

PROJECT NOTIFICATION FORM

217 Albany Street Boston, MA



SUBMITTED TO

Boston Redevelopment Agency d/b/a/
Boston Planning & Development Agency

PROPONENT

217 Albany II LLC, an affiliate of National
Development

PREPARED BY



IN ASSOCIATION WITH

Elkus Manfredi Architects
Copley Wolff Design Group
Arup
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AHA

April 2018



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April 11, 2018

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

**Re: Project Notification Form
217 Albany Street, Boston, MA**

Dear Director Golden:

217 Albany II LLC, an affiliate of National Development (the "Proponent"), respectfully submits the enclosed Project Notification Form ("PNF") to initiate review under Article 80 of the Boston Zoning Code for the construction of a residential building with amenity space (the "Project") located at 217 Albany Street in the South End neighborhood of Boston (the "Project Site"). On November 17, 2017, a Letter of Intent was submitted indicating the intent to file the PNF.

The Project Site is located in the northeastern edge of the South End neighborhood, at the corner of Albany and Herald Streets and contains an existing two-story structure, as well as surface parking. The Proponent intends to redevelop the approximately 0.83-acre (36,070-square foot) parcel with a new construction of a 14-story, 250-unit co-living residential building and new outdoor open space for use by building residents. In addition to introducing a new, co-living, multi-family residential typology to the neighborhood, the Project will enhance the public realm improvements and will facilitate pedestrian connections to surrounding neighborhoods. As a Transit-Oriented Development (TOD) project, there will be no on-site parking provided as future residents will have access to ample MBTA train/bus services and other transportation alternatives within proximity of the Project Site. Furthermore, sustainability and resiliency measures are incorporated into the design, construction, and operations of the Project, in accordance with Article 37. Additionally, all required affordable housing will be provided on-site.

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 Project. We are very excited for the opportunity to transform an underutilized parcel at this highly visible location and gateway to the South End through unique, site-responsive building massing and high-quality architecture that compliments the adjacent Ink Block mixed-use redevelopment. The Project will extend the urban character and active public realm along Albany Street to the north by completing the block. By placing a taller building Albany Street, the Project is consistent with the Harrison-Albany Corridor Strategic Plan.

The intent of the filing is to present a comprehensive study of potential environmental and community impacts so that the BPDA, after reviewing public and agency comments, as well as any further responses to comments made by the Proponents, may issue a Scoping Determination Waiving Further Review pursuant to the Article 80B process.

The Proponent will publish notice of submission of the PNF, as required by Section 80A-2(3) coincident with the filing of this PNF. Requests for copies of the PNF should be directed to Lauren DeVoe at 617-607-0091 or via e-mail at ldevoe@vhb.com.

We look forward to working with you and your staff in your continuing review of the Project.

Sincerely,



Ted Tye
Managing Partner



Samantha Gajewski
Senior Project Manager

cc: Mr. Jonathan Greeley, BPDA
Ms. Casey Hines, BPDA

217 Albany Street

Boston, Massachusetts

SUBMITTED TO **Boston Redevelopment Authority, d/b/a Boston Planning and Development Agency**

One City Hall Square, 9th Floor
Boston, MA 02201

PROPONENT **217 Albany II LLC, an affiliate of National Development**

2310 Washington Street
Newton Lower Falls, MA 02462

PREPARED BY **VHB**

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April 11, 2018

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1

Project Description

In accordance with Article 80B of the City of Boston Zoning Code and Enabling Act (the "Code"), 217 Albany II LLC, an affiliate of National Development (the "Proponent"), respectfully submits this Project Notification Form ("PNF") to the Boston Redevelopment Authority, d/b/a Boston Planning and Development Agency ("BPDA"), to initiate the Article 80B, Large Project Review process required by the Boston Zoning Code for construction of a 14-story, 250-unit co-living multi-family residential building with amenity space (the "Project") on a parcel of land located at Albany and Herald Streets in the South End neighborhood of Boston, Massachusetts (the "Project Site"). Refer to Figure 1.1 for a site locus map.

This chapter provides an overview of the existing site conditions and describes the Project. This chapter also presents Project-related benefits, a list of anticipated permits and approvals, a description of community outreach efforts and legal information.

1.1 Site Context and Existing Site Conditions

The Project Site consists of approximately 0.83 acres (36,070 square feet) of land¹ located in the northeastern edge of the South End neighborhood bordering Chinatown. The Project Site is bounded by the AC Hotel development to the south, the Ink Block South End mixed-use redevelopment project to the west ("Ink Block"), Herald street to the north and Albany Street to the east. Directly to the east of Albany Street (approximately 30 feet) lies the elevated Southeast Expressway (Interstate-93/Route 3, or I-93), which runs north-south. Surrounding neighborhoods include the Chinatown and Downtown neighborhoods north of the Project Site across I-90, the Fort Point Channel and South Boston neighborhoods east of the Project Site across I-93, and the South End and Back Bay neighborhoods to the southwest and west, respectively. Refer to Figure 1.2 for the site context.

In general, the area surrounding the Project Site has been historically industrial in nature with mostly one- to two-story light manufacturing (storage and warehousing) land uses with surface parking consistent with the 1950's Urban Renewal Plan for this section of the South End. However, more recent redevelopment of surrounding properties, such as the Troy Boston residential project at 275 Albany Street, the Ink Block mixed use redevelopment of the former Boston Herald Building on Harrison Avenue, and the AC Hotel (recently opened in March 2018) on Albany street has resulted in greater density with taller and varying building heights and sizes. Refer to

¹ Subdivision to be filed.

Chapter 2, *Urban Design*, of this PNF for a more detailed description on neighborhood context.

The Project Site is well-served by existing infrastructure, some of which was recently upgraded as part of the recent development adjacent to the Project Site. The Project Site is in close proximity to public transit, including the MBTA Silver Line, the Red Line Broadway Station, and multiple bus routes. Refer to Chapter 4, *Transportation*, of this PNF for further information on the transportation infrastructure surrounding the Project Site.

1.1.1 Existing Site Conditions

Figure 1.3 shows the existing conditions site plan, and Figures 1.4a through 1.4c present photographs of the existing Project Site and its immediate surroundings. The majority of the approximately 36,070-square foot Project Site² currently consists of service area parking and driveway associated with Ink Block residential buildings and the existing Ink Block Whole Foods grocery store, as well as a vacant two-story brick building formerly occupied by the Transit Insurance Agency. As discussed further below, the entire Project Site is located within a designated Economic Development Area zoning sub-district of the South End Neighborhood District (the “South End EDA/North”).

Vehicular access to the Project Site is currently provided via one right-in driveway at Albany Street and one right-out driveway along Albany Street.

1.2 Project Description

The Project consists of construction of a new signature residential building at the corner of Albany and Herald Streets, which will complement the adjacent vibrant, mixed use neighborhood, including Ink Block. It will enhance the surrounding neighborhood through public realm improvements and by providing new residential activity to a portion of the Ink Block site that currently functions as service and loading. This existing service and loading area associated with Whole Foods and Ink Block will also be maintained as part of the Project. Refer to Figure 1.5 for the proposed site plan.

1.2.1 Residential Co-Living Concept Overview

The Project introduces an innovative residential typology unique to the surrounding area: all-inclusive co-living. This concept includes attainably-priced, cleverly-designed apartments with efficient layouts (approximately 500 square feet) that make use of a reduced square footage compared to conventional studio apartments. This is accomplished through a hotel-style residential amenities

² Subdivision to be filed.

program that includes a common kitchen and lounge, co-working and meeting space, as well as fitness facilities, shared rooftop space, and housekeeping services.

The building will contain up to 250 units consisting of primarily of studios known as “micro-units”, but will also include a mix of two-, three-, and four-bedroom units. Each unit has its own private kitchen, bathroom, and living areas. Micro-units are a new residential typology, reflecting the evolving desires of a new generation of residents who desire a sustainable lifestyle with small personal living areas and access to common amenity spaces and the vibrant urban neighborhoods around them. The proposed residential units will be “Move-In Ready” with multifunctional furniture, as well as premium Wi-Fi and television connections. Another unique experience provided by this residential concept includes having live-in community manager to organize regular social events for residents in the building.

1.2.2 Proposed Development Program

The Project entails demolition of an existing two-story structure at 217 Albany Street and replacement with a new approximately 139,900-square foot, 14-story building. The maximum building height of approximately 170 feet is consistent with the Harrison Albany Corridor Strategic Plan for this part of the EDA North, which allows for building heights up to 200 feet for the Project Site. The proposed development program is provided in Table 1-1 below.

Table 1-1 Proposed Development Program

Project Element	Approximate Dimensions	Quantity
Residential	127,600 SF	up to 250 units
Lobby and Amenity Space ¹	12,300 SF	NA
Total Gross Floor Area (GFA)	139,900 SF	up to 250 units
Vehicle Parking	NA	-0-
Building Height	14 stories ±170 feet to top of highest occupiable floor ±183 feet to top of mechanicals ±186 feet to top of mechanical screen	NA

NA Not Applicable

GFA Gross Floor Area, as defined in Article 2A of the Boston Zoning Code

1 Includes lower level residential lobby, and interior amenity space on the second level and rooftop.

2 In accordance with the Boston Zoning Code, heights are measured from “Grade” consisting of the average elevation of the nearest sidewalks at the lines of the streets on which the Project abuts: Albany Street and Herald Street. Table includes zoning heights to the top of the highest occupiable floor and to the top of mechanicals.

The main lobby is located on the ground floor at the south end of the building. The second level is dedicated to residential amenity spaces. This level will take advantage of changes in grade to connect to the exterior with a pedestrian-oriented building entrance on the northeast side of the building at Albany and Herald Streets, thereby,

activating that corner. The residential units will be located above on the 3rd through 14th floor. Refer to Figures 2.3a through 2.3e for floorplan layouts for the Project.

1.2.3 Proposed Public Realm Improvements

The proposed design strategy focuses on creating pedestrian-oriented sidewalks and streets. The public realm will be upgraded to provide several conveniences and amenities throughout the Project Site consistent with the fundamental goals of the Boston Transportation Department's ("BTD") Complete Streets guidelines, where feasible. Refer to Chapter 2, *Urban Design*, for additional details.

1.2.4 Site Access and Loading

The Project will utilize the existing Ink Block driveways to access and egress the Project Site as shown on Figure 2.2. As a residential development, the Project will have minimal loading and service needs.

Vehicular Access

The existing Albany Street driveway for the AC Hotel and Ink Block site will remain in the same location. This southerly driveway is located approximately 120 feet to the north of Traveler Street, and will continue to be restricted to entering right-turn movements only. Minor alterations to the northern driveway are proposed to accommodate the Project. The northerly driveway will remain restricted to allowing exiting right-turns only, but with some accompanying minor physical changes to the driveway design to accommodate the proposed building. Refer to Section 4.6 of Chapter 4, *Transportation*, for further details on vehicular access to the Project.

Service and Loading

As noted earlier, by their nature, residential developments have minimal loading needs compared to retail or office uses. For this Project, it is expected that loading activity primarily will be limited to deliveries by mail and other private package delivery services. These services will be able to access the building via one right in driveway at Albany Street and one right out driveway along Albany Street. These deliveries should be quick in nature and should only require a delivery vehicle (likely a small box truck) to be on the Project Site for a few minutes. As part of the Project design, an approximately 100-foot long paved area will be provided to the south of the Albany Street exit driveway passing under the building. While the main intent of this area is to accommodate taxis or other private ride services picking up or dropping off residents, this area also will be used for these short-term deliveries.

Existing service and loading area associated with Whole Foods and Ink Block will be maintained. The Project also will receive regular trash servicing. The trash transfer area within the Project will be located on the west side of the building to the north of the exit driveway opposite the Whole Foods loading area. Trash pickup likely will occur on a weekly basis, with the trash bins being wheeled out of the building to the

trash truck stopped along the westerly side of the building. This activity only will require the truck to be on the Site briefly.

Move-in and move-out activity for residents also should involve considerably smaller trucks than those found at most residential developments. This is due to the Project apartments being pre-furnished, so that most residents will be able to move their belongings in their own vehicles or a small van or truck.

1.2.5 Parking

Vehicle Parking

No on-site parking will be provided as part of the Project, which should almost eliminate private automobile use associated with the Project. Instead, most residents will utilize nearby MBTA train and bus service, taxis, and private ride services (Uber, Lyft, and others). Car sharing services (Zipcar) are also available in the immediate vicinity of the Project Site. Furthermore, short- and long-term monthly public parking for residents is available at the 175-space “Underground at Ink Block” parking facility across Albany Street under the I-93.

Bicycle Parking and Storage

Secure bicycle storage will be provided within the Project building for residents and any building support staff. Specifically, the Project will include a secure, on-site bicycle storage room facility containing spaces for 125 bicycles. This bike parking room is located in a visible location opposite the main lobby entry and is anticipated to include seating and a bike repair station to accommodate and encourage bicycle use. Outdoor bicycle racks will be provided in several locations around the Project Site to accommodate at least 16 bicycles with the ability to provide more if demand exists. Residents and visitors will have access to existing short-term bike parking at Whole Foods and to short- and long-term bicycle parking at Underground at Ink Block. Public bike sharing services (Hubway) are also available in the immediate vicinity of the Project.

1.2.6 Anticipated Project Schedule

It is anticipated that the Project construction will commence during the second quarter of 2019, with the construction duration of approximately 20 months and completion scheduled by 2021.

1.3 Summary of Project Benefits

This section summarizes the main benefits associated with the Project.

Urban Design

- › Fulfill the planning vision identified in the Harrison-Albany Corridor Strategic Plan.

- › Provide for a variety of building heights to create a skyline for the whole Ink Block development and expand the urban design character of the South End.
- › Promote neighborhood connectivity through improved street and pedestrian environment.
- › Improve the public realm by activating the sidewalks along Herald and Albany Streets, and providing a new entry at the corner of Herald and Albany streets.;
- › Transform a former industrial site into a vibrant, transit and pedestrian-oriented mixed-use neighborhood.
- › Expand the urban design character while also creating an iconic image for the South End.

Social and Economic

- › Enhance the diversity of the neighborhood by introducing a new residential typology.
- › Enhance the "18 hour" vitality of the neighborhood with new residents will be patronize existing local businesses.
- › Enhanced tax revenue.
- › Creation of approximately 300 construction jobs.

Transportation

- › As a Transit Oriented Development (TOD) project, and given its location in the midst of the adjacent Ink Block mixed-use development and other nearby developments, residents will not require their own automobiles. Instead, there is ample MBTA train and bus service within proximity of the Project Site.
- › Both secure bicycle parking and external bicycle racks will be provided as part of the Project.
- › An on-site Transportation Coordinator will be designated to oversee elements of the planned Transportation Demand Management (TDM) program. This person will circulate information on alternate modes of transportation to residents, and will provide transit information to new residents as part of their orientation package.
- › With no on-site parking provided, most residents living at the Project Site will have access to either utilize public transportation, biking, or walking. Accommodations will be provided within and next to the Project Site to allow for pick-up/drop-off activity as needed.

Sustainability/Environmental

Sustainable and high-performance building strategies are at the core of the design for the Project.

- › Incorporate sustainable, green building design, construction, and operational measures to achieve LEEDv4 Silver and to be in compliance with Article 37 of Boston Zoning Code.
- › Target a reduction in annual energy consumption by an estimated 13 percent through the implementation of energy optimizing building design and systems.
- › Continue to evaluate building design and alternative energy options throughout design.
- › Comply with the Massachusetts Stretch Energy Code requirement to be 10 percent better than ASHRAE 90.1-2013.
- › Provide improved stormwater infiltration to reduce stormwater run-off.
- › Incorporate adaptation and resiliency measures to address future impacts associated with climate change.

