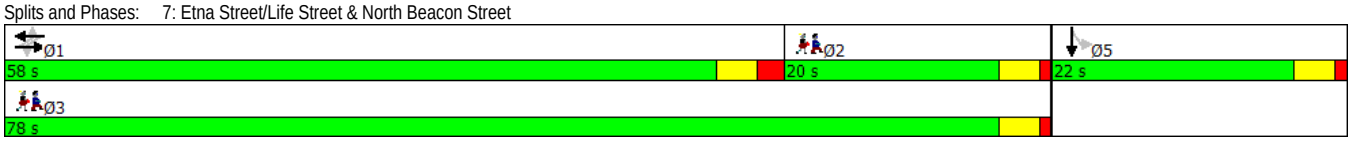
Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	80.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

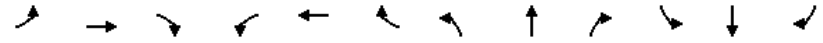
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3
Lane Configurations														
Traffic Volume (vph)	10	530	15	10	500	10	0	0	0	15	5	15		
Future Volume (vph)	10	530	15	10	500	10	0	0	0	15	5	15		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes			Yes		
Link Speed (mph)		30			30			30			30			
Link Distance (ft)		458			334			278			631			
Travel Time (s)		10.4			7.6			6.3			14.3			
Confl. Peds. (#/hr)	20		43	43		20	27		3	3		27		
Confl. Bikes (#/hr)			5											
Peak Hour Factor	0.96	0.96	0.96	0.98	0.98	0.98	0.92	0.92	0.92	0.78	0.78	0.78		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%		
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	578	0	0	530	0	0	0	0	0	44	0		
Turn Type	Perm	NA		Perm	NA					Perm	NA			
Protected Phases		1			1						5		2	3
Permitted Phases	1			1						5				
Detector Phase	1	1		1	1					5	5			
Switch Phase														
Minimum Initial (s)	10.0	10.0		10.0	10.0					7.0	7.0		7.0	8.0
Minimum Split (s)	15.0	15.0		15.0	15.0					11.0	11.0		20.0	19.0
Total Split (s)	58.0	58.0		58.0	58.0					22.0	22.0		20.0	78.0
Total Split (%)	58.0%	58.0%		58.0%	58.0%					22.0%	22.0%		20%	78%
Yellow Time (s)	3.0	3.0		3.0	3.0					3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0					1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0			0.0						0.0			
Total Lost Time (s)		5.0			5.0						4.0			
Lead/Lag	Lead	Lead		Lead	Lead								Lag	
Lead-Lag Optimize?														
Recall Mode	None	None		None	None					None	None		None	Ped
v/c Ratio		0.39			0.35						0.10			
Control Delay		6.6			6.3						15.4			
Queue Delay		0.0			0.0						0.0			
Total Delay		6.6			6.3						15.4			
Queue Length 50th (ft)		0			0						1			
Queue Length 95th (ft)		283			251						33			
Internal Link Dist (ft)		378			254			198			551			
Turn Bay Length (ft)														
Base Capacity (vph)		1718			1720						1142			
Starvation Cap Reductn		0			0						0			
Spillback Cap Reductn		0			0						0			
Storage Cap Reductn		0			0						0			
Reduced v/c Ratio		0.34			0.31						0.04			

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 34.4
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 7: Etna Street/Life Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	530	15	10	500	10	0	0	0	15	5	15
Future Volume (vph)	10	530	15	10	500	10	0	0	0	15	5	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			1.00						0.88	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		1.00			1.00						0.94	
Flt Protected		1.00			1.00						0.98	
Satd. Flow (prot)		1851			1854						1486	
Flt Permitted		0.99			0.99						0.98	
Satd. Flow (perm)		1835			1835						1486	
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.92	0.92	0.92	0.78	0.78	0.78
Adj. Flow (vph)	10	552	16	10	510	10	0	0	0	19	6	19
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	18	0
Lane Group Flow (vph)	0	577	0	0	530	0	0	0	0	0	26	0
Confl. Peds. (#/hr)	20		43	43		20	27		3	3		27
Confl. Bikes (#/hr)			5									
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						5	
Permitted Phases	1			1						5		
Actuated Green, G (s)		22.7			22.7						2.1	
Effective Green, g (s)		22.7			22.7						2.1	
Actuated g/C Ratio		0.58			0.58						0.05	
Clearance Time (s)		5.0			5.0						4.0	
Vehicle Extension (s)		2.0			2.0						2.0	
Lane Grp Cap (vph)		1062			1062						79	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.29						0.02	
v/c Ratio		0.54			0.50						0.33	
Uniform Delay, d1		5.1			4.9						17.9	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.3			0.1						0.9	
Delay (s)		5.4			5.0						18.8	
Level of Service		A			A						B	
Approach Delay (s)		5.4			5.0			0.0			18.8	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	39.2	Sum of lost time (s)	13.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	25	510	5	65	540	5	0	0	0	5	2	2
Future Vol, veh/h	25	510	5	65	540	5	0	0	0	5	2	2
Conflicting Peds, #/hr	24	0	35	35	0	24	2	0	1	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	96	96	96	25	25	25	58	58	58
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	26	526	5	68	563	5	0	0	0	9	3	3

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	592	0	0	566	0	0				1306	1342	591
Stage 1	-	-	-	-	-	-				725	725	-
Stage 2	-	-	-	-	-	-				581	617	-
Critical Hdwy	4.12	-	-	4.11	-	-				6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-				5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.4	5.5	-
Follow-up Hdwy	2.218	-	-	2.209	-	-				3.5	4	3.3
Pot Cap-1 Maneuver	984	-	-	1011	-	-				178	154	511
Stage 1	-	-	-	-	-	-				483	433	-
Stage 2	-	-	-	-	-	-				563	484	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	982	-	-	1010	-	-				148	0	500
Mov Cap-2 Maneuver	-	-	-	-	-	-				148	0	-
Stage 1	-	-	-	-	-	-				427	0	-
Stage 2	-	-	-	-	-	-				531	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0.9	26.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	982	-	-	1010	-	-	185
HCM Lane V/C Ratio	0.026	-	-	0.067	-	-	0.084
HCM Control Delay (s)	8.8	0	-	8.8	0	-	26.2
HCM Lane LOS	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.1	-	-	0.2	-	-	0.3

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	515	0	0	545	2	45	1	60	1	0	20
Future Vol, veh/h	2	515	0	0	545	2	45	1	60	1	0	20
Conflicting Peds, #/hr	19	0	34	34	0	19	4	0	2	2	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	93	93	93	94	94	94	53	53	53
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	0	0	0
Mvmt Flow	2	542	0	0	586	2	48	1	64	2	0	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	607	0	-	-	-	0	1156	1153	544	1187	1152	610
Stage 1	-	-	-	-	-	-	546	546	-	606	606	-
Stage 2	-	-	-	-	-	-	610	607	-	581	546	-
Critical Hdwy	4.12	-	-	-	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	971	-	0	0	-	-	175	199	543	167	199	498
Stage 1	-	-	0	0	-	-	526	521	-	487	490	-
Stage 2	-	-	0	0	-	-	485	489	-	503	521	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	968	-	-	-	-	-	161	195	542	144	195	488
Mov Cap-2 Maneuver	-	-	-	-	-	-	161	195	-	144	195	-
Stage 1	-	-	-	-	-	-	524	519	-	478	482	-
Stage 2	-	-	-	-	-	-	446	481	-	441	519	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	27.9	14
HCM LOS			D	B

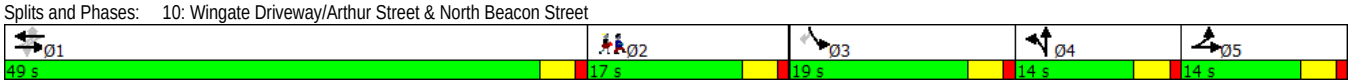
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	268	968	-	-	-	438
HCM Lane V/C Ratio	0.421	0.002	-	-	-	0.09
HCM Control Delay (s)	27.9	8.7	0	-	-	14
HCM Lane LOS	D	A	A	-	-	B
HCM 95th %tile Q(veh)	2	0	-	-	-	0.3

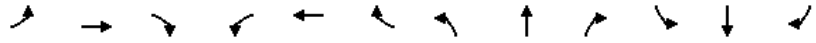
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	115	545	0	0	405	75	0	0	0	135	0	130	
Future Volume (vph)	115	545	0	0	405	75	0	0	0	135	0	130	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12	
Storage Length (ft)	100		0	0		0	0		0	0		150	
Storage Lanes	1		0	0		1	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		456			284			205			781		
Travel Time (s)		10.4			6.5			4.7			17.8		
Confl. Peds. (#/hr)	3					3			2	2			
Confl. Bikes (#/hr)			5			1							
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	120	568	0	0	440	82	0	0	0	145	0	140	
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm	
Protected Phases	5	1 5			1		4	4		3			2
Permitted Phases	1 5			1		1						3	
Detector Phase	5	1 5		1	1	1	4	4		3		3	
Switch Phase													
Minimum Initial (s)	4.0			12.0	12.0	12.0	3.0	3.0		5.0		5.0	4.0
Minimum Split (s)	8.0			16.0	16.0	16.0	7.0	7.0		9.0		9.0	17.0
Total Split (s)	14.0			49.0	49.0	49.0	14.0	14.0		19.0		19.0	17.0
Total Split (%)	12.4%			43.4%	43.4%	43.4%	12.4%	12.4%		16.8%		16.8%	15%
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0
All-Red Time (s)	1.0			1.0	1.0	1.0	1.0	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	-1.0				-1.0	-1.0		-1.0		0.0		-1.0	
Total Lost Time (s)	3.0				3.0	3.0		3.0		4.0		3.0	
Lead/Lag				Lead	Lead	Lead	Lag	Lag		Lead		Lead	Lag
Lead-Lag Optimize?													
Recall Mode	None			None	None	None	None	None		None		None	None
v/c Ratio	0.21	0.48			0.55	0.11				0.51		0.35	
Control Delay	5.8	7.6			16.5	1.3				36.2		9.3	
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0	
Total Delay	5.8	7.6			16.5	1.3				36.2		9.3	
Queue Length 50th (ft)	10	65			103	0				49		0	
Queue Length 95th (ft)	54	284			286	10				149		52	
Internal Link Dist (ft)		376			204			125			701		
Turn Bay Length (ft)	100											150	
Base Capacity (vph)	587	1555			1317	1122				455		536	
Starvation Cap Reductn	0	0			0	0				0		0	
Spillback Cap Reductn	0	0			0	0				0		0	
Storage Cap Reductn	0	0			0	0				0		0	
Reduced v/c Ratio	0.20	0.37			0.33	0.07				0.32		0.26	

Intersection Summary

Area Type: Other
Cycle Length: 113
Actuated Cycle Length: 64.2
Natural Cycle: 65
Control Type: Semi Act-Uncoord

Splits and Phases: 10: Wingate Driveway/Arthur Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	545	0	0	405	75	0	0	0	135	0	130
Future Volume (vph)	115	545	0	0	405	75	0	0	0	135	0	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			3.0	3.0				4.0		3.0
Lane Util. Factor	1.00	1.00			1.00	1.00				1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.98				1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1651	1739			1739	1442				1787		1599
Flt Permitted	0.35	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	609	1739			1739	1442				1787		1599
Peak-hour factor, PHF	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	120	568	0	0	440	82	0	0	0	145	0	140
RTOR Reduction (vph)	0	0	0	0	0	46	0	0	0	0	0	116
Lane Group Flow (vph)	120	568	0	0	440	36	0	0	0	145	0	24
Confl. Peds. (#/hr)	3					3			2	2		
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm
Protected Phases	5	1 5			1		4	4		3		
Permitted Phases	1 5			1		1						3
Actuated Green, G (s)	38.7	42.7			28.3	28.3				10.2		10.2
Effective Green, g (s)	40.7	43.7			29.3	29.3				10.2		11.2
Actuated g/C Ratio	0.61	0.66			0.44	0.44				0.15		0.17
Clearance Time (s)	4.0				4.0	4.0				4.0		4.0
Vehicle Extension (s)	2.0				4.0	4.0				2.0		2.0
Lane Grp Cap (vph)	550	1141			765	634				273		268
v/s Ratio Prot	0.04	c0.33			c0.25					c0.08		
v/s Ratio Perm	0.10					0.03						0.01
v/c Ratio	0.22	0.50			0.58	0.06				0.53		0.09
Uniform Delay, d1	6.1	5.8			14.0	10.7				26.0		23.4
Progression Factor	1.00	1.00			1.00	1.00				1.00		1.00
Incremental Delay, d2	0.1	0.5			1.3	0.1				1.0		0.1
Delay (s)	6.2	6.3			15.2	10.8				27.0		23.4
Level of Service	A	A			B	B				C		C
Approach Delay (s)		6.3			14.5			0.0			25.2	
Approach LOS		A			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	66.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑↑	Y	
Traffic Vol, veh/h	680	0	0	465	15	30
Future Vol, veh/h	680	0	0	465	15	30
Conflicting Peds, #/hr	0	44	44	0	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	82	82	83	83
Heavy Vehicles, %	3	3	2	2	0	0
Mvmt Flow	731	0	0	567	18	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	1017	733
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	286	-
Critical Hdwy	-	-	-	-	7.3	6.2
Critical Hdwy Stg 1	-	-	-	-	6.1	-
Critical Hdwy Stg 2	-	-	-	-	6.5	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	0	-	206	424
Stage 1	-	0	0	-	416	-
Stage 2	-	0	0	-	703	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	206	423
Mov Cap-2 Maneuver	-	-	-	-	206	-
Stage 1	-	-	-	-	416	-
Stage 2	-	-	-	-	702	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	313	-	-
HCM Lane V/C Ratio	0.173	-	-
HCM Control Delay (s)	18.9	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.6	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	675	35	55	445	20	115
Future Vol, veh/h	675	35	55	445	20	115
Conflicting Peds, #/hr	0	49	49	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	85	85	85	85
Heavy Vehicles, %	3	3	2	2	1	1
Mvmt Flow	718	37	65	524	24	135

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	804	0	1439	786
Stage 1	-	-	-	-	786	-
Stage 2	-	-	-	-	653	-
Critical Hdwy	-	-	4.12	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.218	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	820	-	147	394
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	520	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	820	-	125	378
Mov Cap-2 Maneuver	-	-	-	-	125	-
Stage 1	-	-	-	-	433	-
Stage 2	-	-	-	-	462	-

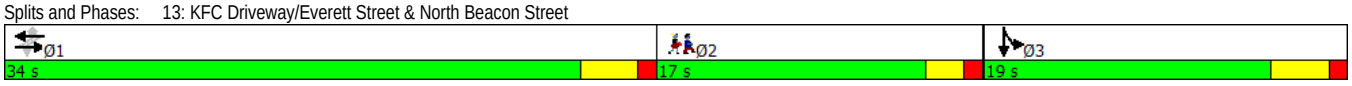
Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	31.3
HCM LOS			D

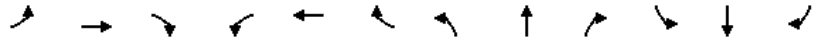
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	291	-	-	820	-
HCM Lane V/C Ratio	0.546	-	-	0.079	-
HCM Control Delay (s)	31.3	-	-	9.8	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	3	-	-	0.3	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	150	490	5	10	425	210	0	0	0	180	1	85	
Future Volume (vph)	150	490	5	10	425	210	0	0	0	180	1	85	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		446			477			138			517		
Travel Time (s)		10.1			10.8			3.1			11.8		
Confl. Peds. (#/hr)	50		64	64		50	13		36	36		13	
Confl. Bikes (#/hr)			6			2							
Peak Hour Factor	0.95	0.95	0.95	0.90	0.90	0.90	0.25	0.25	0.25	0.85	0.85	0.85	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	679	0	0	483	233	0	0	0	0	313	0	
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA		
Protected Phases		1			1					3	3		2
Permitted Phases	1			1		1							
Detector Phase	1	1		1	1	1				3	3		
Switch Phase													
Minimum Initial (s)	15.0	15.0		15.0	15.0	15.0				7.0	7.0		7.0
Minimum Split (s)	19.0	19.0		19.0	19.0	19.0				11.0	11.0		17.0
Total Split (s)	34.0	34.0		34.0	34.0	34.0				19.0	19.0		17.0
Total Split (%)	48.6%	48.6%		48.6%	48.6%	48.6%				27.1%	27.1%		24%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0		2.0
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)		4.0			4.0	4.0					4.0		
Lead/Lag	Lead	Lead		Lead	Lead	Lead							Lag
Lead-Lag Optimize?													
Recall Mode	None	None		None	None	None				Max	Max		None
v/c Ratio		0.69			0.61	0.30					0.58		
Control Delay		17.5			16.5	3.3					24.8		
Queue Delay		0.0			0.0	0.0					0.0		
Total Delay		17.5			16.5	3.3					24.8		
Queue Length 50th (ft)		60			78	0					57		
Queue Length 95th (ft)		181			248	36					#219		
Internal Link Dist (ft)		366			397			58			437		
Turn Bay Length (ft)													
Base Capacity (vph)		1380			1116	980					538		
Starvation Cap Reductn		0			0	0					0		
Spillback Cap Reductn		0			0	0					0		
Storage Cap Reductn		0			0	0					0		
Reduced v/c Ratio		0.49			0.43	0.24					0.58		

Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 52.7	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 13: KFC Driveway/Everett Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	490	5	10	425	210	0	0	0	180	1	85
Future Volume (vph)	150	490	5	10	425	210	0	0	0	180	1	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0					4.0	
Lane Util. Factor		0.95			1.00	1.00					1.00	
Frpb, ped/bikes		1.00			1.00	0.92					0.99	
Flpb, ped/bikes		0.99			1.00	1.00					1.00	
Frt		1.00			1.00	0.85					0.96	
Flt Protected		0.99			1.00	1.00					0.97	
Satd. Flow (prot)		3472			1859	1457					1701	
Flt Permitted		0.64			0.98	1.00					0.97	
Satd. Flow (perm)		2261			1830	1457					1701	
Peak-hour factor, PHF	0.95	0.95	0.95	0.90	0.90	0.90	0.25	0.25	0.25	0.85	0.85	0.85
Adj. Flow (vph)	158	516	5	11	472	233	0	0	0	212	1	100
RTOR Reduction (vph)	0	1	0	0	0	135	0	0	0	0	22	0
Lane Group Flow (vph)	0	678	0	0	483	98	0	0	0	0	291	0
Confl. Peds. (#/hr)	50		64	64		50	13		36	36		13
Confl. Bikes (#/hr)			6			2						
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA	
Protected Phases		1			1					3	3	
Permitted Phases	1			1		1						
Actuated Green, G (s)		22.9			22.9	22.9					16.1	
Effective Green, g (s)		22.9			22.9	22.9					16.1	
Actuated g/C Ratio		0.42			0.42	0.42					0.30	
Clearance Time (s)		4.0			4.0	4.0					4.0	
Vehicle Extension (s)		2.0			2.0	2.0					2.0	
Lane Grp Cap (vph)		955			773	615					505	
v/s Ratio Prot											c0.17	
v/s Ratio Perm		c0.30			0.26	0.07						
v/c Ratio		0.71			0.62	0.16					0.58	
Uniform Delay, d1		12.9			12.3	9.7					16.2	
Progression Factor		1.00			1.00	1.00					1.00	
Incremental Delay, d2		2.1			1.1	0.0					4.7	
Delay (s)		15.0			13.4	9.7					20.9	
Level of Service		B			B	A					C	
Approach Delay (s)		15.0			12.2			0.0			20.9	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	54.2	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	145	425	30	20	140	400	85	0	275	160	110	250	125
Future Volume (vph)	145	425	30	20	140	400	85	0	275	160	110	250	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		420		0	0		150	0		75
Storage Lanes	0		0		1		0	0		1	0		1
Taper Length (ft)	25				25			25			25		
Right Turn on Red			Yes				Yes			Yes			Yes
Link Speed (mph)		30				30			30			30	
Link Distance (ft)		477				1053			361			234	
Travel Time (s)		10.8				23.9			8.2			5.3	
Confl. Peds. (#/hr)	123		81	50	81		123	124		50	50		124
Confl. Bikes (#/hr)			3				9			3			3
Peak Hour Factor	0.95	0.95	0.95	0.81	0.81	0.81	0.81	0.87	0.87	0.87	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	3%	3%	3%	2%	2%	2%
Shared Lane Traffic (%)					10%								
Lane Group Flow (vph)	0	632	0	0	181	616	0	0	316	184	0	396	137
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Detector Phase	3	3		2	2	2			1	1	4	1 4	1
Switch Phase													
Minimum Initial (s)	8.0	8.0		10.0	10.0	10.0			10.0	10.0	4.0		10.0
Minimum Split (s)	26.0	26.0		27.0	27.0	27.0			24.0	24.0	10.0		24.0
Total Split (s)	36.0	36.0		29.0	29.0	29.0			30.0	30.0	11.0		30.0
Total Split (%)	34.0%	34.0%		27.4%	27.4%	27.4%			28.3%	28.3%	10.4%		28.3%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0			4.0	4.0	3.0		4.0
All-Red Time (s)	6.0	6.0		6.0	6.0	6.0			3.0	3.0	3.0		3.0
Lost Time Adjust (s)		0.0			0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag			Lead	Lead	Lag		Lead
Lead-Lag Optimize?													
Recall Mode	None	None		Max	Max	Max			None	None	None		None
v/c Ratio		0.83			0.58	0.97			0.50	0.41		0.66	0.33
Control Delay		45.7			45.4	69.5			38.8	4.6		36.9	2.2
Queue Delay		0.0			0.0	0.0			0.0	0.0		0.0	0.0
Total Delay		45.7			45.4	69.5			38.8	4.6		36.9	2.2
Queue Length 50th (ft)		191			112	203			93	0		102	0
Queue Length 95th (ft)		274			184	#312			135	20		150	0
Internal Link Dist (ft)		397				973			281			154	
Turn Bay Length (ft)					420					150			75
Base Capacity (vph)		931			314	632			844	517		761	469
Starvation Cap Reductn		0			0	0			0	0		0	0
Spillback Cap Reductn		0			0	0			0	0		0	0
Storage Cap Reductn		0			0	0			0	0		0	0
Reduced v/c Ratio		0.68			0.58	0.97			0.37	0.36		0.52	0.29

Intersection Summary

Area Type: Other
Cycle Length: 106
Actuated Cycle Length: 96.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Cambridge Street & North Beacon Street/Brighton Avenue

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	145	425	30	20	140	400	85	0	275	160	110	250	125
Future Volume (vph)	145	425	30	20	140	400	85	0	275	160	110	250	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		10.0			10.0	10.0			7.0	7.0		7.0	7.0
Lane Util. Factor		0.95			0.91	0.91			0.95	1.00		0.95	1.00
Frpb, ped/bikes		0.99			1.00	0.96			1.00	0.90		1.00	0.78
Flpb, ped/bikes		1.00			1.00	1.00			1.00	1.00		0.99	1.00
Frt		0.99			1.00	0.97			1.00	0.85		1.00	0.85
Flt Protected		0.99			0.95	1.00			1.00	1.00		0.98	1.00
Satd. Flow (prot)		3409			1579	3113			3505	1414		3445	1235
Flt Permitted		0.99			0.95	1.00			1.00	1.00		0.73	1.00
Satd. Flow (perm)		3409			1579	3113			3505	1414		2569	1235
Peak-hour factor, PHF	0.95	0.95	0.95	0.81	0.81	0.81	0.81	0.87	0.87	0.87	0.91	0.91	0.91
Adj. Flow (vph)	153	447	32	25	173	494	105	0	316	184	121	275	137
RTOR Reduction (vph)	0	4	0	0	0	15	0	0	0	151	0	0	112
Lane Group Flow (vph)	0	628	0	0	181	601	0	0	316	33	0	396	25
Confl. Peds. (#/hr)	123		81	50	81		123	124		50	50		124
Confl. Bikes (#/hr)			3				9			3			3
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Actuated Green, G (s)		21.5			19.2	19.2			17.3	17.3		22.3	17.3
Effective Green, g (s)		21.5			19.2	19.2			17.3	17.3		22.3	17.3
Actuated g/C Ratio		0.22			0.20	0.20			0.18	0.18		0.23	0.18
Clearance Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Vehicle Extension (s)		2.0			2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)		763			315	622			631	254		642	222
v/s Ratio Prot		c0.18			0.11	c0.19			0.09			c0.03	
v/s Ratio Perm										0.02		c0.11	0.02
v/c Ratio		0.82			0.57	0.97			0.50	0.13		0.62	0.11
Uniform Delay, d1		35.4			34.7	38.1			35.5	33.0		33.0	32.9
Progression Factor		1.00			1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		6.8			7.4	28.6			0.2	0.1		1.2	0.1
Delay (s)		42.3			42.1	66.7			35.7	33.1		34.3	33.0
Level of Service		D			D	E			D	C		C	C
Approach Delay (s)		42.3				61.1			34.7			33.9	
Approach LOS		D				E			C			C	

Intersection Summary			
HCM 2000 Control Delay	45.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	33.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	40	465	470	15	10	15
Future Vol, veh/h	40	465	470	15	10	15
Conflicting Peds, #/hr	129	0	0	129	28	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	63	63
Heavy Vehicles, %	4	4	3	3	4	4
Mvmt Flow	44	511	516	16	16	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	662	0	-	0	1281	658
Stage 1	-	-	-	-	654	-
Stage 2	-	-	-	-	627	-
Critical Hdwy	4.14	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.236	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	917	-	-	-	181	461
Stage 1	-	-	-	-	514	-
Stage 2	-	-	-	-	529	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	914	-	-	-	135	410
Mov Cap-2 Maneuver	-	-	-	-	135	-
Stage 1	-	-	-	-	459	-
Stage 2	-	-	-	-	440	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	24.3
HCM LOS			C

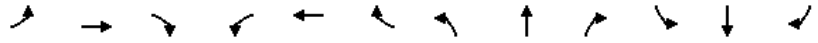
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	914	-	-	-	226
HCM Lane V/C Ratio	0.048	-	-	-	0.176
HCM Control Delay (s)	9.1	0	-	-	24.3
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	470	5	2	470	15	0	0	0	5	0	15
Future Volume (vph)	15	470	5	2	470	15	0	0	0	5	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		587			512			208			484	
Travel Time (s)		13.3			11.6			4.7			11.0	
Confl. Peds. (#/hr)	166		76	76		166	4		73	73		4
Confl. Bikes (#/hr)			6			2						
Peak Hour Factor	0.94	0.94	0.94	0.90	0.90	0.90	0.25	0.25	0.25	0.50	0.50	0.50
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	0%	0%	0%	17%	17%	17%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	521	0	0	541	0	0	0	0	0	40	0
Turn Type	Perm	NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases	1			1								
Detector Phase	1	1		1	1					5	5	
Switch Phase												
Minimum Initial (s)	20.0	20.0		20.0	20.0					8.0	8.0	
Minimum Split (s)	24.0	24.0		24.0	24.0					22.0	22.0	
Total Split (s)	90.0	90.0		90.0	90.0					25.0	25.0	
Total Split (%)	78.3%	78.3%		78.3%	78.3%					21.7%	21.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None					None	None	
v/c Ratio		0.36			0.37						0.09	
Control Delay		5.8			5.8						6.0	
Queue Delay		0.0			0.0						0.0	
Total Delay		5.8			5.8						6.0	
Queue Length 50th (ft)		0			0						1	
Queue Length 95th (ft)		184			192						6	
Internal Link Dist (ft)		507			432			128			404	
Turn Bay Length (ft)												
Base Capacity (vph)		1794			1803						1033	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.29			0.30						0.04	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 31.2
Natural Cycle: 50
Control Type: Semi Act-Uncoord

Splits and Phases: 16: Cambridge Street & Denby Road



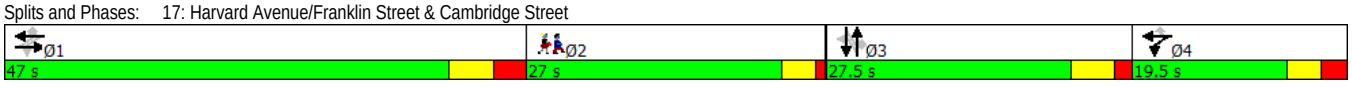
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	470	5	2	470	15	0	0	0	5	0	15
Future Volume (vph)	15	470	5	2	470	15	0	0	0	5	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			0.99						0.98	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		1.00			1.00						0.90	
Flt Protected		1.00			1.00						0.99	
Satd. Flow (prot)		1832			1823						1416	
Flt Permitted		0.98			1.00						0.99	
Satd. Flow (perm)		1804			1821						1416	
Peak-hour factor, PHF	0.94	0.94	0.94	0.90	0.90	0.90	0.25	0.25	0.25	0.50	0.50	0.50
Adj. Flow (vph)	16	500	5	2	522	17	0	0	0	10	0	30
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	27	0
Lane Group Flow (vph)	0	521	0	0	540	0	0	0	0	0	13	0
Confl. Peds. (#/hr)	166		76	76		166	4		73	73		4
Confl. Bikes (#/hr)			6			2						
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	0%	0%	0%	17%	17%	17%
Turn Type	Perm	NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases	1			1								
Actuated Green, G (s)		21.9			21.9						3.7	
Effective Green, g (s)		21.9			21.9						3.7	
Actuated g/C Ratio		0.65			0.65						0.11	
Clearance Time (s)		4.0			4.0						4.0	
Vehicle Extension (s)		0.2			0.2						2.0	
Lane Grp Cap (vph)		1175			1186						155	
v/s Ratio Prot											c0.01	
v/s Ratio Perm		0.29			c0.30							
v/c Ratio		0.44			0.45						0.09	
Uniform Delay, d1		2.9			2.9						13.4	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.1			0.1						0.1	
Delay (s)		3.0			3.0						13.5	
Level of Service		A			A						B	
Approach Delay (s)		3.0			3.0			0.0			13.5	
Approach LOS		A			A			A			B	

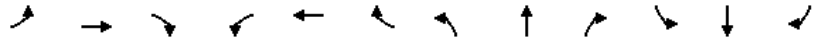
Intersection Summary			
HCM 2000 Control Delay	3.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	33.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	10	400	50	275	395	50	70	25	345	80	40	20	
Future Volume (vph)	10	400	50	275	395	50	70	25	345	80	40	20	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		75	0		100	0		75	0		0	
Storage Lanes	0		1	1		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		512			518			381			156		
Travel Time (s)		11.6			11.8			8.7			3.5		
Confl. Peds. (#/hr)	81		43	43		81	102		71	71		102	
Confl. Bikes (#/hr)			6			12			1			8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.87	0.87	0.87	0.69	0.69	0.69	
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	2%	2%	2%	0%	0%	0%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	490	0	293	420	53	0	109	397	0	203	0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		
Protected Phases		1		4	1 4			3			3		2
Permitted Phases	1			1 4		1 4	3		3	3			
Detector Phase	1	1		4	1 4	1 4	3	3	3	3	3		
Switch Phase													
Minimum Initial (s)	10.0	10.0		8.0			8.0	8.0	8.0	8.0	8.0		7.0
Minimum Split (s)	17.0	17.0		13.5			13.5	13.5	13.5	13.5	13.5		27.0
Total Split (s)	47.0	47.0		19.5			27.5	27.5	27.5	27.5	27.5		27.0
Total Split (%)	38.8%	38.8%		16.1%			22.7%	22.7%	22.7%	22.7%	22.7%		22%
Yellow Time (s)	4.0	4.0		3.0			4.0	4.0	4.0	4.0	4.0		3.0
All-Red Time (s)	3.0	3.0		2.5			1.5	1.5	1.5	1.5	1.5		1.0
Lost Time Adjust (s)		0.0		0.0				0.0	0.0		0.0		
Total Lost Time (s)		7.0		5.5				5.5	5.5		5.5		
Lead/Lag	Lead	Lead		Lag			Lead	Lead	Lead	Lead	Lead		Lag
Lead-Lag Optimize?													
Recall Mode	None	None		None			None	None	None	None	None		None
v/c Ratio		0.71		0.72	0.52	0.08		0.46	0.65		0.72		
Control Delay		40.7		31.7	24.7	4.5		44.7	9.6		53.0		
Queue Delay		0.0		0.0	0.0	0.0		0.0	0.0		0.0		
Total Delay		40.7		31.7	24.7	4.5		44.7	9.6		53.0		
Queue Length 50th (ft)		156		132	210	0		63	0		121		
Queue Length 95th (ft)		213		#201	303	20		125	75		159		
Internal Link Dist (ft)		432			438			301			76		
Turn Bay Length (ft)						100			75				
Base Capacity (vph)		1344		438	1191	914		270	641		322		
Starvation Cap Reductn		0		0	0	0		0	0		0		
Spillback Cap Reductn		0		0	0	0		0	0		0		
Storage Cap Reductn		0		0	0	0		0	0		0		
Reduced v/c Ratio		0.36		0.67	0.35	0.06		0.40	0.62		0.63		

Intersection Summary	
Area Type:	Other
Cycle Length: 121	
Actuated Cycle Length: 94.7	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 17: Harvard Avenue/Franklin Street & Cambridge Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	400	50	275	395	50	70	25	345	80	40	20
Future Volume (vph)	10	400	50	275	395	50	70	25	345	80	40	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		5.5	7.0	7.0		5.5	5.5		5.5	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		0.99		1.00	1.00	0.86		1.00	0.89		0.96	
Flpb, ped/bikes		1.00		0.99	1.00	1.00		0.90	1.00		0.95	
Frt		0.98		1.00	1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00	1.00		0.96	1.00		0.97	
Satd. Flow (prot)		3361		1737	1845	1353		1610	1411		1661	
Flt Permitted		0.88		0.36	1.00	1.00		0.66	1.00		0.76	
Satd. Flow (perm)		2954		662	1845	1353		1103	1411		1303	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.87	0.87	0.87	0.69	0.69	0.69
Adj. Flow (vph)	11	426	53	293	420	53	80	29	397	116	58	29
RTOR Reduction (vph)	0	8	0	0	0	33	0	0	310	0	5	0
Lane Group Flow (vph)	0	482	0	293	420	20	0	109	87	0	198	0
Confl. Peds. (#/hr)	81		43	43		81	102		71	71		102
Confl. Bikes (#/hr)			6			12			1			8
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	2%	2%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		1		4	1 4			3			3	
Permitted Phases	1			1 4		1 4	3		3	3		
Actuated Green, G (s)		21.9		35.2	40.7	40.7		20.6	20.6		20.6	
Effective Green, g (s)		21.9		35.2	35.2	35.2		20.6	20.6		20.6	
Actuated g/C Ratio		0.23		0.37	0.37	0.37		0.22	0.22		0.22	
Clearance Time (s)		7.0		5.5				5.5	5.5		5.5	
Vehicle Extension (s)		2.0		2.0				2.0	2.0		2.0	
Lane Grp Cap (vph)		684		397	687	503		240	307		284	
v/s Ratio Prot				c0.10	0.23							
v/s Ratio Perm		0.16		c0.17		0.01		0.10	0.06		c0.15	
v/c Ratio		0.70		0.74	0.61	0.04		0.45	0.28		0.70	
Uniform Delay, d1		33.3		22.6	24.1	18.9		32.1	30.8		34.1	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.7		6.1	1.1	0.0		0.5	0.2		5.9	
Delay (s)		36.0		28.7	25.2	18.9		32.6	31.0		40.0	
Level of Service		D		C	C	B		C	C		D	
Approach Delay (s)		36.0			26.1			31.3			40.0	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	94.5	Sum of lost time (s)	22.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	95	15	10	60	20	20
Future Vol, veh/h	95	15	10	60	20	20
Conflicting Peds, #/hr	0	22	22	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	63	63	68	68
Heavy Vehicles, %	2	2	1	1	0	0
Mvmt Flow	132	21	16	95	29	29

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	175	0	291	165
Stage 1	-	-	-	-	164	-
Stage 2	-	-	-	-	127	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1407	-	704	885
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	904	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1406	-	683	868
Mov Cap-2 Maneuver	-	-	-	-	683	-
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	893	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	764	-	-	1406	-
HCM Lane V/C Ratio	0.077	-	-	0.011	-
HCM Control Delay (s)	10.1	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	30	395	115	105	345	25	55	145	80	20	100	25	
Future Volume (vph)	30	395	115	105	345	25	55	145	80	20	100	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		100	75		0	115		0	0		0	
Storage Lanes	0		1	1		0	1		0	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		2049			739			1737			510		
Travel Time (s)		46.6			16.8			39.5			11.6		
Confl. Peds. (#/hr)	1		13	13		1	5		4	4		5	
Confl. Bikes (#/hr)						2							
Peak Hour Factor	0.91	0.91	0.91	0.85	0.85	0.85	0.88	0.88	0.88	0.84	0.84	0.84	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	0%	0%	0%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	467	126	124	435	0	63	256	0	0	173	0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA		
Protected Phases		1			1			3			3		2
Permitted Phases	1		1	1			3			3			
Detector Phase	1	1	1	1	1		3	3		3	3		
Switch Phase													
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0		4.0
Minimum Split (s)	17.0	17.0	17.0	17.0	17.0		17.0	17.0		17.0	17.0		28.0
Total Split (s)	35.0	35.0	35.0	35.0	35.0		27.0	27.0		27.0	27.0		28.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	38.9%		30.0%	30.0%		30.0%	30.0%		31%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0		2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0		-1.0	-1.0			-1.0		
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0		
Lead/Lag	Lead	Lead	Lead	Lead	Lead								Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None		None
v/c Ratio		0.41	0.13	0.25	0.37		0.35	0.69			0.62		
Control Delay		13.1	5.7	13.3	12.1		35.5	39.2			40.2		
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		13.1	5.7	13.3	12.1		35.5	39.2			40.2		
Queue Length 50th (ft)		84	6	19	74		32	122			86		
Queue Length 95th (ft)		#386	56	102	292		63	181			129		
Internal Link Dist (ft)		1969			659			1657			430		
Turn Bay Length (ft)			100	75			115						
Base Capacity (vph)		1140	1005	503	1183		237	477			364		
Starvation Cap Reductn		0	0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0	0		0	0			0		
Storage Cap Reductn		0	0	0	0		0	0			0		
Reduced v/c Ratio		0.41	0.13	0.25	0.37		0.27	0.54			0.48		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 19: Everett Street & Western Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	395	115	105	345	25	55	145	80	20	100	25
Future Volume (vph)	30	395	115	105	345	25	55	145	80	20	100	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes		1.00	0.97	1.00	1.00		1.00	0.99			0.99	
Flpb, ped/bikes		1.00	1.00	0.99	1.00		0.99	1.00			1.00	
Frt		1.00	0.85	1.00	0.99		1.00	0.95			0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)		1820	1506	1727	1806		1791	1779			1813	
Flt Permitted		0.95	1.00	0.42	1.00		0.49	1.00			0.76	
Satd. Flow (perm)		1742	1506	770	1806		929	1779			1395	
Peak-hour factor, PHF	0.91	0.91	0.91	0.85	0.85	0.85	0.88	0.88	0.88	0.84	0.84	0.84
Adj. Flow (vph)	33	434	126	124	406	29	62	165	91	24	119	30
RTOR Reduction (vph)	0	0	31	0	2	0	0	24	0	0	9	0
Lane Group Flow (vph)	0	467	95	124	433	0	63	232	0	0	164	0
Confl. Peds. (#/hr)	1		13	13		1	5		4	4		5
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	0%	0%	0%	1%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			3			3	
Permitted Phases	1		1	1			3			3		
Actuated Green, G (s)		54.7	54.7	54.7	54.7		16.5	16.5			16.5	
Effective Green, g (s)		55.7	55.7	55.7	55.7		17.5	17.5			17.5	
Actuated g/C Ratio		0.62	0.62	0.62	0.62		0.19	0.19			0.19	
Clearance Time (s)		5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		1078	932	476	1117		180	345			271	
v/s Ratio Prot					0.24			c0.13				
v/s Ratio Perm		c0.27	0.06	0.16			0.07				0.12	
v/c Ratio		0.43	0.10	0.26	0.39		0.35	0.67			0.61	
Uniform Delay, d1		8.9	7.0	7.8	8.6		31.3	33.6			33.1	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2		1.3	0.2	1.3	1.0		0.4	4.0			2.6	
Delay (s)		10.2	7.2	9.1	9.6		31.8	37.6			35.7	
Level of Service		B	A	A	A		C	D			D	
Approach Delay (s)		9.6			9.5			36.5			35.7	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	5	30	0	40	10	290	45	30	295	5
Future Vol, veh/h	5	0	5	30	0	40	10	290	45	30	295	5
Conflicting Peds, #/hr	0	0	2	2	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	55	55	55	92	92	92	87	87	87	96	96	96
Heavy Vehicles, %	0	0	0	1	1	1	2	2	2	1	1	1
Mvmt Flow	9	0	9	33	0	43	11	333	52	31	307	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	776	780	312	761	757	359	313	0	0	385	0	0
Stage 1	372	372	-	382	382	-	-	-	-	-	-	-
Stage 2	404	408	-	379	375	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.12	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.218	-	-	2.209	-	-
Pot Cap-1 Maneuver	317	329	733	323	338	688	1247	-	-	1179	-	-
Stage 1	653	622	-	643	614	-	-	-	-	-	-	-
Stage 2	627	600	-	645	619	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	287	315	732	308	324	688	1245	-	-	1179	-	-
Mov Cap-2 Maneuver	287	315	-	308	324	-	-	-	-	-	-	-
Stage 1	646	602	-	636	607	-	-	-	-	-	-	-
Stage 2	581	593	-	616	599	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.1	14.6	0.2	0.7
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1245	-	-	412	450	1179	-	-
HCM Lane V/C Ratio	0.009	-	-	0.044	0.169	0.027	-	-
HCM Control Delay (s)	7.9	0	-	14.1	14.6	8.1	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.6	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	10	25	335	245	85
Future Vol, veh/h	10	10	25	335	245	85
Conflicting Peds, #/hr	5	1	24	0	0	24
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	54	89	89	96	96
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	19	19	28	376	255	89

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	761	324	368	0	-	0
Stage 1	323	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.11	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.209	-	-	-
Pot Cap-1 Maneuver	376	722	1196	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	655	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	350	707	1195	-	-	-
Mov Cap-2 Maneuver	350	-	-	-	-	-
Stage 1	723	-	-	-	-	-
Stage 2	623	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.4	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1195	-	468	-	-
HCM Lane V/C Ratio	0.024	-	0.079	-	-
HCM Control Delay (s)	8.1	0	13.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	25	335	60	25	230
Future Vol, veh/h	25	25	335	60	25	230
Conflicting Peds, #/hr	0	25	0	0	40	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	87	87	88	88
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	35	35	385	69	28	261

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	778	485	0	0	494	0
Stage 1	460	-	-	-	-	-
Stage 2	318	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	368	586	-	-	1080	-
Stage 1	640	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	345	555	-	-	1058	-
Mov Cap-2 Maneuver	345	-	-	-	-	-
Stage 1	619	-	-	-	-	-
Stage 2	719	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	425	1058	-
HCM Lane V/C Ratio	-	-	0.166	0.027	-
HCM Control Delay (s)	-	-	15.1	8.5	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	75	0	1	45
Future Vol, veh/h	5	5	75	0	1	45
Conflicting Peds, #/hr	3	1	0	8	8	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	90	90	88	88
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	9	9	83	0	1	51

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	147	92	0	0	91	0
Stage 1	91	-	-	-	-	-
Stage 2	56	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	850	971	-	-	1517	-
Stage 1	938	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	841	964	-	-	1516	-
Mov Cap-2 Maneuver	841	-	-	-	-	-
Stage 1	932	-	-	-	-	-
Stage 2	969	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	898	1516	-
HCM Lane V/C Ratio	-	-	0.019	0.001	-
HCM Control Delay (s)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	0	15	10	0	40	45	5	0	15	5	60	0	0	0	0
Future Vol, veh/h	0	0	15	10	0	40	45	5	0	15	5	60	0	0	0	0
Peak Hour Factor	0.92	0.64	0.64	0.64	0.92	0.88	0.88	0.88	0.79	0.90	0.90	0.90	0.92	0.25	0.25	0.25
Heavy Vehicles, %	2	0	0	0	2	0	0	0	5	1	1	1	2	0	0	0
Mvmt Flow	0	0	23	16	0	45	51	6	0	17	6	67	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.1	7.7	7.2	0
HCM LOS	A	A	A	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	0%	44%	0%
Vol Thru, %	6%	60%	50%	100%
Vol Right, %	75%	40%	6%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	25	90	0
LT Vol	15	0	40	0
Through Vol	5	15	45	0
RT Vol	60	10	5	0
Lane Flow Rate	89	39	102	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.093	0.042	0.118	0
Departure Headway (Hd)	3.748	3.894	4.142	4.215
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	946	913	863	0
Service Time	1.813	1.946	2.176	2.295
HCM Lane V/C Ratio	0.094	0.043	0.118	0
HCM Control Delay	7.2	7.1	7.7	7.3
HCM Lane LOS	A	A	A	N
HCM 95th-tile Q	0.3	0.1	0.4	0

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	0	80	15	0	10	170	2	0	15	0	5	0	2	0	1
Future Vol, veh/h	0	0	80	15	0	10	170	2	0	15	0	5	0	2	0	1
Peak Hour Factor	0.92	0.86	0.86	0.86	0.92	0.75	0.75	0.75	0.92	0.53	0.53	0.53	0.92	0.38	0.38	0.38
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	0	0	0	2	33	33	33
Mvmt Flow	0	0	93	17	0	13	227	3	0	28	0	9	0	5	0	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	8.7	7.9	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	75%	0%	5%	67%
Vol Thru, %	0%	84%	93%	0%
Vol Right, %	25%	16%	1%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	95	182	3
LT Vol	15	0	10	2
Through Vol	0	80	170	0
RT Vol	5	15	2	1
Lane Flow Rate	38	110	243	8
Geometry Grp	1	1	1	1
Degree of Util (X)	0.049	0.125	0.275	0.011
Departure Headway (Hd)	4.672	4.086	4.085	5.207
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	771	864	871	691
Service Time	2.672	2.175	2.146	3.209
HCM Lane V/C Ratio	0.049	0.127	0.279	0.012
HCM Control Delay	7.9	7.8	8.7	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.4	1.1	0

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	0	70	20	0	60	90	0	0	60	0	30	0	0	0	5
Future Vol, veh/h	0	0	70	20	0	60	90	0	0	60	0	30	0	0	0	5
Peak Hour Factor	0.92	0.72	0.72	0.72	0.92	0.86	0.86	0.86	0.92	0.87	0.87	0.87	0.92	0.63	0.63	0.63
Heavy Vehicles, %	2	0	0	0	2	1	1	1	2	0	0	0	2	0	0	0
Mvmt Flow	0	0	97	28	0	70	105	0	0	69	0	34	0	0	0	8
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.9	8.6	8.2	7.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	0%	40%	0%
Vol Thru, %	0%	78%	60%	0%
Vol Right, %	33%	22%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	90	150	5
LT Vol	60	0	60	0
Through Vol	0	70	90	0
RT Vol	30	20	0	5
Lane Flow Rate	103	125	174	8
Geometry Grp	1	1	1	1
Degree of Util (X)	0.13	0.146	0.213	0.009
Departure Headway (Hd)	4.508	4.213	4.4	4.088
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	798	854	822	876
Service Time	2.524	2.228	2.4	2.11
HCM Lane V/C Ratio	0.129	0.146	0.212	0.009
HCM Control Delay	8.2	7.9	8.6	7.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.5	0.8	0

- ***No-Build***

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	370	0	115	135	175	55	50	765	0	10	0	840	85
Future Volume (vph)	370	0	115	135	175	55	50	765	0	10	0	840	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	0		0		0		50
Storage Lanes	2		0	1		0	0		0		0		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		797			420			570				590	
Travel Time (s)		18.1			9.5			13.0				13.4	
Confl. Peds. (#/hr)									27		27		
Confl. Bikes (#/hr)			2						20				8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	7%	7%	7%	5%	5%	5%	6%	6%	6%	6%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	402	125	0	147	250	0	0	886	0	0	0	924	92
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Detector Phase	3			2	2		4	1 4		1		1	1 3
Switch Phase													
Minimum Initial (s)	6.0			6.0	6.0		6.0			10.0		10.0	
Minimum Split (s)	24.0			12.0	12.0		12.0			22.0		22.0	
Total Split (s)	24.0			22.0	22.0		22.0			31.0		31.0	
Total Split (%)	24.2%			22.2%	22.2%		22.2%			31.3%		31.3%	
Yellow Time (s)	4.0			4.0	4.0		4.0			4.0		4.0	
All-Red Time (s)	2.0			2.0	2.0		2.0			2.0		2.0	
Lost Time Adjust (s)	0.0			0.0	0.0							0.0	
Total Lost Time (s)	6.0			6.0	6.0							6.0	
Lead/Lag	Lead			Lag	Lag		Lag			Lead		Lead	
Lead-Lag Optimize?													
Recall Mode	None			None	None		Max			C-Max		C-Max	
v/c Ratio	0.75	0.54		0.56	0.90			0.71				1.19	0.14
Control Delay	49.1	0.0		47.6	73.8			21.9				134.0	2.0
Queue Delay	0.0	0.0		0.0	0.0			0.0				0.0	0.0
Total Delay	49.1	0.0		47.6	73.8			21.9				134.0	2.0
Queue Length 50th (ft)	125	0		86	147			191				~372	0
Queue Length 95th (ft)	172	0		150	#287			259				#497	11
Internal Link Dist (ft)		717			340			490				510	
Turn Bay Length (ft)				75									50
Base Capacity (vph)	630	231		272	288			1241				774	717
Starvation Cap Reductn	0	0		0	0			0				0	0
Spillback Cap Reductn	0	0		0	0			0				0	0
Storage Cap Reductn	0	0		0	0			0				0	0
Reduced v/c Ratio	0.64	0.54		0.54	0.87			0.71				1.19	0.13

Intersection Summary

Area Type: Other
Cycle Length: 99
Actuated Cycle Length: 99
Offset: 47 (47%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Market Street & Leo M. Birmingham Parkway & Lincoln Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	370	0	115	135	175	55	50	765	0	10	0	840	85
Future Volume (vph)	370	0	115	135	175	55	50	765	0	10	0	840	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	6.0			6.0				6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00			0.95				0.95	1.00
Frpb, ped/bikes	1.00	0.94		1.00	1.00			1.00				1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Frt	1.00	0.85		1.00	0.96			1.00				1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00				1.00	1.00
Satd. Flow (prot)	3467	0		1687	1712			3428				3404	1524
Flt Permitted	0.95	1.00		0.95	1.00			0.66				0.90	1.00
Satd. Flow (perm)	3467	0		1687	1712			2265				3069	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	402	0	125	147	190	60	54	832	0	11	0	913	92
RTOR Reduction (vph)	0	125	0	0	12	0	0	0	0	0	0	0	55
Lane Group Flow (vph)	402	0	0	147	238	0	0	886	0	0	0	924	37
Confl. Peds. (#/hr)									27		27		
Confl. Bikes (#/hr)			2						20				8
Heavy Vehicles (%)	1%	1%	1%	7%	7%	7%	5%	5%	5%	6%	6%	6%	6%
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Actuated Green, G (s)	15.3	0.0		15.4	15.4			44.3				25.0	40.3
Effective Green, g (s)	15.3	0.0		15.4	15.4			44.3				25.0	40.3
Actuated g/C Ratio	0.15	0.00		0.16	0.16			0.45				0.25	0.41
Clearance Time (s)	6.0			6.0	6.0							6.0	
Vehicle Extension (s)	2.0			2.0	2.0							2.0	
Lane Grp Cap (vph)	535	0		262	266			1240				775	620
v/s Ratio Prot	c0.12			0.09	c0.14			c0.14					0.02
v/s Ratio Perm								0.18				c0.30	
v/c Ratio	0.75	0.00		0.56	0.90			0.71				1.19	0.06
Uniform Delay, d1	40.0	49.5		38.7	41.0			22.2				37.0	17.8
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Incremental Delay, d2	5.2	0.0		1.6	28.8			3.5				99.1	0.0
Delay (s)	45.3	49.5		40.3	69.8			25.7				136.1	17.9
Level of Service	D	D		D	E			C				F	B
Approach Delay (s)		46.3			58.9			25.7				125.4	
Approach LOS		D			E			C				F	

Intersection Summary			
HCM 2000 Control Delay	70.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	99.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	5	0	60	1	145	5	710	225	455	630	2
Future Volume (vph)	2	5	0	60	1	145	5	710	225	455	630	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			772			187			570	
Travel Time (s)		5.6			17.5			4.3			13.0	
Confl. Peds. (#/hr)	1		28	28		1	8		27	27		8
Confl. Bikes (#/hr)									13			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	7%	7%	7%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	0	66	158	0	1022	0	0	1182	0
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Detector Phase	2	2		2	2	2 3	1	1		3	1 3	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		6.0		
Minimum Split (s)	21.0	21.0		21.0	21.0		22.0	22.0		11.0		
Total Split (s)	21.0	21.0		21.0	21.0		48.0	48.0		21.0		
Total Split (%)	23.3%	23.3%		23.3%	23.3%		53.3%	53.3%		23.3%		
Yellow Time (s)	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		
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead				
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		None		
v/c Ratio		0.03			0.46	0.26		0.59			0.93dl	
Control Delay		33.3			47.0	6.9		4.0			7.1	
Queue Delay		0.0			0.0	0.0		0.2			0.0	
Total Delay		33.3			47.0	6.9		4.1			7.1	
Queue Length 50th (ft)		4			36	15		65			86	
Queue Length 95th (ft)		16			73	52		m40			154	
Internal Link Dist (ft)		167			692			107			490	
Turn Bay Length (ft)						125						
Base Capacity (vph)		333			230	611		1723			1640	
Starvation Cap Reductn		0			0	0		146			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.02			0.29	0.26		0.65			0.72	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 85 (94%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 2: Market Street & Stockyard Driveway/Guest Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	5	0	60	1	145	5	710	225	455	630	2
Future Volume (vph)	2	5	0	60	1	145	5	710	225	455	630	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	5.0		4.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	1.00		0.98			1.00	
Flpb, ped/bikes		1.00			0.95	1.00		1.00			1.00	
Frt		1.00			1.00	0.85		0.96			1.00	
Flt Protected		0.99			0.95	1.00		1.00			0.98	
Satd. Flow (prot)		1872			1603	1509		3267			3392	
Flt Permitted		0.93			0.72	1.00		0.95			0.52	
Satd. Flow (perm)		1766			1219	1509		3103			1790	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	5	0	65	1	158	5	772	245	495	685	2
RTOR Reduction (vph)	0	0	0	0	0	75	0	30	0	0	0	0
Lane Group Flow (vph)	0	7	0	0	66	83	0	992	0	0	1182	0
Confl. Peds. (#/hr)	1		28	28		1	8		27	27		8
Confl. Bikes (#/hr)									13			2
Heavy Vehicles (%)	0%	0%	0%	7%	7%	7%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Actuated Green, G (s)		9.5			9.5	31.9		48.1			65.5	
Effective Green, g (s)		10.5			10.5	31.9		49.1			65.5	
Actuated g/C Ratio		0.12			0.12	0.35		0.55			0.73	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		206			142	534		1692			1612	
v/s Ratio Prot						0.06					c0.14	
v/s Ratio Perm		0.00			c0.05			0.32			c0.39	
v/c Ratio		0.03			0.46	0.16		0.59			0.93dl	
Uniform Delay, d1		35.3			37.1	19.8		13.7			7.2	
Progression Factor		1.00			1.00	1.00		0.27			1.00	
Incremental Delay, d2		0.0			0.9	0.0		0.1			1.5	
Delay (s)		35.3			38.0	19.9		3.9			8.7	
Level of Service		D			D	B		A			A	
Approach Delay (s)		35.3			25.2			3.9			8.7	
Approach LOS		D			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	20	0	920	690	0
Future Vol, veh/h	20	20	0	920	690	0
Conflicting Peds, #/hr	5	1	34	0	0	34
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	5	5	6	6
Mvmt Flow	22	22	0	1000	750	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1255	376	-	0	-	0
Stage 1	750	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	-	-
Pot Cap-1 Maneuver	162	619	0	-	-	0
Stage 1	425	-	0	-	-	0
Stage 2	568	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	162	618	-	-	-	-
Mov Cap-2 Maneuver	162	-	-	-	-	-
Stage 1	425	-	-	-	-	-
Stage 2	568	-	-	-	-	-

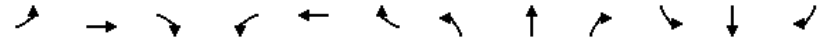
Approach	EB	NB	SB
HCM Control Delay, s	21.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	257	-
HCM Lane V/C Ratio	-	0.169	-
HCM Control Delay (s)	-	21.8	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.6	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	75	335	40	70	350	125	105	720	140	170	490	50	
Future Volume (vph)	75	335	40	70	350	125	105	720	140	170	490	50	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		200	0		200	0		100	0		0	
Storage Lanes	0		1	0		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		324			332			559			323		
Travel Time (s)		7.4			7.5			12.7			7.3		
Confl. Peds. (#/hr)	16		29	29		16	11		24	24		11	
Confl. Bikes (#/hr)			7			3			12			1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	4%	4%	4%	5%	5%	5%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	489	0	0	592	0	0	1049	0	0	772	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		5.0			1.0
Minimum Split (s)	15.0	15.0		15.0	15.0		15.0	15.0		10.0			20.0
Total Split (s)	28.0	28.0		28.0	28.0		31.0	31.0		11.0			20.0
Total Split (%)	31.1%	31.1%		31.1%	31.1%		34.4%	34.4%		12.2%			22%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0			2.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.0			2.0
Lost Time Adjust (s)		0.0			0.0			0.0					
Total Lost Time (s)		5.0			5.0			5.0					
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?													
Recall Mode	Max	Max		Max	Max		C-Max	C-Max		None			None
v/c Ratio		0.60			0.64			1.79			0.99		
Control Delay		30.4			29.5			381.8			50.3		
Queue Delay		0.0			0.0			0.0			0.0		
Total Delay		30.4			29.5			381.8			50.3		
Queue Length 50th (ft)		134			171			~326			178		
Queue Length 95th (ft)		#212			#263			m#595			#296		
Internal Link Dist (ft)		244			252			479			243		
Turn Bay Length (ft)													
Base Capacity (vph)		820			918			586			780		
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		0.60			0.64			1.79			0.99		

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Market Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	335	40	70	350	125	105	720	140	170	490	50
Future Volume (vph)	75	335	40	70	350	125	105	720	140	170	490	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			0.99			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.98			0.99	
Flt Protected		0.99			0.99			0.99			0.99	
Satd. Flow (prot)		3349			3273			3353			3355	
Flt Permitted		0.70			0.79			0.59			0.56	
Satd. Flow (perm)		2364			2589			1978			1905	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	364	43	76	380	136	114	783	152	185	533	54
RTOR Reduction (vph)	0	7	0	0	28	0	0	15	0	0	7	0
Lane Group Flow (vph)	0	482	0	0	564	0	0	1034	0	0	765	0
Confl. Peds. (#/hr)	16		29	29		16	11		24	24		11
Confl. Bikes (#/hr)			7			3			12			1
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	4%	4%	4%	5%	5%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		31.0			31.0			24.4			31.4	
Effective Green, g (s)		31.0			31.0			24.4			31.4	
Actuated g/C Ratio		0.34			0.34			0.27			0.35	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			4.0				
Lane Grp Cap (vph)		814			891			536			777	
v/s Ratio Prot											c0.08	
v/s Ratio Perm		0.20			c0.22			c0.52			0.27	
v/c Ratio		0.59			0.63			1.93			0.99	
Uniform Delay, d1		24.3			24.7			32.8			29.1	
Progression Factor		1.00			0.99			0.81			0.90	
Incremental Delay, d2		3.2			3.2			421.5			24.0	
Delay (s)		27.4			27.8			448.0			50.1	
Level of Service		C			C			F			D	
Approach Delay (s)		27.4			27.8			448.0			50.1	
Approach LOS		C			C			F			D	

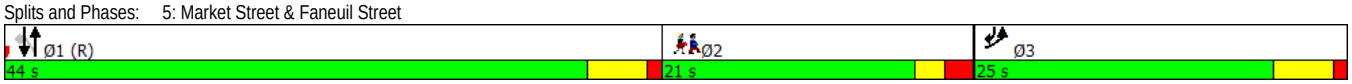
Intersection Summary			
HCM 2000 Control Delay	185.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	300	65	40	690	505	105	
Future Volume (vph)	300	65	40	690	505	105	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Right Turn on Red		Yes				Yes	
Link Speed (mph)	30			30	30		
Link Distance (ft)	420			1276	559		
Travel Time (s)	9.5			29.0	12.7		
Confl. Peds. (#/hr)	3	11	8			8	
Confl. Bikes (#/hr)		9					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	7%	7%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	397	0	0	793	549	114	
Turn Type	Prot		Perm	NA	NA	pm+ov	
Protected Phases	3			1	1	3	2
Permitted Phases			1			1	
Detector Phase	3		1	1	1	3	
Switch Phase							
Minimum Initial (s)	6.0		10.0	10.0	10.0	6.0	7.0
Minimum Split (s)	11.0		15.0	15.0	15.0	11.0	21.0
Total Split (s)	25.0		44.0	44.0	44.0	25.0	21.0
Total Split (%)	27.8%		48.9%	48.9%	48.9%	27.8%	23%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	2.0
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	Lead	Lead		Lag
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max	None	None
v/c Ratio	0.78			0.84	0.56	0.09	
Control Delay	42.3			32.8	6.8	0.3	
Queue Delay	0.0			0.0	0.2	0.0	
Total Delay	42.3			32.8	7.0	0.3	
Queue Length 50th (ft)	195			413	54	0	
Queue Length 95th (ft)	#419			m290	m100	m0	
Internal Link Dist (ft)	340			1196	479		
Turn Bay Length (ft)							
Base Capacity (vph)	506			941	973	1267	
Starvation Cap Reductn	0			0	67	0	
Spillback Cap Reductn	0			0	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.78			0.84	0.61	0.09	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 86 (96%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Market Street & Faneuil Street



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	300	65	40	690	505	105
Future Volume (vph)	300	65	40	690	505	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frpb, ped/bikes	0.99			1.00	1.00	0.98
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.98			1.00	1.00	0.85
Flt Protected	0.96			1.00	1.00	1.00
Satd. Flow (prot)	1697			1822	1776	1486
Flt Permitted	0.96			0.94	1.00	1.00
Satd. Flow (perm)	1697			1716	1776	1486
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	326	71	43	750	549	114
RTOR Reduction (vph)	8	0	0	0	0	22
Lane Group Flow (vph)	389	0	0	793	549	92
Confl. Peds. (#/hr)	3	11	8			8
Confl. Bikes (#/hr)		9				
Heavy Vehicles (%)	4%	4%	4%	4%	7%	7%
Turn Type	Prot		Perm	NA	NA	pm+ov
Protected Phases	3			1	1	3
Permitted Phases			1			1
Actuated Green, G (s)	26.5			46.1	46.1	72.6
Effective Green, g (s)	26.5			46.1	46.1	72.6
Actuated g/C Ratio	0.29			0.51	0.51	0.81
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	2.0			2.0	2.0	2.0
Lane Grp Cap (vph)	499			878	909	1281
v/s Ratio Prot	c0.23				0.31	0.02
v/s Ratio Perm				c0.46		0.04
v/c Ratio	0.78			0.90	0.60	0.07
Uniform Delay, d1	29.1			19.9	15.5	1.8
Progression Factor	1.00			1.76	0.38	0.31
Incremental Delay, d2	7.2			1.7	1.2	0.0
Delay (s)	36.2			36.7	7.2	0.6
Level of Service	D			D	A	A
Approach Delay (s)	36.2			36.7	6.0	
Approach LOS	D			D	A	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	55	245	100	20	220	165	15	500	5	95	415	20	
Future Volume (vph)	55	245	100	20	220	165	15	500	5	95	415	20	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	0		0	75		0	
Storage Lanes	0		0	0		0	0		0	1		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		448			531			497			1276		
Travel Time (s)		10.2			12.1			11.3			29.0		
Confl. Peds. (#/hr)	22		28	28		22	40		39	39		40	
Confl. Bikes (#/hr)			6			4			10			4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	5%	5%	5%	7%	7%	7%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	435	0	0	440	0	0	564	0	103	473	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		4.0			7.0
Minimum Split (s)	13.0	13.0		13.0	13.0		15.0	15.0		8.0			22.0
Total Split (s)	32.0	32.0		32.0	32.0		28.0	28.0		8.0			22.0
Total Split (%)	35.6%	35.6%		35.6%	35.6%		31.1%	31.1%		8.9%			24%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		4.0			3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0			1.0
Lost Time Adjust (s)		0.0			0.0			0.0		0.0			
Total Lost Time (s)		5.0			5.0			5.0		4.0			
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes			Yes
Recall Mode	None	None		None	None		C-Max	C-Max		Max			None
v/c Ratio		0.87			0.76			1.97		0.39	0.66		
Control Delay		48.0			35.5			470.4		35.3	36.9		
Queue Delay		0.0			0.0			0.0		0.0	0.0		
Total Delay		48.0			35.5			470.4		35.3	36.9		
Queue Length 50th (ft)		234			214			~502		46	226		
Queue Length 95th (ft)		#429			#381			#700		m#108	m#359		
Internal Link Dist (ft)		368			451			417			1196		
Turn Bay Length (ft)										75			
Base Capacity (vph)		501			580			287		264	713		
Starvation Cap Reductn		0			0			0		0	0		
Spillback Cap Reductn		0			0			0		0	0		
Storage Cap Reductn		0			0			0		0	0		
Reduced v/c Ratio		0.87			0.76			1.97		0.39	0.66		

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
~	Volume exceeds capacity, queue is theoretically infinite.
	Queue shown is maximum after two cycles.
#	95th percentile volume exceeds capacity, queue may be longer.
	Queue shown is maximum after two cycles.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Market Street & Arlington Street/Sparhawk Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	245	100	20	220	165	15	500	5	95	415	20
Future Volume (vph)	55	245	100	20	220	165	15	500	5	95	415	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		4.0	5.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.98			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.97			0.95			1.00		1.00	0.99	
Flt Protected		0.99			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1754			1698			1802		1683	1757	
Flt Permitted		0.82			0.97			0.62		0.19	1.00	
Satd. Flow (perm)		1455			1651			1126		331	1757	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	266	109	22	239	179	16	543	5	103	451	22
RTOR Reduction (vph)	0	13	0	0	26	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	422	0	0	414	0	0	564	0	103	471	0
Confl. Peds. (#/hr)	22		28	28		22	40		39	39		40
Confl. Bikes (#/hr)			6			4			10			4
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	5%	5%	5%	7%	7%	7%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		30.3			30.3			21.4		30.9	34.9	
Effective Green, g (s)		30.3			30.3			21.4		30.9	30.9	
Actuated g/C Ratio		0.34			0.34			0.24		0.34	0.34	
Clearance Time (s)		5.0			5.0			5.0		4.0		
Vehicle Extension (s)		2.0			2.0			0.2		2.0		
Lane Grp Cap (vph)		489			555			267		256	603	
v/s Ratio Prot										0.04	c0.27	
v/s Ratio Perm		c0.29			0.25			c0.50		0.10		
v/c Ratio		0.86			0.75			2.11		0.40	0.78	
Uniform Delay, d1		27.9			26.4			34.3		22.5	26.5	
Progression Factor		1.00			1.00			1.00		1.48	1.36	
Incremental Delay, d2		14.2			4.8			513.1		3.8	8.0	
Delay (s)		42.1			31.2			547.4		37.1	44.2	
Level of Service		D			C			F		D	D	
Approach Delay (s)		42.1			31.2			547.4			42.9	
Approach LOS		D			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	181.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3
Lane Configurations														
Traffic Volume (vph)	50	605	10	5	510	70	0	0	0	35	2	20		
Future Volume (vph)	50	605	10	5	510	70	0	0	0	35	2	20		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes			Yes		
Link Speed (mph)		30			30			30			30			
Link Distance (ft)		458			334			278			631			
Travel Time (s)		10.4			7.6			6.3			14.3			
Confl. Peds. (#/hr)	15		22	22		15	13					13		
Confl. Bikes (#/hr)			13			5								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	2%	2%	2%	12%	12%	12%		
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	723	0	0	635	0	0	0	0	0	62	0		
Turn Type	Perm	NA		Perm	NA					Perm	NA			
Protected Phases		1			1						5		2	3
Permitted Phases	1			1						5				
Detector Phase	1	1		1	1					5	5			
Switch Phase														
Minimum Initial (s)	10.0	10.0		10.0	10.0					7.0	7.0		7.0	8.0
Minimum Split (s)	15.0	15.0		15.0	15.0					11.0	11.0		20.0	19.0
Total Split (s)	52.0	52.0		52.0	52.0					18.0	18.0		20.0	72.0
Total Split (%)	57.8%	57.8%		57.8%	57.8%					20.0%	20.0%		22%	80%
Yellow Time (s)	3.0	3.0		3.0	3.0					3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0					1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0			0.0						0.0			
Total Lost Time (s)		5.0			5.0						4.0			
Lead/Lag	Lead	Lead		Lead	Lead								Lag	
Lead-Lag Optimize?														
Recall Mode	C-Max	C-Max		C-Max	C-Max					None	None		None	Ped
v/c Ratio		0.54			0.45						0.40			
Control Delay		6.2			6.7						35.0			
Queue Delay		0.0			0.0						0.0			
Total Delay		6.2			6.7						35.0			
Queue Length 50th (ft)		11			67						22			
Queue Length 95th (ft)		m285			341						59			
Internal Link Dist (ft)		378			254			198			551			
Turn Bay Length (ft)														
Base Capacity (vph)		1335			1419						257			
Starvation Cap Reductn		0			0						0			
Spillback Cap Reductn		0			0						0			
Storage Cap Reductn		0			0						0			
Reduced v/c Ratio		0.54			0.45						0.24			

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 3 (3%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Etna Street/Life Street & North Beacon Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	605	10	5	510	70	0	0	0	35	2	20
Future Volume (vph)	50	605	10	5	510	70	0	0	0	35	2	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			1.00						0.96	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		1.00			0.98						0.95	
Flt Protected		1.00			1.00						0.97	
Satd. Flow (prot)		1797			1773						1508	
Flt Permitted		0.92			1.00						0.97	
Satd. Flow (perm)		1663			1766						1508	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	658	11	5	554	76	0	0	0	38	2	22
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	20	0
Lane Group Flow (vph)	0	723	0	0	632	0	0	0	0	0	42	0
Confl. Peds. (#/hr)	15		22	22		15	13					13
Confl. Bikes (#/hr)			13			5						
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	2%	2%	2%	12%	12%	12%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						5	
Permitted Phases	1			1						5		
Actuated Green, G (s)		67.2			67.2						6.6	
Effective Green, g (s)		67.2			67.2						6.6	
Actuated g/C Ratio		0.75			0.75						0.07	
Clearance Time (s)		5.0			5.0						4.0	
Vehicle Extension (s)		2.0			2.0						2.0	
Lane Grp Cap (vph)		1241			1318						110	
v/s Ratio Prot												
v/s Ratio Perm		c0.43			0.36						0.03	
v/c Ratio		0.58			0.48						0.38	
Uniform Delay, d1		5.1			4.5						39.7	
Progression Factor		0.82			1.00						1.00	
Incremental Delay, d2		0.7			1.3						0.8	
Delay (s)		4.9			5.8						40.5	
Level of Service		A			A						D	
Approach Delay (s)		4.9			5.8			0.0			40.5	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	1	625	30	55	585	0	0	0	0	1	0	1
Future Vol, veh/h	1	625	30	55	585	0	0	0	0	1	0	1
Conflicting Peds, #/hr	18	0	20	20	0	18	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	4	4	4	0	0	0	0	0	0
Mvmt Flow	1	679	33	60	636	0	0	0	0	1	0	1

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	654	0	0	732	0	0				1471	1507	655
Stage 1	-	-	-	-	-	-				773	773	-
Stage 2	-	-	-	-	-	-				698	734	-
Critical Hdwy	4.15	-	-	4.14	-	-				6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-				5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.4	5.5	-
Follow-up Hdwy	2.245	-	-	2.236	-	-				3.5	4	3.3
Pot Cap-1 Maneuver	919	-	-	863	-	-				141	122	470
Stage 1	-	-	-	-	-	-				459	412	-
Stage 2	-	-	-	-	-	-				497	429	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	918	-	-	863	-	-				122	0	463
Mov Cap-2 Maneuver	-	-	-	-	-	-				122	0	-
Stage 1	-	-	-	-	-	-				403	0	-
Stage 2	-	-	-	-	-	-				489	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.8	23.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	918	-	-	863	-	-	193
HCM Lane V/C Ratio	0.001	-	-	0.069	-	-	0.011
HCM Control Delay (s)	8.9	0	-	9.5	0	-	23.9
HCM Lane LOS	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	-	-	0.2	-	-	0

Intersection	
Int Delay, s/veh	27.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	620	0	0	525	5	105	2	145	5	0	10
Future Vol, veh/h	5	620	0	0	525	5	105	2	145	5	0	10
Conflicting Peds, #/hr	20	0	19	19	0	20	1	0	10	10	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	6	6	6	1	1	1	17	17	17
Mvmt Flow	5	674	0	0	571	5	114	2	158	5	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	596	0	-	-	-	0	1265	1281	684	1368	1278	594
Stage 1	-	-	-	-	-	-	685	685	-	593	593	-
Stage 2	-	-	-	-	-	-	580	596	-	775	685	-
Critical Hdwy	4.15	-	-	-	-	-	7.11	6.51	6.21	7.27	6.67	6.37
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.27	5.67	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.27	5.67	-
Follow-up Hdwy	2.245	-	-	-	-	-	3.509	4.009	3.309	3.653	4.153	3.453
Pot Cap-1 Maneuver	966	-	0	0	-	-	147	166	450	115	155	478
Stage 1	-	-	0	0	-	-	440	450	-	467	470	-
Stage 2	-	-	0	0	-	-	502	493	-	369	426	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	965	-	-	-	-	-	143	162	446	71	151	470
Mov Cap-2 Maneuver	-	-	-	-	-	-	143	162	-	71	151	-
Stage 1	-	-	-	-	-	-	436	446	-	456	462	-
Stage 2	-	-	-	-	-	-	490	485	-	234	423	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	154.7	29.4
HCM LOS			F	D

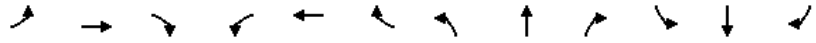
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	235	965	-	-	-	164
HCM Lane V/C Ratio	1.166	0.006	-	-	-	0.099
HCM Control Delay (s)	154.7	8.8	0	-	-	29.4
HCM Lane LOS	F	A	A	-	-	D
HCM 95th %tile Q(veh)	12.9	0	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	130	635	0	0	470	285	0	0	0	135	0	70	
Future Volume (vph)	130	635	0	0	470	285	0	0	0	135	0	70	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12	
Storage Length (ft)	100		0	0		0	0		0	0		150	
Storage Lanes	1		0	0		1	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		456			284			205			781		
Travel Time (s)		10.4			6.5			4.7			17.8		
Confl. Peds. (#/hr)	16					16	3		1	1		3	
Confl. Bikes (#/hr)			12			6							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	2%	2%	2%	8%	8%	8%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	141	690	0	0	511	310	0	0	0	147	0	76	
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm	
Protected Phases	5	1 5			1		4	4		3			2
Permitted Phases	1 5			1		1						3	
Detector Phase	5	1 5		1	1	1	4	4		3		3	
Switch Phase													
Minimum Initial (s)	4.0			12.0	12.0	12.0	3.0	3.0		5.0		5.0	4.0
Minimum Split (s)	8.0			16.0	16.0	16.0	7.0	7.0		9.0		9.0	17.0
Total Split (s)	11.0			36.0	36.0	36.0	15.0	15.0		21.0		21.0	17.0
Total Split (%)	11.0%			36.0%	36.0%	36.0%	15.0%	15.0%		21.0%		21.0%	17%
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0
All-Red Time (s)	1.0			1.0	1.0	1.0	1.0	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	-1.0				-1.0	-1.0		-1.0		0.0		-1.0	
Total Lost Time (s)	3.0				3.0	3.0		3.0		4.0		3.0	
Lead/Lag				Lead	Lead	Lead	Lag	Lag		Lead		Lead	Lag
Lead-Lag Optimize?													
Recall Mode	None			C-Max	C-Max	C-Max	None	None		None		None	None
v/c Ratio	0.23	0.53			0.62	0.38				0.69		0.24	
Control Delay	5.6	8.5			33.6	11.3				57.9		1.8	
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0	
Total Delay	5.6	8.5			33.6	11.3				57.9		1.8	
Queue Length 50th (ft)	15	114			251	53				91		0	
Queue Length 95th (ft)	66	420			m#451	m90				150		2	
Internal Link Dist (ft)		376			204			125			701		
Turn Bay Length (ft)	100											150	
Base Capacity (vph)	626	1297			827	823				284		377	
Starvation Cap Reductn	0	0			0	0				0		0	
Spillback Cap Reductn	0	0			0	0				0		0	
Storage Cap Reductn	0	0			0	0				0		0	
Reduced v/c Ratio	0.23	0.53			0.62	0.38				0.52		0.20	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 35 (35%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Wingate Driveway/Arthur Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	635	0	0	470	285	0	0	0	135	0	70
Future Volume (vph)	130	635	0	0	470	285	0	0	0	135	0	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			3.0	3.0				4.0		3.0
Lane Util. Factor	1.00	1.00			1.00	1.00				1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.96				1.00		0.97
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1602	1689			1657	1350				1671		1450
Flt Permitted	0.29	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	491	1689			1657	1350				1671		1450
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	141	690	0	0	511	310	0	0	0	147	0	76
RTOR Reduction (vph)	0	0	0	0	0	165	0	0	0	0	0	66
Lane Group Flow (vph)	141	690	0	0	511	145	0	0	0	147	0	10
Confl. Peds. (#/hr)	16					16	3		1	1		3
Confl. Bikes (#/hr)			12			6						
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	2%	2%	2%	8%	8%	8%
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm
Protected Phases	5	1 5			1		4	4		3		
Permitted Phases	1 5			1		1						3
Actuated Green, G (s)	68.6	72.6			45.7	45.7				12.8		12.8
Effective Green, g (s)	70.6	73.6			46.7	46.7				12.8		13.8
Actuated g/C Ratio	0.71	0.74			0.47	0.47				0.13		0.14
Clearance Time (s)	4.0				4.0	4.0				4.0		4.0
Vehicle Extension (s)	2.0				4.0	4.0				2.0		2.0
Lane Grp Cap (vph)	612	1243			773	630				213		200
v/s Ratio Prot	0.06	c0.41			c0.31					c0.09		
v/s Ratio Perm	0.11					0.11						0.01
v/c Ratio	0.23	0.56			0.66	0.23				0.69		0.05
Uniform Delay, d1	6.7	5.9			20.5	15.9				41.7		37.4
Progression Factor	1.00	1.00			1.44	3.65				1.00		1.00
Incremental Delay, d2	0.1	0.3			3.1	0.6				7.5		0.0
Delay (s)	6.8	6.2			32.7	58.7				49.2		37.5
Level of Service	A	A			C	E				D		D
Approach Delay (s)		6.3			42.5			0.0			45.2	
Approach LOS		A			D			A			D	

Intersection Summary			
HCM 2000 Control Delay	26.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑↑	↱	
Traffic Vol, veh/h	770	0	0	730	25	60
Future Vol, veh/h	770	0	0	730	25	60
Conflicting Peds, #/hr	0	29	29	0	0	9
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	7	7	0	0
Mvmt Flow	837	0	0	793	27	65

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	1234	846
Stage 1	-	-	-	-	837	-
Stage 2	-	-	-	-	397	-
Critical Hdwy	-	-	-	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	0	-	184	365
Stage 1	-	0	0	-	428	-
Stage 2	-	0	0	-	654	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	184	362
Mov Cap-2 Maneuver	-	-	-	-	184	-
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	654	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	23.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	282	-	-
HCM Lane V/C Ratio	0.328	-	-
HCM Control Delay (s)	23.9	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1.4	-	-

Intersection	
Int Delay, s/veh	46.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	765	65	75	670	60	190
Future Vol, veh/h	765	65	75	670	60	190
Conflicting Peds, #/hr	0	34	34	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	7	7	4	4
Mvmt Flow	832	71	82	728	65	207

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	936	0	1793	901
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	892	-
Critical Hdwy	-	-	4.17	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.263	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	712	-	88	334
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	397	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	712	-	69	325
Mov Cap-2 Maneuver	-	-	-	-	69	-
Stage 1	-	-	-	-	382	-
Stage 2	-	-	-	-	320	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	$ 335
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	172	-	-	712	-
HCM Lane V/C Ratio	1.58	-	-	0.114	-
HCM Control Delay (s)	$ 335	-	-	10.7	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	18.1	-	-	0.4	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	360	580	0	0	640	245	0	0	0	155	0	125	
Future Volume (vph)	360	580	0	0	640	245	0	0	0	155	0	125	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		446			477			138			517		
Travel Time (s)		10.1			10.8			3.1			11.8		
Confl. Peds. (#/hr)	12		40	40		12	24		16	16		24	
Confl. Bikes (#/hr)			13			5							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	5%	5%	5%	6%	6%	6%	2%	2%	2%	3%	3%	3%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	1021	0	0	696	266	0	0	0	0	304	0	
Turn Type	Perm	NA			NA	Perm				Split	NA		
Protected Phases		1			1					3	3		2
Permitted Phases	1					1							
Detector Phase	1	1			1	1				3	3		
Switch Phase													
Minimum Initial (s)	15.0	15.0			15.0	15.0				7.0	7.0		7.0
Minimum Split (s)	19.0	19.0			19.0	19.0				11.0	11.0		17.0
Total Split (s)	50.0	50.0			50.0	50.0				33.0	33.0		17.0
Total Split (%)	50.0%	50.0%			50.0%	50.0%				33.0%	33.0%		17%
Yellow Time (s)	3.0	3.0			3.0	3.0				3.0	3.0		2.0
All-Red Time (s)	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)		4.0			4.0	4.0					4.0		
Lead/Lag	Lead	Lead			Lead	Lead							Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max			C-Max	C-Max				Max	Max		None
v/c Ratio		3.80dl			0.84	0.33					0.49		
Control Delay		139.4			35.3	3.2					26.7		
Queue Delay		0.0			31.5	0.0					0.0		
Total Delay		139.4			66.8	3.2					26.7		
Queue Length 50th (ft)		~430			379	0					142		
Queue Length 95th (ft)		#559			#597	43					232		
Internal Link Dist (ft)		366			397			58			437		
Turn Bay Length (ft)													
Base Capacity (vph)		832			824	818					615		
Starvation Cap Reductn		0			163	0					0		
Spillback Cap Reductn		0			0	0					0		
Storage Cap Reductn		0			0	0					0		
Reduced v/c Ratio		1.23			1.05	0.33					0.49		

Intersection Summary

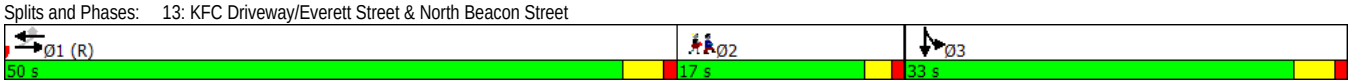
Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 35 (35%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

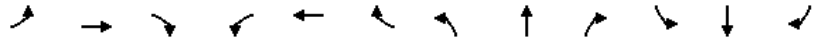
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: KFC Driveway/Everett Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	360	580	0	0	640	245	0	0	0	155	0	125
Future Volume (vph)	360	580	0	0	640	245	0	0	0	155	0	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0					4.0	
Lane Util. Factor		0.95			1.00	1.00					1.00	
Frpb, ped/bikes		1.00			1.00	0.96					0.98	
Flpb, ped/bikes		1.00			1.00	1.00					1.00	
Frt		1.00			1.00	0.85					0.94	
Flt Protected		0.98			1.00	1.00					0.97	
Satd. Flow (prot)		3369			1792	1467					1647	
Flt Permitted		0.53			1.00	1.00					0.97	
Satd. Flow (perm)		1810			1792	1467					1647	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	391	630	0	0	696	266	0	0	0	168	0	136
RTOR Reduction (vph)	0	0	0	0	0	147	0	0	0	0	28	0
Lane Group Flow (vph)	0	1021	0	0	696	119	0	0	0	0	276	0
Confl. Peds. (#/hr)	12		40	40		12	24		16	16		24
Confl. Bikes (#/hr)			13			5						
Heavy Vehicles (%)	5%	5%	5%	6%	6%	6%	2%	2%	2%	3%	3%	3%
Turn Type	Perm	NA			NA	Perm				Split	NA	
Protected Phases		1			1					3	3	
Permitted Phases	1					1						
Actuated Green, G (s)		44.8			44.8	44.8					35.8	
Effective Green, g (s)		44.8			44.8	44.8					35.8	
Actuated g/C Ratio		0.45			0.45	0.45					0.36	
Clearance Time (s)		4.0			4.0	4.0					4.0	
Vehicle Extension (s)		2.0			2.0	2.0					2.0	
Lane Grp Cap (vph)		810			802	657					589	
v/s Ratio Prot					0.39						c0.17	
v/s Ratio Perm		c0.56				0.08						
v/c Ratio		3.80dl			0.87	0.18					0.47	
Uniform Delay, d1		27.6			24.9	16.6					24.8	
Progression Factor		1.01			1.00	1.00					1.00	
Incremental Delay, d2		126.5			12.2	0.6					2.7	
Delay (s)		154.3			37.2	17.2					27.4	
Level of Service		F			D	B					C	
Approach Delay (s)		154.3			31.6			0.0			27.4	
Approach LOS		F			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	85.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	205	455	20	10	130	525	60	0	355	195	50	420	305
Future Volume (vph)	205	455	20	10	130	525	60	0	355	195	50	420	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		420		0	0		150	0		75
Storage Lanes	0		0		1		0	0		1	0		1
Taper Length (ft)	25				25			25			25		
Right Turn on Red			No				Yes			Yes			No
Link Speed (mph)		30				30			30			30	
Link Distance (ft)		477				1053			361			234	
Travel Time (s)		10.8				23.9			8.2			5.3	
Confl. Peds. (#/hr)	53		36	23	36		53	54		23	23		54
Confl. Bikes (#/hr)			27				5			18			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	8%	8%	8%	8%	7%	7%	7%	10%	10%	10%
Shared Lane Traffic (%)					10%								
Lane Group Flow (vph)	0	740	0	0	138	650	0	0	386	212	0	511	332
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Detector Phase	3	3		2	2	2			1	1	4	1 4	1
Switch Phase													
Minimum Initial (s)	8.0	8.0		10.0	10.0	10.0			10.0	10.0	4.0		10.0
Minimum Split (s)	26.0	26.0		27.0	27.0	27.0			24.0	24.0	10.0		24.0
Total Split (s)	37.0	37.0		30.0	30.0	30.0			32.0	32.0	11.0		32.0
Total Split (%)	33.6%	33.6%		27.3%	27.3%	27.3%			29.1%	29.1%	10.0%		29.1%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0			4.0	4.0	3.0		4.0
All-Red Time (s)	6.0	6.0		6.0	6.0	6.0			3.0	3.0	3.0		3.0
Lost Time Adjust (s)		0.0			0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag			Lead	Lead	Lag		Lead
Lead-Lag Optimize?													
Recall Mode	None	None		Max	Max	Max			C-Max	C-Max	None		C-Max
v/c Ratio		0.92			0.50	1.13			0.50	0.43		0.68	1.13
Control Delay		59.0			47.6	121.3			39.8	6.7		39.3	131.9
Queue Delay		0.0			0.0	0.0			0.0	0.0		0.0	0.0
Total Delay		59.0			47.6	121.3			39.8	6.7		39.3	131.9
Queue Length 50th (ft)		266			97	~292			125	0		150	~272
Queue Length 95th (ft)		#374			168	#416			175	50		202	#451
Internal Link Dist (ft)		397				973			281			154	
Turn Bay Length (ft)					420					150			75
Base Capacity (vph)		825			276	573			766	494		748	294
Starvation Cap Reductn		0			0	0			0	0		0	0
Spillback Cap Reductn		0			0	0			0	0		0	0
Storage Cap Reductn		0			0	0			0	0		0	0
Reduced v/c Ratio		0.90			0.50	1.13			0.50	0.43		0.68	1.13

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 2 (2%), Referenced to phase 1:NESW, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 14: Cambridge Street & North Beacon Street/Brighton Avenue

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	205	455	20	10	130	525	60	0	355	195	50	420	305
Future Volume (vph)	205	455	20	10	130	525	60	0	355	195	50	420	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		10.0			10.0	10.0			7.0	7.0		7.0	7.0
Lane Util. Factor		0.95			0.91	0.91			0.95	1.00		0.95	1.00
Frpb, ped/bikes		1.00			1.00	0.99			1.00	0.93		1.00	0.88
Flpb, ped/bikes		1.00			1.00	1.00			1.00	1.00		1.00	1.00
Frt		1.00			1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected		0.99			0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3361			1521	3113			3374	1401		3258	1294
Flt Permitted		0.99			0.95	1.00			1.00	1.00		0.82	1.00
Satd. Flow (perm)		3361			1521	3113			3374	1401		2673	1294
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	495	22	11	141	571	65	0	386	212	54	457	332
RTOR Reduction (vph)	0	0	0	0	0	7	0	0	0	164	0	0	0
Lane Group Flow (vph)	0	740	0	0	138	643	0	0	386	48	0	511	332
Confl. Peds. (#/hr)	53		36	23	36		53	54		23	23		54
Confl. Bikes (#/hr)			27				5			18			5
Heavy Vehicles (%)	5%	5%	5%	8%	8%	8%	8%	7%	7%	7%	10%	10%	10%
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Actuated Green, G (s)		26.2			20.0	20.0			25.0	25.0		30.8	25.0
Effective Green, g (s)		26.2			20.0	20.0			25.0	25.0		30.8	25.0
Actuated g/C Ratio		0.24			0.18	0.18			0.23	0.23		0.28	0.23
Clearance Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Vehicle Extension (s)		2.0			2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)		800			276	566			766	318		779	294
v/s Ratio Prot		c0.22			0.09	c0.21			0.11			c0.03	
v/s Ratio Perm										0.03		0.15	c0.26
v/c Ratio		0.93			0.50	1.14			0.50	0.15		0.66	1.13
Uniform Delay, d1		40.9			40.5	45.0			37.1	34.0		34.9	42.5
Progression Factor		1.00			1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		16.1			6.3	81.0			2.4	1.0		1.5	92.0
Delay (s)		57.0			46.8	126.0			39.5	35.0		36.5	134.5
Level of Service		E			D	F			D	D		D	F
Approach Delay (s)		57.0				112.1			37.9			75.1	
Approach LOS		E				F			D			E	

Intersection Summary			
HCM 2000 Control Delay	72.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	33.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	50	570	750	10	2	25
Future Vol, veh/h	50	570	750	10	2	25
Conflicting Peds, #/hr	36	0	0	36	36	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	11	11	3	3
Mvmt Flow	54	620	815	11	2	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	862	0	-	0	1621	861
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	764	-
Critical Hdwy	4.18	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.272	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	755	-	-	-	113	354
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	458	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	752	-	-	-	95	342
Mov Cap-2 Maneuver	-	-	-	-	95	-
Stage 1	-	-	-	-	402	-
Stage 2	-	-	-	-	396	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	19
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	752	-	-	-	287
HCM Lane V/C Ratio	0.072	-	-	-	0.102
HCM Control Delay (s)	10.2	0	-	-	19
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	575	1	2	740	0	0	0	0	150	2	20
Future Volume (vph)	0	575	1	2	740	0	0	0	0	150	2	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		587			512			200			484	
Travel Time (s)		13.3			11.6			4.5			11.0	
Confl. Peds. (#/hr)	25		9	9		25	8		9	9		8
Confl. Bikes (#/hr)			28			7						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	9%	9%	9%	10%	10%	10%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	626	0	0	806	0	0	0	0	163	24	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Detector Phase		1		1	1					5	5	
Switch Phase												
Minimum Initial (s)		20.0		20.0	20.0					8.0	8.0	
Minimum Split (s)		24.0		24.0	24.0					22.0	22.0	
Total Split (s)		53.0		53.0	53.0					47.0	47.0	
Total Split (%)		53.0%		53.0%	53.0%					47.0%	47.0%	
Yellow Time (s)		3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)		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)		4.0			4.0					4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max					None	None	
v/c Ratio		0.46			0.60					0.67	0.10	
Control Delay		5.4			4.5					54.4	16.4	
Queue Delay		0.0			0.8					0.0	0.0	
Total Delay		5.4			5.3					54.4	16.4	
Queue Length 50th (ft)		106			28					100	1	
Queue Length 95th (ft)		207			68					160	23	
Internal Link Dist (ft)		507			432			120			404	
Turn Bay Length (ft)										100		
Base Capacity (vph)		1368			1354					776	689	
Starvation Cap Reductn		0			266					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.46			0.74					0.21	0.03	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 16: Driveway/Denby Road & Cambridge Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	575	1	2	740	0	0	0	0	150	2	20
Future Volume (vph)	0	575	1	2	740	0	0	0	0	150	2	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0	4.0	
Lane Util. Factor		1.00			1.00					1.00	1.00	
Frpb, ped/bikes		1.00			1.00					1.00	0.96	
Flpb, ped/bikes		1.00			1.00					1.00	1.00	
Frt		1.00			1.00					1.00	0.86	
Flt Protected		1.00			1.00					0.95	1.00	
Satd. Flow (prot)		1743			1727					1805	1576	
Flt Permitted		1.00			1.00					0.95	1.00	
Satd. Flow (perm)		1743			1726					1805	1576	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	625	1	2	804	0	0	0	0	163	2	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	19	0
Lane Group Flow (vph)	0	626	0	0	806	0	0	0	0	163	5	0
Confl. Peds. (#/hr)	25		9	9		25	8		9	9		8
Confl. Bikes (#/hr)			28			7						
Heavy Vehicles (%)	9%	9%	9%	10%	10%	10%	0%	0%	0%	0%	0%	0%
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Actuated Green, G (s)		78.5			78.5					13.5	13.5	
Effective Green, g (s)		78.5			78.5					13.5	13.5	
Actuated g/C Ratio		0.78			0.78					0.14	0.14	
Clearance Time (s)		4.0			4.0					4.0	4.0	
Vehicle Extension (s)		0.2			0.2					2.0	2.0	
Lane Grp Cap (vph)		1368			1354					243	212	
v/s Ratio Prot		0.36								c0.09	0.00	
v/s Ratio Perm					c0.47							
v/c Ratio		0.46			0.60					0.67	0.02	
Uniform Delay, d1		3.6			4.3					41.1	37.5	
Progression Factor		1.00			0.58					1.00	1.02	
Incremental Delay, d2		1.1			1.4					5.6	0.0	
Delay (s)		4.7			3.9					47.0	38.2	
Level of Service		A			A					D	D	
Approach Delay (s)		4.7			3.9			0.0			45.8	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	10	670	45	415	710	150	40	15	515	0	0	0	
Future Volume (vph)	10	670	45	415	710	150	40	15	515	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		75	0		100	0		75	0		0	
Storage Lanes	0		1	1		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		512			518			381			156		
Travel Time (s)		11.6			11.8			8.7			3.5		
Confl. Peds. (#/hr)	35		17	17		35	23		57	57		23	
Confl. Bikes (#/hr)			19			15						12	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	5%	5%	5%	8%	8%	8%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	788	0	451	772	163	0	59	560	0	0	0	
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov				
Protected Phases		1		4	1 4	4	3	3	3 4				2
Permitted Phases	1			1 4		1 4							
Detector Phase	1	1		4	1 4	4	3	3	3 4				
Switch Phase													
Minimum Initial (s)	10.0	10.0		8.0		8.0	8.0	8.0					7.0
Minimum Split (s)	17.0	17.0		13.5		13.5	13.5	13.5					23.0
Total Split (s)	29.0	29.0		26.0		26.0	20.0	20.0					25.0
Total Split (%)	29.0%	29.0%		26.0%		26.0%	20.0%	20.0%					25%
Yellow Time (s)	4.0	4.0		3.0		3.0	4.0	4.0					3.0
All-Red Time (s)	3.0	3.0		2.5		2.5	1.5	1.5					1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0					
Total Lost Time (s)		7.0		5.5		5.5		5.5					
Lead/Lag	Lead	Lead		Lag		Lag	Lead	Lead					Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		None		None	None	None					None
v/c Ratio		1.31		0.78	0.70	0.19		0.32	0.56				
Control Delay		181.0		35.2	20.9	7.1		44.7	4.6				
Queue Delay		0.0		0.0	0.0	0.0		0.0	0.0				
Total Delay		181.0		35.2	20.9	7.1		44.7	4.6				
Queue Length 50th (ft)		~346		222	365	25		36	8				
Queue Length 95th (ft)		#514		#484	#692	67		71	76				
Internal Link Dist (ft)		432			438			301			76		
Turn Bay Length (ft)						100			75				
Base Capacity (vph)		602		579	1110	881		260	993				
Starvation Cap Reductn		0		0	0	0		0	0				
Spillback Cap Reductn		0		0	0	0		0	0				
Storage Cap Reductn		0		0	0	0		0	0				
Reduced v/c Ratio		1.31		0.78	0.70	0.19		0.23	0.56				

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 17: Harvard Avenue/Franklin Street & Cambridge Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	670	45	415	710	150	40	15	515	0	0	0
Future Volume (vph)	10	670	45	415	710	150	40	15	515	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		5.5	7.0	5.5		5.5	5.5			
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00			
Frpb, ped/bikes		1.00		1.00	1.00	0.97		1.00	1.00			
Flpb, ped/bikes		1.00		1.00	1.00	1.00		1.00	1.00			
Frt		0.99		1.00	1.00	0.85		1.00	0.85			
Flt Protected		1.00		0.95	1.00	1.00		0.96	1.00			
Satd. Flow (prot)		3262		1670	1759	1454		1746	1538			
Flt Permitted		0.66		0.15	1.00	1.00		0.96	1.00			
Satd. Flow (perm)		2166		271	1759	1454		1746	1538			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	728	49	451	772	163	43	16	560	0	0	0
RTOR Reduction (vph)	0	4	0	0	0	31	0	0	290	0	0	0
Lane Group Flow (vph)	0	784	0	451	772	132	0	59	270	0	0	0
Confl. Peds. (#/hr)	35		17	17		35	23		57	57		23
Confl. Bikes (#/hr)			19			15						12
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	5%	5%	5%	8%	8%	8%
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov			
Protected Phases		1		4	1 4	4	3	3	3 4			
Permitted Phases	1			1 4		1 4						
Actuated Green, G (s)		26.0		56.0	61.5	56.0		10.6	46.1			
Effective Green, g (s)		26.0		56.0	56.0	56.0		10.6	46.1			
Actuated g/C Ratio		0.26		0.56	0.56	0.56		0.11	0.46			
Clearance Time (s)		7.0		5.5		5.5		5.5				
Vehicle Extension (s)		2.0		2.0		2.0		2.0				
Lane Grp Cap (vph)		563		571	985	894		185	709			
v/s Ratio Prot				c0.24	0.44	0.04		0.03	c0.18			
v/s Ratio Perm		c0.36		0.21		0.05						
v/c Ratio		1.39		0.79	0.78	0.15		0.32	0.38			
Uniform Delay, d1		37.0		22.3	17.3	10.6		41.4	17.6			
Progression Factor		0.93		1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2		186.3		6.6	3.8	0.0		0.4	0.1			
Delay (s)		220.7		28.9	21.1	10.6		41.7	17.7			
Level of Service		F		C	C	B		D	B			
Approach Delay (s)		220.7			22.4			20.0			0.0	
Approach LOS		F			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	77.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↱	
Traffic Vol, veh/h	1	0	130	15	140	5	0	0	0	0	15	2
Future Vol, veh/h	1	0	130	15	140	5	0	0	0	0	15	2
Conflicting Peds, #/hr	0	0	9	9	0	0	0	0	3	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	5	5	2	2	2	21	2	21	2	2	2
Mvmt Flow	1	0	141	16	152	5	0	0	0	0	16	2

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	158	0	0	150	0	0				-	339	155
Stage 1	-	-	-	-	-	-				-	187	-
Stage 2	-	-	-	-	-	-				-	152	-
Critical Hdwy	4.12	-	-	4.12	-	-				-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				-	4.018	3.318
Pot Cap-1 Maneuver	1422	-	-	1431	-	-				0	582	891
Stage 1	-	-	-	-	-	-				0	745	-
Stage 2	-	-	-	-	-	-				0	772	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1422	-	-	1431	-	-				-	0	891
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0.7	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1422	-	-	1431	-	-	891
HCM Lane V/C Ratio	0.001	-	-	0.011	-	-	0.021
HCM Control Delay (s)	7.5	0	-	7.5	0	-	9.1
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	55	570	100	115	410	55	85	320	120	25	175	30	
Future Volume (vph)	55	570	100	115	410	55	85	320	120	25	175	30	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		100	75		0	115		0	0		0	
Storage Lanes	0		1	1		0	1		0	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		2049			739			1759			510		
Travel Time (s)		46.6			16.8			40.0			11.6		
Confl. Peds. (#/hr)	9		12	12		9	15		14	14		15	
Confl. Bikes (#/hr)						6						1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	11%	11%	11%	8%	8%	8%	3%	3%	3%	3%	3%	3%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	680	109	125	506	0	92	478	0	0	250	0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA		
Protected Phases		1			1			3			3		2
Permitted Phases	1		1	1			3			3			
Detector Phase	1	1	1	1	1		3	3		3	3		
Switch Phase													
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		8.0	8.0		8.0	8.0		4.0
Minimum Split (s)	17.0	17.0	17.0	17.0	17.0		17.0	17.0		17.0	17.0		28.0
Total Split (s)	28.0	28.0	28.0	28.0	28.0		24.0	24.0		24.0	24.0		28.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%		30.0%	30.0%		30.0%	30.0%		35%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0		2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0		-1.0	-1.0			-1.0		
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0		
Lead/Lag	Lead	Lead	Lead	Lead	Lead								Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None		None
v/c Ratio		0.74	0.13	0.53	0.51		0.46	1.06			1.31		
Control Delay		23.1	5.8	27.7	16.5		34.2	88.2			200.0		
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		23.1	5.8	27.7	16.5		34.2	88.2			200.0		
Queue Length 50th (ft)		183	4	28	107		39	~257			~161		
Queue Length 95th (ft)		#670	46	#171	#442		86	#440			#304		
Internal Link Dist (ft)		1969			659			1679			430		
Turn Bay Length (ft)			100	75			115						
Base Capacity (vph)		915	844	237	1000		200	453			191		
Starvation Cap Reductn		0	0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0	0		0	0			0		
Storage Cap Reductn		0	0	0	0		0	0			0		
Reduced v/c Ratio		0.74	0.13	0.53	0.51		0.46	1.06			1.31		

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 19: Everett Street & Western Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	570	100	115	410	55	85	320	120	25	175	30
Future Volume (vph)	55	570	100	115	410	55	85	320	120	25	175	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes		1.00	0.97	1.00	1.00		1.00	0.99			0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		0.98	1.00			1.00	
Frt		1.00	0.85	1.00	0.98		1.00	0.96			0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)		1704	1410	1666	1721		1724	1747			1788	
Flt Permitted		0.92	1.00	0.23	1.00		0.44	1.00			0.41	
Satd. Flow (perm)		1579	1410	410	1721		800	1747			739	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	620	109	125	446	60	92	348	130	27	190	33
RTOR Reduction (vph)	0	0	38	0	4	0	0	17	0	0	7	0
Lane Group Flow (vph)	0	680	71	125	502	0	92	462	0	0	243	0
Confl. Peds. (#/hr)	9		12	12		9	15		14	14		15
Confl. Bikes (#/hr)						6						1
Heavy Vehicles (%)	11%	11%	11%	8%	8%	8%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			3			3	
Permitted Phases	1		1	1			3			3		
Actuated Green, G (s)		42.2	42.2	42.2	42.2		19.0	19.0			19.0	
Effective Green, g (s)		43.2	43.2	43.2	43.2		20.0	20.0			20.0	
Actuated g/C Ratio		0.54	0.54	0.54	0.54		0.25	0.25			0.25	
Clearance Time (s)		5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		852	761	221	929		200	436			184	
v/s Ratio Prot					0.29			0.26				
v/s Ratio Perm		c0.43	0.05	0.30			0.12				c0.33	
v/c Ratio		0.80	0.09	0.57	0.54		0.46	1.06			1.32	
Uniform Delay, d1		14.9	8.9	12.2	12.0		25.4	30.0			30.0	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2		7.7	0.2	10.1	2.3		0.6	59.4			177.7	
Delay (s)		22.6	9.2	22.3	14.2		26.0	89.4			207.7	
Level of Service		C	A	C	B		C	F			F	
Approach Delay (s)		20.7			15.8			79.2			207.7	
Approach LOS		C			B			E			F	

Intersection Summary			
HCM 2000 Control Delay	55.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	5	30	0	45	5	495	60	65	345	0
Future Vol, veh/h	1	0	5	30	0	45	5	495	60	65	345	0
Conflicting Peds, #/hr	1	0	1	1	0	1	16	0	9	9	0	16
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	25	25	25	4	4	4	3	3	3	4	4	4
Mvmt Flow	1	0	5	33	0	49	5	538	65	71	375	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1139	1155	392	1111	1123	581	391	0	0	612	0	0
Stage 1	532	532	-	591	591	-	-	-	-	-	-	-
Stage 2	607	623	-	520	532	-	-	-	-	-	-	-
Critical Hdwy	7.35	6.75	6.45	7.14	6.54	6.24	4.13	-	-	4.14	-	-
Critical Hdwy Stg 1	6.35	5.75	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.35	5.75	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.725	4.225	3.525	3.536	4.036	3.336	2.227	-	-	2.236	-	-
Pot Cap-1 Maneuver	161	178	609	185	204	510	1162	-	-	957	-	-
Stage 1	492	490	-	490	491	-	-	-	-	-	-	-
Stage 2	446	444	-	536	522	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	132	157	600	168	180	506	1161	-	-	956	-	-
Mov Cap-2 Maneuver	132	157	-	168	180	-	-	-	-	-	-	-
Stage 1	482	438	-	483	484	-	-	-	-	-	-	-
Stage 2	400	438	-	481	467	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.7	23.1	0.1	1.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1161	-	-	377	280	956	-	-
HCM Lane V/C Ratio	0.005	-	-	0.017	0.291	0.074	-	-
HCM Control Delay (s)	8.1	0	-	14.7	23.1	9.1	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.2	0.2	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	555	320	60
Future Vol, veh/h	5	5	5	555	320	60
Conflicting Peds, #/hr	0	0	14	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	3	3
Mvmt Flow	5	5	5	603	348	65

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1008	394	427	0	-	0
Stage 1	394	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.11	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.209	-	-	-
Pot Cap-1 Maneuver	269	659	1138	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	261	651	1138	-	-	-
Mov Cap-2 Maneuver	261	-	-	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	534	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.9	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1138	-	373	-	-
HCM Lane V/C Ratio	0.005	-	0.029	-	-
HCM Control Delay (s)	8.2	0	14.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	20	540	70	50	275
Future Vol, veh/h	25	20	540	70	50	275
Conflicting Peds, #/hr	0	8	0	0	18	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	2	2	2	2
Mvmt Flow	27	22	587	76	54	299

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1051	651	0	0	681	0
Stage 1	643	-	-	-	-	-
Stage 2	408	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.12	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.218	-
Pot Cap-1 Maneuver	248	463	-	-	912	-
Stage 1	518	-	-	-	-	-
Stage 2	665	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	227	453	-	-	906	-
Mov Cap-2 Maneuver	227	-	-	-	-	-
Stage 1	510	-	-	-	-	-
Stage 2	618	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.8	0	1.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	292	906	-
HCM Lane V/C Ratio	-	-	0.168	0.06	-
HCM Control Delay (s)	-	-	19.8	9.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.2	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	120	2	0	45
Future Vol, veh/h	1	1	120	2	0	45
Conflicting Peds, #/hr	0	0	0	8	8	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	5	5	2	2
Mvmt Flow	1	1	130	2	0	49

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	189	140	0	0	141	0
Stage 1	140	-	-	-	-	-
Stage 2	49	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	805	913	-	-	1442	-
Stage 1	892	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	800	907	-	-	1442	-
Mov Cap-2 Maneuver	800	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	979	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	850	1442	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	-	-	9.2	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	5	15	5	0	25	40	2	5	20	10	85	0	0	10	1
Future Vol, veh/h	0	5	15	5	0	25	40	2	5	20	10	85	0	0	10	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	9	9	9	5	5	5	5	2	0	0	0
Mvmt Flow	0	5	16	5	0	27	43	2	5	22	11	92	0	0	11	1
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.3	7.9	7.4	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	20%	37%	0%
Vol Thru, %	9%	60%	60%	91%
Vol Right, %	74%	20%	3%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	25	67	11
LT Vol	21	5	25	0
Through Vol	10	15	40	10
RT Vol	89	5	2	1
Lane Flow Rate	130	27	73	12
Geometry Grp	1	1	1	1
Degree of Util (X)	0.136	0.031	0.089	0.014
Departure Headway (Hd)	3.759	4.126	4.38	4.12
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	944	859	813	858
Service Time	1.821	2.192	2.431	2.199
HCM Lane V/C Ratio	0.138	0.031	0.09	0.014
HCM Control Delay	7.4	7.3	7.9	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.1	0.3	0

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	145	180	25	0	15	175	10	0	15	70	30	0	5	15	35
Future Vol, veh/h	0	145	180	25	0	15	175	10	0	15	70	30	0	5	15	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	7	7	7	2	3	3	3	2	30	30	30
Mvmt Flow	0	158	196	27	0	16	190	11	0	16	76	33	0	5	16	38
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.5	10.2	9.6	9.4
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	41%	7%	9%
Vol Thru, %	61%	51%	88%	27%
Vol Right, %	26%	7%	5%	64%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	350	200	55
LT Vol	15	145	15	5
Through Vol	70	180	175	15
RT Vol	30	25	10	35
Lane Flow Rate	125	380	217	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.184	0.5	0.299	0.096
Departure Headway (Hd)	5.313	4.732	4.947	5.755
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	668	757	720	627
Service Time	3.409	2.802	3.027	3.755
HCM Lane V/C Ratio	0.187	0.502	0.301	0.096
HCM Control Delay	9.6	12.5	10.2	9.4
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.7	2.8	1.3	0.3

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	105	40	55	0	10	110	80	0	100	245	15	0	10	60	10
Future Vol, veh/h	0	105	40	55	0	10	110	80	0	100	245	15	0	10	60	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	4	4	4	2	11	11	11	2	36	36	36
Mvmt Flow	0	114	43	60	0	11	120	87	0	109	266	16	0	11	65	11
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.5	11.3	16.5	10.6
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	53%	5%	12%
Vol Thru, %	68%	20%	55%	75%
Vol Right, %	4%	28%	40%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	360	200	200	80
LT Vol	100	105	10	10
Through Vol	245	40	110	60
RT Vol	15	55	80	10
Lane Flow Rate	391	217	217	87
Geometry Grp	1	1	1	1
Degree of Util (X)	0.599	0.339	0.333	0.154
Departure Headway (Hd)	5.507	5.611	5.514	6.386
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	653	639	650	559
Service Time	3.55	3.667	3.571	4.451
HCM Lane V/C Ratio	0.599	0.34	0.334	0.156
HCM Control Delay	16.5	11.5	11.3	10.6
HCM Lane LOS	C	B	B	B
HCM 95th-tile Q	4	1.5	1.5	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	220	0	50	140	225	65	205	1005	0	5	0	925	275
Future Volume (vph)	220	0	50	140	225	65	205	1005	0	5	0	925	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	0		0		0		50
Storage Lanes	2		0	1		0	0		0		0		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		797			420			570				590	
Travel Time (s)		18.1			9.5			13.0				13.4	
Confl. Peds. (#/hr)	5		3	3		5	1		49	5	49		1
Confl. Bikes (#/hr)									20				5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	239	54	0	152	316	0	0	1315	0	0	0	1010	299
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Detector Phase	3			2	2		4	1 4		1		1	1 3
Switch Phase													
Minimum Initial (s)	6.0			6.0	6.0		6.0			10.0		10.0	
Minimum Split (s)	24.0			12.0	12.0		12.0			22.0		22.0	
Total Split (s)	24.0			22.0	22.0		22.0			31.0		31.0	
Total Split (%)	24.2%			22.2%	22.2%		22.2%			31.3%		31.3%	
Yellow Time (s)	4.0			4.0	4.0		4.0			4.0		4.0	
All-Red Time (s)	2.0			2.0	2.0		2.0			2.0		2.0	
Lost Time Adjust (s)	0.0			0.0	0.0							0.0	
Total Lost Time (s)	6.0			6.0	6.0							6.0	
Lead/Lag	Lead			Lag	Lag		Lag			Lead		Lead	
Lead-Lag Optimize?													
Recall Mode	None			None	None		Max			C-Max		C-Max	
v/c Ratio	0.62	0.23		0.53	1.05			1.02				1.53	0.46
Control Delay	48.5	0.0		45.7	106.6			51.4				275.6	9.7
Queue Delay	0.0	0.0		0.0	0.0			0.0				0.0	0.0
Total Delay	48.5	0.0		45.7	106.6			51.4				275.6	9.7
Queue Length 50th (ft)	75	0		89	~212			~314				~472	43
Queue Length 95th (ft)	110	0		153	#383			#464				#599	70
Internal Link Dist (ft)		717			340			490				510	
Turn Bay Length (ft)				75									50
Base Capacity (vph)	618	231		286	300			1289				660	748
Starvation Cap Reductn	0	0		0	0			0				0	0
Spillback Cap Reductn	0	0		0	0			0				0	0
Storage Cap Reductn	0	0		0	0			0				0	0
Reduced v/c Ratio	0.39	0.23		0.53	1.05			1.02				1.53	0.40

Intersection Summary	
Area Type:	Other
Cycle Length: 99	
Actuated Cycle Length: 99	
Offset: 47 (47%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: Market Street & Leo M. Birmingham Parkway & Lincoln Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	220	0	50	140	225	65	205	1005	0	5	0	925	275
Future Volume (vph)	220	0	50	140	225	65	205	1005	0	5	0	925	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	6.0			6.0				6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00			0.95				0.95	1.00
Frpb, ped/bikes	1.00	0.90		1.00	1.00			1.00				1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Frt	1.00	0.85		1.00	0.97			1.00				1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99				1.00	1.00
Satd. Flow (prot)	3400	0		1770	1791			3509				3538	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.54				0.74	1.00
Satd. Flow (perm)	3400	0		1770	1791			1917				2616	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	0	54	152	245	71	223	1092	0	5	0	1005	299
RTOR Reduction (vph)	0	54	0	0	11	0	0	0	0	0	0	0	68
Lane Group Flow (vph)	239	0	0	152	305	0	0	1315	0	0	0	1010	231
Confl. Peds. (#/hr)	5		3	3		5	1		49	5	49		1
Confl. Bikes (#/hr)									20				5
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Actuated Green, G (s)	11.3	0.0		16.0	16.0			47.7				25.0	36.3
Effective Green, g (s)	11.3	0.0		16.0	16.0			47.7				25.0	36.3
Actuated g/C Ratio	0.11	0.00		0.16	0.16			0.48				0.25	0.37
Clearance Time (s)	6.0			6.0	6.0							6.0	
Vehicle Extension (s)	2.0			2.0	2.0							2.0	
Lane Grp Cap (vph)	388	0		286	289			1288				660	580
v/s Ratio Prot	c0.07			0.09	c0.17			c0.23					0.15
v/s Ratio Perm								0.26				c0.39	
v/c Ratio	0.62	0.00		0.53	1.06			1.02				1.53	0.40
Uniform Delay, d1	41.8	49.5		38.1	41.5			25.6				37.0	23.2
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Incremental Delay, d2	2.0	0.0		1.0	68.4			30.5				246.3	0.2
Delay (s)	43.8	49.5		39.0	109.9			56.1				283.3	23.4
Level of Service	D	D		D	F			E				F	C
Approach Delay (s)		44.9			86.8			56.1				223.9	
Approach LOS		D			F			E				F	

Intersection Summary			
HCM 2000 Control Delay	124.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	99.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	5	1	255	15	620	30	580	120	190	865	40
Future Volume (vph)	10	5	1	255	15	620	30	580	120	190	865	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			772			187			570	
Travel Time (s)		5.6			17.5			4.3			13.0	
Confl. Peds. (#/hr)	1		37	37		1	17		36	36		17
Confl. Bikes (#/hr)						1			2			7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	293	674	0	793	0	0	1190	0
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Detector Phase	2	2		2	2	2 3	1	1		3	1 3	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		6.0		
Minimum Split (s)	21.0	21.0		21.0	21.0		22.0	22.0		11.0		
Total Split (s)	21.0	21.0		21.0	21.0		48.0	48.0		21.0		
Total Split (%)	23.3%	23.3%		23.3%	23.3%		53.3%	53.3%		23.3%		
Yellow Time (s)	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		
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead				
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		None		
v/c Ratio		0.07			1.22	0.89		0.56			0.73	
Control Delay		29.9			165.1	35.1		17.2			9.1	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		29.9			165.1	35.1		17.2			9.1	
Queue Length 50th (ft)		8			~206	276		152			131	
Queue Length 95th (ft)		26			#363	#507		207			168	
Internal Link Dist (ft)		167			692			107			490	
Turn Bay Length (ft)						125						
Base Capacity (vph)		235			240	754		1428			1640	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.07			1.22	0.89		0.56			0.73	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 85 (94%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Market Street & Stockyard Driveway/Guest Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	5	1	255	15	620	30	580	120	190	865	40
Future Volume (vph)	10	5	1	255	15	620	30	580	120	190	865	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	5.0		4.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	1.00		0.98			1.00	
Flpb, ped/bikes		1.00			0.93	1.00		1.00			1.00	
Frt		0.99			1.00	0.85		0.98			0.99	
Flt Protected		0.97			0.95	1.00		1.00			0.99	
Satd. Flow (prot)		1816			1678	1599		3347			3473	
Flt Permitted		0.66			0.73	1.00		0.86			0.61	
Satd. Flow (perm)		1244			1275	1599		2887			2134	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	5	1	277	16	674	33	630	130	207	940	43
RTOR Reduction (vph)	0	1	0	0	0	97	0	18	0	0	3	0
Lane Group Flow (vph)	0	16	0	0	293	577	0	775	0	0	1187	0
Confl. Peds. (#/hr)	1		37	37		1	17		36	36		17
Confl. Bikes (#/hr)						1			2			7
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Actuated Green, G (s)		16.0			16.0	37.0		43.0			59.0	
Effective Green, g (s)		17.0			17.0	37.0		44.0			59.0	
Actuated g/C Ratio		0.19			0.19	0.41		0.49			0.66	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		234			240	657		1411			1637	
v/s Ratio Prot						c0.36					0.13	
v/s Ratio Perm		0.01			c0.23			0.27			c0.35	
v/c Ratio		0.07			1.22	0.88		0.55			0.73	
Uniform Delay, d1		30.0			36.5	24.4		16.1			10.2	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.0			130.9	12.3		1.5			1.4	
Delay (s)		30.0			167.4	36.8		17.6			11.6	
Level of Service		C			F	D		B			B	
Approach Delay (s)		30.0			76.3			17.6			11.6	
Approach LOS		C			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	0	725	1120	0
Future Vol, veh/h	5	15	0	725	1120	0
Conflicting Peds, #/hr	9	0	20	0	0	20
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	3	3	1	1
Mvmt Flow	5	16	0	788	1217	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1620	609	-	0	-	0
Stage 1	1217	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	-	-
Pot Cap-1 Maneuver	91	431	0	-	-	0
Stage 1	237	-	0	-	-	0
Stage 2	635	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	91	431	-	-	-	-
Mov Cap-2 Maneuver	91	-	-	-	-	-
Stage 1	237	-	-	-	-	-
Stage 2	635	-	-	-	-	-

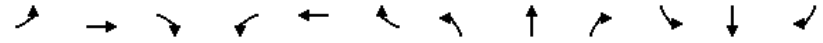
Approach	EB	NB	SB
HCM Control Delay, s	22.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	223	-
HCM Lane V/C Ratio	-	0.097	-
HCM Control Delay (s)	-	22.9	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.3	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	40	415	55	145	455	135	45	550	145	160	870	105	
Future Volume (vph)	40	415	55	145	455	135	45	550	145	160	870	105	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		200	0		200	0		100	0		0	
Storage Lanes	0		1	0		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		324			332			559			323		
Travel Time (s)		7.4			7.5			12.7			7.3		
Confl. Peds. (#/hr)	12		34	34		12	12		46	46		12	
Confl. Bikes (#/hr)						4						2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	554	0	0	800	0	0	805	0	0	1234	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		5.0			1.0
Minimum Split (s)	15.0	15.0		15.0	15.0		15.0	15.0		10.0			20.0
Total Split (s)	33.0	33.0		33.0	33.0		36.0	36.0		11.0			20.0
Total Split (%)	33.0%	33.0%		33.0%	33.0%		36.0%	36.0%		11.0%			20%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0			2.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.0			2.0
Lost Time Adjust (s)		0.0			0.0			0.0					
Total Lost Time (s)		5.0			5.0			5.0					
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?													
Recall Mode	Max	Max		Max	Max		C-Max	C-Max		None			None
v/c Ratio		0.68			1.11			1.37			1.52		
Control Delay		35.6			95.4			195.5			265.0		
Queue Delay		0.0			0.0			0.0			0.5		
Total Delay		35.6			95.4			195.5			265.4		
Queue Length 50th (ft)		166			~266			~347			~584		
Queue Length 95th (ft)		232			#444			m#295			#719		
Internal Link Dist (ft)		244			252			479			243		
Turn Bay Length (ft)													
Base Capacity (vph)		815			721			589			813		
Starvation Cap Reductn		0			0			0			0		
Spillback Cap Reductn		0			0			0			60		
Storage Cap Reductn		0			0			0			0		
Reduced v/c Ratio		0.68			1.11			1.37			1.64		

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Market Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	415	55	145	455	135	45	550	145	160	870	105
Future Volume (vph)	40	415	55	145	455	135	45	550	145	160	870	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.97			0.99	
Flt Protected		1.00			0.99			1.00			0.99	
Satd. Flow (prot)		3451			3383			3386			3490	
Flt Permitted		0.73			0.64			0.54			0.55	
Satd. Flow (perm)		2523			2198			1829			1928	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	451	60	158	495	147	49	598	158	174	946	114
RTOR Reduction (vph)	0	9	0	0	18	0	0	22	0	0	8	0
Lane Group Flow (vph)	0	545	0	0	782	0	0	783	0	0	1226	0
Confl. Peds. (#/hr)	12		34	34		12	12		46	46		12
Confl. Bikes (#/hr)						4						2
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		32.0			32.0			30.2			37.2	
Effective Green, g (s)		32.0			32.0			30.2			37.2	
Actuated g/C Ratio		0.32			0.32			0.30			0.37	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			4.0				
Lane Grp Cap (vph)		807			703			552			826	
v/s Ratio Prot											c0.10	
v/s Ratio Perm		0.22			c0.36			0.43			c0.45	
v/c Ratio		0.68			1.11			1.42			1.48	
Uniform Delay, d1		29.5			34.0			34.9			31.4	
Progression Factor		1.00			0.88			1.01			1.00	
Incremental Delay, d2		4.5			65.1			189.6			224.7	
Delay (s)		34.0			95.0			224.9			256.1	
Level of Service		C			F			F			F	
Approach Delay (s)		34.0			95.0			224.9			256.1	
Approach LOS		C			F			F			F	

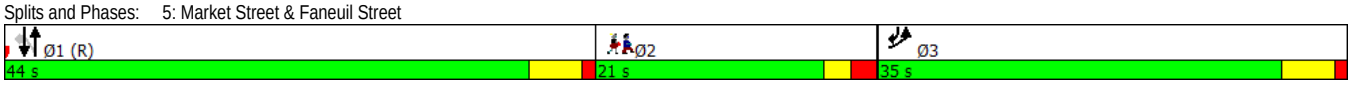
Intersection Summary			
HCM 2000 Control Delay	174.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	106.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	205	55	50	620	785	360	
Future Volume (vph)	205	55	50	620	785	360	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Right Turn on Red		Yes				Yes	
Link Speed (mph)	30			30	30		
Link Distance (ft)	420			1276	559		
Travel Time (s)	9.5			29.0	12.7		
Confl. Peds. (#/hr)	27	26	16			16	
Confl. Bikes (#/hr)		2					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	283	0	0	728	853	391	
Turn Type	Prot		Perm	NA	NA	pm+ov	
Protected Phases	3			1	1	3	2
Permitted Phases			1			1	
Detector Phase	3		1	1	1	3	
Switch Phase							
Minimum Initial (s)	6.0		10.0	10.0	10.0	6.0	7.0
Minimum Split (s)	11.0		15.0	15.0	15.0	11.0	21.0
Total Split (s)	35.0		44.0	44.0	44.0	35.0	21.0
Total Split (%)	35.0%		44.0%	44.0%	44.0%	35.0%	21%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	2.0
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	Lead	Lead		Lag
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max	None	None
v/c Ratio	0.79			1.23	0.80	0.30	
Control Delay	51.3			132.8	12.3	0.2	
Queue Delay	0.0			0.0	1.9	0.0	
Total Delay	51.3			132.8	14.2	0.2	
Queue Length 50th (ft)	164			~607	247	0	
Queue Length 95th (ft)	235			m#178	m195	m0	
Internal Link Dist (ft)	340			1196	479		
Turn Bay Length (ft)							
Base Capacity (vph)	524			592	1065	1341	
Starvation Cap Reductn	0			0	98	0	
Spillback Cap Reductn	0			0	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.54			1.23	0.88	0.29	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 7 (7%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Market Street & Faneuil Street



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	205	55	50	620	785	360
Future Volume (vph)	205	55	50	620	785	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frpb, ped/bikes	0.98			1.00	1.00	0.98
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.97			1.00	1.00	0.85
Flt Protected	0.96			1.00	1.00	1.00
Satd. Flow (prot)	1709			1855	1863	1548
Flt Permitted	0.96			0.56	1.00	1.00
Satd. Flow (perm)	1709			1038	1863	1548
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	60	54	674	853	391
RTOR Reduction (vph)	11	0	0	0	0	95
Lane Group Flow (vph)	272	0	0	728	853	296
Confl. Peds. (#/hr)	27	26	16			16
Confl. Bikes (#/hr)		2				
Turn Type	Prot		Perm	NA	NA	pm+ov
Protected Phases	3			1	1	3
Permitted Phases			1			1
Actuated Green, G (s)	20.2			55.6	55.6	75.8
Effective Green, g (s)	20.2			55.6	55.6	75.8
Actuated g/C Ratio	0.20			0.56	0.56	0.76
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	2.0			2.0	2.0	2.0
Lane Grp Cap (vph)	345			577	1035	1250
v/s Ratio Prot	c0.16				0.46	0.05
v/s Ratio Perm				c0.70		0.14
v/c Ratio	0.79			1.26	0.82	0.24
Uniform Delay, d1	37.9			22.2	18.2	3.6
Progression Factor	1.00			1.30	0.35	0.34
Incremental Delay, d2	10.5			119.1	0.7	0.0
Delay (s)	48.3			148.0	7.1	1.2
Level of Service	D			F	A	A
Approach Delay (s)	48.3			148.0	5.2	
Approach LOS	D			F	A	

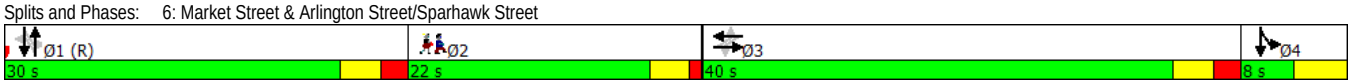
Intersection Summary			
HCM 2000 Control Delay	56.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		

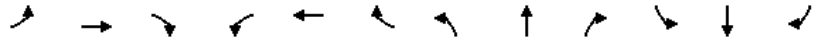
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	65	265	75	25	295	140	15	455	5	80	660	15	
Future Volume (vph)	65	265	75	25	295	140	15	455	5	80	660	15	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	0		0	75		0	
Storage Lanes	0		0	0		0	0		0	1		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		448			531			497			1276		
Travel Time (s)		10.2			12.1			11.3			29.0		
Confl. Peds. (#/hr)	17		10	10		17	28		38	38		28	
Confl. Bikes (#/hr)			3			9			8			4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	441	0	0	500	0	0	516	0	87	733	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		4.0			7.0
Minimum Split (s)	13.0	13.0		13.0	13.0		15.0	15.0		8.0			22.0
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		8.0			22.0
Total Split (%)	40.0%	40.0%		40.0%	40.0%		30.0%	30.0%		8.0%			22%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		4.0			3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0			1.0
Lost Time Adjust (s)		0.0			0.0			0.0		0.0			
Total Lost Time (s)		5.0			5.0			5.0		4.0			
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes			Yes
Recall Mode	None	None		None	None		C-Max	C-Max		Max			None
v/c Ratio		0.97			0.84			2.88		0.35	1.03		
Control Delay		67.4			43.4			880.4		44.5	79.2		
Queue Delay		0.0			0.0			0.0		0.0	0.0		
Total Delay		67.4			43.4			880.4		44.5	79.2		
Queue Length 50th (ft)		262			274			~569		56	~592		
Queue Length 95th (ft)		#461			#448			#769		m73	#821		
Internal Link Dist (ft)		368			451			417			1196		
Turn Bay Length (ft)										75			
Base Capacity (vph)		471			612			179		247	715		
Starvation Cap Reductn		0			0			0		0	0		
Spillback Cap Reductn		0			0			0		0	0		
Storage Cap Reductn		0			0			0		0	0		
Reduced v/c Ratio		0.94			0.82			2.88		0.35	1.03		

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
~	Volume exceeds capacity, queue is theoretically infinite.
	Queue shown is maximum after two cycles.
#	95th percentile volume exceeds capacity, queue may be longer.
	Queue shown is maximum after two cycles.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Market Street & Arlington Street/Sparhawk Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	265	75	25	295	140	15	455	5	80	660	15
Future Volume (vph)	65	265	75	25	295	140	15	455	5	80	660	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		4.0	5.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.99			0.98			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.97			0.96			1.00		1.00	1.00	
Flt Protected		0.99			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1804			1769			1837		1766	1854	
Flt Permitted		0.73			0.96			0.39		0.17	1.00	
Satd. Flow (perm)		1322			1704			718		307	1854	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	288	82	27	321	152	16	495	5	87	717	16
RTOR Reduction (vph)	0	9	0	0	16	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	432	0	0	484	0	0	516	0	87	732	0
Confl. Peds. (#/hr)	17		10	10		17	28		38	38		28
Confl. Bikes (#/hr)			3			9			8			4
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		33.9			33.9			24.2		33.7	37.7	
Effective Green, g (s)		33.9			33.9			24.2		33.7	33.7	
Actuated g/C Ratio		0.34			0.34			0.24		0.34	0.34	
Clearance Time (s)		5.0			5.0			5.0		4.0		
Vehicle Extension (s)		2.0			2.0			0.2		2.0		
Lane Grp Cap (vph)		448			577			173		242	624	
v/s Ratio Prot										0.03	c0.40	
v/s Ratio Perm		c0.33			0.28			c0.72		0.09		
v/c Ratio		0.97			0.84			2.98		0.36	1.17	
Uniform Delay, d1		32.5			30.5			37.9		25.3	33.1	
Progression Factor		1.00			1.00			1.00		1.71	1.52	
Incremental Delay, d2		33.2			9.9			907.6		2.5	88.4	
Delay (s)		65.6			40.5			945.5		45.6	138.9	
Level of Service		E			D			F		D	F	
Approach Delay (s)		65.6			40.5			945.5			129.0	
Approach LOS		E			D			F			F	

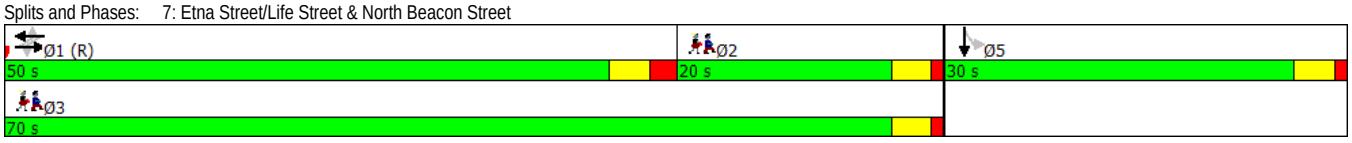
Intersection Summary			
HCM 2000 Control Delay	282.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3
Lane Configurations														
Traffic Volume (vph)	35	685	15	15	660	45	0	0	0	130	15	95		
Future Volume (vph)	35	685	15	15	660	45	0	0	0	130	15	95		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes			Yes		
Link Speed (mph)		30			30			30			30			
Link Distance (ft)		458			334			278			631			
Travel Time (s)		10.4			7.6			6.3			14.3			
Confl. Peds. (#/hr)	23		51	51		23	33		3	3		33		
Confl. Bikes (#/hr)			4			6								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	0%	0%	0%		
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	799	0	0	782	0	0	0	0	0	260	0		
Turn Type	Perm	NA		Perm	NA					Perm	NA			
Protected Phases		1			1						5		2	3
Permitted Phases	1			1						5				
Detector Phase	1	1		1	1					5	5			
Switch Phase														
Minimum Initial (s)	10.0	10.0		10.0	10.0					7.0	7.0		7.0	8.0
Minimum Split (s)	15.0	15.0		15.0	15.0					11.0	11.0		20.0	19.0
Total Split (s)	50.0	50.0		50.0	50.0					30.0	30.0		20.0	70.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%					30.0%	30.0%		20%	70%
Yellow Time (s)	3.0	3.0		3.0	3.0					3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0					1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0			0.0						0.0			
Total Lost Time (s)		5.0			5.0						4.0			
Lead/Lag	Lead	Lead		Lead	Lead								Lag	
Lead-Lag Optimize?														
Recall Mode	C-Max	C-Max		C-Max	C-Max					None	None		None	Ped
v/c Ratio		0.70			0.67						0.79			
Control Delay		23.0			19.2						50.2			
Queue Delay		0.0			0.0						0.0			
Total Delay		23.0			19.2						50.2			
Queue Length 50th (ft)		302			202						140			
Queue Length 95th (ft)		m440			#720						210			
Internal Link Dist (ft)		378			254			198			551			
Turn Bay Length (ft)														
Base Capacity (vph)		1144			1173						463			
Starvation Cap Reductn		0			0						0			
Spillback Cap Reductn		0			0						0			
Storage Cap Reductn		0			0						0			
Reduced v/c Ratio		0.70			0.67						0.56			

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 39 (39%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Etna Street/Life Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	685	15	15	660	45	0	0	0	130	15	95
Future Volume (vph)	35	685	15	15	660	45	0	0	0	130	15	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			1.00						0.96	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		1.00			0.99						0.95	
Flt Protected		1.00			1.00						0.97	
Satd. Flow (prot)		1869			1840						1668	
Flt Permitted		0.94			0.98						0.97	
Satd. Flow (perm)		1763			1805						1668	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	745	16	16	717	49	0	0	0	141	16	103
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	26	0
Lane Group Flow (vph)	0	799	0	0	781	0	0	0	0	0	234	0
Confl. Peds. (#/hr)	23		51	51		23	33		3	3		33
Confl. Bikes (#/hr)			4			6						
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						5	
Permitted Phases	1			1						5		
Actuated Green, G (s)		62.5			62.5						18.1	
Effective Green, g (s)		62.5			62.5						18.1	
Actuated g/C Ratio		0.62			0.62						0.18	
Clearance Time (s)		5.0			5.0						4.0	
Vehicle Extension (s)		2.0			2.0						2.0	
Lane Grp Cap (vph)		1101			1128						301	
v/s Ratio Prot												
v/s Ratio Perm		c0.45			0.43						0.14	
v/c Ratio		0.73			0.69						0.78	
Uniform Delay, d1		12.9			12.4						39.0	
Progression Factor		1.38			1.00						1.00	
Incremental Delay, d2		1.1			3.5						10.9	
Delay (s)		18.8			15.9						49.9	
Level of Service		B			B						D	
Approach Delay (s)		18.8			15.9			0.0			49.9	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	1	720	105	160	730	0	0	0	0	5	2	5
Future Vol, veh/h	1	720	105	160	730	0	0	0	0	5	2	5
Conflicting Peds, #/hr	26	0	35	35	0	26	0	0	11	11	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	2	2	2	0	0	0	0	0	0
Mvmt Flow	1	783	114	174	793	0	0	0	0	5	2	5

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	819	0	0	932	0	0				2020	2101	819
Stage 1	-	-	-	-	-	-				1167	1167	-
Stage 2	-	-	-	-	-	-				853	934	-
Critical Hdwy	4.11	-	-	4.12	-	-				6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-				5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.4	5.5	-
Follow-up Hdwy	2.209	-	-	2.218	-	-				3.5	4	3.3
Pot Cap-1 Maneuver	814	-	-	734	-	-				65	52	379
Stage 1	-	-	-	-	-	-				299	270	-
Stage 2	-	-	-	-	-	-				421	347	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	814	-	-	727	-	-				35	0	371
Mov Cap-2 Maneuver	-	-	-	-	-	-				35	0	-
Stage 1	-	-	-	-	-	-				167	0	-
Stage 2	-	-	-	-	-	-				411	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	2.1	75.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	814	-	-	727	-	-	64
HCM Lane V/C Ratio	0.001	-	-	0.239	-	-	0.204
HCM Control Delay (s)	9.4	0	-	11.5	0	-	75.1
HCM Lane LOS	A	A	-	B	A	-	F
HCM 95th %tile Q(veh)	0	-	-	0.9	-	-	0.7

Intersection	
Int Delay, s/veh	27.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	720	0	0	795	5	60	5	110	15	0	35
Future Vol, veh/h	5	720	0	0	795	5	60	5	110	15	0	35
Conflicting Peds, #/hr	25	0	31	31	0	25	0	0	3	3	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	783	0	0	864	5	65	5	120	16	0	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	895	0	-	-	-	0	1679	1688	786	1751	1685	892
Stage 1	-	-	-	-	-	-	793	793	-	892	892	-
Stage 2	-	-	-	-	-	-	886	895	-	859	793	-
Critical Hdwy	4.11	-	-	-	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.209	-	-	-	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	762	-	0	0	-	-	75	94	392	67	94	341
Stage 1	-	-	0	0	-	-	382	400	-	337	360	-
Stage 2	-	-	0	0	-	-	339	359	-	351	400	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	762	-	-	-	-	-	66	91	391	43	91	334
Mov Cap-2 Maneuver	-	-	-	-	-	-	66	91	-	43	91	-
Stage 1	-	-	-	-	-	-	377	395	-	326	353	-
Stage 2	-	-	-	-	-	-	300	352	-	237	395	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	256.3	66.1
HCM LOS			F	F

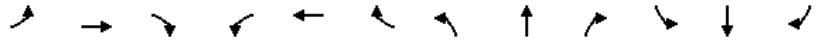
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	141	762	-	-	-	110
HCM Lane V/C Ratio	1.349	0.007	-	-	-	0.494
HCM Control Delay (s)	256.3	9.8	0	-	-	66.1
HCM Lane LOS	F	A	A	-	-	F
HCM 95th %tile Q(veh)	12.1	0	-	-	-	2.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	200	645	0	0	530	215	0	0	0	410	0	250	
Future Volume (vph)	200	645	0	0	530	215	0	0	0	410	0	250	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12	
Storage Length (ft)	100		0	0		0	0		0	0		150	
Storage Lanes	1		0	0		1	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		456			284			205			781		
Travel Time (s)		10.4			6.5			4.7			17.8		
Confl. Peds. (#/hr)	21					21	11		1	1		11	
Confl. Bikes (#/hr)			4			5							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	217	701	0	0	576	234	0	0	0	446	0	272	
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm	
Protected Phases	5	1 5			1		4	4		3			2
Permitted Phases	1 5			1		1						3	
Detector Phase	5	1 5		1	1	1	4	4		3		3	
Switch Phase													
Minimum Initial (s)	4.0			12.0	12.0	12.0	3.0	3.0		5.0		5.0	4.0
Minimum Split (s)	8.0			16.0	16.0	16.0	7.0	7.0		9.0		9.0	17.0
Total Split (s)	11.0			42.0	42.0	42.0	15.0	15.0		25.0		25.0	17.0
Total Split (%)	10.0%			38.2%	38.2%	38.2%	13.6%	13.6%		22.7%		22.7%	15%
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0
All-Red Time (s)	1.0			1.0	1.0	1.0	1.0	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	-1.0				-1.0	-1.0		-1.0		0.0		-1.0	
Total Lost Time (s)	3.0				3.0	3.0		3.0		4.0		3.0	
Lead/Lag				Lead	Lead	Lead	Lag	Lag		Lead		Lead	Lag
Lead-Lag Optimize?													
Recall Mode	None			C-Max	C-Max	C-Max	None	None		None		None	None
v/c Ratio	0.52	0.68			0.94	0.36				0.89		0.48	
Control Delay	23.2	19.5			58.3	11.2				60.8		16.5	
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0	
Total Delay	23.2	19.5			58.3	11.2				60.8		16.5	
Queue Length 50th (ft)	81	316			322	43				273		47	
Queue Length 95th (ft)	159	452			m#563	m62				#607		150	
Internal Link Dist (ft)		376			204			125			701		
Turn Bay Length (ft)	100											150	
Base Capacity (vph)	416	1037			616	642				501		565	
Starvation Cap Reductn	0	0			0	0				0		0	
Spillback Cap Reductn	0	0			0	0				0		0	
Storage Cap Reductn	0	0			0	0				0		0	
Reduced v/c Ratio	0.52	0.68			0.94	0.36				0.89		0.48	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 109 (99%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Wingate Driveway/Arthur Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	645	0	0	530	215	0	0	0	410	0	250
Future Volume (vph)	200	645	0	0	530	215	0	0	0	410	0	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			3.0	3.0				4.0		3.0
Lane Util. Factor	1.00	1.00			1.00	1.00				1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.94				1.00		0.96
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1667	1756			1739	1395				1770		1523
Flt Permitted	0.11	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	192	1756			1739	1395				1770		1523
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	701	0	0	576	234	0	0	0	446	0	272
RTOR Reduction (vph)	0	0	0	0	0	151	0	0	0	0	0	124
Lane Group Flow (vph)	217	701	0	0	576	83	0	0	0	446	0	148
Confl. Peds. (#/hr)	21					21	11		1	1		11
Confl. Bikes (#/hr)			4			5						
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm
Protected Phases	5	1 5			1		4	4		3		
Permitted Phases	1 5			1		1						3
Actuated Green, G (s)	57.6	61.6			35.6	35.6				31.2		31.2
Effective Green, g (s)	59.6	62.6			36.6	36.6				31.2		32.2
Actuated g/C Ratio	0.54	0.57			0.33	0.33				0.28		0.29
Clearance Time (s)	4.0				4.0	4.0				4.0		4.0
Vehicle Extension (s)	2.0				4.0	4.0				2.0		2.0
Lane Grp Cap (vph)	412	999			578	464				502		445
v/s Ratio Prot	0.11	c0.40			c0.33					c0.25		
v/s Ratio Perm	0.18					0.06						0.10
v/c Ratio	0.53	0.70			1.00	0.18				0.89		0.33
Uniform Delay, d1	20.9	17.0			36.6	26.0				37.7		30.5
Progression Factor	1.00	1.00			1.21	2.67				1.00		1.00
Incremental Delay, d2	0.6	1.8			28.5	0.5				16.8		0.2
Delay (s)	21.4	18.8			72.7	70.0				54.5		30.6
Level of Service	C	B			E	E				D		C
Approach Delay (s)		19.5			71.9			0.0			45.5	
Approach LOS		B			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	44.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	101.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1055	0	0	735	10	25
Future Vol, veh/h	1055	0	0	735	10	25
Conflicting Peds, #/hr	0	55	55	0	0	11
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	3	3
Mvmt Flow	1147	0	0	799	11	27

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	1546	1158
Stage 1	-	-	-	-	1147	-
Stage 2	-	-	-	-	399	-
Critical Hdwy	-	-	-	-	6.645	6.245
Critical Hdwy Stg 1	-	-	-	-	5.445	-
Critical Hdwy Stg 2	-	-	-	-	5.845	-
Follow-up Hdwy	-	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	0	0	-	114	236
Stage 1	-	0	0	-	300	-
Stage 2	-	0	0	-	645	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	114	234
Mov Cap-2 Maneuver	-	-	-	-	114	-
Stage 1	-	-	-	-	300	-
Stage 2	-	-	-	-	645	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	30.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	180	-	-
HCM Lane V/C Ratio	0.211	-	-
HCM Control Delay (s)	30.3	-	-
HCM Lane LOS	D	-	-
HCM 95th %tile Q(veh)	0.8	-	-

Intersection	
Int Delay, s/veh	53.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	955	125	125	695	40	135
Future Vol, veh/h	955	125	125	695	40	135
Conflicting Peds, #/hr	0	44	44	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	1038	136	136	755	43	147

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1218	0	2177	1150
Stage 1	-	-	-	-	1150	-
Stage 2	-	-	-	-	1027	-
Critical Hdwy	-	-	4.13	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.227	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	569	-	51	241
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	345	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	569	-	~ 29	232
Mov Cap-2 Maneuver	-	-	-	-	~ 29	-
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	203	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	$ 624.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	89	-	-	569	-
HCM Lane V/C Ratio	2.137	-	-	0.239	-
HCM Control Delay (s)	$ 624.4	-	-	13.3	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	16.9	-	-	0.9	-

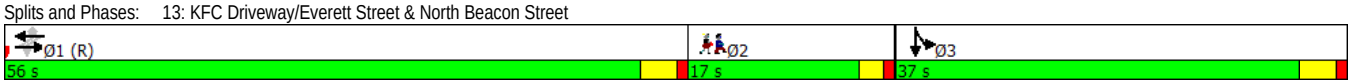
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

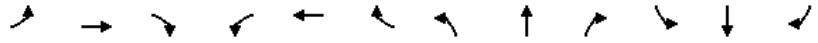
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	240	755	5	5	675	250	0	0	0	295	0	165	
Future Volume (vph)	240	755	5	5	675	250	0	0	0	295	0	165	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		446			477			138			517		
Travel Time (s)		10.1			10.8			3.1			11.8		
Confl. Peds. (#/hr)	29		61	61		29	26		26	26		26	
Confl. Bikes (#/hr)			1			6							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	1087	0	0	739	272	0	0	0	0	500	0	
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA		
Protected Phases		1			1					3	3		2
Permitted Phases	1			1		1							
Detector Phase	1	1		1	1	1				3	3		
Switch Phase													
Minimum Initial (s)	15.0	15.0		15.0	15.0	15.0				7.0	7.0		7.0
Minimum Split (s)	19.0	19.0		19.0	19.0	19.0				11.0	11.0		17.0
Total Split (s)	56.0	56.0		56.0	56.0	56.0				37.0	37.0		17.0
Total Split (%)	50.9%	50.9%		50.9%	50.9%	50.9%				33.6%	33.6%		15%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0		2.0
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)		4.0			4.0	4.0					4.0		
Lead/Lag	Lead	Lead		Lead	Lead	Lead							Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max				Max	Max		None
v/c Ratio		2.87dl			0.84	0.32					0.78		
Control Delay		158.9			14.2	0.6					40.9		
Queue Delay		0.0			50.5	0.0					0.0		
Total Delay		158.9			64.7	0.6					40.9		
Queue Length 50th (ft)		~521			151	2					319		
Queue Length 95th (ft)		m#647			m326	m1					#527		
Internal Link Dist (ft)		366			397			58			437		
Turn Bay Length (ft)													
Base Capacity (vph)		852			883	847					639		
Starvation Cap Reductn		0			300	0					0		
Spillback Cap Reductn		0			0	0					0		
Storage Cap Reductn		0			0	0					0		
Reduced v/c Ratio		1.28			1.27	0.32					0.78		