1.4 Regulatory Context

This section lists the anticipated permits and approvals as well as the local planning and regulatory controls applicable to the Project.

1.4.1 Anticipated Permits and Approvals

Table 1-2 lists the anticipated permits and approvals from state and local governmental agencies, which are presently expected to be required for the Project, based on information currently available. It is possible that not all of these permits or actions will be required, or that additional permits or actions may be needed, depending upon the outcome of the community review process.

Table 1-2 List of Anticipated Permits and Approvals

Agency/Department	Permit/Approval/Action
Federal Government	
Federal Aviation Administration	▪ Notice of Proposed Construction or Alteration (Form 7460)
Commonwealth of Massachusetts	
MA Department of Transportation (MassDOT) Highway Department	▪ Vehicular Access Permit ▪ Construction Management Plan
MassDOT Highway Department, Office of Outdoor Advertising	▪ Billboard license/permit
MassDOT Rail Division	▪ Chapter 40 Section 54A Permit
Massachusetts Historical Commission	▪ Project review in compliance with MGL Chapter 9, sections 26-27C (Chapter 254)
MA Department of Environmental Protection, Division of Air Quality Control	▪ Demolition Notice ▪ Air Quality Permit (under 310 CMR 7.00) for heating boilers and emergency generators (<i>if required</i>)
MA Division of Labor and Workforce Development	▪ Notice of Asbestos Removal
City of Boston	

Agency/Department	Permit/Approval/Action
Boston Planning and Development Agency	<ul style="list-style-type: none"> ▪ Article 80B, Large Project Review ▪ Article 37 Certificate of Compliance ▪ Comprehensive Sign Design Approval ▪ Affordable Rental Housing Agreement ▪ Cooperation Agreement ▪ Boston Residents Construction Employment Plan Agreement
Boston Civic Design Commission	<ul style="list-style-type: none"> ▪ Design Review
Boston Zoning Board of Appeals	<ul style="list-style-type: none"> ▪ Conditional Use Permit for Groundwater Conservation Overlay District (GCOD) compliance ▪ Height Variance
Boston Transportation Department	<ul style="list-style-type: none"> ▪ Transportation Access Plan Agreement ▪ Construction Management Plan
Boston Water and Sewer Commission	<ul style="list-style-type: none"> ▪ Site Plan Review and Approval ▪ General Service Application ▪ Groundwater Conservation Overlay District recharge system approval ▪ Site plan/water & sewer connection approval
Boston Landmarks Commission	<ul style="list-style-type: none"> ▪ Article 85 Demolition Delay for existing structure to be demolished
South End Landmarks Commission	<ul style="list-style-type: none"> ▪ Certificate of Appropriateness Application for Demolition in the South End Landmark District Protection Area
Boston Inspectional Services Department	<ul style="list-style-type: none"> ▪ Demolition Permit ▪ Lot Subdivision Approval ▪ Building Permit ▪ Occupancy Permit

1.4.2 Harrison Albany Corridor Strategic Plan

In April 2009, the BRA, began a planning study of the Harrison-Albany Corridor. The desired outcome of the planning study was the Strategic Plan, to guide future development within the study area so that the corridor maintains its diversity of land uses. Upon completion of its planning review, the Advisory Group (AG) set forth a strategic plan wherein recommendations for new zoning were outlined. The completion and adoption of the Strategic Plan was achieved in November 2011. The new zoning reflected in the Strategic Plan was approved by the Boston Zoning Commission on January 18, 2012. Thereafter, the changes recommended by the Strategic Plan were incorporated into Article 64 of the Boston Zoning Code, the South End Neighborhood District Code.

The Project is located in the Economic Development Area (EDA) North "New York Streets" sub-district of the study area and, therefore, it aims to address the development goals articulated by the Strategic Plan for this sub-area. The vision

statement for this sub-area states that “future development should provide exciting new 18-hour uses within a pedestrian friendly public realm.”

Specifically, the Project will increase the density of residential development at the Project Site and introduce a new co-living, multi-family residential use that will serve as a physical gateway between Downtown, Chinatown, and South End. The Project will activate the ground floor of Albany and Herald Streets, and will create a vibrant, economic and physical presence at this important intersection. This is consistent with other recent nearby development projects. The Project will enhance the pedestrian experience along Albany and Herald Streets through an improved sidewalk and lighting along the site frontage.

The Strategic Plan also recognized the opportunity for place-making in the study area. The Project’s location at the intersection of Herald Street and Albany Street was identified as one such opportunity. Consistent with that goal, the Project will activate the corner with a lobby to the building and a plaza area. This location provides a vital pedestrian link under the I-93 viaduct to South Boston.

1.4.3 City of Boston Zoning Code

The Project is located within the South End Neighborhood District, governed by Article 64 of the Boston Zoning Code. The Project Site is further located within an Economic Development Area zoning sub-district of the South End Neighborhood District (“EDA North”), pursuant to Article 64-14(1) of the Code.

There are two overlay districts applicable to this sub-district: (1) Restricted Parking Overlay District (RPOD), established by Section 3-1A[c] of the Code; and (2) the Groundwater Conservation Overlay District (GCOD), established by Article 32 of the Code.

Uses

The Project consists of approximately 127,600 square feet of multi-family residential use (a total of 250 co-living units) and related service amenities for the residents of the building. Pursuant to Article 64, Table C of the Code, multi-family residential use along with accessory services for residents is an “allowed” use in the EDA North Sub-district.

Dimensional Requirements

The Project includes the construction of a multi-family residential building with 14 stories above grade measuring approximately 178 feet in height. The proposed total square footage, in accordance with the Code, is approximately 139,900 square feet, and the Project’s floor area ratio (FAR) will be approximately 3.88. A breakdown of the dimensional zoning requirements applicable to the Project Site is included in Table 1-3 below.

Table 1-3 Zoning Code Dimensional Regulations vs. Proposed Project Dimensions

Dimensional Requirements	EDA/North	Project
Max. Floor Area Ratio [FAR]	4.0	3.88
Max. Building Height (Feet)	100	170'
Rear Yard Minimum Depth (Feet) [Footnote 11 of Table G provides with respect to Rear Yard: "except that any rear yard for any Proposed Project that is subject to or has elected to comply with the provisions of Large Project Review shall be determined through such review."]	20	80'
Usable Open Space per dwelling unit	50 SF	50.08 SF
Parking Requirement	Footnote 1 of Table H provides that the off-street parking requirements of Article 64 do not apply to projects subject to Large Project Review.	

There are no dimensional requirements applicable to the Project Site with respect to: minimum Lot size, minimum Lot width, minimum Front Yard, minimum Side Yard, or minimum Lot Frontage.

Zoning Relief Required

The Project will need the following relief from the Boston Board of Appeal:

- › Variance for Excessive Building Height; and
- › Conditional Use Permit for Groundwater Recharge System.

1.4.4 Article 80B - Large Project Review

Because the Project exceeds 50,000 square feet of gross floor area and is located in a downtown zoning district, it is subject to Large Project Review by the BPDA pursuant to Article 80B of the Boston Zoning Code. The Large Project Review process was commenced by the filing of a Letter of Intent with the BPDA on November 17, 2017, a copy of which is included in Appendix A.

This PNF aims to meet the City of Boston Article 80B, Large Project Review by presenting details about the Project and providing detailed impact analysis of transportation, environmental protection, infrastructure, and other components of the Project in order to inform city agencies and neighborhood residents about the

Project, its potential impacts and mitigation proposed to address potential impacts. Based on a comprehensive approach to address potential impacts similar to the level of information normally presented in a Draft Project Impact Report, the Proponent requests that the BPDA, after reviewing public and agency comments on this EPNF and any further responses to comments made by the Proponent, issue a Scoping Determination Waiving Further Review pursuant to the Article 80B process.

1.4.5 Groundwater Conservation Overlay District (GCOD)

Under Article 32 of the Code, a conditional use permit is required for projects within the GCOD involving paving or other surfacing of lot area, extension of a structure occupying more than 50 square feet of lot area, and construction of a structure involving excavation below-grade to a depth of seven (7) or more feet below Boston City Base. As described in Chapter 6, *Infrastructure*, the Project Site will be increasing impervious surface area, and any impervious areas not accounted for in the stormwater systems constructed under the previous phases of the Ink Block project will most likely be addressed with additional infiltration system to be compliant with the requirements of GCOD and the Boston Water and Sewer Commission (BWSC).

1.4.6 Inclusionary Development Policy

The Inclusionary Development Policy ("IDP"), approved by the BPDA in December 2015, established as city policy that any residential project of 10 or more dwelling units seeking zoning relief must set aside at least 13 percent of its market rate units as affordable to households at specified levels of income within a project. The Proponent proposes the inclusion of all of the required affordable units on-site.

1.4.7 Boston Landmarks Commission and South End Landmarks District Commission

The Project Site is located within the Protection Area of the South End Landmark District and, therefore, the South End Landmark Commission is required to review the significance of the on-site buildings in light of their proposed demolition. When a project occurs within the Protection Area, only certain types of work or project elements are subject to review, including demolition, land coverage, height of structures, landscaping, and topography. The goals of the Protection Area are to protect views of the adjacent Landmark District, to ensure that new development within the Protection Area and adjacent to the Landmark District is architecturally compatible in massing, setback, and height, and protects light and air circulation within the Landmark District. As discussed in Chapter 6, *Historic Resources* of this PNF the demolition of the existing on-site buildings will not have an adverse impact as they are not considered to be significant historic resources. And, the Project would not impact the South End Landmark District as it meets the goals of the South End Landmark District Protection Area due to its compatible height, massing, and setback, and complementary design to recent development around it.

1.4.8 Massachusetts Environmental Policy Act

The Project is not subject to environmental review by the Secretary of the Executive Office of Energy and Environmental Affairs. While the Project requires an Access Permit from the MassDOT it does not meet or exceed any of the MEPA review thresholds set forth in 301 CMR 11.03.

1.5 Agency Coordination/Community Outreach

As part of the Article 80 review process, the Proponent is committed to maintaining an open dialogue with all interested parties. The public will have the opportunity to review this PNF, which has been distributed to various city departments and agencies by the BPDA and is available upon request. The Proponent has reached out to (either has met with or intends to meet with) a broad range of elected officials, government agencies, and neighborhood association groups to solicit feedback and input on the Project. Previously, the Proponent was actively involved in the AG and intends to incorporate as many of the goals, visions and ideas of the Strategic Plan into the Project, where feasible.

An Impact Advisory Group (IAG) has been developed for the Project. IAGs do not replace the role of the greater community in the development review process. The IAG is an overlay to the existing process that allows for greater understanding by the BPDA of local concerns, and greater public insight into the thinking of the BPDA and other public agencies involved in the development review process.

Prior to filing this PNF or holding any required IAG meetings, the Proponent engaged in outreach efforts with neighborhood groups, and elected officials and/or their staff. The following is a list of those contacted:

- › Mayor's Office of Neighborhood Services
- › Old Dover/New York Streets Neighborhood Association
- › Pine Street Inn;
- › State Senator Sonia Chang-Diaz;
- › State Representative Aaron M. Michelwitz;
- › Ed Flynn, City Council District 2; and
- › The following Boston City Council at large councilors:
 - Annissa Essaibi George
 - Ayanna Presley
 - Michelle Wu
 - Michael Flaherty

The Proponent has also begun coordinating directly with city departments and state agencies. The following pre-filing meetings were held on the Project:

- › Various BPDA staff; and

› MassDOT.

1.6 Development Team

Table 1-4 identifies the members of the design and consulting team (the “Project Team”) and provides their primary contact information.

Table 1-4 Development Team

Proponent	217 Albany II LLC 2310 Washington Street Newton Lower Falls, MA 02462 617-527-9800 <i>Contacts: Ted Tye Samantha Gajewski</i>
Legal Counsel	Marc LaCasse LaCasse Law, LLC 75 Arlington Street, Suite 500 Boston, MA 02116 Tel: 617-605-2767 <i>Contact: Marc LaCasse</i>
Architect	Elkus/Manfredi Architects 25 Drydock Avenue, 7 th Floor Boston, MA 02210 617-426-1300 <i>Contacts: John Martin Tim Talun</i>
Landscape Architecture	Copley Wolf Design Group 10 Post Office Square, Suite 1315 Boston, MA 02109 617-654-9000 <i>Contact: John Copley</i>
Permitting, Site/Civil Engineering, Transportation, and Historic Resources	VHB 99 High Street, 10 th Floor Boston, MA 02110 617-728-0091 <i>Contact: Lauren DeVoe (Permitting) Lisa Chow (Site Civil) Patrick Dunford (Traffic/Transportation) Nicole Benjamin-Ma (Historic Resources)</i>
Sustainability and MEP Engineer	AHA 700 Technology Square, Suite 402 Cambridge, MA 02139 781-372-3000 <i>Contact: Bob Andrews Allison Gaiko</i>
Geotechnical and Hazardous Materials	GZA 31 State Street, 8th Floor Boston, MA 02109 <i>Contact: Mary Hall</i>
Structural Engineer	McNamara/Salvia Inc. 101 Federal Street – 11 th Floor

	Boston, MA 02110
	Contact: John Matuszewski

1.7 Legal Information

1.7.1 Legal Judgments or Actions Pending Concerning the Proposed Project

The Proponent is not aware of any legal judgments or pending legal actions concerning the Project or the Project Site.

1.7.2 History of Tax Arrears on Property Owned in Boston by the Proponent

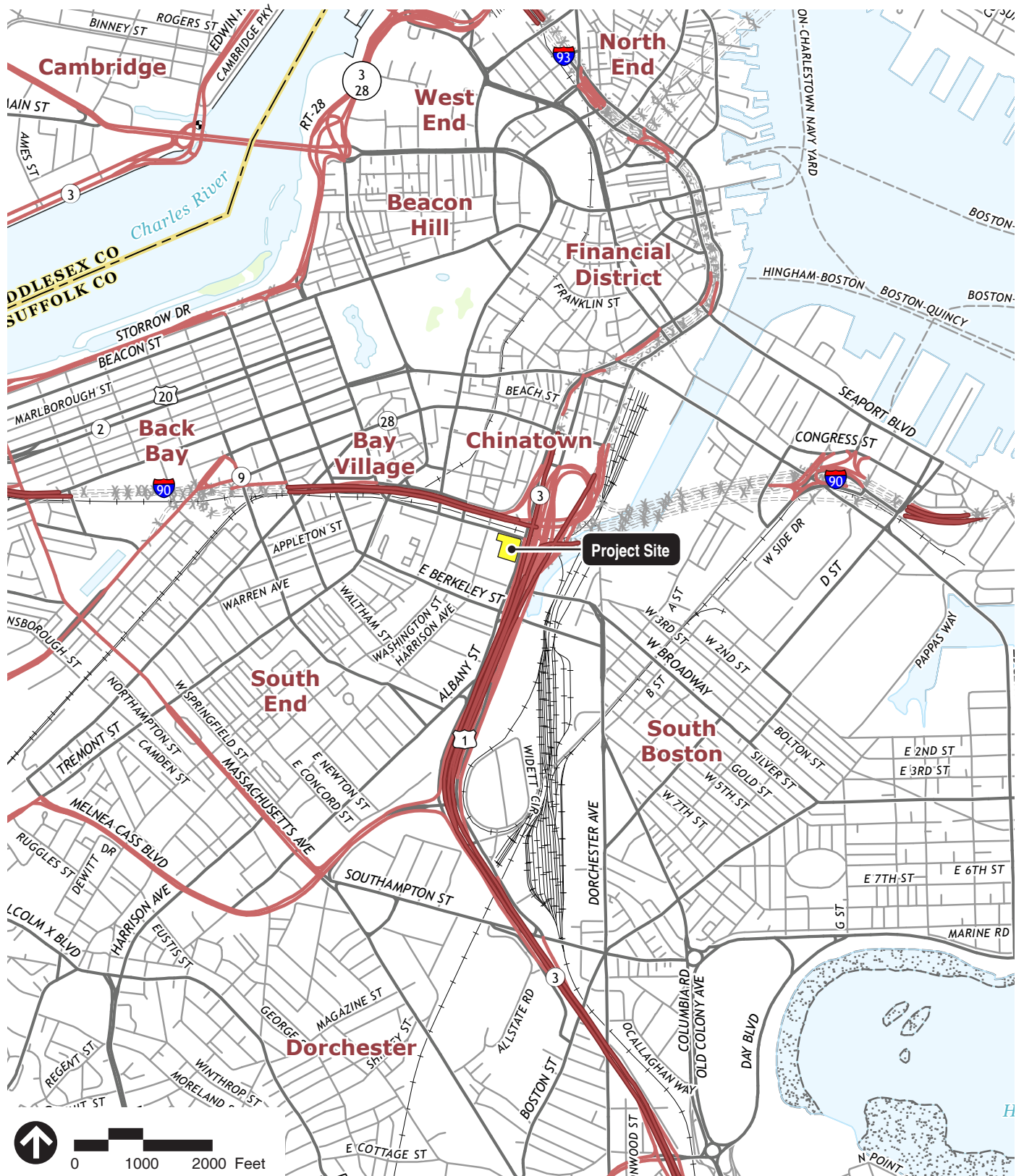
The Proponent does not own any property which is in arrears on the payment of taxes due and owing to the City of Boston and no taxes on the Project Site are in arrears.