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 109 (99%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: KFC Driveway/Everett Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	240	755	5	5	675	250	0	0	0	295	0	165
Future Volume (vph)	240	755	5	5	675	250	0	0	0	295	0	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0					4.0	
Lane Util. Factor		0.95			1.00	1.00					1.00	
Frpb, ped/bikes		1.00			1.00	0.94					0.98	
Flpb, ped/bikes		1.00			1.00	1.00					1.00	
Frt		1.00			1.00	0.85					0.95	
Flt Protected		0.99			1.00	1.00					0.97	
Satd. Flow (prot)		3522			1880	1510					1700	
Flt Permitted		0.51			0.99	1.00					0.97	
Satd. Flow (perm)		1805			1868	1510					1700	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	261	821	5	5	734	272	0	0	0	321	0	179
RTOR Reduction (vph)	0	1	0	0	0	135	0	0	0	0	26	0
Lane Group Flow (vph)	0	1086	0	0	739	137	0	0	0	0	474	0
Confl. Peds. (#/hr)	29		61	61		29	26		26	26		26
Confl. Bikes (#/hr)			1			6						
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA	
Protected Phases		1			1					3	3	
Permitted Phases	1			1		1						
Actuated Green, G (s)		50.8			50.8	50.8					39.8	
Effective Green, g (s)		50.8			50.8	50.8					39.8	
Actuated g/C Ratio		0.46			0.46	0.46					0.36	
Clearance Time (s)		4.0			4.0	4.0					4.0	
Vehicle Extension (s)		2.0			2.0	2.0					2.0	
Lane Grp Cap (vph)		833			862	697					615	
v/s Ratio Prot											c0.28	
v/s Ratio Perm		c0.60			0.40	0.09						
v/c Ratio		2.87dl			0.86	0.20					0.77	
Uniform Delay, d1		29.6			26.4	17.5					31.1	
Progression Factor		0.99			0.43	0.11					1.00	
Incremental Delay, d2		143.6			2.7	0.1					9.1	
Delay (s)		173.0			14.1	2.1					40.2	
Level of Service		F			B	A					D	
Approach Delay (s)		173.0			10.9			0.0			40.2	
Approach LOS		F			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	84.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	107.8%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	345	645	10	15	170	615	70	0	345	190	155	450	240
Future Volume (vph)	345	645	10	15	170	615	70	0	345	190	155	450	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		420		0	0		150	0		75
Storage Lanes	0		0		1		0	0		1	0		1
Taper Length (ft)	25				25			25			25		
Right Turn on Red			Yes				Yes			Yes			Yes
Link Speed (mph)		30				30			30			30	
Link Distance (ft)		477				1053			361			234	
Travel Time (s)		10.8				23.9			8.2			5.3	
Confl. Peds. (#/hr)	88		53	57	53		88	86		57	57		86
Confl. Bikes (#/hr)			5				22			6			25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	7%	7%	7%	3%	3%	3%
Shared Lane Traffic (%)					10%								
Lane Group Flow (vph)	0	1087	0	0	182	763	0	0	375	207	0	657	261
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Detector Phase	3	3		2	2	2			1	1	4	1 4	1
Switch Phase													
Minimum Initial (s)	8.0	8.0		10.0	10.0	10.0			10.0	10.0	4.0		10.0
Minimum Split (s)	26.0	26.0		27.0	27.0	27.0			24.0	24.0	10.0		24.0
Total Split (s)	37.0	37.0		30.0	30.0	30.0			32.0	32.0	11.0		32.0
Total Split (%)	33.6%	33.6%		27.3%	27.3%	27.3%			29.1%	29.1%	10.0%		29.1%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0			4.0	4.0	3.0		4.0
All-Red Time (s)	6.0	6.0		6.0	6.0	6.0			3.0	3.0	3.0		3.0
Lost Time Adjust (s)		0.0			0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag			Lead	Lead	Lag		Lead
Lead-Lag Optimize?													
Recall Mode	None	None		Max	Max	Max			C-Max	C-Max	None		C-Max
v/c Ratio		1.28			0.63	1.29			0.49	0.43		0.97	0.56
Control Delay		153.9			52.7	181.3			39.5	6.5		79.2	28.8
Queue Delay		0.0			0.0	0.6			0.0	0.0		0.0	0.0
Total Delay		153.9			52.7	181.9			39.5	6.5		79.2	28.8
Queue Length 50th (ft)		~507			131	~378			122	0		261	95
Queue Length 95th (ft)		m#413			216	#508			170	47		#375	176
Internal Link Dist (ft)		397				973			281			154	
Turn Bay Length (ft)					420					150			75
Base Capacity (vph)		851			287	590			766	476		676	463
Starvation Cap Reductn		0			0	0			0	0		0	0
Spillback Cap Reductn		0			0	46			0	0		0	3
Storage Cap Reductn		0			0	0			0	0		0	0
Reduced v/c Ratio		1.28			0.63	1.40			0.49	0.43		0.97	0.57

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 78 (71%), Referenced to phase 1:NESW, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 14: Cambridge Street & North Beacon Street/Brighton Avenue

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	345	645	10	15	170	615	70	0	345	190	155	450	240
Future Volume (vph)	345	645	10	15	170	615	70	0	345	190	155	450	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		10.0			10.0	10.0			7.0	7.0		7.0	7.0
Lane Util. Factor		0.95			0.91	0.91			0.95	1.00		0.95	1.00
Frpb, ped/bikes		1.00			1.00	0.98			1.00	0.87		1.00	0.81
Flpb, ped/bikes		1.00			1.00	1.00			1.00	1.00		0.99	1.00
Frt		1.00			1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected		0.98			0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3470			1579	3207			3374	1320		3425	1265
Flt Permitted		0.98			0.95	1.00			1.00	1.00		0.70	1.00
Satd. Flow (perm)		3470			1579	3207			3374	1320		2436	1265
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	375	701	11	16	185	668	76	0	375	207	168	489	261
RTOR Reduction (vph)	0	1	0	0	0	7	0	0	0	160	0	0	176
Lane Group Flow (vph)	0	1086	0	0	182	756	0	0	375	47	0	657	85
Confl. Peds. (#/hr)	88		53	57	53		88	86		57	57		86
Confl. Bikes (#/hr)			5				22			6			25
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	7%	7%	7%	3%	3%	3%
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Actuated Green, G (s)		27.0			20.0	20.0			25.0	25.0		30.0	25.0
Effective Green, g (s)		27.0			20.0	20.0			25.0	25.0		30.0	25.0
Actuated g/C Ratio		0.25			0.18	0.18			0.23	0.23		0.27	0.23
Clearance Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Vehicle Extension (s)		2.0			2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)		851			287	583			766	300		709	287
v/s Ratio Prot		c0.31			0.12	c0.24			0.11			c0.04	
v/s Ratio Perm										0.04		c0.21	0.07
v/c Ratio		1.28			0.63	1.30			0.49	0.16		0.93	0.30
Uniform Delay, d1		41.5			41.6	45.0			37.0	34.1		38.9	35.2
Progression Factor		0.71			1.00	1.00			1.00	1.00		1.46	3.31
Incremental Delay, d2		125.3			10.2	145.6			2.2	1.1		14.8	2.0
Delay (s)		154.8			51.9	190.6			39.2	35.2		71.7	118.5
Level of Service		F			D	F			D	D		E	F
Approach Delay (s)		154.8				163.9			37.8			85.0	
Approach LOS		F				F			D			F	

Intersection Summary			
HCM 2000 Control Delay	119.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	33.0
Intersection Capacity Utilization	107.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	715	830	10	5	15
Future Vol, veh/h	45	715	830	10	5	15
Conflicting Peds, #/hr	75	0	0	75	61	18
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	3	3	0	0
Mvmt Flow	49	777	902	11	5	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	988	0	-	0	1919	1001
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	936	-
Critical Hdwy	4.16	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.254	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	684	-	-	-	75	297
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	385	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	674	-	-	-	57	274
Mov Cap-2 Maneuver	-	-	-	-	57	-
Stage 1	-	-	-	-	343	-
Stage 2	-	-	-	-	315	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	35.4
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	674	-	-	-	140
HCM Lane V/C Ratio	0.073	-	-	-	0.155
HCM Control Delay (s)	10.8	0	-	-	35.4
HCM Lane LOS	B	A	-	-	E
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	720	0	1	805	0	0	0	0	275	1	20
Future Volume (vph)	0	720	0	1	805	0	0	0	0	275	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		587			512			134			484	
Travel Time (s)		13.3			11.6			3.0			11.0	
Confl. Peds. (#/hr)	45		47	47		45	3		22	22		3
Confl. Bikes (#/hr)			7			29						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	783	0	0	876	0	0	0	0	299	23	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Detector Phase		1		1	1					5	5	
Switch Phase												
Minimum Initial (s)		20.0		20.0	20.0					8.0	8.0	
Minimum Split (s)		24.0		24.0	24.0					22.0	22.0	
Total Split (s)		61.0		61.0	61.0					49.0	49.0	
Total Split (%)		55.5%		55.5%	55.5%					44.5%	44.5%	
Yellow Time (s)		3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)		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)		4.0			4.0					4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max					None	None	
v/c Ratio		0.62			0.66					0.78	0.07	
Control Delay		17.7			10.1					56.4	14.2	
Queue Delay		0.0			1.5					0.0	0.0	
Total Delay		17.7			11.6					56.4	14.2	
Queue Length 50th (ft)		470			62					203	1	
Queue Length 95th (ft)		m466			796					m275	m21	
Internal Link Dist (ft)		507			432			54			404	
Turn Bay Length (ft)										100		
Base Capacity (vph)		1271			1321					738	660	
Starvation Cap Reductn		0			260					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.62			0.83					0.41	0.03	

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 16: Driveway/Denby Road & Cambridge Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	720	0	1	805	0	0	0	0	275	1	20
Future Volume (vph)	0	720	0	1	805	0	0	0	0	275	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0	4.0	
Lane Util. Factor		1.00			1.00					1.00	1.00	
Frpb, ped/bikes		1.00			1.00					1.00	0.97	
Flpb, ped/bikes		1.00			1.00					1.00	1.00	
Frt		1.00			1.00					1.00	0.86	
Flt Protected		1.00			1.00					0.95	1.00	
Satd. Flow (prot)		1776			1845					1805	1582	
Flt Permitted		1.00			1.00					0.95	1.00	
Satd. Flow (perm)		1776			1844					1805	1582	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	783	0	1	875	0	0	0	0	299	1	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	17	0
Lane Group Flow (vph)	0	783	0	0	876	0	0	0	0	299	6	0
Confl. Peds. (#/hr)	45		47	47		45	3		22	22		3
Confl. Bikes (#/hr)			7			29						
Heavy Vehicles (%)	7%	7%	7%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Actuated Green, G (s)		78.8			78.8					23.2	23.2	
Effective Green, g (s)		78.8			78.8					23.2	23.2	
Actuated g/C Ratio		0.72			0.72					0.21	0.21	
Clearance Time (s)		4.0			4.0					4.0	4.0	
Vehicle Extension (s)		0.2			0.2					2.0	2.0	
Lane Grp Cap (vph)		1272			1320					380	333	
v/s Ratio Prot		0.44								c0.17	0.00	
v/s Ratio Perm					c0.48							
v/c Ratio		0.62			0.66					0.79	0.02	
Uniform Delay, d1		7.9			8.4					41.1	34.4	
Progression Factor		1.76			0.81					1.03	1.14	
Incremental Delay, d2		0.9			1.9					9.5	0.0	
Delay (s)		14.8			8.7					51.9	39.2	
Level of Service		B			A					D	D	
Approach Delay (s)		14.8			8.7			0.0			51.0	
Approach LOS		B			A			A			D	

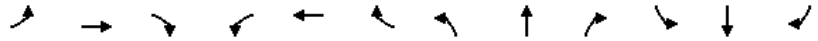
Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	10	845	115	395	740	120	75	35	310	0	0	0	
Future Volume (vph)	10	845	115	395	740	120	75	35	310	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		75	0		100	0		75	0		0	
Storage Lanes	0		1	1		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		512			518			381			156		
Travel Time (s)		11.6			11.8			8.7			3.5		
Confl. Peds. (#/hr)	65		39	39		65	86		102	102		86	
Confl. Bikes (#/hr)			3			30			3			14	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	3%	3%	3%	0%	0%	0%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	1054	0	429	804	130	0	120	337	0	0	0	
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov				
Protected Phases		1		4	1 4	4	3	3	3 4				2
Permitted Phases	1			1 4		1 4							
Detector Phase	1	1		4	1 4	4	3	3	3 4				
Switch Phase													
Minimum Initial (s)	10.0	10.0		8.0		8.0	8.0	8.0					7.0
Minimum Split (s)	17.0	17.0		13.5		13.5	13.5	13.5					23.0
Total Split (s)	37.0	37.0		34.0		34.0	14.0	14.0					25.0
Total Split (%)	33.6%	33.6%		30.9%		30.9%	12.7%	12.7%					23%
Yellow Time (s)	4.0	4.0		3.0		3.0	4.0	4.0					3.0
All-Red Time (s)	3.0	3.0		2.5		2.5	1.5	1.5					1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0					
Total Lost Time (s)		7.0		5.5		5.5		5.5					
Lead/Lag	Lead	Lead		Lag		Lag	Lead	Lead					Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		None		None	None	None					None
v/c Ratio		1.28		0.85	0.69	0.14		0.73	0.41				
Control Delay		162.0		45.0	19.3	5.6		73.9	4.0				
Queue Delay		0.0		0.0	0.9	0.0		0.0	0.0				
Total Delay		162.0		45.0	20.2	5.6		73.9	4.0				
Queue Length 50th (ft)		~556		237	393	18		84	0				
Queue Length 95th (ft)		#524		#402	555	44		#171	55				
Internal Link Dist (ft)		432			438			301			76		
Turn Bay Length (ft)						100			75				
Base Capacity (vph)		824		528	1167	922		164	830				
Starvation Cap Reductn		0		0	0	0		0	0				
Spillback Cap Reductn		0		0	142	0		0	0				
Storage Cap Reductn		0		0	0	0		0	0				
Reduced v/c Ratio		1.28		0.81	0.78	0.14		0.73	0.41				

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: Harvard Avenue/Franklin Street & Cambridge Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	845	115	395	740	120	75	35	310	0	0	0
Future Volume (vph)	10	845	115	395	740	120	75	35	310	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		5.5	7.0	5.5		5.5	5.5			
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00			
Frpb, ped/bikes		0.99		1.00	1.00	0.95		1.00	1.00			
Flpb, ped/bikes		1.00		1.00	1.00	1.00		1.00	1.00			
Frt		0.98		1.00	1.00	0.85		1.00	0.85			
Flt Protected		1.00		0.95	1.00	1.00		0.97	1.00			
Satd. Flow (prot)		3279		1769	1863	1498		1784	1568			
Flt Permitted		0.75		0.11	1.00	1.00		0.97	1.00			
Satd. Flow (perm)		2460		209	1863	1498		1784	1568			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	918	125	429	804	130	82	38	337	0	0	0
RTOR Reduction (vph)	0	9	0	0	0	28	0	0	206	0	0	0
Lane Group Flow (vph)	0	1045	0	429	804	102	0	120	131	0	0	0
Confl. Peds. (#/hr)	65		39	39		65	86		102	102		86
Confl. Bikes (#/hr)			3			30			3			14
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	3%	3%	3%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov			
Protected Phases		1		4	1 4	4	3	3	3 4			
Permitted Phases	1			1 4		1 4						
Actuated Green, G (s)		35.7		62.6	68.1	62.6		10.2	42.6			
Effective Green, g (s)		35.7		62.6	62.6	62.6		10.2	42.6			
Actuated g/C Ratio		0.32		0.57	0.57	0.57		0.09	0.39			
Clearance Time (s)		7.0		5.5		5.5		5.5				
Vehicle Extension (s)		2.0		2.0		2.0		2.0				
Lane Grp Cap (vph)		798		500	1060	927		165	607			
v/s Ratio Prot				c0.21	0.43	0.03		c0.07	0.08			
v/s Ratio Perm		c0.42		0.28		0.04						
v/c Ratio		1.31		0.86	0.76	0.11		0.73	0.22			
Uniform Delay, d1		37.1		29.4	18.0	10.9		48.5	22.5			
Progression Factor		0.73		1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2		147.0		13.2	2.8	0.0		12.7	0.1			
Delay (s)		174.2		42.6	20.8	10.9		61.2	22.6			
Level of Service		F		D	C	B		E	C			
Approach Delay (s)		174.2			26.7			32.7			0.0	
Approach LOS		F			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	81.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↱	
Traffic Vol, veh/h	5	0	220	30	130	15	0	0	0	0	10	2
Future Vol, veh/h	5	0	220	30	130	15	0	0	0	0	10	2
Conflicting Peds, #/hr	0	0	11	11	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	1	1	2	2	2	0	2	0	2	2	2
Mvmt Flow	5	0	239	33	141	16	0	0	0	0	11	2

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	158	0	0	250	0	0				-	476	149
Stage 1	-	-	-	-	-	-				-	215	-
Stage 2	-	-	-	-	-	-				-	261	-
Critical Hdwy	4.12	-	-	4.12	-	-				-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				-	4.018	3.318
Pot Cap-1 Maneuver	1422	-	-	1316	-	-				0	488	898
Stage 1	-	-	-	-	-	-				0	725	-
Stage 2	-	-	-	-	-	-				0	692	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1422	-	-	1316	-	-				-	0	898
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	1.3	9.1
HCM LOS			A

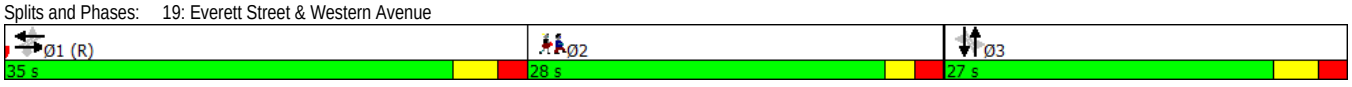
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1422	-	-	1316	-	-	898
HCM Lane V/C Ratio	0.004	-	-	0.025	-	-	0.015
HCM Control Delay (s)	7.5	0	-	7.8	0	-	9.1
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	30	430	175	160	550	90	95	235	95	25	275	50	
Future Volume (vph)	30	430	175	160	550	90	95	235	95	25	275	50	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		100	75		0	115		0	0		0	
Storage Lanes	0		1	1		0	1		0	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		2049			739			1716			510		
Travel Time (s)		46.6			16.8			39.0			11.6		
Confl. Peds. (#/hr)	17		21	21		17	25		10	10		25	
Confl. Bikes (#/hr)						18							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	1%	1%	1%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	500	190	174	696	0	103	358	0	0	380	0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA		
Protected Phases		1			1			3			3		2
Permitted Phases	1		1	1			3			3			
Detector Phase	1	1	1	1	1		3	3		3	3		
Switch Phase													
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0		4.0
Minimum Split (s)	17.0	17.0	17.0	17.0	17.0		17.0	17.0		17.0	17.0		28.0
Total Split (s)	35.0	35.0	35.0	35.0	35.0		27.0	27.0		27.0	27.0		28.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	38.9%		30.0%	30.0%		30.0%	30.0%		31%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0		2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0		-1.0	-1.0			-1.0		
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0		
Lead/Lag	Lead	Lead	Lead	Lead	Lead								Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None		None
v/c Ratio		0.52	0.21	0.43	0.65		0.80	0.76			1.09		
Control Delay		16.9	6.2	19.4	19.4		75.4	41.0			106.6		
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		16.9	6.2	19.4	19.4		75.4	41.0			106.6		
Queue Length 50th (ft)		125	14	41	194		55	177			~242		
Queue Length 95th (ft)		#452	79	#195	#674		#148	#307			#419		
Internal Link Dist (ft)		1969			659			1636			430		
Turn Bay Length (ft)			100	75			115						
Base Capacity (vph)		970	922	403	1065		128	471			350		
Starvation Cap Reductn		0	0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0	0		0	0			0		
Storage Cap Reductn		0	0	0	0		0	0			0		
Reduced v/c Ratio		0.52	0.21	0.43	0.65		0.80	0.76			1.09		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 19: Everett Street & Western Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	430	175	160	550	90	95	235	95	25	275	50
Future Volume (vph)	30	430	175	160	550	90	95	235	95	25	275	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes		1.00	0.96	1.00	0.99		1.00	0.99			0.99	
Flpb, ped/bikes		1.00	1.00	0.99	1.00		0.98	1.00			1.00	
Frt		1.00	0.85	1.00	0.98		1.00	0.96			0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)		1820	1493	1738	1794		1754	1780			1820	
Flt Permitted		0.90	1.00	0.37	1.00		0.27	1.00			0.74	
Satd. Flow (perm)		1637	1493	681	1794		502	1780			1343	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	467	190	174	598	98	103	255	103	27	299	54
RTOR Reduction (vph)	0	0	51	0	4	0	0	16	0	0	7	0
Lane Group Flow (vph)	0	500	139	174	692	0	103	342	0	0	373	0
Confl. Peds. (#/hr)	17		21	21		17	25		10	10		25
Confl. Bikes (#/hr)						18						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			3			3	
Permitted Phases	1		1	1			3			3		
Actuated Green, G (s)		49.2	49.2	49.2	49.2		22.0	22.0			22.0	
Effective Green, g (s)		50.2	50.2	50.2	50.2		23.0	23.0			23.0	
Actuated g/C Ratio		0.56	0.56	0.56	0.56		0.26	0.26			0.26	
Clearance Time (s)		5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		913	832	379	1000		128	454			343	
v/s Ratio Prot					c0.39			0.19				
v/s Ratio Perm		0.31	0.09	0.26			0.21				c0.28	
v/c Ratio		0.55	0.17	0.46	0.69		0.80	0.75			1.09	
Uniform Delay, d1		12.7	9.7	11.8	14.3		31.4	30.9			33.5	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2		2.4	0.4	4.0	3.9		28.1	6.2			74.3	
Delay (s)		15.0	10.1	15.8	18.3		59.5	37.0			107.8	
Level of Service		B	B	B	B		E	D			F	
Approach Delay (s)		13.7			17.8			42.1			107.8	
Approach LOS		B			B			D			F	

Intersection Summary			
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	15	65	2	75	20	445	50	45	555	1
Future Vol, veh/h	0	0	15	65	2	75	20	445	50	45	555	1
Conflicting Peds, #/hr	0	0	4	4	0	0	44	0	17	17	0	44
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	0	0	16	71	2	82	22	484	54	49	603	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1342	1345	652	1285	1317	528	648	0	0	555	0	0
Stage 1	746	746	-	571	571	-	-	-	-	-	-	-
Stage 2	596	599	-	714	746	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	131	153	471	142	158	552	943	-	-	1020	-	-
Stage 1	409	424	-	508	506	-	-	-	-	-	-	-
Stage 2	494	494	-	424	422	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	98	130	452	124	135	544	940	-	-	1020	-	-
Mov Cap-2 Maneuver	98	130	-	124	135	-	-	-	-	-	-	-
Stage 1	381	379	-	484	482	-	-	-	-	-	-	-
Stage 2	404	470	-	378	377	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.3	58.6	0.3	0.7
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	940	-	-	452	210	1020	-	-
HCM Lane V/C Ratio	0.023	-	-	0.036	0.735	0.048	-	-
HCM Control Delay (s)	8.9	0	-	13.3	58.6	8.7	0	-
HCM Lane LOS	A	A	-	B	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	4.9	0.2	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	15	15	505	480	155
Future Vol, veh/h	10	15	15	505	480	155
Conflicting Peds, #/hr	4	0	29	0	0	29
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	1	1	1	1
Mvmt Flow	11	16	16	549	522	168

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1221	635	719	0	-	0
Stage 1	635	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.11	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.209	-	-	-
Pot Cap-1 Maneuver	197	475	887	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	183	464	887	-	-	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	511	-	-	-	-	-
Stage 2	525	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.9	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	887	-	287	-	-
HCM Lane V/C Ratio	0.018	-	0.095	-	-
HCM Control Delay (s)	9.1	0	18.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	50	470	50	55	440
Future Vol, veh/h	30	50	470	50	55	440
Conflicting Peds, #/hr	0	27	0	0	45	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	33	54	511	54	60	478

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1181	610	0	0	610	0
Stage 1	583	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	212	498	-	-	974	-
Stage 1	562	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	187	469	-	-	952	-
Mov Cap-2 Maneuver	187	-	-	-	-	-
Stage 1	541	-	-	-	-	-
Stage 2	505	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.8	0	1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	300	952	-
HCM Lane V/C Ratio	-	-	0.29	0.063	-
HCM Control Delay (s)	-	-	21.8	9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.2	0.2	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	0	100	5	0	70
Future Vol, veh/h	10	0	100	5	0	70
Conflicting Peds, #/hr	0	0	0	7	7	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	11	0	109	5	0	76

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	194	118	0	0	121	0
Stage 1	118	-	-	-	-	-
Stage 2	76	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	799	939	-	-	1473	-
Stage 1	912	-	-	-	-	-
Stage 2	952	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	794	934	-	-	1473	-
Mov Cap-2 Maneuver	794	-	-	-	-	-
Stage 1	907	-	-	-	-	-
Stage 2	952	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	794	1473	-
HCM Lane V/C Ratio	-	-	0.014	-	-
HCM Control Delay (s)	-	-	9.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	0	75	5	0	60	80	0	0	10	35	60	0	5	15	1
Future Vol, veh/h	0	0	75	5	0	60	80	0	0	10	35	60	0	5	15	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	1	1	1	5	1	1	1	2	0	0	0
Mvmt Flow	0	0	82	5	0	65	87	0	0	11	38	65	0	5	16	1
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.9	8.4	7.8	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	0%	43%	24%
Vol Thru, %	33%	94%	57%	71%
Vol Right, %	57%	6%	0%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	105	80	140	21
LT Vol	10	0	60	5
Through Vol	35	75	80	15
RT Vol	60	5	0	1
Lane Flow Rate	114	87	152	23
Geometry Grp	1	1	1	1
Degree of Util (X)	0.132	0.105	0.186	0.029
Departure Headway (Hd)	4.165	4.362	4.411	4.589
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	864	823	819	782
Service Time	2.177	2.378	2.411	2.605
HCM Lane V/C Ratio	0.132	0.106	0.186	0.029
HCM Control Delay	7.8	7.9	8.4	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.4	0.7	0.1

Intersection	
Intersection Delay, s/veh	18.1
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	100	165	90	0	45	340	5	0	10	45	20	0	5	90	185
Future Vol, veh/h	0	100	165	90	0	45	340	5	0	10	45	20	0	5	90	185
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	1	1	1	2	0	0	0	2	0	0	0
Mvmt Flow	0	109	179	98	0	49	370	5	0	11	49	22	0	5	98	201
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	18.2	21.3	11.3	15.2
HCM LOS	C	C	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	28%	12%	2%
Vol Thru, %	60%	46%	87%	32%
Vol Right, %	27%	25%	1%	66%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	355	390	280
LT Vol	10	100	45	5
Through Vol	45	165	340	90
RT Vol	20	90	5	185
Lane Flow Rate	82	386	424	304
Geometry Grp	1	1	1	1
Degree of Util (X)	0.157	0.626	0.694	0.509
Departure Headway (Hd)	6.916	5.842	5.893	6.026
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	517	617	615	597
Service Time	4.979	3.885	3.934	4.071
HCM Lane V/C Ratio	0.159	0.626	0.689	0.509
HCM Control Delay	11.3	18.2	21.3	15.2
HCM Lane LOS	B	C	C	C
HCM 95th-tile Q	0.6	4.4	5.5	2.9

Intersection	
Intersection Delay, s/veh	24.8
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	20	65	115	0	60	145	30	0	115	160	25	0	45	290	110
Future Vol, veh/h	0	20	65	115	0	60	145	30	0	115	160	25	0	45	290	110
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	2	2	2	2	2	2	2	2	1	1	1
Mvmt Flow	0	22	71	125	0	65	158	33	0	125	174	27	0	49	315	120
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.2	17.6	20.4	36
HCM LOS	C	C	C	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	10%	26%	10%
Vol Thru, %	53%	33%	62%	65%
Vol Right, %	8%	57%	13%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	300	200	235	445
LT Vol	115	20	60	45
Through Vol	160	65	145	290
RT Vol	25	115	30	110
Lane Flow Rate	326	217	255	484
Geometry Grp	1	1	1	1
Degree of Util (X)	0.618	0.424	0.511	0.855
Departure Headway (Hd)	6.82	7.025	7.201	6.364
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	528	511	498	571
Service Time	4.884	5.099	5.271	4.364
HCM Lane V/C Ratio	0.617	0.425	0.512	0.848
HCM Control Delay	20.4	15.2	17.6	36
HCM Lane LOS	C	C	C	E
HCM 95th-tile Q	4.2	2.1	2.9	9.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	90	0	40	85	100	45	55	785	0	10	0	820	75
Future Volume (vph)	90	0	40	85	100	45	55	785	0	10	0	820	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	0		0		0		50
Storage Lanes	2		0	1		0	0		0		0		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		797			420			570				590	
Travel Time (s)		18.1			9.5			13.0				13.4	
Confl. Peds. (#/hr)			2	2					34		34		
Confl. Bikes (#/hr)									5				1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	98	43	0	92	158	0	0	913	0	0	0	902	82
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Detector Phase	3			2	2		4	1 4		1		1	1 3
Switch Phase													
Minimum Initial (s)	6.0			6.0	6.0		6.0			10.0		10.0	
Minimum Split (s)	24.0			12.0	12.0		12.0			22.0		22.0	
Total Split (s)	24.0			22.0	22.0		22.0			31.0		31.0	
Total Split (%)	24.2%			22.2%	22.2%		22.2%			31.3%		31.3%	
Yellow Time (s)	4.0			4.0	4.0		4.0			4.0		4.0	
All-Red Time (s)	2.0			2.0	2.0		2.0			2.0		2.0	
Lost Time Adjust (s)	0.0			0.0	0.0							0.0	
Total Lost Time (s)	6.0			6.0	6.0							6.0	
Lead/Lag	Lead			Lag	Lag		Lag			Lead		Lead	
Lead-Lag Optimize?													
Recall Mode	None			None	None		Max			C-Max		C-Max	
v/c Ratio	0.38	0.19		0.43	0.68			0.53				1.08	0.14
Control Delay	47.6	0.0		45.7	51.2			11.7				91.0	2.3
Queue Delay	0.0	0.0		0.0	0.0			0.0				0.0	0.0
Total Delay	47.6	0.0		45.7	51.2			11.7				91.0	2.3
Queue Length 50th (ft)	30	0		55	85			141				~336	0
Queue Length 95th (ft)	55	0		99	146			216				#460	12
Internal Link Dist (ft)		717			340			490				510	
Turn Bay Length (ft)				75									50
Base Capacity (vph)	618	231		291	308			1734				836	743
Starvation Cap Reductn	0	0		0	0			0				0	0
Spillback Cap Reductn	0	0		0	0			0				0	0
Storage Cap Reductn	0	0		0	0			0				0	0
Reduced v/c Ratio	0.16	0.19		0.32	0.51			0.53				1.08	0.11

Intersection Summary

Area Type: Other
Cycle Length: 99
Actuated Cycle Length: 99
Offset: 47 (47%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Market Street & Leo M. Birmingham Parkway & Lincoln Street

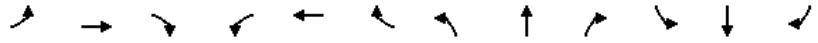
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	90	0	40	85	100	45	55	785	0	10	0	820	75
Future Volume (vph)	90	0	40	85	100	45	55	785	0	10	0	820	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	6.0			6.0				6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00			0.95				0.95	1.00
Frpb, ped/bikes	1.00	0.93		1.00	1.00			1.00				1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Frt	1.00	0.85		1.00	0.95			1.00				1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00				1.00	1.00
Satd. Flow (prot)	3400	0		1805	1812			3528				3537	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.71				0.94	1.00
Satd. Flow (perm)	3400	0		1805	1812			2523				3314	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	0	43	92	109	49	60	853	0	11	0	891	82
RTOR Reduction (vph)	0	43	0	0	17	0	0	0	0	0	0	0	55
Lane Group Flow (vph)	98	0	0	92	141	0	0	913	0	0	0	902	27
Confl. Peds. (#/hr)			2	2					34		34		
Confl. Bikes (#/hr)									5				1
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Actuated Green, G (s)	7.5	0.0		11.7	11.7			55.8				25.0	32.5
Effective Green, g (s)	7.5	0.0		11.7	11.7			55.8				25.0	32.5
Actuated g/C Ratio	0.08	0.00		0.12	0.12			0.56				0.25	0.33
Clearance Time (s)	6.0			6.0	6.0							6.0	
Vehicle Extension (s)	2.0			2.0	2.0							2.0	
Lane Grp Cap (vph)	257	0		213	214			1734				836	519
v/s Ratio Prot	c0.03			0.05	c0.08			c0.16					0.02
v/s Ratio Perm								0.13				c0.27	
v/c Ratio	0.38	0.00		0.43	0.66			0.53				1.08	0.05
Uniform Delay, d1	43.5	49.5		40.6	41.7			13.4				37.0	22.7
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Incremental Delay, d2	0.3	0.0		0.5	5.8			1.1				54.7	0.0
Delay (s)	43.9	49.5		41.1	47.5			14.6				91.7	22.7
Level of Service	D	D		D	D			B				F	C
Approach Delay (s)		45.6			45.2			14.6				85.9	
Approach LOS		D			D			B				F	

Intersection Summary			
HCM 2000 Control Delay	50.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	99.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	5	170	5	220	25	645	155	165	715	20
Future Volume (vph)	5	1	5	170	5	220	25	645	155	165	715	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			772			187			570	
Travel Time (s)		5.6			17.5			4.3			13.0	
Confl. Peds. (#/hr)	3		16	16		3	9		28	28		9
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	190	239	0	896	0	0	978	0
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Detector Phase	2	2		2	2	2 3	1	1		3	1 3	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		6.0		
Minimum Split (s)	19.0	19.0		19.0	19.0		22.0	22.0		11.0		
Total Split (s)	20.0	20.0		20.0	20.0		50.0	50.0		15.0		
Total Split (%)	23.5%	23.5%		23.5%	23.5%		58.8%	58.8%		17.6%		
Yellow Time (s)	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		
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead				
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		None		
v/c Ratio		0.04			0.82	0.36		0.53			0.63	
Control Delay		22.8			60.8	8.1		12.9			7.5	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		22.8			60.8	8.1		12.9			7.5	
Queue Length 50th (ft)		3			97	23		143			93	
Queue Length 95th (ft)		17			#202	76		195			123	
Internal Link Dist (ft)		167			692			107			490	
Turn Bay Length (ft)						125						
Base Capacity (vph)		296			253	648		1687			1548	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.04			0.75	0.37		0.53			0.63	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 83.8	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 2: Market Street & Stockyard Driveway/Guest Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	5	170	5	220	25	645	155	165	715	20
Future Volume (vph)	5	1	5	170	5	220	25	645	155	165	715	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	5.0		4.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		0.98			1.00	1.00		0.98			1.00	
Flpb, ped/bikes		1.00			0.97	1.00		1.00			1.00	
Frt		0.94			1.00	0.85		0.97			1.00	
Flt Protected		0.98			0.95	1.00		1.00			0.99	
Satd. Flow (prot)		1709			1744	1599		3344			3521	
Flt Permitted		0.88			0.72	1.00		0.91			0.59	
Satd. Flow (perm)		1532			1325	1599		3032			2097	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1	5	185	5	239	27	701	168	179	777	22
RTOR Reduction (vph)	0	4	0	0	0	114	0	23	0	0	2	0
Lane Group Flow (vph)	0	7	0	0	190	125	0	873	0	0	976	0
Confl. Peds. (#/hr)	3		16	16		3	9		28	28		9
Confl. Bikes (#/hr)									1			2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Actuated Green, G (s)		13.8			13.8	28.8		45.0			55.0	
Effective Green, g (s)		14.8			14.8	28.8		46.0			55.0	
Actuated g/C Ratio		0.18			0.18	0.34		0.55			0.66	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		270			234	549		1664			1546	
v/s Ratio Prot						0.08					c0.08	
v/s Ratio Perm		0.00			c0.14			0.29			c0.34	
v/c Ratio		0.03			0.81	0.23		0.52			0.63	
Uniform Delay, d1		28.5			33.2	19.6		12.0			8.5	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.0			18.0	0.1		1.2			0.6	
Delay (s)		28.5			51.2	19.7		13.2			9.1	
Level of Service		C			D	B		B			A	
Approach Delay (s)		28.5			33.6			13.2			9.1	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	83.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	0	820	890	0
Future Vol, veh/h	5	15	0	820	890	0
Conflicting Peds, #/hr	3	5	15	0	0	15
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	2	2	1	1
Mvmt Flow	5	16	0	891	967	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1416	489	-	0	-	0
Stage 1	967	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Critical Hdwy	6.92	7.02	-	-	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	-	-	-	-
Pot Cap-1 Maneuver	124	514	0	-	-	0
Stage 1	320	-	0	-	-	0
Stage 2	598	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	124	512	-	-	-	-
Mov Cap-2 Maneuver	124	-	-	-	-	-
Stage 1	320	-	-	-	-	-
Stage 2	598	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	287	-
HCM Lane V/C Ratio	-	0.076	-
HCM Control Delay (s)	-	18.6	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.2	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	60	300	60	135	320	155	80	605	160	185	665	55	
Future Volume (vph)	60	300	60	135	320	155	80	605	160	185	665	55	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		200	0		200	0		100	0		0	
Storage Lanes	0		1	0		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		324			332			559			323		
Travel Time (s)		7.4			7.5			12.7			7.3		
Confl. Peds. (#/hr)	30		29	29		30	12		32	32		12	
Confl. Bikes (#/hr)			1			1			1			2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	2%	2%	2%	2%	2%	2%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	456	0	0	663	0	0	919	0	0	984	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		5.0			1.0
Minimum Split (s)	15.0	15.0		15.0	15.0		15.0	15.0		10.0			20.0
Total Split (s)	33.0	33.0		33.0	33.0		35.0	35.0		11.0			20.0
Total Split (%)	33.3%	33.3%		33.3%	33.3%		35.4%	35.4%		11.1%			20%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0			2.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.0			2.0
Lost Time Adjust (s)		0.0			0.0			0.0					
Total Lost Time (s)		5.0			5.0			5.0					
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?													
Recall Mode	Max	Max		Max	Max		Max	Max		None			None
v/c Ratio		0.62			0.88			1.37			1.17		
Control Delay		31.7			44.4			201.1			113.5		
Queue Delay		0.0			0.0			0.0			0.0		
Total Delay		31.7			44.4			201.1			113.5		
Queue Length 50th (ft)		128			203			~422			~368		
Queue Length 95th (ft)		185			#324			#548			#547		
Internal Link Dist (ft)		244			252			479			243		
Turn Bay Length (ft)													
Base Capacity (vph)		737			753			673			844		
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		0.62			0.88			1.37			1.17		

Intersection Summary	
Area Type:	Other
Cycle Length: 99	
Actuated Cycle Length: 91	
Natural Cycle: 140	
Control Type: Actuated-Uncoordinated	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Market Street & North Beacon Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	300	60	135	320	155	80	605	160	185	665	55
Future Volume (vph)	60	300	60	135	320	155	80	605	160	185	665	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			0.99			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.96			0.97			0.99	
Flt Protected		0.99			0.99			1.00			0.99	
Satd. Flow (prot)		3381			3355			3395			3465	
Flt Permitted		0.68			0.68			0.58			0.52	
Satd. Flow (perm)		2324			2316			1963			1824	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	326	65	147	348	168	87	658	174	201	723	60
RTOR Reduction (vph)	0	13	0	0	33	0	0	19	0	0	4	0
Lane Group Flow (vph)	0	443	0	0	630	0	0	900	0	0	980	0
Confl. Peds. (#/hr)	30		29	29		30	12		32	32		12
Confl. Bikes (#/hr)			1			1			1			2
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		28.3			28.3			30.4			37.5	
Effective Green, g (s)		28.3			28.3			30.4			37.5	
Actuated g/C Ratio		0.31			0.31			0.33			0.40	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			4.0				
Lane Grp Cap (vph)		710			707			644			864	
v/s Ratio Prot											c0.09	
v/s Ratio Perm		0.19			c0.27			c0.46			0.37	
v/c Ratio		0.62			0.89			1.40			1.13	
Uniform Delay, d1		27.6			30.7			31.1			27.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		4.1			15.8			187.9			74.6	
Delay (s)		31.7			46.5			219.0			102.1	
Level of Service		C			D			F			F	
Approach Delay (s)		31.7			46.5			219.0			102.1	
Approach LOS		C			D			F			F	

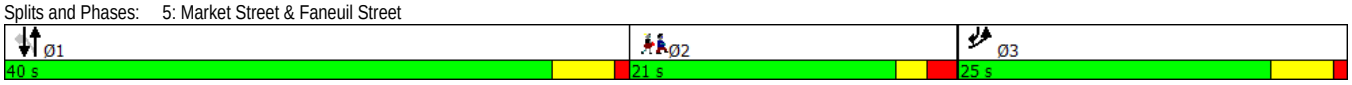
Intersection Summary			
HCM 2000 Control Delay	114.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	92.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	220	60	40	690	695	210	
Future Volume (vph)	220	60	40	690	695	210	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Right Turn on Red		Yes				Yes	
Link Speed (mph)	30			30	30		
Link Distance (ft)	420			1276	559		
Travel Time (s)	9.5			29.0	12.7		
Confl. Peds. (#/hr)	2	27	21			21	
Confl. Bikes (#/hr)		1					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	3%	3%	1%	1%	3%	3%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	304	0	0	793	755	228	
Turn Type	Prot		Perm	NA	NA	pm+ov	
Protected Phases	3			1	1	3	2
Permitted Phases			1			1	
Detector Phase	3		1	1	1	3	
Switch Phase							
Minimum Initial (s)	6.0		10.0	10.0	10.0	6.0	7.0
Minimum Split (s)	11.0		15.0	15.0	15.0	11.0	21.0
Total Split (s)	25.0		40.0	40.0	40.0	25.0	21.0
Total Split (%)	29.1%		46.5%	46.5%	46.5%	29.1%	24%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	2.0
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	Lead	Lead		Lag
Lead-Lag Optimize?							
Recall Mode	None		Max	Max	Max	None	None
v/c Ratio	0.79			1.09	0.77	0.19	
Control Delay	41.4			84.2	25.2	1.1	
Queue Delay	0.0			0.0	0.0	0.0	
Total Delay	41.4			84.2	25.2	1.1	
Queue Length 50th (ft)	95			248	169	0	
Queue Length 95th (ft)	#266			#803	#646	18	
Internal Link Dist (ft)	340			1196	479		
Turn Bay Length (ft)							
Base Capacity (vph)	522			725	976	1276	
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	0.58			1.09	0.77	0.18	

Intersection Summary

Area Type: Other
Cycle Length: 86
Actuated Cycle Length: 68.8
Natural Cycle: 110
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Market Street & Faneuil Street



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	220	60	40	690	695	210
Future Volume (vph)	220	60	40	690	695	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frpb, ped/bikes	0.98			1.00	1.00	0.98
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.97			1.00	1.00	0.85
Flt Protected	0.96			1.00	1.00	1.00
Satd. Flow (prot)	1693			1876	1845	1530
Flt Permitted	0.96			0.73	1.00	1.00
Satd. Flow (perm)	1693			1370	1845	1530
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	65	43	750	755	228
RTOR Reduction (vph)	12	0	0	0	0	62
Lane Group Flow (vph)	292	0	0	793	755	166
Confl. Peds. (#/hr)	2	27	21			21
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	3%	3%	1%	1%	3%	3%
Turn Type	Prot		Perm	NA	NA	pm+ov
Protected Phases	3			1	1	3
Permitted Phases			1			1
Actuated Green, G (s)	15.3			36.4	36.4	51.7
Effective Green, g (s)	15.3			36.4	36.4	51.7
Actuated g/C Ratio	0.22			0.51	0.51	0.73
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	2.0			2.0	2.0	2.0
Lane Grp Cap (vph)	364			701	944	1220
v/s Ratio Prot	c0.17				0.41	0.03
v/s Ratio Perm				c0.58		0.08
v/c Ratio	0.80			1.13	0.80	0.14
Uniform Delay, d1	26.5			17.3	14.3	2.9
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	11.4			76.2	7.1	0.0
Delay (s)	37.9			93.6	21.4	3.0
Level of Service	D			F	C	A
Approach Delay (s)	37.9			93.6	17.1	
Approach LOS	D			F	B	

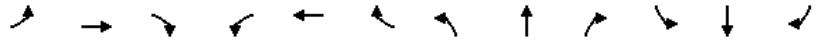
Intersection Summary			
HCM 2000 Control Delay	49.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	71.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	30	150	85	15	215	115	25	535	5	70	650	20	
Future Volume (vph)	30	150	85	15	215	115	25	535	5	70	650	20	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	0		0	75		0	
Storage Lanes	0		0	0		0	0		0	1		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		448			531			497			1276		
Travel Time (s)		10.2			12.1			11.3			29.0		
Confl. Peds. (#/hr)	9		17	17		9	34		36	36		34	
Confl. Bikes (#/hr)			1			1			5			2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	288	0	0	375	0	0	614	0	76	729	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		4.0			7.0
Minimum Split (s)	13.0	13.0		13.0	13.0		15.0	15.0		8.0			22.0
Total Split (s)	29.0	29.0		29.0	29.0		32.0	32.0		8.0			22.0
Total Split (%)	31.9%	31.9%		31.9%	31.9%		35.2%	35.2%		8.8%			24%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		4.0			3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0			1.0
Lost Time Adjust (s)		0.0			0.0			0.0		0.0			
Total Lost Time (s)		5.0			5.0			5.0		4.0			
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes			Yes
Recall Mode	None	None		None	None		Max	Max		Max			None
v/c Ratio		0.74			0.83			2.15		0.28	0.83		
Control Delay		38.7			44.3			550.2		19.5	33.9		
Queue Delay		0.0			0.0			0.0		0.0	0.0		
Total Delay		38.7			44.3			550.2		19.5	33.9		
Queue Length 50th (ft)		137			187			~602		27	~450		
Queue Length 95th (ft)		#234			#326			#806		55	#671		
Internal Link Dist (ft)		368			451			417			1196		
Turn Bay Length (ft)										75			
Base Capacity (vph)		502			581			285		269	874		
Starvation Cap Reductn		0			0			0		0	0		
Spillback Cap Reductn		0			0			0		0	0		
Storage Cap Reductn		0			0			0		0	0		
Reduced v/c Ratio		0.57			0.65			2.15		0.28	0.83		

Intersection Summary	
Area Type:	Other
Cycle Length: 91	
Actuated Cycle Length: 77.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Market Street & Arlington Street/Sparhawk Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	150	85	15	215	115	25	535	5	70	650	20
Future Volume (vph)	30	150	85	15	215	115	25	535	5	70	650	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		4.0	5.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.96			0.95			1.00		1.00	1.00	
Flt Protected		0.99			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1756			1768			1855		1764	1851	
Flt Permitted		0.85			0.98			0.42		0.25	1.00	
Satd. Flow (perm)		1497			1738			784		467	1851	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	163	92	16	234	125	27	582	5	76	707	22
RTOR Reduction (vph)	0	19	0	0	20	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	269	0	0	355	0	0	614	0	76	728	0
Confl. Peds. (#/hr)	9		17	17		9	34		36	36		34
Confl. Bikes (#/hr)			1			1			5			2
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		19.2			19.2			28.4		32.6	36.6	
Effective Green, g (s)		19.2			19.2			28.4		32.6	32.6	
Actuated g/C Ratio		0.24			0.24			0.36		0.41	0.41	
Clearance Time (s)		5.0			5.0			5.0		4.0		
Vehicle Extension (s)		2.0			2.0			0.2		2.0		
Lane Grp Cap (vph)		363			422			281		261	763	
v/s Ratio Prot										0.02	c0.39	
v/s Ratio Perm		0.18			c0.20			c0.78		0.10		
v/c Ratio		0.74			0.84			2.19		0.29	0.95	
Uniform Delay, d1		27.6			28.4			25.3		16.3	22.5	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		7.0			13.5			544.8		2.8	23.1	
Delay (s)		34.6			41.9			570.1		19.1	45.6	
Level of Service		C			D			F		B	D	
Approach Delay (s)		34.6			41.9			570.1			43.1	
Approach LOS		C			D			F			D	

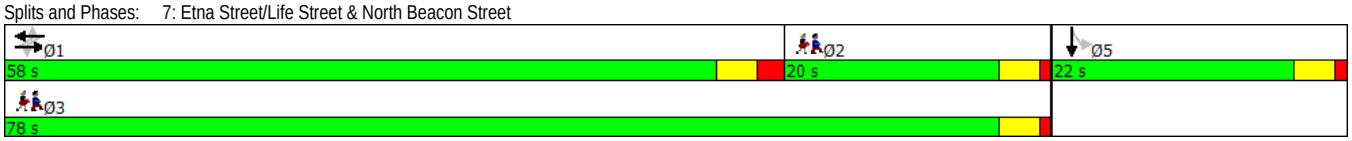
Intersection Summary			
HCM 2000 Control Delay	197.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	79.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

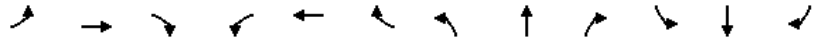
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3
Lane Configurations														
Traffic Volume (vph)	50	610	15	10	570	60	0	0	0	70	5	50		
Future Volume (vph)	50	610	15	10	570	60	0	0	0	70	5	50		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes			Yes		
Link Speed (mph)		30			30			30			30			
Link Distance (ft)		458			334			278			631			
Travel Time (s)		10.4			7.6			6.3			14.3			
Confl. Peds. (#/hr)	20		43	43		20	27		3	3		27		
Confl. Bikes (#/hr)			5											
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%		
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	733	0	0	696	0	0	0	0	0	135	0		
Turn Type	Perm	NA		Perm	NA					Perm	NA			
Protected Phases		1			1						5		2	3
Permitted Phases	1			1						5				
Detector Phase	1	1		1	1					5	5			
Switch Phase														
Minimum Initial (s)	10.0	10.0		10.0	10.0					7.0	7.0		7.0	8.0
Minimum Split (s)	15.0	15.0		15.0	15.0					11.0	11.0		20.0	19.0
Total Split (s)	58.0	58.0		58.0	58.0					22.0	22.0		20.0	78.0
Total Split (%)	58.0%	58.0%		58.0%	58.0%					22.0%	22.0%		20%	78%
Yellow Time (s)	3.0	3.0		3.0	3.0					3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0					1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0			0.0						0.0			
Total Lost Time (s)		5.0			5.0						4.0			
Lead/Lag	Lead	Lead		Lead	Lead								Lag	
Lead-Lag Optimize?														
Recall Mode	None	None		None	None					None	None		None	Ped
v/c Ratio		0.63			0.57						0.37			
Control Delay		12.7			10.8						24.0			
Queue Delay		0.0			0.0						0.0			
Total Delay		12.7			10.8						24.0			
Queue Length 50th (ft)		105			91						25			
Queue Length 95th (ft)		521			444						119			
Internal Link Dist (ft)		378			254			198			551			
Turn Bay Length (ft)														
Base Capacity (vph)		1530			1626						730			
Starvation Cap Reductn		0			0						0			
Spillback Cap Reductn		0			0						0			
Storage Cap Reductn		0			0						0			
Reduced v/c Ratio		0.48			0.43						0.18			

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 52.1
Natural Cycle: 65
Control Type: Semi Act-Uncoord

Splits and Phases: 7: Etna Street/Life Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	610	15	10	570	60	0	0	0	70	5	50
Future Volume (vph)	50	610	15	10	570	60	0	0	0	70	5	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			1.00						0.95	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		1.00			0.99						0.95	
Flt Protected		1.00			1.00						0.97	
Satd. Flow (prot)		1847			1831						1609	
Flt Permitted		0.92			0.99						0.97	
Satd. Flow (perm)		1706			1812						1609	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	663	16	11	620	65	0	0	0	76	5	54
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	0	0	25	0
Lane Group Flow (vph)	0	732	0	0	693	0	0	0	0	0	110	0
Confl. Peds. (#/hr)	20		43	43		20	27		3	3		27
Confl. Bikes (#/hr)			5									
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						5	
Permitted Phases	1			1						5		
Actuated Green, G (s)		32.9			32.9						7.6	
Effective Green, g (s)		32.9			32.9						7.6	
Actuated g/C Ratio		0.60			0.60						0.14	
Clearance Time (s)		5.0			5.0						4.0	
Vehicle Extension (s)		2.0			2.0						2.0	
Lane Grp Cap (vph)		1016			1079						221	
v/s Ratio Prot												
v/s Ratio Perm		c0.43			0.38						0.07	
v/c Ratio		0.72			0.64						0.50	
Uniform Delay, d1		7.9			7.3						22.0	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		2.2			1.0						0.6	
Delay (s)		10.1			8.3						22.7	
Level of Service		B			A						C	
Approach Delay (s)		10.1			8.3			0.0			22.7	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	55.2	Sum of lost time (s)	13.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	25	640	5	115	665	5	0	0	0	5	2	2
Future Vol, veh/h	25	640	5	115	665	5	0	0	0	5	2	2
Conflicting Peds, #/hr	24	0	35	35	0	24	2	0	1	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	27	696	5	125	723	5	0	0	0	5	2	2

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	752	0	0	736	0	0	1754	1790	752
Stage 1	-	-	-	-	-	-	1000	1000	-
Stage 2	-	-	-	-	-	-	754	790	-
Critical Hdwy	4.12	-	-	4.11	-	-	6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4	5.5	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3
Pot Cap-1 Maneuver	858	-	-	874	-	-	95	82	413
Stage 1	-	-	-	-	-	-	359	324	-
Stage 2	-	-	-	-	-	-	468	404	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	857	-	-	873	-	-	66	0	404
Mov Cap-2 Maneuver	-	-	-	-	-	-	66	0	-
Stage 1	-	-	-	-	-	-	267	0	-
Stage 2	-	-	-	-	-	-	435	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	1.4	51.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	857	-	-	873	-	-	87
HCM Lane V/C Ratio	0.032	-	-	0.143	-	-	0.112
HCM Control Delay (s)	9.3	0	-	9.8	0	-	51.6
HCM Lane LOS	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.1	-	-	0.5	-	-	0.4

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	640	0	0	715	5	50	1	110	2	0	20
Future Vol, veh/h	5	640	0	0	715	5	50	1	110	2	0	20
Conflicting Peds, #/hr	19	0	34	34	0	19	4	0	2	2	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	0	0	0
Mvmt Flow	5	696	0	0	777	5	54	1	120	2	0	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	802	0	-	-	-	0	1502	1509	698	1568	1506	803
Stage 1	-	-	-	-	-	-	707	707	-	799	799	-
Stage 2	-	-	-	-	-	-	795	802	-	769	707	-
Critical Hdwy	4.12	-	-	-	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	822	-	0	0	-	-	101	122	444	91	122	387
Stage 1	-	-	0	0	-	-	429	441	-	382	401	-
Stage 2	-	-	0	0	-	-	384	399	-	397	441	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	819	-	-	-	-	-	94	119	443	64	119	380
Mov Cap-2 Maneuver	-	-	-	-	-	-	94	119	-	64	119	-
Stage 1	-	-	-	-	-	-	425	437	-	372	395	-
Stage 2	-	-	-	-	-	-	361	393	-	286	437	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	79.2	20.1
HCM LOS			F	C

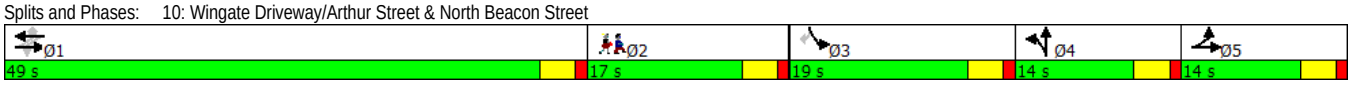
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	204	819	-	-	-	262
HCM Lane V/C Ratio	0.858	0.007	-	-	-	0.091
HCM Control Delay (s)	79.2	9.4	0	-	-	20.1
HCM Lane LOS	F	A	A	-	-	C
HCM 95th %tile Q(veh)	6.5	0	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	205	645	0	0	490	255	0	0	0	330	0	210	
Future Volume (vph)	205	645	0	0	490	255	0	0	0	330	0	210	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12	
Storage Length (ft)	100		0	0		0	0		0	0		150	
Storage Lanes	1		0	0		1	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		456			284			205			781		
Travel Time (s)		10.4			6.5			4.7			17.8		
Confl. Peds. (#/hr)	3					3			2	2			
Confl. Bikes (#/hr)			5			1							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	223	701	0	0	533	277	0	0	0	359	0	228	
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm	
Protected Phases	5	1 5			1		4	4		3			2
Permitted Phases	1 5			1		1						3	
Detector Phase	5	1 5		1	1	1	4	4		3		3	
Switch Phase													
Minimum Initial (s)	4.0			12.0	12.0	12.0	3.0	3.0		5.0		5.0	4.0
Minimum Split (s)	8.0			16.0	16.0	16.0	7.0	7.0		9.0		9.0	17.0
Total Split (s)	14.0			49.0	49.0	49.0	14.0	14.0		19.0		19.0	17.0
Total Split (%)	12.4%			43.4%	43.4%	43.4%	12.4%	12.4%		16.8%		16.8%	15%
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0
All-Red Time (s)	1.0			1.0	1.0	1.0	1.0	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	-1.0				-1.0	-1.0		-1.0		0.0		-1.0	
Total Lost Time (s)	3.0				3.0	3.0		3.0		4.0		3.0	
Lead/Lag				Lead	Lead	Lead	Lag	Lag		Lead		Lead	Lag
Lead-Lag Optimize?													
Recall Mode	None			None	None	None	None	None		None		None	None
v/c Ratio	0.46	0.59			0.62	0.32				1.03		0.49	
Control Delay	8.8	10.3			18.6	2.9				93.3		14.9	
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0	
Total Delay	8.8	10.3			18.6	2.9				93.3		14.9	
Queue Length 50th (ft)	29	131			160	0				~207		27	
Queue Length 95th (ft)	96	398			370	43				#471		110	
Internal Link Dist (ft)		376			204			125			701		
Turn Bay Length (ft)	100											150	
Base Capacity (vph)	484	1356			1040	973				348		463	
Starvation Cap Reductn	0	0			0	0				0		0	
Spillback Cap Reductn	0	0			0	0				0		0	
Storage Cap Reductn	0	0			0	0				0		0	
Reduced v/c Ratio	0.46	0.52			0.51	0.28				1.03		0.49	

Intersection Summary

Area Type: Other
Cycle Length: 113
Actuated Cycle Length: 78.9
Natural Cycle: 90
Control Type: Semi Act-Uncoord
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Wingate Driveway/Arthur Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	645	0	0	490	255	0	0	0	330	0	210
Future Volume (vph)	205	645	0	0	490	255	0	0	0	330	0	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			3.0	3.0				4.0		3.0
Lane Util. Factor	1.00	1.00			1.00	1.00				1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.98				1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1651	1739			1739	1443				1787		1599
Flt Permitted	0.29	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	500	1739			1739	1443				1787		1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	701	0	0	533	277	0	0	0	359	0	228
RTOR Reduction (vph)	0	0	0	0	0	145	0	0	0	0	0	132
Lane Group Flow (vph)	223	701	0	0	533	132	0	0	0	359	0	96
Confl. Peds. (#/hr)	3					3			2	2		
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm
Protected Phases	5	1 5			1		4	4		3		
Permitted Phases	1 5			1		1						3
Actuated Green, G (s)	48.5	52.5			38.2	38.2				15.4		15.4
Effective Green, g (s)	50.5	53.5			39.2	39.2				15.4		16.4
Actuated g/C Ratio	0.62	0.65			0.48	0.48				0.19		0.20
Clearance Time (s)	4.0				4.0	4.0				4.0		4.0
Vehicle Extension (s)	2.0				4.0	4.0				2.0		2.0
Lane Grp Cap (vph)	466	1134			831	689				335		319
v/s Ratio Prot	0.07	c0.40			0.31					c0.20		
v/s Ratio Perm	0.23					0.09						0.06
v/c Ratio	0.48	0.62			0.64	0.19				1.07		0.30
Uniform Delay, d1	8.9	8.3			16.1	12.3				33.3		27.9
Progression Factor	1.00	1.00			1.00	1.00				1.00		1.00
Incremental Delay, d2	0.3	1.2			1.9	0.2				69.5		0.2
Delay (s)	9.2	9.5			18.0	12.5				102.8		28.1
Level of Service	A	A			B	B				F		C
Approach Delay (s)		9.4			16.1			0.0			73.8	
Approach LOS		A			B			A			E	

Intersection Summary			
HCM 2000 Control Delay	28.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	82.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	94.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑↑	⋔	
Traffic Vol, veh/h	975	0	0	730	15	30
Future Vol, veh/h	975	0	0	730	15	30
Conflicting Peds, #/hr	0	44	44	0	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	2	2	0	0
Mvmt Flow	1060	0	0	793	16	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	1459	1062
Stage 1	-	-	-	-	1060	-
Stage 2	-	-	-	-	399	-
Critical Hdwy	-	-	-	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	0	-	133	274
Stage 1	-	0	0	-	336	-
Stage 2	-	0	0	-	652	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	133	274
Mov Cap-2 Maneuver	-	-	-	-	133	-
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	651	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	28.4
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	202	-	-
HCM Lane V/C Ratio	0.242	-	-
HCM Control Delay (s)	28.4	-	-
HCM Lane LOS	D	-	-
HCM 95th %tile Q(veh)	0.9	-	-

Intersection	
Int Delay, s/veh	10.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	965	40	60	710	20	125
Future Vol, veh/h	965	40	60	710	20	125
Conflicting Peds, #/hr	0	49	49	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	2	2	1	1
Mvmt Flow	1049	43	65	772	22	136

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1141	0	2022	1120
Stage 1	-	-	-	-	1120	-
Stage 2	-	-	-	-	902	-
Critical Hdwy	-	-	4.12	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.218	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	612	-	64	252
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	398	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	612	-	50	242
Mov Cap-2 Maneuver	-	-	-	-	50	-
Stage 1	-	-	-	-	300	-
Stage 2	-	-	-	-	324	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	128.4
HCM LOS			F

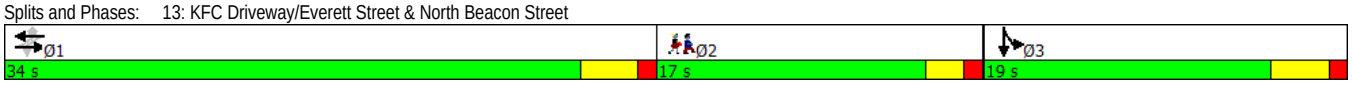
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	158	-	-	612	-
HCM Lane V/C Ratio	0.998	-	-	0.107	-
HCM Control Delay (s)	128.4	-	-	11.6	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	7.7	-	-	0.4	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	205	725	5	10	680	225	0	0	0	195	1	95	
Future Volume (vph)	205	725	5	10	680	225	0	0	0	195	1	95	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		446			477			138			517		
Travel Time (s)		10.1			10.8			3.1			11.8		
Confl. Peds. (#/hr)	50		64	64		50	13		36	36		13	
Confl. Bikes (#/hr)			6			2							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	1016	0	0	750	245	0	0	0	0	316	0	
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA		
Protected Phases		1			1					3	3		2
Permitted Phases	1			1		1							
Detector Phase	1	1		1	1	1				3	3		
Switch Phase													
Minimum Initial (s)	15.0	15.0		15.0	15.0	15.0				7.0	7.0		7.0
Minimum Split (s)	19.0	19.0		19.0	19.0	19.0				11.0	11.0		17.0
Total Split (s)	34.0	34.0		34.0	34.0	34.0				19.0	19.0		17.0
Total Split (%)	48.6%	48.6%		48.6%	48.6%	48.6%				27.1%	27.1%		24%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0		2.0
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)		4.0			4.0	4.0					4.0		
Lead/Lag	Lead	Lead		Lead	Lead	Lead							Lag
Lead-Lag Optimize?													
Recall Mode	None	None		None	None	None				Max	Max		None
v/c Ratio		1.53dl			0.80	0.28					0.69		
Control Delay		73.0			24.1	3.0					30.4		
Queue Delay		0.0			0.1	0.0					0.0		
Total Delay		73.0			24.2	3.0					30.4		
Queue Length 50th (ft)		141			150	0					76		
Queue Length 95th (ft)		#420			#526	37					#246		
Internal Link Dist (ft)		366			397			58			437		
Turn Bay Length (ft)													
Base Capacity (vph)		942			936	865					456		
Starvation Cap Reductn		0			8	0					0		
Spillback Cap Reductn		0			0	0					0		
Storage Cap Reductn		0			0	0					0		
Reduced v/c Ratio		1.08			0.81	0.28					0.69		

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 59.8
Natural Cycle: 90
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: KFC Driveway/Everett Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	725	5	10	680	225	0	0	0	195	1	95
Future Volume (vph)	205	725	5	10	680	225	0	0	0	195	1	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0					4.0	
Lane Util. Factor		0.95			1.00	1.00					1.00	
Frpb, ped/bikes		1.00			1.00	0.93					0.99	
Flpb, ped/bikes		1.00			1.00	1.00					1.00	
Frt		1.00			1.00	0.85					0.96	
Flt Protected		0.99			1.00	1.00					0.97	
Satd. Flow (prot)		3487			1861	1471					1697	
Flt Permitted		0.52			0.98	1.00					0.97	
Satd. Flow (perm)		1845			1832	1471					1697	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	788	5	11	739	245	0	0	0	212	1	103
RTOR Reduction (vph)	0	1	0	0	0	123	0	0	0	0	24	0
Lane Group Flow (vph)	0	1015	0	0	750	122	0	0	0	0	292	0
Confl. Peds. (#/hr)	50		64	64		50	13		36	36		13
Confl. Bikes (#/hr)			6			2						
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA	
Protected Phases		1			1					3	3	
Permitted Phases	1			1		1						
Actuated Green, G (s)		30.6			30.6	30.6					15.3	
Effective Green, g (s)		30.6			30.6	30.6					15.3	
Actuated g/C Ratio		0.50			0.50	0.50					0.25	
Clearance Time (s)		4.0			4.0	4.0					4.0	
Vehicle Extension (s)		2.0			2.0	2.0					2.0	
Lane Grp Cap (vph)		915			908	729					420	
v/s Ratio Prot											c0.17	
v/s Ratio Perm		c0.55			0.41	0.08						
v/c Ratio		1.53dl			0.83	0.17					0.70	
Uniform Delay, d1		15.6			13.3	8.5					21.1	
Progression Factor		1.00			1.00	1.00					1.00	
Incremental Delay, d2		64.6			5.9	0.0					9.2	
Delay (s)		80.2			19.2	8.6					30.2	
Level of Service		F			B	A					C	
Approach Delay (s)		80.2			16.6			0.0			30.2	
Approach LOS		F			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	46.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	61.7	Sum of lost time (s)	11.0
Intersection Capacity Utilization	96.3%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	285	525	30	20	150	505	90	0	340	170	120	310	285
Future Volume (vph)	285	525	30	20	150	505	90	0	340	170	120	310	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		420		0	0		150	0		75
Storage Lanes	0		0		1		0	0		1	0		1
Taper Length (ft)	25				25			25			25		
Right Turn on Red			Yes				Yes			Yes			Yes
Link Speed (mph)		30				30			30			30	
Link Distance (ft)		477				1053			361			234	
Travel Time (s)		10.8				23.9			8.2			5.3	
Confl. Peds. (#/hr)	123		81	50	81		123	124		50	50		124
Confl. Bikes (#/hr)			3				9			3			3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	3%	3%	3%	2%	2%	2%
Shared Lane Traffic (%)					10%								
Lane Group Flow (vph)	0	914	0	0	169	663	0	0	370	185	0	467	310
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Detector Phase	3	3		2	2	2			1	1	4	1 4	1
Switch Phase													
Minimum Initial (s)	8.0	8.0		10.0	10.0	10.0			10.0	10.0	4.0		10.0
Minimum Split (s)	26.0	26.0		27.0	27.0	27.0			24.0	24.0	10.0		24.0
Total Split (s)	36.0	36.0		29.0	29.0	29.0			30.0	30.0	11.0		30.0
Total Split (%)	34.0%	34.0%		27.4%	27.4%	27.4%			28.3%	28.3%	10.4%		28.3%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0			4.0	4.0	3.0		4.0
All-Red Time (s)	6.0	6.0		6.0	6.0	6.0			3.0	3.0	3.0		3.0
Lost Time Adjust (s)		0.0			0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag			Lead	Lead	Lag		Lead
Lead-Lag Optimize?													
Recall Mode	None	None		Max	Max	Max			None	None	None		None
v/c Ratio		1.06			0.58	1.12			0.56	0.40		0.78	0.74
Control Delay		84.4			48.0	113.3			40.8	4.5		44.4	21.7
Queue Delay		0.0			0.0	0.0			0.0	0.0		0.0	0.0
Total Delay		84.4			48.0	113.3			40.8	4.5		44.4	21.7
Queue Length 50th (ft)		~366			116	~287			116	0		130	42
Queue Length 95th (ft)		#498			196	#413			163	26		177	147
Internal Link Dist (ft)		397				973			281			154	
Turn Bay Length (ft)					420					150			75
Base Capacity (vph)		866			292	592			786	498		679	453
Starvation Cap Reductn		0			0	0			0	0		0	0
Spillback Cap Reductn		0			0	0			0	0		0	0
Storage Cap Reductn		0			0	0			0	0		0	0
Reduced v/c Ratio		1.06			0.58	1.12			0.47	0.37		0.69	0.68

Intersection Summary	
Area Type:	Other
Cycle Length: 106	
Actuated Cycle Length: 102.7	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Cambridge Street & North Beacon Street/Brighton Avenue

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	285	525	30	20	150	505	90	0	340	170	120	310	285
Future Volume (vph)	285	525	30	20	150	505	90	0	340	170	120	310	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		10.0			10.0	10.0			7.0	7.0		7.0	7.0
Lane Util. Factor		0.95			0.91	0.91			0.95	1.00		0.95	1.00
Frpb, ped/bikes		0.99			1.00	0.96			1.00	0.90		1.00	0.77
Flpb, ped/bikes		1.00			1.00	1.00			1.00	1.00		0.99	1.00
Frt		0.99			1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected		0.98			0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3407			1579	3134			3505	1406		3458	1213
Flt Permitted		0.98			0.95	1.00			1.00	1.00		0.69	1.00
Satd. Flow (perm)		3407			1579	3134			3505	1406		2432	1213
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	310	571	33	22	163	549	98	0	370	185	130	337	310
RTOR Reduction (vph)	0	2	0	0	0	12	0	0	0	150	0	0	192
Lane Group Flow (vph)	0	912	0	0	169	651	0	0	370	35	0	467	118
Confl. Peds. (#/hr)	123		81	50	81		123	124		50	50		124
Confl. Bikes (#/hr)			3				9			3			3
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Actuated Green, G (s)		26.0			19.0	19.0			19.5	19.5		24.5	19.5
Effective Green, g (s)		26.0			19.0	19.0			19.5	19.5		24.5	19.5
Actuated g/C Ratio		0.25			0.19	0.19			0.19	0.19		0.24	0.19
Clearance Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Vehicle Extension (s)		2.0			2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)		864			292	580			666	267		631	230
v/s Ratio Prot		c0.27			0.11	c0.21			0.11			c0.04	
v/s Ratio Perm										0.03		c0.14	0.10
v/c Ratio		1.06			0.58	1.12			0.56	0.13		0.74	0.51
Uniform Delay, d1		38.2			38.1	41.8			37.6	34.5		36.1	37.2
Progression Factor		1.00			1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		46.3			8.1	75.6			0.6	0.1		4.1	0.8
Delay (s)		84.5			46.2	117.4			38.1	34.6		40.1	38.0
Level of Service		F			D	F			D	C		D	D
Approach Delay (s)		84.5				102.9			36.9			39.3	
Approach LOS		F				F			D			D	

Intersection Summary			
HCM 2000 Control Delay	69.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	102.5	Sum of lost time (s)	33.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	670	700	15	10	15
Future Vol, veh/h	45	670	700	15	10	15
Conflicting Peds, #/hr	129	0	0	129	28	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	3	3	4	4
Mvmt Flow	49	728	761	16	11	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	906	0	-	0	1752	902
Stage 1	-	-	-	-	898	-
Stage 2	-	-	-	-	854	-
Critical Hdwy	4.14	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.236	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	743	-	-	-	93	333
Stage 1	-	-	-	-	394	-
Stage 2	-	-	-	-	414	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	741	-	-	-	66	296
Mov Cap-2 Maneuver	-	-	-	-	66	-
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	328	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	42
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	741	-	-	-	124
HCM Lane V/C Ratio	0.066	-	-	-	0.219
HCM Control Delay (s)	10.2	0	-	-	42
HCM Lane LOS	B	A	-	-	E
HCM 95th %tile Q(veh)	0.2	-	-	-	0.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	690	5	2	675	0	0	0	0	170	0	40
Future Volume (vph)	0	690	5	2	675	0	0	0	0	170	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		587			512			208			484	
Travel Time (s)		13.3			11.6			4.7			11.0	
Confl. Peds. (#/hr)	166		76	76		166	4		73	73		4
Confl. Bikes (#/hr)			6			2						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	0%	0%	0%	17%	17%	17%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	755	0	0	736	0	0	0	0	185	43	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Detector Phase		1		1	1					5	5	
Switch Phase												
Minimum Initial (s)		20.0		20.0	20.0					8.0	8.0	
Minimum Split (s)		24.0		24.0	24.0					22.0	22.0	
Total Split (s)		60.0		60.0	60.0					30.0	30.0	
Total Split (%)		66.7%		66.7%	66.7%					33.3%	33.3%	
Yellow Time (s)		3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)		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)		4.0			4.0					4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max					None	None	
v/c Ratio		0.55			0.54					0.71	0.13	
Control Delay		7.8			9.0					50.9	1.0	
Queue Delay		0.0			2.0					0.0	0.0	
Total Delay		7.8			11.0					50.9	1.0	
Queue Length 50th (ft)		153			52					102	0	
Queue Length 95th (ft)		312			571					m161	m0	
Internal Link Dist (ft)		507			432			128			404	
Turn Bay Length (ft)										100		
Base Capacity (vph)		1365			1368					445	467	
Starvation Cap Reductn		0			459					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.55			0.81					0.42	0.09	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: Driveway/Denby Road & Cambridge Street

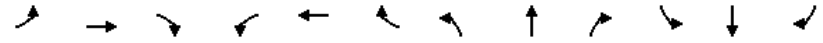
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	690	5	2	675	0	0	0	0	170	0	40
Future Volume (vph)	0	690	5	2	675	0	0	0	0	170	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0	4.0	
Lane Util. Factor		1.00			1.00					1.00	1.00	
Frpb, ped/bikes		1.00			1.00					1.00	0.97	
Flpb, ped/bikes		1.00			1.00					1.00	1.00	
Frt		1.00			1.00					1.00	0.85	
Flt Protected		1.00			1.00					0.95	1.00	
Satd. Flow (prot)		1840			1844					1543	1339	
Flt Permitted		1.00			1.00					0.95	1.00	
Satd. Flow (perm)		1840			1843					1543	1339	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	750	5	2	734	0	0	0	0	185	0	43
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	36	0
Lane Group Flow (vph)	0	755	0	0	736	0	0	0	0	185	7	0
Confl. Peds. (#/hr)	166		76	76		166	4		73	73		4
Confl. Bikes (#/hr)			6			2						
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	0%	0%	0%	17%	17%	17%
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Actuated Green, G (s)		66.8			66.8					15.2	15.2	
Effective Green, g (s)		66.8			66.8					15.2	15.2	
Actuated g/C Ratio		0.74			0.74					0.17	0.17	
Clearance Time (s)		4.0			4.0					4.0	4.0	
Vehicle Extension (s)		0.2			0.2					2.0	2.0	
Lane Grp Cap (vph)		1365			1367					260	226	
v/s Ratio Prot		c0.41								c0.12	0.01	
v/s Ratio Perm					0.40							
v/c Ratio		0.55			0.54					0.71	0.03	
Uniform Delay, d1		5.1			5.0					35.3	31.3	
Progression Factor		1.00			1.29					1.03	1.00	
Incremental Delay, d2		1.6			1.2					7.4	0.0	
Delay (s)		6.7			7.7					43.9	31.3	
Level of Service		A			A					D	C	
Approach Delay (s)		6.7			7.7			0.0			41.5	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	25	720	100	295	600	110	75	30	370	0	0	0	
Future Volume (vph)	25	720	100	295	600	110	75	30	370	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		75	0		100	0		75	0		0	
Storage Lanes	0		1	1		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		512			518			381			156		
Travel Time (s)		11.6			11.8			8.7			3.5		
Confl. Peds. (#/hr)	81		43	43		81	102		71	71		102	
Confl. Bikes (#/hr)			6			12			1			8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	2%	2%	2%	0%	0%	0%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	919	0	321	652	120	0	115	402	0	0	0	
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov				
Protected Phases		1		4	1 4	4	3	3	3 4				2
Permitted Phases	1			1 4		1 4							
Detector Phase	1	1		4	1 4	4	3	3	3 4				
Switch Phase													
Minimum Initial (s)	10.0	10.0		8.0		8.0	8.0	8.0					7.0
Minimum Split (s)	17.0	17.0		13.5		13.5	13.5	13.5					23.0
Total Split (s)	29.0	29.0		22.0		22.0	14.0	14.0					25.0
Total Split (%)	32.2%	32.2%		24.4%		24.4%	15.6%	15.6%					28%
Yellow Time (s)	4.0	4.0		3.0		3.0	4.0	4.0					3.0
All-Red Time (s)	3.0	3.0		2.5		2.5	1.5	1.5					1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0					
Total Lost Time (s)		7.0		5.5		5.5		5.5					
Lead/Lag	Lead	Lead		Lag		Lag	Lead	Lead					Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		None		None	None	None					None
v/c Ratio		0.95		0.76	0.59	0.14		0.60	0.50				
Control Delay		48.3		30.8	17.2	5.3		51.7	4.5				
Queue Delay		0.0		0.0	0.2	0.0		0.0	0.0				
Total Delay		48.3		30.8	17.4	5.3		51.7	4.5				
Queue Length 50th (ft)		~265		125	281	11		63	0				
Queue Length 95th (ft)		#486		#260	416	39		117	58				
Internal Link Dist (ft)		432			438			301			76		
Turn Bay Length (ft)						100			75				
Base Capacity (vph)		968		438	1094	846		194	807				
Starvation Cap Reductn		0		0	0	0		0	0				
Spillback Cap Reductn		0		0	73	0		0	0				
Storage Cap Reductn		0		0	0	0		0	0				
Reduced v/c Ratio		0.95		0.73	0.64	0.14		0.59	0.50				

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 17: Harvard Avenue/Franklin Street & Cambridge Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	720	100	295	600	110	75	30	370	0	0	0
Future Volume (vph)	25	720	100	295	600	110	75	30	370	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		5.5	7.0	5.5		5.5	5.5			
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00			
Frpb, ped/bikes		0.99		1.00	1.00	0.93		1.00	1.00			
Flpb, ped/bikes		1.00		1.00	1.00	1.00		1.00	1.00			
Frt		0.98		1.00	1.00	0.85		1.00	0.85			
Flt Protected		1.00		0.95	1.00	1.00		0.97	1.00			
Satd. Flow (prot)		3366		1750	1845	1461		1799	1583			
Flt Permitted		0.79		0.16	1.00	1.00		0.97	1.00			
Satd. Flow (perm)		2667		300	1845	1461		1799	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	783	109	321	652	120	82	33	402	0	0	0
RTOR Reduction (vph)	0	10	0	0	0	38	0	0	263	0	0	0
Lane Group Flow (vph)	0	909	0	321	652	82	0	115	139	0	0	0
Confl. Peds. (#/hr)	81		43	43		81	102		71	71		102
Confl. Bikes (#/hr)			6			12			1			8
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	2%	2%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov			
Protected Phases		1		4	1 4	4	3	3	3 4			
Permitted Phases	1			1 4		1 4						
Actuated Green, G (s)		30.9		47.0	52.5	47.0		9.6	31.2			
Effective Green, g (s)		30.9		47.0	47.0	47.0		9.6	31.2			
Actuated g/C Ratio		0.34		0.52	0.52	0.52		0.11	0.35			
Clearance Time (s)		7.0		5.5		5.5		5.5				
Vehicle Extension (s)		2.0		2.0		2.0		2.0				
Lane Grp Cap (vph)		915		416	963	852		191	548			
v/s Ratio Prot				c0.14	0.35	0.02		c0.06	0.09			
v/s Ratio Perm		c0.34		0.27		0.04						
v/c Ratio		0.99		0.77	0.68	0.10		0.60	0.25			
Uniform Delay, d1		29.5		16.5	15.9	10.8		38.4	21.1			
Progression Factor		0.88		1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2		26.1		7.9	1.5	0.0		3.6	0.1			
Delay (s)		52.0		24.4	17.4	10.8		42.0	21.2			
Level of Service		D		C	B	B		D	C			
Approach Delay (s)		52.0			18.7			25.8			0.0	
Approach LOS		D			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↱	
Traffic Vol, veh/h	5	0	145	40	115	10	0	0	0	0	10	2
Future Vol, veh/h	5	0	145	40	115	10	0	0	0	0	10	2
Conflicting Peds, #/hr	0	0	22	22	0	0	0	0	1	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	1	1	2	0	2	0	2	2	2
Mvmt Flow	5	0	158	43	125	11	0	0	0	0	11	2

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	136	0	0	180	0	0				-	407	130
Stage 1	-	-	-	-	-	-				-	217	-
Stage 2	-	-	-	-	-	-				-	190	-
Critical Hdwy	4.12	-	-	4.11	-	-				-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	5.52	-
Follow-up Hdwy	2.218	-	-	2.209	-	-				-	4.018	3.318
Pot Cap-1 Maneuver	1448	-	-	1402	-	-				0	533	920
Stage 1	-	-	-	-	-	-				0	723	-
Stage 2	-	-	-	-	-	-				0	743	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1448	-	-	1402	-	-				-	0	920
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	1.9	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1448	-	-	1402	-	-	920
HCM Lane V/C Ratio	0.004	-	-	0.031	-	-	0.014
HCM Control Delay (s)	7.5	0	-	7.7	0	-	9
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	30	440	125	120	395	25	60	190	90	20	150	25	
Future Volume (vph)	30	440	125	120	395	25	60	190	90	20	150	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		100	75		0	115		0	0		0	
Storage Lanes	0		1	1		0	1		0	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		2049			739			1728			510		
Travel Time (s)		46.6			16.8			39.3			11.6		
Confl. Peds. (#/hr)	1		13	13		1	5		4	4		5	
Confl. Bikes (#/hr)						2							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	0%	0%	0%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	511	136	130	456	0	65	305	0	0	212	0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA		
Protected Phases		1			1			3			3		2
Permitted Phases	1		1	1			3			3			
Detector Phase	1	1	1	1	1		3	3		3	3		
Switch Phase													
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0		4.0
Minimum Split (s)	17.0	17.0	17.0	17.0	17.0		17.0	17.0		17.0	17.0		28.0
Total Split (s)	35.0	35.0	35.0	35.0	35.0		27.0	27.0		27.0	27.0		28.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	38.9%		30.0%	30.0%		30.0%	30.0%		31%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0		2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0		-1.0	-1.0			-1.0		
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0		
Lead/Lag	Lead	Lead	Lead	Lead	Lead								Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None		None
v/c Ratio		0.46	0.14	0.29	0.40		0.37	0.76			0.72		
Control Delay		14.7	6.3	14.9	13.1		35.2	42.7			45.4		
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		14.7	6.3	14.9	13.1		35.2	42.7			45.4		
Queue Length 50th (ft)		112	9	25	93		31	148			107		
Queue Length 95th (ft)		#443	61	121	337		68	230			178		
Internal Link Dist (ft)		1969			659			1648			430		
Turn Bay Length (ft)			100	75			115						
Base Capacity (vph)		1109	978	444	1150		211	476			351		
Starvation Cap Reductn		0	0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0	0		0	0			0		
Storage Cap Reductn		0	0	0	0		0	0			0		
Reduced v/c Ratio		0.46	0.14	0.29	0.40		0.31	0.64			0.60		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 19: Everett Street & Western Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	440	125	120	395	25	60	190	90	20	150	25
Future Volume (vph)	30	440	125	120	395	25	60	190	90	20	150	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes		1.00	0.97	1.00	1.00		1.00	0.99			1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		0.99	1.00			1.00	
Frt		1.00	0.85	1.00	0.99		1.00	0.95			0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)		1821	1505	1727	1808		1793	1791			1831	
Flt Permitted		0.96	1.00	0.38	1.00		0.44	1.00			0.73	
Satd. Flow (perm)		1746	1505	700	1808		827	1791			1352	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	478	136	130	429	27	65	207	98	22	163	27
RTOR Reduction (vph)	0	0	32	0	2	0	0	20	0	0	6	0
Lane Group Flow (vph)	0	511	104	130	454	0	65	285	0	0	206	0
Confl. Peds. (#/hr)	1		13	13		1	5		4	4		5
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	0%	0%	0%	1%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			3			3	
Permitted Phases	1		1	1			3			3		
Actuated Green, G (s)		53.0	53.0	53.0	53.0		18.2	18.2			18.2	
Effective Green, g (s)		54.0	54.0	54.0	54.0		19.2	19.2			19.2	
Actuated g/C Ratio		0.60	0.60	0.60	0.60		0.21	0.21			0.21	
Clearance Time (s)		5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		1047	903	420	1084		176	382			288	
v/s Ratio Prot					0.25			c0.16				
v/s Ratio Perm		c0.29	0.07	0.19			0.08				0.15	
v/c Ratio		0.49	0.11	0.31	0.42		0.37	0.75			0.71	
Uniform Delay, d1		10.2	7.7	8.8	9.6		30.2	33.1			32.9	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2		1.6	0.3	1.9	1.2		0.5	6.8			6.8	
Delay (s)		11.8	8.0	10.8	10.8		30.7	40.0			39.7	
Level of Service		B	A	B	B		C	D			D	
Approach Delay (s)		11.0			10.8			38.3			39.7	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	5	30	0	45	10	360	50	30	365	5
Future Vol, veh/h	5	0	5	30	0	45	10	360	50	30	365	5
Conflicting Peds, #/hr	0	0	2	2	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	1	1	2	2	2	1	1	1
Mvmt Flow	5	0	5	33	0	49	11	391	54	33	397	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	930	932	401	909	907	418	402	0	0	446	0	0
Stage 1	465	465	-	440	440	-	-	-	-	-	-	-
Stage 2	465	467	-	469	467	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.12	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.218	-	-	2.209	-	-
Pot Cap-1 Maneuver	250	269	653	257	277	637	1157	-	-	1120	-	-
Stage 1	581	566	-	598	579	-	-	-	-	-	-	-
Stage 2	581	565	-	577	563	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	222	255	652	245	263	637	1155	-	-	1120	-	-
Mov Cap-2 Maneuver	222	255	-	245	263	-	-	-	-	-	-	-
Stage 1	573	544	-	590	571	-	-	-	-	-	-	-
Stage 2	529	558	-	550	542	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.2	16.7	0.2	0.6
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1155	-	-	331	388	1120	-	-
HCM Lane V/C Ratio	0.009	-	-	0.033	0.21	0.029	-	-
HCM Control Delay (s)	8.1	0	-	16.2	16.7	8.3	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.8	0.1	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	10	25	410	270	130
Future Vol, veh/h	10	10	25	410	270	130
Conflicting Peds, #/hr	5	1	24	0	0	24
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	11	11	27	446	293	141

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	893	389	459	0	-	0
Stage 1	388	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.11	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.209	-	-	-
Pot Cap-1 Maneuver	315	664	1107	-	-	-
Stage 1	690	-	-	-	-	-
Stage 2	610	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	293	650	1106	-	-	-
Mov Cap-2 Maneuver	293	-	-	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	579	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1106	-	404	-	-
HCM Lane V/C Ratio	0.025	-	0.054	-	-
HCM Control Delay (s)	8.3	0	14.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	30	405	70	25	255
Future Vol, veh/h	30	30	405	70	25	255
Conflicting Peds, #/hr	0	25	0	0	40	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	33	33	440	76	27	277

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	850	543	0	0	556	0
Stage 1	518	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	334	544	-	-	1025	-
Stage 1	602	-	-	-	-	-
Stage 2	731	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	313	515	-	-	1004	-
Mov Cap-2 Maneuver	313	-	-	-	-	-
Stage 1	582	-	-	-	-	-
Stage 2	708	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.1	0	0.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	389	1004	-
HCM Lane V/C Ratio	-	-	0.168	0.027	-
HCM Control Delay (s)	-	-	16.1	8.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	90	0	1	55
Future Vol, veh/h	5	5	90	0	1	55
Conflicting Peds, #/hr	3	1	0	8	8	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	5	5	98	0	1	60

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	171	107	0	0	106	0
Stage 1	106	-	-	-	-	-
Stage 2	65	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	824	953	-	-	1498	-
Stage 1	923	-	-	-	-	-
Stage 2	963	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	816	946	-	-	1497	-
Mov Cap-2 Maneuver	816	-	-	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	960	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	876	1497	-
HCM Lane V/C Ratio	-	-	0.012	0.001	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	0	40	10	0	50	70	5	0	15	5	70	0	0	0	0
Future Vol, veh/h	0	0	40	10	0	50	70	5	0	15	5	70	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	0	0	0	5	1	1	1	2	0	0	0
Mvmt Flow	0	0	43	11	0	54	76	5	0	16	5	76	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.4	8	7.4	0
HCM LOS	A	A	A	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	0%	40%	0%
Vol Thru, %	6%	80%	56%	100%
Vol Right, %	78%	20%	4%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	50	125	0
LT Vol	15	0	50	0
Through Vol	5	40	70	0
RT Vol	70	10	5	0
Lane Flow Rate	98	54	136	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.104	0.061	0.157	0
Departure Headway (Hd)	3.809	4.056	4.169	4.418
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	924	874	856	0
Service Time	1.901	2.122	2.215	2.418
HCM Lane V/C Ratio	0.106	0.062	0.159	0
HCM Control Delay	7.4	7.4	8	7.4
HCM Lane LOS	A	A	A	N
HCM 95th-tile Q	0.3	0.2	0.6	0

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	135	160	15	0	30	240	2	0	15	70	25	0	2	70	125
Future Vol, veh/h	0	135	160	15	0	30	240	2	0	15	70	25	0	2	70	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	0	0	0	2	33	33	33
Mvmt Flow	0	147	174	16	0	33	261	2	0	16	76	27	0	2	76	136
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.2	13.1	10.5	12.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	44%	11%	1%
Vol Thru, %	64%	52%	88%	36%
Vol Right, %	23%	5%	1%	63%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	310	272	197
LT Vol	15	135	30	2
Through Vol	70	160	240	70
RT Vol	25	15	2	125
Lane Flow Rate	120	337	296	214
Geometry Grp	1	1	1	1
Degree of Util (X)	0.198	0.513	0.452	0.36
Departure Headway (Hd)	5.975	5.482	5.508	6.045
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	597	654	650	593
Service Time	4.051	3.538	3.567	4.109
HCM Lane V/C Ratio	0.201	0.515	0.455	0.361
HCM Control Delay	10.5	14.2	13.1	12.5
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.7	2.9	2.3	1.6

Intersection	
Intersection Delay, s/veh	14.5
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	5	75	85	0	60	120	40	0	115	215	30	0	15	210	10
Future Vol, veh/h	0	5	75	85	0	60	120	40	0	115	215	30	0	15	210	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	1	1	1	2	0	0	0	2	0	0	0
Mvmt Flow	0	5	82	92	0	65	130	43	0	125	234	33	0	16	228	11
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.7	13.4	17.4	13.2
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	3%	27%	6%
Vol Thru, %	60%	45%	55%	89%
Vol Right, %	8%	52%	18%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	360	165	220	235
LT Vol	115	5	60	15
Through Vol	215	75	120	210
RT Vol	30	85	40	10
Lane Flow Rate	391	179	239	255
Geometry Grp	1	1	1	1
Degree of Util (X)	0.612	0.301	0.409	0.422
Departure Headway (Hd)	5.753	6.038	6.156	5.95
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	630	595	586	608
Service Time	3.753	4.065	4.171	3.965
HCM Lane V/C Ratio	0.621	0.301	0.408	0.419
HCM Control Delay	17.4	11.7	13.4	13.2
HCM Lane LOS	C	B	B	B
HCM 95th-tile Q	4.2	1.3	2	2.1

- ***Build***

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	370	0	115	135	175	55	50	760	0	10	0	800	85
Future Volume (vph)	370	0	115	135	175	55	50	760	0	10	0	800	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	0		0		0		50
Storage Lanes	2		0	1		0	0		0		0		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		797			420			570				590	
Travel Time (s)		18.1			9.5			13.0				13.4	
Confl. Peds. (#/hr)									27		27		
Confl. Bikes (#/hr)			2						20				8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	7%	7%	7%	5%	5%	5%	6%	6%	6%	6%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	402	125	0	147	250	0	0	880	0	0	0	881	92
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Detector Phase	3			2	2		4	1 4		1		1	1 3
Switch Phase													
Minimum Initial (s)	6.0			6.0	6.0		6.0			10.0		10.0	
Minimum Split (s)	24.0			12.0	12.0		12.0			22.0		22.0	
Total Split (s)	24.0			22.0	22.0		22.0			31.0		31.0	
Total Split (%)	24.2%			22.2%	22.2%		22.2%			31.3%		31.3%	
Yellow Time (s)	4.0			4.0	4.0		4.0			4.0		4.0	
All-Red Time (s)	2.0			2.0	2.0		2.0			2.0		2.0	
Lost Time Adjust (s)	0.0			0.0	0.0							0.0	
Total Lost Time (s)	6.0			6.0	6.0							6.0	
Lead/Lag	Lead			Lag	Lag		Lag			Lead		Lead	
Lead-Lag Optimize?													
Recall Mode	None			None	None		Max			C-Max		C-Max	
v/c Ratio	0.75	0.54		0.56	0.90			0.70				1.13	0.14
Control Delay	49.1	0.0		47.6	73.8			21.4				111.1	2.0
Queue Delay	0.0	0.0		0.0	0.0			0.0				0.0	0.0
Total Delay	49.1	0.0		47.6	73.8			21.4				111.1	2.0
Queue Length 50th (ft)	125	0		86	147			189				~342	0
Queue Length 95th (ft)	172	0		150	#287			257				#465	11
Internal Link Dist (ft)		717			340			490				510	
Turn Bay Length (ft)				75									50
Base Capacity (vph)	630	231		272	288			1262				777	717
Starvation Cap Reductn	0	0		0	0			0				0	0
Spillback Cap Reductn	0	0		0	0			0				0	0
Storage Cap Reductn	0	0		0	0			0				0	0
Reduced v/c Ratio	0.64	0.54		0.54	0.87			0.70				1.13	0.13

Intersection Summary

Area Type: Other
Cycle Length: 99
Actuated Cycle Length: 99
Offset: 47 (47%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Market Street & Leo M. Birmingham Parkway & Lincoln Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	370	0	115	135	175	55	50	760	0	10	0	800	85
Future Volume (vph)	370	0	115	135	175	55	50	760	0	10	0	800	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	6.0			6.0				6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00			0.95				0.95	1.00
Frpb, ped/bikes	1.00	0.94		1.00	1.00			1.00				1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Frt	1.00	0.85		1.00	0.96			1.00				1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00				1.00	1.00
Satd. Flow (prot)	3467	0		1687	1712			3428				3404	1524
Flt Permitted	0.95	1.00		0.95	1.00			0.68				0.90	1.00
Satd. Flow (perm)	3467	0		1687	1712			2351				3078	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	402	0	125	147	190	60	54	826	0	11	0	870	92
RTOR Reduction (vph)	0	125	0	0	12	0	0	0	0	0	0	0	55
Lane Group Flow (vph)	402	0	0	147	238	0	0	880	0	0	0	881	37
Confl. Peds. (#/hr)									27		27		
Confl. Bikes (#/hr)			2						20				8
Heavy Vehicles (%)	1%	1%	1%	7%	7%	7%	5%	5%	5%	6%	6%	6%	6%
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Actuated Green, G (s)	15.3	0.0		15.4	15.4			44.3				25.0	40.3
Effective Green, g (s)	15.3	0.0		15.4	15.4			44.3				25.0	40.3
Actuated g/C Ratio	0.15	0.00		0.16	0.16			0.45				0.25	0.41
Clearance Time (s)	6.0			6.0	6.0							6.0	
Vehicle Extension (s)	2.0			2.0	2.0							2.0	
Lane Grp Cap (vph)	535	0		262	266			1261				777	620
v/s Ratio Prot	c0.12			0.09	c0.14			c0.14					0.02
v/s Ratio Perm								0.18				c0.29	
v/c Ratio	0.75	0.00		0.56	0.90			0.70				1.13	0.06
Uniform Delay, d1	40.0	49.5		38.7	41.0			22.0				37.0	17.8
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Incremental Delay, d2	5.2	0.0		1.6	28.8			3.2				75.8	0.0
Delay (s)	45.3	49.5		40.3	69.8			25.2				112.8	17.9
Level of Service	D	D		D	E			C				F	B
Approach Delay (s)		46.3			58.9			25.2				103.8	
Approach LOS		D			E			C				F	

Intersection Summary			
HCM 2000 Control Delay	61.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	99.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	5	0	110	1	150	5	695	285	435	610	2
Future Volume (vph)	2	5	0	110	1	150	5	695	285	435	610	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			772			187			570	
Travel Time (s)		5.6			17.5			4.3			13.0	
Confl. Peds. (#/hr)	1		28	28		1	8		27	27		8
Confl. Bikes (#/hr)									13			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	7%	7%	7%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	0	121	163	0	1070	0	0	1138	0
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Detector Phase	2	2		2	2	2 3	1	1		3	1 3	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		6.0		
Minimum Split (s)	21.0	21.0		21.0	21.0		22.0	22.0		11.0		
Total Split (s)	21.0	21.0		21.0	21.0		48.0	48.0		21.0		
Total Split (%)	23.3%	23.3%		23.3%	23.3%		53.3%	53.3%		23.3%		
Yellow Time (s)	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		
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead				
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		None		
v/c Ratio		0.03			0.66	0.26		0.64			0.99dl	
Control Delay		30.5			53.2	6.6		4.7			8.7	
Queue Delay		0.0			0.0	0.0		0.2			0.0	
Total Delay		30.5			53.2	6.6		4.9			8.7	
Queue Length 50th (ft)		3			65	14		71			107	
Queue Length 95th (ft)		15			120	52		m40			162	
Internal Link Dist (ft)		167			692			107			490	
Turn Bay Length (ft)						125						
Base Capacity (vph)		334			229	629		1660			1565	
Starvation Cap Reductn		0			0	0		106			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.02			0.53	0.26		0.69			0.73	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 85 (94%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 2: Market Street & Stockyard Driveway/Guest Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	5	0	110	1	150	5	695	285	435	610	2
Future Volume (vph)	2	5	0	110	1	150	5	695	285	435	610	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	5.0		4.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	1.00		0.97			1.00	
Flpb, ped/bikes		1.00			0.95	1.00		1.00			1.00	
Frt		1.00			1.00	0.85		0.96			1.00	
Flt Protected		0.99			0.95	1.00		1.00			0.98	
Satd. Flow (prot)		1872			1602	1509		3225			3393	
Flt Permitted		0.93			0.72	1.00		0.95			0.52	
Satd. Flow (perm)		1772			1217	1509		3065			1806	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	5	0	120	1	163	5	755	310	473	663	2
RTOR Reduction (vph)	0	0	0	0	0	76	0	45	0	0	0	0
Lane Group Flow (vph)	0	7	0	0	121	87	0	1025	0	0	1138	0
Confl. Peds. (#/hr)	1		28	28		1	8		27	27		8
Confl. Bikes (#/hr)									13			2
Heavy Vehicles (%)	0%	0%	0%	7%	7%	7%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Actuated Green, G (s)		12.5			12.5	33.6		46.4			62.5	
Effective Green, g (s)		13.5			13.5	33.6		47.4			62.5	
Actuated g/C Ratio		0.15			0.15	0.37		0.53			0.69	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		265			182	563		1614			1538	
v/s Ratio Prot						0.06					c0.13	
v/s Ratio Perm		0.00			c0.10			0.33			c0.38	
v/c Ratio		0.03			0.66	0.15		0.63			0.99dl	
Uniform Delay, d1		32.6			36.1	18.7		15.1			8.6	
Progression Factor		1.00			1.00	1.00		0.31			1.00	
Incremental Delay, d2		0.0			6.9	0.0		0.2			1.6	
Delay (s)		32.7			43.0	18.8		4.8			10.3	
Level of Service		C			D	B		A			B	
Approach Delay (s)		32.7			29.1			4.8			10.3	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	20	0	965	720	0
Future Vol, veh/h	20	20	0	965	720	0
Conflicting Peds, #/hr	5	1	34	0	0	34
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	5	5	6	6
Mvmt Flow	22	22	0	1049	783	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1312	392	-	0	-	0
Stage 1	783	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	-	-
Pot Cap-1 Maneuver	149	604	0	-	-	0
Stage 1	408	-	0	-	-	0
Stage 2	553	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	149	603	-	-	-	-
Mov Cap-2 Maneuver	149	-	-	-	-	-
Stage 1	408	-	-	-	-	-
Stage 2	553	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	239	-
HCM Lane V/C Ratio	-	0.182	-
HCM Control Delay (s)	-	23.4	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.7	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	100	335	40	90	340	115	105	750	160	150	515	75	
Future Volume (vph)	100	335	40	90	340	115	105	750	160	150	515	75	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		200	0		200	0		100	0		0	
Storage Lanes	0		1	0		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		324			332			559			323		
Travel Time (s)		7.4			7.5			12.7			7.3		
Confl. Peds. (#/hr)	16		29	29		16	11		24	24		11	
Confl. Bikes (#/hr)			7			3			12			1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	4%	4%	4%	5%	5%	5%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	516	0	0	593	0	0	1103	0	0	805	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		5.0			1.0
Minimum Split (s)	15.0	15.0		15.0	15.0		15.0	15.0		10.0			20.0
Total Split (s)	28.0	28.0		28.0	28.0		31.0	31.0		11.0			20.0
Total Split (%)	31.1%	31.1%		31.1%	31.1%		34.4%	34.4%		12.2%			22%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0			2.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.0			2.0
Lost Time Adjust (s)		0.0			0.0			0.0					
Total Lost Time (s)		5.0			5.0			5.0					
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?													
Recall Mode	Max	Max		Max	Max		C-Max	C-Max		None			None
v/c Ratio		0.69			0.71			1.92			1.04		
Control Delay		34.4			32.8			439.4			65.1		
Queue Delay		0.0			0.0			0.0			1.0		
Total Delay		34.4			32.8			439.4			66.0		
Queue Length 50th (ft)		147			178			~514			~208		
Queue Length 95th (ft)		#250			#284			m#561			#334		
Internal Link Dist (ft)		244			252			479			243		
Turn Bay Length (ft)													
Base Capacity (vph)		745			832			574			771		
Starvation Cap Reductn		0			0			0			0		
Spillback Cap Reductn		0			0			0			2		
Storage Cap Reductn		0			0			0			0		
Reduced v/c Ratio		0.69			0.71			1.92			1.05		

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Market Street & North Beacon Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	335	40	90	340	115	105	750	160	150	515	75
Future Volume (vph)	100	335	40	90	340	115	105	750	160	150	515	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			0.99			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.98			0.98	
Flt Protected		0.99			0.99			0.99			0.99	
Satd. Flow (prot)		3344			3277			3345			3343	
Flt Permitted		0.64			0.71			0.57			0.55	
Satd. Flow (perm)		2150			2351			1931			1864	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	364	43	98	370	125	114	815	174	163	560	82
RTOR Reduction (vph)	0	7	0	0	24	0	0	17	0	0	10	0
Lane Group Flow (vph)	0	509	0	0	569	0	0	1086	0	0	795	0
Confl. Peds. (#/hr)	16		29	29		16	11		24	24		11
Confl. Bikes (#/hr)			7			3			12			1
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	4%	4%	4%	5%	5%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		31.0			31.0			24.4			31.4	
Effective Green, g (s)		31.0			31.0			24.4			31.4	
Actuated g/C Ratio		0.34			0.34			0.27			0.35	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			4.0				
Lane Grp Cap (vph)		740			809			523			765	
v/s Ratio Prot											c0.08	
v/s Ratio Perm		0.24			c0.24			c0.56			0.28	
v/c Ratio		0.69			0.70			2.08			1.04	
Uniform Delay, d1		25.4			25.5			32.8			29.3	
Progression Factor		1.00			1.00			0.87			0.92	
Incremental Delay, d2		5.2			4.7			486.6			38.5	
Delay (s)		30.5			30.3			515.1			65.4	
Level of Service		C			C			F			E	
Approach Delay (s)		30.5			30.3			515.1			65.4	
Approach LOS		C			C			F			E	

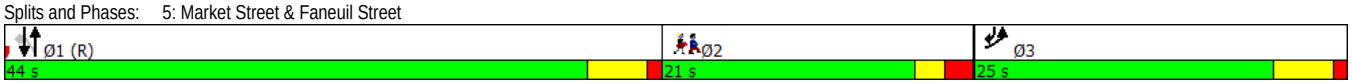
Intersection Summary			
HCM 2000 Control Delay	216.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	310	65	40	735	535	115	
Future Volume (vph)	310	65	40	735	535	115	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Right Turn on Red		Yes				Yes	
Link Speed (mph)	30			30	30		
Link Distance (ft)	420			1276	559		
Travel Time (s)	9.5			29.0	12.7		
Confl. Peds. (#/hr)	3	11	8			8	
Confl. Bikes (#/hr)		9					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	7%	7%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	408	0	0	842	582	125	
Turn Type	Prot		Perm	NA	NA	pm+ov	
Protected Phases	3			1	1	3	2
Permitted Phases			1			1	
Detector Phase	3		1	1	1	3	
Switch Phase							
Minimum Initial (s)	6.0		10.0	10.0	10.0	6.0	7.0
Minimum Split (s)	11.0		15.0	15.0	15.0	11.0	21.0
Total Split (s)	25.0		44.0	44.0	44.0	25.0	21.0
Total Split (%)	27.8%		48.9%	48.9%	48.9%	27.8%	23%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	2.0
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	Lead	Lead		Lag
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max	None	None
v/c Ratio	0.77			0.97	0.61	0.10	
Control Delay	40.9			40.6	7.5	0.2	
Queue Delay	0.0			0.0	0.3	0.0	
Total Delay	40.9			40.6	7.7	0.2	
Queue Length 50th (ft)	198			458	65	0	
Queue Length 95th (ft)	#434			m258	m108	m0	
Internal Link Dist (ft)	340			1196	479		
Turn Bay Length (ft)							
Base Capacity (vph)	527			865	951	1269	
Starvation Cap Reductn	0			0	64	0	
Spillback Cap Reductn	0			0	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.77			0.97	0.66	0.10	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 86 (96%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Market Street & Faneuil Street



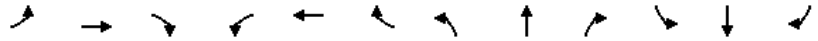
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	310	65	40	735	535	115
Future Volume (vph)	310	65	40	735	535	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frpb, ped/bikes	0.99			1.00	1.00	0.98
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.98			1.00	1.00	0.85
Flt Protected	0.96			1.00	1.00	1.00
Satd. Flow (prot)	1699			1822	1776	1486
Flt Permitted	0.96			0.88	1.00	1.00
Satd. Flow (perm)	1699			1615	1776	1486
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	337	71	43	799	582	125
RTOR Reduction (vph)	8	0	0	0	0	24
Lane Group Flow (vph)	400	0	0	842	582	101
Confl. Peds. (#/hr)	3	11	8			8
Confl. Bikes (#/hr)		9				
Heavy Vehicles (%)	4%	4%	4%	4%	7%	7%
Turn Type	Prot		Perm	NA	NA	pm+ov
Protected Phases	3			1	1	3
Permitted Phases			1			1
Actuated Green, G (s)	27.6			45.0	45.0	72.6
Effective Green, g (s)	27.6			45.0	45.0	72.6
Actuated g/C Ratio	0.31			0.50	0.50	0.81
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	2.0			2.0	2.0	2.0
Lane Grp Cap (vph)	521			807	888	1281
v/s Ratio Prot	c0.24				0.33	0.02
v/s Ratio Perm				c0.52		0.04
v/c Ratio	0.77			1.04	0.66	0.08
Uniform Delay, d1	28.3			22.5	16.7	1.8
Progression Factor	1.00			1.77	0.40	0.31
Incremental Delay, d2	6.1			23.5	1.1	0.0
Delay (s)	34.4			63.2	7.8	0.6
Level of Service	C			E	A	A
Approach Delay (s)	34.4			63.2	6.5	
Approach LOS	C			E	A	

Intersection Summary			
HCM 2000 Control Delay	36.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	60	245	100	20	220	165	15	540	5	95	445	25	
Future Volume (vph)	60	245	100	20	220	165	15	540	5	95	445	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	0		0	75		0	
Storage Lanes	0		0	0		0	0		0	1		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		448			531			497			1276		
Travel Time (s)		10.2			12.1			11.3			29.0		
Confl. Peds. (#/hr)	22		28	28		22	40		39	39		40	
Confl. Bikes (#/hr)			6			4			10			4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	5%	5%	5%	7%	7%	7%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	440	0	0	440	0	0	608	0	103	511	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		4.0			7.0
Minimum Split (s)	13.0	13.0		13.0	13.0		15.0	15.0		8.0			22.0
Total Split (s)	32.0	32.0		32.0	32.0		28.0	28.0		8.0			22.0
Total Split (%)	35.6%	35.6%		35.6%	35.6%		31.1%	31.1%		8.9%			24%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		4.0			3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0			1.0
Lost Time Adjust (s)		0.0			0.0			0.0		0.0			
Total Lost Time (s)		5.0			5.0			5.0		4.0			
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes			Yes
Recall Mode	None	None		None	None		C-Max	C-Max		Max			None
v/c Ratio		0.83			0.72			2.70		0.44	0.75		
Control Delay		43.8			33.1			797.1		36.3	39.9		
Queue Delay		0.0			0.0			0.0		0.0	0.0		
Total Delay		43.8			33.1			797.1		36.3	39.9		
Queue Length 50th (ft)		238			214			~592		45	217		
Queue Length 95th (ft)		#435			#381			#796		m#94	m#420		
Internal Link Dist (ft)		368			451			417			1196		
Turn Bay Length (ft)										75			
Base Capacity (vph)		527			609			225		235	681		
Starvation Cap Reductn		0			0			0		0	0		
Spillback Cap Reductn		0			0			0		0	0		
Storage Cap Reductn		0			0			0		0	0		
Reduced v/c Ratio		0.83			0.72			2.70		0.44	0.75		

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
~	Volume exceeds capacity, queue is theoretically infinite.
	Queue shown is maximum after two cycles.
#	95th percentile volume exceeds capacity, queue may be longer.
	Queue shown is maximum after two cycles.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Market Street & Arlington Street/Sparhawk Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	245	100	20	220	165	15	540	5	95	445	25
Future Volume (vph)	60	245	100	20	220	165	15	540	5	95	445	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		4.0	5.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.98			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.97			0.95			1.00		1.00	0.99	
Flt Protected		0.99			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1755			1699			1802		1683	1754	
Flt Permitted		0.82			0.97			0.49		0.19	1.00	
Satd. Flow (perm)		1455			1652			882		331	1754	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	266	109	22	239	179	16	587	5	103	484	27
RTOR Reduction (vph)	0	12	0	0	25	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	428	0	0	415	0	0	608	0	103	509	0
Confl. Peds. (#/hr)	22		28	28		22	40		39	39		40
Confl. Bikes (#/hr)			6			4			10			4
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	5%	5%	5%	7%	7%	7%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		31.9			31.9			21.4		29.3	33.3	
Effective Green, g (s)		31.9			31.9			21.4		29.3	29.3	
Actuated g/C Ratio		0.35			0.35			0.24		0.33	0.33	
Clearance Time (s)		5.0			5.0			5.0		4.0		
Vehicle Extension (s)		2.0			2.0			0.2		2.0		
Lane Grp Cap (vph)		515			585			209		226	571	
v/s Ratio Prot										0.04	c0.29	
v/s Ratio Perm		c0.29			0.25			c0.69		0.11		
v/c Ratio		0.83			0.71			2.91		0.46	0.89	
Uniform Delay, d1		26.6			25.0			34.3		23.6	28.8	
Progression Factor		1.00			1.00			1.00		1.46	1.33	
Incremental Delay, d2		10.5			3.2			872.0		5.1	15.3	
Delay (s)		37.0			28.3			906.3		39.5	53.5	
Level of Service		D			C			F		D	D	
Approach Delay (s)		37.0			28.3			906.3			51.2	
Approach LOS		D			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	290.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	107.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3
Lane Configurations														
Traffic Volume (vph)	50	605	10	5	505	70	0	0	0	30	2	20		
Future Volume (vph)	50	605	10	5	505	70	0	0	0	30	2	20		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes			Yes		
Link Speed (mph)		30			30			30			30			
Link Distance (ft)		458			334			278			631			
Travel Time (s)		10.4			7.6			6.3			14.3			
Confl. Peds. (#/hr)	15		22	22		15	13					13		
Confl. Bikes (#/hr)			13			5								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	2%	2%	2%	12%	12%	12%		
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	723	0	0	630	0	0	0	0	0	57	0		
Turn Type	Perm	NA		Perm	NA					Perm	NA			
Protected Phases		1			1						5		2	3
Permitted Phases	1			1						5				
Detector Phase	1	1		1	1					5	5			
Switch Phase														
Minimum Initial (s)	10.0	10.0		10.0	10.0					7.0	7.0		7.0	8.0
Minimum Split (s)	15.0	15.0		15.0	15.0					11.0	11.0		20.0	19.0
Total Split (s)	52.0	52.0		52.0	52.0					18.0	18.0		20.0	72.0
Total Split (%)	57.8%	57.8%		57.8%	57.8%					20.0%	20.0%		22%	80%
Yellow Time (s)	3.0	3.0		3.0	3.0					3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0					1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0			0.0						0.0			
Total Lost Time (s)		5.0			5.0						4.0			
Lead/Lag	Lead	Lead		Lead	Lead								Lag	
Lead-Lag Optimize?														
Recall Mode	C-Max	C-Max		C-Max	C-Max					None	None		None	Ped
v/c Ratio		0.54			0.44						0.38			
Control Delay		5.4			6.6						33.7			
Queue Delay		0.0			0.0						0.0			
Total Delay		5.4			6.6						33.7			
Queue Length 50th (ft)		3			66						19			
Queue Length 95th (ft)		m270			333						55			
Internal Link Dist (ft)		378			254			198			551			
Turn Bay Length (ft)														
Base Capacity (vph)		1339			1421						255			
Starvation Cap Reductn		0			0						0			
Spillback Cap Reductn		0			0						0			
Storage Cap Reductn		0			0						0			
Reduced v/c Ratio		0.54			0.44						0.22			

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 3 (3%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Etna Street/Life Street & North Beacon Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	605	10	5	505	70	0	0	0	30	2	20
Future Volume (vph)	50	605	10	5	505	70	0	0	0	30	2	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			1.00						0.96	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		1.00			0.98						0.95	
Flt Protected		1.00			1.00						0.97	
Satd. Flow (prot)		1797			1772						1497	
Flt Permitted		0.92			1.00						0.97	
Satd. Flow (perm)		1664			1766						1497	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	658	11	5	549	76	0	0	0	33	2	22
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	20	0
Lane Group Flow (vph)	0	723	0	0	627	0	0	0	0	0	37	0
Confl. Peds. (#/hr)	15		22	22		15	13					13
Confl. Bikes (#/hr)			13			5						
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	2%	2%	2%	12%	12%	12%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						5	
Permitted Phases	1			1						5		
Actuated Green, G (s)		67.4			67.4						6.4	
Effective Green, g (s)		67.4			67.4						6.4	
Actuated g/C Ratio		0.75			0.75						0.07	
Clearance Time (s)		5.0			5.0						4.0	
Vehicle Extension (s)		2.0			2.0						2.0	
Lane Grp Cap (vph)		1246			1322						106	
v/s Ratio Prot												
v/s Ratio Perm		c0.43			0.36						0.02	
v/c Ratio		0.58			0.47						0.34	
Uniform Delay, d1		5.0			4.4						39.8	
Progression Factor		0.79			1.00						1.00	
Incremental Delay, d2		0.2			1.2						0.7	
Delay (s)		4.2			5.6						40.5	
Level of Service		A			A						D	
Approach Delay (s)		4.2			5.6			0.0			40.5	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	1	630	30	60	585	0	0	0	0	1	0	1
Future Vol, veh/h	1	630	30	60	585	0	0	0	0	1	0	1
Conflicting Peds, #/hr	18	0	20	20	0	18	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	4	4	4	0	0	0	0	0	0
Mvmt Flow	1	685	33	65	636	0	0	0	0	1	0	1

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	654	0	0	737	0	0				1487	1524	655
Stage 1	-	-	-	-	-	-				784	784	-
Stage 2	-	-	-	-	-	-				703	740	-
Critical Hdwy	4.15	-	-	4.14	-	-				6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-				5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.4	5.5	-
Follow-up Hdwy	2.245	-	-	2.236	-	-				3.5	4	3.3
Pot Cap-1 Maneuver	919	-	-	860	-	-				138	119	470
Stage 1	-	-	-	-	-	-				453	407	-
Stage 2	-	-	-	-	-	-				495	426	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	918	-	-	860	-	-				118	0	463
Mov Cap-2 Maneuver	-	-	-	-	-	-				118	0	-
Stage 1	-	-	-	-	-	-				394	0	-
Stage 2	-	-	-	-	-	-				487	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.9	24.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	918	-	-	860	-	-	188
HCM Lane V/C Ratio	0.001	-	-	0.076	-	-	0.012
HCM Control Delay (s)	8.9	0	-	9.5	0	-	24.4
HCM Lane LOS	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	-	-	0.2	-	-	0

Intersection	
Int Delay, s/veh	30.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	625	0	0	530	5	105	2	150	5	0	10
Future Vol, veh/h	5	625	0	0	530	5	105	2	150	5	0	10
Conflicting Peds, #/hr	20	0	19	19	0	20	1	0	10	10	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	6	6	6	1	1	1	17	17	17
Mvmt Flow	5	679	0	0	576	5	114	2	163	5	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	602	0	-	-	-	0	1275	1292	689	1382	1289	600
Stage 1	-	-	-	-	-	-	690	690	-	599	599	-
Stage 2	-	-	-	-	-	-	585	602	-	783	690	-
Critical Hdwy	4.15	-	-	-	-	-	7.11	6.51	6.21	7.27	6.67	6.37
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.27	5.67	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.27	5.67	-
Follow-up Hdwy	2.245	-	-	-	-	-	3.509	4.009	3.309	3.653	4.153	3.453
Pot Cap-1 Maneuver	961	-	0	0	-	-	144	164	447	112	153	474
Stage 1	-	-	0	0	-	-	437	448	-	463	467	-
Stage 2	-	-	0	0	-	-	499	490	-	365	424	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	960	-	-	-	-	-	140	160	443	68	149	466
Mov Cap-2 Maneuver	-	-	-	-	-	-	140	160	-	68	149	-
Stage 1	-	-	-	-	-	-	434	444	-	452	459	-
Stage 2	-	-	-	-	-	-	487	482	-	226	421	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	166.9	30.4
HCM LOS			F	D

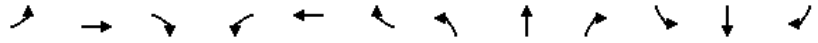
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	233	960	-	-	-	158
HCM Lane V/C Ratio	1.199	0.006	-	-	-	0.103
HCM Control Delay (s)	166.9	8.8	0	-	-	30.4
HCM Lane LOS	F	A	A	-	-	D
HCM 95th %tile Q(veh)	13.5	0	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	180	595	0	0	435	245	0	0	0	115	0	105	
Future Volume (vph)	180	595	0	0	435	245	0	0	0	115	0	105	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12	
Storage Length (ft)	100		0	0		0	0		0	0		150	
Storage Lanes	1		0	0		1	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		456			284			205			781		
Travel Time (s)		10.4			6.5			4.7			17.8		
Confl. Peds. (#/hr)	16					16	3		1	1		3	
Confl. Bikes (#/hr)			12			6							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	2%	2%	2%	8%	8%	8%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	196	647	0	0	473	266	0	0	0	125	0	114	
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm	
Protected Phases	5	1 5			1		4	4		3			2
Permitted Phases	1 5			1		1						3	
Detector Phase	5	1 5		1	1	1	4	4		3		3	
Switch Phase													
Minimum Initial (s)	4.0			12.0	12.0	12.0	3.0	3.0		5.0		5.0	4.0
Minimum Split (s)	8.0			16.0	16.0	16.0	7.0	7.0		9.0		9.0	17.0
Total Split (s)	11.0			36.0	36.0	36.0	15.0	15.0		21.0		21.0	17.0
Total Split (%)	11.0%			36.0%	36.0%	36.0%	15.0%	15.0%		21.0%		21.0%	17%
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0
All-Red Time (s)	1.0			1.0	1.0	1.0	1.0	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	-1.0				-1.0	-1.0		-1.0		0.0		-1.0	
Total Lost Time (s)	3.0				3.0	3.0		3.0		4.0		3.0	
Lead/Lag				Lead	Lead	Lead	Lag	Lag		Lead		Lead	Lag
Lead-Lag Optimize?													
Recall Mode	None			C-Max	C-Max	C-Max	None	None		None		None	None
v/c Ratio	0.30	0.49			0.52	0.31				0.63		0.37	
Control Delay	5.8	7.6			28.0	10.1				55.9		7.1	
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0	
Total Delay	5.8	7.6			28.0	10.1				55.9		7.1	
Queue Length 50th (ft)	20	93			190	36				77		0	
Queue Length 95th (ft)	90	375			#451	m86				130		30	
Internal Link Dist (ft)		376			204			125			701		
Turn Bay Length (ft)	100											150	
Base Capacity (vph)	648	1313			904	851				284		377	
Starvation Cap Reductn	0	0			0	0				0		0	
Spillback Cap Reductn	0	0			0	0				0		0	
Storage Cap Reductn	0	0			0	0				0		0	
Reduced v/c Ratio	0.30	0.49			0.52	0.31				0.44		0.30	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 35 (35%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Wingate Driveway/Arthur Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	595	0	0	435	245	0	0	0	115	0	105
Future Volume (vph)	180	595	0	0	435	245	0	0	0	115	0	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			3.0	3.0				4.0		3.0
Lane Util. Factor	1.00	1.00			1.00	1.00				1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.96				1.00		0.97
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1602	1689			1657	1353				1671		1448
Flt Permitted	0.36	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	599	1689			1657	1353				1671		1448
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	196	647	0	0	473	266	0	0	0	125	0	114
RTOR Reduction (vph)	0	0	0	0	0	129	0	0	0	0	0	99
Lane Group Flow (vph)	196	647	0	0	473	137	0	0	0	125	0	15
Confl. Peds. (#/hr)	16					16	3		1	1		3
Confl. Bikes (#/hr)			12			6						
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	2%	2%	2%	8%	8%	8%
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm
Protected Phases	5	1 5			1		4	4		3		
Permitted Phases	1 5			1		1						3
Actuated Green, G (s)	69.6	73.6			50.4	50.4				11.8		11.8
Effective Green, g (s)	71.6	74.6			51.4	51.4				11.8		12.8
Actuated g/C Ratio	0.72	0.75			0.51	0.51				0.12		0.13
Clearance Time (s)	4.0				4.0	4.0				4.0		4.0
Vehicle Extension (s)	2.0				4.0	4.0				2.0		2.0
Lane Grp Cap (vph)	631	1259			851	695				197		185
v/s Ratio Prot	0.06	c0.38			c0.29					c0.07		
v/s Ratio Perm	0.16					0.10						0.01
v/c Ratio	0.31	0.51			0.56	0.20				0.63		0.08
Uniform Delay, d1	5.9	5.2			16.5	13.1				42.0		38.4
Progression Factor	1.00	1.00			1.42	3.24				1.00		1.00
Incremental Delay, d2	0.1	0.1			2.0	0.5				4.8		0.1
Delay (s)	6.0	5.4			25.5	43.1				46.9		38.5
Level of Service	A	A			C	D				D		D
Approach Delay (s)		5.5			31.8			0.0			42.9	
Approach LOS		A			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	710	0	0	655	25	60
Future Vol, veh/h	710	0	0	655	25	60
Conflicting Peds, #/hr	0	29	29	0	0	9
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	7	7	0	0
Mvmt Flow	772	0	0	712	27	65

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	1128	781
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	356	-
Critical Hdwy	-	-	-	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	0	-	214	398
Stage 1	-	0	0	-	459	-
Stage 2	-	0	0	-	686	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	214	395
Mov Cap-2 Maneuver	-	-	-	-	214	-
Stage 1	-	-	-	-	459	-
Stage 2	-	-	-	-	686	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	21
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	316	-	-
HCM Lane V/C Ratio	0.292	-	-
HCM Control Delay (s)	21	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1.2	-	-

Intersection	
Int Delay, s/veh	36.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	705	65	80	595	60	195
Future Vol, veh/h	705	65	80	595	60	195
Conflicting Peds, #/hr	0	34	34	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	7	7	4	4
Mvmt Flow	766	71	87	647	65	212

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	871	0	1658	836
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	822	-
Critical Hdwy	-	-	4.17	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.263	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	753	-	106	364
Stage 1	-	-	-	-	422	-
Stage 2	-	-	-	-	428	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	753	-	84	354
Mov Cap-2 Maneuver	-	-	-	-	84	-
Stage 1	-	-	-	-	410	-
Stage 2	-	-	-	-	351	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	240.8
HCM LOS			F

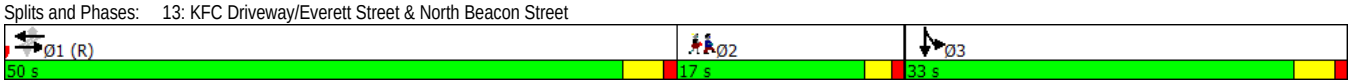
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	202	-	-	753	-
HCM Lane V/C Ratio	1.372	-	-	0.115	-
HCM Control Delay (s)	240.8	-	-	10.4	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	15.9	-	-	0.4	-

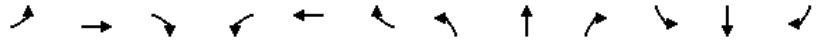
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	355	535	0	1	570	300	0	0	0	195	0	130	
Future Volume (vph)	355	535	0	1	570	300	0	0	0	195	0	130	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		446			477			138			542		
Travel Time (s)		10.1			10.8			3.1			12.3		
Confl. Peds. (#/hr)	12		40	40		12	24		16	16		24	
Confl. Bikes (#/hr)			13			5							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	5%	5%	5%	6%	6%	6%	2%	2%	2%	3%	3%	3%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	968	0	0	621	326	0	0	0	0	353	0	
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA		
Protected Phases		1			1					3	3		2
Permitted Phases	1			1		1							
Detector Phase	1	1		1	1	1				3	3		
Switch Phase													
Minimum Initial (s)	15.0	15.0		15.0	15.0	15.0				7.0	7.0		7.0
Minimum Split (s)	19.0	19.0		19.0	19.0	19.0				11.0	11.0		17.0
Total Split (s)	50.0	50.0		50.0	50.0	50.0				33.0	33.0		17.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%				33.0%	33.0%		17%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0		2.0
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)		4.0			4.0	4.0					4.0		
Lead/Lag	Lead	Lead		Lead	Lead	Lead							Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max				Max	Max		None
v/c Ratio		2.47dl			0.75	0.38					0.57		
Control Delay		120.1			29.5	3.3					29.0		
Queue Delay		0.0			9.6	0.0					0.0		
Total Delay		120.1			39.1	3.3					29.0		
Queue Length 50th (ft)		~395			317	0					175		
Queue Length 95th (ft)		#525			461	47					279		
Internal Link Dist (ft)		366			397			58			462		
Turn Bay Length (ft)													
Base Capacity (vph)		821			823	851					620		
Starvation Cap Reductn		0			174	0					0		
Spillback Cap Reductn		0			0	0					0		
Storage Cap Reductn		0			0	0					0		
Reduced v/c Ratio		1.18			0.96	0.38					0.57		

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 35 (35%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: KFC Driveway/Everett Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	355	535	0	1	570	300	0	0	0	195	0	130
Future Volume (vph)	355	535	0	1	570	300	0	0	0	195	0	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0					4.0	
Lane Util. Factor		0.95			1.00	1.00					1.00	
Frpb, ped/bikes		1.00			1.00	0.96					0.98	
Flpb, ped/bikes		1.00			1.00	1.00					1.00	
Frt		1.00			1.00	0.85					0.95	
Flt Protected		0.98			1.00	1.00					0.97	
Satd. Flow (prot)		3365			1792	1467					1659	
Flt Permitted		0.52			1.00	1.00					0.97	
Satd. Flow (perm)		1784			1791	1467					1659	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	386	582	0	1	620	326	0	0	0	212	0	141
RTOR Reduction (vph)	0	0	0	0	0	180	0	0	0	0	28	0
Lane Group Flow (vph)	0	968	0	0	621	146	0	0	0	0	325	0
Confl. Peds. (#/hr)	12		40	40		12	24		16	16		24
Confl. Bikes (#/hr)			13			5						
Heavy Vehicles (%)	5%	5%	5%	6%	6%	6%	2%	2%	2%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA	
Protected Phases		1			1					3	3	
Permitted Phases	1			1		1						
Actuated Green, G (s)		44.8			44.8	44.8					35.8	
Effective Green, g (s)		44.8			44.8	44.8					35.8	
Actuated g/C Ratio		0.45			0.45	0.45					0.36	
Clearance Time (s)		4.0			4.0	4.0					4.0	
Vehicle Extension (s)		2.0			2.0	2.0					2.0	
Lane Grp Cap (vph)		799			802	657					593	
v/s Ratio Prot											c0.20	
v/s Ratio Perm		c0.54			0.35	0.10						
v/c Ratio		2.47dl			0.77	0.22					0.55	
Uniform Delay, d1		27.6			23.3	16.9					25.6	
Progression Factor		1.01			1.00	1.00					1.00	
Incremental Delay, d2		106.2			7.2	0.8					3.6	
Delay (s)		134.1			30.5	17.7					29.2	
Level of Service		F			C	B					C	
Approach Delay (s)		134.1			26.1			0.0			29.2	
Approach LOS		F			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	72.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	195	460	20	10	130	530	60	0	355	195	50	410	285
Future Volume (vph)	195	460	20	10	130	530	60	0	355	195	50	410	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		420		0	0		150	0		75
Storage Lanes	0		0		1		0	0		1	0		1
Taper Length (ft)	25				25			25			25		
Right Turn on Red			No				Yes			Yes			No
Link Speed (mph)		30				30			30			30	
Link Distance (ft)		477				1053			361			234	
Travel Time (s)		10.8				23.9			8.2			5.3	
Confl. Peds. (#/hr)	53		36	23	36		53	54		23	23		54
Confl. Bikes (#/hr)			27				5			18			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	8%	8%	8%	8%	7%	7%	7%	10%	10%	10%
Shared Lane Traffic (%)					10%								
Lane Group Flow (vph)	0	734	0	0	138	655	0	0	386	212	0	500	310
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Detector Phase	3	3		2	2	2			1	1	4	1 4	1
Switch Phase													
Minimum Initial (s)	8.0	8.0		10.0	10.0	10.0			10.0	10.0	4.0		10.0
Minimum Split (s)	26.0	26.0		27.0	27.0	27.0			24.0	24.0	10.0		24.0
Total Split (s)	37.0	37.0		30.0	30.0	30.0			32.0	32.0	11.0		32.0
Total Split (%)	33.6%	33.6%		27.3%	27.3%	27.3%			29.1%	29.1%	10.0%		29.1%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0			4.0	4.0	3.0		4.0
All-Red Time (s)	6.0	6.0		6.0	6.0	6.0			3.0	3.0	3.0		3.0
Lost Time Adjust (s)		0.0			0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag			Lead	Lead	Lag		Lead
Lead-Lag Optimize?													
Recall Mode	None	None		Max	Max	Max			C-Max	C-Max	None		C-Max
v/c Ratio		0.92			0.50	1.14			0.50	0.43		0.67	1.05
Control Delay		58.2			47.6	124.3			39.8	6.7		38.7	109.5
Queue Delay		0.0			0.0	0.0			0.0	0.0		0.0	0.0
Total Delay		58.2			47.6	124.3			39.8	6.7		38.7	109.5
Queue Length 50th (ft)		264			97	~296			125	0		146	~240
Queue Length 95th (ft)		#369			168	#420			175	50		197	#414
Internal Link Dist (ft)		397				973			281			154	
Turn Bay Length (ft)					420					150			75
Base Capacity (vph)		826			276	573			766	494		750	294
Starvation Cap Reductn		0			0	0			0	0		0	0
Spillback Cap Reductn		0			0	0			0	0		0	0
Storage Cap Reductn		0			0	0			0	0		0	0
Reduced v/c Ratio		0.89			0.50	1.14			0.50	0.43		0.67	1.05

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 2 (2%), Referenced to phase 1:NESW, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 14: Cambridge Street & North Beacon Street/Brighton Avenue

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	195	460	20	10	130	530	60	0	355	195	50	410	285
Future Volume (vph)	195	460	20	10	130	530	60	0	355	195	50	410	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		10.0			10.0	10.0			7.0	7.0		7.0	7.0
Lane Util. Factor		0.95			0.91	0.91			0.95	1.00		0.95	1.00
Frpb, ped/bikes		1.00			1.00	0.99			1.00	0.93		1.00	0.88
Flpb, ped/bikes		1.00			1.00	1.00			1.00	1.00		1.00	1.00
Frt		1.00			1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected		0.99			0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3363			1521	3114			3374	1401		3258	1294
Flt Permitted		0.99			0.95	1.00			1.00	1.00		0.81	1.00
Satd. Flow (perm)		3363			1521	3114			3374	1401		2668	1294
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	212	500	22	11	141	576	65	0	386	212	54	446	310
RTOR Reduction (vph)	0	0	0	0	0	7	0	0	0	164	0	0	0
Lane Group Flow (vph)	0	734	0	0	138	648	0	0	386	48	0	500	310
Confl. Peds. (#/hr)	53		36	23	36		53	54		23	23		54
Confl. Bikes (#/hr)			27				5			18			5
Heavy Vehicles (%)	5%	5%	5%	8%	8%	8%	8%	7%	7%	7%	10%	10%	10%
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Actuated Green, G (s)		26.2			20.0	20.0			25.0	25.0		30.8	25.0
Effective Green, g (s)		26.2			20.0	20.0			25.0	25.0		30.8	25.0
Actuated g/C Ratio		0.24			0.18	0.18			0.23	0.23		0.28	0.23
Clearance Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Vehicle Extension (s)		2.0			2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)		801			276	566			766	318		778	294
v/s Ratio Prot		c0.22			0.09	c0.21			0.11			c0.03	
v/s Ratio Perm										0.03		0.15	c0.24
v/c Ratio		0.92			0.50	1.14			0.50	0.15		0.64	1.05
Uniform Delay, d1		40.8			40.5	45.0			37.1	34.0		34.8	42.5
Progression Factor		1.00			1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		14.8			6.3	84.3			2.4	1.0		1.4	67.5
Delay (s)		55.6			46.8	129.3			39.5	35.0		36.1	110.0
Level of Service		E			D	F			D	D		D	F
Approach Delay (s)		55.6				115.0			37.9			64.4	
Approach LOS		E				F			D			E	

Intersection Summary			
HCM 2000 Control Delay	70.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	33.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	50	560	720	10	2	25
Future Vol, veh/h	50	560	720	10	2	25
Conflicting Peds, #/hr	36	0	0	36	36	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	11	11	3	3
Mvmt Flow	54	609	783	11	2	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	829	0	-	0	1577	828
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	753	-
Critical Hdwy	4.18	-	-	-	7.13	6.23
Critical Hdwy Stg 1	-	-	-	-	6.13	-
Critical Hdwy Stg 2	-	-	-	-	6.13	-
Follow-up Hdwy	2.272	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	777	-	-	-	88	369
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	400	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	774	-	-	-	76	357
Mov Cap-2 Maneuver	-	-	-	-	76	-
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	347	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	19.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	774	-	-	-	280
HCM Lane V/C Ratio	0.07	-	-	-	0.105
HCM Control Delay (s)	10	0	-	-	19.4
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	565	1	2	715	0	0	0	0	225	2	20
Future Volume (vph)	0	565	1	2	715	0	0	0	0	225	2	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		587			512			200			484	
Travel Time (s)		13.3			11.6			4.5			11.0	
Confl. Peds. (#/hr)	25		9	9		25	8		9	9		8
Confl. Bikes (#/hr)			28			7						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	9%	9%	9%	10%	10%	10%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	615	0	0	779	0	0	0	0	245	24	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Detector Phase		1		1	1					5	5	
Switch Phase												
Minimum Initial (s)		20.0		20.0	20.0					8.0	8.0	
Minimum Split (s)		24.0		24.0	24.0					22.0	22.0	
Total Split (s)		53.0		53.0	53.0					47.0	47.0	
Total Split (%)		53.0%		53.0%	53.0%					47.0%	47.0%	
Yellow Time (s)		3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)		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)		4.0			4.0					4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max					None	None	
v/c Ratio		0.48			0.61					0.74	0.08	
Control Delay		7.7			5.2					51.5	13.7	
Queue Delay		0.0			1.2					0.0	0.0	
Total Delay		7.7			6.4					51.5	13.7	
Queue Length 50th (ft)		135			29					150	1	
Queue Length 95th (ft)		266			47					215	22	
Internal Link Dist (ft)		507			432			120			404	
Turn Bay Length (ft)										100		
Base Capacity (vph)		1282			1270					776	689	
Starvation Cap Reductn		0			266					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.48			0.78					0.32	0.03	

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 16: Driveway/Denby Road & Cambridge Street

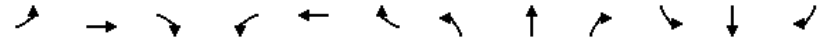
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	565	1	2	715	0	0	0	0	225	2	20
Future Volume (vph)	0	565	1	2	715	0	0	0	0	225	2	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0	4.0	
Lane Util. Factor		1.00			1.00					1.00	1.00	
Frpb, ped/bikes		1.00			1.00					1.00	0.96	
Flpb, ped/bikes		1.00			1.00					1.00	1.00	
Frt		1.00			1.00					1.00	0.86	
Flt Protected		1.00			1.00					0.95	1.00	
Satd. Flow (prot)		1743			1727					1805	1576	
Flt Permitted		1.00			1.00					0.95	1.00	
Satd. Flow (perm)		1743			1726					1805	1576	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	614	1	2	777	0	0	0	0	245	2	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	18	0
Lane Group Flow (vph)	0	615	0	0	779	0	0	0	0	245	6	0
Confl. Peds. (#/hr)	25		9	9		25	8		9	9		8
Confl. Bikes (#/hr)			28			7						
Heavy Vehicles (%)	9%	9%	9%	10%	10%	10%	0%	0%	0%	0%	0%	0%
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Actuated Green, G (s)		73.6			73.6					18.4	18.4	
Effective Green, g (s)		73.6			73.6					18.4	18.4	
Actuated g/C Ratio		0.74			0.74					0.18	0.18	
Clearance Time (s)		4.0			4.0					4.0	4.0	
Vehicle Extension (s)		0.2			0.2					2.0	2.0	
Lane Grp Cap (vph)		1282			1270					332	289	
v/s Ratio Prot		0.35								c0.14	0.00	
v/s Ratio Perm					c0.45							
v/c Ratio		0.48			0.61					0.74	0.02	
Uniform Delay, d1		5.4			6.4					38.5	33.4	
Progression Factor		1.00			0.46					1.01	1.02	
Incremental Delay, d2		1.3			1.6					7.2	0.0	
Delay (s)		6.7			4.6					46.0	34.2	
Level of Service		A			A					D	C	
Approach Delay (s)		6.7			4.6			0.0			44.9	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	10	725	55	415	690	230	40	30	515	0	0	0	
Future Volume (vph)	10	725	55	415	690	230	40	30	515	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		75	0		100	0		75	0		0	
Storage Lanes	0		1	1		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		512			518			381			156		
Travel Time (s)		11.6			11.8			8.7			3.5		
Confl. Peds. (#/hr)	35		17	17		35	23		57	57		23	
Confl. Bikes (#/hr)			19			15						12	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	5%	5%	5%	8%	8%	8%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	859	0	451	750	250	0	76	560	0	0	0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm				
Protected Phases		1		4	1 4			3					2
Permitted Phases	1			1 4		1 4	3		3				
Detector Phase	1	1		4	1 4	1 4	3	3	3				
Switch Phase													
Minimum Initial (s)	10.0	10.0		8.0			8.0	8.0	8.0				7.0
Minimum Split (s)	17.0	17.0		13.5			13.5	13.5	13.5				23.0
Total Split (s)	29.0	29.0		26.0			20.0	20.0	20.0				25.0
Total Split (%)	29.0%	29.0%		26.0%			20.0%	20.0%	20.0%				25%
Yellow Time (s)	4.0	4.0		3.0			4.0	4.0	4.0				3.0
All-Red Time (s)	3.0	3.0		2.5			1.5	1.5	1.5				1.0
Lost Time Adjust (s)		0.0		0.0				0.0	0.0				
Total Lost Time (s)		7.0		5.5				5.5	5.5				
Lead/Lag	Lead	Lead		Lag			Lead	Lead	Lead				Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		None			None	None	None				None
v/c Ratio		1.29		0.84	0.69	0.28		0.38	0.86				
Control Delay		172.7		41.7	21.6	8.0		45.1	17.9				
Queue Delay		0.0		0.0	0.1	0.0		0.0	0.0				
Total Delay		172.7		41.7	21.7	8.0		45.1	17.9				
Queue Length 50th (ft)		~397		229	358	41		46	0				
Queue Length 95th (ft)		#545		#488	#662	102		86	#170				
Internal Link Dist (ft)		432			438			301			76		
Turn Bay Length (ft)						100			75				
Base Capacity (vph)		664		538	1089	902		257	679				
Starvation Cap Reductn		0		0	0	0		0	0				
Spillback Cap Reductn		0		0	22	0		0	0				
Storage Cap Reductn		0		0	0	0		0	0				
Reduced v/c Ratio		1.29		0.84	0.70	0.28		0.30	0.82				

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
~	Volume exceeds capacity, queue is theoretically infinite.
	Queue shown is maximum after two cycles.
#	95th percentile volume exceeds capacity, queue may be longer.
	Queue shown is maximum after two cycles.