1.7.3 Evidence of Site Control

The Proponent acquired title to the property on February 12, 2016 by Deed recorded in the Registered Section of the Suffolk County Registry of Deeds evidenced by Certificate of Title No.132618. Additionally, the parcel evidenced by this Certificate of Title will be combined with a portion of the parcel at 300 Harrison Avenue to create a new 36,070 square foot parcel. This subdivision plan creating the new lot is being submitted to ISD for approval contemporaneously with the filing of this PNF.

1.7.4 Public Easements

Review parcel 71-5-C for MassDOT strip taken on behalf of the City.



Source: USGS 2016 Quad



Figure 1.1
Locus Map

**217 Albany Street
Boston, Massachusetts**



Source: MassGIS, City of Boston



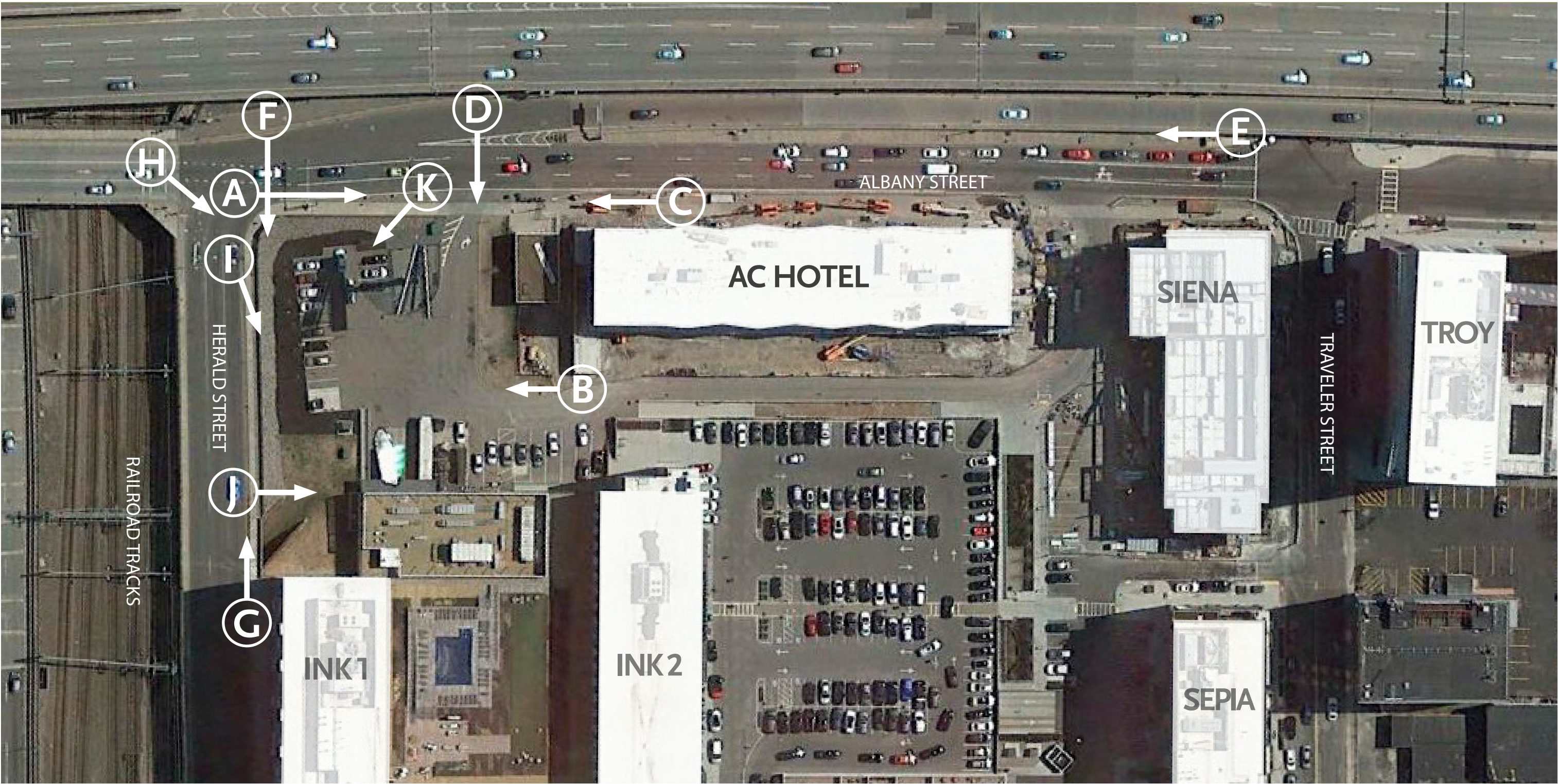
Figure 1.2
Project Site Context

**217 Albany Street
Boston, Massachusetts**



Figure 1.3
Existing Conditions

**217 Albany Street
Boston, Massachusetts**



Source: Google Maps



View Direction Indicator

ELKUS | MANFREDI
ARCHITECTS

ND NATIONAL
DEVELOPMENT

Figure 1.4a
Existing Site Photographs Key Map

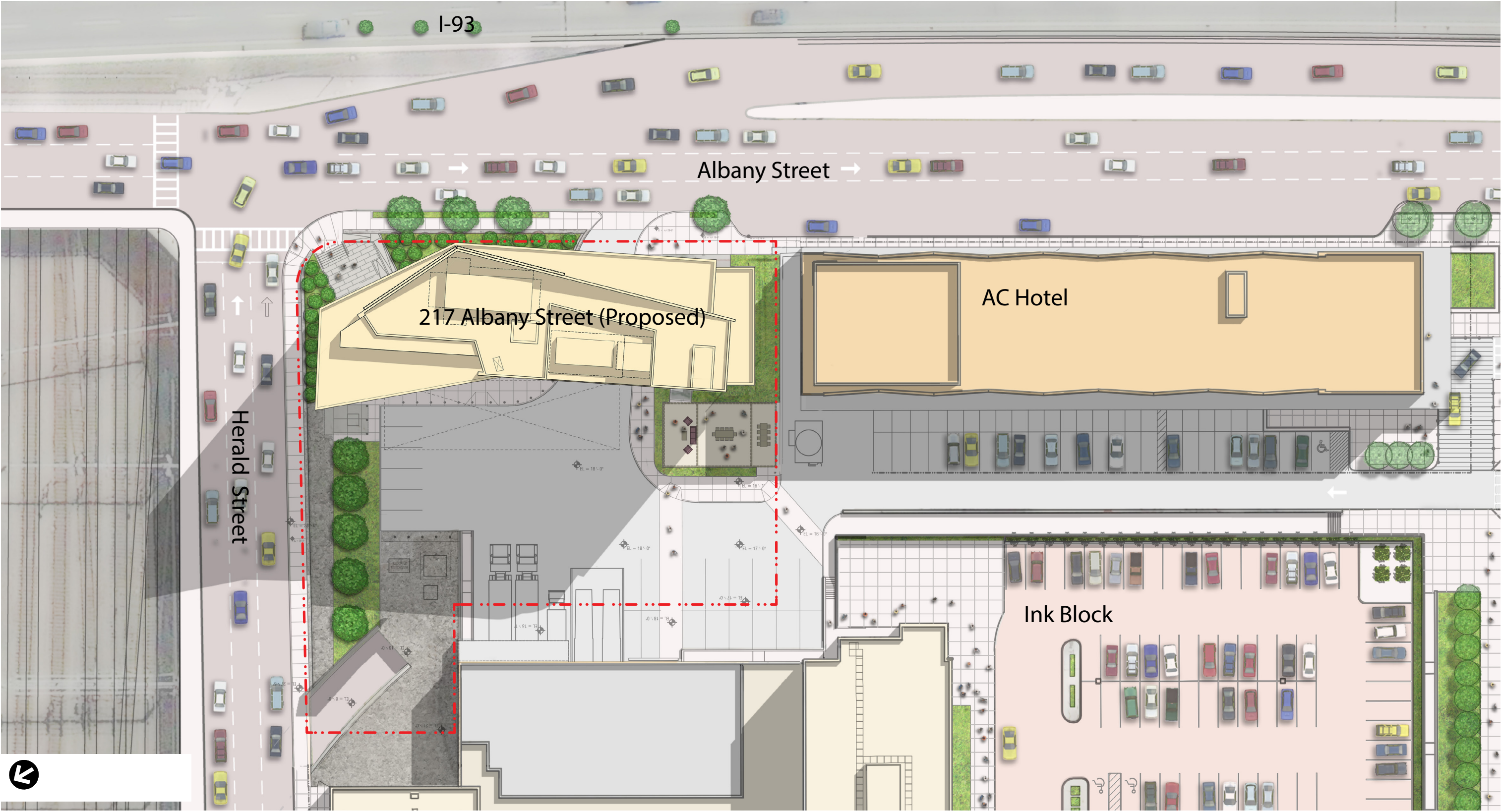
217 Albany Street
South End - Boston, Massachusetts



*Letters correspond to view location and direction on Figure 1.4a



*Letters correspond to view location and direction on Figure 1.4a



- PROJECT BOUNDARY
- CURRENT INK BLOCK BUILDINGS
- PROPOSED 217 ALBANY STREET BUILDING

2

Urban Design

The Project will introduce a new and innovative residential typology and building design that is responsive to its surroundings and enhances the public realm. The following chapter describes the proposed building design and public realm improvements.

2.1 Summary of Key Findings and Benefits

Key findings and benefits include:

- › Fulfills the planning vision and completes the build-out of the remaining strategic corner of the Project Site identified in the Harrison Albany Corridor Strategic Plan;
- › Promotes connections to surrounding neighborhoods and the new Underground at Ink Block open space by facilitating an inner block pedestrian connection from Harrison Avenue to Albany Street;
- › Enhances the public realm by activating the sidewalks along Herald and Albany Streets and providing a new entry at the corner of Herald and Albany streets;
- › Enhances the diversity of the neighborhood through the introduction of a new residential typology;
- › Adds to the “18 hour” vitality of the Project Site and vicinity with new residents who will patronize existing local businesses and public spaces;
- › Compliments the adjacent Ink Block redevelopment and expands the urban design character of the South End by creating a taller building spine on Albany Street where it is most appropriate and called for by the Harrison Albany Corridor Plan; and
- › Creates an iconic image for this highly visible location and gateway to the South End through unique, site-responsive building massing and high-quality architecture that builds on the eclectic, evolving neighborhood vernacular.

2.2 Neighborhood Context

The Project Site is located at the corner of Albany and Herald Streets adjacent to the Ink Block redevelopment—a master planned redevelopment of the former Boston Herald site that is a key part of the transformation of this corner of the South End known as the ‘New York Streets’ into a vibrant new neighborhood over the past five years. The Project Site is also bordered by two roadways: Herald Street to the north; and Albany Street to the east. To the south lies the recently opened AC Hotel. Refer to Figure 1.2 for the site context.

The Project Site is close to two major highways, with I-90 (Massachusetts Turnpike) depressed beyond Herald Street to the north and I-93 (Southeast Expressway) elevated beyond Albany Street to the east.

The Chinatown and Downtown Crossing neighborhoods are located to the north of the Project Site across I-90, the Fort Point Channel and South Boston neighborhoods are located to the east across I-93, and the South End and Back Bay neighborhoods are located immediately southwest and west, respectively (Figure 1.2). As described further in Chapter 4, *Transportation*, the Project is well served (located within approximately a 5-minute walk) by multiple MBTA bus lines and four MBTA subway/bus stations (two Silver Line Stations, an Orange Line station and a Red Line Station). Additionally, Hubway stations are located on the Harrison Avenue side of the Ink Block site and on Albany Street to the south of the Project Site adjacent to The Troy. Refer to Figure 4.13 for the existing public transportation around the Project Site.

Many of the buildings surrounding the Project Site have been re-built in recent years. They were previously utilized for light manufacturing and warehousing uses. Ink Block contains six other buildings, as shown on Figures 2.1a-b. To the west of the Project Site are Ink Block Buildings 1 and 2, which are mixed-use with residential above retail and amenity spaces on the ground floor. The Whole Foods Market occupies the majority of the ground floor of these buildings and is a major destination for the area. Ink Block Buildings 3, 4 (Sepia), and 5 (Siena) are located around the perimeter of the block to the south and southwest (Figures 2.1a-b); Ink Block Buildings 3 and 4 are also mixed-use with residential above retail on the ground floor. Together they contain a diverse array of retail offerings including restaurants, cafés and fitness uses. A parking lot with one below grade level is located in the middle of the Ink Block site. Oriented along Albany Street and immediately adjacent to the south of the Project Site is the AC Hotel, which recently opened in March 2018.

Several of the surrounding blocks are also in the process of redevelopment. These include:

- › To the west of the Project Site, at 321 Harrison Avenue, a 9-story, 218,000 SF office building has been proposed and approved by the BPDA;
- › Also to the west of the Project Site, at 345 Harrison Avenue, a 14-story, 563,000 SF mixed-use building with approximately 560 residential units and 30,000 SF of retail on the ground level is currently under construction;
- › Farther to the southwest of the Project Site, at 370-380 Harrison Avenue, a 14-story, 356,500 SF mixed use building with approximately 273 residential units and 8,500 SF of ground level retail space is currently under construction;
- › Farther to the southwest, at 80 East Berkeley Street, a 11-story, 308,000 SF office building with ground level retail is proposed; and
- › To the south of the Project Site, at the corner of Albany Street and Traveler Street, the Troy Boston Apartments (275 Albany Street) is a 19-story residential building totaling 330,000 SF with 380 apartments and ground level retail uses.