Splits and Phases: 17: Harvard Avenue/Franklin Street & Cambridge Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	725	55	415	690	230	40	30	515	0	0	0
Future Volume (vph)	10	725	55	415	690	230	40	30	515	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		5.5	7.0	7.0		5.5	5.5			
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00			
Frpb, ped/bikes		0.99		1.00	1.00	0.94		1.00	0.85			
Flpb, ped/bikes		1.00		1.00	1.00	1.00		0.94	1.00			
Frt		0.99		1.00	1.00	0.85		1.00	0.85			
Flt Protected		1.00		0.95	1.00	1.00		0.97	1.00			
Satd. Flow (prot)		3257		1671	1759	1404		1663	1301			
Flt Permitted		0.70		0.15	1.00	1.00		0.97	1.00			
Satd. Flow (perm)		2289		259	1759	1404		1663	1301			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	788	60	451	750	250	43	33	560	0	0	0
RTOR Reduction (vph)	0	5	0	0	0	52	0	0	494	0	0	0
Lane Group Flow (vph)	0	854	0	451	750	198	0	76	66	0	0	0
Confl. Peds. (#/hr)	35		17	17		35	23		57	57		23
Confl. Bikes (#/hr)			19			15						12
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	5%	5%	5%	8%	8%	8%
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm			
Protected Phases		1		4	1 4			3				
Permitted Phases	1			1 4		1 4	3		3			
Actuated Green, G (s)		27.2		54.8	60.3	60.3		11.8	11.8			
Effective Green, g (s)		27.2		54.8	54.8	54.8		11.8	11.8			
Actuated g/C Ratio		0.27		0.55	0.55	0.55		0.12	0.12			
Clearance Time (s)		7.0		5.5				5.5	5.5			
Vehicle Extension (s)		2.0		2.0				2.0	2.0			
Lane Grp Cap (vph)		622		531	963	769		196	153			
v/s Ratio Prot				c0.23	0.43							
v/s Ratio Perm		c0.37		0.23		0.14		0.05	c0.05			
v/c Ratio		1.37		0.85	0.78	0.26		0.39	0.43			
Uniform Delay, d1		36.4		24.4	17.8	11.9		40.8	41.0			
Progression Factor		0.89		1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2		177.0		11.6	3.7	0.1		0.5	0.7			
Delay (s)		209.3		36.0	21.5	12.0		41.2	41.7			
Level of Service		F		D	C	B		D	D			
Approach Delay (s)		209.3			24.4			41.6			0.0	
Approach LOS		F			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	82.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↱	
Traffic Vol, veh/h	1	0	210	15	235	5	0	0	0	0	15	2
Future Vol, veh/h	1	0	210	15	235	5	0	0	0	0	15	2
Conflicting Peds, #/hr	0	0	9	9	0	0	0	0	3	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	5	5	2	2	2	21	2	21	2	2	2
Mvmt Flow	1	0	228	16	255	5	0	0	0	0	16	2

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	261	0	0	237	0	0				-	530	258
Stage 1	-	-	-	-	-	-				-	291	-
Stage 2	-	-	-	-	-	-				-	239	-
Critical Hdwy	4.12	-	-	4.12	-	-				-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				-	4.018	3.318
Pot Cap-1 Maneuver	1303	-	-	1330	-	-				0	455	781
Stage 1	-	-	-	-	-	-				0	672	-
Stage 2	-	-	-	-	-	-				0	708	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1303	-	-	1330	-	-				-	0	781
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.5	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1303	-	-	1330	-	-	781
HCM Lane V/C Ratio	0.001	-	-	0.012	-	-	0.024
HCM Control Delay (s)	7.8	0	-	7.7	0	-	9.7
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	55	570	100	155	410	55	85	350	145	25	235	30	
Future Volume (vph)	55	570	100	155	410	55	85	350	145	25	235	30	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		100	75		0	115		0	0		0	
Storage Lanes	0		1	1		0	1		0	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		2049			739			1774			510		
Travel Time (s)		46.6			16.8			40.3			11.6		
Confl. Peds. (#/hr)	9		12	12		9	15		14	14		15	
Confl. Bikes (#/hr)						6						1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	11%	11%	11%	8%	8%	8%	3%	3%	3%	3%	3%	3%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	680	109	168	506	0	92	538	0	0	315	0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA		
Protected Phases		1			1			3			3		2
Permitted Phases	1		1	1			3			3			
Detector Phase	1	1	1	1	1		3	3		3	3		
Switch Phase													
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		8.0	8.0		8.0	8.0		4.0
Minimum Split (s)	17.0	17.0	17.0	17.0	17.0		17.0	17.0		17.0	17.0		28.0
Total Split (s)	28.0	28.0	28.0	28.0	28.0		24.0	24.0		24.0	24.0		28.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%		30.0%	30.0%		30.0%	30.0%		35%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0		2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0		-1.0	-1.0			-1.0		
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0		
Lead/Lag	Lead	Lead	Lead	Lead	Lead								Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None		None
v/c Ratio		0.74	0.13	0.71	0.51		0.58	1.19			2.17		
Control Delay		23.1	5.8	37.2	16.5		43.3	133.6			570.6		
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		23.1	5.8	37.2	16.5		43.3	133.6			570.6		
Queue Length 50th (ft)		183	4	44	107		40	~321			~258		
Queue Length 95th (ft)		#670	46	#231	#442		#104	#512			#415		
Internal Link Dist (ft)		1969			659			1694			430		
Turn Bay Length (ft)			100	75			115						
Base Capacity (vph)		915	844	237	1000		159	453			145		
Starvation Cap Reductn		0	0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0	0		0	0			0		
Storage Cap Reductn		0	0	0	0		0	0			0		
Reduced v/c Ratio		0.74	0.13	0.71	0.51		0.58	1.19			2.17		

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 19: Everett Street & Western Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	570	100	155	410	55	85	350	145	25	235	30
Future Volume (vph)	55	570	100	155	410	55	85	350	145	25	235	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes		1.00	0.97	1.00	1.00		1.00	0.99			0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		0.99	1.00			1.00	
Frt		1.00	0.85	1.00	0.98		1.00	0.96			0.99	
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)		1704	1410	1666	1721		1729	1739			1800	
Flt Permitted		0.92	1.00	0.23	1.00		0.35	1.00			0.31	
Satd. Flow (perm)		1579	1410	410	1721		637	1739			559	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	620	109	168	446	60	92	380	158	27	255	33
RTOR Reduction (vph)	0	0	38	0	4	0	0	19	0	0	5	0
Lane Group Flow (vph)	0	680	71	168	502	0	92	519	0	0	310	0
Confl. Peds. (#/hr)	9		12	12		9	15		14	14		15
Confl. Bikes (#/hr)						6						1
Heavy Vehicles (%)	11%	11%	11%	8%	8%	8%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			3			3	
Permitted Phases	1		1	1			3			3		
Actuated Green, G (s)		42.2	42.2	42.2	42.2		19.0	19.0			19.0	
Effective Green, g (s)		43.2	43.2	43.2	43.2		20.0	20.0			20.0	
Actuated g/C Ratio		0.54	0.54	0.54	0.54		0.25	0.25			0.25	
Clearance Time (s)		5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		852	761	221	929		159	434			139	
v/s Ratio Prot					0.29			0.30				
v/s Ratio Perm		c0.43	0.05	0.41			0.14				c0.55	
v/c Ratio		0.80	0.09	0.76	0.54		0.58	1.20			2.23	
Uniform Delay, d1		14.9	8.9	14.4	12.0		26.3	30.0			30.0	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2		7.7	0.2	21.5	2.3		3.1	108.9			575.4	
Delay (s)		22.6	9.2	35.9	14.2		29.5	138.9			605.4	
Level of Service		C	A	D	B		C	F			F	
Approach Delay (s)		20.7			19.6			122.9			605.4	
Approach LOS		C			B			F			F	

Intersection Summary			
HCM 2000 Control Delay	123.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	5	30	0	45	5	555	60	65	445	0
Future Vol, veh/h	1	0	5	30	0	45	5	555	60	65	445	0
Conflicting Peds, #/hr	1	0	1	1	0	1	16	0	9	9	0	16
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	25	25	25	4	4	4	3	3	3	4	4	4
Mvmt Flow	1	0	5	33	0	49	5	603	65	71	484	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1313	1329	501	1285	1297	646	500	0	0	677	0	0
Stage 1	641	641	-	656	656	-	-	-	-	-	-	-
Stage 2	672	688	-	629	641	-	-	-	-	-	-	-
Critical Hdwy	7.35	6.75	6.45	7.14	6.54	6.24	4.13	-	-	4.14	-	-
Critical Hdwy Stg 1	6.35	5.75	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.35	5.75	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.725	4.225	3.525	3.536	4.036	3.336	2.227	-	-	2.236	-	-
Pot Cap-1 Maneuver	121	139	527	140	160	468	1059	-	-	905	-	-
Stage 1	427	436	-	451	459	-	-	-	-	-	-	-
Stage 2	410	414	-	467	466	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	97	121	520	125	139	464	1058	-	-	904	-	-
Mov Cap-2 Maneuver	97	121	-	125	139	-	-	-	-	-	-	-
Stage 1	418	384	-	444	452	-	-	-	-	-	-	-
Stage 2	364	408	-	412	411	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.2	30.2	0.1	1.2
HCM LOS	C	D		

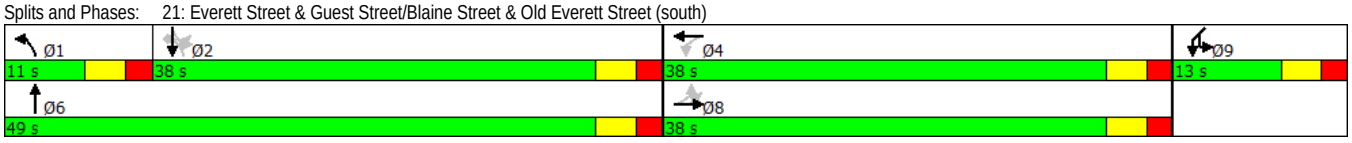
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1058	-	-	301	223	904	-	-
HCM Lane V/C Ratio	0.005	-	-	0.022	0.366	0.078	-	-
HCM Control Delay (s)	8.4	0	-	17.2	30.2	9.3	0	-
HCM Lane LOS	A	A	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.6	0.3	-	-

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL2	SBT	SBR	SWL	SWR
Lane Configurations																
Traffic Volume (vph)	75	55	0	50	1	0	1	1	60	525	70	50	265	165	25	95
Future Volume (vph)	75	55	0	50	1	0	1	1	60	525	70	50	265	165	25	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200		0	0		0		0		0			50	0	0
Storage Lanes		1		0	0		0		1		0			1	1	0
Taper Length (ft)		25			25				25						25	
Right Turn on Red				No				No						No		
Link Speed (mph)			30			30				30			30		30	
Link Distance (ft)			303			119				150			1204		367	
Travel Time (s)			6.9			2.7				3.4			27.4		8.3	
Confl. Peds. (#/hr)									14					14		
Confl. Bikes (#/hr)				1										2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)																
Lane Group Flow (vph)	82	0	114	0	0	3	0	0	65	647	0	0	342	179	152	0
Turn Type	Perm	Perm	NA		Perm	NA			D.P+P	NA		Perm	NA	Perm	Prot	
Protected Phases			8			4			1	6			2		9	
Permitted Phases	8	8			4				2			2		2		
Detector Phase	8	8	8		4	4			1	6		2	2	2	9	
Switch Phase																
Minimum Initial (s)	6.0	6.0	6.0		6.0	6.0			6.0	6.0		6.0	6.0	6.0	6.0	
Minimum Split (s)	21.0	21.0	21.0		21.0	21.0			11.0	21.0		21.0	21.0	21.0	11.0	
Total Split (s)	38.0	38.0	38.0		38.0	38.0			11.0	49.0		38.0	38.0	38.0	13.0	
Total Split (%)	38.0%	38.0%	38.0%		38.0%	38.0%			11.0%	49.0%		38.0%	38.0%	38.0%	13.0%	
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0			0.0			0.0	0.0			0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0			5.0			5.0	5.0			5.0	5.0	5.0	
Lead/Lag									Lead			Lag	Lag	Lag		
Lead-Lag Optimize?									Yes			Yes	Yes	Yes		
Recall Mode	Min	Min	Min		None	None			Min	Max		Max	Max	Max	None	
v/c Ratio	0.41		0.56			0.01			0.13	0.63			0.52	0.29	0.91	
Control Delay	36.3		41.7			27.7			9.6	15.8			21.0	17.3	88.7	
Queue Delay	0.0		0.0			0.0			0.0	0.0			0.0	0.0	0.0	
Total Delay	36.3		41.7			27.7			9.6	15.8			21.0	17.3	88.7	
Queue Length 50th (ft)	37		53			1			13	197			119	56	75	
Queue Length 95th (ft)	78		103			9			34	350			217	111	#196	
Internal Link Dist (ft)			223			39				70			1124		287	
Turn Bay Length (ft)	200													50		
Base Capacity (vph)	593		602			657			491	1028			660	623	167	
Starvation Cap Reductn	0		0			0			0	0			0	0	0	
Spillback Cap Reductn	0		0			0			0	0			0	0	0	
Storage Cap Reductn	0		0			0			0	0			0	0	0	
Reduced v/c Ratio	0.14		0.19			0.00			0.13	0.63			0.52	0.29	0.91	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 78.4
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Everett Street & Guest Street/Blaine Street & Old Everett Street (south)



Lane Group	SWR2
Lane Configurations	
Traffic Volume (vph)	20
Future Volume (vph)	20
Ideal Flow (vphpl)	1900
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	No
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.92
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL2	SBT	SBR	SWL	SWR
Lane Configurations																
Traffic Volume (vph)	75	55	0	50	1	0	1	1	60	525	70	50	265	165	25	95
Future Volume (vph)	75	55	0	50	1	0	1	1	60	525	70	50	265	165	25	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0			5.0	5.0			5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00			1.00			1.00	1.00			1.00	1.00	1.00	
Frpb, ped/bikes	1.00		0.99			1.00			1.00	1.00			1.00	0.94	1.00	
Flpb, ped/bikes	1.00		1.00			1.00			0.99	1.00			1.00	1.00	1.00	
Frt	1.00		0.93			0.91			1.00	0.98			1.00	0.85	0.89	
Flt Protected	0.95		0.97			0.98			0.95	1.00			0.99	1.00	0.99	
Satd. Flow (prot)	1770		1668			1667			1756	1830			1848	1496	1641	
Flt Permitted	0.76		0.83			0.92			0.46	1.00			0.84	1.00	0.99	
Satd. Flow (perm)	1408		1427			1559			852	1830			1567	1496	1641	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	60	0	54	1	0	1	1	65	571	76	54	288	179	27	103
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	82	0	114	0	0	3	0	0	65	647	0	0	342	179	152	0
Confl. Peds. (#/hr)									14					14		
Confl. Bikes (#/hr)				1										2		
Turn Type	Perm	Perm	NA		Perm	NA			D.P+P	NA		Perm	NA	Perm	Prot	
Protected Phases			8			4			1	6			2		9	
Permitted Phases	8	8			4				2			2		2		
Actuated Green, G (s)	11.3		11.3			11.3			39.1	44.1			33.1	33.1	8.0	
Effective Green, g (s)	11.3		11.3			11.3			39.1	44.1			33.1	33.1	8.0	
Actuated g/C Ratio	0.14		0.14			0.14			0.50	0.56			0.42	0.42	0.10	
Clearance Time (s)	5.0		5.0			5.0			5.0	5.0			5.0	5.0	5.0	
Vehicle Extension (s)	3.0		3.0			3.0			3.0	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	202		205			224			494	1029			661	631	167	
v/s Ratio Prot									0.01	c0.35					c0.09	
v/s Ratio Perm	0.06		c0.08			0.00			0.06				0.22	0.12		
v/c Ratio	0.41		0.56			0.01			0.13	0.63			0.52	0.28	0.91	
Uniform Delay, d1	30.5		31.2			28.8			10.4	11.6			16.7	14.9	34.8	
Progression Factor	1.00		1.00			1.00			1.00	1.00			1.00	1.00	1.00	
Incremental Delay, d2	1.3		3.2			0.0			0.1	2.9			2.9	1.1	44.5	
Delay (s)	31.8		34.5			28.8			10.6	14.5			19.6	16.0	79.3	
Level of Service	C		C			C			B	B			B	B	E	
Approach Delay (s)			33.4			28.8				14.2			18.4		79.3	
Approach LOS			C			C				B			B		E	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	78.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	20
Future Volume (vph)	20
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	22
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	655	0	2	340
Future Vol, veh/h	2	2	655	0	2	340
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	712	0	2	370

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1086	712	0	0	712	0
Stage 1	712	-	-	-	-	-
Stage 2	374	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	239	432	-	-	888	-
Stage 1	486	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	238	432	-	-	888	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	486	-	-	-	-	-
Stage 2	694	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.9	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	307	888	-
HCM Lane V/C Ratio	-	-	0.014	0.002	-
HCM Control Delay (s)	-	-	16.9	9.1	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	5	30	5	0	120	45	2	5	20	10	140	0	0	10	1
Future Vol, veh/h	0	5	30	5	0	120	45	2	5	20	10	140	0	0	10	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	9	9	9	5	5	5	5	2	0	0	0
Mvmt Flow	0	5	33	5	0	130	49	2	5	22	11	152	0	0	11	1
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	9.1	8.2	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	12%	72%	0%
Vol Thru, %	6%	75%	27%	91%
Vol Right, %	82%	12%	1%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	175	40	167	11
LT Vol	21	5	120	0
Through Vol	10	30	45	10
RT Vol	144	5	2	1
Lane Flow Rate	190	43	182	12
Geometry Grp	1	1	1	1
Degree of Util (X)	0.215	0.054	0.236	0.015
Departure Headway (Hd)	4.075	4.498	4.69	4.594
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	885	797	770	781
Service Time	2.087	2.519	2.69	2.613
HCM Lane V/C Ratio	0.215	0.054	0.236	0.015
HCM Control Delay	8.2	7.8	9.1	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.2	0.9	0

Intersection	
Intersection Delay, s/veh	16.5
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	145	300	25	0	15	305	10	0	15	70	30	0	5	15	35
Future Vol, veh/h	0	145	300	25	0	15	305	10	0	15	70	30	0	5	15	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	7	7	7	2	3	3	3	2	30	30	30
Mvmt Flow	0	158	326	27	0	16	332	11	0	16	76	33	0	5	16	38
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	20.1	14.2	10.9	10.4
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	31%	5%	9%
Vol Thru, %	61%	64%	92%	27%
Vol Right, %	26%	5%	3%	64%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	470	330	55
LT Vol	15	145	15	5
Through Vol	70	300	305	15
RT Vol	30	25	10	35
Lane Flow Rate	125	511	359	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.213	0.72	0.528	0.109
Departure Headway (Hd)	6.136	5.071	5.304	6.541
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	584	715	678	546
Service Time	4.192	3.105	3.343	4.604
HCM Lane V/C Ratio	0.214	0.715	0.529	0.11
HCM Control Delay	10.9	20.1	14.2	10.4
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	0.8	6.2	3.1	0.4

Intersection	
Intersection Delay, s/veh	26.1
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	105	180	35	0	65	255	130	0	90	195	85	0	25	45	10
Future Vol, veh/h	0	105	180	35	0	65	255	130	0	90	195	85	0	25	45	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	4	4	4	2	11	11	11	2	36	36	36
Mvmt Flow	0	114	196	38	0	71	277	141	0	98	212	92	0	27	49	11
Number of Lanes	0	0	1	0	0	1	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	27.1	30.3	22.4	15
HCM LOS	D	D	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	32%	0%	33%	100%	0%	31%
Vol Thru, %	68%	0%	56%	0%	66%	56%
Vol Right, %	0%	100%	11%	0%	34%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	285	85	320	65	385	80
LT Vol	90	0	105	65	0	25
Through Vol	195	0	180	0	255	45
RT Vol	0	85	35	0	130	10
Lane Flow Rate	310	92	348	71	418	87
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.677	0.179	0.715	0.152	0.811	0.225
Departure Headway (Hd)	7.862	6.98	7.396	7.73	6.975	9.331
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	458	512	487	463	519	387
Service Time	5.633	4.751	5.472	5.502	4.746	7.331
HCM Lane V/C Ratio	0.677	0.18	0.715	0.153	0.805	0.225
HCM Control Delay	25.7	11.3	27.1	11.9	33.4	15
HCM Lane LOS	D	B	D	B	D	B
HCM 95th-tile Q	5	0.6	5.7	0.5	7.8	0.9

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	60	225	300	30	5	35
Future Vol, veh/h	60	225	300	30	5	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	65	245	326	33	5	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	359	0	-	0	717	342
Stage 1	-	-	-	-	342	-
Stage 2	-	-	-	-	375	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1200	-	-	-	396	701
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	695	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1200	-	-	-	371	701
Mov Cap-2 Maneuver	-	-	-	-	371	-
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	651	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1200	-	-	-	631
HCM Lane V/C Ratio	0.054	-	-	-	0.069
HCM Control Delay (s)	8.2	0	-	-	11.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	160	10	5	270	45	25	5	20	50	5	35
Future Vol, veh/h	60	160	10	5	270	45	25	5	20	50	5	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	174	11	5	293	49	27	5	22	54	5	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	342	0	0	185	0	0	661	663	179	652	644	318
Stage 1	-	-	-	-	-	-	310	310	-	329	329	-
Stage 2	-	-	-	-	-	-	351	353	-	323	315	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1217	-	-	1390	-	-	376	382	864	381	391	723
Stage 1	-	-	-	-	-	-	700	659	-	684	646	-
Stage 2	-	-	-	-	-	-	666	631	-	689	656	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1217	-	-	1390	-	-	337	360	864	351	369	723
Mov Cap-2 Maneuver	-	-	-	-	-	-	337	360	-	351	369	-
Stage 1	-	-	-	-	-	-	663	624	-	647	643	-
Stage 2	-	-	-	-	-	-	623	628	-	630	621	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	0.1	14.1	15.5
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	450	1217	-	-	1390	-	-	440
HCM Lane V/C Ratio	0.121	0.054	-	-	0.004	-	-	0.222
HCM Control Delay (s)	14.1	8.1	-	-	7.6	0	-	15.5
HCM Lane LOS	B	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0	-	-	0.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	220	0	50	140	225	65	205	940	0	5	0	915	275
Future Volume (vph)	220	0	50	140	225	65	205	940	0	5	0	915	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	0		0		0		50
Storage Lanes	2		0	1		0	0		0		0		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		797			420			570				590	
Travel Time (s)		18.1			9.5			13.0				13.4	
Confl. Peds. (#/hr)	5		3	3		5	1		49	5	49		1
Confl. Bikes (#/hr)									20				5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	239	54	0	152	316	0	0	1245	0	0	0	1000	299
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Detector Phase	3			2	2		4	1 4		1		1	1 3
Switch Phase													
Minimum Initial (s)	6.0			6.0	6.0		6.0			10.0		10.0	
Minimum Split (s)	24.0			12.0	12.0		12.0			22.0		22.0	
Total Split (s)	24.0			22.0	22.0		22.0			31.0		31.0	
Total Split (%)	24.2%			22.2%	22.2%		22.2%			31.3%		31.3%	
Yellow Time (s)	4.0			4.0	4.0		4.0			4.0		4.0	
All-Red Time (s)	2.0			2.0	2.0		2.0			2.0		2.0	
Lost Time Adjust (s)	0.0			0.0	0.0							0.0	
Total Lost Time (s)	6.0			6.0	6.0							6.0	
Lead/Lag	Lead			Lag	Lag		Lag			Lead		Lead	
Lead-Lag Optimize?													
Recall Mode	None			None	None		Max			C-Max		C-Max	
v/c Ratio	0.62	0.23		0.53	1.05			0.97				1.45	0.46
Control Delay	48.5	0.0		45.7	106.6			38.5				242.5	9.6
Queue Delay	0.0	0.0		0.0	0.0			0.0				0.0	0.0
Total Delay	48.5	0.0		45.7	106.6			38.5				242.5	9.6
Queue Length 50th (ft)	75	0		89	~212			277				~455	43
Queue Length 95th (ft)	110	0		153	#383			#414				#583	69
Internal Link Dist (ft)		717			340			490				510	
Turn Bay Length (ft)				75									50
Base Capacity (vph)	618	231		286	300			1289				688	749
Starvation Cap Reductn	0	0		0	0			0				0	0
Spillback Cap Reductn	0	0		0	0			0				0	0
Storage Cap Reductn	0	0		0	0			0				0	0
Reduced v/c Ratio	0.39	0.23		0.53	1.05			0.97				1.45	0.40

Intersection Summary

Area Type: Other
Cycle Length: 99
Actuated Cycle Length: 99
Offset: 47 (47%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Market Street & Leo M. Birmingham Parkway & Lincoln Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	220	0	50	140	225	65	205	940	0	5	0	915	275
Future Volume (vph)	220	0	50	140	225	65	205	940	0	5	0	915	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	6.0			6.0				6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00			0.95				0.95	1.00
Frpb, ped/bikes	1.00	0.90		1.00	1.00			1.00				1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Frt	1.00	0.85		1.00	0.97			1.00				1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99				1.00	1.00
Satd. Flow (prot)	3400	0		1770	1791			3508				3538	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.54				0.77	1.00
Satd. Flow (perm)	3400	0		1770	1791			1923				2727	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	0	54	152	245	71	223	1022	0	5	0	995	299
RTOR Reduction (vph)	0	54	0	0	11	0	0	0	0	0	0	0	70
Lane Group Flow (vph)	239	0	0	152	305	0	0	1245	0	0	0	1000	229
Confl. Peds. (#/hr)	5		3	3		5	1		49	5	49		1
Confl. Bikes (#/hr)									20				5
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Actuated Green, G (s)	11.3	0.0		16.0	16.0			47.7				25.0	36.3
Effective Green, g (s)	11.3	0.0		16.0	16.0			47.7				25.0	36.3
Actuated g/C Ratio	0.11	0.00		0.16	0.16			0.48				0.25	0.37
Clearance Time (s)	6.0			6.0	6.0							6.0	
Vehicle Extension (s)	2.0			2.0	2.0							2.0	
Lane Grp Cap (vph)	388	0		286	289			1289				688	580
v/s Ratio Prot	c0.07			0.09	c0.17			c0.22					0.14
v/s Ratio Perm								0.24				c0.37	
v/c Ratio	0.62	0.00		0.53	1.06			0.97				1.45	0.40
Uniform Delay, d1	41.8	49.5		38.1	41.5			24.9				37.0	23.2
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Incremental Delay, d2	2.0	0.0		1.0	68.4			18.1				212.1	0.2
Delay (s)	43.8	49.5		39.0	109.9			43.0				249.1	23.4
Level of Service	D	D		D	F			D				F	C
Approach Delay (s)		44.9			86.8			43.0				197.2	
Approach LOS		D			F			D				F	

Intersection Summary			
HCM 2000 Control Delay	110.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	99.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	5	1	315	15	570	30	570	175	200	855	40
Future Volume (vph)	10	5	1	315	15	570	30	570	175	200	855	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			772			187			570	
Travel Time (s)		5.6			17.5			4.3			13.0	
Confl. Peds. (#/hr)	1		37	37		1	17		36	36		17
Confl. Bikes (#/hr)						1			2			7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	358	620	0	843	0	0	1189	0
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Detector Phase	2	2		2	2	2 3	1	1		3	1 3	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		6.0		
Minimum Split (s)	21.0	21.0		21.0	21.0		22.0	22.0		11.0		
Total Split (s)	21.0	21.0		21.0	21.0		48.0	48.0		21.0		
Total Split (%)	23.3%	23.3%		23.3%	23.3%		53.3%	53.3%		23.3%		
Yellow Time (s)	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		
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead				
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		None		
v/c Ratio		0.09			1.50	0.82		0.59			0.74	
Control Delay		30.6			274.6	27.5		17.4			9.4	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		30.6			274.6	27.5		17.4			9.4	
Queue Length 50th (ft)		8			~285	229		161			131	
Queue Length 95th (ft)		26			#454	#431		220			168	
Internal Link Dist (ft)		167			692			107			490	
Turn Bay Length (ft)						125						
Base Capacity (vph)		181			239	757		1424			1607	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.09			1.50	0.82		0.59			0.74	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 85 (94%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 2: Market Street & Stockyard Driveway/Guest Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	5	1	315	15	570	30	570	175	200	855	40
Future Volume (vph)	10	5	1	315	15	570	30	570	175	200	855	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	5.0		4.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	1.00		0.97			1.00	
Flpb, ped/bikes		1.00			0.93	1.00		1.00			1.00	
Frt		0.99			1.00	0.85		0.97			0.99	
Flt Protected		0.97			0.95	1.00		1.00			0.99	
Satd. Flow (prot)		1817			1676	1599		3292			3472	
Flt Permitted		0.51			0.72	1.00		0.87			0.59	
Satd. Flow (perm)		957			1270	1599		2853			2065	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	5	1	342	16	620	33	620	190	217	929	43
RTOR Reduction (vph)	0	1	0	0	0	100	0	30	0	0	3	0
Lane Group Flow (vph)	0	16	0	0	358	520	0	813	0	0	1186	0
Confl. Peds. (#/hr)	1		37	37		1	17		36	36		17
Confl. Bikes (#/hr)						1			2			7
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Actuated Green, G (s)		16.0			16.0	37.0		43.0			59.0	
Effective Green, g (s)		17.0			17.0	37.0		44.0			59.0	
Actuated g/C Ratio		0.19			0.19	0.41		0.49			0.66	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		180			239	657		1394			1603	
v/s Ratio Prot						c0.33					0.13	
v/s Ratio Perm		0.02			c0.28			0.28			c0.35	
v/c Ratio		0.09			1.50	0.79		0.58			0.74	
Uniform Delay, d1		30.1			36.5	23.1		16.4			10.4	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.1			244.8	6.1		1.8			1.6	
Delay (s)		30.2			281.3	29.2		18.2			11.9	
Level of Service		C			F	C		B			B	
Approach Delay (s)		30.2			121.5			18.2			11.9	
Approach LOS		C			F			B			B	

Intersection Summary			
HCM 2000 Control Delay	49.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	89.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	0	770	1170	0
Future Vol, veh/h	5	15	0	770	1170	0
Conflicting Peds, #/hr	9	0	20	0	0	20
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	3	3	1	1
Mvmt Flow	5	16	0	837	1272	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1699	636	-	0	-	0
Stage 1	1272	-	-	-	-	-
Stage 2	427	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	-	-
Pot Cap-1 Maneuver	81	413	0	-	-	0
Stage 1	221	-	0	-	-	0
Stage 2	617	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	81	413	-	-	-	-
Mov Cap-2 Maneuver	81	-	-	-	-	-
Stage 1	221	-	-	-	-	-
Stage 2	617	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.7	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	204	-
HCM Lane V/C Ratio	-	0.107	-
HCM Control Delay (s)	-	24.7	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.4	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	70	405	55	165	450	125	45	575	155	145	900	140	
Future Volume (vph)	70	405	55	165	450	125	45	575	155	145	900	140	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		200	0		200	0		100	0		0	
Storage Lanes	0		1	0		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		324			332			559			323		
Travel Time (s)		7.4			7.5			12.7			7.3		
Confl. Peds. (#/hr)	12		34	34		12	12		46	46		12	
Confl. Bikes (#/hr)						4						2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	576	0	0	804	0	0	842	0	0	1288	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		5.0			1.0
Minimum Split (s)	15.0	15.0		15.0	15.0		15.0	15.0		10.0			20.0
Total Split (s)	33.0	33.0		33.0	33.0		36.0	36.0		11.0			20.0
Total Split (%)	33.0%	33.0%		33.0%	33.0%		36.0%	36.0%		11.0%			20%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0			2.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.0			2.0
Lost Time Adjust (s)		0.0			0.0			0.0					
Total Lost Time (s)		5.0			5.0			5.0					
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?													
Recall Mode	Max	Max		Max	Max		C-Max	C-Max		None			None
v/c Ratio		0.85			1.15			1.43			1.60		
Control Delay		46.5			112.2			223.1			299.8		
Queue Delay		0.0			0.0			0.0			0.6		
Total Delay		46.5			112.2			223.1			300.5		
Queue Length 50th (ft)		187			~284			~373			~624		
Queue Length 95th (ft)		#303			#456			m#251			#761		
Internal Link Dist (ft)		244			252			479			243		
Turn Bay Length (ft)													
Base Capacity (vph)		679			697			589			806		
Starvation Cap Reductn		0			0			0			0		
Spillback Cap Reductn		0			0			0			82		
Storage Cap Reductn		0			0			0			0		
Reduced v/c Ratio		0.85			1.15			1.43			1.78		

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Market Street & North Beacon Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	405	55	165	450	125	45	575	155	145	900	140
Future Volume (vph)	70	405	55	165	450	125	45	575	155	145	900	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.97			0.98	
Flt Protected		0.99			0.99			1.00			0.99	
Satd. Flow (prot)		3444			3387			3384			3478	
Flt Permitted		0.61			0.62			0.54			0.54	
Satd. Flow (perm)		2102			2130			1828			1894	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	440	60	179	489	136	49	625	168	158	978	152
RTOR Reduction (vph)	0	8	0	0	16	0	0	22	0	0	11	0
Lane Group Flow (vph)	0	568	0	0	788	0	0	820	0	0	1277	0
Confl. Peds. (#/hr)	12		34	34		12	12		46	46		12
Confl. Bikes (#/hr)						4						2
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		32.0			32.0			30.2			37.2	
Effective Green, g (s)		32.0			32.0			30.2			37.2	
Actuated g/C Ratio		0.32			0.32			0.30			0.37	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			4.0				
Lane Grp Cap (vph)		672			681			552			815	
v/s Ratio Prot											c0.11	
v/s Ratio Perm		0.27			c0.37			0.45			c0.47	
v/c Ratio		0.85			1.16			1.48			1.57	
Uniform Delay, d1		31.7			34.0			34.9			31.4	
Progression Factor		1.00			0.88			1.02			1.00	
Incremental Delay, d2		12.4			83.2			219.1			261.2	
Delay (s)		44.1			112.9			254.6			292.6	
Level of Service		D			F			F			F	
Approach Delay (s)		44.1			112.9			254.6			292.6	
Approach LOS		D			F			F			F	

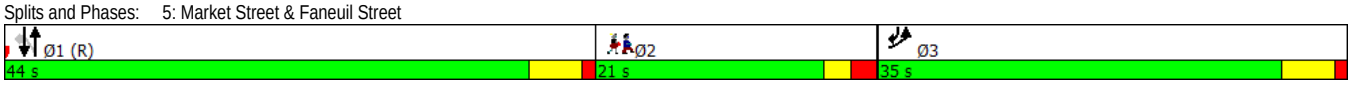
Intersection Summary			
HCM 2000 Control Delay	201.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	110.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	210	55	50	655	825	370	
Future Volume (vph)	210	55	50	655	825	370	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Right Turn on Red		Yes				Yes	
Link Speed (mph)	30			30	30		
Link Distance (ft)	420			1276	559		
Travel Time (s)	9.5			29.0	12.7		
Confl. Peds. (#/hr)	27	26	16			16	
Confl. Bikes (#/hr)		2					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	288	0	0	766	897	402	
Turn Type	Prot		Perm	NA	NA	pm+ov	
Protected Phases	3			1	1	3	2
Permitted Phases			1			1	
Detector Phase	3		1	1	1	3	
Switch Phase							
Minimum Initial (s)	6.0		10.0	10.0	10.0	6.0	7.0
Minimum Split (s)	11.0		15.0	15.0	15.0	11.0	21.0
Total Split (s)	35.0		44.0	44.0	44.0	35.0	21.0
Total Split (%)	35.0%		44.0%	44.0%	44.0%	35.0%	21%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	2.0
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	Lead	Lead		Lag
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max	None	None
v/c Ratio	0.79			1.49	0.85	0.31	
Control Delay	51.3			248.4	14.1	0.2	
Queue Delay	0.0			0.0	3.6	0.0	
Total Delay	51.3			248.4	17.7	0.2	
Queue Length 50th (ft)	167			~704	267	0	
Queue Length 95th (ft)	237			m#336	m221	m0	
Internal Link Dist (ft)	340			1196	479		
Turn Bay Length (ft)							
Base Capacity (vph)	525			514	1060	1342	
Starvation Cap Reductn	0			0	97	0	
Spillback Cap Reductn	0			0	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.55			1.49	0.93	0.30	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 7 (7%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Market Street & Faneuil Street



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	210	55	50	655	825	370
Future Volume (vph)	210	55	50	655	825	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frpb, ped/bikes	0.98			1.00	1.00	0.98
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.97			1.00	1.00	0.85
Flt Protected	0.96			1.00	1.00	1.00
Satd. Flow (prot)	1710			1856	1863	1548
Flt Permitted	0.96			0.49	1.00	1.00
Satd. Flow (perm)	1710			904	1863	1548
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	228	60	54	712	897	402
RTOR Reduction (vph)	11	0	0	0	0	97
Lane Group Flow (vph)	277	0	0	766	897	305
Confl. Peds. (#/hr)	27	26	16			16
Confl. Bikes (#/hr)		2				
Turn Type	Prot		Perm	NA	NA	pm+ov
Protected Phases	3			1	1	3
Permitted Phases			1			1
Actuated Green, G (s)	20.5			55.3	55.3	75.8
Effective Green, g (s)	20.5			55.3	55.3	75.8
Actuated g/C Ratio	0.20			0.55	0.55	0.76
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	2.0			2.0	2.0	2.0
Lane Grp Cap (vph)	350			499	1030	1250
v/s Ratio Prot	c0.16				0.48	0.05
v/s Ratio Perm				c0.85		0.15
v/c Ratio	0.79			1.54	0.87	0.24
Uniform Delay, d1	37.7			22.4	19.3	3.6
Progression Factor	1.00			1.44	0.37	0.38
Incremental Delay, d2	10.8			241.7	1.0	0.0
Delay (s)	48.5			273.8	8.3	1.4
Level of Service	D			F	A	A
Approach Delay (s)	48.5			273.8	6.1	
Approach LOS	D			F	A	

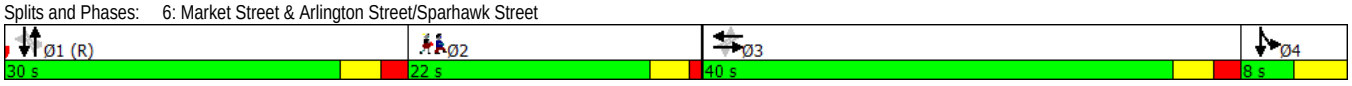
Intersection Summary			
HCM 2000 Control Delay	98.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		

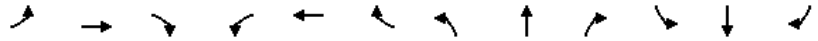
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	70	265	75	25	295	140	15	485	5	80	695	20	
Future Volume (vph)	70	265	75	25	295	140	15	485	5	80	695	20	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	0		0	75		0	
Storage Lanes	0		0	0		0	0		0	1		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		448			531			497			1276		
Travel Time (s)		10.2			12.1			11.3			29.0		
Confl. Peds. (#/hr)	17		10	10		17	28		38	38		28	
Confl. Bikes (#/hr)			3			9			8			4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	446	0	0	500	0	0	548	0	87	777	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		4.0			7.0
Minimum Split (s)	13.0	13.0		13.0	13.0		15.0	15.0		8.0			22.0
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		8.0			22.0
Total Split (%)	40.0%	40.0%		40.0%	40.0%		30.0%	30.0%		8.0%			22%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		4.0			3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0			1.0
Lost Time Adjust (s)		0.0			0.0			0.0		0.0			
Total Lost Time (s)		5.0			5.0			5.0		4.0			
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes			Yes
Recall Mode	None	None		None	None		C-Max	C-Max		Max			None
v/c Ratio		0.98			0.83			3.06		0.37	1.11		
Control Delay		70.5			41.9			959.5		44.3	102.1		
Queue Delay		0.0			0.0			0.0		0.0	0.0		
Total Delay		70.5			41.9			959.5		44.3	102.1		
Queue Length 50th (ft)		270			274			~611		57	~653		
Queue Length 95th (ft)		#475			#448			#815		m69	m#847		
Internal Link Dist (ft)		368			451			417			1196		
Turn Bay Length (ft)										75			
Base Capacity (vph)		462			612			179		236	703		
Starvation Cap Reductn		0			0			0		0	0		
Spillback Cap Reductn		0			0			0		0	0		
Storage Cap Reductn		0			0			0		0	0		
Reduced v/c Ratio		0.97			0.82			3.06		0.37	1.11		

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 6: Market Street & Arlington Street/Sparhawk Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	265	75	25	295	140	15	485	5	80	695	20
Future Volume (vph)	70	265	75	25	295	140	15	485	5	80	695	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		4.0	5.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.99			0.98			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.98			0.96			1.00		1.00	1.00	
Flt Protected		0.99			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1804			1769			1837		1766	1851	
Flt Permitted		0.72			0.96			0.39		0.17	1.00	
Satd. Flow (perm)		1301			1706			718		307	1851	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	288	82	27	321	152	16	527	5	87	755	22
RTOR Reduction (vph)	0	8	0	0	16	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	438	0	0	484	0	0	548	0	87	776	0
Confl. Peds. (#/hr)	17		10	10		17	28		38	38		28
Confl. Bikes (#/hr)			3			9			8			4
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		34.5			34.5			24.2		33.1	37.1	
Effective Green, g (s)		34.5			34.5			24.2		33.1	33.1	
Actuated g/C Ratio		0.34			0.34			0.24		0.33	0.33	
Clearance Time (s)		5.0			5.0			5.0		4.0		
Vehicle Extension (s)		2.0			2.0			0.2		2.0		
Lane Grp Cap (vph)		448			588			173		231	612	
v/s Ratio Prot										0.03	c0.42	
v/s Ratio Perm		c0.34			0.28			c0.76		0.09		
v/c Ratio		0.98			0.82			3.17		0.38	1.27	
Uniform Delay, d1		32.4			30.0			37.9		25.7	33.5	
Progression Factor		1.00			1.00			1.00		1.70	1.51	
Incremental Delay, d2		36.2			8.7			990.4		2.5	127.4	
Delay (s)		68.6			38.7			1028.3		46.1	177.8	
Level of Service		E			D			F		D	F	
Approach Delay (s)		68.6			38.7			1028.3			164.6	
Approach LOS		E			D			F			F	

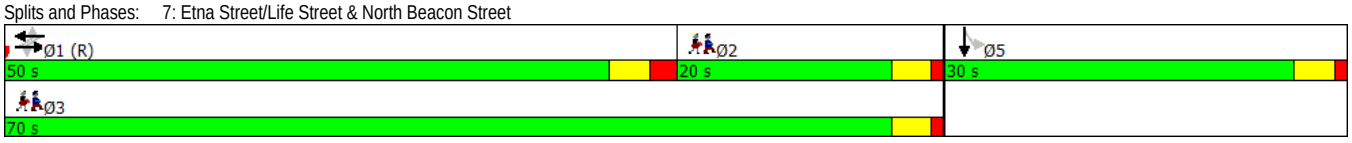
Intersection Summary			
HCM 2000 Control Delay	320.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

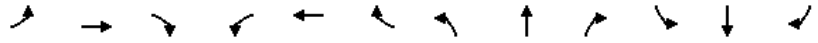
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3
Lane Configurations														
Traffic Volume (vph)	35	670	15	15	660	40	0	0	0	120	15	95		
Future Volume (vph)	35	670	15	15	660	40	0	0	0	120	15	95		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes			Yes		
Link Speed (mph)		30			30			30			30			
Link Distance (ft)		458			334			278			631			
Travel Time (s)		10.4			7.6			6.3			14.3			
Confl. Peds. (#/hr)	23		51	51		23	33		3	3		33		
Confl. Bikes (#/hr)			4			6								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	0%	0%	0%		
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	782	0	0	776	0	0	0	0	0	249	0		
Turn Type	Perm	NA		Perm	NA					Perm	NA			
Protected Phases		1			1						5		2	3
Permitted Phases	1			1						5				
Detector Phase	1	1		1	1					5	5			
Switch Phase														
Minimum Initial (s)	10.0	10.0		10.0	10.0					7.0	7.0		7.0	8.0
Minimum Split (s)	15.0	15.0		15.0	15.0					11.0	11.0		20.0	19.0
Total Split (s)	50.0	50.0		50.0	50.0					30.0	30.0		20.0	70.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%					30.0%	30.0%		20%	70%
Yellow Time (s)	3.0	3.0		3.0	3.0					3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0					1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0			0.0						0.0			
Total Lost Time (s)		5.0			5.0						4.0			
Lead/Lag	Lead	Lead		Lead	Lead								Lag	
Lead-Lag Optimize?														
Recall Mode	C-Max	C-Max		C-Max	C-Max					None	None		None	Ped
v/c Ratio		0.68			0.65						0.78			
Control Delay		21.0			18.4						50.0			
Queue Delay		0.0			0.0						0.0			
Total Delay		21.0			18.4						50.0			
Queue Length 50th (ft)		289			192						133			
Queue Length 95th (ft)		m417			#701						202			
Internal Link Dist (ft)		378			254			198			551			
Turn Bay Length (ft)														
Base Capacity (vph)		1156			1188						463			
Starvation Cap Reductn		0			0						0			
Spillback Cap Reductn		0			0						0			
Storage Cap Reductn		0			0						0			
Reduced v/c Ratio		0.68			0.65						0.54			

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 39 (39%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Etna Street/Life Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	670	15	15	660	40	0	0	0	120	15	95
Future Volume (vph)	35	670	15	15	660	40	0	0	0	120	15	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			1.00						0.95	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		1.00			0.99						0.94	
Flt Protected		1.00			1.00						0.97	
Satd. Flow (prot)		1869			1842						1659	
Flt Permitted		0.94			0.98						0.97	
Satd. Flow (perm)		1762			1808						1659	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	728	16	16	717	43	0	0	0	130	16	103
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	28	0
Lane Group Flow (vph)	0	782	0	0	775	0	0	0	0	0	221	0
Confl. Peds. (#/hr)	23		51	51		23	33		3	3		33
Confl. Bikes (#/hr)			4			6						
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						5	
Permitted Phases	1			1						5		
Actuated Green, G (s)		63.2			63.2						17.4	
Effective Green, g (s)		63.2			63.2						17.4	
Actuated g/C Ratio		0.63			0.63						0.17	
Clearance Time (s)		5.0			5.0						4.0	
Vehicle Extension (s)		2.0			2.0						2.0	
Lane Grp Cap (vph)		1113			1142						288	
v/s Ratio Prot												
v/s Ratio Perm		c0.44			0.43						0.13	
v/c Ratio		0.70			0.68						0.77	
Uniform Delay, d1		12.2			11.9						39.4	
Progression Factor		1.35			1.00						1.00	
Incremental Delay, d2		0.3			3.2						10.5	
Delay (s)		16.7			15.1						49.8	
Level of Service		B			B						D	
Approach Delay (s)		16.7			15.1			0.0			49.8	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	1	700	105	165	725	0	0	0	0	5	2	5
Future Vol, veh/h	1	700	105	165	725	0	0	0	0	5	2	5
Conflicting Peds, #/hr	26	0	35	35	0	26	0	0	11	11	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	2	2	2	0	0	0	0	0	0
Mvmt Flow	1	761	114	179	788	0	0	0	0	5	2	5

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	814	0	0	910	0	0				2004	2085	814
Stage 1	-	-	-	-	-	-				1173	1173	-
Stage 2	-	-	-	-	-	-				831	912	-
Critical Hdwy	4.11	-	-	4.12	-	-				6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-				5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.4	5.5	-
Follow-up Hdwy	2.209	-	-	2.218	-	-				3.5	4	3.3
Pot Cap-1 Maneuver	817	-	-	748	-	-				66	54	381
Stage 1	-	-	-	-	-	-				297	268	-
Stage 2	-	-	-	-	-	-				431	355	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	817	-	-	741	-	-				36	0	373
Mov Cap-2 Maneuver	-	-	-	-	-	-				36	0	-
Stage 1	-	-	-	-	-	-				166	0	-
Stage 2	-	-	-	-	-	-				421	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	2.1	72.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	817	-	-	741	-	-	66
HCM Lane V/C Ratio	0.001	-	-	0.242	-	-	0.198
HCM Control Delay (s)	9.4	0	-	11.4	0	-	72.5
HCM Lane LOS	A	A	-	B	A	-	F
HCM 95th %tile Q(veh)	0	-	-	0.9	-	-	0.7

Intersection	
Int Delay, s/veh	26.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	700	0	0	795	5	60	5	115	15	0	35
Future Vol, veh/h	5	700	0	0	795	5	60	5	115	15	0	35
Conflicting Peds, #/hr	25	0	31	31	0	25	0	0	3	3	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	761	0	0	864	5	65	5	125	16	0	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	895	0	-	-	-	0	1658	1667	764	1732	1664	892
Stage 1	-	-	-	-	-	-	772	772	-	892	892	-
Stage 2	-	-	-	-	-	-	886	895	-	840	772	-
Critical Hdwy	4.11	-	-	-	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.209	-	-	-	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	762	-	0	0	-	-	78	96	404	69	97	341
Stage 1	-	-	0	0	-	-	392	409	-	337	360	-
Stage 2	-	-	0	0	-	-	339	359	-	360	409	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	762	-	-	-	-	-	69	93	403	44	94	334
Mov Cap-2 Maneuver	-	-	-	-	-	-	69	93	-	44	94	-
Stage 1	-	-	-	-	-	-	388	405	-	326	353	-
Stage 2	-	-	-	-	-	-	300	352	-	242	405	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	238.3	64.3
HCM LOS			F	F

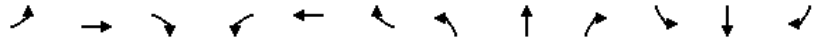
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	149	762	-	-	-	112
HCM Lane V/C Ratio	1.313	0.007	-	-	-	0.485
HCM Control Delay (s)	238.3	9.8	0	-	-	64.3
HCM Lane LOS	F	A	A	-	-	F
HCM 95th %tile Q(veh)	12	0	-	-	-	2.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	235	595	0	0	485	190	0	0	0	330	0	295	
Future Volume (vph)	235	595	0	0	485	190	0	0	0	330	0	295	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12	
Storage Length (ft)	100		0	0		0	0		0	0		150	
Storage Lanes	1		0	0		1	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		456			284			205			781		
Travel Time (s)		10.4			6.5			4.7			17.8		
Confl. Peds. (#/hr)	21					21	11		1	1		11	
Confl. Bikes (#/hr)			4			5							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	255	647	0	0	527	207	0	0	0	359	0	321	
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm	
Protected Phases	5	1 5			1		4	4		3			2
Permitted Phases	1 5			1		1						3	
Detector Phase	5	1 5		1	1	1	4	4		3		3	
Switch Phase													
Minimum Initial (s)	4.0			12.0	12.0	12.0	3.0	3.0		5.0		5.0	4.0
Minimum Split (s)	8.0			16.0	16.0	16.0	7.0	7.0		9.0		9.0	17.0
Total Split (s)	11.0			42.0	42.0	42.0	15.0	15.0		25.0		25.0	17.0
Total Split (%)	10.0%			38.2%	38.2%	38.2%	13.6%	13.6%		22.7%		22.7%	15%
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0
All-Red Time (s)	1.0			1.0	1.0	1.0	1.0	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	-1.0				-1.0	-1.0		-1.0		0.0		-1.0	
Total Lost Time (s)	3.0				3.0	3.0		3.0		4.0		3.0	
Lead/Lag				Lead	Lead	Lead	Lag	Lag		Lead		Lead	Lag
Lead-Lag Optimize?													
Recall Mode	None			C-Max	C-Max	C-Max	None	None		None		None	None
v/c Ratio	0.53	0.59			0.83	0.32				0.83		0.56	
Control Delay	20.9	15.3			48.4	10.4				58.0		13.2	
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0	
Total Delay	20.9	15.3			48.4	10.4				58.0		13.2	
Queue Length 50th (ft)	81	226			297	36				229		34	
Queue Length 95th (ft)	183	396			m#498	m56				#463		134	
Internal Link Dist (ft)		376			204			125			701		
Turn Bay Length (ft)	100											150	
Base Capacity (vph)	480	1104			632	640				434		575	
Starvation Cap Reductn	0	0			0	0				0		0	
Spillback Cap Reductn	0	0			0	0				0		0	
Storage Cap Reductn	0	0			0	0				0		0	
Reduced v/c Ratio	0.53	0.59			0.83	0.32				0.83		0.56	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 109 (99%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Wingate Driveway/Arthur Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	595	0	0	485	190	0	0	0	330	0	295
Future Volume (vph)	235	595	0	0	485	190	0	0	0	330	0	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			3.0	3.0				4.0		3.0
Lane Util. Factor	1.00	1.00			1.00	1.00				1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.94				1.00		0.96
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1667	1756			1739	1396				1770		1518
Flt Permitted	0.13	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	232	1756			1739	1396				1770		1518
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	255	647	0	0	527	207	0	0	0	359	0	321
RTOR Reduction (vph)	0	0	0	0	0	136	0	0	0	0	0	191
Lane Group Flow (vph)	255	647	0	0	527	71	0	0	0	359	0	130
Confl. Peds. (#/hr)	21					21	11		1	1		11
Confl. Bikes (#/hr)			4			5						
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm
Protected Phases	5	1 5			1		4	4		3		
Permitted Phases	1 5			1		1						3
Actuated Green, G (s)	61.8	65.8			36.6	36.6				27.0		27.0
Effective Green, g (s)	63.8	66.8			37.6	37.6				27.0		28.0
Actuated g/C Ratio	0.58	0.61			0.34	0.34				0.25		0.25
Clearance Time (s)	4.0				4.0	4.0				4.0		4.0
Vehicle Extension (s)	2.0				4.0	4.0				2.0		2.0
Lane Grp Cap (vph)	476	1066			594	477				434		386
v/s Ratio Prot	0.13	c0.37			c0.30					c0.20		
v/s Ratio Perm	0.18					0.05						0.09
v/c Ratio	0.54	0.61			0.89	0.15				0.83		0.34
Uniform Delay, d1	17.9	13.4			34.2	25.1				39.3		33.4
Progression Factor	1.00	1.00			1.21	2.65				1.00		1.00
Incremental Delay, d2	0.6	0.7			12.8	0.4				11.7		0.2
Delay (s)	18.5	14.1			54.2	67.0				51.0		33.6
Level of Service	B	B			D	E				D		C
Approach Delay (s)		15.3			57.8			0.0			42.8	
Approach LOS		B			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	36.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑↑	↱	
Traffic Vol, veh/h	925	0	0	665	10	25
Future Vol, veh/h	925	0	0	665	10	25
Conflicting Peds, #/hr	0	55	55	0	0	11
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	3	3
Mvmt Flow	1005	0	0	723	11	27

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	1366	1016
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	361	-
Critical Hdwy	-	-	-	-	6.645	6.245
Critical Hdwy Stg 1	-	-	-	-	5.445	-
Critical Hdwy Stg 2	-	-	-	-	5.845	-
Follow-up Hdwy	-	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	0	0	-	149	286
Stage 1	-	0	0	-	351	-
Stage 2	-	0	0	-	674	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	149	283
Mov Cap-2 Maneuver	-	-	-	-	149	-
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	674	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	24.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	225	-	-
HCM Lane V/C Ratio	0.169	-	-
HCM Control Delay (s)	24.2	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.6	-	-

Intersection	
Int Delay, s/veh	33.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	825	125	130	625	40	140
Future Vol, veh/h	825	125	130	625	40	140
Conflicting Peds, #/hr	0	44	44	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	897	136	141	679	43	152

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1077	0	1971	1009
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	962	-
Critical Hdwy	-	-	4.13	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.227	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	644	-	69	292
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	371	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	644	-	~ 43	281
Mov Cap-2 Maneuver	-	-	-	-	~ 43	-
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	240	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	$ 346.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	126	-	-	644	-
HCM Lane V/C Ratio	1.553	-	-	0.219	-
HCM Control Delay (s)	$ 346.2	-	-	12.2	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	14	-	-	0.8	-

Notes

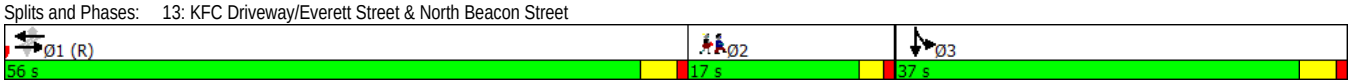
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

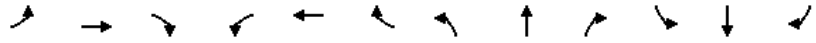
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	205	660	5	5	605	295	0	0	0	355	0	170	
Future Volume (vph)	205	660	5	5	605	295	0	0	0	355	0	170	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		446			477			138			518		
Travel Time (s)		10.1			10.8			3.1			11.8		
Confl. Peds. (#/hr)	29		61	61		29	26		26	26		26	
Confl. Bikes (#/hr)			1			6							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	945	0	0	663	321	0	0	0	0	571	0	
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA		
Protected Phases		1			1					3	3		2
Permitted Phases	1			1		1							
Detector Phase	1	1		1	1	1				3	3		
Switch Phase													
Minimum Initial (s)	15.0	15.0		15.0	15.0	15.0				7.0	7.0		7.0
Minimum Split (s)	19.0	19.0		19.0	19.0	19.0				11.0	11.0		17.0
Total Split (s)	56.0	56.0		56.0	56.0	56.0				37.0	37.0		17.0
Total Split (%)	50.9%	50.9%		50.9%	50.9%	50.9%				33.6%	33.6%		15%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0		2.0
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)		4.0			4.0	4.0					4.0		
Lead/Lag	Lead	Lead		Lead	Lead	Lead							Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max				Max	Max		None
v/c Ratio		1.52dl			0.75	0.36					0.89		
Control Delay		82.4			11.3	0.8					50.5		
Queue Delay		0.0			51.8	0.0					0.0		
Total Delay		82.4			63.1	0.8					50.5		
Queue Length 50th (ft)		~398			285	1					~423		
Queue Length 95th (ft)		#531			m117	m0					#641		
Internal Link Dist (ft)		366			397			58			438		
Turn Bay Length (ft)													
Base Capacity (vph)		874			884	884					642		
Starvation Cap Reductn		0			304	0					0		
Spillback Cap Reductn		0			0	0					0		
Storage Cap Reductn		0			0	0					0		
Reduced v/c Ratio		1.08			1.14	0.36					0.89		

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 109 (99%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: KFC Driveway/Everett Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	660	5	5	605	295	0	0	0	355	0	170
Future Volume (vph)	205	660	5	5	605	295	0	0	0	355	0	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0					4.0	
Lane Util. Factor		0.95			1.00	1.00					1.00	
Frpb, ped/bikes		1.00			1.00	0.94					0.98	
Flpb, ped/bikes		1.00			1.00	1.00					1.00	
Frt		1.00			1.00	0.85					0.96	
Flt Protected		0.99			1.00	1.00					0.97	
Satd. Flow (prot)		3521			1880	1510					1709	
Flt Permitted		0.52			0.99	1.00					0.97	
Satd. Flow (perm)		1848			1869	1510					1709	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	717	5	5	658	321	0	0	0	386	0	185
RTOR Reduction (vph)	0	1	0	0	0	173	0	0	0	0	26	0
Lane Group Flow (vph)	0	944	0	0	663	148	0	0	0	0	545	0
Confl. Peds. (#/hr)	29		61	61		29	26		26	26		26
Confl. Bikes (#/hr)			1			6						
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA	
Protected Phases		1			1					3	3	
Permitted Phases	1			1		1						
Actuated Green, G (s)		50.8			50.8	50.8					39.8	
Effective Green, g (s)		50.8			50.8	50.8					39.8	
Actuated g/C Ratio		0.46			0.46	0.46					0.36	
Clearance Time (s)		4.0			4.0	4.0					4.0	
Vehicle Extension (s)		2.0			2.0	2.0					2.0	
Lane Grp Cap (vph)		853			863	697					618	
v/s Ratio Prot											c0.32	
v/s Ratio Perm		c0.51			0.35	0.10						
v/c Ratio		1.52dl			0.77	0.21					0.88	
Uniform Delay, d1		29.6			24.7	17.7					32.9	
Progression Factor		1.02			0.41	0.26					1.00	
Incremental Delay, d2		62.4			1.6	0.2					16.7	
Delay (s)		92.7			11.6	4.7					49.6	
Level of Service		F			B	A					D	
Approach Delay (s)		92.7			9.4			0.0			49.6	
Approach LOS		F			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	50.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	315	640	10	15	170	615	70	0	340	190	155	450	215
Future Volume (vph)	315	640	10	15	170	615	70	0	340	190	155	450	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		420		0	0		150	0		75
Storage Lanes	0		0		1		0	0		1	0		1
Taper Length (ft)	25				25			25			25		
Right Turn on Red			Yes				Yes			Yes			Yes
Link Speed (mph)		30				30			30			30	
Link Distance (ft)		477				1053			361			234	
Travel Time (s)		10.8				23.9			8.2			5.3	
Confl. Peds. (#/hr)	88		53	57	53		88	86		57	57		86
Confl. Bikes (#/hr)			5				22			6			25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	7%	7%	7%	3%	3%	3%
Shared Lane Traffic (%)					10%								
Lane Group Flow (vph)	0	1049	0	0	182	763	0	0	370	207	0	657	234
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Detector Phase	3	3		2	2	2			1	1	4	1 4	1
Switch Phase													
Minimum Initial (s)	8.0	8.0		10.0	10.0	10.0			10.0	10.0	4.0		10.0
Minimum Split (s)	26.0	26.0		27.0	27.0	27.0			24.0	24.0	10.0		24.0
Total Split (s)	37.0	37.0		30.0	30.0	30.0			32.0	32.0	11.0		32.0
Total Split (%)	33.6%	33.6%		27.3%	27.3%	27.3%			29.1%	29.1%	10.0%		29.1%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0			4.0	4.0	3.0		4.0
All-Red Time (s)	6.0	6.0		6.0	6.0	6.0			3.0	3.0	3.0		3.0
Lost Time Adjust (s)		0.0			0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag			Lead	Lead	Lag		Lead
Lead-Lag Optimize?													
Recall Mode	None	None		Max	Max	Max			C-Max	C-Max	None		C-Max
v/c Ratio		1.23			0.63	1.29			0.48	0.43		0.97	0.51
Control Delay		135.2			52.7	181.3			39.4	6.5		73.3	23.9
Queue Delay		0.0			0.0	0.5			0.0	0.0		0.0	0.0
Total Delay		135.2			52.7	181.8			39.4	6.5		73.3	23.9
Queue Length 50th (ft)		~479			131	~378			120	0		261	93
Queue Length 95th (ft)		m#475			216	#508			167	47		#375	m150
Internal Link Dist (ft)		397				973			281			154	
Turn Bay Length (ft)					420					150			75
Base Capacity (vph)		852			287	590			766	476		679	463
Starvation Cap Reductn		0			0	0			0	0		0	0
Spillback Cap Reductn		0			0	38			0	0		0	2
Storage Cap Reductn		0			0	0			0	0		0	0
Reduced v/c Ratio		1.23			0.63	1.38			0.48	0.43		0.97	0.51

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 78 (71%), Referenced to phase 1:NESW, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 14: Cambridge Street & North Beacon Street/Brighton Avenue

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	315	640	10	15	170	615	70	0	340	190	155	450	215
Future Volume (vph)	315	640	10	15	170	615	70	0	340	190	155	450	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		10.0			10.0	10.0			7.0	7.0		7.0	7.0
Lane Util. Factor		0.95			0.91	0.91			0.95	1.00		0.95	1.00
Frpb, ped/bikes		1.00			1.00	0.98			1.00	0.87		1.00	0.81
Flpb, ped/bikes		1.00			1.00	1.00			1.00	1.00		0.99	1.00
Frt		1.00			1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected		0.98			0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3472			1579	3207			3374	1320		3424	1265
Flt Permitted		0.98			0.95	1.00			1.00	1.00		0.71	1.00
Satd. Flow (perm)		3472			1579	3207			3374	1320		2448	1265
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	342	696	11	16	185	668	76	0	370	207	168	489	234
RTOR Reduction (vph)	0	1	0	0	0	7	0	0	0	160	0	0	176
Lane Group Flow (vph)	0	1048	0	0	182	756	0	0	370	47	0	657	58
Confl. Peds. (#/hr)	88		53	57	53		88	86		57	57		86
Confl. Bikes (#/hr)			5				22			6			25
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	7%	7%	7%	3%	3%	3%
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Actuated Green, G (s)		27.0			20.0	20.0			25.0	25.0		30.0	25.0
Effective Green, g (s)		27.0			20.0	20.0			25.0	25.0		30.0	25.0
Actuated g/C Ratio		0.25			0.18	0.18			0.23	0.23		0.27	0.23
Clearance Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Vehicle Extension (s)		2.0			2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)		852			287	583			766	300		712	287
v/s Ratio Prot		c0.30			0.12	c0.24			0.11			c0.04	
v/s Ratio Perm										0.04		c0.21	0.05
v/c Ratio		1.23			0.63	1.30			0.48	0.16		0.92	0.20
Uniform Delay, d1		41.5			41.6	45.0			36.9	34.1		38.9	34.4
Progression Factor		0.77			1.00	1.00			1.00	1.00		1.34	3.86
Incremental Delay, d2		104.7			10.2	145.6			2.2	1.1		13.7	1.2
Delay (s)		136.4			51.9	190.6			39.1	35.2		65.8	134.1
Level of Service		F			D	F			D	D		E	F
Approach Delay (s)		136.4				163.9			37.7			83.7	
Approach LOS		F				F			D			F	

Intersection Summary			
HCM 2000 Control Delay	113.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	33.0
Intersection Capacity Utilization	106.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	680	805	10	5	15
Future Vol, veh/h	45	680	805	10	5	15
Conflicting Peds, #/hr	75	0	0	75	61	18
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	3	3	0	0
Mvmt Flow	49	739	875	11	5	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	961	0	-	0	1853	973
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	898	-
Critical Hdwy	4.16	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.254	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	700	-	-	-	82	309
Stage 1	-	-	-	-	377	-
Stage 2	-	-	-	-	401	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	690	-	-	-	63	285
Mov Cap-2 Maneuver	-	-	-	-	63	-
Stage 1	-	-	-	-	353	-
Stage 2	-	-	-	-	331	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	32.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	690	-	-	-	152
HCM Lane V/C Ratio	0.071	-	-	-	0.143
HCM Control Delay (s)	10.6	0	-	-	32.6
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	690	0	1	780	0	0	0	0	380	1	20
Future Volume (vph)	0	690	0	1	780	0	0	0	0	380	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		587			512			134			484	
Travel Time (s)		13.3			11.6			3.0			11.0	
Confl. Peds. (#/hr)	45		47	47		45	3		22	22		3
Confl. Bikes (#/hr)			7			29						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	750	0	0	849	0	0	0	0	413	23	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Detector Phase		1		1	1					5	5	
Switch Phase												
Minimum Initial (s)		20.0		20.0	20.0					8.0	8.0	
Minimum Split (s)		24.0		24.0	24.0					22.0	22.0	
Total Split (s)		61.0		61.0	61.0					49.0	49.0	
Total Split (%)		55.5%		55.5%	55.5%					44.5%	44.5%	
Yellow Time (s)		3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)		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)		4.0			4.0					4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max					None	None	
v/c Ratio		0.65			0.71					0.82	0.05	
Control Delay		22.7			17.2					51.4	10.8	
Queue Delay		0.0			3.8					0.0	0.0	
Total Delay		22.7			21.0					51.4	10.8	
Queue Length 50th (ft)		458			546					276	0	
Queue Length 95th (ft)		m477			773					m345	m18	
Internal Link Dist (ft)		507			432			54			404	
Turn Bay Length (ft)										100		
Base Capacity (vph)		1153			1198					738	660	
Starvation Cap Reductn		0			259					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.65			0.90					0.56	0.03	

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 16: Driveway/Denby Road & Cambridge Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	690	0	1	780	0	0	0	0	380	1	20
Future Volume (vph)	0	690	0	1	780	0	0	0	0	380	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0	4.0	
Lane Util. Factor		1.00			1.00					1.00	1.00	
Frpb, ped/bikes		1.00			1.00					1.00	0.97	
Flpb, ped/bikes		1.00			1.00					1.00	1.00	
Frt		1.00			1.00					1.00	0.86	
Flt Protected		1.00			1.00					0.95	1.00	
Satd. Flow (prot)		1776			1845					1805	1582	
Flt Permitted		1.00			1.00					0.95	1.00	
Satd. Flow (perm)		1776			1844					1805	1582	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	750	0	1	848	0	0	0	0	413	1	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	16	0
Lane Group Flow (vph)	0	750	0	0	849	0	0	0	0	413	7	0
Confl. Peds. (#/hr)	45		47	47		45	3		22	22		3
Confl. Bikes (#/hr)			7			29						
Heavy Vehicles (%)	7%	7%	7%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Actuated Green, G (s)		71.5			71.5					30.5	30.5	
Effective Green, g (s)		71.5			71.5					30.5	30.5	
Actuated g/C Ratio		0.65			0.65					0.28	0.28	
Clearance Time (s)		4.0			4.0					4.0	4.0	
Vehicle Extension (s)		0.2			0.2					2.0	2.0	
Lane Grp Cap (vph)		1154			1198					500	438	
v/s Ratio Prot		0.42								c0.23	0.00	
v/s Ratio Perm					c0.46							
v/c Ratio		0.65			0.71					0.83	0.02	
Uniform Delay, d1		11.7			12.5					37.3	28.9	
Progression Factor		1.55			0.98					1.02	1.08	
Incremental Delay, d2		1.3			2.6					10.2	0.0	
Delay (s)		19.4			14.8					48.3	31.2	
Level of Service		B			B					D	C	
Approach Delay (s)		19.4			14.8			0.0			47.4	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	10	905	130	395	715	190	75	45	310	0	0	0	
Future Volume (vph)	10	905	130	395	715	190	75	45	310	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		75	0		100	0		75	0		0	
Storage Lanes	0		1	1		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		512			518			381			156		
Travel Time (s)		11.6			11.8			8.7			3.5		
Confl. Peds. (#/hr)	65		39	39		65	86		102	102		86	
Confl. Bikes (#/hr)			3			30			3			14	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	3%	3%	3%	0%	0%	0%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	1136	0	429	777	207	0	131	337	0	0	0	
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov				
Protected Phases		1		4	1 4	4	3	3	3 4				2
Permitted Phases	1			1 4		1 4							
Detector Phase	1	1		4	1 4	4	3	3	3 4				
Switch Phase													
Minimum Initial (s)	10.0	10.0		8.0		8.0	8.0	8.0					7.0
Minimum Split (s)	17.0	17.0		13.5		13.5	13.5	13.5					23.0
Total Split (s)	37.0	37.0		34.0		34.0	14.0	14.0					25.0
Total Split (%)	33.6%	33.6%		30.9%		30.9%	12.7%	12.7%					23%
Yellow Time (s)	4.0	4.0		3.0		3.0	4.0	4.0					3.0
All-Red Time (s)	3.0	3.0		2.5		2.5	1.5	1.5					1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0					
Total Lost Time (s)		7.0		5.5		5.5		5.5					
Lead/Lag	Lead	Lead		Lag		Lag	Lead	Lead					Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		None		None	None	None					None
v/c Ratio		1.37		0.84	0.67	0.23		0.77	0.41				
Control Delay		198.5		44.1	18.7	6.0		77.0	3.9				
Queue Delay		0.0		0.0	3.1	0.0		0.0	0.0				
Total Delay		198.5		44.1	21.9	6.0		77.0	3.9				
Queue Length 50th (ft)		~604		236	371	32		92	0				
Queue Length 95th (ft)		#747		#401	522	66		#191	55				
Internal Link Dist (ft)		432			438			301			76		
Turn Bay Length (ft)						100			75				
Base Capacity (vph)		832		530	1160	930		171	835				
Starvation Cap Reductn		0		0	0	0		0	0				
Spillback Cap Reductn		0		0	275	0		0	0				
Storage Cap Reductn		0		0	0	0		0	0				
Reduced v/c Ratio		1.37		0.81	0.88	0.22		0.77	0.40				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 17: Harvard Avenue/Franklin Street & Cambridge Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	905	130	395	715	190	75	45	310	0	0	0
Future Volume (vph)	10	905	130	395	715	190	75	45	310	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		5.5	7.0	5.5		5.5	5.5			
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00			
Frpb, ped/bikes		0.99		1.00	1.00	0.95		1.00	1.00			
Flpb, ped/bikes		1.00		1.00	1.00	1.00		1.00	1.00			
Frt		0.98		1.00	1.00	0.85		1.00	0.85			
Flt Protected		1.00		0.95	1.00	1.00		0.97	1.00			
Satd. Flow (prot)		3275		1769	1863	1499		1789	1568			
Flt Permitted		0.77		0.11	1.00	1.00		0.97	1.00			
Satd. Flow (perm)		2524		212	1863	1499		1789	1568			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	984	141	429	777	207	82	49	337	0	0	0
RTOR Reduction (vph)	0	10	0	0	0	42	0	0	205	0	0	0
Lane Group Flow (vph)	0	1126	0	429	777	165	0	131	132	0	0	0
Confl. Peds. (#/hr)	65		39	39		65	86		102	102		86
Confl. Bikes (#/hr)			3			30			3			14
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	3%	3%	3%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov			
Protected Phases		1		4	1 4	4	3	3	3 4			
Permitted Phases	1			1 4		1 4						
Actuated Green, G (s)		35.2		62.3	67.8	62.3		10.5	43.1			
Effective Green, g (s)		35.2		62.3	62.3	62.3		10.5	43.1			
Actuated g/C Ratio		0.32		0.57	0.57	0.57		0.10	0.39			
Clearance Time (s)		7.0		5.5		5.5		5.5				
Vehicle Extension (s)		2.0		2.0		2.0		2.0				
Lane Grp Cap (vph)		807		503	1055	923		170	614			
v/s Ratio Prot				c0.21	0.42	0.04		c0.07	0.08			
v/s Ratio Perm		c0.45		0.27		0.07						
v/c Ratio		1.40		0.85	0.74	0.18		0.77	0.22			
Uniform Delay, d1		37.4		29.6	17.7	11.5		48.6	22.2			
Progression Factor		0.78		1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2		184.1		12.7	2.3	0.0		17.6	0.1			
Delay (s)		213.4		42.3	20.1	11.5		66.2	22.3			
Level of Service		F		D	C	B		E	C			
Approach Delay (s)		213.4			25.6			34.6			0.0	
Approach LOS		F			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	97.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↱	
Traffic Vol, veh/h	5	0	325	30	215	15	0	0	0	0	10	2
Future Vol, veh/h	5	0	325	30	215	15	0	0	0	0	10	2
Conflicting Peds, #/hr	0	0	11	11	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	1	1	2	2	2	0	2	0	2	2	2
Mvmt Flow	5	0	353	33	234	16	0	0	0	0	11	2

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	250	0	0	364	0	0				-	682	242
Stage 1	-	-	-	-	-	-				-	307	-
Stage 2	-	-	-	-	-	-				-	375	-
Critical Hdwy	4.12	-	-	4.12	-	-				-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				-	4.018	3.318
Pot Cap-1 Maneuver	1316	-	-	1195	-	-				0	372	797
Stage 1	-	-	-	-	-	-				0	661	-
Stage 2	-	-	-	-	-	-				0	617	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1316	-	-	1195	-	-				-	0	797
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0.9	9.6
HCM LOS			A

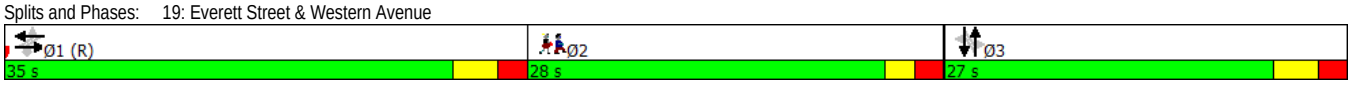
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1316	-	-	1195	-	-	797
HCM Lane V/C Ratio	0.004	-	-	0.027	-	-	0.016
HCM Control Delay (s)	7.7	0	-	8.1	0	-	9.6
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	30	430	175	180	550	90	95	305	145	25	305	50	
Future Volume (vph)	30	430	175	180	550	90	95	305	145	25	305	50	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		100	75		0	115		0	0		0	
Storage Lanes	0		1	1		0	1		0	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		2049			739			1728			510		
Travel Time (s)		46.6			16.8			39.3			11.6		
Confl. Peds. (#/hr)	17		21	21		17	25		10	10		25	
Confl. Bikes (#/hr)						18							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	1%	1%	1%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	500	190	196	696	0	103	490	0	0	413	0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA		
Protected Phases		1			1			3			3		2
Permitted Phases	1		1	1			3			3			
Detector Phase	1	1	1	1	1		3	3		3	3		
Switch Phase													
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0		4.0
Minimum Split (s)	17.0	17.0	17.0	17.0	17.0		17.0	17.0		17.0	17.0		28.0
Total Split (s)	35.0	35.0	35.0	35.0	35.0		27.0	27.0		27.0	27.0		28.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	38.9%		30.0%	30.0%		30.0%	30.0%		31%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0		2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0		-1.0	-1.0			-1.0		
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0		
Lead/Lag	Lead	Lead	Lead	Lead	Lead								Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None		None
v/c Ratio		0.52	0.21	0.49	0.65		0.92	1.04			2.19		
Control Delay		16.9	6.2	21.0	19.4		102.9	85.4			571.9		
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		16.9	6.2	21.0	19.4		102.9	85.4			571.9		
Queue Length 50th (ft)		125	14	48	194		57	~293			~383		
Queue Length 95th (ft)		#452	79	#228	#674		#158	#486			#565		
Internal Link Dist (ft)		1969			659			1648			430		
Turn Bay Length (ft)			100	75			115						
Base Capacity (vph)		970	922	403	1065		112	471			189		
Starvation Cap Reductn		0	0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0	0		0	0			0		
Storage Cap Reductn		0	0	0	0		0	0			0		
Reduced v/c Ratio		0.52	0.21	0.49	0.65		0.92	1.04			2.19		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 19: Everett Street & Western Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	430	175	180	550	90	95	305	145	25	305	50
Future Volume (vph)	30	430	175	180	550	90	95	305	145	25	305	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes		1.00	0.96	1.00	0.99		1.00	0.99			0.99	
Flpb, ped/bikes		1.00	1.00	0.99	1.00		0.98	1.00			1.00	
Frt		1.00	0.85	1.00	0.98		1.00	0.95			0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)		1820	1493	1738	1794		1757	1768			1825	
Flt Permitted		0.90	1.00	0.37	1.00		0.24	1.00			0.39	
Satd. Flow (perm)		1637	1493	681	1794		440	1768			719	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	467	190	196	598	98	103	332	158	27	332	54
RTOR Reduction (vph)	0	0	51	0	4	0	0	19	0	0	6	0
Lane Group Flow (vph)	0	500	139	196	692	0	103	471	0	0	407	0
Confl. Peds. (#/hr)	17		21	21		17	25		10	10		25
Confl. Bikes (#/hr)						18						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			3			3	
Permitted Phases	1		1	1			3			3		
Actuated Green, G (s)		49.2	49.2	49.2	49.2		22.0	22.0			22.0	
Effective Green, g (s)		50.2	50.2	50.2	50.2		23.0	23.0			23.0	
Actuated g/C Ratio		0.56	0.56	0.56	0.56		0.26	0.26			0.26	
Clearance Time (s)		5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		913	832	379	1000		112	451			183	
v/s Ratio Prot					c0.39			0.27				
v/s Ratio Perm		0.31	0.09	0.29			0.23				c0.57	
v/c Ratio		0.55	0.17	0.52	0.69		0.92	1.04			2.22	
Uniform Delay, d1		12.7	9.7	12.4	14.3		32.6	33.5			33.5	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2		2.4	0.4	5.0	3.9		58.7	54.2			568.3	
Delay (s)		15.0	10.1	17.3	18.3		91.3	87.7			601.8	
Level of Service		B	B	B	B		F	F			F	
Approach Delay (s)		13.7			18.1			88.3			601.8	
Approach LOS		B			B			F			F	

Intersection Summary			
HCM 2000 Control Delay	126.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	12.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	15	65	2	75	20	565	50	45	605	1
Future Vol, veh/h	0	0	15	65	2	75	20	565	50	45	605	1
Conflicting Peds, #/hr	0	0	4	4	0	0	44	0	17	17	0	44
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	0	0	16	71	2	82	22	614	54	49	658	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1527	1529	706	1470	1503	658	703	0	0	685	0	0
Stage 1	800	800	-	702	702	-	-	-	-	-	-	-
Stage 2	727	729	-	768	801	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	97	118	439	106	122	466	899	-	-	913	-	-
Stage 1	382	400	-	430	442	-	-	-	-	-	-	-
Stage 2	419	431	-	396	398	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	69	99	421	91	102	459	896	-	-	913	-	-
Mov Cap-2 Maneuver	69	99	-	91	102	-	-	-	-	-	-	-
Stage 1	354	353	-	407	419	-	-	-	-	-	-	-
Stage 2	329	408	-	347	351	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.9	122.8	0.3	0.6
HCM LOS	B	F		

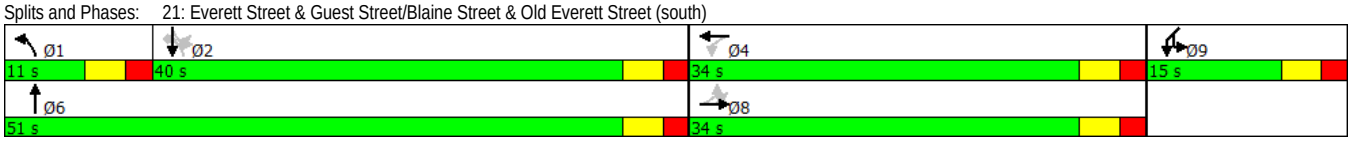
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	896	-	-	421	158	913	-	-
HCM Lane V/C Ratio	0.024	-	-	0.039	0.977	0.054	-	-
HCM Control Delay (s)	9.1	0	-	13.9	122.8	9.2	0	-
HCM Lane LOS	A	A	-	B	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	7.4	0.2	-	-

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	NBR2	SBL2	SBT	SBR	SWL	SWR	SWR2
Lane Configurations																
Traffic Volume (vph)	170	105	0	80	10	0	70	415	50	5	55	420	210	30	75	50
Future Volume (vph)	170	105	0	80	10	0	70	415	50	5	55	420	210	30	75	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200		0	0		0		0				50	0	0	
Storage Lanes		1		0	0		1		0				1	1	0	
Taper Length (ft)		25			25		25							25		
Right Turn on Red				No						No			No			No
Link Speed (mph)			30			30		30				30		30		
Link Distance (ft)			301			174		173				1225		364		
Travel Time (s)			6.8			4.0		3.9				27.8		8.3		
Confl. Peds. (#/hr)	4						29						29			
Confl. Bikes (#/hr)				4									3			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)																
Lane Group Flow (vph)	185	0	201	0	0	11	76	510	0	0	0	517	228	169	0	0
Turn Type	Perm	Perm	NA		Perm	NA	D.P+P	NA			Perm	NA	Perm	Prot		
Protected Phases			8			4	1	6				2		9		
Permitted Phases	8	8			4		2				2		2			
Detector Phase	8	8	8		4	4	1	6			2	2	2	9		
Switch Phase																
Minimum Initial (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0			6.0	6.0	6.0	6.0		
Minimum Split (s)	21.0	21.0	21.0		21.0	21.0	11.0	21.0			21.0	21.0	21.0	11.0		
Total Split (s)	34.0	34.0	34.0		34.0	34.0	11.0	51.0			40.0	40.0	40.0	15.0		
Total Split (%)	34.0%	34.0%	34.0%		34.0%	34.0%	11.0%	51.0%			40.0%	40.0%	40.0%	15.0%		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0			3.0	3.0	3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0	2.0			2.0	2.0	2.0	2.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0	0.0				0.0	0.0	0.0		
Total Lost Time (s)	5.0		5.0			5.0	5.0	5.0				5.0	5.0	5.0		
Lead/Lag							Lead				Lag	Lag	Lag			
Lead-Lag Optimize?							Yes				Yes	Yes	Yes			
Recall Mode	Min	Min	Min		None	None	Min	Max			Max	Max	Max	None		
v/c Ratio	0.66		0.71			0.06	0.25	0.54				0.79	0.41	0.92		
Control Delay	44.3		46.6			28.0	15.0	18.3				36.0	23.9	90.9		
Queue Delay	0.0		0.0			0.0	0.0	0.0				0.0	0.0	0.0		
Total Delay	44.3		46.6			28.0	15.0	18.3				36.0	23.9	90.9		
Queue Length 50th (ft)	96		106			5	20	180				249	90	95		
Queue Length 95th (ft)	164		178			19	52	333				#488	178	#241		
Internal Link Dist (ft)			221			94		93				1145		284		
Turn Bay Length (ft)	200												50			
Base Capacity (vph)	449		458			299	300	945				653	552	184		
Starvation Cap Reductn	0		0			0	0	0				0	0	0		
Spillback Cap Reductn	0		0			0	0	0				0	0	0		
Storage Cap Reductn	0		0			0	0	0				0	0	0		
Reduced v/c Ratio	0.41		0.44			0.04	0.25	0.54				0.79	0.41	0.92		

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 89.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Everett Street & Guest Street/Blaine Street & Old Everett Street (south)



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	NBR2	SBL2	SBT	SBR	SWL	SWR	SWR2
Lane Configurations																
Traffic Volume (vph)	170	105	0	80	10	0	70	415	50	5	55	420	210	30	75	50
Future Volume (vph)	170	105	0	80	10	0	70	415	50	5	55	420	210	30	75	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0	5.0	5.0				5.0	5.0	5.0		
Lane Util. Factor	1.00		1.00			1.00	1.00	1.00				1.00	1.00	1.00		
Frpb, ped/bikes	1.00		0.99			1.00	1.00	1.00				1.00	0.90	1.00		
Flpb, ped/bikes	0.99		1.00			1.00	1.00	1.00				1.00	1.00	1.00		
Frt	1.00		0.94			1.00	1.00	0.98				1.00	0.85	0.89		
Flt Protected	0.95		0.97			0.95	0.95	1.00				0.99	1.00	0.99		
Satd. Flow (prot)	1750		1674			1770	1770	1830				1852	1422	1644		
Flt Permitted	0.75		0.82			0.49	0.25	1.00				0.89	1.00	0.99		
Satd. Flow (perm)	1382		1409			920	460	1830				1662	1422	1644		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	114	0	87	11	0	76	451	54	5	60	457	228	33	82	54
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	185	0	201	0	0	11	76	510	0	0	0	517	228	169	0	0
Confl. Peds. (#/hr)	4						29						29			
Confl. Bikes (#/hr)				4									3			
Turn Type	Perm	Perm	NA		Perm	NA	D.P+P	NA			Perm	NA	Perm	Prot		
Protected Phases			8			4	1	6				2		9		
Permitted Phases	8	8			4		2				2		2			
Actuated Green, G (s)	18.1		18.1			18.1	41.2	46.2				35.2	35.2	10.0		
Effective Green, g (s)	18.1		18.1			18.1	41.2	46.2				35.2	35.2	10.0		
Actuated g/C Ratio	0.20		0.20			0.20	0.46	0.52				0.39	0.39	0.11		
Clearance Time (s)	5.0		5.0			5.0	5.0	5.0				5.0	5.0	5.0		
Vehicle Extension (s)	3.0		3.0			3.0	3.0	3.0				3.0	3.0	3.0		
Lane Grp Cap (vph)	280		285			186	300	946				655	560	184		
v/s Ratio Prot							0.02	c0.28						c0.10		
v/s Ratio Perm	0.13		c0.14			0.01	0.10					c0.31	0.16			
v/c Ratio	0.66		0.71			0.06	0.25	0.54				0.79	0.41	0.92		
Uniform Delay, d1	32.8		33.1			28.7	15.3	14.4				23.8	19.5	39.2		
Progression Factor	1.00		1.00			1.00	1.00	1.00				1.00	1.00	1.00		
Incremental Delay, d2	5.7		7.7			0.1	0.4	2.2				9.4	2.2	43.3		
Delay (s)	38.5		40.8			28.9	15.7	16.6				33.2	21.7	82.5		
Level of Service	D		D			C	B	B				C	C	F		
Approach Delay (s)			39.7			28.9		16.5				29.7		82.5		
Approach LOS			D			C		B				C		F		

Intersection Summary			
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	89.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	535	2	0	530
Future Vol, veh/h	2	0	535	2	0	530
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	0	582	2	0	576

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1159	583	0	0	584	0
Stage 1	583	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	216	512	-	-	991	-
Stage 1	558	-	-	-	-	-
Stage 2	562	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	216	512	-	-	991	-
Mov Cap-2 Maneuver	216	-	-	-	-	-
Stage 1	558	-	-	-	-	-
Stage 2	562	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	216	991	-
HCM Lane V/C Ratio	-	-	0.01	-	-
HCM Control Delay (s)	-	-	21.8	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	0	75	5	0	135	85	0	0	10	35	165	0	5	15	1
Future Vol, veh/h	0	0	75	5	0	135	85	0	0	10	35	165	0	5	15	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	1	1	1	5	1	1	1	2	0	0	0
Mvmt Flow	0	0	82	5	0	147	92	0	0	11	38	179	0	5	16	1
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	9.9	8.9	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	0%	61%	24%
Vol Thru, %	17%	94%	39%	71%
Vol Right, %	79%	6%	0%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	210	80	220	21
LT Vol	10	0	135	5
Through Vol	35	75	85	15
RT Vol	165	5	0	1
Lane Flow Rate	228	87	239	23
Geometry Grp	1	1	1	1
Degree of Util (X)	0.27	0.115	0.312	0.032
Departure Headway (Hd)	4.266	4.741	4.699	4.968
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	840	754	763	718
Service Time	2.298	2.786	2.738	3.016
HCM Lane V/C Ratio	0.271	0.115	0.313	0.032
HCM Control Delay	8.9	8.4	9.9	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.1	0.4	1.3	0.1

Intersection	
Intersection Delay, s/veh	54.2
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	100	325	90	0	45	455	5	0	10	40	20	0	5	80	185
Future Vol, veh/h	0	100	325	90	0	45	455	5	0	10	40	20	0	5	80	185
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	1	1	1	2	0	0	0	2	0	0	0
Mvmt Flow	0	109	353	98	0	49	495	5	0	11	43	22	0	5	87	201
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	66.5	65.8	13.4	19.8
HCM LOS	F	F	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	19%	9%	2%
Vol Thru, %	57%	63%	90%	30%
Vol Right, %	29%	17%	1%	69%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	515	505	270
LT Vol	10	100	45	5
Through Vol	40	325	455	80
RT Vol	20	90	5	185
Lane Flow Rate	76	560	549	293
Geometry Grp	1	1	1	1
Degree of Util (X)	0.179	1.011	1.006	0.582
Departure Headway (Hd)	8.566	6.499	6.601	7.138
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	422	560	549	505
Service Time	6.566	4.524	4.628	5.21
HCM Lane V/C Ratio	0.18	1	1	0.58
HCM Control Delay	13.4	66.5	65.8	19.8
HCM Lane LOS	B	F	F	C
HCM 95th-tile Q	0.6	14.8	14.5	3.7

Intersection	
Intersection Delay, s/veh	86.9
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	20	265	80	0	120	280	60	0	100	135	75	0	110	225	110
Future Vol, veh/h	0	20	265	80	0	120	280	60	0	100	135	75	0	110	225	110
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	2	2	2	2	2	2	2	2	1	1	1
Mvmt Flow	0	22	288	87	0	130	304	65	0	109	147	82	0	120	245	120
Number of Lanes	0	0	1	0	0	1	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	85.6	51.2	29.7	164.7
HCM LOS	F	F	D	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	43%	0%	5%	100%	0%	25%
Vol Thru, %	57%	0%	73%	0%	82%	51%
Vol Right, %	0%	100%	22%	0%	18%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	235	75	365	120	340	445
LT Vol	100	0	20	120	0	110
Through Vol	135	0	265	0	280	225
RT Vol	0	75	80	0	60	110
Lane Flow Rate	255	82	397	130	370	484
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.695	0.201	1.017	0.35	0.927	1.258
Departure Headway (Hd)	10.668	9.707	10.232	10.589	9.934	9.646
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	342	372	357	342	370	382
Service Time	8.368	7.407	8.232	8.289	7.634	7.646
HCM Lane V/C Ratio	0.746	0.22	1.112	0.38	1	1.267
HCM Control Delay	34.4	14.8	85.6	18.9	62.6	164.7
HCM Lane LOS	D	B	F	C	F	F
HCM 95th-tile Q	4.9	0.7	12	1.5	9.7	20.6

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	415	355	5	25	50
Future Vol, veh/h	35	415	355	5	25	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	451	386	5	27	54

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	391	0	-	0	916	389
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	527	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1168	-	-	-	302	659
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	592	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1168	-	-	-	289	659
Mov Cap-2 Maneuver	-	-	-	-	289	-
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	567	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1168	-	-	-	462
HCM Lane V/C Ratio	0.033	-	-	-	0.176
HCM Control Delay (s)	8.2	0	-	-	14.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	385	20	15	295	45	10	5	10	45	5	50
Future Vol, veh/h	35	385	20	15	295	45	10	5	10	45	5	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	418	22	16	321	49	11	5	11	49	5	54

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	370	0	0	440	0	0	913	907	429	892	894	345
Stage 1	-	-	-	-	-	-	505	505	-	378	378	-
Stage 2	-	-	-	-	-	-	408	402	-	514	516	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1189	-	-	1120	-	-	254	276	626	263	280	698
Stage 1	-	-	-	-	-	-	549	540	-	644	615	-
Stage 2	-	-	-	-	-	-	620	600	-	543	534	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1189	-	-	1120	-	-	222	262	626	245	266	698
Mov Cap-2 Maneuver	-	-	-	-	-	-	222	262	-	245	266	-
Stage 1	-	-	-	-	-	-	531	523	-	623	604	-
Stage 2	-	-	-	-	-	-	556	589	-	511	517	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.3	17.6	19
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	312	1189	-	-	1120	-	-	365
HCM Lane V/C Ratio	0.087	0.032	-	-	0.015	-	-	0.298
HCM Control Delay (s)	17.6	8.1	-	-	8.3	0	-	19
HCM Lane LOS	C	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	1.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	90	0	40	85	100	45	55	770	0	10	0	820	75
Future Volume (vph)	90	0	40	85	100	45	55	770	0	10	0	820	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	0		0		0		50
Storage Lanes	2		0	1		0	0		0		0		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		797			420			570				590	
Travel Time (s)		18.1			9.5			13.0				13.4	
Confl. Peds. (#/hr)			2	2					34		34		
Confl. Bikes (#/hr)									5				1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	98	43	0	92	158	0	0	897	0	0	0	902	82
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Detector Phase	3			2	2		4	1 4		1		1	1 3
Switch Phase													
Minimum Initial (s)	6.0			6.0	6.0		6.0			10.0		10.0	
Minimum Split (s)	24.0			12.0	12.0		12.0			22.0		22.0	
Total Split (s)	24.0			22.0	22.0		22.0			31.0		31.0	
Total Split (%)	24.2%			22.2%	22.2%		22.2%			31.3%		31.3%	
Yellow Time (s)	4.0			4.0	4.0		4.0			4.0		4.0	
All-Red Time (s)	2.0			2.0	2.0		2.0			2.0		2.0	
Lost Time Adjust (s)	0.0			0.0	0.0							0.0	
Total Lost Time (s)	6.0			6.0	6.0							6.0	
Lead/Lag	Lead			Lag	Lag		Lag			Lead		Lead	
Lead-Lag Optimize?													
Recall Mode	None			None	None		Max			C-Max		C-Max	
v/c Ratio	0.38	0.19		0.43	0.68			0.52				1.08	0.14
Control Delay	47.6	0.0		45.7	51.2			11.6				90.6	2.3
Queue Delay	0.0	0.0		0.0	0.0			0.0				0.0	0.0
Total Delay	47.6	0.0		45.7	51.2			11.6				90.6	2.3
Queue Length 50th (ft)	30	0		55	85			137				~335	0
Queue Length 95th (ft)	55	0		99	146			212				#459	12
Internal Link Dist (ft)		717			340			490				510	
Turn Bay Length (ft)				75									50
Base Capacity (vph)	618	231		291	308			1734				837	743
Starvation Cap Reductn	0	0		0	0			0				0	0
Spillback Cap Reductn	0	0		0	0			0				0	0
Storage Cap Reductn	0	0		0	0			0				0	0
Reduced v/c Ratio	0.16	0.19		0.32	0.51			0.52				1.08	0.11

Intersection Summary

Area Type: Other
Cycle Length: 99
Actuated Cycle Length: 99
Offset: 47 (47%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Market Street & Leo M. Birmingham Parkway & Lincoln Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	90	0	40	85	100	45	55	770	0	10	0	820	75
Future Volume (vph)	90	0	40	85	100	45	55	770	0	10	0	820	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	6.0			6.0				6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00			0.95				0.95	1.00
Frpb, ped/bikes	1.00	0.93		1.00	1.00			1.00				1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Frt	1.00	0.85		1.00	0.95			1.00				1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00				1.00	1.00
Satd. Flow (prot)	3400	0		1805	1812			3527				3537	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.71				0.94	1.00
Satd. Flow (perm)	3400	0		1805	1812			2522				3315	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	0	43	92	109	49	60	837	0	11	0	891	82
RTOR Reduction (vph)	0	43	0	0	17	0	0	0	0	0	0	0	55
Lane Group Flow (vph)	98	0	0	92	141	0	0	897	0	0	0	902	27
Confl. Peds. (#/hr)			2	2					34		34		
Confl. Bikes (#/hr)									5				1
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot			Split	NA		pm+pt	NA		Perm		NA	pt+ov
Protected Phases	3			2	2		4	1 4				1	1 3
Permitted Phases							1 4			1			
Actuated Green, G (s)	7.5	0.0		11.7	11.7			55.8				25.0	32.5
Effective Green, g (s)	7.5	0.0		11.7	11.7			55.8				25.0	32.5
Actuated g/C Ratio	0.08	0.00		0.12	0.12			0.56				0.25	0.33
Clearance Time (s)	6.0			6.0	6.0							6.0	
Vehicle Extension (s)	2.0			2.0	2.0							2.0	
Lane Grp Cap (vph)	257	0		213	214			1734				837	519
v/s Ratio Prot	c0.03			0.05	c0.08			c0.16					0.02
v/s Ratio Perm								0.13				c0.27	
v/c Ratio	0.38	0.00		0.43	0.66			0.52				1.08	0.05
Uniform Delay, d1	43.5	49.5		40.6	41.7			13.3				37.0	22.7
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	1.00
Incremental Delay, d2	0.3	0.0		0.5	5.8			1.1				54.2	0.0
Delay (s)	43.9	49.5		41.1	47.5			14.4				91.2	22.7
Level of Service	D	D		D	D			B				F	C
Approach Delay (s)		45.6			45.2			14.4				85.5	
Approach LOS		D			D			B				F	

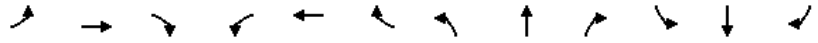
Intersection Summary			
HCM 2000 Control Delay	50.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	99.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	5	215	5	225	25	635	200	185	700	20
Future Volume (vph)	5	1	5	215	5	225	25	635	200	185	700	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			772			187			570	
Travel Time (s)		5.6			17.5			4.3			13.0	
Confl. Peds. (#/hr)	3		16	16		3	9		28	28		9
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	239	245	0	934	0	0	984	0
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Detector Phase	2	2		2	2	2 3	1	1		3	1 3	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		6.0		
Minimum Split (s)	19.0	19.0		19.0	19.0		22.0	22.0		11.0		
Total Split (s)	20.0	20.0		20.0	20.0		50.0	50.0		15.0		
Total Split (%)	23.5%	23.5%		23.5%	23.5%		58.8%	58.8%		17.6%		
Yellow Time (s)	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		
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead				
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		None		
v/c Ratio		0.04			0.96	0.36		0.56			0.66	
Control Delay		22.8			85.8	8.0		13.4			8.2	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		22.8			85.8	8.0		13.4			8.2	
Queue Length 50th (ft)		3			128	24		148			94	
Queue Length 95th (ft)		17			#271	76		203			124	
Internal Link Dist (ft)		167			692			107			490	
Turn Bay Length (ft)						125						
Base Capacity (vph)		290			248	679		1657			1485	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.04			0.96	0.36		0.56			0.66	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Natural Cycle: 60
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Market Street & Stockyard Driveway/Guest Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	5	215	5	225	25	635	200	185	700	20
Future Volume (vph)	5	1	5	215	5	225	25	635	200	185	700	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	5.0		4.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		0.98			1.00	1.00		0.98			1.00	
Flpb, ped/bikes		1.00			0.97	1.00		1.00			1.00	
Frt		0.94			1.00	0.85		0.97			1.00	
Flt Protected		0.98			0.95	1.00		1.00			0.99	
Satd. Flow (prot)		1709			1743	1599		3307			3518	
Flt Permitted		0.87			0.72	1.00		0.91			0.57	
Satd. Flow (perm)		1522			1322	1599		3002			2021	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1	5	234	5	245	27	690	217	201	761	22
RTOR Reduction (vph)	0	4	0	0	0	115	0	33	0	0	2	0
Lane Group Flow (vph)	0	7	0	0	239	130	0	901	0	0	982	0
Confl. Peds. (#/hr)	3		16	16		3	9		28	28		9
Confl. Bikes (#/hr)									1			2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Actuated Green, G (s)		15.0			15.0	30.0		45.0			55.0	
Effective Green, g (s)		16.0			16.0	30.0		46.0			55.0	
Actuated g/C Ratio		0.19			0.19	0.35		0.54			0.65	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		286			248	564		1624			1483	
v/s Ratio Prot						0.08					c0.08	
v/s Ratio Perm		0.00			c0.18			0.30			c0.35	
v/c Ratio		0.02			0.96	0.23		0.55			0.66	
Uniform Delay, d1		28.1			34.2	19.4		12.8			9.3	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.0			46.5	0.1		1.4			0.9	
Delay (s)		28.1			80.7	19.4		14.2			10.1	
Level of Service		C			F	B		B			B	
Approach Delay (s)		28.1			49.7			14.2			10.1	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	0	855	920	0
Future Vol, veh/h	5	15	0	855	920	0
Conflicting Peds, #/hr	3	5	15	0	0	15
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	2	2	1	1
Mvmt Flow	5	16	0	929	1000	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1468	505	-	0	-	0
Stage 1	1000	-	-	-	-	-
Stage 2	468	-	-	-	-	-
Critical Hdwy	6.92	7.02	-	-	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	-	-	-	-
Pot Cap-1 Maneuver	114	502	0	-	-	0
Stage 1	308	-	0	-	-	0
Stage 2	585	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	114	500	-	-	-	-
Mov Cap-2 Maneuver	114	-	-	-	-	-
Stage 1	308	-	-	-	-	-
Stage 2	585	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	271	-
HCM Lane V/C Ratio	-	0.08	-
HCM Control Delay (s)	-	19.4	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.3	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	85	295	60	150	315	140	80	630	175	170	685	80	
Future Volume (vph)	85	295	60	150	315	140	80	630	175	170	685	80	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		200	0		200	0		100	0		0	
Storage Lanes	0		1	0		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		324			332			559			323		
Travel Time (s)		7.4			7.5			12.7			7.3		
Confl. Peds. (#/hr)	30		29	29		30	12		32	32		12	
Confl. Bikes (#/hr)			1			1			1			2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	2%	2%	2%	2%	2%	2%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	478	0	0	657	0	0	962	0	0	1017	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		5.0			1.0
Minimum Split (s)	15.0	15.0		15.0	15.0		15.0	15.0		10.0			20.0
Total Split (s)	33.0	33.0		33.0	33.0		35.0	35.0		11.0			20.0
Total Split (%)	33.3%	33.3%		33.3%	33.3%		35.4%	35.4%		11.1%			20%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0			2.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.0			2.0
Lost Time Adjust (s)		0.0			0.0			0.0					
Total Lost Time (s)		5.0			5.0			5.0					
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?													
Recall Mode	Max	Max		Max	Max		Max	Max		None			None
v/c Ratio		0.73			0.90			1.45			1.21		
Control Delay		36.3			48.0			237.8			131.3		
Queue Delay		0.0			0.0			0.0			0.0		
Total Delay		36.3			48.0			237.8			131.3		
Queue Length 50th (ft)		141			206			~455			~400		
Queue Length 95th (ft)		#222			#331			#583			#572		
Internal Link Dist (ft)		244			252			479			243		
Turn Bay Length (ft)													
Base Capacity (vph)		659			726			663			840		
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		0.73			0.90			1.45			1.21		

Intersection Summary	
Area Type:	Other
Cycle Length: 99	
Actuated Cycle Length: 91	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Market Street & North Beacon Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	295	60	150	315	140	80	630	175	170	685	80
Future Volume (vph)	85	295	60	150	315	140	80	630	175	170	685	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			0.99			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.97			0.99	
Flt Protected		0.99			0.99			1.00			0.99	
Satd. Flow (prot)		3376			3364			3390			3454	
Flt Permitted		0.61			0.66			0.57			0.52	
Satd. Flow (perm)		2074			2247			1927			1810	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	92	321	65	163	342	152	87	685	190	185	745	87
RTOR Reduction (vph)	0	12	0	0	28	0	0	21	0	0	7	0
Lane Group Flow (vph)	0	466	0	0	629	0	0	941	0	0	1010	0
Confl. Peds. (#/hr)	30		29	29		30	12		32	32		12
Confl. Bikes (#/hr)			1			1			1			2
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		28.3			28.3			30.4			37.5	
Effective Green, g (s)		28.3			28.3			30.4			37.5	
Actuated g/C Ratio		0.31			0.31			0.33			0.40	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			4.0				
Lane Grp Cap (vph)		633			686			632			859	
v/s Ratio Prot											c0.09	
v/s Ratio Perm		0.22			c0.28			c0.49			0.39	
v/c Ratio		0.74			0.92			1.49			1.18	
Uniform Delay, d1		28.8			31.0			31.1			27.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		7.4			19.2			228.5			91.5	
Delay (s)		36.2			50.2			259.6			119.0	
Level of Service		D			D			F			F	
Approach Delay (s)		36.2			50.2			259.6			119.0	
Approach LOS		D			D			F			F	

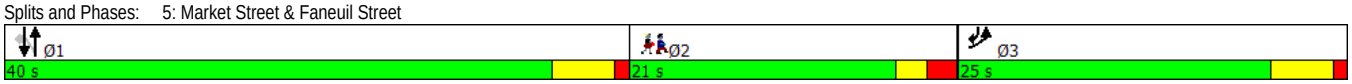
Intersection Summary			
HCM 2000 Control Delay	135.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	92.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	225	60	40	720	725	215	
Future Volume (vph)	225	60	40	720	725	215	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Right Turn on Red		Yes				Yes	
Link Speed (mph)	30			30	30		
Link Distance (ft)	420			1276	559		
Travel Time (s)	9.5			29.0	12.7		
Confl. Peds. (#/hr)	2	27	21			21	
Confl. Bikes (#/hr)		1					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	3%	3%	1%	1%	3%	3%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	310	0	0	826	788	234	
Turn Type	Prot		Perm	NA	NA	pm+ov	
Protected Phases	3			1	1	3	2
Permitted Phases			1			1	
Detector Phase	3		1	1	1	3	
Switch Phase							
Minimum Initial (s)	6.0		10.0	10.0	10.0	6.0	7.0
Minimum Split (s)	11.0		15.0	15.0	15.0	11.0	21.0
Total Split (s)	25.0		40.0	40.0	40.0	25.0	21.0
Total Split (%)	29.1%		46.5%	46.5%	46.5%	29.1%	24%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0	2.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	2.0
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	Lead	Lead		Lag
Lead-Lag Optimize?							
Recall Mode	None		Max	Max	Max	None	None
v/c Ratio	0.79			1.24	0.81	0.19	
Control Delay	41.8			141.7	27.3	1.1	
Queue Delay	0.0			0.0	0.0	0.0	
Total Delay	41.8			141.7	27.3	1.1	
Queue Length 50th (ft)	98			~360	186	0	
Queue Length 95th (ft)	#273			#868	#687	19	
Internal Link Dist (ft)	340			1196	479		
Turn Bay Length (ft)							
Base Capacity (vph)	521			667	972	1275	
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	0.60			1.24	0.81	0.18	

Intersection Summary

Area Type: Other
Cycle Length: 86
Actuated Cycle Length: 69
Natural Cycle: 130
Control Type: Semi Act-Uncoord
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Market Street & Faneuil Street



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	225	60	40	720	725	215
Future Volume (vph)	225	60	40	720	725	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frpb, ped/bikes	0.98			1.00	1.00	0.98
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.97			1.00	1.00	0.85
Flt Protected	0.96			1.00	1.00	1.00
Satd. Flow (prot)	1694			1876	1845	1530
Flt Permitted	0.96			0.67	1.00	1.00
Satd. Flow (perm)	1694			1266	1845	1530
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	245	65	43	783	788	234
RTOR Reduction (vph)	11	0	0	0	0	64
Lane Group Flow (vph)	299	0	0	826	788	170
Confl. Peds. (#/hr)	2	27	21			21
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	3%	3%	1%	1%	3%	3%
Turn Type	Prot		Perm	NA	NA	pm+ov
Protected Phases	3			1	1	3
Permitted Phases			1			1
Actuated Green, G (s)	15.5			36.4	36.4	51.9
Effective Green, g (s)	15.5			36.4	36.4	51.9
Actuated g/C Ratio	0.22			0.51	0.51	0.73
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	2.0			2.0	2.0	2.0
Lane Grp Cap (vph)	367			645	940	1219
v/s Ratio Prot	c0.18				0.43	0.03
v/s Ratio Perm				c0.65		0.08
v/c Ratio	0.81			1.28	0.84	0.14
Uniform Delay, d1	26.6			17.5	15.0	3.0
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	12.4			137.9	8.9	0.0
Delay (s)	39.0			155.4	23.8	3.0
Level of Service	D			F	C	A
Approach Delay (s)	39.0			155.4	19.1	
Approach LOS	D			F	B	

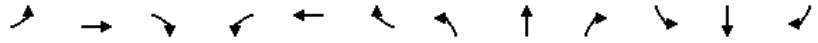
Intersection Summary			
HCM 2000 Control Delay	74.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	71.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	35	150	85	15	215	115	25	560	5	70	675	25	
Future Volume (vph)	35	150	85	15	215	115	25	560	5	70	675	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	0		0	75		0	
Storage Lanes	0		0	0		0	0		0	1		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		448			531			497			1276		
Travel Time (s)		10.2			12.1			11.3			29.0		
Confl. Peds. (#/hr)	9		17	17		9	34		36	36		34	
Confl. Bikes (#/hr)			1			1			5			2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	293	0	0	375	0	0	641	0	76	761	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		3			3			1		4	1 4		2
Permitted Phases	3			3			1			1 4			
Detector Phase	3	3		3	3		1	1		4	1 4		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		4.0			7.0
Minimum Split (s)	13.0	13.0		13.0	13.0		15.0	15.0		8.0			22.0
Total Split (s)	29.0	29.0		29.0	29.0		32.0	32.0		8.0			22.0
Total Split (%)	31.9%	31.9%		31.9%	31.9%		35.2%	35.2%		8.8%			24%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		4.0			3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0			1.0
Lost Time Adjust (s)		0.0			0.0			0.0		0.0			
Total Lost Time (s)		5.0			5.0			5.0		4.0			
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lag			Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes			Yes
Recall Mode	None	None		None	None		Max	Max		Max			None
v/c Ratio		0.78			0.83			2.61		0.29	0.87		
Control Delay		42.3			44.3			752.7		19.7	37.0		
Queue Delay		0.0			0.0			0.0		0.0	0.0		
Total Delay		42.3			44.3			752.7		19.7	37.0		
Queue Length 50th (ft)		141			187			~654		27	~490		
Queue Length 95th (ft)		#259			#326			#771		55	#713		
Internal Link Dist (ft)		368			451			417			1196		
Turn Bay Length (ft)										75			
Base Capacity (vph)		484			581			246		259	874		
Starvation Cap Reductn		0			0			0		0	0		
Spillback Cap Reductn		0			0			0		0	0		
Storage Cap Reductn		0			0			0		0	0		
Reduced v/c Ratio		0.61			0.65			2.61		0.29	0.87		

Intersection Summary	
Area Type:	Other
Cycle Length: 91	
Actuated Cycle Length: 77.8	
Natural Cycle: 140	
Control Type: Actuated-Uncoordinated	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Market Street & Arlington Street/Sparhawk Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	150	85	15	215	115	25	560	5	70	675	25
Future Volume (vph)	35	150	85	15	215	115	25	560	5	70	675	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		4.0	5.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.96			0.95			1.00		1.00	0.99	
Flt Protected		0.99			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1757			1768			1855		1765	1849	
Flt Permitted		0.82			0.98			0.36		0.24	1.00	
Satd. Flow (perm)		1442			1737			674		439	1849	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	163	92	16	234	125	27	609	5	76	734	27
RTOR Reduction (vph)	0	19	0	0	20	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	274	0	0	355	0	0	641	0	76	760	0
Confl. Peds. (#/hr)	9		17	17		9	34		36	36		34
Confl. Bikes (#/hr)			1			1			5			2
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		3			3			1		4	1 4	
Permitted Phases	3			3			1			1 4		
Actuated Green, G (s)		19.2			19.2			28.4		32.6	36.6	
Effective Green, g (s)		19.2			19.2			28.4		32.6	32.6	
Actuated g/C Ratio		0.24			0.24			0.36		0.41	0.41	
Clearance Time (s)		5.0			5.0			5.0		4.0		
Vehicle Extension (s)		2.0			2.0			0.2		2.0		
Lane Grp Cap (vph)		350			422			242		251	763	
v/s Ratio Prot										0.02	c0.41	
v/s Ratio Perm		0.19			c0.20			c0.95		0.11		
v/c Ratio		0.78			0.84			2.65		0.30	1.00	
Uniform Delay, d1		28.0			28.4			25.3		16.5	23.1	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		10.1			13.5			753.7		3.1	31.6	
Delay (s)		38.0			41.9			779.0		19.5	54.7	
Level of Service		D			D			F		B	D	
Approach Delay (s)		38.0			41.9			779.0			51.5	
Approach LOS		D			D			F			D	

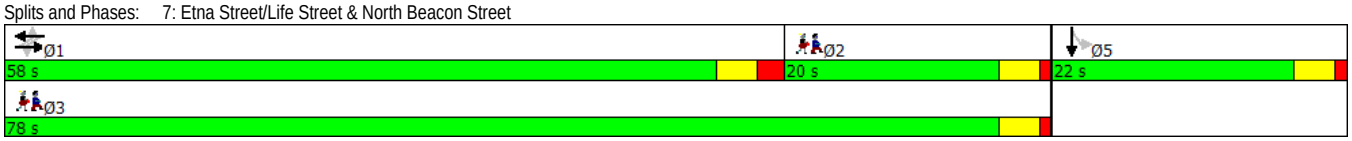
Intersection Summary			
HCM 2000 Control Delay	265.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.56		
Actuated Cycle Length (s)	79.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3
Lane Configurations														
Traffic Volume (vph)	50	600	15	10	560	55	0	0	0	55	5	50		
Future Volume (vph)	50	600	15	10	560	55	0	0	0	55	5	50		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes			Yes		
Link Speed (mph)		30			30			30			30			
Link Distance (ft)		458			334			278			631			
Travel Time (s)		10.4			7.6			6.3			14.3			
Confl. Peds. (#/hr)	20		43	43		20	27		3	3		27		
Confl. Bikes (#/hr)			5											
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%		
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	722	0	0	680	0	0	0	0	0	119	0		
Turn Type	Perm	NA		Perm	NA					Perm	NA			
Protected Phases		1			1						5		2	3
Permitted Phases	1			1						5				
Detector Phase	1	1		1	1					5	5			
Switch Phase														
Minimum Initial (s)	10.0	10.0		10.0	10.0					7.0	7.0		7.0	8.0
Minimum Split (s)	15.0	15.0		15.0	15.0					11.0	11.0		20.0	19.0
Total Split (s)	58.0	58.0		58.0	58.0					22.0	22.0		20.0	78.0
Total Split (%)	58.0%	58.0%		58.0%	58.0%					22.0%	22.0%		20%	78%
Yellow Time (s)	3.0	3.0		3.0	3.0					3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0					1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0			0.0						0.0			
Total Lost Time (s)		5.0			5.0						4.0			
Lead/Lag	Lead	Lead		Lead	Lead								Lag	
Lead-Lag Optimize?														
Recall Mode	None	None		None	None					None	None		None	Ped
v/c Ratio		0.63			0.56						0.33			
Control Delay		12.0			10.2						21.6			
Queue Delay		0.0			0.0						0.0			
Total Delay		12.0			10.2						21.6			
Queue Length 50th (ft)		93			80						18			
Queue Length 95th (ft)		487			412						101			
Internal Link Dist (ft)		378			254			198			551			
Turn Bay Length (ft)														
Base Capacity (vph)		1553			1649						758			
Starvation Cap Reductn		0			0						0			
Spillback Cap Reductn		0			0						0			
Storage Cap Reductn		0			0						0			
Reduced v/c Ratio		0.46			0.41						0.16			

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 49.9
Natural Cycle: 65
Control Type: Semi Act-Uncoord

Splits and Phases: 7: Etna Street/Life Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	600	15	10	560	55	0	0	0	55	5	50
Future Volume (vph)	50	600	15	10	560	55	0	0	0	55	5	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			1.00						0.95	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		1.00			0.99						0.94	
Flt Protected		1.00			1.00						0.98	
Satd. Flow (prot)		1847			1833						1588	
Flt Permitted		0.92			0.99						0.98	
Satd. Flow (perm)		1707			1813						1588	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	652	16	11	609	60	0	0	0	60	5	54
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	0	0	31	0
Lane Group Flow (vph)	0	721	0	0	677	0	0	0	0	0	88	0
Confl. Peds. (#/hr)	20		43	43		20	27		3	3		27
Confl. Bikes (#/hr)			5									
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						5	
Permitted Phases	1			1						5		
Actuated Green, G (s)		31.2			31.2						7.0	
Effective Green, g (s)		31.2			31.2						7.0	
Actuated g/C Ratio		0.59			0.59						0.13	
Clearance Time (s)		5.0			5.0						4.0	
Vehicle Extension (s)		2.0			2.0						2.0	
Lane Grp Cap (vph)		1006			1069						210	
v/s Ratio Prot												
v/s Ratio Perm		c0.42			0.37						0.06	
v/c Ratio		0.72			0.63						0.42	
Uniform Delay, d1		7.7			7.1						21.1	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		2.1			0.9						0.5	
Delay (s)		9.8			8.0						21.6	
Level of Service		A			A						C	
Approach Delay (s)		9.8			8.0			0.0			21.6	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	13.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	25	615	5	120	650	5	0	0	0	5	2	2
Future Vol, veh/h	25	615	5	120	650	5	0	0	0	5	2	2
Conflicting Peds, #/hr	24	0	35	35	0	24	2	0	1	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	27	668	5	130	707	5	0	0	0	5	2	2

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	736	0	0	709	0	0	1721	1757	735
Stage 1	-	-	-	-	-	-	994	994	-
Stage 2	-	-	-	-	-	-	727	763	-
Critical Hdwy	4.12	-	-	4.11	-	-	6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4	5.5	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3
Pot Cap-1 Maneuver	870	-	-	895	-	-	99	86	423
Stage 1	-	-	-	-	-	-	361	326	-
Stage 2	-	-	-	-	-	-	482	416	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	869	-	-	894	-	-	69	0	414
Mov Cap-2 Maneuver	-	-	-	-	-	-	69	0	-
Stage 1	-	-	-	-	-	-	269	0	-
Stage 2	-	-	-	-	-	-	449	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	1.5	49.3
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	869	-	-	894	-	-	91
HCM Lane V/C Ratio	0.031	-	-	0.146	-	-	0.108
HCM Control Delay (s)	9.3	0	-	9.7	0	-	49.3
HCM Lane LOS	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	0.1	-	-	0.5	-	-	0.3

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	615	0	0	705	5	50	1	115	1	0	20
Future Vol, veh/h	5	615	0	0	705	5	50	1	115	1	0	20
Conflicting Peds, #/hr	19	0	34	34	0	19	4	0	2	2	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	0	0	0
Mvmt Flow	5	668	0	0	766	5	54	1	125	1	0	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	791	0	-	-	-	0	1463	1470	670	1532	1467	792
Stage 1	-	-	-	-	-	-	679	679	-	788	788	-
Stage 2	-	-	-	-	-	-	784	791	-	744	679	-
Critical Hdwy	4.12	-	-	-	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	829	-	0	0	-	-	108	129	460	96	129	392
Stage 1	-	-	0	0	-	-	445	454	-	387	405	-
Stage 2	-	-	0	0	-	-	389	404	-	410	454	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	826	-	-	-	-	-	101	126	459	68	126	385
Mov Cap-2 Maneuver	-	-	-	-	-	-	101	126	-	68	126	-
Stage 1	-	-	-	-	-	-	441	449	-	377	399	-
Stage 2	-	-	-	-	-	-	366	398	-	294	449	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	68.5	17.3
HCM LOS			F	C

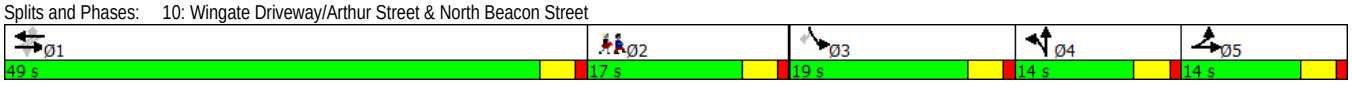
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	220	826	-	-	-	315
HCM Lane V/C Ratio	0.82	0.007	-	-	-	0.072
HCM Control Delay (s)	68.5	9.4	0	-	-	17.3
HCM Lane LOS	F	A	A	-	-	C
HCM 95th %tile Q(veh)	6.1	0	-	-	-	0.2

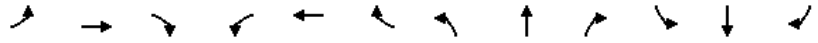
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	235	595	0	0	440	220	0	0	0	260	0	240	
Future Volume (vph)	235	595	0	0	440	220	0	0	0	260	0	240	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12	
Storage Length (ft)	100		0	0		0	0		0	0		150	
Storage Lanes	1		0	0		1	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		456			284			205			781		
Travel Time (s)		10.4			6.5			4.7			17.8		
Confl. Peds. (#/hr)	3					3			2	2			
Confl. Bikes (#/hr)			5			1							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	255	647	0	0	478	239	0	0	0	283	0	261	
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm	
Protected Phases	5	1 5			1		4	4		3			2
Permitted Phases	1 5			1		1						3	
Detector Phase	5	1 5		1	1	1	4	4		3		3	
Switch Phase													
Minimum Initial (s)	4.0			12.0	12.0	12.0	3.0	3.0		5.0		5.0	4.0
Minimum Split (s)	8.0			16.0	16.0	16.0	7.0	7.0		9.0		9.0	17.0
Total Split (s)	14.0			49.0	49.0	49.0	14.0	14.0		19.0		19.0	17.0
Total Split (%)	12.4%			43.4%	43.4%	43.4%	12.4%	12.4%		16.8%		16.8%	15%
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0
All-Red Time (s)	1.0			1.0	1.0	1.0	1.0	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	-1.0				-1.0	-1.0		-1.0		0.0		-1.0	
Total Lost Time (s)	3.0				3.0	3.0		3.0		4.0		3.0	
Lead/Lag				Lead	Lead	Lead	Lag	Lag		Lead		Lead	Lag
Lead-Lag Optimize?													
Recall Mode	None			None	None	None	None	None		None		None	None
v/c Ratio	0.50	0.56			0.58	0.30				0.77		0.49	
Control Delay	9.4	9.8			18.1	3.0				48.5		9.7	
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0	
Total Delay	9.4	9.8			18.1	3.0				48.5		9.7	
Queue Length 50th (ft)	34	115			138	0				122		8	
Queue Length 95th (ft)	110	347			320	40				#356		85	
Internal Link Dist (ft)		376			204			125			701		
Turn Bay Length (ft)	100											150	
Base Capacity (vph)	510	1414			1094	996				366		537	
Starvation Cap Reductn	0	0			0	0				0		0	
Spillback Cap Reductn	0	0			0	0				0		0	
Storage Cap Reductn	0	0			0	0				0		0	
Reduced v/c Ratio	0.50	0.46			0.44	0.24				0.77		0.49	

Intersection Summary

Area Type: Other
Cycle Length: 113
Actuated Cycle Length: 75.6
Natural Cycle: 90
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Wingate Driveway/Arthur Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	595	0	0	440	220	0	0	0	260	0	240
Future Volume (vph)	235	595	0	0	440	220	0	0	0	260	0	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			3.0	3.0				4.0		3.0
Lane Util. Factor	1.00	1.00			1.00	1.00				1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.98				1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1651	1739			1739	1442				1787		1599
Flt Permitted	0.32	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	554	1739			1739	1442				1787		1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	255	647	0	0	478	239	0	0	0	283	0	261
RTOR Reduction (vph)	0	0	0	0	0	130	0	0	0	0	0	190
Lane Group Flow (vph)	255	647	0	0	478	109	0	0	0	283	0	71
Confl. Peds. (#/hr)	3					3			2	2		
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm
Protected Phases	5	1 5			1		4	4		3		
Permitted Phases	1 5			1		1						3
Actuated Green, G (s)	45.0	49.0			34.7	34.7				15.5		15.5
Effective Green, g (s)	47.0	50.0			35.7	35.7				15.5		16.5
Actuated g/C Ratio	0.60	0.64			0.45	0.45				0.20		0.21
Clearance Time (s)	4.0				4.0	4.0				4.0		4.0
Vehicle Extension (s)	2.0				4.0	4.0				2.0		2.0
Lane Grp Cap (vph)	489	1107			790	655				352		336
v/s Ratio Prot	0.07	c0.37			0.27					c0.16		
v/s Ratio Perm	0.24					0.08						0.04
v/c Ratio	0.52	0.58			0.61	0.17				0.80		0.21
Uniform Delay, d1	8.9	8.2			16.1	12.6				30.1		25.6
Progression Factor	1.00	1.00			1.00	1.00				1.00		1.00
Incremental Delay, d2	0.5	0.9			1.5	0.2				11.8		0.1
Delay (s)	9.4	9.2			17.6	12.8				41.9		25.7
Level of Service	A	A			B	B				D		C
Approach Delay (s)		9.2			16.0			0.0			34.1	
Approach LOS		A			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	78.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑↑	Y	
Traffic Vol, veh/h	855	0	0	645	15	30
Future Vol, veh/h	855	0	0	645	15	30
Conflicting Peds, #/hr	0	44	44	0	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	2	2	0	0
Mvmt Flow	929	0	0	701	16	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	1282	931
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	353	-
Critical Hdwy	-	-	-	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	0	-	172	326
Stage 1	-	0	0	-	388	-
Stage 2	-	0	0	-	688	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	172	325
Mov Cap-2 Maneuver	-	-	-	-	172	-
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	687	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	251	-	-
HCM Lane V/C Ratio	0.195	-	-
HCM Control Delay (s)	22.8	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.7	-	-

Intersection	
Int Delay, s/veh	9.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	845	40	65	625	20	130
Future Vol, veh/h	845	40	65	625	20	130
Conflicting Peds, #/hr	0	49	49	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	2	2	1	1
Mvmt Flow	918	43	71	679	22	141

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1011	0	1810	989
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	821	-
Critical Hdwy	-	-	4.12	-	7.11	6.21
Critical Hdwy Stg 1	-	-	-	-	6.11	-
Critical Hdwy Stg 2	-	-	-	-	6.11	-
Follow-up Hdwy	-	-	2.218	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	686	-	61	301
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	370	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	686	-	51	289
Mov Cap-2 Maneuver	-	-	-	-	51	-
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	309	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	99.6
HCM LOS			F

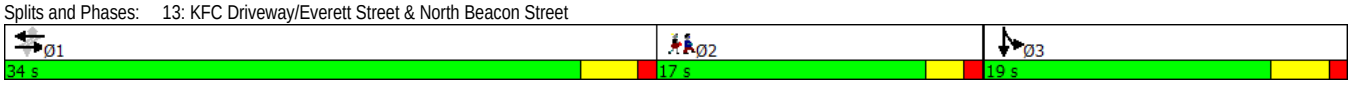
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	178	-	-	686	-
HCM Lane V/C Ratio	0.916	-	-	0.103	-
HCM Control Delay (s)	99.6	-	-	10.8	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	6.9	-	-	0.3	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	170	645	5	10	600	280	0	0	0	245	1	100	
Future Volume (vph)	170	645	5	10	600	280	0	0	0	245	1	100	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		446			477			138			542		
Travel Time (s)		10.1			10.8			3.1			12.3		
Confl. Peds. (#/hr)	50		64	64		50	13		36	36		13	
Confl. Bikes (#/hr)			6			2							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	891	0	0	663	304	0	0	0	0	376	0	
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA		
Protected Phases		1			1					3	3		2
Permitted Phases	1			1		1							
Detector Phase	1	1		1	1	1				3	3		
Switch Phase													
Minimum Initial (s)	15.0	15.0		15.0	15.0	15.0				7.0	7.0		7.0
Minimum Split (s)	19.0	19.0		19.0	19.0	19.0				11.0	11.0		17.0
Total Split (s)	34.0	34.0		34.0	34.0	34.0				19.0	19.0		17.0
Total Split (%)	48.6%	48.6%		48.6%	48.6%	48.6%				27.1%	27.1%		24%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0		2.0
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)		4.0			4.0	4.0					4.0		
Lead/Lag	Lead	Lead		Lead	Lead	Lead							Lag
Lead-Lag Optimize?													
Recall Mode	None	None		None	None	None				Max	Max		None
v/c Ratio		0.87			0.71	0.34					0.83		
Control Delay		28.1			19.5	3.0					40.7		
Queue Delay		0.0			0.1	0.0					0.0		
Total Delay		28.1			19.6	3.0					40.7		
Queue Length 50th (ft)		100			123	0					98		
Queue Length 95th (ft)		#336			#438	41					#317		
Internal Link Dist (ft)		366			397			58			462		
Turn Bay Length (ft)													
Base Capacity (vph)		1024			936	894					455		
Starvation Cap Reductn		0			9	0					0		
Spillback Cap Reductn		0			0	0					0		
Storage Cap Reductn		0			0	0					0		
Reduced v/c Ratio		0.87			0.72	0.34					0.83		

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 59.8
Natural Cycle: 90
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 13: KFC Driveway/Everett Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	645	5	10	600	280	0	0	0	245	1	100
Future Volume (vph)	170	645	5	10	600	280	0	0	0	245	1	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0					4.0	
Lane Util. Factor		0.95			1.00	1.00					1.00	
Frpb, ped/bikes		1.00			1.00	0.93					0.99	
Flpb, ped/bikes		1.00			1.00	1.00					1.00	
Frt		1.00			1.00	0.85					0.96	
Flt Protected		0.99			1.00	1.00					0.97	
Satd. Flow (prot)		3487			1861	1471					1706	
Flt Permitted		0.57			0.98	1.00					0.97	
Satd. Flow (perm)		2004			1833	1471					1706	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	701	5	11	652	304	0	0	0	266	1	109
RTOR Reduction (vph)	0	1	0	0	0	153	0	0	0	0	20	0
Lane Group Flow (vph)	0	890	0	0	663	151	0	0	0	0	356	0
Confl. Peds. (#/hr)	50		64	64		50	13		36	36		13
Confl. Bikes (#/hr)			6			2						
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA	
Protected Phases		1			1					3	3	
Permitted Phases	1			1		1						
Actuated Green, G (s)		30.6			30.6	30.6					15.3	
Effective Green, g (s)		30.6			30.6	30.6					15.3	
Actuated g/C Ratio		0.50			0.50	0.50					0.25	
Clearance Time (s)		4.0			4.0	4.0					4.0	
Vehicle Extension (s)		2.0			2.0	2.0					2.0	
Lane Grp Cap (vph)		993			909	729					423	
v/s Ratio Prot											c0.21	
v/s Ratio Perm		c0.44			0.36	0.10						
v/c Ratio		0.90			0.73	0.21					0.84	
Uniform Delay, d1		14.1			12.3	8.7					22.0	
Progression Factor		1.00			1.00	1.00					1.00	
Incremental Delay, d2		10.3			2.5	0.1					18.0	
Delay (s)		24.4			14.8	8.8					40.0	
Level of Service		C			B	A					D	
Approach Delay (s)		24.4			12.9			0.0			40.0	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	61.7	Sum of lost time (s)	11.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	260	525	30	20	150	510	90	0	340	170	120	310	255
Future Volume (vph)	260	525	30	20	150	510	90	0	340	170	120	310	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		420		0	0		150	0		75
Storage Lanes	0		0		1		0	0		1	0		1
Taper Length (ft)	25				25			25			25		
Right Turn on Red			Yes				Yes			Yes			Yes
Link Speed (mph)		30				30			30			30	
Link Distance (ft)		477				1053			361			234	
Travel Time (s)		10.8				23.9			8.2			5.3	
Confl. Peds. (#/hr)	123		81	50	81		123	124		50	50		124
Confl. Bikes (#/hr)			3				9			3			3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	3%	3%	3%	2%	2%	2%
Shared Lane Traffic (%)					10%								
Lane Group Flow (vph)	0	887	0	0	169	668	0	0	370	185	0	467	277
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Detector Phase	3	3		2	2	2			1	1	4	1 4	1
Switch Phase													
Minimum Initial (s)	8.0	8.0		10.0	10.0	10.0			10.0	10.0	4.0		10.0
Minimum Split (s)	26.0	26.0		27.0	27.0	27.0			24.0	24.0	10.0		24.0
Total Split (s)	36.0	36.0		29.0	29.0	29.0			30.0	30.0	11.0		30.0
Total Split (%)	34.0%	34.0%		27.4%	27.4%	27.4%			28.3%	28.3%	10.4%		28.3%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0			4.0	4.0	3.0		4.0
All-Red Time (s)	6.0	6.0		6.0	6.0	6.0			3.0	3.0	3.0		3.0
Lost Time Adjust (s)		0.0			0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag			Lead	Lead	Lag		Lead
Lead-Lag Optimize?													
Recall Mode	None	None		Max	Max	Max			None	None	None		None
v/c Ratio		1.02			0.58	1.12			0.56	0.41		0.79	0.66
Control Delay		75.2			47.9	115.2			40.9	4.5		44.8	16.0
Queue Delay		0.0			0.0	0.0			0.0	0.0		0.0	0.0
Total Delay		75.2			47.9	115.2			40.9	4.5		44.8	16.0
Queue Length 50th (ft)		~346			116	~291			116	0		130	22
Queue Length 95th (ft)		#477			196	#417			163	26		177	109
Internal Link Dist (ft)		397				973			281			154	
Turn Bay Length (ft)					420					150			75
Base Capacity (vph)		868			293	594			788	498		680	453
Starvation Cap Reductn		0			0	0			0	0		0	0
Spillback Cap Reductn		0			0	0			0	0		0	0
Storage Cap Reductn		0			0	0			0	0		0	0
Reduced v/c Ratio		1.02			0.58	1.12			0.47	0.37		0.69	0.61

Intersection Summary

Area Type: Other
Cycle Length: 106
Actuated Cycle Length: 102.5
Natural Cycle: 90
Control Type: Semi Act-Uncoord
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Cambridge Street & North Beacon Street/Brighton Avenue

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	260	525	30	20	150	510	90	0	340	170	120	310	255
Future Volume (vph)	260	525	30	20	150	510	90	0	340	170	120	310	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		10.0			10.0	10.0			7.0	7.0		7.0	7.0
Lane Util. Factor		0.95			0.91	0.91			0.95	1.00		0.95	1.00
Frpb, ped/bikes		0.99			1.00	0.97			1.00	0.90		1.00	0.77
Flpb, ped/bikes		1.00			1.00	1.00			1.00	1.00		0.99	1.00
Frt		0.99			1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected		0.98			0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3409			1579	3135			3505	1406		3458	1213
Flt Permitted		0.98			0.95	1.00			1.00	1.00		0.69	1.00
Satd. Flow (perm)		3409			1579	3135			3505	1406		2430	1213
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	283	571	33	22	163	554	98	0	370	185	130	337	277
RTOR Reduction (vph)	0	2	0	0	0	12	0	0	0	150	0	0	192
Lane Group Flow (vph)	0	885	0	0	169	656	0	0	370	35	0	467	85
Confl. Peds. (#/hr)	123		81	50	81		123	124		50	50		124
Confl. Bikes (#/hr)			3				9			3			3
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Actuated Green, G (s)		26.1			19.0	19.0			19.3	19.3		24.3	19.3
Effective Green, g (s)		26.1			19.0	19.0			19.3	19.3		24.3	19.3
Actuated g/C Ratio		0.25			0.19	0.19			0.19	0.19		0.24	0.19
Clearance Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Vehicle Extension (s)		2.0			2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)		868			292	581			660	264		626	228
v/s Ratio Prot		c0.26			0.11	c0.21			0.11			c0.04	
v/s Ratio Perm										0.02		c0.14	0.07
v/c Ratio		1.02			0.58	1.13			0.56	0.13		0.75	0.37
Uniform Delay, d1		38.2			38.0	41.7			37.7	34.6		36.2	36.3
Progression Factor		1.00			1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		35.5			8.1	78.1			0.7	0.1		4.2	0.4
Delay (s)		73.6			46.2	119.8			38.4	34.7		40.4	36.6
Level of Service		E			D	F			D	C		D	D
Approach Delay (s)		73.6				104.9			37.1			39.0	
Approach LOS		E				F			D			D	

Intersection Summary			
HCM 2000 Control Delay	67.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	102.4	Sum of lost time (s)	33.0
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	645	670	15	10	15
Future Vol, veh/h	45	645	670	15	10	15
Conflicting Peds, #/hr	129	0	0	129	28	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	3	3	4	4
Mvmt Flow	49	701	728	16	11	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	874	0	-	0	1692	869
Stage 1	-	-	-	-	865	-
Stage 2	-	-	-	-	827	-
Critical Hdwy	4.14	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.236	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	764	-	-	-	101	348
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	426	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	761	-	-	-	72	310
Mov Cap-2 Maneuver	-	-	-	-	72	-
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	340	-

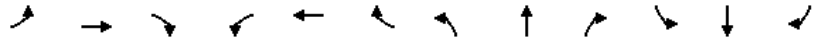
Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	38.9
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	761	-	-	-	133
HCM Lane V/C Ratio	0.064	-	-	-	0.204
HCM Control Delay (s)	10.1	0	-	-	38.9
HCM Lane LOS	B	A	-	-	E
HCM 95th %tile Q(veh)	0.2	-	-	-	0.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	665	5	2	650	0	0	0	0	250	0	40
Future Volume (vph)	0	665	5	2	650	0	0	0	0	250	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		587			512			208			484	
Travel Time (s)		13.3			11.6			4.7			11.0	
Confl. Peds. (#/hr)	166		76	76		166	4		73	73		4
Confl. Bikes (#/hr)			6			2						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	0%	0%	0%	17%	17%	17%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	728	0	0	709	0	0	0	0	272	43	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Detector Phase		1		1	1					5	5	
Switch Phase												
Minimum Initial (s)		20.0		20.0	20.0					8.0	8.0	
Minimum Split (s)		24.0		24.0	24.0					22.0	22.0	
Total Split (s)		60.0		60.0	60.0					30.0	30.0	
Total Split (%)		66.7%		66.7%	66.7%					33.3%	33.3%	
Yellow Time (s)		3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)		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)		4.0			4.0					4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max					None	None	
v/c Ratio		0.57			0.56					0.80	0.11	
Control Delay		10.4			13.2					51.4	0.6	
Queue Delay		0.0			3.6					0.0	0.0	
Total Delay		10.4			16.8					51.4	0.6	
Queue Length 50th (ft)		186			372					149	0	
Queue Length 95th (ft)		349			554					m219	m1	
Internal Link Dist (ft)		507			432			128			404	
Turn Bay Length (ft)										100		
Base Capacity (vph)		1270			1273					445	472	
Starvation Cap Reductn		0			458					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.57			0.87					0.61	0.09	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 16: Driveway/Denby Road & Cambridge Street



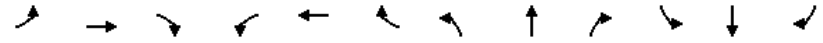
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	665	5	2	650	0	0	0	0	250	0	40
Future Volume (vph)	0	665	5	2	650	0	0	0	0	250	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0	4.0	
Lane Util. Factor		1.00			1.00					1.00	1.00	
Frpb, ped/bikes		1.00			1.00					1.00	0.97	
Flpb, ped/bikes		1.00			1.00					1.00	1.00	
Frt		1.00			1.00					1.00	0.85	
Flt Protected		1.00			1.00					0.95	1.00	
Satd. Flow (prot)		1839			1844					1543	1339	
Flt Permitted		1.00			1.00					0.95	1.00	
Satd. Flow (perm)		1839			1843					1543	1339	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	723	5	2	707	0	0	0	0	272	0	43
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	34	0
Lane Group Flow (vph)	0	728	0	0	709	0	0	0	0	272	9	0
Confl. Peds. (#/hr)	166		76	76		166	4		73	73		4
Confl. Bikes (#/hr)			6			2						
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	0%	0%	0%	17%	17%	17%
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Actuated Green, G (s)		62.2			62.2					19.8	19.8	
Effective Green, g (s)		62.2			62.2					19.8	19.8	
Actuated g/C Ratio		0.69			0.69					0.22	0.22	
Clearance Time (s)		4.0			4.0					4.0	4.0	
Vehicle Extension (s)		0.2			0.2					2.0	2.0	
Lane Grp Cap (vph)		1270			1273					339	294	
v/s Ratio Prot		c0.40								c0.18	0.01	
v/s Ratio Perm					0.38							
v/c Ratio		0.57			0.56					0.80	0.03	
Uniform Delay, d1		7.1			7.0					33.2	27.6	
Progression Factor		1.00			1.42					1.03	1.00	
Incremental Delay, d2		1.9			1.5					12.1	0.0	
Delay (s)		9.0			11.3					46.4	27.6	
Level of Service		A			B					D	C	
Approach Delay (s)		9.0			11.3			0.0			43.9	
Approach LOS		A			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	25	765	110	295	575	180	75	40	370	0	0	0	
Future Volume (vph)	25	765	110	295	575	180	75	40	370	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		75	0		100	0		75	0		0	
Storage Lanes	0		1	1		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		512			518			381			156		
Travel Time (s)		11.6			11.8			8.7			3.5		
Confl. Peds. (#/hr)	81		43	43		81	102		71	71		102	
Confl. Bikes (#/hr)			6			12			1			8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	2%	2%	2%	0%	0%	0%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	979	0	321	625	196	0	125	402	0	0	0	
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov				
Protected Phases		1		4	1 4	4	3	3	3 4				2
Permitted Phases	1			1 4		1 4							
Detector Phase	1	1		4	1 4	4	3	3	3 4				
Switch Phase													
Minimum Initial (s)	10.0	10.0		8.0		8.0	8.0	8.0					7.0
Minimum Split (s)	17.0	17.0		13.5		13.5	13.5	13.5					23.0
Total Split (s)	29.0	29.0		22.0		22.0	14.0	14.0					25.0
Total Split (%)	32.2%	32.2%		24.4%		24.4%	15.6%	15.6%					28%
Yellow Time (s)	4.0	4.0		3.0		3.0	4.0	4.0					3.0
All-Red Time (s)	3.0	3.0		2.5		2.5	1.5	1.5					1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0					
Total Lost Time (s)		7.0		5.5		5.5		5.5					
Lead/Lag	Lead	Lead		Lag		Lag	Lead	Lead					Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		None		None	None	None					None
v/c Ratio		0.99		0.79	0.57	0.23		0.64	0.49				
Control Delay		55.3		36.5	16.7	5.9		53.8	4.5				
Queue Delay		0.0		0.0	0.3	0.0		0.0	0.0				
Total Delay		55.3		36.5	17.0	5.9		53.8	4.5				
Queue Length 50th (ft)		~312		136	263	23		69	0				
Queue Length 95th (ft)		#523		#277	390	60		#134	58				
Internal Link Dist (ft)		432			438			301			76		
Turn Bay Length (ft)						100			75				
Base Capacity (vph)		990		420	1093	860		198	811				
Starvation Cap Reductn		0		0	0	0		0	0				
Spillback Cap Reductn		0		0	105	0		0	0				
Storage Cap Reductn		0		0	0	0		0	0				
Reduced v/c Ratio		0.99		0.76	0.63	0.23		0.63	0.50				

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 17: Harvard Avenue/Franklin Street & Cambridge Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	765	110	295	575	180	75	40	370	0	0	0
Future Volume (vph)	25	765	110	295	575	180	75	40	370	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		5.5	7.0	5.5		5.5	5.5			
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00			
Frpb, ped/bikes		0.99		1.00	1.00	0.93		1.00	1.00			
Flpb, ped/bikes		1.00		1.00	1.00	1.00		1.00	1.00			
Frt		0.98		1.00	1.00	0.85		1.00	0.85			
Flt Protected		1.00		0.95	1.00	1.00		0.97	1.00			
Satd. Flow (prot)		3363		1751	1845	1461		1804	1583			
Flt Permitted		0.81		0.13	1.00	1.00		0.97	1.00			
Satd. Flow (perm)		2737		245	1845	1461		1804	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	832	120	321	625	196	82	43	402	0	0	0
RTOR Reduction (vph)	0	11	0	0	0	54	0	0	262	0	0	0
Lane Group Flow (vph)	0	968	0	321	625	142	0	125	140	0	0	0
Confl. Peds. (#/hr)	81		43	43		81	102		71	71		102
Confl. Bikes (#/hr)			6			12			1			8
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	2%	2%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov			
Protected Phases		1		4	1 4	4	3	3	3 4			
Permitted Phases	1			1 4		1 4						
Actuated Green, G (s)		30.7		46.8	52.3	46.8		9.8	31.4			
Effective Green, g (s)		30.7		46.8	46.8	46.8		9.8	31.4			
Actuated g/C Ratio		0.34		0.52	0.52	0.52		0.11	0.35			
Clearance Time (s)		7.0		5.5		5.5		5.5				
Vehicle Extension (s)		2.0		2.0		2.0		2.0				
Lane Grp Cap (vph)		933		396	959	849		196	552			
v/s Ratio Prot				c0.14	0.34	0.03		c0.07	0.09			
v/s Ratio Perm		c0.35		0.28		0.07						
v/c Ratio		1.04		0.81	0.65	0.17		0.64	0.25			
Uniform Delay, d1		29.6		20.5	15.7	11.4		38.4	20.9			
Progression Factor		0.89		1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2		37.0		11.3	1.2	0.0		4.9	0.1			
Delay (s)		63.5		31.8	16.9	11.4		43.3	21.0			
Level of Service		E		C	B	B		D	C			
Approach Delay (s)		63.5			20.1			26.3			0.0	
Approach LOS		E			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	37.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↱	
Traffic Vol, veh/h	5	0	225	40	195	10	0	0	0	0	10	2
Future Vol, veh/h	5	0	225	40	195	10	0	0	0	0	10	2
Conflicting Peds, #/hr	0	0	22	22	0	0	0	0	1	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	1	1	2	0	2	0	2	2	2
Mvmt Flow	5	0	245	43	212	11	0	0	0	0	11	2

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	223	0	0	267	0	0				-	581	217
Stage 1	-	-	-	-	-	-				-	304	-
Stage 2	-	-	-	-	-	-				-	277	-
Critical Hdwy	4.12	-	-	4.11	-	-				-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	5.52	-
Follow-up Hdwy	2.218	-	-	2.209	-	-				-	4.018	3.318
Pot Cap-1 Maneuver	1346	-	-	1303	-	-				0	425	823
Stage 1	-	-	-	-	-	-				0	663	-
Stage 2	-	-	-	-	-	-				0	681	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1346	-	-	1303	-	-				-	0	823
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	1.3	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1346	-	-	1303	-	-	823
HCM Lane V/C Ratio	0.004	-	-	0.033	-	-	0.016
HCM Control Delay (s)	7.7	0	-	7.9	0	-	9.4
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	30	440	125	135	395	25	60	225	115	20	175	25	
Future Volume (vph)	30	440	125	135	395	25	60	225	115	20	175	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		100	75		0	115		0	0		0	
Storage Lanes	0		1	1		0	1		0	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		2049			739			1735			510		
Travel Time (s)		46.6			16.8			39.4			11.6		
Confl. Peds. (#/hr)	1		13	13		1	5		4	4		5	
Confl. Bikes (#/hr)						2							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	0%	0%	0%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	511	136	147	456	0	65	370	0	0	239	0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA		
Protected Phases		1			1			3			3		2
Permitted Phases	1		1	1			3			3			
Detector Phase	1	1	1	1	1		3	3		3	3		
Switch Phase													
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0		4.0
Minimum Split (s)	17.0	17.0	17.0	17.0	17.0		17.0	17.0		17.0	17.0		28.0
Total Split (s)	35.0	35.0	35.0	35.0	35.0		27.0	27.0		27.0	27.0		28.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	38.9%		30.0%	30.0%		30.0%	30.0%		31%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0		2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0		-1.0	-1.0			-1.0		
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0		
Lead/Lag	Lead	Lead	Lead	Lead	Lead								Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None		None
v/c Ratio		0.48	0.14	0.35	0.41		0.35	0.85			0.84		
Control Delay		15.5	6.4	16.8	13.8		33.9	49.2			58.1		
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		15.5	6.4	16.8	13.8		33.9	49.2			58.1		
Queue Length 50th (ft)		125	10	33	105		30	182			122		
Queue Length 95th (ft)		#443	61	#154	337		68	#317			#243		
Internal Link Dist (ft)		1969			659			1655			430		
Turn Bay Length (ft)			100	75			115						
Base Capacity (vph)		1074	950	419	1115		202	476			310		
Starvation Cap Reductn		0	0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0	0		0	0			0		
Storage Cap Reductn		0	0	0	0		0	0			0		
Reduced v/c Ratio		0.48	0.14	0.35	0.41		0.32	0.78			0.77		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 19: Everett Street & Western Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	440	125	135	395	25	60	225	115	20	175	25
Future Volume (vph)	30	440	125	135	395	25	60	225	115	20	175	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes		1.00	0.97	1.00	1.00		1.00	0.99			1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		0.99	1.00			1.00	
Frt		1.00	0.85	1.00	0.99		1.00	0.95			0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)		1821	1505	1727	1808		1795	1786			1837	
Flt Permitted		0.96	1.00	0.38	1.00		0.42	1.00			0.65	
Satd. Flow (perm)		1745	1505	682	1808		792	1786			1197	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	478	136	147	429	27	65	245	125	22	190	27
RTOR Reduction (vph)	0	0	34	0	2	0	0	21	0	0	5	0
Lane Group Flow (vph)	0	511	102	147	454	0	65	349	0	0	234	0
Confl. Peds. (#/hr)	1		13	13		1	5		4	4		5
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	0%	0%	0%	1%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			3			3	
Permitted Phases	1		1	1			3			3		
Actuated Green, G (s)		51.2	51.2	51.2	51.2		20.0	20.0			20.0	
Effective Green, g (s)		52.2	52.2	52.2	52.2		21.0	21.0			21.0	
Actuated g/C Ratio		0.58	0.58	0.58	0.58		0.23	0.23			0.23	
Clearance Time (s)		5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		1012	872	395	1048		184	416			279	
v/s Ratio Prot					0.25			c0.20				
v/s Ratio Perm		c0.29	0.07	0.22			0.08				0.20	
v/c Ratio		0.50	0.12	0.37	0.43		0.35	0.84			0.84	
Uniform Delay, d1		11.2	8.5	10.1	10.6		28.8	32.9			32.9	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2		1.8	0.3	2.7	1.3		0.4	13.3			18.4	
Delay (s)		13.0	8.8	12.8	11.9		29.3	46.2			51.3	
Level of Service		B	A	B	B		C	D			D	
Approach Delay (s)		12.1			12.1			43.6			51.3	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	5	30	0	45	10	405	50	30	405	5
Future Vol, veh/h	5	0	5	30	0	45	10	405	50	30	405	5
Conflicting Peds, #/hr	0	0	2	2	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	1	1	2	2	2	1	1	1
Mvmt Flow	5	0	5	33	0	49	11	440	54	33	440	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1022	1024	445	1002	1000	467	446	0	0	495	0	0
Stage 1	508	508	-	489	489	-	-	-	-	-	-	-
Stage 2	514	516	-	513	511	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.12	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.218	-	-	2.209	-	-
Pot Cap-1 Maneuver	216	237	617	222	244	598	1114	-	-	1074	-	-
Stage 1	551	542	-	562	551	-	-	-	-	-	-	-
Stage 2	547	538	-	546	539	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	190	224	616	211	231	598	1112	-	-	1074	-	-
Mov Cap-2 Maneuver	190	224	-	211	231	-	-	-	-	-	-	-
Stage 1	543	520	-	554	543	-	-	-	-	-	-	-
Stage 2	495	530	-	518	517	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.9	18.6	0.2	0.6
HCM LOS	C	C		