There are several public parks located within approximately ¼-mile of the Project Site, including Rotch Playground (soccer field) and Peter's Park in the South End. Immediately to the east is the new innovative public open space known as Underground at Ink Block. The project transformed an 8-acre area underneath the I-93 overpass into an active urban park, cultural attraction and parking amenity. The space includes a landscaped pedestrian boardwalk and bicycle path along the Fort Point Channel that creates new connections between communities previously separated by highway infrastructure. This is expected to be actively programmed and become a place that brings together surrounding neighborhoods together.

2.3 Planning Principles and Design Goals

The Project fulfills the planning vision for the Project Site and this corner of the New York Streets sub-area of the South End identified in the Harrison-Albany Corridor Strategic Plan (June 2012). It represents the full build-out of the block that consists of the Ink Block master plan redevelopment and AC Hotel, thus, completing the urban design vision for the block and supporting the evolution of the surrounding area. Refer to Figure 2.2 for site access and circulation.

The key planning principle for the Project is consistent with what was described in the original approved PNF for Ink Block dated January 2012: "To transform what is currently an industrial site into a vibrant urban community that will extend and reinforce the existing mixed-use residential character of the northeast quadrant of the South End and bring 18-hour activity to the area."

Refer to Figures 2.3a through 2.3d for the proposed building floorplans.

2.3.1 Height and Massing

Located at the highly visible juncture of I-90 and I-93, the Project will be the tallest building within the block creating an identifiable and iconic visual marker at this gateway into the South End. The proposed building is 170 feet tall and fulfills the vision of the Harrison Albany Corridor Strategic Plan which recommends that the tallest buildings in the corridor be located in this area, calling for buildings up to 200 feet within 165 feet of Albany Street. These heights were established for Planned Development Areas (PDA). Although this Proposed Project is not a PDA, it seeks to conform to the planning goals for increased height along I-93 as a buffer. Figures 2.4a-b and Figures 2.5a-d present the building sections and building elevations, respectively.

The massing of the proposed building has been shaped to respond to its unique context (i.e., adjacent to the Ink Block site and highway system to the north and east), creating a prismatic sculptural volume that will add visual interest to this prominent location and enhance the pedestrian realm. Consistent with early BPDA discussions, the Project's 170-foot height "bookended" with The Troy's 199-foot height to the south.

The primary street walls of the Project are oriented toward Albany Street and the adjacent highways, and the massing responds to this with a gesture appropriate to the scale of the highway. The east elevation is divided at an inflection point into two sides, which are not parallel to the street, but instead angle into the Project Site from that point. The building volume also tapers to be its narrowest at the building elevation facing Herald Street and the Turnpike to the north. Both of these gestures accentuate the verticality of the massing, as appropriate for the tallest building on the block.

Each phase of the Ink Block master plan and the AC Hotel development has fulfilled the goal of providing a pedestrian-friendly public realm in a way that is appropriate to its individual street frontages, and the Project continues this goal in its own way. Due to its proximity to busy streets and the on-ramp to I-93 at Albany Street, the Project Site's corner on Albany Street and Herald Street is challenging for pedestrians. The proposed building mass responds to this by pulling away from the corner to create visual relief for pedestrians moving around it, which is enhanced by the use of transparent materials at the ground level (discussed more in the following section). Pulling the building mass away from the corner also creates a more comfortable space for a secondary pedestrian-oriented building entrance.

The primary building lobby and entrance is located in the southern portion of the building, connecting to a drive which passes under and through the building. The lobby is expressed as a lower scale volume that steps out from the mass of the rest of the building, marking this as an entry with a more pedestrian scale element.

The massing of the mechanical penthouse and screen wall reinforces the massing of the building and enhances the visibility of the billboards which will be attached to the side of the screen wall. These billboards are existing on-site, and may be removed during construction and relocated to the new building or relocated on the ground. Signage is discussed further in Section 2.3.3.

2.3.2 Character and Exterior Materials

Ink Block is intended to be a collection of interesting South End architecture, and the Project will add to the diversity of the collection. The Project involves the construction of an architecturally striking building which is responsive to its context and will add to the visual vibrancy of Ink Block, the AC Hotel, and surrounding neighborhood. It will complement the eclectic South End architectural heritage and neighborhood by creating a contemporary building designed to be contextually responsive but also creating unique identity for this important gateway location. Figures 2.6a and 2.6b provide depictions of the building exterior.

Adjacent buildings, including Ink Block and the AC Hotel are designed to be unique with its own exterior materials to differentiate the buildings from each other. Window types and sizes also vary in design, size and character. Both of these strategies will be continued with this Project.

Material selection for the building complements the massing strategy by independently articulating the amenity and lobby spaces at the base from the

residential facades above. The sides of the base facing Albany and Herald Street are primarily made up of vision glass with translucent glazing in some locations, allowing the activity of these spaces to be visible from the streets around them. The face of the building at the lower floors in these locations is set in from the building above, allowing the perimeter building columns to be expressed on the exterior. Lateral bracing is incorporated into these perimeter columns on these lower floors, allowing for an open floor plan on the interior and resulting in an expressive pattern of diagonal columns on the exterior. This expression recalls the industrial history of the area and animates the public realm for the pedestrian and is also legible at the scale of the adjacent streets and highway, creating a unique identity for the building. This expression gives the appearance that the volume of residential floors above has been picked up and suspended above the ground at this corner to reveal the activity inside.

A two-level expanse of translucent and vision glass is used at the south building entry volume to signify this as the main entry. This expresses the double-height space inside and creates a lower, pedestrian-scaled element that recalls the existing on-site two-story building and sets the lobby apart from the rest of the building.

The materials at residential floors incorporate an elegant pattern of fiber-cement panels that reinforces the massing and accentuates the verticality of the building. A darker panel is used in the vertical space between windows and is intended to appear more visually similar to the glazing than the panels in between the windows horizontally in order to accentuate the vertical banding on the exterior. Windows are expressed as individual units, reflecting individual residential units that make up much of the building program.

The south and a portion of the west end of the building are composed of precast concrete, breaking down the mass of the building by creating the appearance of distinct building volumes. The precast concrete being used on upper floors comes to the ground on the south and west sides, anchoring the building to the ground and providing for more solid walls facing the adjacent hotel and service area.

Precast concrete extends up to become the wall of the mechanical penthouse on the south and west elevation while on other building faces the penthouse wall is set back from the building edge. This difference further distinguishes the appearance of distinct building masses.

On the east side a screen wall extends above the roof, which serves multiple functions. It screens from view an energy recovery unit, which will be located west of the wall on the roof over the amenity space and mechanical penthouse. One of the options for the relocation of the existing on-site billboard is to locate the billboard faces on the two faces of the screen wall, which are angled in a way that is complimentary to the building massing below while also maximizing visibility of the billboards from the adjacent highway. The screen wall will extend above the billboards, reaching its highest elevation at the inflection point between the two portions of the east elevation. This allows the building architecture to define the skyline of the building instead of the billboards, which will appear as elements that

are integrated into the building. The final billboard placement within the Project Site is still being negotiated and is to be determined. The other option being considered for the billboard relocation is to relocate the billboards on the ground, within the Site boundaries.

2.3.3 Signage

The Project will include the relocation of an existing on-site double-sided billboard. One of the relocation options is to relocate the billboard faces to the roof level of the proposed building, as shown on Figure 2.7. As currently proposed, the billboard faces will be attached to penthouse screen wall and integrated into the overall building massing and design. They will be oriented towards I-93 on the east, and the visual impact on adjacent buildings is reduced through their relocation as they will no longer be directly visible from the residential buildings north of the MassPike. There are no buildings nearby to the east.

Final billboard placement within the Project Site is still being negotiated and is to be determined. Project signage will be discussed further during design review discussions as part of the Article 80 Large Project Review process as part of the Comprehensive Sign Design approval.

2.4 Public Realm Improvements

This Project will complete the improvement to the public realm by transforming the Project Site into a vibrant transit and pedestrian-oriented mixed-use development. Specific public realm improvements include streetscape improvements and landscaping, provision of active uses at the ground level along Albany and Herald Street and the facilitation of a new inter-block connection between Harrison Street and Albany Street, as shown on Figure 1.5.

An existing retaining wall topped by a fence is located between the proposed building and sidewalk. This is subject to a MassDOT easement, which prohibits modifications to the wall along Herald Street (Figure 1.4b, exhibit C). Because of this wall it is not possible to increase the width of the sidewalk to the interior of the Project Site, but the Project includes providing street trees along Albany Street and landscaping on the interior side of the wall on both Albany and Herald Street to enhance the public realm. Additionally, a secondary building entrance located near the intersection of Albany and Herald streets will bring activity to this location and effectively provide for a wider sidewalk at the south side of the crosswalk at Albany Street.

2.5 Proposed Landscaping and Open Space

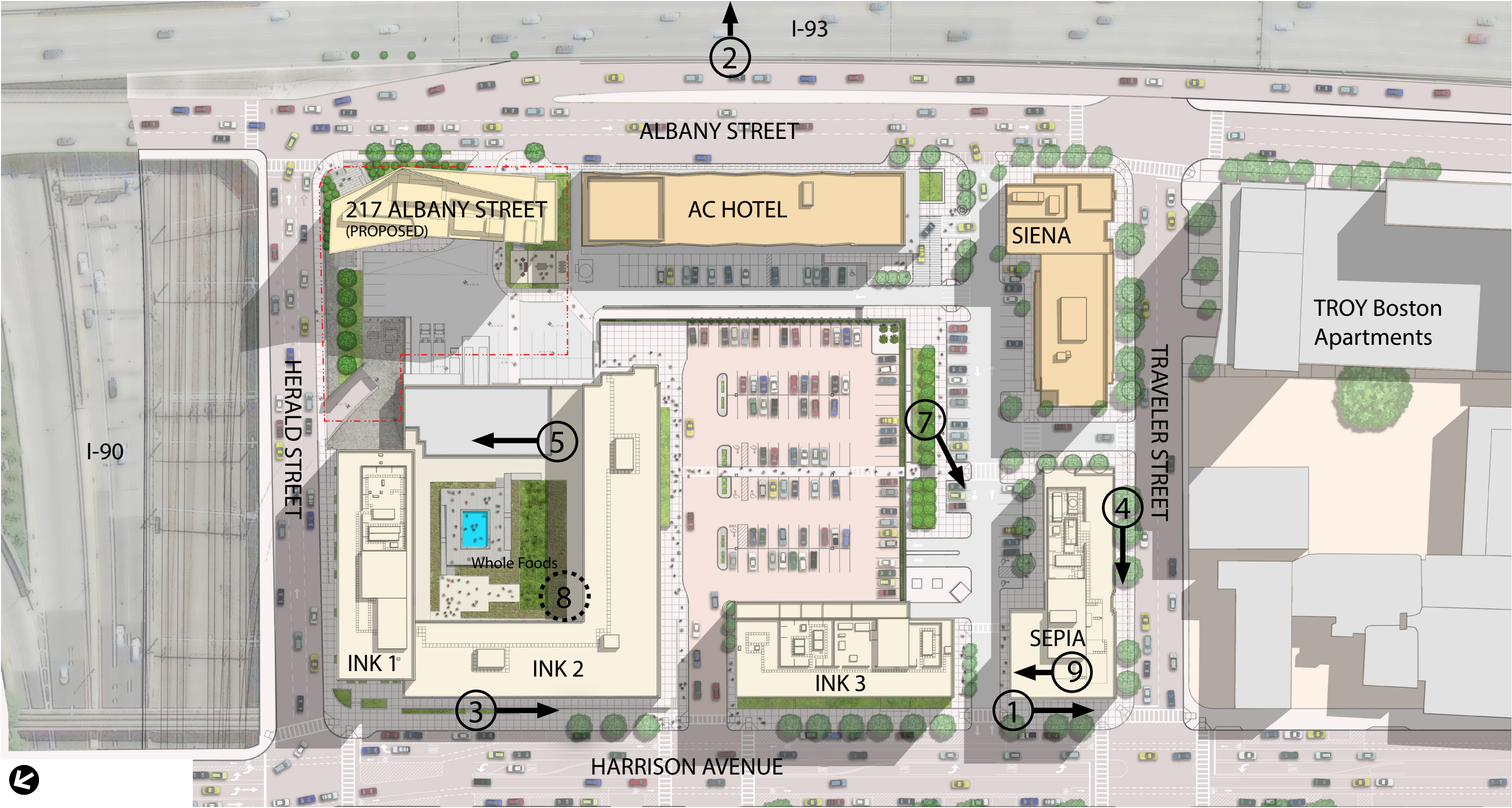
The proposed site landscaping, as shown in Figure 2.8, will consist of raised plantings, walkway landscape beds and new street trees. Raised planted beds are located in between the Building and the existing retaining wall along Albany and Herald Streets. These will contain a variety of plant types and planting heights that

will enhance the pedestrian experience along these streets while also allowing the ground level of the building to be visually accessible from the street. These plantings and street trees will also mitigate wind impacts from the building on the pedestrian realm (refer to Section 5.2 of Chapter 5, *Environmental Protection*, for a discussion of the wind study).

Additionally, a new private outdoor open space will be created interior to the Project Site at the southwestern corner of the building. Landscaping and hardscape will enhance the pedestrian path around this location, which will complete the connection from Harrison Street past Whole Foods through to Albany Street.

As discussed further in Chapter 3, *Sustainability/Green Building and Climate Change Resiliency*, the Proponent is committed to reducing or eliminating landscape irrigation needs through the use of native plantings for groundcover and other drought-tolerant landscaping material.