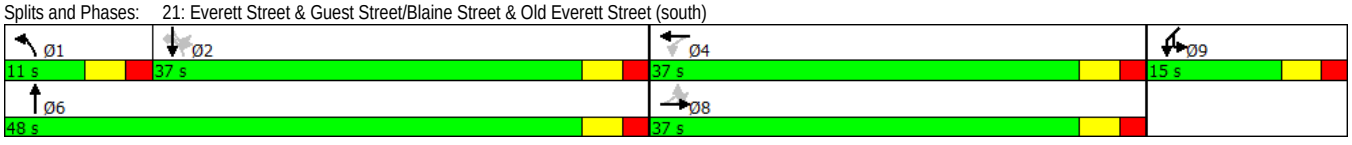
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1112	-	-	290	345	1074	-	-
HCM Lane V/C Ratio	0.01	-	-	0.037	0.236	0.03	-	-
HCM Control Delay (s)	8.3	0	-	17.9	18.6	8.5	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.9	0.1	-	-

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR2	NBL	NBT	NBR	SBL2	SBT	SBR	SWL2	SWL	SWR
Lane Configurations																
Traffic Volume (vph)	100	80	0	65	5	0	5	85	340	70	20	245	175	1	30	85
Future Volume (vph)	100	80	0	65	5	0	5	85	340	70	20	245	175	1	30	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200		0	0			0		0			50		0	0
Storage Lanes		1		0	0			1		0			1		1	0
Taper Length (ft)		25			25			25							25	
Right Turn on Red				No			No						No			
Link Speed (mph)			30			30			30			30			30	
Link Distance (ft)			307			169			149			1225			365	
Travel Time (s)			7.0			3.8			3.4			27.8			8.3	
Confl. Peds. (#/hr)	5			1				24					24			
Confl. Bikes (#/hr)													1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)																
Lane Group Flow (vph)	109	0	158	0	0	10	0	92	446	0	0	288	190	0	159	0
Turn Type	Perm	Perm	NA		Perm	NA		D.P+P	NA		Perm	NA	Perm	Prot	Prot	
Protected Phases			8			4		1	6			2		9	9	
Permitted Phases	8	8			4			2			2		2			
Detector Phase	8	8	8		4	4		1	6		2	2	2	9	9	
Switch Phase																
Minimum Initial (s)	6.0	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	21.0	21.0	21.0		21.0	21.0		11.0	21.0		21.0	21.0	21.0	11.0	11.0	
Total Split (s)	37.0	37.0	37.0		37.0	37.0		11.0	48.0		37.0	37.0	37.0	15.0	15.0	
Total Split (%)	37.0%	37.0%	37.0%		37.0%	37.0%		11.0%	48.0%		37.0%	37.0%	37.0%	15.0%	15.0%	
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0			0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	5.0		5.0			5.0		5.0	5.0			5.0	5.0		5.0	
Lead/Lag								Lead			Lag	Lag	Lag			
Lead-Lag Optimize?								Yes			Yes	Yes	Yes			
Recall Mode	Min	Min	Min		None	None		Min	Max		Max	Max	Max	None	None	
v/c Ratio	0.46		0.65			0.04		0.19	0.47			0.42	0.34		0.80	
Control Delay	36.7		44.3			27.6		12.2	15.3			21.6	20.9		65.7	
Queue Delay	0.0		0.0			0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	36.7		44.3			27.6		12.2	15.3			21.6	20.9		65.7	
Queue Length 50th (ft)	51		77			4		22	136			106	67		81	
Queue Length 95th (ft)	98		138			17		53	247			193	134		#199	
Internal Link Dist (ft)			227			89			69			1145			285	
Turn Bay Length (ft)	200												50			
Base Capacity (vph)	536		551			587		477	948			690	558		200	
Starvation Cap Reductn	0		0			0		0	0			0	0		0	
Spillback Cap Reductn	0		0			0		0	0			0	0		0	
Storage Cap Reductn	0		0			0		0	0			0	0		0	
Reduced v/c Ratio	0.20		0.29			0.02		0.19	0.47			0.42	0.34		0.80	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 82.4
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Everett Street & Guest Street/Blaine Street & Old Everett Street (south)



Lane Group	SWR2
Lane Configurations	
Traffic Volume (vph)	30
Future Volume (vph)	30
Ideal Flow (vphpl)	1900
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	No
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.92
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR2	NBL	NBT	NBR	SBL2	SBT	SBR	SWL2	SWL	SWR
Lane Configurations																
Traffic Volume (vph)	100	80	0	65	5	0	5	85	340	70	20	245	175	1	30	85
Future Volume (vph)	100	80	0	65	5	0	5	85	340	70	20	245	175	1	30	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0		5.0	5.0			5.0	5.0		5.0	
Lane Util. Factor	1.00		1.00			1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00		0.99			1.00		1.00	1.00			1.00	0.92		1.00	
Flpb, ped/bikes	0.99		1.00			1.00		0.98	1.00			1.00	1.00		1.00	
Frt	1.00		0.93			0.93		1.00	0.97			1.00	0.85		0.89	
Flt Protected	0.95		0.97			0.98		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)	1747		1674			1695		1740	1815			1856	1454		1647	
Flt Permitted	0.75		0.82			0.87		0.50	1.00			0.95	1.00		0.99	
Satd. Flow (perm)	1381		1416			1510		917	1815			1773	1454		1647	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	87	0	71	5	0	5	92	370	76	22	266	190	1	33	92
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	109	0	158	0	0	10	0	92	446	0	0	288	190	0	159	0
Confl. Peds. (#/hr)	5			1				24					24			
Confl. Bikes (#/hr)													1			
Turn Type	Perm	Perm	NA		Perm	NA		D.P+P	NA		Perm	NA	Perm	Prot	Prot	
Protected Phases			8			4		1	6			2		9	9	
Permitted Phases	8	8			4			2			2		2			
Actuated Green, G (s)	14.2		14.2			14.2		38.1	43.1			32.1	32.1		10.0	
Effective Green, g (s)	14.2		14.2			14.2		38.1	43.1			32.1	32.1		10.0	
Actuated g/C Ratio	0.17		0.17			0.17		0.46	0.52			0.39	0.39		0.12	
Clearance Time (s)	5.0		5.0			5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0		3.0			3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	238		244			260		484	950			691	567		200	
v/s Ratio Prot								0.01	c0.25						c0.10	
v/s Ratio Perm	0.08		c0.11			0.01		0.07				0.16	0.13			
v/c Ratio	0.46		0.65			0.04		0.19	0.47			0.42	0.34		0.80	
Uniform Delay, d1	30.6		31.7			28.4		12.7	12.4			18.3	17.6		35.2	
Progression Factor	1.00		1.00			1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	1.4		5.8			0.1		0.2	1.7			1.8	1.6		19.2	
Delay (s)	32.0		37.5			28.4		12.9	14.0			20.1	19.2		54.4	
Level of Service	C		D			C		B	B			C	B		D	
Approach Delay (s)			35.3			28.4			13.8			19.8			54.4	
Approach LOS			D			C			B			B			D	

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	82.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	30
Future Volume (vph)	30
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	33
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	495	1	5	335
Future Vol, veh/h	0	0	495	1	5	335
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	538	1	5	364

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	914	539	0	0	539	0
Stage 1	539	-	-	-	-	-
Stage 2	375	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	303	542	-	-	1029	-
Stage 1	585	-	-	-	-	-
Stage 2	695	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	301	542	-	-	1029	-
Mov Cap-2 Maneuver	301	-	-	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	691	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1029	-
HCM Lane V/C Ratio	-	-	-	0.005	-
HCM Control Delay (s)	-	-	0	8.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	0	40	10	0	130	70	5	0	15	5	150	0	0	0	0
Future Vol, veh/h	0	0	40	10	0	130	70	5	0	15	5	150	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	0	0	0	5	1	1	1	2	0	0	0
Mvmt Flow	0	0	43	11	0	141	76	5	0	16	5	163	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	9.2	8.1	0
HCM LOS	A	A	A	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	0%	63%	0%
Vol Thru, %	3%	80%	34%	100%
Vol Right, %	88%	20%	2%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	170	50	205	0
LT Vol	15	0	130	0
Through Vol	5	40	70	0
RT Vol	150	10	5	0
Lane Flow Rate	185	54	223	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.208	0.067	0.278	0
Departure Headway (Hd)	4.047	4.42	4.485	4.745
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	889	810	807	0
Service Time	2.064	2.446	2.485	2.772
HCM Lane V/C Ratio	0.208	0.067	0.276	0
HCM Control Delay	8.1	7.8	9.2	7.8
HCM Lane LOS	A	A	A	N
HCM 95th-tile Q	0.8	0.2	1.1	0

Intersection	
Intersection Delay, s/veh	17.6
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	135	255	15	0	30	320	2	0	15	60	25	0	2	55	125
Future Vol, veh/h	0	135	255	15	0	30	320	2	0	15	60	25	0	2	55	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	0	0	0	2	33	33	33
Mvmt Flow	0	147	277	16	0	33	348	2	0	16	65	27	0	2	60	136
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	20.9	17.6	11.4	13.5
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	33%	9%	1%
Vol Thru, %	60%	63%	91%	30%
Vol Right, %	25%	4%	1%	69%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	405	352	182
LT Vol	15	135	30	2
Through Vol	60	255	320	55
RT Vol	25	15	2	125
Lane Flow Rate	109	440	383	198
Geometry Grp	1	1	1	1
Degree of Util (X)	0.201	0.699	0.614	0.365
Departure Headway (Hd)	6.663	5.715	5.779	6.649
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	538	634	627	540
Service Time	4.717	3.727	3.794	4.697
HCM Lane V/C Ratio	0.203	0.694	0.611	0.367
HCM Control Delay	11.4	20.9	17.6	13.5
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	0.7	5.6	4.2	1.7

Intersection	
Intersection Delay, s/veh	24.6
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	5	225	45	0	105	225	75	0	95	185	75	0	65	165	10
Future Vol, veh/h	0	5	225	45	0	105	225	75	0	95	185	75	0	65	165	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	1	1	1	2	0	0	0	2	0	0	0
Mvmt Flow	0	5	245	49	0	114	245	82	0	103	201	82	0	71	179	11
Number of Lanes	0	0	1	0	0	1	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	27	23.6	24.3	24.2
HCM LOS	D	C	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	34%	0%	2%	100%	0%	27%
Vol Thru, %	66%	0%	82%	0%	75%	69%
Vol Right, %	0%	100%	16%	0%	25%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	280	75	275	105	300	240
LT Vol	95	0	5	105	0	65
Through Vol	185	0	225	0	225	165
RT Vol	0	75	45	0	75	10
Lane Flow Rate	304	82	299	114	326	261
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.694	0.165	0.679	0.268	0.702	0.614
Departure Headway (Hd)	8.204	7.306	8.174	8.448	7.751	8.469
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	441	490	442	425	466	425
Service Time	5.965	5.067	6.241	6.211	5.514	6.538
HCM Lane V/C Ratio	0.689	0.167	0.676	0.268	0.7	0.614
HCM Control Delay	27.7	11.5	27	14.3	26.9	24.2
HCM Lane LOS	D	B	D	B	D	C
HCM 95th-tile Q	5.2	0.6	4.9	1.1	5.4	4

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	330	330	10	10	30
Future Vol, veh/h	35	330	330	10	10	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	359	359	11	11	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	370	0	-	0	799	364
Stage 1	-	-	-	-	364	-
Stage 2	-	-	-	-	435	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1189	-	-	-	355	681
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	653	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1189	-	-	-	341	681
Mov Cap-2 Maneuver	-	-	-	-	341	-
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	627	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1189	-	-	-	545
HCM Lane V/C Ratio	0.032	-	-	-	0.08
HCM Control Delay (s)	8.1	0	-	-	12.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	290	15	10	295	35	15	5	10	35	5	30
Future Vol, veh/h	35	290	15	10	295	35	15	5	10	35	5	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	315	16	11	321	38	16	5	11	38	5	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	359	0	0	332	0	0	779	779	323	769	769	340
Stage 1	-	-	-	-	-	-	399	399	-	361	361	-
Stage 2	-	-	-	-	-	-	380	380	-	408	408	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1200	-	-	1227	-	-	313	327	718	318	332	702
Stage 1	-	-	-	-	-	-	627	602	-	657	626	-
Stage 2	-	-	-	-	-	-	642	614	-	620	597	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1200	-	-	1227	-	-	285	313	718	299	318	702
Mov Cap-2 Maneuver	-	-	-	-	-	-	285	313	-	299	318	-
Stage 1	-	-	-	-	-	-	607	583	-	636	619	-
Stage 2	-	-	-	-	-	-	600	607	-	586	578	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.2	15.9	16.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	363	1200	-	-	1227	-	-	399
HCM Lane V/C Ratio	0.09	0.032	-	-	0.009	-	-	0.191
HCM Control Delay (s)	15.9	8.1	-	-	8	0	-	16.1
HCM Lane LOS	C	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.7

Post-Build Analysis

Table C-1 Signalized Post-Build Intersection Capacity Analysis

		2023 No-Build Conditions					2023 Build Conditions with Mitigation					2023 Post Build Conditions				
	Movement	v/c[a]	Delay[b]	LOS[c]	50th Queue[d]	95th Queue[e]	v/c	Delay	LOS	50th Queue	95th Queue	v/c	Delay	LOS	50th Queue	95th Queue
Market Street at Guest Street/Stockyard Driveway																
Weekday Morning																
Stockyard Driveway	EB L/T/R	0.03	35	D	4	16	0.03	33	C	3	15	0.03	32	C	3	15
Guest Street	WB L/T	0.46	38	D	36	73	0.66	43	D	65	120	0.70	45	D	70	128
	WB R	0.16	20	B	15	52	0.15	19	B	14	52	0.17	19	B	18	58
Market Street	NB L/T/R	0.59	4	A	65	m40	0.63	5	A	71	m40	0.64	5	A	71	m40
	SB L/T/R	0.93dl	9	A	86	154	0.99dl	10	B	107	162	1.01dl	11	B	113	163
	OVERALL	**0.71**	**8**	**A**			**0.74**	**10**	**B**			**0.75**	**11**	**B**		
Weekday Evening																
Stockyard Driveway	EB L/T/R	0.07	30	C	8	26	0.09	30	C	8	26	0.09	30	C	8	26
Guest Street	WB L/T	>1.20	>120	F	~206	#363	>1.20	>120	F	~285	#454	>1.20	>120	F	~292	#462
	WB R	0.88	37	D	276	#507	0.79	29	C	229	#431	0.80	30	C	233	#439
Market Street	NB L/T/R	0.55	18	B	152	207	0.58	18	B	161	220	0.59	18	B	163	223
	SB L/T/R	0.73	12	B	131	168	0.74	12	B	131	168	0.75	12	B	132	171
	OVERALL	**0.91**	**34**	**C**			**0.96**	**49**	**D**			**0.97**	**51**	**D**		
Saturday Midday																
Stockyard Driveway	EB L/T/R	0.03	29	C	3	17	0.02	28	C	3	17	0.02	28	C	3	17
Guest Street	WB L/T	0.81	51	D	97	#202	0.96	81	F	128	#271	0.98	87	F	131	#276
	WB R	0.23	20	B	23	76	0.23	19	B	24	76	0.24	20	B	26	79
Market Street	NB L/T/R	0.52	13	B	143	195	0.55	14	B	148	203	0.56	14	B	150	206
	SB L/T/R	0.63	9	A	93	123	0.66	10	B	94	124	0.67	10	B	95	126
	OVERALL	**0.68**	**15**	**B**			**0.74**	**20**	**B**			**0.75**	**21**	**C**		
North Beacon Street at Arthur Street/ Wingate Driveway																
Weekday Morning																
North Beacon Street	EB L	0.23	7	A	15	66	0.31	6	A	20	90	0.33	7	A	23	92
	EB T/R	0.56	6	A	114	420	0.51	5	A	93	375	0.52	6	A	105	377
	WB L/T	0.66	33	C	251	m#451	0.56	26	C	190	#451	0.59	28	C	199	#468
	WB R	0.23	59	E	53	m90	0.20	43	D	36	m86	0.20	46	D	36	m85
Wingate Driveway	NB L/T/R	0.00	0	A	0	0	0.00	0	A	0	0	0.00	0	A	0	0
Arthur Street	SB L/T	0.69	49	D	91	150	0.63	47	D	77	130	0.70	50	D	94	155
	SB R	0.05	38	D	0	2	0.08	39	D	0	30	0.09	38	D	0	39
	OVERALL	**0.65**	**27**	**C**			**0.57**	**21**	**C**			**0.60**	**23**	**C**		

a	volume to capacity ratio	d	50th percentile queue length, measured in feet	m	Volume for 95th percentile queue is metered by upstream signal
b	average delay in seconds per vehicle	e	95th percentile queue length, measured in feet	~	volume exceeds capacity; queue is theoretically infinite
c	level of service	#	95th percentile volume exceeds capacity, queue may be longer	dl	Defacto left lane

Table 5-XX Signalized Post-Build Intersection Capacity Analysis (Cont.)

		2023 No-Build Conditions					2023 Build Conditions with Mitigation					2023 Post Build Conditions				
	Movement	v/c[a]	Delay[b]	LOS[c]	50th Queue[d]	95th Queue[e]	v/c	Delay	LOS	50th Queue	95th Queue	v/c	Delay	LOS	50th Queue	95th Queue
North Beacon Street at Arthur Street/Wingate Driveway (Cont.)																
Weekday Evening																
North Beacon Street	EB L	0.53	21	C	81	159	0.54	19	B	81	183	0.60	24	C	104	210
	EB T/R	0.70	19	B	316	452	0.61	14	B	226	396	0.62	15	B	236	401
	WB L/T	1.00	73	E	322	m#563	0.89	54	D	297	m#498	0.91	57	E	297	m#508
	WB R	0.18	70	E	43	m62	0.15	67	E	36	m56	0.15	67	E	35	m55
Wingate Driveway	NB L/T/R	0.00	0	A	0	0	0.00	0	A	0	0	0.00	0	A	0	0
Arthur Street	SB L/T	0.89	55	D	273	#607	0.83	51	D	229	#463	0.82	49	D	235	#482
	SB R	0.33	31	C	47	150	0.34	34	C	34	134	0.35	33	C	39	142
	OVERALL	**0.88**	**45**	**D**			**0.78**	**37**	**D**			**0.79**	**38**	**D**		
Saturday Midday																
North Beacon Street	EB L	0.48	9	A	29	96	0.52	9	A	34	110	0.56	10	A	36	118
	EB T/R	0.62	10	A	131	398	0.58	9	A	115	347	0.59	9	A	116	352
	WB L/T	0.64	18	B	160	370	0.61	18	B	138	320	0.61	18	B	140	324
	WB R	0.19	13	B	0	43	0.17	13	B	0	40	0.17	13	B	0	41
Wingate Driveway	NB L/T/R	0.00	0	A	0	0	0.00	0	A	0	0	0.00	0	A	0	0
Arthur Street	SB L/T	1.07	103	F	~207	#471	0.80	42	D	122	#356	0.84	46	D	131	#372
	SB R	0.30	28	C	27	110	0.21	26	C	8	85	0.24	26	C	11	92
	OVERALL	**0.77**	**28**	**C**			**0.69**	**18**	**B**			**0.70**	**18**	**B**		
North Beacon Street at Everett Street/KFC Driveway																
Weekday Morning																
North Beacon Street	EB L/T/R	>1.20dl	>120	F	~430	#559	>1.20dl	>120	F	~395	#525	>1.20dl	>120	F	~415	#544
	WB T	0.87	37	D	379	#597	0.77	31	C	317	461	0.78	31	C	321	468
	WB R	0.18	17	B	0	43	0.22	18	B	0	47	0.22	18	B	0	47
Everett Street	SB L/T/R	0.47	27	C	142	232	0.55	29	C	175	279	0.55	29	C	175	279
	OVERALL	**0.82**	**86**	**F**			**0.83**	**73**	**E**			**0.85**	**80**	**E**		
Weekday Evening																
North Beacon Street	EB L/T/R	>1.20dl	>120	F	~521	m#647	>1.20dl	93	F	~398	#531	>1.20dl	110	F	~420	#553
	WB T	0.86	14	B	151	m326	0.77	12	B	285	m117	0.80	12	B	342	m126
	WB R	0.20	2	A	2	m1	0.21	5	A	1	m0	0.22	4	A	2	m0
Everett Street	SB L/T/R	0.77	40	D	319	#527	0.88	50	D	~423	m#641	0.88	50	D	~423	#641
	OVERALL	**0.98**	**84**	**F**			**0.92**	**50**	**D**			**0.94**	**56**	**E**		

a volume to capacity ratio
b average delay in seconds per vehicle
c level of service
d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ volume exceeds capacity; queue is theoretically infinite
dl Defacto left lane

Table 5-XX Signalized Post-Build Intersection Capacity Analysis (Cont.)

		2023 No-Build Conditions					2023 Build Conditions with Mitigation					2023 Post Build Conditions				
	Movement	v/c[a]	Delay[b]	LOS[c]	50th Queue[d]	95th Queue[e]	v/c	Delay	LOS	50th Queue	95th Queue	v/c	Delay	LOS	50th Queue	95th Queue
North Beacon Street at Everett Street/KFC Driveway (Cont.)																
Saturday Midday																
North Beacon Street	EB L/T/R	>1.20dl	80	F	141	#420	0.90	24	C	100	#336	0.97dl	29	C	104	#346
	WB T	0.83	19	B	150	#526	0.73	15	B	123	#438	0.76	16	B	131	#465
	WB R	0.17	9	A	0	37	0.21	9	A	0	41	0.21	9	A	0	41
Everett Street	SB L/T/R	0.70	30	C	76	#246	0.84	40	D	98	#317	0.84	40	D	98	#317
	OVERALL	**0.88**	**46**	**D**			**0.79**	**22**	**C**			**0.81**	**24**	**C**		
North Beacon Street/Brighton Avenue at Cambridge Street																
Weekday Morning																
North Beacon Street	EB L/T/R	0.93	57	E	266	#374	0.92	56	E	264	#369	0.94	60	E	276	#392
Brighton Avenue	WB L	0.50	47	D	97	168	0.50	47	D	97	168	0.50	47	D	97	168
	WB L/T/R	1.14	>120	F	~292	#416	1.14	>120	F	~296	#420	1.14	>120	F	~296	#420
Cambridge Street	NB T	0.50	40	D	125	175	0.50	40	D	125	175	0.50	40	D	125	175
	NB R	0.15	35	D	0	50	0.15	35	D	0	50	0.15	35	D	0	50
	SB L/T	0.66	37	D	150	202	0.64	36	D	146	197	0.65	37	D	148	199
	SB R	1.13	>120	F	~272	#451	1.05	110	F	~240	#414	1.07	115	F	~247	#423
	OVERALL	**1.03**	**73**	**E**			**1.00**	**71**	**E**			**1.02**	**72**	**E**		
Weekday Evening																
North Beacon Street	EB L/T/R	>1.20	>120	F	~507	m#413	>1.20	>120	F	~479	m#475	>1.20	>120	F	~491	m#467
Brighton Avenue	WB L	0.63	52	D	131	216	0.63	52	D	131	216	0.63	52	D	131	216
	WB L/T/R	>1.20	>120	F	~378	#508	>1.20	>120	F	~378	#508	>1.20	>120	F	~387	#517
Cambridge Street	NB T	0.49	39	D	122	170	0.48	39	D	120	167	0.48	39	D	120	167
	NB R	0.16	35	D	0	47	0.16	35	D	0	47	0.16	35	D	0	47
	SB L/T	0.93	72	E	261	#375	0.92	66	E	261	#375	0.93	65	E	263	#379
	SB R	0.30	>120	F	95	176	0.20	>120	F	93	m150	0.26	116	F	99	m159
	OVERALL	**1.14**	**120**	**F**			**1.13**	**114**	**F**			**1.14**	**117**	**F**		
Saturday Midday																
North Beacon Street	EB L/T/R	1.06	85	F	~366	#498	1.02	74	E	~346	#477	1.04	79	E	~359	#488
Brighton Avenue	WB L	0.58	46	D	116	196	0.58	46	D	116	196	0.58	46	D	116	196
	WB L/T/R	1.12	175	F	~287	#413	1.13	120	F	~291	#417	1.15	>120	F	~301	#426
Cambridge Street	NB T	0.56	38	D	116	163	0.56	38	D	116	163	0.56	38	D	116	163
	NB R	0.13	35	C	0	26	0.13	35	C	0	26	0.13	35	C	0	26
	SB L/T	0.74	40	D	130	177	0.75	40	D	130	177	0.75	41	D	131	178
	SB R	0.51	38	D	42	147	0.37	37	D	22	109	0.44	37	D	31	126
	OVERALL	**0.96**	**70**	**E**			**0.95**	**67**	**E**			**0.97**	**70**	**E**		

a volume to capacity ratio
b average delay in seconds per vehicle
c level of service
d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ volume exceeds capacity; queue is theoretically infinite
dl Defacto left lane

Table 5-XX Signalized Post-Build Intersection Capacity Analysis (Cont.)

		2016 Existing Conditions					2023 No-Build Conditions					2023 Build Conditions with Mitigation				
	Movement	v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
Cambridge Street at Denby Road																
Weekday Morning																
Cambridge Street	EB L/T	0.46	5	A	106	207	0.48	7	A	135	266	0.51	8	A	162	316
	WB T/R	0.60	4	A	28	68	0.61	5	A	29	47	0.65	7	A	30	664
Denby Road	SB L	0.67	47	D	100	160	0.74	46	D	150	215	0.77	45	D	181	250
	SB R	0.02	38	D	1	23	0.02	34	C	1	22	0.02	32	C	1	20
	OVERALL	**0.61**	**9**	**A**			**0.64**	**12**	**B**			**0.67**	**14**	**B**		
Weekday Evening																
Cambridge Street	EB L/T	0.62	15	B	470	m466	0.65	19	B	458	m477	0.67	21	C	461	m481
	WB T/R	0.66	9	A	62	796	0.71	15	B	546	773	0.74	17	B	579	#800
Denby Road	SB L	0.79	52	D	203	m275	0.83	48	D	276	m345	0.83	48	D	292	362
	SB R	0.02	39	D	1	m21	0.02	31	C	0	m18	0.02	30	C	0	m17
	OVERALL	**0.69**	**18**	**B**			**0.74**	**24**	**C**			**0.77**	**25**	**C**		
Saturday Midday																
Cambridge Street	EB L/T	0.55	7	A	153	312	0.57	9	A	186	349	0.59	10	A	203	353
	WB T/R	0.54	8	A	52	571	0.56	11	B	372	554	0.58	13	B	397	566
Denby Road	SB L	0.71	44	D	102	m161	0.80	46	D	149	m219	0.84	49	D	165	m247
	SB R	0.03	31	C	0	m0	0.03	28	C	0	m1	0.03	27	C	0	m1
	OVERALL	**0.58**	**12**	**B**			**0.63**	**16**	**B**			**0.65**	**18**	**B**		
Cambridge Street at Harvard Avenue/Franklin Street																
Weekday Morning																
Cambridge Street	EB L/T/R	>1.20	>120	F	~346	#514	>1.20	>120	F	~397	#545	>1.20	>120	F	~470	#600
	WB L	0.79	29	C	222	#484	0.85	36	D	229	#488	0.84	35	D	229	#487
	WB T	0.78	21	C	365	#692	0.78	22	C	358	#662	0.78	22	C	362	#668
	WB R	0.15	11	B	25	67	0.26	12	B	41	102	0.27	12	B	43	107
Harvard Avenue	NB L/T	0.32	42	D	36	71	0.39	41	D	46	86	0.39	41	D	46	86
	NB R	0.38	18	B	8	76	0.43	42	D	0	#170	0.43	42	D	0	#170
	OVERALL	**0.83**	**78**	**E**			**0.84**	**82**	**F**			**0.89**	**104**	**F**		

a volume to capacity ratio
b average delay in seconds per vehicle
c LOS = level-of-service
d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ volume exceeds capacity; queue is theoretically infinite
dl Defacto left lane

Table 5-XX Signalized Post-Build Intersection Capacity Analysis (Cont.)

		2016 Existing Conditions					2023 No-Build Conditions					2023 Build Conditions with Mitigation				
	Movement	v/c[a]	Delay[b]	LOS[c]	50th % Queue[d]	95th % Queue[e]	v/c	Delay	LOS	50th % Queue	95th % Queue	v/c	Delay	LOS	50th % Queue	95th % Queue
Cambridge Street at Harvard Avenue/Franklin Street (Cont.)																
Weekday Evening																
Cambridge Street	EB L/T/R	>1.20	>120	F	~556	#524	>1.20	>120	F	~604	#747	>1.20	>120	F	~644	#788
	WB L	0.86	43	D	237	#402	0.85	42	D	~236	#401	0.85	42	D	235	#400
	WB T	0.76	21	C	393	555	0.74	20	B	371	522	0.76	21	C	384	541
	WB R	0.11	11	B	18	44	0.18	12	B	32	66	0.22	12	B	40	79
Harvard Avenue	NB L/T	0.73	61	E	84	#171	0.77	66	E	92	#191	0.77	65	E	96	#200
	NB R	0.22	23	C	0	55	0.22	22	C	0	55	0.21	22	C	0	55
	OVERALL	**0.86**	**82**	**F**			**0.91**	**98**	**F**			**0.96**	**118**	**F**		
Saturday Midday																
Cambridge Street	EB L/T/R	0.99	52	D	~265	#486	1.04	64	E	~312	#523	1.12	92	F	~369	#557
	WB L	0.77	24	C	125	#260	0.81	32	C	136	#277	0.80	31	C	136	#278
	WB T	0.68	17	B	281	416	0.65	17	B	263	390	0.67	17	B	273	405
	WB R	0.10	11	B	11	39	0.17	11	B	23	60	0.20	12	B	30	70
Harvard Avenue	NB L/T	0.60	42	D	63	117	0.64	43	D	69	#134	0.66	45	D	72	#143
	NB R	0.25	21	C	0	58	0.25	21	C	0	58	0.25	21	C	0	58
	OVERALL	**0.72**	**32**	**C**			**0.75**	**37**	**D**			**0.79**	**48**	**D**		
Everett Street at Guest Street Extension/Old Everett Street/Blaine Street																
Weekday Morning																
Guest Street	EB L						0.41	32	C	37	78	0.47	31	C	47	94
	EB T/R						0.56	35	C	53	103	0.59	36	D	61	115
Blaine Street	WB L/T/R						0.01	29	C	1	9	0.01	28	C	1	9
Everett Street	NB L	*Intersection Does Not Exist*					0.13	11	B	13	34	0.13	11	B	14	36
	NB T/R						0.63	15	B	197	350	0.64	15	B	205	367
	SB L/T						0.52	20	B	119	217	0.52	20	C	122	224
	SB R						0.28	16	B	56	111	0.30	17	B	59	118
"Old" Everett Street	SWB L/T/R						0.91	79	E	75	#196	0.99	102	F	82	#216
	OVERALL						**0.71**	**24**	**C**			**0.73**	**28**	**C**		

a volume to capacity ratio
b average delay in seconds per vehicle
c LOS = level-of-service
d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ volume exceeds capacity; queue is theoretically infinite
dl Defacto left lane

Table 5-XX Signalized Post-Build Intersection Capacity Analysis (Cont.)

		2023 No-Build Conditions					2023 Build Conditions with Mitigation					2023 Post Build Conditions				
	Movement	v/c[a]	Delay[b]	LOS[c]	50th Queue[d]	95th Queue[e]	v/c	Delay	LOS	50th Queue	95th Queue	v/c	Delay	LOS	50th Queue	95th Queue
Everett Street at Guest Street Extension/Old Everett Street/Blaine Street (Cont.)																
Weekday Evening																
Guest Street	EB L						0.66	39	D	96	164	0.69	40	D	103	174
	EB T/R						0.71	41	D	106	178	0.71	41	D	110	183
Blaine Street	WB L/T/R						0.06	29	C	5	19	0.06	29	C	5	19
Everett Street	NB L		*Intersection Does Not Exist*				0.25	16	B	20	52	0.26	16	B	20	52
	NB T/R						0.54	17	B	180	333	0.55	17	B	185	343
	SB L/T						0.79	33	C	249	#488	0.80	34	C	251	#495
	SB R						0.41	22	C	90	178	0.45	23	C	101	199
"Old" Everett Street	SWB L/T/R						0.92	83	F	95	#241	1.02	111	F	~106	#270
	OVERALL						**0.78**	**32**	**C**			**0.80**	**36**	**D**		
Saturday Midday																
Guest Street	EB L						0.46	32	C	51	98	0.49	32	C	57	107
	EB T/R						0.65	38	D	77	138	0.65	38	D	79	141
Blaine Street	WB L/T/R						0.04	28	C	4	17	0.04	28	C	4	17
Everett Street	NB L		*Intersection Does Not Exist*				0.19	13	B	22	53	0.19	13	B	23	54
	NB T/R						0.47	14	B	136	247	0.47	14	B	138	251
	SB L/T						0.42	20	C	106	193	0.42	20	C	106	195
	SB R						0.34	19	B	67	134	0.38	20	C	77	151
"Old" Everett Street	SWB L/T/R						0.80	54	D	81	#199	0.88	68	E	90	#224
	OVERALL						**0.60**	**24**	**C**			**0.62**	**27**	**C**		

a volume to capacity ratio
b average delay in seconds per vehicle
c level of service
d 50th percentile queue length, measured in feet
e 95th percentile queue length, measured in feet
95th percentile volume exceeds capacity, queue may be longer
m Volume for 95th percentile queue is metered by upstream signal
~ volume exceeds capacity; queue is theoretically infinite
dl Defacto left lane

Table 5-XX Unsignalized Post-Build Intersection Capacity Analysis

		2023 No-Build Conditions				2023 Build Conditions with Mitigation				2023 Post Build Conditions			
	Movement	v/c[a]	Delay[b]	LOS[c]	95th Queue[d]	v/c	Delay	LOS	95th Queue	v/c	Delay	LOS	95th Queue
Cambridge Street at Hano Street													
Weekday Morning													
Cambridge Street	EB L	0.07	10	B	5	0.07	10	B	5	0.07	10	B	5
Hano Street	SB L/R	0.10	19	C	8	0.11	19	C	8	0.11	18	C	10
Weekday Evening													
Cambridge Street	EB L	0.07	11	B	5	0.07	11	B	5	0.08	11	B	8
Hano Street	SB L/R	0.16	35	E	13	0.14	33	D	13	0.17	32	D	15
Saturday Midday													
Cambridge Street	EB L	0.07	10	B	5	0.06	10	B	5	0.07	10	B	5
Hano Street	SB L/R	0.22	42	E	20	0.20	39	E	18	0.27	45	E	25
"Old" Everett Street at Braintree Street													
Weekday Morning													
Braintree Street	EB L/T/R	0.03	7	A	3	0.05	8	A	5	0.06	8	A	5
	WB L/T/R	0.09	8	A	8	0.24	9	A	23	0.25	9	A	25
"Old" Everett Street	NB L/T/R	0.14	7	A	13	0.22	8	A	20	0.24	8	A	23
	SB L/T/R	0.01	7	A	0	0.02	8	A	0	0.02	8	A	0
Weekday Evening													
Braintree Street	EB L/T/R	0.11	8	A	10	0.12	8	A	10	0.12	9	A	10
	WB L/T/R	0.19	8	A	18	0.31	10	A	33	0.34	10	B	38
"Old" Everett Street	NB L/T/R	0.13	8	A	13	0.27	9	A	28	0.29	9	A	30
	SB L/T/R	0.03	8	A	3	0.03	8	A	3	0.03	8	A	3
Saturday Midday													
Braintree Street	EB L/T/R	0.06	7	A	5	0.07	8	A	5	0.07	8	A	5
	WB L/T/R	0.16	8	A	15	0.28	9	A	28	0.31	10	A	33
"Old" Everett Street	NB L/T/R	0.11	7	A	8	0.21	8	A	20	0.22	8	A	23
	SB L/T/R	0.00	7	A	0	0.00	8	A	0	0.00	8	A	0

a v/c = volume to capacity ratio
b delay = average intersection delay, measured in seconds
c LOS = level-of-service
d 95th Percentile queue measured in feet

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	5	0	120	1	160	5	695	290	440	610	2
Future Volume (vph)	2	5	0	120	1	160	5	695	290	440	610	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			772			187			570	
Travel Time (s)		5.6			17.5			4.3			13.0	
Confl. Peds. (#/hr)	1		28	28		1	8		27	27		8
Confl. Bikes (#/hr)									13			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	7%	7%	7%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	0	131	174	0	1075	0	0	1143	0
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Detector Phase	2	2		2	2	2 3	1	1		3	1 3	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		6.0		
Minimum Split (s)	21.0	21.0		21.0	21.0		22.0	22.0		11.0		
Total Split (s)	21.0	21.0		21.0	21.0		48.0	48.0		21.0		
Total Split (%)	23.3%	23.3%		23.3%	23.3%		53.3%	53.3%		23.3%		
Yellow Time (s)	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		
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead				
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		None		
v/c Ratio		0.03			0.70	0.27		0.65			1.01dl	
Control Delay		30.3			55.4	7.2		4.8			8.9	
Queue Delay		0.0			0.0	0.0		0.2			0.0	
Total Delay		30.3			55.4	7.2		5.0			8.9	
Queue Length 50th (ft)		3			70	18		71			113	
Queue Length 95th (ft)		15			128	58		m40			163	
Internal Link Dist (ft)		167			692			107			490	
Turn Bay Length (ft)						125						
Base Capacity (vph)		334			229	645		1648			1560	
Starvation Cap Reductn		0			0	0		104			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.02			0.57	0.27		0.70			0.73	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 85 (94%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 2: Market Street & Stockyard Driveway/Guest Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	5	0	120	1	160	5	695	290	440	610	2
Future Volume (vph)	2	5	0	120	1	160	5	695	290	440	610	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	5.0		4.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	1.00		0.97			1.00	
Flpb, ped/bikes		1.00			0.95	1.00		1.00			1.00	
Frt		1.00			1.00	0.85		0.96			1.00	
Flt Protected		0.99			0.95	1.00		1.00			0.98	
Satd. Flow (prot)		1872			1602	1509		3222			3393	
Flt Permitted		0.93			0.72	1.00		0.95			0.52	
Satd. Flow (perm)		1771			1216	1509		3062			1809	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	5	0	130	1	174	5	755	315	478	663	2
RTOR Reduction (vph)	0	0	0	0	0	76	0	47	0	0	0	0
Lane Group Flow (vph)	0	7	0	0	131	98	0	1028	0	0	1143	0
Confl. Peds. (#/hr)	1		28	28		1	8		27	27		8
Confl. Bikes (#/hr)									13			2
Heavy Vehicles (%)	0%	0%	0%	7%	7%	7%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Actuated Green, G (s)		12.9			12.9	33.9		46.1			62.1	
Effective Green, g (s)		13.9			13.9	33.9		47.1			62.1	
Actuated g/C Ratio		0.15			0.15	0.38		0.52			0.69	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		273			187	568		1602			1529	
v/s Ratio Prot						0.06					c0.13	
v/s Ratio Perm		0.00			c0.11			0.34			c0.38	
v/c Ratio		0.03			0.70	0.17		0.64			1.01dl	
Uniform Delay, d1		32.3			36.1	18.7		15.4			8.9	
Progression Factor		1.00			1.00	1.00		0.31			1.00	
Incremental Delay, d2		0.0			9.3	0.1		0.2			1.8	
Delay (s)		32.3			45.3	18.8		4.9			10.7	
Level of Service		C			D	B		A			B	
Approach Delay (s)		32.3			30.2			4.9			10.7	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	185	595	0	0	445	245	0	0	0	140	0	115	
Future Volume (vph)	185	595	0	0	445	245	0	0	0	140	0	115	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12	
Storage Length (ft)	100		0	0		0	0		0	0		150	
Storage Lanes	1		0	0		1	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		456			284			205			781		
Travel Time (s)		10.4			6.5			4.7			17.8		
Confl. Peds. (#/hr)	16					16	3		1	1		3	
Confl. Bikes (#/hr)			12			6							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	2%	2%	2%	8%	8%	8%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	201	647	0	0	484	266	0	0	0	152	0	125	
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm	
Protected Phases	5	1 5			1		4	4		3			2
Permitted Phases	1 5			1		1						3	
Detector Phase	5	1 5		1	1	1	4	4		3		3	
Switch Phase													
Minimum Initial (s)	4.0			12.0	12.0	12.0	3.0	3.0		5.0		5.0	4.0
Minimum Split (s)	8.0			16.0	16.0	16.0	7.0	7.0		9.0		9.0	17.0
Total Split (s)	11.0			36.0	36.0	36.0	15.0	15.0		21.0		21.0	17.0
Total Split (%)	11.0%			36.0%	36.0%	36.0%	15.0%	15.0%		21.0%		21.0%	17%
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0
All-Red Time (s)	1.0			1.0	1.0	1.0	1.0	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	-1.0				-1.0	-1.0		-1.0		0.0		-1.0	
Total Lost Time (s)	3.0				3.0	3.0		3.0		4.0		3.0	
Lead/Lag				Lead	Lead	Lead	Lag	Lag		Lead		Lead	Lag
Lead-Lag Optimize?													
Recall Mode	None			C-Max	C-Max	C-Max	None	None		None		None	None
v/c Ratio	0.32	0.50			0.56	0.32				0.70		0.38	
Control Delay	6.2	8.1			29.8	10.3				58.3		8.4	
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0	
Total Delay	6.2	8.1			29.8	10.3				58.3		8.4	
Queue Length 50th (ft)	23	105			199	36				94		0	
Queue Length 95th (ft)	92	377			#468	m85				155		39	
Internal Link Dist (ft)		376			204			125			701		
Turn Bay Length (ft)	100											150	
Base Capacity (vph)	630	1293			870	829				284		377	
Starvation Cap Reductn	0	0			0	0				0		0	
Spillback Cap Reductn	0	0			0	0				0		0	
Storage Cap Reductn	0	0			0	0				0		0	
Reduced v/c Ratio	0.32	0.50			0.56	0.32				0.54		0.33	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 35 (35%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Wingate Driveway/Arthur Street & North Beacon Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	595	0	0	445	245	0	0	0	140	0	115
Future Volume (vph)	185	595	0	0	445	245	0	0	0	140	0	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			3.0	3.0				4.0		3.0
Lane Util. Factor	1.00	1.00			1.00	1.00				1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.96				1.00		0.97
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1602	1689			1657	1352				1671		1450
Flt Permitted	0.33	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	562	1689			1657	1352				1671		1450
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	201	647	0	0	484	266	0	0	0	152	0	125
RTOR Reduction (vph)	0	0	0	0	0	135	0	0	0	0	0	108
Lane Group Flow (vph)	201	647	0	0	484	131	0	0	0	152	0	18
Confl. Peds. (#/hr)	16					16	3		1	1		3
Confl. Bikes (#/hr)			12			6						
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	2%	2%	2%	8%	8%	8%
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm
Protected Phases	5	1 5			1		4	4		3		
Permitted Phases	1 5			1		1						3
Actuated Green, G (s)	68.4	72.4			48.4	48.4				13.0		13.0
Effective Green, g (s)	70.4	73.4			49.4	49.4				13.0		14.0
Actuated g/C Ratio	0.70	0.73			0.49	0.49				0.13		0.14
Clearance Time (s)	4.0				4.0	4.0				4.0		4.0
Vehicle Extension (s)	2.0				4.0	4.0				2.0		2.0
Lane Grp Cap (vph)	614	1239			818	667				217		203
v/s Ratio Prot	0.07	c0.38			c0.29					c0.09		
v/s Ratio Perm	0.16					0.10						0.01
v/c Ratio	0.33	0.52			0.59	0.20				0.70		0.09
Uniform Delay, d1	6.6	5.7			18.1	14.2				41.6		37.4
Progression Factor	1.00	1.00			1.39	3.19				1.00		1.00
Incremental Delay, d2	0.1	0.2			2.5	0.5				8.1		0.1
Delay (s)	6.7	5.9			27.6	45.7				49.7		37.5
Level of Service	A	A			C	D				D		D
Approach Delay (s)		6.1			34.1			0.0			44.2	
Approach LOS		A			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	22.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

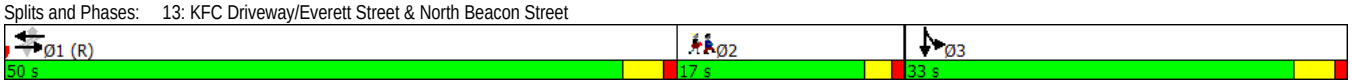
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	355	560	0	1	575	300	0	0	0	195	0	130	
Future Volume (vph)	355	560	0	1	575	300	0	0	0	195	0	130	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		446			477			138			542		
Travel Time (s)		10.1			10.8			3.1			12.3		
Confl. Peds. (#/hr)	12		40	40		12	24		16	16		24	
Confl. Bikes (#/hr)			13			5							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	5%	5%	5%	6%	6%	6%	2%	2%	2%	3%	3%	3%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	995	0	0	626	326	0	0	0	0	353	0	
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA		
Protected Phases		1			1					3	3		2
Permitted Phases	1			1		1							
Detector Phase	1	1		1	1	1				3	3		
Switch Phase													
Minimum Initial (s)	15.0	15.0		15.0	15.0	15.0				7.0	7.0		7.0
Minimum Split (s)	19.0	19.0		19.0	19.0	19.0				11.0	11.0		17.0
Total Split (s)	50.0	50.0		50.0	50.0	50.0				33.0	33.0		17.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%				33.0%	33.0%		17%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0		2.0
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)		4.0			4.0	4.0					4.0		
Lead/Lag	Lead	Lead		Lead	Lead	Lead							Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max				Max	Max		None
v/c Ratio		2.52dl			0.76	0.38					0.57		
Control Delay		134.9			29.8	3.3					29.0		
Queue Delay		0.0			10.4	0.0					0.0		
Total Delay		134.9			40.1	3.3					29.0		
Queue Length 50th (ft)		~415			321	0					175		
Queue Length 95th (ft)		#545			468	47					279		
Internal Link Dist (ft)		366			397			58			462		
Turn Bay Length (ft)													
Base Capacity (vph)		819			823	851					620		
Starvation Cap Reductn		0			173	0					0		
Spillback Cap Reductn		0			0	0					0		
Storage Cap Reductn		0			0	0					0		
Reduced v/c Ratio		1.21			0.96	0.38					0.57		

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 35 (35%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: KFC Driveway/Everett Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	355	560	0	1	575	300	0	0	0	195	0	130
Future Volume (vph)	355	560	0	1	575	300	0	0	0	195	0	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0					4.0	
Lane Util. Factor		0.95			1.00	1.00					1.00	
Frpb, ped/bikes		1.00			1.00	0.96					0.98	
Flpb, ped/bikes		1.00			1.00	1.00					1.00	
Frt		1.00			1.00	0.85					0.95	
Flt Protected		0.98			1.00	1.00					0.97	
Satd. Flow (prot)		3367			1792	1467					1659	
Flt Permitted		0.52			1.00	1.00					0.97	
Satd. Flow (perm)		1782			1791	1467					1659	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	386	609	0	1	625	326	0	0	0	212	0	141
RTOR Reduction (vph)	0	0	0	0	0	180	0	0	0	0	28	0
Lane Group Flow (vph)	0	995	0	0	626	146	0	0	0	0	325	0
Confl. Peds. (#/hr)	12		40	40		12	24		16	16		24
Confl. Bikes (#/hr)			13			5						
Heavy Vehicles (%)	5%	5%	5%	6%	6%	6%	2%	2%	2%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA	
Protected Phases		1			1					3	3	
Permitted Phases	1			1		1						
Actuated Green, G (s)		44.8			44.8	44.8					35.8	
Effective Green, g (s)		44.8			44.8	44.8					35.8	
Actuated g/C Ratio		0.45			0.45	0.45					0.36	
Clearance Time (s)		4.0			4.0	4.0					4.0	
Vehicle Extension (s)		2.0			2.0	2.0					2.0	
Lane Grp Cap (vph)		798			802	657					593	
v/s Ratio Prot											c0.20	
v/s Ratio Perm		c0.56			0.35	0.10						
v/c Ratio		2.52dl			0.78	0.22					0.55	
Uniform Delay, d1		27.6			23.4	16.9					25.6	
Progression Factor		1.02			1.00	1.00					1.00	
Incremental Delay, d2		121.0			7.4	0.8					3.6	
Delay (s)		149.3			30.9	17.7					29.2	
Level of Service		F			C	B					C	
Approach Delay (s)		149.3			26.3			0.0			29.2	
Approach LOS		F			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	80.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	210	470	20	10	130	530	60	0	355	195	50	415	290
Future Volume (vph)	210	470	20	10	130	530	60	0	355	195	50	415	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		420		0	0		150	0		75
Storage Lanes	0		0		1		0	0		1	0		1
Taper Length (ft)	25				25			25			25		
Right Turn on Red			No				Yes			Yes			No
Link Speed (mph)		30				30			30			30	
Link Distance (ft)		477				1053			361			234	
Travel Time (s)		10.8				23.9			8.2			5.3	
Confl. Peds. (#/hr)	53		36	23	36		53	54		23	23		54
Confl. Bikes (#/hr)			27				5			18			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	8%	8%	8%	8%	7%	7%	7%	10%	10%	10%
Shared Lane Traffic (%)					10%								
Lane Group Flow (vph)	0	761	0	0	138	655	0	0	386	212	0	505	315
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Detector Phase	3	3		2	2	2			1	1	4	1 4	1
Switch Phase													
Minimum Initial (s)	8.0	8.0		10.0	10.0	10.0			10.0	10.0	4.0		10.0
Minimum Split (s)	26.0	26.0		27.0	27.0	27.0			24.0	24.0	10.0		24.0
Total Split (s)	37.0	37.0		30.0	30.0	30.0			32.0	32.0	11.0		32.0
Total Split (%)	33.6%	33.6%		27.3%	27.3%	27.3%			29.1%	29.1%	10.0%		29.1%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0			4.0	4.0	3.0		4.0
All-Red Time (s)	6.0	6.0		6.0	6.0	6.0			3.0	3.0	3.0		3.0
Lost Time Adjust (s)		0.0			0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag			Lead	Lead	Lag		Lead
Lead-Lag Optimize?													
Recall Mode	None	None		Max	Max	Max			C-Max	C-Max	None		C-Max
v/c Ratio		0.94			0.50	1.14			0.50	0.43		0.68	1.07
Control Delay		61.8			47.6	124.3			39.8	6.7		39.4	114.3
Queue Delay		0.0			0.0	0.0			0.0	0.0		0.0	0.0
Total Delay		61.8			47.6	124.3			39.8	6.7		39.4	114.3
Queue Length 50th (ft)		276			97	~296			125	0		148	~247
Queue Length 95th (ft)		#392			168	#420			175	50		199	#423
Internal Link Dist (ft)		397				973			281			154	
Turn Bay Length (ft)					420					150			75
Base Capacity (vph)		825			276	573			766	494		741	294
Starvation Cap Reductn		0			0	0			0	0		0	0
Spillback Cap Reductn		0			0	0			0	0		0	0
Storage Cap Reductn		0			0	0			0	0		0	0
Reduced v/c Ratio		0.92			0.50	1.14			0.50	0.43		0.68	1.07

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 2 (2%), Referenced to phase 1:NESW, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Cambridge Street & North Beacon Street/Brighton Avenue

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	210	470	20	10	130	530	60	0	355	195	50	415	290
Future Volume (vph)	210	470	20	10	130	530	60	0	355	195	50	415	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		10.0			10.0	10.0			7.0	7.0		7.0	7.0
Lane Util. Factor		0.95			0.91	0.91			0.95	1.00		0.95	1.00
Frpb, ped/bikes		1.00			1.00	0.99			1.00	0.93		1.00	0.88
Flpb, ped/bikes		1.00			1.00	1.00			1.00	1.00		1.00	1.00
Frt		1.00			1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected		0.99			0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3362			1521	3114			3374	1401		3258	1294
Flt Permitted		0.99			0.95	1.00			1.00	1.00		0.81	1.00
Satd. Flow (perm)		3362			1521	3114			3374	1401		2666	1294
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	228	511	22	11	141	576	65	0	386	212	54	451	315
RTOR Reduction (vph)	0	0	0	0	0	7	0	0	0	164	0	0	0
Lane Group Flow (vph)	0	761	0	0	138	648	0	0	386	48	0	505	315
Confl. Peds. (#/hr)	53		36	23	36		53	54		23	23		54
Confl. Bikes (#/hr)			27				5			18			5
Heavy Vehicles (%)	5%	5%	5%	8%	8%	8%	8%	7%	7%	7%	10%	10%	10%
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Actuated Green, G (s)		26.4			20.0	20.0			25.0	25.0		30.6	25.0
Effective Green, g (s)		26.4			20.0	20.0			25.0	25.0		30.6	25.0
Actuated g/C Ratio		0.24			0.18	0.18			0.23	0.23		0.28	0.23
Clearance Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Vehicle Extension (s)		2.0			2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)		806			276	566			766	318		771	294
v/s Ratio Prot		c0.23			0.09	c0.21			0.11			c0.03	
v/s Ratio Perm										0.03		0.15	c0.24
v/c Ratio		0.94			0.50	1.14			0.50	0.15		0.65	1.07
Uniform Delay, d1		41.1			40.5	45.0			37.1	34.0		35.0	42.5
Progression Factor		1.00			1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		19.1			6.3	84.3			2.4	1.0		1.5	72.7
Delay (s)		60.2			46.8	129.3			39.5	35.0		36.6	115.2
Level of Service		E			D	F			D	D		D	F
Approach Delay (s)		60.2				115.0			37.9			66.8	
Approach LOS		E				F			D			E	

Intersection Summary			
HCM 2000 Control Delay	72.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	33.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	50	575	725	10	2	30
Future Vol, veh/h	50	575	725	10	2	30
Conflicting Peds, #/hr	36	0	0	36	36	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	11	11	3	3
Mvmt Flow	54	625	788	11	2	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	835	0	-	0	1599	833
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	770	-
Critical Hdwy	4.18	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.272	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	773	-	-	-	116	367
Stage 1	-	-	-	-	427	-
Stage 2	-	-	-	-	455	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	770	-	-	-	97	355
Mov Cap-2 Maneuver	-	-	-	-	97	-
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	394	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	18.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	770	-	-	-	304
HCM Lane V/C Ratio	0.071	-	-	-	0.114
HCM Control Delay (s)	10	0	-	-	18.4
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	580	1	2	720	0	0	0	0	275	2	20
Future Volume (vph)	0	580	1	2	720	0	0	0	0	275	2	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		587			512			200			484	
Travel Time (s)		13.3			11.6			4.5			11.0	
Confl. Peds. (#/hr)	25		9	9		25	8		9	9		8
Confl. Bikes (#/hr)			28			7						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	9%	9%	9%	10%	10%	10%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	631	0	0	785	0	0	0	0	299	24	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Detector Phase		1		1	1					5	5	
Switch Phase												
Minimum Initial (s)		20.0		20.0	20.0					8.0	8.0	
Minimum Split (s)		24.0		24.0	24.0					22.0	22.0	
Total Split (s)		53.0		53.0	53.0					47.0	47.0	
Total Split (%)		53.0%		53.0%	53.0%					47.0%	47.0%	
Yellow Time (s)		3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)		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)		4.0			4.0					4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max					None	None	
v/c Ratio		0.51			0.65					0.77	0.07	
Control Delay		9.7			7.5					49.8	12.4	
Queue Delay		0.0			1.8					0.0	0.0	
Total Delay		9.7			9.3					49.8	12.4	
Queue Length 50th (ft)		162			30					181	1	
Queue Length 95th (ft)		316			664					250	20	
Internal Link Dist (ft)		507			432			120			404	
Turn Bay Length (ft)										100		
Base Capacity (vph)		1227			1215					776	689	
Starvation Cap Reductn		0			266					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.51			0.83					0.39	0.03	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 16: Driveway/Denby Road & Cambridge Street

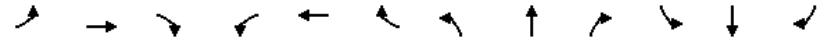
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	580	1	2	720	0	0	0	0	275	2	20
Future Volume (vph)	0	580	1	2	720	0	0	0	0	275	2	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0	4.0	
Lane Util. Factor		1.00			1.00					1.00	1.00	
Frpb, ped/bikes		1.00			1.00					1.00	0.96	
Flpb, ped/bikes		1.00			1.00					1.00	1.00	
Frt		1.00			1.00					1.00	0.86	
Flt Protected		1.00			1.00					0.95	1.00	
Satd. Flow (prot)		1743			1727					1805	1576	
Flt Permitted		1.00			1.00					0.95	1.00	
Satd. Flow (perm)		1743			1726					1805	1576	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	630	1	2	783	0	0	0	0	299	2	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	17	0
Lane Group Flow (vph)	0	631	0	0	785	0	0	0	0	299	7	0
Confl. Peds. (#/hr)	25		9	9		25	8		9	9		8
Confl. Bikes (#/hr)			28			7						
Heavy Vehicles (%)	9%	9%	9%	10%	10%	10%	0%	0%	0%	0%	0%	0%
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Actuated Green, G (s)		70.4			70.4					21.6	21.6	
Effective Green, g (s)		70.4			70.4					21.6	21.6	
Actuated g/C Ratio		0.70			0.70					0.22	0.22	
Clearance Time (s)		4.0			4.0					4.0	4.0	
Vehicle Extension (s)		0.2			0.2					2.0	2.0	
Lane Grp Cap (vph)		1227			1215					389	340	
v/s Ratio Prot		0.36								c0.17	0.00	
v/s Ratio Perm					c0.45							
v/c Ratio		0.51			0.65					0.77	0.02	
Uniform Delay, d1		6.9			8.0					36.9	30.9	
Progression Factor		1.00			0.56					1.01	1.02	
Incremental Delay, d2		1.5			2.0					8.0	0.0	
Delay (s)		8.4			6.5					45.1	31.6	
Level of Service		A			A					D	C	
Approach Delay (s)		8.4			6.5			0.0			44.1	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	10	780	60	415	695	240	40	30	515	0	0	0	
Future Volume (vph)	10	780	60	415	695	240	40	30	515	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		75	0		100	0		75	0		0	
Storage Lanes	0		1	1		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		512			518			381			156		
Travel Time (s)		11.6			11.8			8.7			3.5		
Confl. Peds. (#/hr)	35		17	17		35	23		57	57		23	
Confl. Bikes (#/hr)			19			15						12	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	5%	5%	5%	8%	8%	8%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	924	0	451	755	261	0	76	560	0	0	0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm				
Protected Phases		1		4	1 4			3					2
Permitted Phases	1			1 4		1 4	3		3				
Detector Phase	1	1		4	1 4	1 4	3	3	3				
Switch Phase													
Minimum Initial (s)	10.0	10.0		8.0			8.0	8.0	8.0				7.0
Minimum Split (s)	17.0	17.0		13.5			13.5	13.5	13.5				23.0
Total Split (s)	29.0	29.0		26.0			20.0	20.0	20.0				25.0
Total Split (%)	29.0%	29.0%		26.0%			20.0%	20.0%	20.0%				25%
Yellow Time (s)	4.0	4.0		3.0			4.0	4.0	4.0				3.0
All-Red Time (s)	3.0	3.0		2.5			1.5	1.5	1.5				1.0
Lost Time Adjust (s)		0.0		0.0				0.0	0.0				
Total Lost Time (s)		7.0		5.5				5.5	5.5				
Lead/Lag	Lead	Lead		Lag			Lead	Lead	Lead				Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		None			None	None	None				None
v/c Ratio		1.43		0.83	0.69	0.29		0.38	0.86				
Control Delay		230.7		40.7	21.8	8.1		45.1	17.9				
Queue Delay		0.0		0.0	0.4	0.0		0.0	0.0				
Total Delay		230.7		40.7	22.2	8.1		45.1	17.9				
Queue Length 50th (ft)		~470		229	362	43		46	0				
Queue Length 95th (ft)		#600		#487	#668	107		86	#170				
Internal Link Dist (ft)		432			438			301			76		
Turn Bay Length (ft)						100			75				
Base Capacity (vph)		645		544	1089	903		257	679				
Starvation Cap Reductn		0		0	0	0		0	0				
Spillback Cap Reductn		0		0	73	0		0	0				
Storage Cap Reductn		0		0	0	0		0	0				
Reduced v/c Ratio		1.43		0.83	0.74	0.29		0.30	0.82				

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 17: Harvard Avenue/Franklin Street & Cambridge Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	780	60	415	695	240	40	30	515	0	0	0
Future Volume (vph)	10	780	60	415	695	240	40	30	515	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		5.5	7.0	7.0		5.5	5.5			
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00			
Frpb, ped/bikes		0.99		1.00	1.00	0.94		1.00	0.85			
Flpb, ped/bikes		1.00		1.00	1.00	1.00		0.94	1.00			
Frt		0.99		1.00	1.00	0.85		1.00	0.85			
Flt Protected		1.00		0.95	1.00	1.00		0.97	1.00			
Satd. Flow (prot)		3257		1671	1759	1404		1663	1301			
Flt Permitted		0.69		0.15	1.00	1.00		0.97	1.00			
Satd. Flow (perm)		2247		262	1759	1404		1663	1301			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	848	65	451	755	261	43	33	560	0	0	0
RTOR Reduction (vph)	0	5	0	0	0	54	0	0	494	0	0	0
Lane Group Flow (vph)	0	919	0	451	755	207	0	76	66	0	0	0
Confl. Peds. (#/hr)	35		17	17		35	23		57	57		23
Confl. Bikes (#/hr)			19			15						12
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	5%	5%	5%	8%	8%	8%
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm			
Protected Phases		1		4	1 4			3				
Permitted Phases	1			1 4		1 4	3		3			
Actuated Green, G (s)		26.9		54.8	60.3	60.3		11.8	11.8			
Effective Green, g (s)		26.9		54.8	54.8	54.8		11.8	11.8			
Actuated g/C Ratio		0.27		0.55	0.55	0.55		0.12	0.12			
Clearance Time (s)		7.0		5.5				5.5	5.5			
Vehicle Extension (s)		2.0		2.0				2.0	2.0			
Lane Grp Cap (vph)		604		536	963	769		196	153			
v/s Ratio Prot				c0.23	0.43							
v/s Ratio Perm		c0.41		0.23		0.15		0.05	c0.05			
v/c Ratio		1.52		0.84	0.78	0.27		0.39	0.43			
Uniform Delay, d1		36.5		24.3	17.9	12.0		40.8	41.0			
Progression Factor		0.89		1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2		242.1		11.0	3.9	0.1		0.5	0.7			
Delay (s)		274.6		35.3	21.8	12.0		41.2	41.7			
Level of Service		F		D	C	B		D	D			
Approach Delay (s)		274.6			24.2			41.6			0.0	
Approach LOS		F			C			D			A	

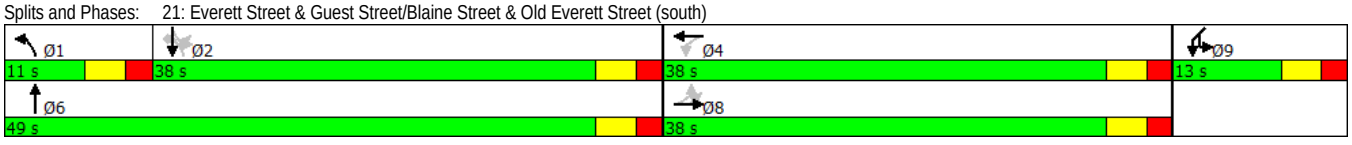
Intersection Summary			
HCM 2000 Control Delay	104.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2	SBT	SBR	SWL
Lane Configurations																
Traffic Volume (vph)	95	70	0	50	1	0	1	1	60	525	70	2	50	265	170	25
Future Volume (vph)	95	70	0	50	1	0	1	1	60	525	70	2	50	265	170	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200		0	0		0		0		0				50	0
Storage Lanes		1		0	0		0		1		0				1	1
Taper Length (ft)		25			25				25							25
Right Turn on Red				No				No				No			No	
Link Speed (mph)			30			30				30				30		30
Link Distance (ft)			303			119				150				1204		367
Travel Time (s)			6.9			2.7				3.4				27.4		8.3
Confl. Peds. (#/hr)									14						14	
Confl. Bikes (#/hr)				1											2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)																
Lane Group Flow (vph)	103	0	130	0	0	3	0	0	65	649	0	0	0	342	185	163
Turn Type	Perm	Perm	NA		Perm	NA			D.P+P	NA			Perm	NA	Perm	Prot
Protected Phases			8			4			1	6				2		9
Permitted Phases	8	8			4				2				2		2	
Detector Phase	8	8	8		4	4			1	6			2	2	2	9
Switch Phase																
Minimum Initial (s)	6.0	6.0	6.0		6.0	6.0			6.0	6.0			6.0	6.0	6.0	6.0
Minimum Split (s)	21.0	21.0	21.0		21.0	21.0			11.0	21.0			21.0	21.0	21.0	11.0
Total Split (s)	38.0	38.0	38.0		38.0	38.0			11.0	49.0			38.0	38.0	38.0	13.0
Total Split (%)	38.0%	38.0%	38.0%		38.0%	38.0%			11.0%	49.0%			38.0%	38.0%	38.0%	13.0%
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0			3.0	3.0			3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0			2.0	2.0			2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0			0.0			0.0	0.0				0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0			5.0			5.0	5.0				5.0	5.0	5.0
Lead/Lag									Lead				Lag	Lag	Lag	
Lead-Lag Optimize?									Yes				Yes	Yes	Yes	
Recall Mode	Min	Min	Min		None	None			Min	Max			Max	Max	Max	None
v/c Ratio	0.47		0.59			0.01			0.14	0.64				0.53	0.30	0.99
Control Delay	37.7		42.6			27.3			10.0	16.6				21.8	18.0	107.6
Queue Delay	0.0		0.0			0.0			0.0	0.0				0.0	0.0	0.0
Total Delay	37.7		42.6			27.3			10.0	16.6				21.8	18.0	107.6
Queue Length 50th (ft)	47		61			1			14	205				122	59	82
Queue Length 95th (ft)	94		115			9			36	367				224	118	#216
Internal Link Dist (ft)			223			39				70				1124		287
Turn Bay Length (ft)	200														50	
Base Capacity (vph)	585		589			650			481	1015				651	615	165
Starvation Cap Reductn	0		0			0			0	0				0	0	0
Spillback Cap Reductn	0		0			0			0	0				0	0	0
Storage Cap Reductn	0		0			0			0	0				0	0	0
Reduced v/c Ratio	0.18		0.22			0.00			0.14	0.64				0.53	0.30	0.99

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 79.4
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Everett Street & Guest Street/Blaine Street & Old Everett Street (south)



Lane Group	SWR	SWR2
Lane Configurations		
Traffic Volume (vph)	100	25
Future Volume (vph)	100	25
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	0	
Storage Lanes	0	
Taper Length (ft)		
Right Turn on Red		No
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.92	0.92
Shared Lane Traffic (%)		
Lane Group Flow (vph)	0	0
Turn Type		
Protected Phases		
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)		
Minimum Split (s)		
Total Split (s)		
Total Split (%)		
Yellow Time (s)		
All-Red Time (s)		
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2	SBT	SBR	SWL
Lane Configurations																
Traffic Volume (vph)	95	70	0	50	1	0	1	1	60	525	70	2	50	265	170	25
Future Volume (vph)	95	70	0	50	1	0	1	1	60	525	70	2	50	265	170	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0			5.0	5.0				5.0	5.0	5.0
Lane Util. Factor	1.00		1.00			1.00			1.00	1.00				1.00	1.00	1.00
Frpb, ped/bikes	1.00		0.99			1.00			1.00	1.00				1.00	0.94	1.00
Flpb, ped/bikes	1.00		1.00			1.00			0.99	1.00				1.00	1.00	1.00
Frt	1.00		0.94			0.91			1.00	0.98				1.00	0.85	0.89
Flt Protected	0.95		0.97			0.98			0.95	1.00				0.99	1.00	0.99
Satd. Flow (prot)	1770		1681			1667			1756	1829				1848	1495	1639
Flt Permitted	0.76		0.82			0.92			0.46	1.00				0.84	1.00	0.99
Satd. Flow (perm)	1408		1416			1563			845	1829				1565	1495	1639
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	76	0	54	1	0	1	1	65	571	76	2	54	288	185	27
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	103	0	130	0	0	3	0	0	65	649	0	0	0	342	185	163
Confl. Peds. (#/hr)									14						14	
Confl. Bikes (#/hr)				1											2	
Turn Type	Perm	Perm	NA		Perm	NA			D.P+P	NA			Perm	NA	Perm	Prot
Protected Phases			8			4			1	6				2		9
Permitted Phases	8	8			4				2				2		2	
Actuated Green, G (s)	12.3		12.3			12.3			39.1	44.1				33.1	33.1	8.0
Effective Green, g (s)	12.3		12.3			12.3			39.1	44.1				33.1	33.1	8.0
Actuated g/C Ratio	0.15		0.15			0.15			0.49	0.56				0.42	0.42	0.10
Clearance Time (s)	5.0		5.0			5.0			5.0	5.0				5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0			3.0			3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	218		219			242			484	1015				652	623	165
v/s Ratio Prot									0.01	c0.35						c0.10
v/s Ratio Perm	0.07		c0.09			0.00			0.06					0.22	0.12	
v/c Ratio	0.47		0.59			0.01			0.13	0.64				0.52	0.30	0.99
Uniform Delay, d1	30.6		31.2			28.4			10.9	12.2				17.3	15.4	35.7
Progression Factor	1.00		1.00			1.00			1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	1.6		4.3			0.0			0.1	3.1				3.0	1.2	65.8
Delay (s)	32.2		35.5			28.4			11.0	15.3				20.3	16.6	101.5
Level of Service	C		D			C			B	B				C	B	F
Approach Delay (s)			34.0			28.4				14.9				19.0		101.5
Approach LOS			C			C				B				B		F

Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	79.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SWR	SWR2
Lane Configurations		
Traffic Volume (vph)	100	25
Future Volume (vph)	100	25
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		
Lane Util. Factor		
Frpb, ped/bikes		
Flpb, ped/bikes		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	109	27
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Turn Type		
Protected Phases		
Permitted Phases		
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)		
Approach LOS		

Intersection Summary

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	5	30	5	0	130	45	2	5	20	10	155	0	0	10	1
Future Vol, veh/h	0	5	30	5	0	130	45	2	5	20	10	155	0	0	10	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	9	9	9	5	5	5	5	2	0	0	0
Mvmt Flow	0	5	33	5	0	141	49	2	5	22	11	168	0	0	11	1
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	9.3	8.4	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	12%	73%	0%
Vol Thru, %	5%	75%	25%	91%
Vol Right, %	84%	12%	1%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	40	177	11
LT Vol	21	5	130	0
Through Vol	10	30	45	10
RT Vol	159	5	2	1
Lane Flow Rate	207	43	192	12
Geometry Grp	1	1	1	1
Degree of Util (X)	0.235	0.055	0.252	0.015
Departure Headway (Hd)	4.093	4.549	4.712	4.642
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	880	787	764	772
Service Time	2.109	2.575	2.734	2.667
HCM Lane V/C Ratio	0.235	0.055	0.251	0.016
HCM Control Delay	8.4	7.8	9.3	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	0.2	1	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	5	1	320	15	575	30	570	185	210	855	40
Future Volume (vph)	10	5	1	320	15	575	30	570	185	210	855	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			772			187			570	
Travel Time (s)		5.6			17.5			4.3			13.0	
Confl. Peds. (#/hr)	1		37	37		1	17		36	36		17
Confl. Bikes (#/hr)						1			2			7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	364	625	0	854	0	0	1200	0
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Detector Phase	2	2		2	2	2 3	1	1		3	1 3	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		6.0		
Minimum Split (s)	21.0	21.0		21.0	21.0		22.0	22.0		11.0		
Total Split (s)	21.0	21.0		21.0	21.0		48.0	48.0		21.0		
Total Split (%)	23.3%	23.3%		23.3%	23.3%		53.3%	53.3%		23.3%		
Yellow Time (s)	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		
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead				
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		None		
v/c Ratio		0.10			1.52	0.83		0.60			0.75	
Control Delay		30.7			285.0	28.1		17.4			9.7	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		30.7			285.0	28.1		17.4			9.7	
Queue Length 50th (ft)		8			~292	233		163			132	
Queue Length 95th (ft)		26			#462	#439		223			171	
Internal Link Dist (ft)		167			692			107			490	
Turn Bay Length (ft)						125						
Base Capacity (vph)		176			239	756		1423			1596	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.10			1.52	0.83		0.60			0.75	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 85 (94%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 2: Market Street & Stockyard Driveway/Guest Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	5	1	320	15	575	30	570	185	210	855	40
Future Volume (vph)	10	5	1	320	15	575	30	570	185	210	855	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	5.0		4.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	1.00		0.97			1.00	
Flpb, ped/bikes		1.00			0.93	1.00		1.00			1.00	
Frt		0.99			1.00	0.85		0.96			0.99	
Flt Protected		0.97			0.95	1.00		1.00			0.99	
Satd. Flow (prot)		1817			1676	1599		3283			3471	
Flt Permitted		0.50			0.72	1.00		0.86			0.58	
Satd. Flow (perm)		931			1270	1599		2845			2041	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	5	1	348	16	625	33	620	201	228	929	43
RTOR Reduction (vph)	0	1	0	0	0	100	0	32	0	0	3	0
Lane Group Flow (vph)	0	16	0	0	364	525	0	822	0	0	1197	0
Confl. Peds. (#/hr)	1		37	37		1	17		36	36		17
Confl. Bikes (#/hr)						1			2			7
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Actuated Green, G (s)		16.0			16.0	37.0		43.0			59.0	
Effective Green, g (s)		17.0			17.0	37.0		44.0			59.0	
Actuated g/C Ratio		0.19			0.19	0.41		0.49			0.66	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		175			239	657		1390			1592	
v/s Ratio Prot						c0.33					0.13	
v/s Ratio Perm		0.02			c0.29			0.29			c0.36	
v/c Ratio		0.09			1.52	0.80		0.59			0.75	
Uniform Delay, d1		30.1			36.5	23.3		16.5			10.5	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.1			255.6	6.3		1.9			1.8	
Delay (s)		30.2			292.1	29.6		18.4			12.4	
Level of Service		C			F	C		B			B	
Approach Delay (s)		30.2			126.2			18.4			12.4	
Approach LOS		C			F			B			B	