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- PROPERTY BOUNDARY
 - CURRENT INK BLOCK BUILDINGS
 - UNDER CONSTRUCTION
 - PROPOSED 217 ALBANY STREET BUILDING
- *Refer to Figure 2.1b for views indicated on this plan



SOUTH ELEVATION OF SEPIA BUILDING LOOKING SOUTH



VIEW INTO THE UNDERGROUND AT INKBLOCK, LOOKING EAST



VIEW OF INK2 ALONG WHOLEFOODS



VIEW ALONG SEPIA



SHARED TERRACE AT INKS1 & 2 LOOKING NORTH



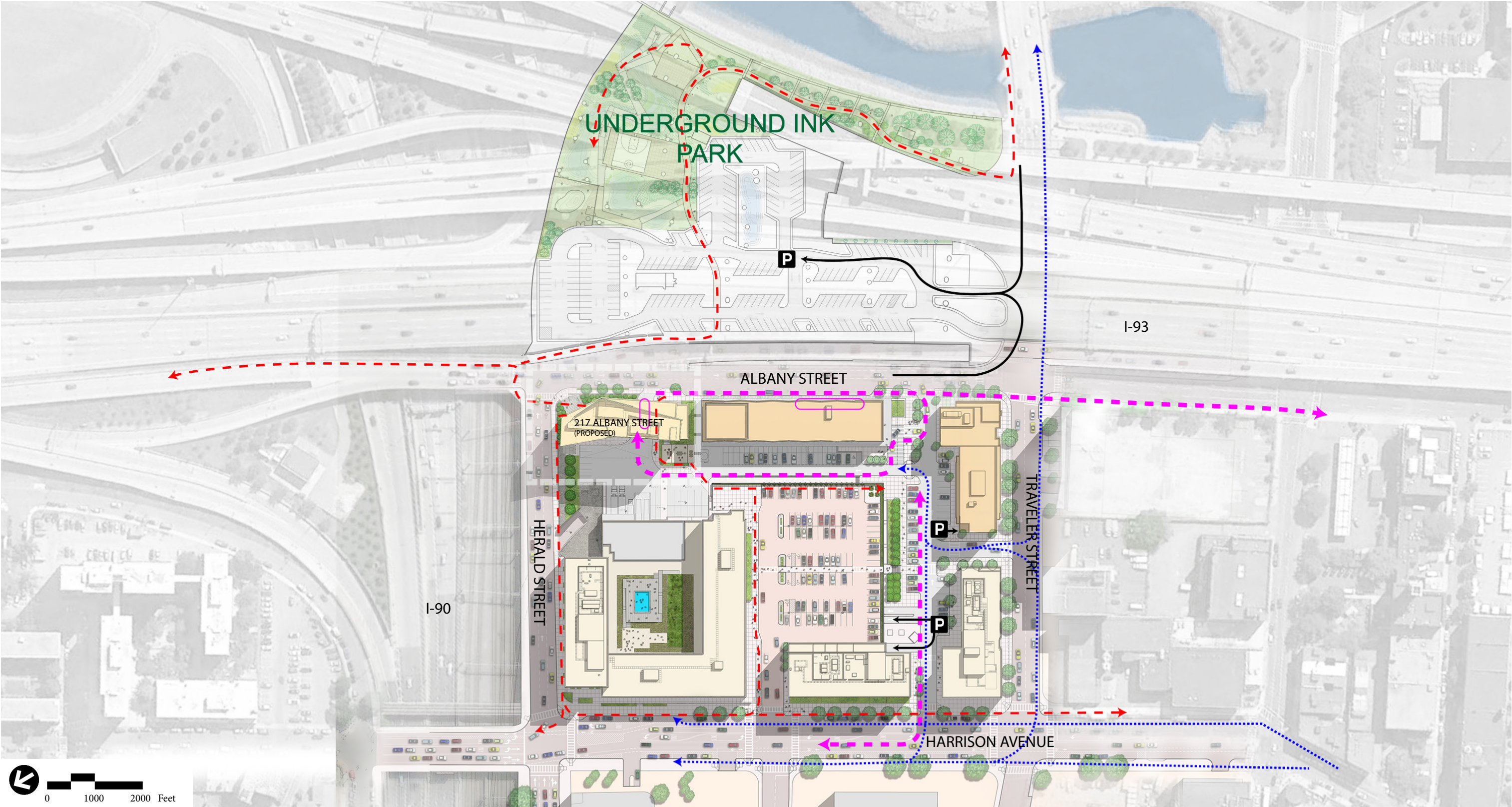
ROOF TERRACE AT SEPIA LOOKING NORTH



VIEW OF SEPIA LOOING WEST FROM PARKING AREA



URBAN INTERIOR AT WHOLEFOODS



Source Info

- Vehicular Access
- Pedestrian Access
- ... Bicycle Access
- P** Parking

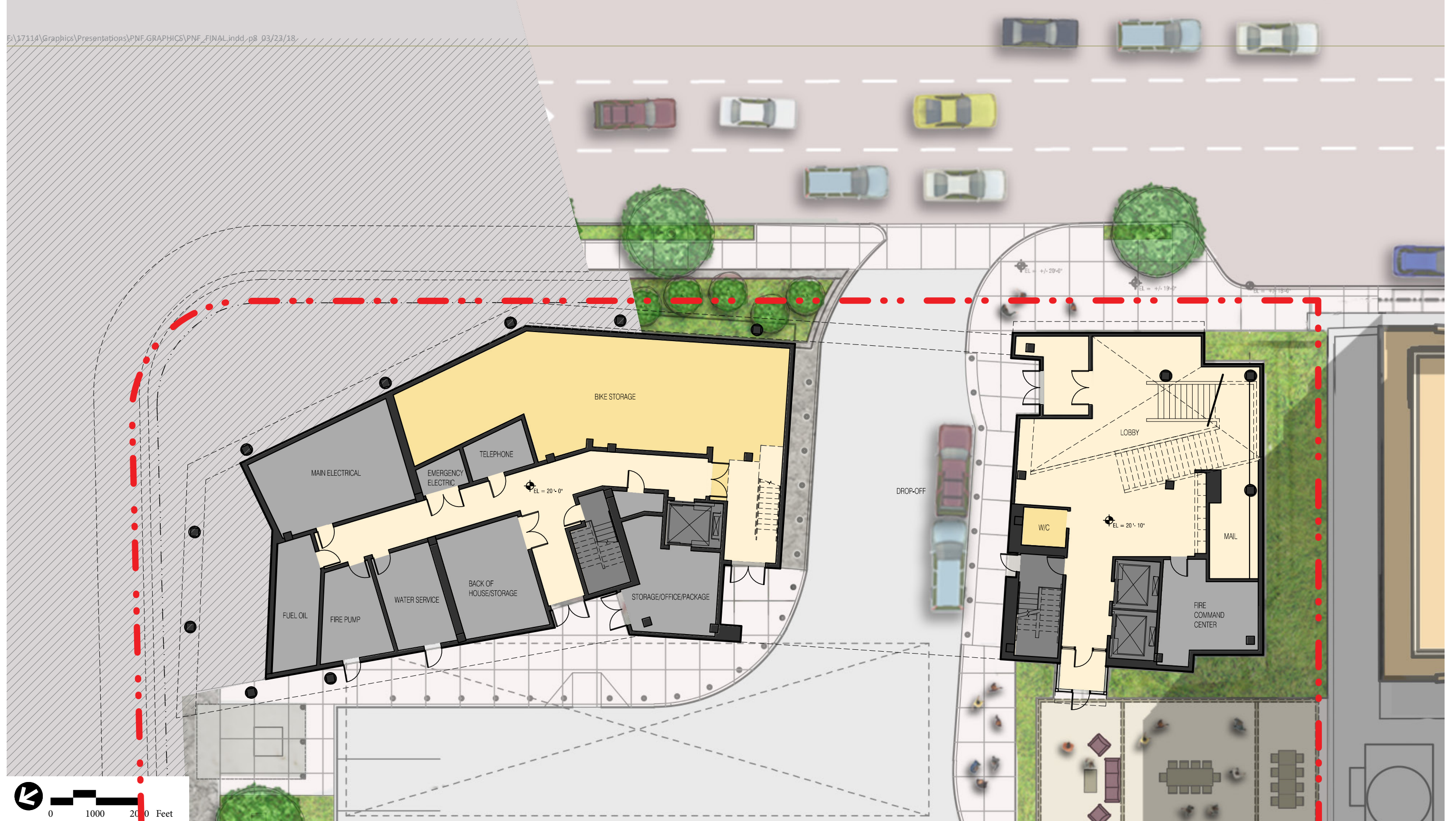
- Current Ink Block Buildings
- Under Construction
- Proposed 217 Albany Street Building

*Portions of map across from Albany street are representative of what is under the elevated I-93 highway structure



Figure 2.2
Access and Circulation Diagram

217 Albany Street
South End - Boston, Massachusetts



Source Info

- ● ● ● ● PROPERTY BOUNDARY
- AMENITY
- GENERAL CIRCULATION | OPEN PROGRAM
- MECHANICAL/ BACK OF HOUSE
- VERTICAL CIRCULATION

ELKUS | MANFREDI
ARCHITECTS

ND NATIONAL
DEVELOPMENT

Figure 2.3a

Floor Plans
Level 1

217 Albany Street
South End - Boston, Massachusetts



- ● ● ● ● PROPERTY BOUNDARY
- AMENITY
- GENERAL CIRCULATION | OPEN PROGRAM
- MECHANICAL/ BACK OF HOUSE
- VERTICAL CIRCULATION

IN PROGRESS | GRAPHIC OPTION 2

TYPICAL UPPER AND
LANDSCAPE PLAN TO BE
UPDATED



- AMENITY
- GENERAL CIRCULATION | OPEN PROGRAM
- MECHANICAL/ BACK OF HOUSE
- VERTICAL CIRCULATION

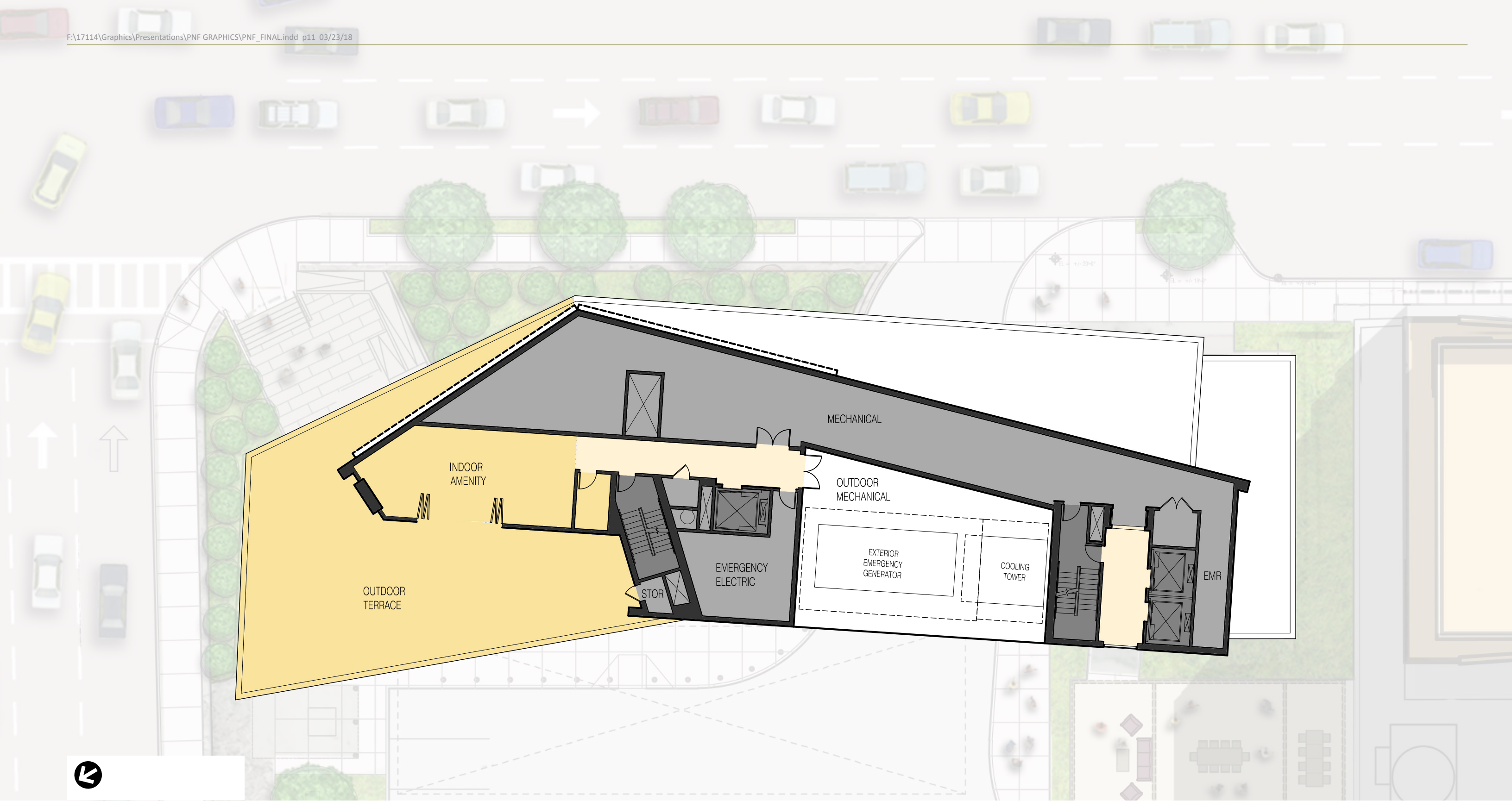
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DEVELOPMENT