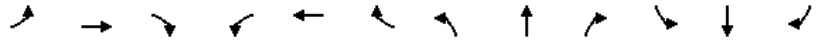
Intersection Summary			
HCM 2000 Control Delay	50.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	250	600	0	0	490	195	0	0	0	340	0	300	
Future Volume (vph)	250	600	0	0	490	195	0	0	0	340	0	300	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12	
Storage Length (ft)	100		0	0		0	0		0	0		150	
Storage Lanes	1		0	0		1	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		456			284			205			781		
Travel Time (s)		10.4			6.5			4.7			17.8		
Confl. Peds. (#/hr)	21					21	11		1	1		11	
Confl. Bikes (#/hr)			4			5							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	272	652	0	0	533	212	0	0	0	370	0	326	
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm	
Protected Phases	5	1 5			1		4	4		3			2
Permitted Phases	1 5			1		1						3	
Detector Phase	5	1 5		1	1	1	4	4		3		3	
Switch Phase													
Minimum Initial (s)	4.0			12.0	12.0	12.0	3.0	3.0		5.0		5.0	4.0
Minimum Split (s)	8.0			16.0	16.0	16.0	7.0	7.0		9.0		9.0	17.0
Total Split (s)	11.0			42.0	42.0	42.0	15.0	15.0		25.0		25.0	17.0
Total Split (%)	10.0%			38.2%	38.2%	38.2%	13.6%	13.6%		22.7%		22.7%	15%
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0
All-Red Time (s)	1.0			1.0	1.0	1.0	1.0	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	-1.0				-1.0	-1.0		-1.0		0.0		-1.0	
Total Lost Time (s)	3.0				3.0	3.0		3.0		4.0		3.0	
Lead/Lag				Lead	Lead	Lead	Lag	Lag		Lead		Lead	Lag
Lead-Lag Optimize?													
Recall Mode	None			C-Max	C-Max	C-Max	None	None		None		None	None
v/c Ratio	0.59	0.60			0.86	0.33				0.82		0.56	
Control Delay	26.1	16.1			50.2	10.2				56.0		13.8	
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0	
Total Delay	26.1	16.1			50.2	10.2				56.0		13.8	
Queue Length 50th (ft)	104	236			297	35				235		39	
Queue Length 95th (ft)	210	401			m#508	m55				#482		142	
Internal Link Dist (ft)		376			204			125			701		
Turn Bay Length (ft)	100											150	
Base Capacity (vph)	461	1085			620	635				453		585	
Starvation Cap Reductn	0	0			0	0				0		0	
Spillback Cap Reductn	0	0			0	0				0		0	
Storage Cap Reductn	0	0			0	0				0		0	
Reduced v/c Ratio	0.59	0.60			0.86	0.33				0.82		0.56	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 109 (99%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Wingate Driveway/Arthur Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	600	0	0	490	195	0	0	0	340	0	300
Future Volume (vph)	250	600	0	0	490	195	0	0	0	340	0	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			3.0	3.0				4.0		3.0
Lane Util. Factor	1.00	1.00			1.00	1.00				1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.94				1.00		0.96
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1667	1756			1739	1395				1770		1520
Flt Permitted	0.12	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	203	1756			1739	1395				1770		1520
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	272	652	0	0	533	212	0	0	0	370	0	326
RTOR Reduction (vph)	0	0	0	0	0	141	0	0	0	0	0	185
Lane Group Flow (vph)	272	652	0	0	533	71	0	0	0	370	0	141
Confl. Peds. (#/hr)	21					21	11		1	1		11
Confl. Bikes (#/hr)			4			5						
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm
Protected Phases	5	1 5			1		4	4		3		
Permitted Phases	1 5			1		1						3
Actuated Green, G (s)	60.6	64.6			35.9	35.9				28.2		28.2
Effective Green, g (s)	62.6	65.6			36.9	36.9				28.2		29.2
Actuated g/C Ratio	0.57	0.60			0.34	0.34				0.26		0.27
Clearance Time (s)	4.0				4.0	4.0				4.0		4.0
Vehicle Extension (s)	2.0				4.0	4.0				2.0		2.0
Lane Grp Cap (vph)	457	1047			583	467				453		403
v/s Ratio Prot	0.14	c0.37			c0.31					c0.21		
v/s Ratio Perm	0.20					0.05						0.09
v/c Ratio	0.60	0.62			0.91	0.15				0.82		0.35
Uniform Delay, d1	22.2	14.3			35.0	25.6				38.5		32.7
Progression Factor	1.00	1.00			1.19	2.61				1.00		1.00
Incremental Delay, d2	1.4	0.8			15.5	0.5				10.4		0.2
Delay (s)	23.6	15.1			57.4	67.4				48.8		32.9
Level of Service	C	B			E	E				D		C
Approach Delay (s)		17.6			60.2			0.0			41.4	
Approach LOS		B			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	38.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		

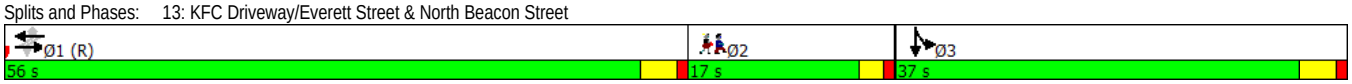
c Critical Lane Group

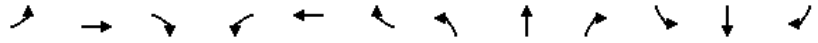
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	205	675	5	5	630	295	0	0	0	355	0	170	
Future Volume (vph)	205	675	5	5	630	295	0	0	0	355	0	170	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		446			477			138			518		
Travel Time (s)		10.1			10.8			3.1			11.8		
Confl. Peds. (#/hr)	29		61	61		29	26		26	26		26	
Confl. Bikes (#/hr)			1			6							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	962	0	0	690	321	0	0	0	0	571	0	
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA		
Protected Phases		1			1					3	3		2
Permitted Phases	1			1		1							
Detector Phase	1	1		1	1	1				3	3		
Switch Phase													
Minimum Initial (s)	15.0	15.0		15.0	15.0	15.0				7.0	7.0		7.0
Minimum Split (s)	19.0	19.0		19.0	19.0	19.0				11.0	11.0		17.0
Total Split (s)	56.0	56.0		56.0	56.0	56.0				37.0	37.0		17.0
Total Split (%)	50.9%	50.9%		50.9%	50.9%	50.9%				33.6%	33.6%		15%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0		2.0
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)		4.0			4.0	4.0					4.0		
Lead/Lag	Lead	Lead		Lead	Lead	Lead							Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max				Max	Max		None
v/c Ratio		1.76dl			0.78	0.36					0.89		
Control Delay		98.1			11.3	0.6					50.5		
Queue Delay		0.0			51.5	0.0					0.0		
Total Delay		98.1			62.7	0.6					50.5		
Queue Length 50th (ft)		~420			342	2					~423		
Queue Length 95th (ft)		#553			m126	m0					#641		
Internal Link Dist (ft)		366			397			58			438		
Turn Bay Length (ft)													
Base Capacity (vph)		856			884	882					642		
Starvation Cap Reductn		0			303	0					0		
Spillback Cap Reductn		0			0	0					0		
Storage Cap Reductn		0			0	0					0		
Reduced v/c Ratio		1.12			1.19	0.36					0.89		

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 109 (99%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: KFC Driveway/Everett Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	675	5	5	630	295	0	0	0	355	0	170
Future Volume (vph)	205	675	5	5	630	295	0	0	0	355	0	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0					4.0	
Lane Util. Factor		0.95			1.00	1.00					1.00	
Frpb, ped/bikes		1.00			1.00	0.94					0.98	
Flpb, ped/bikes		1.00			1.00	1.00					1.00	
Frt		1.00			1.00	0.85					0.96	
Flt Protected		0.99			1.00	1.00					0.97	
Satd. Flow (prot)		3522			1880	1510					1709	
Flt Permitted		0.51			0.99	1.00					0.97	
Satd. Flow (perm)		1810			1869	1510					1709	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	734	5	5	685	321	0	0	0	386	0	185
RTOR Reduction (vph)	0	1	0	0	0	171	0	0	0	0	26	0
Lane Group Flow (vph)	0	961	0	0	690	150	0	0	0	0	545	0
Confl. Peds. (#/hr)	29		61	61		29	26		26	26		26
Confl. Bikes (#/hr)			1			6						
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA	
Protected Phases		1			1					3	3	
Permitted Phases	1			1		1						
Actuated Green, G (s)		50.8			50.8	50.8					39.8	
Effective Green, g (s)		50.8			50.8	50.8					39.8	
Actuated g/C Ratio		0.46			0.46	0.46					0.36	
Clearance Time (s)		4.0			4.0	4.0					4.0	
Vehicle Extension (s)		2.0			2.0	2.0					2.0	
Lane Grp Cap (vph)		835			863	697					618	
v/s Ratio Prot											c0.32	
v/s Ratio Perm		c0.53			0.37	0.10						
v/c Ratio		1.76dl			0.80	0.22					0.88	
Uniform Delay, d1		29.6			25.3	17.7					32.9	
Progression Factor		1.02			0.42	0.24					1.00	
Incremental Delay, d2		79.8			0.7	0.1					16.7	
Delay (s)		109.9			11.5	4.4					49.6	
Level of Service		F			B	A					D	
Approach Delay (s)		109.9			9.2			0.0			49.6	
Approach LOS		F			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	56.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	105.7%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	325	645	10	15	170	625	70	0	340	190	155	455	230
Future Volume (vph)	325	645	10	15	170	625	70	0	340	190	155	455	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		420		0	0		150	0		75
Storage Lanes	0		0		1		0	0		1	0		1
Taper Length (ft)	25				25			25			25		
Right Turn on Red			Yes				Yes			Yes			Yes
Link Speed (mph)		30				30			30			30	
Link Distance (ft)		477				1053			361			234	
Travel Time (s)		10.8				23.9			8.2			5.3	
Confl. Peds. (#/hr)	88		53	57	53		88	86		57	57		86
Confl. Bikes (#/hr)			5				22			6			25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	7%	7%	7%	3%	3%	3%
Shared Lane Traffic (%)					10%								
Lane Group Flow (vph)	0	1065	0	0	182	774	0	0	370	207	0	663	250
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Detector Phase	3	3		2	2	2			1	1	4	1 4	1
Switch Phase													
Minimum Initial (s)	8.0	8.0		10.0	10.0	10.0			10.0	10.0	4.0		10.0
Minimum Split (s)	26.0	26.0		27.0	27.0	27.0			24.0	24.0	10.0		24.0
Total Split (s)	37.0	37.0		30.0	30.0	30.0			32.0	32.0	11.0		32.0
Total Split (%)	33.6%	33.6%		27.3%	27.3%	27.3%			29.1%	29.1%	10.0%		29.1%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0			4.0	4.0	3.0		4.0
All-Red Time (s)	6.0	6.0		6.0	6.0	6.0			3.0	3.0	3.0		3.0
Lost Time Adjust (s)		0.0			0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag			Lead	Lead	Lag		Lead
Lead-Lag Optimize?													
Recall Mode	None	None		Max	Max	Max			C-Max	C-Max	None		C-Max
v/c Ratio		1.25			0.63	1.31			0.48	0.43		0.97	0.54
Control Delay		143.3			52.7	188.8			39.4	6.5		72.9	25.2
Queue Delay		0.0			0.0	0.5			0.0	0.0		0.0	0.0
Total Delay		143.3			52.7	189.3			39.4	6.5		72.9	25.2
Queue Length 50th (ft)		~491			131	~387			120	0		263	99
Queue Length 95th (ft)		m#467			216	#517			167	47		#379	m159
Internal Link Dist (ft)		397				973			281			154	
Turn Bay Length (ft)					420					150			75
Base Capacity (vph)		852			287	590			766	476		680	463
Starvation Cap Reductn		0			0	0			0	0		0	0
Spillback Cap Reductn		0			0	41			0	0		0	2
Storage Cap Reductn		0			0	0			0	0		0	0
Reduced v/c Ratio		1.25			0.63	1.41			0.48	0.43		0.97	0.54

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 78 (71%), Referenced to phase 1:NESW, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: Cambridge Street & North Beacon Street/Brighton Avenue

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	325	645	10	15	170	625	70	0	340	190	155	455	230
Future Volume (vph)	325	645	10	15	170	625	70	0	340	190	155	455	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		10.0			10.0	10.0			7.0	7.0		7.0	7.0
Lane Util. Factor		0.95			0.91	0.91			0.95	1.00		0.95	1.00
Frpb, ped/bikes		1.00			1.00	0.98			1.00	0.87		1.00	0.81
Flpb, ped/bikes		1.00			1.00	1.00			1.00	1.00		0.99	1.00
Frt		1.00			1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected		0.98			0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3472			1579	3208			3374	1320		3425	1265
Flt Permitted		0.98			0.95	1.00			1.00	1.00		0.71	1.00
Satd. Flow (perm)		3472			1579	3208			3374	1320		2451	1265
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	353	701	11	16	185	679	76	0	370	207	168	495	250
RTOR Reduction (vph)	0	1	0	0	0	7	0	0	0	160	0	0	176
Lane Group Flow (vph)	0	1064	0	0	182	767	0	0	370	47	0	663	74
Confl. Peds. (#/hr)	88		53	57	53		88	86		57	57		86
Confl. Bikes (#/hr)			5				22			6			25
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	7%	7%	7%	3%	3%	3%
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Actuated Green, G (s)		27.0			20.0	20.0			25.0	25.0		30.0	25.0
Effective Green, g (s)		27.0			20.0	20.0			25.0	25.0		30.0	25.0
Actuated g/C Ratio		0.25			0.18	0.18			0.23	0.23		0.27	0.23
Clearance Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Vehicle Extension (s)		2.0			2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)		852			287	583			766	300		712	287
v/s Ratio Prot		c0.31			0.12	c0.24			0.11			c0.04	
v/s Ratio Perm										0.04		c0.21	0.06
v/c Ratio		1.25			0.63	1.31			0.48	0.16		0.93	0.26
Uniform Delay, d1		41.5			41.6	45.0			36.9	34.1		39.0	34.9
Progression Factor		0.76			1.00	1.00			1.00	1.00		1.30	3.28
Incremental Delay, d2		113.0			10.2	153.6			2.2	1.1		14.5	1.5
Delay (s)		144.7			51.9	198.6			39.1	35.2		65.1	116.0
Level of Service		F			D	F			D	D		E	F
Approach Delay (s)		144.7				170.7			37.7			79.1	
Approach LOS		F				F			D			E	

Intersection Summary			
HCM 2000 Control Delay	117.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	33.0
Intersection Capacity Utilization	107.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	50	685	820	10	5	20
Future Vol, veh/h	50	685	820	10	5	20
Conflicting Peds, #/hr	75	0	0	75	61	18
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	3	3	0	0
Mvmt Flow	54	745	891	11	5	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	977	0	-	0	1886	990
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	914	-
Critical Hdwy	4.16	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.254	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	690	-	-	-	79	302
Stage 1	-	-	-	-	370	-
Stage 2	-	-	-	-	394	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	680	-	-	-	60	279
Mov Cap-2 Maneuver	-	-	-	-	60	-
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	320	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	31.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	680	-	-	-	161
HCM Lane V/C Ratio	0.08	-	-	-	0.169
HCM Control Delay (s)	10.8	0	-	-	31.8
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0.3	-	-	-	0.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	695	0	1	795	0	0	0	0	405	1	20
Future Volume (vph)	0	695	0	1	795	0	0	0	0	405	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		587			512			134			484	
Travel Time (s)		13.3			11.6			3.0			11.0	
Confl. Peds. (#/hr)	45		47	47		45	3		22	22		3
Confl. Bikes (#/hr)			7			29						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	755	0	0	865	0	0	0	0	440	23	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Detector Phase		1		1	1					5	5	
Switch Phase												
Minimum Initial (s)		20.0		20.0	20.0					8.0	8.0	
Minimum Split (s)		24.0		24.0	24.0					22.0	22.0	
Total Split (s)		61.0		61.0	61.0					49.0	49.0	
Total Split (%)		55.5%		55.5%	55.5%					44.5%	44.5%	
Yellow Time (s)		3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)		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)		4.0			4.0					4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max					None	None	
v/c Ratio		0.67			0.74					0.83	0.05	
Control Delay		24.4			19.1					50.7	10.2	
Queue Delay		0.0			6.8					0.0	0.0	
Total Delay		24.4			25.9					50.7	10.2	
Queue Length 50th (ft)		461			579					292	0	
Queue Length 95th (ft)		m481			#800					362	m17	
Internal Link Dist (ft)		507			432			54			404	
Turn Bay Length (ft)										100		
Base Capacity (vph)		1127			1171					738	660	
Starvation Cap Reductn		0			259					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.67			0.95					0.60	0.03	

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 16: Driveway/Denby Road & Cambridge Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	695	0	1	795	0	0	0	0	405	1	20
Future Volume (vph)	0	695	0	1	795	0	0	0	0	405	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0	4.0	
Lane Util. Factor		1.00			1.00					1.00	1.00	
Frpb, ped/bikes		1.00			1.00					1.00	0.97	
Flpb, ped/bikes		1.00			1.00					1.00	1.00	
Frt		1.00			1.00					1.00	0.86	
Flt Protected		1.00			1.00					0.95	1.00	
Satd. Flow (prot)		1776			1845					1805	1582	
Flt Permitted		1.00			1.00					0.95	1.00	
Satd. Flow (perm)		1776			1844					1805	1582	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	755	0	1	864	0	0	0	0	440	1	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	16	0
Lane Group Flow (vph)	0	755	0	0	865	0	0	0	0	440	7	0
Confl. Peds. (#/hr)	45		47	47		45	3		22	22		3
Confl. Bikes (#/hr)			7			29						
Heavy Vehicles (%)	7%	7%	7%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Actuated Green, G (s)		69.8			69.8					32.2	32.2	
Effective Green, g (s)		69.8			69.8					32.2	32.2	
Actuated g/C Ratio		0.63			0.63					0.29	0.29	
Clearance Time (s)		4.0			4.0					4.0	4.0	
Vehicle Extension (s)		0.2			0.2					2.0	2.0	
Lane Grp Cap (vph)		1126			1170					528	463	
v/s Ratio Prot		0.43								c0.24	0.00	
v/s Ratio Perm					c0.47							
v/c Ratio		0.67			0.74					0.83	0.02	
Uniform Delay, d1		12.8			13.8					36.4	27.6	
Progression Factor		1.53			0.98					1.02	1.08	
Incremental Delay, d2		1.4			3.0					10.4	0.0	
Delay (s)		20.9			16.6					47.5	29.8	
Level of Service		C			B					D	C	
Approach Delay (s)		20.9			16.6			0.0			46.6	
Approach LOS		C			B			A			D	

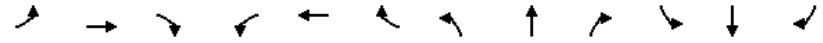
Intersection Summary			
HCM 2000 Control Delay	24.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	10	935	135	395	730	230	75	50	310	0	0	0	
Future Volume (vph)	10	935	135	395	730	230	75	50	310	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		75	0		100	0		75	0		0	
Storage Lanes	0		1	1		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		512			518			381			156		
Travel Time (s)		11.6			11.8			8.7			3.5		
Confl. Peds. (#/hr)	65		39	39		65	86		102	102		86	
Confl. Bikes (#/hr)			3			30			3			14	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	3%	3%	3%	0%	0%	0%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	1174	0	429	793	250	0	136	337	0	0	0	
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov				
Protected Phases		1		4	1 4	4	3	3	3 4				2
Permitted Phases	1			1 4		1 4							
Detector Phase	1	1		4	1 4	4	3	3	3 4				
Switch Phase													
Minimum Initial (s)	10.0	10.0		8.0		8.0	8.0	8.0					7.0
Minimum Split (s)	17.0	17.0		13.5		13.5	13.5	13.5					23.0
Total Split (s)	37.0	37.0		34.0		34.0	14.0	14.0					25.0
Total Split (%)	33.6%	33.6%		30.9%		30.9%	12.7%	12.7%					23%
Yellow Time (s)	4.0	4.0		3.0		3.0	4.0	4.0					3.0
All-Red Time (s)	3.0	3.0		2.5		2.5	1.5	1.5					1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0					
Total Lost Time (s)		7.0		5.5		5.5		5.5					
Lead/Lag	Lead	Lead		Lag		Lag	Lead	Lead					Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		None		None	None	None					None
v/c Ratio		1.47		0.85	0.69	0.27		0.77	0.41				
Control Delay		245.8		44.1	19.3	6.3		77.0	3.9				
Queue Delay		0.0		0.0	6.1	0.0		0.0	0.0				
Total Delay		245.8		44.1	25.4	6.3		77.0	3.9				
Queue Length 50th (ft)		~644		235	384	40		96	0				
Queue Length 95th (ft)		#788		#400	541	79		#200	55				
Internal Link Dist (ft)		432			438			301			76		
Turn Bay Length (ft)						100			75				
Base Capacity (vph)		796		529	1155	933		176	838				
Starvation Cap Reductn		0		0	0	0		0	0				
Spillback Cap Reductn		0		0	305	0		0	0				
Storage Cap Reductn		0		0	0	0		0	0				
Reduced v/c Ratio		1.47		0.81	0.93	0.27		0.77	0.40				

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: Harvard Avenue/Franklin Street & Cambridge Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	935	135	395	730	230	75	50	310	0	0	0
Future Volume (vph)	10	935	135	395	730	230	75	50	310	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		5.5	7.0	5.5		5.5	5.5			
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00			
Frpb, ped/bikes		0.99		1.00	1.00	0.95		1.00	1.00			
Flpb, ped/bikes		1.00		1.00	1.00	1.00		1.00	1.00			
Frt		0.98		1.00	1.00	0.85		1.00	0.85			
Flt Protected		1.00		0.95	1.00	1.00		0.97	1.00			
Satd. Flow (prot)		3274		1769	1863	1499		1791	1568			
Flt Permitted		0.74		0.11	1.00	1.00		0.97	1.00			
Satd. Flow (perm)		2430		214	1863	1499		1791	1568			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	1016	147	429	793	250	82	54	337	0	0	0
RTOR Reduction (vph)	0	10	0	0	0	49	0	0	204	0	0	0
Lane Group Flow (vph)	0	1164	0	429	793	201	0	136	133	0	0	0
Confl. Peds. (#/hr)	65		39	39		65	86		102	102		86
Confl. Bikes (#/hr)			3			30			3			14
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	3%	3%	3%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov			
Protected Phases		1		4	1 4	4	3	3	3 4			
Permitted Phases	1			1 4		1 4						
Actuated Green, G (s)		34.8		61.9	67.4	61.9		10.9	43.5			
Effective Green, g (s)		34.8		61.9	61.9	61.9		10.9	43.5			
Actuated g/C Ratio		0.32		0.56	0.56	0.56		0.10	0.40			
Clearance Time (s)		7.0		5.5		5.5		5.5				
Vehicle Extension (s)		2.0		2.0		2.0		2.0				
Lane Grp Cap (vph)		768		503	1048	918		177	620			
v/s Ratio Prot				c0.21	0.43	0.05		c0.08	0.08			
v/s Ratio Perm		c0.48		0.27		0.08						
v/c Ratio		1.52		0.85	0.76	0.22		0.77	0.21			
Uniform Delay, d1		37.6		29.6	18.3	12.0		48.3	22.0			
Progression Factor		0.79		1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2		237.4		12.7	2.8	0.0		16.3	0.1			
Delay (s)		267.2		42.3	21.1	12.0		64.7	22.0			
Level of Service		F		D	C	B		E	C			
Approach Delay (s)		267.2			25.7			34.3			0.0	
Approach LOS		F			C			C			A	

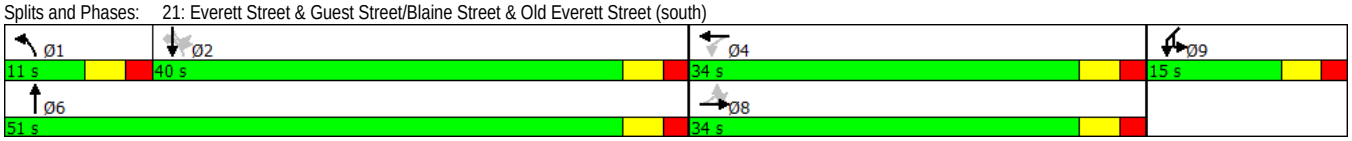
Intersection Summary			
HCM 2000 Control Delay	117.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	NBR2	SBL2	SBT	SBR	SWL	SWR	SWR2
Lane Configurations																
Traffic Volume (vph)	180	110	0	80	10	0	70	415	55	5	55	420	230	30	90	50
Future Volume (vph)	180	110	0	80	10	0	70	415	55	5	55	420	230	30	90	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200		0	0		0		0				50	0	0	
Storage Lanes		1		0	0		1		0				1	1	0	
Taper Length (ft)		25			25		25							25		
Right Turn on Red				No						No			No			No
Link Speed (mph)			30			30		30				30		30		
Link Distance (ft)			301			174		173				1225		364		
Travel Time (s)			6.8			4.0		3.9				27.8		8.3		
Confl. Peds. (#/hr)	4						29						29			
Confl. Bikes (#/hr)				4									3			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)																
Lane Group Flow (vph)	196	0	207	0	0	11	76	516	0	0	0	517	250	185	0	0
Turn Type	Perm	Perm	NA		Perm	NA	D.P+P	NA			Perm	NA	Perm	Prot		
Protected Phases			8			4	1	6				2		9		
Permitted Phases	8	8			4		2				2		2			
Detector Phase	8	8	8		4	4	1	6			2	2	2	9		
Switch Phase																
Minimum Initial (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0			6.0	6.0	6.0	6.0		
Minimum Split (s)	21.0	21.0	21.0		21.0	21.0	11.0	21.0			21.0	21.0	21.0	11.0		
Total Split (s)	34.0	34.0	34.0		34.0	34.0	11.0	51.0			40.0	40.0	40.0	15.0		
Total Split (%)	34.0%	34.0%	34.0%		34.0%	34.0%	11.0%	51.0%			40.0%	40.0%	40.0%	15.0%		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0			3.0	3.0	3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0	2.0			2.0	2.0	2.0	2.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0	0.0				0.0	0.0	0.0		
Total Lost Time (s)	5.0		5.0			5.0	5.0	5.0				5.0	5.0	5.0		
Lead/Lag							Lead				Lag	Lag	Lag			
Lead-Lag Optimize?							Yes				Yes	Yes	Yes			
Recall Mode	Min	Min	Min		None	None	Min	Max			Max	Max	Max	None		
v/c Ratio	0.69		0.71			0.06	0.26	0.55				0.80	0.45	1.01		
Control Delay	45.6		47.0			27.8	15.2	18.8				36.6	25.0	113.1		
Queue Delay	0.0		0.0			0.0	0.0	0.0				0.0	0.0	0.0		
Total Delay	45.6		47.0			27.8	15.2	18.8				36.6	25.0	113.1		
Queue Length 50th (ft)	103		110			5	20	185				251	101	~106		
Queue Length 95th (ft)	174		183			19	52	343				#495	199	#270		
Internal Link Dist (ft)			221			94		93				1145		284		
Turn Bay Length (ft)	200												50			
Base Capacity (vph)	447		455			292	296	939				649	550	183		
Starvation Cap Reductn	0		0			0	0	0				0	0	0		
Spillback Cap Reductn	0		0			0	0	0				0	0	0		
Storage Cap Reductn	0		0			0	0	0				0	0	0		
Reduced v/c Ratio	0.44		0.45			0.04	0.26	0.55				0.80	0.45	1.01		

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 89.9
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Everett Street & Guest Street/Blaine Street & Old Everett Street (south)



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	NBR2	SBL2	SBT	SBR	SWL	SWR	SWR2
Lane Configurations																
Traffic Volume (vph)	180	110	0	80	10	0	70	415	55	5	55	420	230	30	90	50
Future Volume (vph)	180	110	0	80	10	0	70	415	55	5	55	420	230	30	90	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0	5.0	5.0				5.0	5.0	5.0		
Lane Util. Factor	1.00		1.00			1.00	1.00	1.00				1.00	1.00	1.00		
Frpb, ped/bikes	1.00		0.99			1.00	1.00	1.00				1.00	0.90	1.00		
Flpb, ped/bikes	0.99		1.00			1.00	1.00	1.00				1.00	1.00	1.00		
Frt	1.00		0.94			1.00	1.00	0.98				1.00	0.85	0.89		
Flt Protected	0.95		0.97			0.95	0.95	1.00				0.99	1.00	0.99		
Satd. Flow (prot)	1750		1677			1770	1770	1828				1852	1421	1641		
Flt Permitted	0.75		0.82			0.48	0.24	1.00				0.89	1.00	0.99		
Satd. Flow (perm)	1382		1406			903	455	1828				1660	1421	1641		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	196	120	0	87	11	0	76	451	60	5	60	457	250	33	98	54
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	196	0	207	0	0	11	76	516	0	0	0	517	250	185	0	0
Confl. Peds. (#/hr)	4						29						29			
Confl. Bikes (#/hr)				4									3			
Turn Type	Perm	Perm	NA		Perm	NA	D.P+P	NA			Perm	NA	Perm	Prot		
Protected Phases			8			4	1	6				2		9		
Permitted Phases	8	8			4		2				2		2			
Actuated Green, G (s)	18.6		18.6			18.6	41.2	46.2				35.2	35.2	10.0		
Effective Green, g (s)	18.6		18.6			18.6	41.2	46.2				35.2	35.2	10.0		
Actuated g/C Ratio	0.21		0.21			0.21	0.46	0.51				0.39	0.39	0.11		
Clearance Time (s)	5.0		5.0			5.0	5.0	5.0				5.0	5.0	5.0		
Vehicle Extension (s)	3.0		3.0			3.0	3.0	3.0				3.0	3.0	3.0		
Lane Grp Cap (vph)	286		291			187	296	940				650	557	182		
v/s Ratio Prot							0.02	c0.28						c0.11		
v/s Ratio Perm	0.14		c0.15			0.01	0.10					c0.31	0.18			
v/c Ratio	0.69		0.71			0.06	0.26	0.55				0.80	0.45	1.02		
Uniform Delay, d1	32.9		33.1			28.6	15.5	14.8				24.1	20.1	39.9		
Progression Factor	1.00		1.00			1.00	1.00	1.00				1.00	1.00	1.00		
Incremental Delay, d2	6.7		8.0			0.1	0.5	2.3				9.7	2.6	71.1		
Delay (s)	39.5		41.1			28.7	16.0	17.1				33.9	22.7	111.0		
Level of Service	D		D			C	B	B				C	C	F		
Approach Delay (s)			40.3			28.7		16.9				30.2		111.0		
Approach LOS			D			C		B				C		F		

Intersection Summary			
HCM 2000 Control Delay	35.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	0	75	5	0	150	85	0	0	10	35	175	0	5	15	1
Future Vol, veh/h	0	0	75	5	0	150	85	0	0	10	35	175	0	5	15	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	1	1	1	5	1	1	1	2	0	0	0
Mvmt Flow	0	0	82	5	0	163	92	0	0	11	38	190	0	5	16	1
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	10.2	9.1	8.3
HCM LOS	A	B	A	A

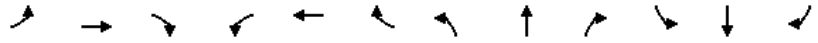
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	0%	64%	24%
Vol Thru, %	16%	94%	36%	71%
Vol Right, %	80%	6%	0%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	220	80	235	21
LT Vol	10	0	150	5
Through Vol	35	75	85	15
RT Vol	175	5	0	1
Lane Flow Rate	239	87	255	23
Geometry Grp	1	1	1	1
Degree of Util (X)	0.286	0.116	0.336	0.032
Departure Headway (Hd)	4.303	4.791	4.733	5.029
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	835	744	759	709
Service Time	2.338	2.843	2.776	3.084
HCM Lane V/C Ratio	0.286	0.117	0.336	0.032
HCM Control Delay	9.1	8.5	10.2	8.3
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	1.2	0.4	1.5	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	5	220	5	230	25	635	210	195	700	20
Future Volume (vph)	5	1	5	220	5	230	25	635	210	195	700	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		125	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			772			187			570	
Travel Time (s)		5.6			17.5			4.3			13.0	
Confl. Peds. (#/hr)	3		16	16		3	9		28	28		9
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	244	250	0	945	0	0	995	0
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Detector Phase	2	2		2	2	2 3	1	1		3	1 3	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		6.0		
Minimum Split (s)	19.0	19.0		19.0	19.0		22.0	22.0		11.0		
Total Split (s)	20.0	20.0		20.0	20.0		50.0	50.0		15.0		
Total Split (%)	23.5%	23.5%		23.5%	23.5%		58.8%	58.8%		17.6%		
Yellow Time (s)	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		
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead				
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		None		
v/c Ratio		0.04			0.98	0.37		0.57			0.68	
Control Delay		22.8			90.6	8.2		13.4			8.4	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		22.8			90.6	8.2		13.4			8.4	
Queue Length 50th (ft)		3			131	26		150			95	
Queue Length 95th (ft)		17			#276	79		206			126	
Internal Link Dist (ft)		167			692			107			490	
Turn Bay Length (ft)						125						
Base Capacity (vph)		290			248	679		1656			1474	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.04			0.98	0.37		0.57			0.68	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Natural Cycle: 60
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Market Street & Stockyard Driveway/Guest Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	5	220	5	230	25	635	210	195	700	20
Future Volume (vph)	5	1	5	220	5	230	25	635	210	195	700	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	5.0		4.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		0.98			1.00	1.00		0.98			1.00	
Flpb, ped/bikes		1.00			0.97	1.00		1.00			1.00	
Frt		0.94			1.00	0.85		0.96			1.00	
Flt Protected		0.98			0.95	1.00		1.00			0.99	
Satd. Flow (prot)		1709			1743	1599		3300			3516	
Flt Permitted		0.87			0.72	1.00		0.91			0.56	
Satd. Flow (perm)		1520			1322	1599		2994			2000	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1	5	239	5	250	27	690	228	212	761	22
RTOR Reduction (vph)	0	4	0	0	0	115	0	36	0	0	2	0
Lane Group Flow (vph)	0	7	0	0	244	135	0	909	0	0	993	0
Confl. Peds. (#/hr)	3		16	16		3	9		28	28		9
Confl. Bikes (#/hr)									1			2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases		2			2	2 3		1		3	1 3	
Permitted Phases	2			2			1			1 3		
Actuated Green, G (s)		15.0			15.0	30.0		45.0			55.0	
Effective Green, g (s)		16.0			16.0	30.0		46.0			55.0	
Actuated g/C Ratio		0.19			0.19	0.35		0.54			0.65	
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		286			248	564		1620			1472	
v/s Ratio Prot						0.08					c0.08	
v/s Ratio Perm		0.00			c0.18			0.30			c0.36	
v/c Ratio		0.02			0.98	0.24		0.56			0.67	
Uniform Delay, d1		28.1			34.4	19.4		12.9			9.4	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.0			52.1	0.1		1.4			1.0	
Delay (s)		28.1			86.5	19.5		14.3			10.4	
Level of Service		C			F	B		B			B	
Approach Delay (s)		28.1			52.6			14.3			10.4	
Approach LOS		C			D			B			B	

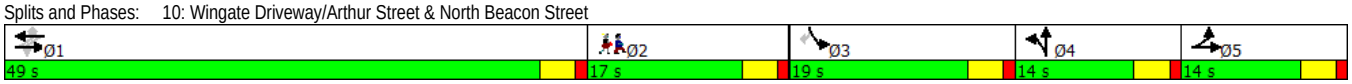
Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

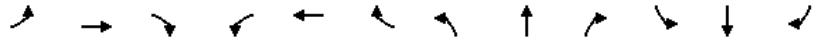
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	250	600	0	0	445	225	0	0	0	270	0	245	
Future Volume (vph)	250	600	0	0	445	225	0	0	0	270	0	245	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12	
Storage Length (ft)	100		0	0		0	0		0	0		150	
Storage Lanes	1		0	0		1	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		456			284			205			781		
Travel Time (s)		10.4			6.5			4.7			17.8		
Confl. Peds. (#/hr)	3					3			2	2			
Confl. Bikes (#/hr)			5			1							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	272	652	0	0	484	245	0	0	0	293	0	266	
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm	
Protected Phases	5	1 5			1		4	4		3			2
Permitted Phases	1 5			1		1						3	
Detector Phase	5	1 5		1	1	1	4	4		3		3	
Switch Phase													
Minimum Initial (s)	4.0			12.0	12.0	12.0	3.0	3.0		5.0		5.0	4.0
Minimum Split (s)	8.0			16.0	16.0	16.0	7.0	7.0		9.0		9.0	17.0
Total Split (s)	14.0			49.0	49.0	49.0	14.0	14.0		19.0		19.0	17.0
Total Split (%)	12.4%			43.4%	43.4%	43.4%	12.4%	12.4%		16.8%		16.8%	15%
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0
All-Red Time (s)	1.0			1.0	1.0	1.0	1.0	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	-1.0				-1.0	-1.0		-1.0		0.0		-1.0	
Total Lost Time (s)	3.0				3.0	3.0		3.0		4.0		3.0	
Lead/Lag				Lead	Lead	Lead	Lag	Lag		Lead		Lead	Lag
Lead-Lag Optimize?													
Recall Mode	None			None	None	None	None	None		None		None	None
v/c Ratio	0.54	0.56			0.58	0.30				0.81		0.50	
Control Delay	10.2	9.8			18.1	2.9				51.7		10.6	
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0	
Total Delay	10.2	9.8			18.1	2.9				51.7		10.6	
Queue Length 50th (ft)	36	116			140	0				131		11	
Queue Length 95th (ft)	118	352			324	41				#372		92	
Internal Link Dist (ft)		376			204			125			701		
Turn Bay Length (ft)	100											150	
Base Capacity (vph)	508	1403			1085	992				363		531	
Starvation Cap Reductn	0	0			0	0				0		0	
Spillback Cap Reductn	0	0			0	0				0		0	
Storage Cap Reductn	0	0			0	0				0		0	
Reduced v/c Ratio	0.54	0.46			0.45	0.25				0.81		0.50	

Intersection Summary

Area Type: Other
Cycle Length: 113
Actuated Cycle Length: 76.1
Natural Cycle: 90
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Wingate Driveway/Arthur Street & North Beacon Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	600	0	0	445	225	0	0	0	270	0	245
Future Volume (vph)	250	600	0	0	445	225	0	0	0	270	0	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			3.0	3.0				4.0		3.0
Lane Util. Factor	1.00	1.00			1.00	1.00				1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.98				1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1651	1739			1739	1442				1787		1599
Flt Permitted	0.32	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	550	1739			1739	1442				1787		1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	272	652	0	0	484	245	0	0	0	293	0	266
RTOR Reduction (vph)	0	0	0	0	0	133	0	0	0	0	0	187
Lane Group Flow (vph)	272	652	0	0	484	112	0	0	0	293	0	79
Confl. Peds. (#/hr)	3					3			2	2		
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%
Turn Type	pm+pt	NA			NA	Perm				Prot		Perm
Protected Phases	5	1 5			1		4	4		3		
Permitted Phases	1 5			1		1						3
Actuated Green, G (s)	45.6	49.6			35.3	35.3				15.5		15.5
Effective Green, g (s)	47.6	50.6			36.3	36.3				15.5		16.5
Actuated g/C Ratio	0.60	0.64			0.46	0.46				0.20		0.21
Clearance Time (s)	4.0				4.0	4.0				4.0		4.0
Vehicle Extension (s)	2.0				4.0	4.0				2.0		2.0
Lane Grp Cap (vph)	488	1112			798	661				350		333
v/s Ratio Prot	0.08	c0.38			0.28					c0.16		
v/s Ratio Perm	0.26					0.08						0.05
v/c Ratio	0.56	0.59			0.61	0.17				0.84		0.24
Uniform Delay, d1	9.0	8.2			16.0	12.6				30.6		26.1
Progression Factor	1.00	1.00			1.00	1.00				1.00		1.00
Incremental Delay, d2	0.8	0.9			1.5	0.2				15.2		0.1
Delay (s)	9.8	9.2			17.6	12.7				45.8		26.2
Level of Service	A	A			B	B				D		C
Approach Delay (s)		9.3			15.9			0.0			36.5	
Approach LOS		A			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	79.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		

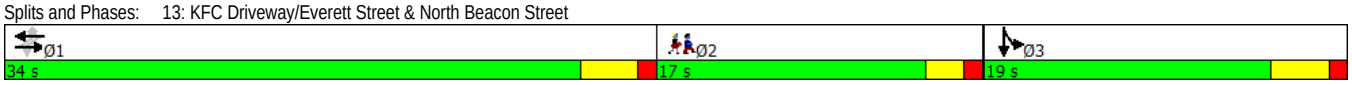
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	170	655	5	10	625	280	0	0	0	245	1	100	
Future Volume (vph)	170	655	5	10	625	280	0	0	0	245	1	100	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		446			477			138			542		
Travel Time (s)		10.1			10.8			3.1			12.3		
Confl. Peds. (#/hr)	50		64	64		50	13		36	36		13	
Confl. Bikes (#/hr)			6			2							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	902	0	0	690	304	0	0	0	0	376	0	
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA		
Protected Phases		1			1					3	3		2
Permitted Phases	1			1		1							
Detector Phase	1	1		1	1	1				3	3		
Switch Phase													
Minimum Initial (s)	15.0	15.0		15.0	15.0	15.0				7.0	7.0		7.0
Minimum Split (s)	19.0	19.0		19.0	19.0	19.0				11.0	11.0		17.0
Total Split (s)	34.0	34.0		34.0	34.0	34.0				19.0	19.0		17.0
Total Split (%)	48.6%	48.6%		48.6%	48.6%	48.6%				27.1%	27.1%		24%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0		2.0
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)		4.0			4.0	4.0					4.0		
Lead/Lag	Lead	Lead		Lead	Lead	Lead							Lag
Lead-Lag Optimize?													
Recall Mode	None	None		None	None	None				Max	Max		None
v/c Ratio		0.97dl			0.74	0.34					0.83		
Control Delay		31.4			20.6	3.0					40.7		
Queue Delay		0.0			0.1	0.0					0.0		
Total Delay		31.4			20.7	3.0					40.7		
Queue Length 50th (ft)		104			131	0					98		
Queue Length 95th (ft)		#346			#465	41					#317		
Internal Link Dist (ft)		366			397			58			462		
Turn Bay Length (ft)													
Base Capacity (vph)		1001			937	894					455		
Starvation Cap Reductn		0			11	0					0		
Spillback Cap Reductn		0			0	0					0		
Storage Cap Reductn		0			0	0					0		
Reduced v/c Ratio		0.90			0.75	0.34					0.83		

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 59.8
Natural Cycle: 90
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: KFC Driveway/Everett Street & North Beacon Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	655	5	10	625	280	0	0	0	245	1	100
Future Volume (vph)	170	655	5	10	625	280	0	0	0	245	1	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0					4.0	
Lane Util. Factor		0.95			1.00	1.00					1.00	
Frpb, ped/bikes		1.00			1.00	0.93					0.99	
Flpb, ped/bikes		1.00			1.00	1.00					1.00	
Frt		1.00			1.00	0.85					0.96	
Flt Protected		0.99			1.00	1.00					0.97	
Satd. Flow (prot)		3488			1861	1471					1706	
Flt Permitted		0.56			0.98	1.00					0.97	
Satd. Flow (perm)		1960			1834	1471					1706	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	712	5	11	679	304	0	0	0	266	1	109
RTOR Reduction (vph)	0	1	0	0	0	153	0	0	0	0	20	0
Lane Group Flow (vph)	0	901	0	0	690	151	0	0	0	0	356	0
Confl. Peds. (#/hr)	50		64	64		50	13		36	36		13
Confl. Bikes (#/hr)			6			2						
Turn Type	Perm	NA		Perm	NA	Perm				Split	NA	
Protected Phases		1			1					3	3	
Permitted Phases	1			1		1						
Actuated Green, G (s)		30.6			30.6	30.6					15.3	
Effective Green, g (s)		30.6			30.6	30.6					15.3	
Actuated g/C Ratio		0.50			0.50	0.50					0.25	
Clearance Time (s)		4.0			4.0	4.0					4.0	
Vehicle Extension (s)		2.0			2.0	2.0					2.0	
Lane Grp Cap (vph)		972			909	729					423	
v/s Ratio Prot											c0.21	
v/s Ratio Perm		c0.46			0.38	0.10						
v/c Ratio		0.97dl			0.76	0.21					0.84	
Uniform Delay, d1		14.5			12.6	8.7					22.0	
Progression Factor		1.00			1.00	1.00					1.00	
Incremental Delay, d2		14.1			3.3	0.1					18.0	
Delay (s)		28.7			15.8	8.8					40.0	
Level of Service		C			B	A					D	
Approach Delay (s)		28.7			13.7			0.0			40.0	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	61.7	Sum of lost time (s)	11.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	270	530	30	20	150	520	90	0	340	170	120	315	270
Future Volume (vph)	270	530	30	20	150	520	90	0	340	170	120	315	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		420		0	0		150	0		75
Storage Lanes	0		0		1		0	0		1	0		1
Taper Length (ft)	25				25			25			25		
Right Turn on Red			Yes				Yes			Yes			Yes
Link Speed (mph)		30				30			30			30	
Link Distance (ft)		477				1053			361			234	
Travel Time (s)		10.8				23.9			8.2			5.3	
Confl. Peds. (#/hr)	123		81	50	81		123	124		50	50		124
Confl. Bikes (#/hr)			3				9			3			3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	3%	3%	3%	2%	2%	2%
Shared Lane Traffic (%)					10%								
Lane Group Flow (vph)	0	902	0	0	169	679	0	0	370	185	0	472	293
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Detector Phase	3	3		2	2	2			1	1	4	1 4	1
Switch Phase													
Minimum Initial (s)	8.0	8.0		10.0	10.0	10.0			10.0	10.0	4.0		10.0
Minimum Split (s)	26.0	26.0		27.0	27.0	27.0			24.0	24.0	10.0		24.0
Total Split (s)	36.0	36.0		29.0	29.0	29.0			30.0	30.0	11.0		30.0
Total Split (%)	34.0%	34.0%		27.4%	27.4%	27.4%			28.3%	28.3%	10.4%		28.3%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0			4.0	4.0	3.0		4.0
All-Red Time (s)	6.0	6.0		6.0	6.0	6.0			3.0	3.0	3.0		3.0
Lost Time Adjust (s)		0.0			0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag			Lead	Lead	Lag		Lead
Lead-Lag Optimize?													
Recall Mode	None	None		Max	Max	Max			None	None	None		None
v/c Ratio		1.04			0.58	1.14			0.56	0.40		0.79	0.70
Control Delay		79.8			48.0	121.7			40.9	4.5		45.1	18.5
Queue Delay		0.0			0.0	0.0			0.0	0.0		0.0	0.0
Total Delay		79.8			48.0	121.7			40.9	4.5		45.1	18.5
Queue Length 50th (ft)		~359			116	~301			116	0		131	31
Queue Length 95th (ft)		#488			196	#426			163	26		178	126
Internal Link Dist (ft)		397				973			281			154	
Turn Bay Length (ft)					420					150			75
Base Capacity (vph)		868			293	594			787	498		680	453
Starvation Cap Reductn		0			0	0			0	0		0	0
Spillback Cap Reductn		0			0	0			0	0		0	0
Storage Cap Reductn		0			0	0			0	0		0	0
Reduced v/c Ratio		1.04			0.58	1.14			0.47	0.37		0.69	0.65

Intersection Summary

Area Type: Other
Cycle Length: 106
Actuated Cycle Length: 102.6
Natural Cycle: 100
Control Type: Semi Act-Uncoord

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Cambridge Street & North Beacon Street/Brighton Avenue

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Volume (vph)	270	530	30	20	150	520	90	0	340	170	120	315	270
Future Volume (vph)	270	530	30	20	150	520	90	0	340	170	120	315	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		10.0			10.0	10.0			7.0	7.0		7.0	7.0
Lane Util. Factor		0.95			0.91	0.91			0.95	1.00		0.95	1.00
Frpb, ped/bikes		0.99			1.00	0.97			1.00	0.90		1.00	0.77
Flpb, ped/bikes		1.00			1.00	1.00			1.00	1.00		0.99	1.00
Frt		0.99			1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected		0.98			0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3409			1579	3138			3505	1405		3459	1213
Flt Permitted		0.98			0.95	1.00			1.00	1.00		0.69	1.00
Satd. Flow (perm)		3409			1579	3138			3505	1405		2435	1213
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	293	576	33	22	163	565	98	0	370	185	130	342	293
RTOR Reduction (vph)	0	2	0	0	0	12	0	0	0	150	0	0	192
Lane Group Flow (vph)	0	900	0	0	169	667	0	0	370	35	0	472	101
Confl. Peds. (#/hr)	123		81	50	81		123	124		50	50		124
Confl. Bikes (#/hr)			3				9			3			3
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	Split	NA			NA	Perm	pm+pt	NA	custom
Protected Phases	3	3		2	2	2			1		4	1 4	
Permitted Phases										1	1 4		1
Actuated Green, G (s)		26.1			19.0	19.0			19.4	19.4		24.4	19.4
Effective Green, g (s)		26.1			19.0	19.0			19.4	19.4		24.4	19.4
Actuated g/C Ratio		0.25			0.19	0.19			0.19	0.19		0.24	0.19
Clearance Time (s)		10.0			10.0	10.0			7.0	7.0			7.0
Vehicle Extension (s)		2.0			2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)		868			292	581			663	265		629	229
v/s Ratio Prot		c0.26			0.11	c0.21			0.11			c0.04	
v/s Ratio Perm										0.02		c0.14	0.08
v/c Ratio		1.04			0.58	1.15			0.56	0.13		0.75	0.44
Uniform Delay, d1		38.2			38.1	41.8			37.7	34.5		36.2	36.7
Progression Factor		1.00			1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		40.4			8.1	85.2			0.6	0.1		4.5	0.5
Delay (s)		78.6			46.2	127.0			38.2	34.6		40.7	37.2
Level of Service		E			D	F			D	C		D	D
Approach Delay (s)		78.6				110.9			37.0			39.4	
Approach LOS		E				F			D			D	

Intersection Summary			
HCM 2000 Control Delay	70.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	102.5	Sum of lost time (s)	33.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	50	650	685	15	10	20
Future Vol, veh/h	50	650	685	15	10	20
Conflicting Peds, #/hr	129	0	0	129	28	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	3	3	4	4
Mvmt Flow	54	707	745	16	11	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	890	0	-	0	1725	886
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	843	-
Critical Hdwy	4.14	-	-	-	7.14	6.24
Critical Hdwy Stg 1	-	-	-	-	6.14	-
Critical Hdwy Stg 2	-	-	-	-	6.14	-
Follow-up Hdwy	2.236	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	753	-	-	-	69	341
Stage 1	-	-	-	-	338	-
Stage 2	-	-	-	-	355	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	750	-	-	-	55	303
Mov Cap-2 Maneuver	-	-	-	-	55	-
Stage 1	-	-	-	-	266	-
Stage 2	-	-	-	-	305	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	45.4
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	750	-	-	-	121
HCM Lane V/C Ratio	0.072	-	-	-	0.269
HCM Control Delay (s)	10.2	0	-	-	45.4
HCM Lane LOS	B	A	-	-	E
HCM 95th %tile Q(veh)	0.2	-	-	-	1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	670	5	2	665	0	0	0	0	280	0	40
Future Volume (vph)	0	670	5	2	665	0	0	0	0	280	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		587			512			208			484	
Travel Time (s)		13.3			11.6			4.7			11.0	
Confl. Peds. (#/hr)	166		76	76		166	4		73	73		4
Confl. Bikes (#/hr)			6			2						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	0%	0%	0%	17%	17%	17%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	733	0	0	725	0	0	0	0	304	43	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Detector Phase		1		1	1					5	5	
Switch Phase												
Minimum Initial (s)		20.0		20.0	20.0					8.0	8.0	
Minimum Split (s)		24.0		24.0	24.0					22.0	22.0	
Total Split (s)		60.0		60.0	60.0					30.0	30.0	
Total Split (%)		66.7%		66.7%	66.7%					33.3%	33.3%	
Yellow Time (s)		3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)		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)		4.0			4.0					4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max					None	None	
v/c Ratio		0.59			0.58					0.84	0.11	
Control Delay		11.2			14.6					53.3	0.6	
Queue Delay		0.0			6.1					0.0	0.0	
Total Delay		11.2			20.8					53.3	0.6	
Queue Length 50th (ft)		203			397					165	0	
Queue Length 95th (ft)		353			566					m247	m1	
Internal Link Dist (ft)		507			432			128			404	
Turn Bay Length (ft)										100		
Base Capacity (vph)		1242			1245					445	469	
Starvation Cap Reductn		0			458					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.59			0.92					0.68	0.09	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 16: Driveway/Denby Road & Cambridge Street

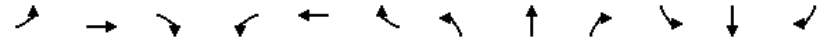
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	670	5	2	665	0	0	0	0	280	0	40
Future Volume (vph)	0	670	5	2	665	0	0	0	0	280	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0	4.0	
Lane Util. Factor		1.00			1.00					1.00	1.00	
Frpb, ped/bikes		1.00			1.00					1.00	0.97	
Flpb, ped/bikes		1.00			1.00					1.00	1.00	
Frt		1.00			1.00					1.00	0.85	
Flt Protected		1.00			1.00					0.95	1.00	
Satd. Flow (prot)		1839			1844					1543	1339	
Flt Permitted		1.00			1.00					0.95	1.00	
Satd. Flow (perm)		1839			1843					1543	1339	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	728	5	2	723	0	0	0	0	304	0	43
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	33	0
Lane Group Flow (vph)	0	733	0	0	725	0	0	0	0	304	10	0
Confl. Peds. (#/hr)	166		76	76		166	4		73	73		4
Confl. Bikes (#/hr)			6			2						
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	0%	0%	0%	17%	17%	17%
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		1			1					5	5	
Permitted Phases				1								
Actuated Green, G (s)		60.8			60.8					21.2	21.2	
Effective Green, g (s)		60.8			60.8					21.2	21.2	
Actuated g/C Ratio		0.68			0.68					0.24	0.24	
Clearance Time (s)		4.0			4.0					4.0	4.0	
Vehicle Extension (s)		0.2			0.2					2.0	2.0	
Lane Grp Cap (vph)		1242			1245					363	315	
v/s Ratio Prot		c0.40								c0.20	0.01	
v/s Ratio Perm					0.39							
v/c Ratio		0.59			0.58					0.84	0.03	
Uniform Delay, d1		7.9			7.8					32.8	26.5	
Progression Factor		1.00			1.43					1.03	1.00	
Incremental Delay, d2		2.1			1.6					14.8	0.0	
Delay (s)		9.9			12.8					48.5	26.5	
Level of Service		A			B					D	C	
Approach Delay (s)		9.9			12.8			0.0			45.8	
Approach LOS		A			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	25	800	115	295	590	215	75	45	370	0	0	0	
Future Volume (vph)	25	800	115	295	590	215	75	45	370	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		75	0		100	0		75	0		0	
Storage Lanes	0		1	1		1	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		512			518			381			156		
Travel Time (s)		11.6			11.8			8.7			3.5		
Confl. Peds. (#/hr)	81		43	43		81	102		71	71		102	
Confl. Bikes (#/hr)			6			12			1			8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	2%	2%	2%	0%	0%	0%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	1022	0	321	641	234	0	131	402	0	0	0	
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov				
Protected Phases		1		4	1 4	4	3	3	3 4				2
Permitted Phases	1			1 4		1 4							
Detector Phase	1	1		4	1 4	4	3	3	3 4				
Switch Phase													
Minimum Initial (s)	10.0	10.0		8.0		8.0	8.0	8.0					7.0
Minimum Split (s)	17.0	17.0		13.5		13.5	13.5	13.5					23.0
Total Split (s)	29.0	29.0		22.0		22.0	14.0	14.0					25.0
Total Split (%)	32.2%	32.2%		24.4%		24.4%	15.6%	15.6%					28%
Yellow Time (s)	4.0	4.0		3.0		3.0	4.0	4.0					3.0
All-Red Time (s)	3.0	3.0		2.5		2.5	1.5	1.5					1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0					
Total Lost Time (s)		7.0		5.5		5.5		5.5					
Lead/Lag	Lead	Lead		Lag		Lag	Lead	Lead					Lag
Lead-Lag Optimize?													
Recall Mode	C-Max	C-Max		None		None	None	None					None
v/c Ratio		1.06		0.79	0.58	0.27		0.66	0.49				
Control Delay		75.8		36.3	17.0	6.2		55.3	4.5				
Queue Delay		0.0		0.0	0.4	0.0		0.0	0.0				
Total Delay		75.8		36.3	17.5	6.2		55.3	4.5				
Queue Length 50th (ft)		~369		136	273	30		72	0				
Queue Length 95th (ft)		#557		#278	405	70		#143	58				
Internal Link Dist (ft)		432			438			301			76		
Turn Bay Length (ft)						100			75				
Base Capacity (vph)		960		421	1090	866		200	814				
Starvation Cap Reductn		0		0	0	0		0	0				
Spillback Cap Reductn		0		0	131	0		0	0				
Storage Cap Reductn		0		0	0	0		0	0				
Reduced v/c Ratio		1.06		0.76	0.67	0.27		0.66	0.49				

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 17: Harvard Avenue/Franklin Street & Cambridge Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	800	115	295	590	215	75	45	370	0	0	0
Future Volume (vph)	25	800	115	295	590	215	75	45	370	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		5.5	7.0	5.5		5.5	5.5			
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00			
Frpb, ped/bikes		0.99		1.00	1.00	0.93		1.00	1.00			
Flpb, ped/bikes		1.00		1.00	1.00	1.00		1.00	1.00			
Frt		0.98		1.00	1.00	0.85		1.00	0.85			
Flt Protected		1.00		0.95	1.00	1.00		0.97	1.00			
Satd. Flow (prot)		3363		1751	1845	1461		1806	1583			
Flt Permitted		0.80		0.13	1.00	1.00		0.97	1.00			
Satd. Flow (perm)		2677		243	1845	1461		1806	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	870	125	321	641	234	82	49	402	0	0	0
RTOR Reduction (vph)	0	11	0	0	0	63	0	0	260	0	0	0
Lane Group Flow (vph)	0	1011	0	321	641	171	0	131	142	0	0	0
Confl. Peds. (#/hr)	81		43	43		81	102		71	71		102
Confl. Bikes (#/hr)			6			12			1			8
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	2%	2%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA	custom	Split	NA	pt+ov			
Protected Phases		1		4	1 4	4	3	3	3 4			
Permitted Phases	1			1 4		1 4						
Actuated Green, G (s)		30.4		46.7	52.2	46.7		9.9	31.7			
Effective Green, g (s)		30.4		46.7	46.7	46.7		9.9	31.7			
Actuated g/C Ratio		0.34		0.52	0.52	0.52		0.11	0.35			
Clearance Time (s)		7.0		5.5		5.5		5.5				
Vehicle Extension (s)		2.0		2.0		2.0		2.0				
Lane Grp Cap (vph)		904		399	957	847		198	557			
v/s Ratio Prot				c0.15	0.35	0.04		c0.07	0.09			
v/s Ratio Perm		c0.38		0.27		0.08						
v/c Ratio		1.12		0.80	0.67	0.20		0.66	0.25			
Uniform Delay, d1		29.8		20.8	16.0	11.6		38.4	20.7			
Progression Factor		0.90		1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2		65.5		10.6	1.4	0.0		6.3	0.1			
Delay (s)		92.3		31.4	17.4	11.7		44.7	20.8			
Level of Service		F		C	B	B		D	C			
Approach Delay (s)		92.3			20.0			26.7			0.0	
Approach LOS		F			C			C			A	

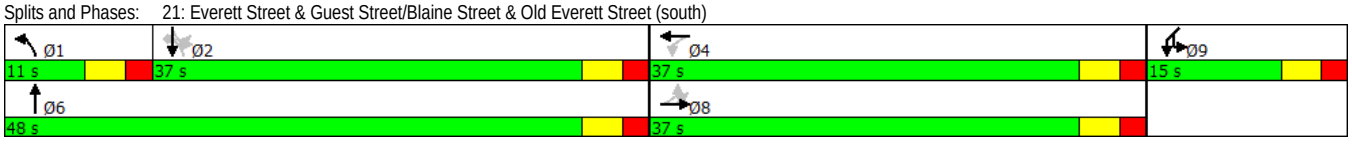
Intersection Summary			
HCM 2000 Control Delay	48.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR2	NBL	NBT	NBR	SBL2	SBT	SBR	SWL2	SWL	SWR
Lane Configurations																
Traffic Volume (vph)	110	85	0	65	5	0	5	85	340	70	20	245	195	1	35	100
Future Volume (vph)	110	85	0	65	5	0	5	85	340	70	20	245	195	1	35	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200		0	0			0		0			50		0	0
Storage Lanes		1		0	0			1		0			1		1	0
Taper Length (ft)		25			25			25							25	
Right Turn on Red				No			No						No			
Link Speed (mph)			30			30			30			30			30	
Link Distance (ft)			307			169			149			1225			365	
Travel Time (s)			7.0			3.8			3.4			27.8			8.3	
Confl. Peds. (#/hr)	5			1				24					24			
Confl. Bikes (#/hr)													1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)																
Lane Group Flow (vph)	120	0	163	0	0	10	0	92	446	0	0	288	212	0	175	0
Turn Type	Perm	Perm	NA		Perm	NA		D.P+P	NA		Perm	NA	Perm	Prot	Prot	
Protected Phases			8			4		1	6			2		9	9	
Permitted Phases	8	8			4			2			2		2			
Detector Phase	8	8	8		4	4		1	6		2	2	2	9	9	
Switch Phase																
Minimum Initial (s)	6.0	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	21.0	21.0	21.0		21.0	21.0		11.0	21.0		21.0	21.0	21.0	11.0	11.0	
Total Split (s)	37.0	37.0	37.0		37.0	37.0		11.0	48.0		37.0	37.0	37.0	15.0	15.0	
Total Split (%)	37.0%	37.0%	37.0%		37.0%	37.0%		11.0%	48.0%		37.0%	37.0%	37.0%	15.0%	15.0%	
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0			0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	5.0		5.0			5.0		5.0	5.0			5.0	5.0		5.0	
Lead/Lag								Lead			Lag	Lag	Lag			
Lead-Lag Optimize?								Yes			Yes	Yes	Yes			
Recall Mode	Min	Min	Min		None	None		Min	Max		Max	Max	Max	None	None	
v/c Ratio	0.50		0.65			0.04		0.19	0.47			0.42	0.38		0.88	
Control Delay	37.7		44.5			27.3		12.4	15.5			21.8	21.8		78.3	
Queue Delay	0.0		0.0			0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	37.7		44.5			27.3		12.4	15.5			21.8	21.8		78.3	
Queue Length 50th (ft)	57		79			4		23	138			106	77		90	
Queue Length 95th (ft)	107		141			17		54	251			195	151		#224	
Internal Link Dist (ft)			227			89			69			1145			285	
Turn Bay Length (ft)	200												50			
Base Capacity (vph)	533		548			585		475	945			687	556		199	
Starvation Cap Reductn	0		0			0		0	0			0	0		0	
Spillback Cap Reductn	0		0			0		0	0			0	0		0	
Storage Cap Reductn	0		0			0		0	0			0	0		0	
Reduced v/c Ratio	0.23		0.30			0.02		0.19	0.47			0.42	0.38		0.88	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 82.7
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Everett Street & Guest Street/Blaine Street & Old Everett Street (south)



Lane Group	SWR2
Lane Configurations	
Traffic Volume (vph)	25
Future Volume (vph)	25
Ideal Flow (vphpl)	1900
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	No
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.92
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR2	NBL	NBT	NBR	SBL2	SBT	SBR	SWL2	SWL	SWR
Lane Configurations																
Traffic Volume (vph)	110	85	0	65	5	0	5	85	340	70	20	245	195	1	35	100
Future Volume (vph)	110	85	0	65	5	0	5	85	340	70	20	245	195	1	35	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0		5.0	5.0			5.0	5.0		5.0	
Lane Util. Factor	1.00		1.00			1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00		0.99			1.00		1.00	1.00			1.00	0.92		1.00	
Flpb, ped/bikes	0.99		1.00			1.00		0.98	1.00			1.00	1.00		1.00	
Frt	1.00		0.93			0.93		1.00	0.97			1.00	0.85		0.90	
Flt Protected	0.95		0.97			0.98		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)	1747		1677			1695		1740	1815			1856	1454		1649	
Flt Permitted	0.75		0.82			0.87		0.50	1.00			0.95	1.00		0.99	
Satd. Flow (perm)	1381		1413			1511		914	1815			1773	1454		1649	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	92	0	71	5	0	5	92	370	76	22	266	212	1	38	109
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	120	0	163	0	0	10	0	92	446	0	0	288	212	0	175	0
Confl. Peds. (#/hr)	5			1				24					24			
Confl. Bikes (#/hr)													1			
Turn Type	Perm	Perm	NA		Perm	NA		D.P+P	NA		Perm	NA	Perm	Prot	Prot	
Protected Phases			8			4		1	6			2		9	9	
Permitted Phases	8	8			4			2			2		2			
Actuated Green, G (s)	14.6		14.6			14.6		38.1	43.1			32.1	32.1		10.0	
Effective Green, g (s)	14.6		14.6			14.6		38.1	43.1			32.1	32.1		10.0	
Actuated g/C Ratio	0.18		0.18			0.18		0.46	0.52			0.39	0.39		0.12	
Clearance Time (s)	5.0		5.0			5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0		3.0			3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	243		249			266		481	945			688	564		199	
v/s Ratio Prot								0.01	c0.25						c0.11	
v/s Ratio Perm	0.09		c0.12			0.01		0.07				0.16	0.15			
v/c Ratio	0.49		0.65			0.04		0.19	0.47			0.42	0.38		0.88	
Uniform Delay, d1	30.7		31.7			28.2		12.8	12.6			18.5	18.1		35.8	
Progression Factor	1.00		1.00			1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	1.6		6.1			0.1		0.2	1.7			1.9	1.9		32.6	
Delay (s)	32.3		37.8			28.3		13.0	14.3			20.4	20.0		68.4	
Level of Service	C		D			C		B	B			C	C		E	
Approach Delay (s)			35.4			28.3			14.1			20.2			68.4	
Approach LOS			D			C			B			C			E	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	82.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	25
Future Volume (vph)	25
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	27
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	0	40	10	0	150	70	5	0	15	5	160	0	0	0	0
Future Vol, veh/h	0	0	40	10	0	150	70	5	0	15	5	160	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	0	0	0	5	1	1	1	2	0	0	0
Mvmt Flow	0	0	43	11	0	163	76	5	0	16	5	174	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	9.5	8.3	0
HCM LOS	A	A	A	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	0%	67%	0%
Vol Thru, %	3%	80%	31%	100%
Vol Right, %	89%	20%	2%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	50	225	0
LT Vol	15	0	150	0
Through Vol	5	40	70	0
RT Vol	160	10	5	0
Lane Flow Rate	196	54	245	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.223	0.068	0.307	0
Departure Headway (Hd)	4.095	4.473	4.523	4.814
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	878	800	800	0
Service Time	2.116	2.504	2.523	2.847
HCM Lane V/C Ratio	0.223	0.068	0.306	0
HCM Control Delay	8.3	7.8	9.5	7.8
HCM Lane LOS	A	A	A	N
HCM 95th-tile Q	0.9	0.2	1.3	0

APPENDIX D: Noise Supporting Documentation

Noise Monitoring Data – Daytime

Noise Monitoring Data – Nighttime

Noise Monitoring Data – Daytime

Summary	
Filename	16101800.LD0
Serial Number	3707
Model	SoundExpert™ LxT
Firmware Version	2.301
User	Q.Tat/L.Capriotti
Location	Everett Street
Job Description	Allston Yards
Note	Daytime
Measurement Description	
Start	2016/10/18 11:09:38
Stop	2016/10/18 11:25:12
Duration	0:15:33.2
Run Time	0:15:33.2
Pause	0:00:00.0
Pre Calibration	2016/10/18 11:08:39
Post Calibration	2016/10/18 11:25:52
Calibration Deviation	-0.21 dB
Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Exponential
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At Lmax
Results	
LASeq	61.0 dB
LAS1.00	69.8 dB
LAS10.00	64.0 dB
LAS33.30	59.3 dB
LAS50.00	58.2 dB
LAS90.00	55.3 dB
LAS99.00	54.0 dB

Summary	
Filename	16101801.LD0
Serial Number	3707
Model	SoundExpert™ LxT
Firmware Version	2.301
User	Q.Tat/L.Capriotti
Location	Harvester Street
Job Description	Allston Yards
Note	Daytime
Measurement Description	
Start	2016/10/18 11:32:36
Stop	2016/10/18 11:47:43
Duration	0:15:07.3
Run Time	0:15:07.3
Pause	0:00:00.0
Pre Calibration	2016/10/18 11:32:19
Post Calibration	2016/10/18 11:48:09
Calibration Deviation	-0.01 dB
Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Exponential
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At Lmax
Results	
LASeq	54.8 dB
LAS1.00	60.8 dB
LAS10.00	54.2 dB
LAS33.30	52.4 dB
LAS50.00	51.9 dB
LAS90.00	50.7 dB
LAS99.00	50.1 dB

Summary	
Filename	16101802.LD0
Serial Number	3707
Model	SoundExpert™ LxT
Firmware Version	2.301
User	Q.Tat/L.Capriotti
Location	Hichborn Street
Job Description	Allston Yards
Note	Daytime
Measurement Description	
Start	2016/10/18 11:55:45
Stop	2016/10/18 12:11:14
Duration	0:15:28.9
Run Time	0:15:28.9
Pause	0:00:00.0
Pre Calibration	2016/10/18 11:55:20
Post Calibration	2016/10/18 12:11:52
Calibration Deviation	0.13 dB
Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Exponential
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At Lmax
Results	
LASeq	56.2 dB
LAS1.00	64.2 dB
LAS10.00	58.0 dB
LAS33.30	55.3 dB
LAS50.00	54.4 dB
LAS90.00	52.9 dB
LAS99.00	52.2 dB

Noise Monitoring Data – Nighttime

Summary	
Filename	16101900.LD0
Serial Number	3707
Model	SoundExpert™ LxT
Firmware Version	2.301
User	Q.Tat/L.Capriotti
Location	Everett Street
Job Description	Allston Yards
Note	Nighttime
Measurement Description	
Start	2016/10/19 3:54:37
Stop	2016/10/19 4:10:47
Duration	0:16:09.4
Run Time	0:16:09.4
Pause	0:00:00.0
Pre Calibration	2016/10/19 3:54:07
Post Calibration	2016/10/19 4:11:12
Calibration Deviation	-0.03 dB
Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Exponential
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At Lmax
Results	
LASeq	48.7 dB
LAS1.00	54.2 dB
LAS10.00	51.2 dB
LAS33.30	48.9 dB
LAS50.00	47.8 dB
LAS90.00	45.2 dB
LAS99.00	44.1 dB

Summary	
Filename	16101901.LD0
Serial Number	3707
Model	SoundExpert™ LxT
Firmware Version	2.301
User	Q.Tat/L.Capriotti
Location	Harvester Street
Job Description	Allston Yards
Note	Nighttime
Measurement Description	
Start	2016/10/19 4:17:29
Stop	2016/10/19 4:29:33
Duration	0:12:03.2
Run Time	0:12:03.2
Pause	0:00:00.0
Pre Calibration	2016/10/19 4:16:50
Post Calibration	2016/10/19 4:30:32
Calibration Deviation	-0.03 dB
Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Exponential
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At Lmax
Results	
LASeq	47.5 dB
LAS1.00	50.0 dB
LAS10.00	48.6 dB
LAS33.30	47.8 dB
LAS50.00	47.4 dB
LAS90.00	46.2 dB
LAS99.00	45.4 dB

Summary	
Filename	16101902.LD0
Serial Number	3707
Model	SoundExpert™ LxT
Firmware Version	2.301
User	Q.Tat/L.Capriotti
Location	Hichborn Street
Job Description	Allston Yards
Note	Nighttime
Measurement Description	
Start	2016/10/19 4:38:01
Stop	2016/10/19 4:57:17
Duration	0:19:15.2
Run Time	0:19:15.2
Pause	0:00:00.0
Pre Calibration	2016/10/19 4:37:46
Post Calibration	2016/10/19 4:57:46
Calibration Deviation	0.01 dB
Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Exponential
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At Lmax
Results	
LASeq	49.5 dB
LAS1.00	52.3 dB
LAS10.00	50.9 dB
LAS33.30	49.8 dB
LAS50.00	49.3 dB
LAS90.00	47.8 dB
LAS99.00	46.3 dB