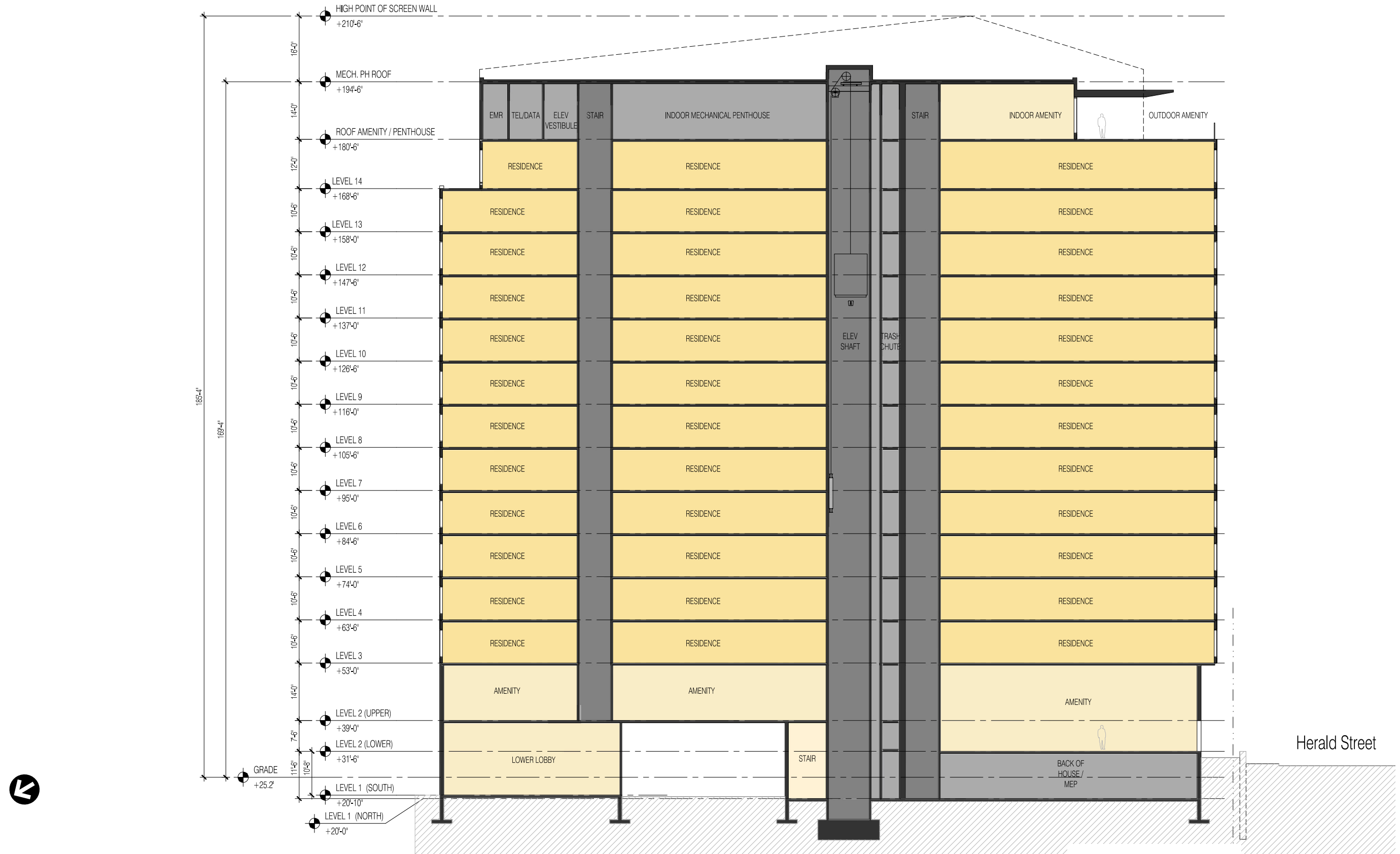
Figure 2.3c

Floor Plans
Typical Upper Floors

217 Albany Street
South End - Boston, Massachusetts



- AMENITY
- GENERAL CIRCULATION | OPEN PROGRAM
- MECHANICAL/ BACK OF HOUSE
- VERTICAL CIRCULATION





- AMENITY
- GENERAL CIRCULATION | OPEN PROGRAM
- MECHANICAL/ BACK OF HOUSE
- VERTICAL CIRCULATION

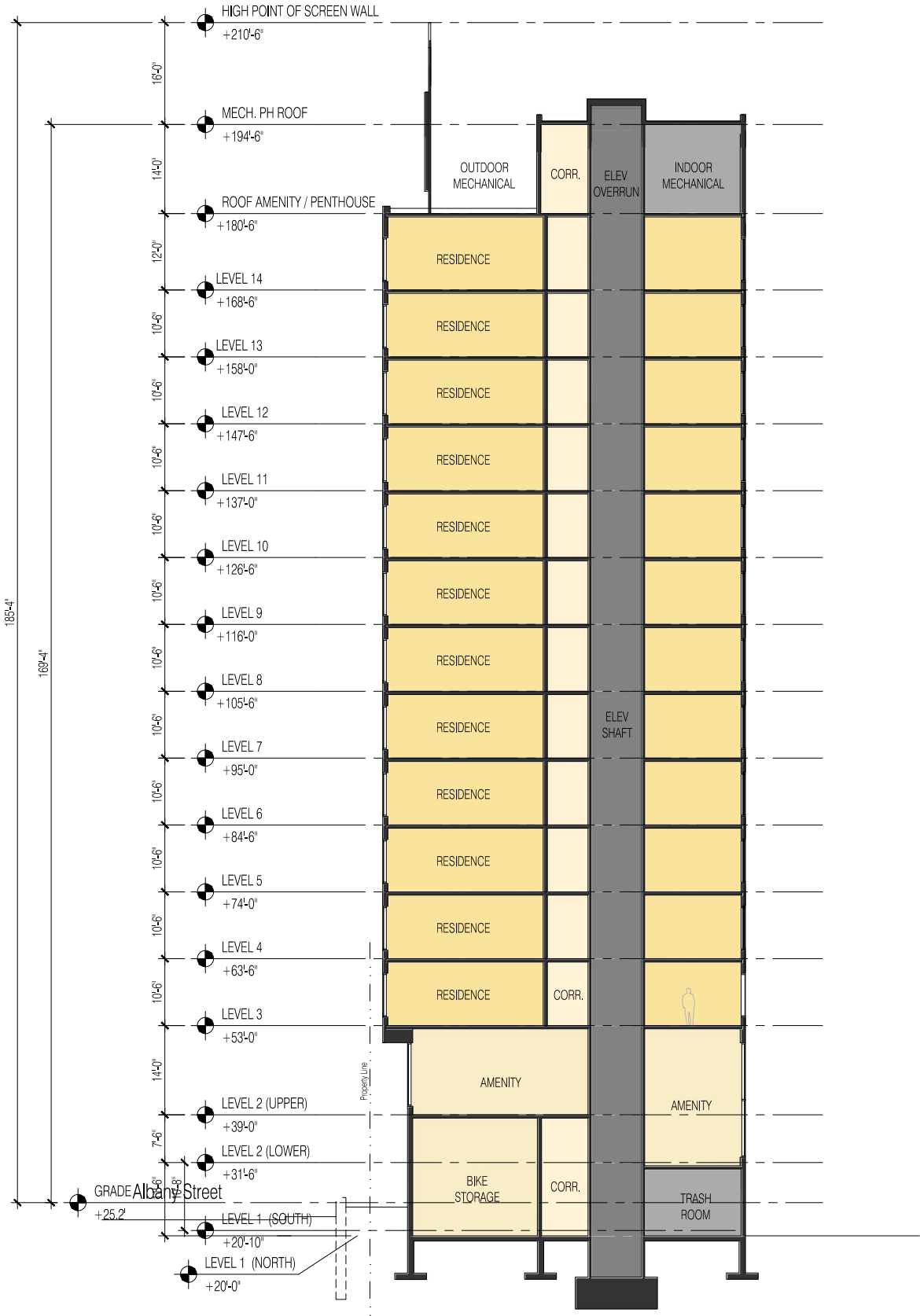
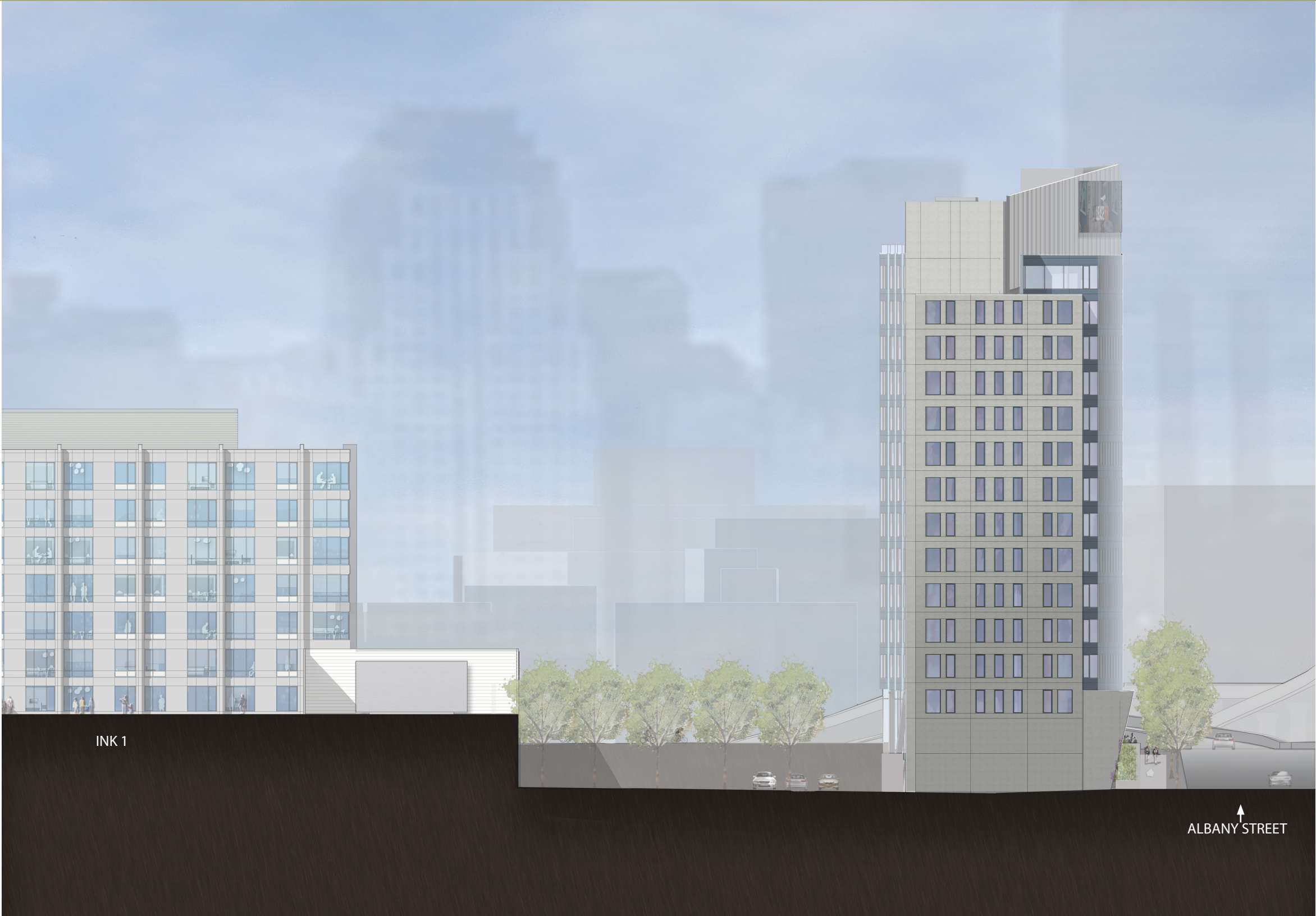


Figure 2.4b
Building Sections -
East / West Cross Section
217 Albany Street
South End - Boston, Massachusetts













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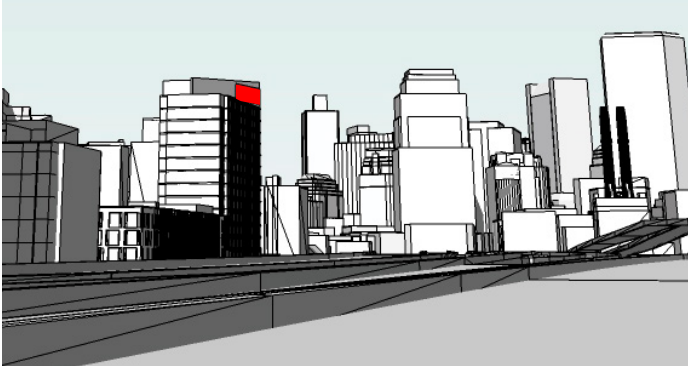
Figure 2.6b
Project Rendering Looking North

217 Albany Street
South End - Boston, Massachusetts

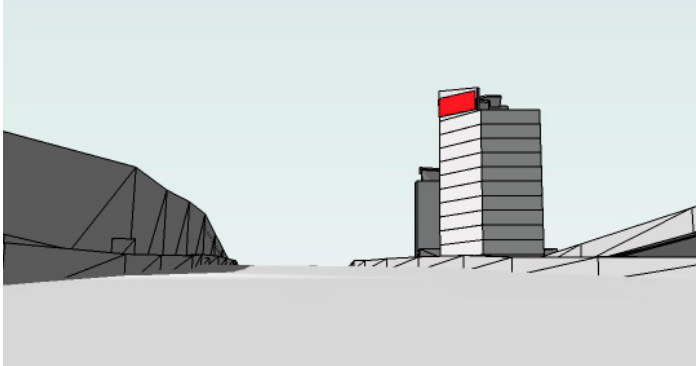


EXISTING BILLBOARDS TO BE RELOCATED TO BUILDING AS SHOWN

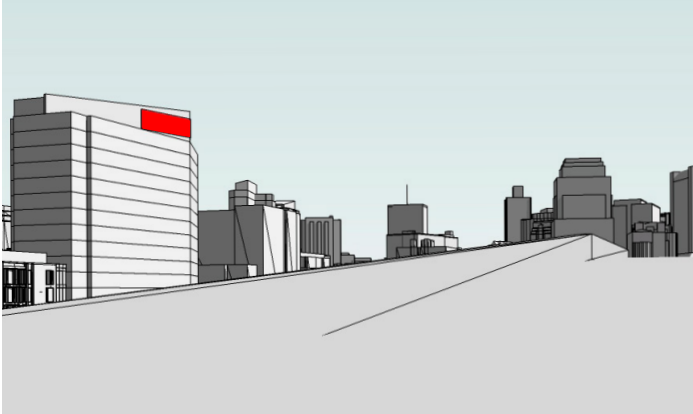
BILLBOARD VISIBILITY STUDY



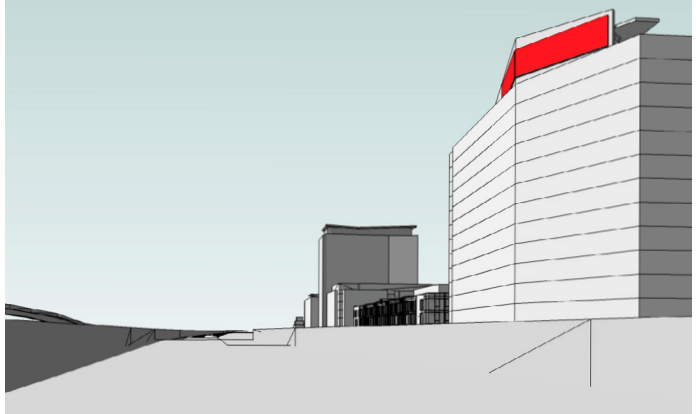
LONG VIEW FROM I-93 N



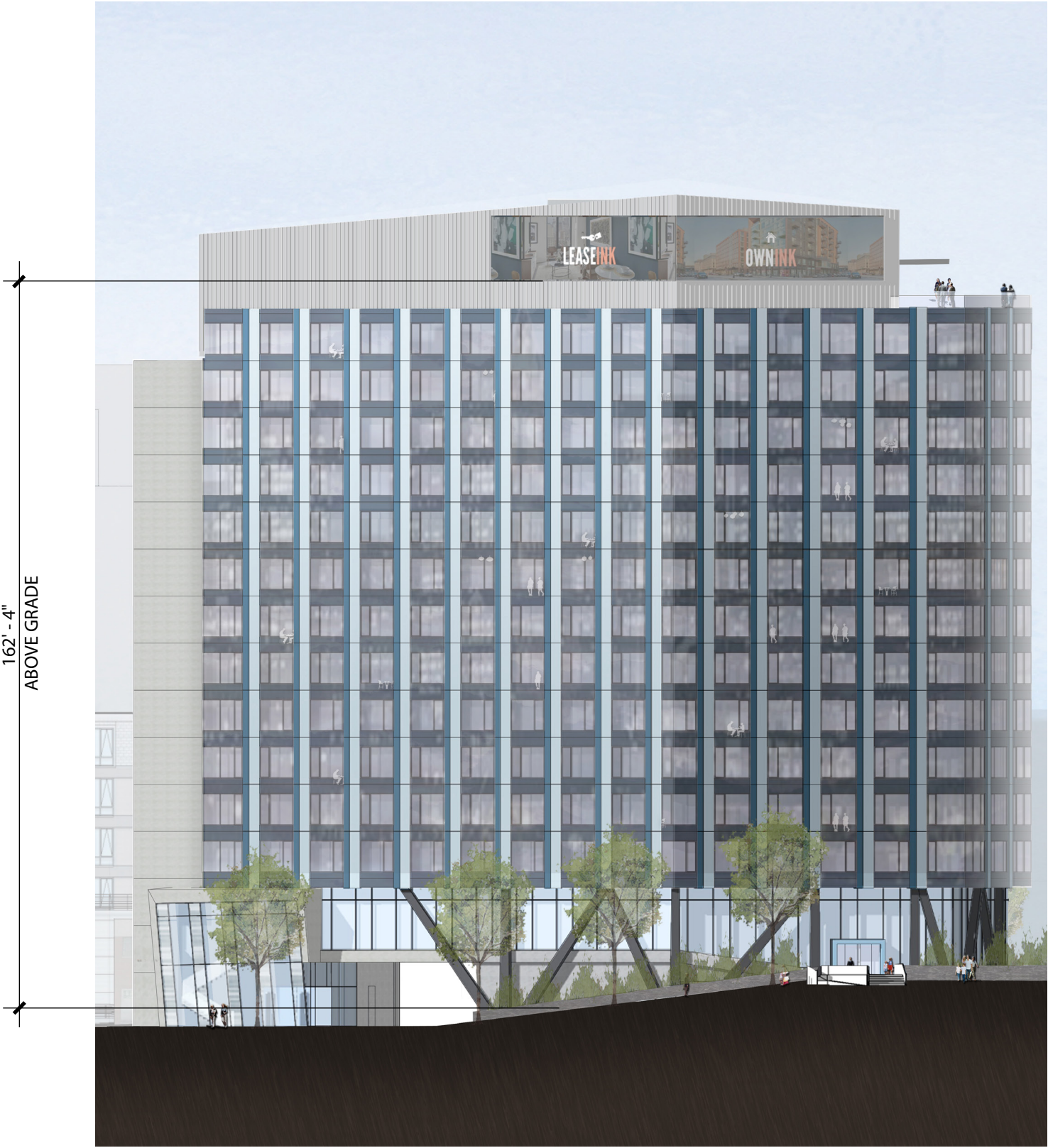
LONG VIEW FROM I-93 S

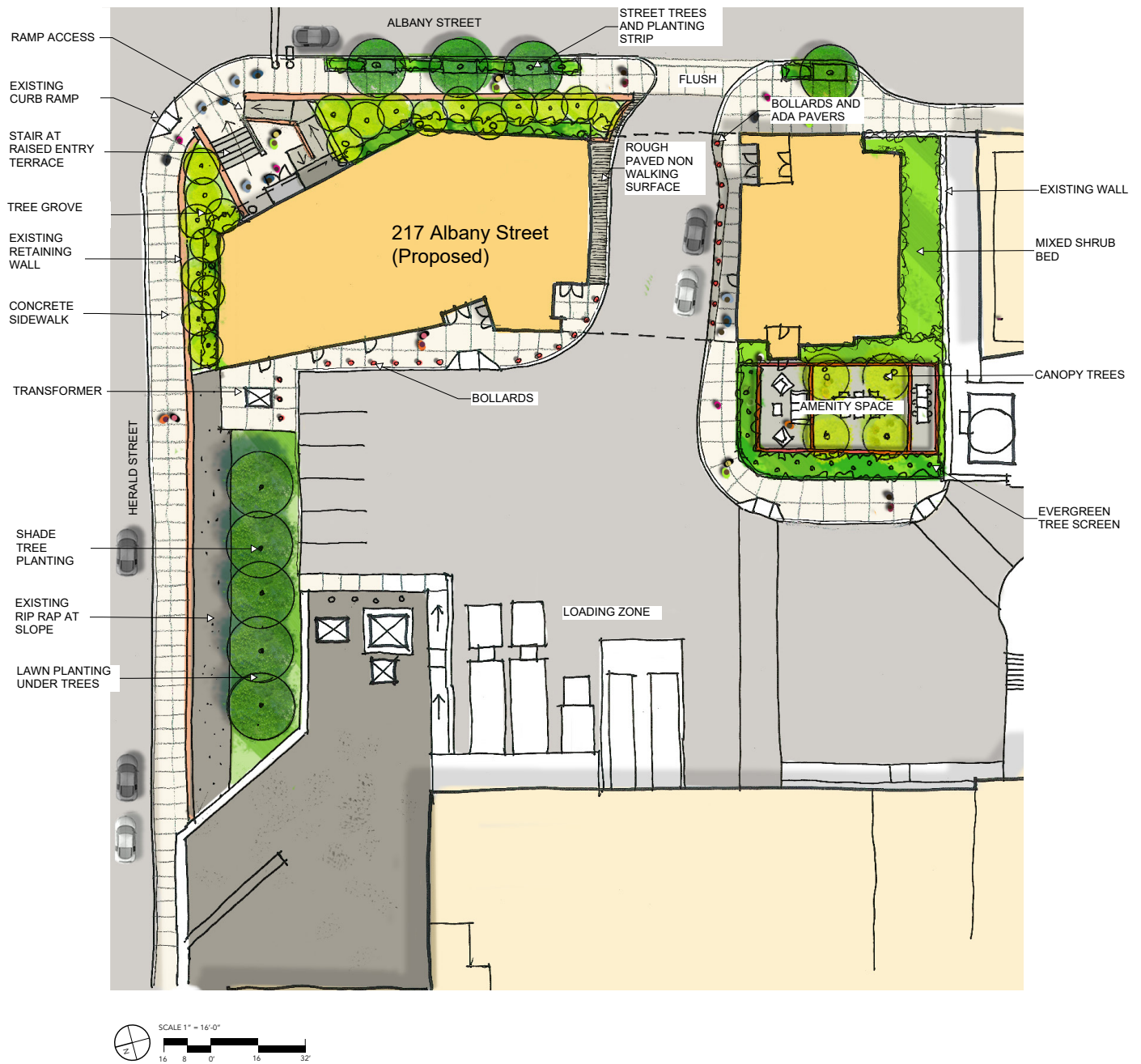


VIEW FROM I-93 N



VIEW FROM I-93 S





Source: CWDG



Figure 2.8
Proposed Site Plan

**217 Albany Street
Boston, Massachusetts**

3

Sustainability/Green Building and Climate Change Resiliency

The following chapter provides an overview of the Project's proposed sustainable design elements at this time of preliminary design, to demonstrate that the Project will meet the requirements of Article 37 of the Boston Zoning Code relative to the City's Green Building policies and procedures.

This chapter also discusses the approach to preparing for changes in climate change, in accordance with the BPDA Climate Change Resiliency and Preparedness Policy ("the "Resiliency Policy"). The required Climate Change Resiliency and Preparedness Checklist (the "Resiliency Checklist") has been completed for the Proposed Project and is provided in Appendix B.

3.1 Summary of Key Findings and Benefits

- › Targets a high level of sustainability by designing the Site and building using the LEEDv4 rating system to demonstrate compliance with Article 37, Green Buildings of the Code.
- › In support of Boston's GHG emissions reductions goals, the design team has considered and will continue to evaluate energy conservation measures to reduce overall building energy usage and reduce associated GHG emissions.
- › The early energy model study provides an evaluation of building system and alternative energy options, as well as demonstrates the proposed building designs meet the Massachusetts Stretch Energy Code requirement to be 10 percent better than ASHRAE 90.1-2013.
 - Reduces overall annual energy consumption by an estimated 13 percent through the implementation of energy optimizing building design and systems.
 - With the proposed design, the energy consumption is expected to result in an estimated GHG emissions of 896 tons per year.
- › Potential impacts associated with climate changes, such as predicted future sea level rise, increased frequency and intensity of precipitation events, and extreme heat events have been considered during early stages of design.

3.2 Regulatory Context

The following sections provide an overview of the state and local regulatory context related to sustainability/green building design, energy efficiency and GHG emissions, and climate change resiliency.

3.2.1 Massachusetts 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 of Boston, 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.

3.2.2 Article 37 of Boston Zoning Code

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). 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, BTB, 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.

3.2.3 Greenovate Boston Climate Action Plan

In 2010, the Boston Climate Action Leadership Committee and Community Advisory Committees presented the City's first climate action plan: *Sparkling the Climate Revolution 2010*. The report contained wide-ranging recommendations for reducing Boston's contribution to climate change, addressing the changes we cannot avoid, and engaging the Boston community in the effort. Following an update in 2011, which set a goal of reducing GHG emissions by 25 percent by 2020 (*A Climate of*

Progress), Mayor Walsh released the *Greenovate Boston 2014 Climate Action Plan Update*, which reported on the City's progress towards reducing GHG emissions and preparing for the impacts of climate change. This report documents that, since 2005, community-wide GHG emissions have decreased by 17 percent, and the City of Boston has made significant progress preparing for climate change. The City, through the BPDA, uses the Article 80 Development Review process to include an assessment of likely effects of climate change in new development.

3.2.4 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.

3.3 Sustainability/Green Building Design Approach

While the sustainability goals of the Project are in the development phase, the Proponent has identified a few initial areas of focus. In support of the City's energy conservation and GHG emissions reduction goals, the Proponent and design team are working to provide an energy efficient building. The Project is currently designed as certifiable using the LEEDv4 for New Construction (NC) rating system, as demonstrated by the preliminary LEED checklist provided in Figure 3.1. The design team have identified a number of credits potentially available based on schematic design.

The Proponent intends to pursue certification for the Project under LEEDv3 (2009) rating system, the rating system under which the Project has already been registered.

3.3.1 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 project will meet or exceed the compliance level of LEED certifiable using the LEEDv4 for New Construction (NC) rating system.

The preliminary LEEDv4 checklist presented as Figure 3.1 indicates the targeted credits and the associated points. The narrative below summarizes the sustainable design compliance approach for the Project, in compliance with Article 37.

Integrative Process (IP)

IP Credit: Integrative Process, 1 point

The Project has been utilizing early analysis of energy and water to inform the design and decision-making process. The Project Team has used early “shoebox” performance modeling and held a utility-incentive integrated design study energy charrette meeting.

Location and Transportation (LT)

LT Credit: Sensitive Land Protection, 1 point

The Project will be developed on land that has been previously developed. In addition, the Project Site is also not designated as prime farmland, floodplains, particular habitats, water bodies, or wetlands.

LT Credit: High Priority Site, 1 point

The Project is located within a U.S. Federal Empowerment Zone, as identified by the U.S. Housing and Urban Development (HUD) Agency.

LT Credit: Surrounding Density and Diverse Uses, 5 points

The Project is located on an urban site, surrounded by multiple and diverse adjacent uses and services.

LT Credit: Access to Quality Transit, 5 points

The Project Site will be within ¼-mile walking distance of several bus stops, and within ½-mile walk of a subway stop.

LT Credit: Reduced Parking Footprint, 1 point

The Project will not provide on-site parking.

Sustainable Sites (SS)

SS Prerequisite: Construction Activity Pollution Prevention

The Project Team will create and implement an Erosion and Sedimentation Control (ESC) plan for all construction activities associated with the Project. The ESC Plan will conform to the 2012 U.S. Environmental Protection Agency (EPA) Construction General Permit (CGP) requirements.

SS Credit: Site Assessment, 1 point

The Project Team has assessed site conditions before design to evaluate sustainable options and inform related decisions about site design.

SS Credit: Heat Island Reduction, 2 points

To minimize effects on the immediate microclimate and both human and wildlife habitats, the Project will seek to utilize highly reflective and high-albedo materials where possible, to reduce heat island effect.

Water Efficiency (WE)*WE Prerequisite: Outdoor Water Use Reduction*

The Project intends to meet this prerequisite by reducing landscape water usage by at least 30% from the calculated baseline.

WE Prerequisite: Indoor Water Use Reduction

The Project will utilize low-flow toilets, urinals, faucets, and shower-heads, which will reduce its indoor water consumption by at least 20 percent from the calculated baseline.

WE Prerequisite: Building-Level Water Metering

In order to support water management and identify opportunities for additional water savings, the Proponent will install a water meter for tracking the Project's potable water consumption.

WE Credit: Outdoor Water Use Reduction, 1 point

Through a combination of selecting appropriate plant species and utilizing a high-efficiency irrigation system, the Proponent intends to reduce the Project's landscape water requirement by at least 50 percent from the calculated baseline.

WE Credit: Indoor Water Use Reduction, 2 points

Through the use of low-flow toilets, urinals, faucets, and shower-heads, and potentially using other alternative water sources, the Proponent intends to further reduce the Project's fixture and fitting water use by up to 30 percent from the calculated baseline in *WE Prerequisite Indoor Water Use Reduction*.

WE Credit: Cooling Tower Water Use, 2 points

The Project will require an initial water test for cooling tower make-up, and will test for levels of Ca (as CaCO₃), Total alkalinity, SiO₂, Cl⁻, and Conductivity. The cooling tower chemical treatment and filtration program will include a water testing program, and will be designed and set up to control the cooling tower water quality in order to maintain the actual concentration levels below the specified concentrations and to achieve a minimum of 10 water cycles of concentration.

WE Credit: Water Metering, 1 point

The Project will install additional water meters for at least two water subsystems. Each of the residential units will be provided with their own metering system, and at least one other water subsystem will be metered.

Energy & Atmosphere (EA)*EA Prerequisite: Fundamental Commissioning and Verification*

The Proponent will engage an independent Commissioning Agent (CxA), who will be responsible for performing fundamental commissioning services for the Project. The CxA will establish commissioning requirements to be incorporated into the

construction documents; verify the installation and performance of mechanical, electrical, plumbing, and any other systems, in accordance with ASHRAE Guidelines; and ultimately confirm the building systems are installed and function as intended and desired.

EA Prerequisite: Minimum Energy Performance

The Project will reduce the environmental and economic harms of excessive energy use by achieving a minimum level of building-wide energy efficiency and its systems in compliance with the mandatory provisions of ANSI/ASHREA/IESNA Standard 90.1-2010.

EA Prerequisite: Building-Level Energy Metering

The Project will install building-level energy meters or sub-meters that can be aggregated to provide building-level data representing total building energy consumption.

EA Prerequisite: Fundamental Refrigerant Management

The Project will not use chlorofluorocarbon (CFC)-based refrigerants in new heating, ventilating, air-conditioning, and refrigeration systems.

EA Credit: Enhanced Commissioning, 5 points

The Proponent will also engage an independent Commissioning Agent (CxA) to performance enhanced commissioning services. The enhanced commissioning will further help to minimize the negative impacts of the building on the environment by developing an on-going commissioning plan to ensure that the proposed building is designed, constructed, and operated as intended, in accordance with the Proponent's Project requirements.

EA Credit: Optimize Energy Performance, 2 points

In order to achieve increasing levels of energy performance beyond the prerequisite standard and reduce environmental and economic harms associated with excessive energy use, the Project has established an energy cost savings performance target of 8% based on representative project recently constructed by the Proponent. This target exceeds the minimum requirements of LEEDv4 energy performance and achieves at least 2 LEED points. During the schematic design phase, the project team will utilize whole-building energy simulation to analyze efficiency measures during the design process and decision making. Then, the Project will demonstrate a percentage improvement in the proposed building performance rating from the calculated baseline.

EA Credit: Advanced Energy Metering, 1 point

The Project will install advanced energy metering for whole-building energy sources and any individual energy end uses that represent 10 percent or more of the total annual consumption of the building.

EA Credit: Enhanced Refrigerant Management, 1 point

The Project will select mechanical equipment and refrigerants with low or no ozone depletion and global warming impacts.

EA Credit: Green Power and Carbon Offsets, 2 points

The Proponent will engage in a contract for a minimum of five years, to be delivered at least annually, to ensure that at least 50 or 100 percent of the Project's energy is offset by green power, carbon offsets, or renewable energy credits (RECs).

Materials and Resources (MR)

MR Prerequisite: Storage and Collection of Recyclables

The Project will provide dedicated areas accessible to waste haulers and building occupants for the collection and storage of recyclable materials for the entire building, to reduce the waste that is generated by building occupants and hauled to and disposed of in landfills.

MR Prerequisite: Construction and Demolition Waste Management Planning

The Project will reduce the amount of construction and demolition waste disposed in landfills and incineration facilities by recovering, reusing, and recycling the materials. A Construction and Demolition Waste Management Plan will be developed and implemented, with establish waste diversion goals established and regularly reporting provided.

MR Credit: Building Product Disclosure and Optimization - Environmental Product Declarations, 1 point

The Project aims to incorporate products and materials that have information regarding environmentally, economically, and socially preferable life-cycle impacts disclosed, using an accepted methodology.

MR Credit: Building Product Disclosure and Optimization - Material Ingredients, 1 point

The Project aims to incorporate products and materials that have information regarding environmentally, economically, and socially preferable life-cycle impacts disclosed, using an accepted methodology. The chemical ingredients in these select products must be inventoried and verified to minimize the use and generation of harmful substances.

MR Credit: Construction and Demolition Waste Management, 2 points

The Project will reduce the amount of construction and demolition waste disposed in landfills and incineration facilities by recovering, reusing, and recycling the materials. The Project aims to divert at least 75 percent of construction and demolition waste materials from landfills, and four waste streams.

Indoor Environmental Quality (IEQ)*IEQ Prerequisite: Minimum Indoor Air Quality Performance*

The Project will contribute to the comfort and well-being of the building occupants by establishing minimum standards for indoor air quality (IAQ).

IEQ Prerequisite: Environmental Tobacco Smoke (ETS) Control

To prevent or minimize exposure of building occupants, indoor surfaces, and ventilation air distribution systems to environmental tobacco smoke, the building management will prohibit smoking inside and outside the building except in designated areas located at least 25 feet from all entries, outdoor air intakes, and operable windows.

IEQ Credit: Enhanced Indoor Air Quality Strategies, 1 point

The Project will utilize proper entryway systems, interior cross-contamination prevention, and filtration to improve indoor air quality and promote occupants' comfort, well-being, and productivity.

IEQ Credit: Low-Emitting Materials, 2 points

The Project aims to reduce concentrations of chemical contaminants that can damage air quality, human health, productivity, and the environment, by limiting the VOC content of materials used in the construction of the building.

IEQ Credit: Construction IAQ Management Plan, 1 point

The Project will develop and implement an Indoor Air Quality (IAQ) Management Plan for the construction and preoccupancy phases of the building, in order to promote the well-being of construction workers and building occupants by minimizing indoor air quality problems associated with construction.

IEQ Credit: Thermal Comfort, 1 point

The Project will provide quality thermal comfort by design the heating, ventilating, air-conditioning systems and the building envelope to meet the established requirements and provide quality thermal comfort that will help boost building occupants' productivity and wellbeing.

IEQ Credit: Quality Views, 1 point

The Project will be designed so that building occupants are provided with a quality views and a connection to the natural outdoor environment.

Innovative in Design (ID)

The Proponent will explore innovative approaches to design, construction, and operations and maintenance, including green cleaning and green building education program.

Regional Priority Credits (RPC)

The available RPCs for the Project may include:

- › SS High priority site (2-point threshold);
- › SS Rainwater management (2-point threshold);
- › WE Indoor water use reduction (4-point threshold);
- › EA Optimize energy performance (8-point threshold); and
- › EA Renewable energy production (2-point threshold).

Boston Green Building Credits

The Project may receive up to four points, not yet determined, for achieving each of the Boston Green Building credits (Appendix A of Article 37):

- › Modern Grid
- › Historic Preservation
- › Groundwater Recharge
- › Modern Mobility

3.4 Preliminary Energy Conservation/GHG Emissions Reduction Approach

In alignment with 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 the Project. The EEMs may include low-flow plumbing fixtures, as well as high efficiency mechanical and ventilation systems. Whole building energy modeling was used for a preliminary analysis of possible energy efficient measures.

The residential building meets the updated code requirement to have energy consumption a minimum of 10 percent below an ASHRAE 90.1-2013 baseline. As currently designed the estimated energy usage for the residential building is reduced by approximately 13.1 percent compared to the baseline.¹ With the proposed design, the energy consumption is expected to result in an estimated GHG emissions of 933 tons per year, which represents an approximately 9.2 percent reduction from the baseline.

High energy performance of the building has been incorporated in the Project through high efficiency heat pumps, condensing boilers, energy recovery units serving apartment corridors and a condenser water system. In addition, there is passive energy savings in the condenser water loop as one side of the building will be in the sun and in the cooling mode, while the other side of the building will be shaded and in heating mode. The condenser water loop therefore acts as a heat sink

¹ Energy usage percent savings is different from energy cost, which is dependent on different energy sources and associated utility rates.

and can absorb heat from one side and add heat to the opposite side. The condenser water loop balances out the heating and cooling demands. There are also fewer windows on the southern façade to reduce the cooling load. The high efficiency equipment includes low-flow plumbing fixtures, high efficiency condensing boilers, energy recovery units and high efficiency heat pumps.

3.4.1 Clean and Renewable Energy Analysis Evaluation

Combined Heat and Power (CHP)

Combined Heat and Power (CHP) systems are most efficient when there is a hot water demand year-round, making it applicable for the residential projects. The project team will continue to explore the benefits of implementing CHP for the residential tower for use in heating domestic hot water and providing power. As design advances the team will continue to assess the viability of including small scale CHP systems for the Project. The feasibility of such systems often hinges on the efficiency of the CHP during the summer months, which will be considered in the future study.

Solar Photovoltaic (PV) Systems

An evaluation of incorporating both roof-mounted and building integrated solar photovoltaic (PV) systems will be conducted for the Proposed Project. The results of the study will determine the initial payback assessment for the roof mounted arrays and for the building integrated approach. As the design progresses, the team will 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. This will give the owner flexibility if the market changes and they want to invest in solar later. The design 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 Photovoltaic systems can be installed in several locations, including vertically along the façade. Solar Thermal and Photovoltaic systems have similar paybacks, there are additional maintenance costs associated with solar thermal. The project team will investigate the benefits of a small CHP system for building, which would provide hot water to satisfy most of the domestic hot water load for the building. There would be no need for additional capacity from a solar thermal system.

Architectural Wind

The Project team is not considering building mounted mini-turbines and as they typically would not provide enough power to make the installation economically feasible in the Boston area. A mini-turbine will produce less electricity than a

photovoltaic system, but will likely cost more to install. Wind turbines also have additional operation and maintenance costs to consider since they contain moving parts.

Geothermal (Water Source Heat Pumps)

Geothermal as a clean/renewable energy source is generally difficult to implement in the urban setting with site constraints. The Project would require a 375-ton system (based on approximately 400-square foot/ton), which would include 15 wells running approximately 2,500 feet deep. These wells would require 7,500 to 8,500 square feet of land area (based on a 30' x 30' grid configuration), which is not available on the Project Site. Therefore, it was determined that geothermal is not a viable option for the Project.

Air Source Heat Pumps

Air source heat pumps function in a manner similar to water source heat pumps (Geothermal Systems), but extract heat from outside air instead of from geothermal wells. Typically, air source heat pumps are regarded as less efficient than ground source heat pumps, although their initial costs are often lower. The Proponent has found heat pumps to be feasible for the Project and has incorporated the equipment into the Project design.

3.4.2 Energy Efficiency Utility Assistance

The Project team will meet with representatives of local utility companies serving the area to discuss the utility incentives programs available. By working 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 that may be achieved. The Project will participate in the MassSave New Construction Program, which is designed to target energy efficiency opportunities in new commercial facilities. The program provides financial incentives and technical assistance to developers, customers and design professionals to encourage the use of design features and equipment that optimize energy efficiency in the new construction projects.

To determine the incentive levels, a whole building energy model will be created using DOE-2 based energy model. The proposed model will incorporate any energy conservation measures proposed by the design team. The proposed model will accurately reflect the whole building, per its design.

3.5 Climate Change Preparedness and Resiliency

3.5.1 Sea Level Rise and Extreme Flooding

The Proponent has evaluated the Project Site in terms of flooding in combination with projected sea level rise, as outlined in the *Sea Level Rise: Understanding and*

Applying Trends and Future Scenarios for Analysis and Planning prepared by the Massachusetts Office of Coastal Zone Management (CZM). The FEMA Flood Insurance Rate Map (FIRM) map number 25025C0081J indicates the 100-year flood elevation for the Fort Point Channel is +16.46 feet Boston City Base (BCB). The Project Site is above the 100-year flood elevation. Its existing lowest point elevation is at +13.85 feet BCB, but expected to be filled to approximately +17.5 feet BCB. Although the Project Site is above the 100-year flood elevation, it is noted that the Project is not hydrologically connected to the Fort Point Channel. As discussed previously, I-93 and railroad tracks provide a vertical physical barrier between the Fort Point Channel and the South End. Refer to Figure 3.2 for location of the Project Site in relation to the FEMA Flood Map.

A “bathtub model” approach was used to determine the potential extreme flood event elevations in the Fort Point Channel, under certain sea level rise scenarios, in order to compare elevations to the building and critical infrastructure. The CZM report indicated that sea level rise could potentially reach 0.81 feet, 1.91 feet, 4.20 feet, and 6.83 feet in the Boston area by the year 2100 under a range of emission scenarios established by the Intergovernmental Panel on Climate Change in their fourth comprehensive report. These levels of sea level rise correspond to the following 100-year flood elevations in the Fort Point Channel:

- › Lowest Scenario – Elevation +17.27 feet BCB
- › Intermediate Low Scenario – Elevation +18.37 feet BCB
- › Intermediate High Scenario – Elevation +20.66 feet BCB
- › Highest Scenario – Elevation +23.29 feet BCB

The elevation at which a coastal flooding will access the South End from flooding over either I-93 or the South Station railroad tracks is not known. These flood elevations provide a proxy for evaluating design decisions. The Intermediate High Scenario, with sea level rise of 2.47 feet for the year 2075, may be a more appropriate design elevation to compare to with an extreme flood event elevation of +18.92 feet BCB. Although this flood elevation is not expected to occur in the South End due to topographic separation, BWSC infrastructure will be subject to this level of coastal inundation. This realization confirms the design decisions to elevate storm and sewer infrastructure as high as possible on-site, install backflow preventers on lateral service connections, and ensure the internal piping is water tight up to the second floor. This flood elevation will also be accounted for when deciding what elevation to install critical infrastructure, such as electrical and backup generating systems, to higher floors.

3.5.2 Extreme Weather Events/Temperature

This section examines how the Project may be affected by and will prepare for climate change-induced extreme weather events.

The 2011 Massachusetts Climate Change Adaptation Report projects an increase in extreme weather events which could consist of drought, tropical rainfall patterns (i.e., increased precipitation), extreme heat and cold stretches, an increase in the

number of days with extreme heat (i.e., temperatures greater than 90°F and 100°F) and increased winter precipitation, yet fewer days of snow.

The latest Climate Ready Boston report, released in December 2016, predicts an increase in the days of extreme heat from previous research; an additional 10 days above 90 degrees by 2030 to 20-40 in total, and an additional 22 days above 90 degrees by 2070 to 25-90 in total. Projections for increased precipitation and sea level rise from previous reports have remained consistent, as do implications to the Project Site.

In preparing for extreme temperature and extreme weather events, the Proponent will explore various adaptation strategies including the usage of reflective building materials to reduce heat island effect, operable windows to provide ventilation and natural cooling, and installation of infiltration chambers to reduce storm water run-off. Please refer to the Climate Resiliency Checklist in Appendix B for additional details on how the Project will respond to extreme weather conditions.

3.5.3 Potential Resiliency Measures

Additional site measures include raising all building infrastructure predisposed to flooding, as well as the building finished floor elevation above the base flood elevation. The Proponent will evaluate the practicality of raising electrical equipment and emergency generators to higher floors, well above the preliminary 100-year flood elevation during the design process.

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LEED v4 for New Construction

Project Name: 7- Ink

Address: 217 Albany Street, Boston, MA

Date: April 03, 2018

Y	?	N		
1	0	0	Integrative Process	1
1			Credit Integrative Process	1
13	0	3	Location and Transportation	16
		0	Credit LEED for Neighborhood Development Location	16
1			Credit Sensitive Land Protection	1
1		1	Credit High Priority Site	2
5			Credit Surrounding Density and Diverse Uses	5
5			Credit Access to Quality Transit	5
		1	Credit Bicycle Facilities	1
1			Credit Reduced Parking Footprint	1
		1	Credit Green Vehicles	1
3	1	6	Sustainable Sites	10
Y			Prereq Construction Activity Pollution Prevention	Required
1			Credit Site Assessment	1
	1	1	Credit Site Development - Protect or Restore Habitat	2
		1	Credit Open Space	1
		3	Credit Rainwater Management	3
2			Credit Heat Island Reduction	2
		1	Credit Light Pollution Reduction	1
6	2	3	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
2			Credit Cooling Tower Water Use	2
1			Credit Water Metering	1
11	6	16	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
5	1		Credit Enhanced Commissioning	6
2	4	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

Y	?	N		
4	1	8	Materials and Resources	13
Y			Prereq Storage and Collection of Recyclables	Required
Y			Prereq Construction and Demolition Waste Management Planning	Required
		5	Credit Building Life-Cycle Impact Reduction	5
1		1	Credit Building Product Disclosure and Optimization - EPDs	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
2			Credit Construction and Demolition Waste Management	2
6	5	5	Indoor Environmental Quality	16
Y			Prereq Minimum Indoor Air Quality Performance	Required
Y			Prereq Environmental Tobacco Smoke Control	Required
1	1		Credit Enhanced Indoor Air Quality Strategies	2
2	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
3	3	0	Innovation & Exemplary Performance	6
1			Credit Innovation: Green Cleaning & Pest Management Plan	1
1			Credit Exemplary: Reduced Parking Footprint	1
	1		Credit Innovation:	1
	1		Credit Innovation:	1
	1		Credit Innovation:	1
1			Credit LEED Accredited Professional	1
0	0	4	Regional Priority	4
		1	Credit Regional Priority: (4-pt threshold) Indoor Water Use Reduction	1
		1	Credit Regional Priority: (8-pt threshold) Optimize Energy Performance	1
		1	Credit Regional Priority: (2-pt threshold) High Priority Site	1
		1	Credit Regional Priority: (2-pt threshold) Rainwater Management	1
		0	Credit Regional Priority: (2-pt threshold) Renewable Energy Production	1
		0	Credit Regional Priority: (2-pt threshold) Bldg Life-Cycle Impact Reduction	1
47	18	45	TOTALS	Possible Points: 110

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



Figure 3.1

Draft LEED Scorecard

Source: EMA

217 Albany Street
Boston, Massachusetts



Source: Bing Aerial and FEMA National Flood Hazard Layer



Figure 3.2
FEMA Flood Map

**217 Albany Street
Boston, Massachusetts**

4

Transportation

This chapter provides a detailed and comprehensive evaluation of the existing and proposed transportation conditions, and identifies traffic impacts as a result of the Project. The analysis captures in detail the operational characteristics of the Project, and provides a basis for determining to what extent, if any, Project-related traffic is likely to affect the wider transportation network.

4.1 Summary of Key Findings and Benefits

The following are key findings and benefits related to transportation:

- › The Project will utilize the extensive existing transportation infrastructure currently serving the Project Site, including infrastructure for alternative modes (nearby MBTA facilities, and bicycle and pedestrian facilities, including on-street bike lanes, cycle tracks, sidewalks, crosswalks and multi-use pathways).
- › The Project will reduce potential traffic-related impacts on the surrounding roadway network by not introducing any new curb cuts on Albany Street, or any other roadways abutting the Project Site.
- › No on-site parking will be provided as part of the Project as the new development is heavily oriented towards tenants (such as young professionals) that utilize other forms of travel not requiring private-vehicle ownership.
- › The Project Site is well-served by nearby MBTA train and bus service, as well as taxis and private ride services (i.e., Uber, Lyft, and others) reducing the need to provide parking for the Project.
- › In addition to the alternative modes of transportation listed above, some residents may choose to park in the Underground at Ink Block parking facility just across Albany Street underneath Route I-93.
- › Considering these factors, the Project is projected to generate only minor levels of vehicle trips: 671 vehicle trips on a typical weekday and 676 vehicle trips on a Saturday.
 - During the respective weekday morning and evening peak hours the Project will generate 45 trips 38, respectively, 44 trips during the Saturday midday peak hour. during the Saturday midday peak hour.
- › The Proponent is proposing to extend the existing pick-up/drop-off area on Albany Street, which is located approximately 150 feet to the south of the Site. This area will be extended further to the north to accommodate new Site resident activity, while also maintaining the approved pick-up/drop-off area for the AC Hotel recently opened in March 2018.

- › Secure bicycle storage will be provided within the Project building for residents and any building support staff.

4.2 Methodology

The following transportation analysis has been performed in general conformance with the Massachusetts Executive Office of Environmental Affairs (EEA)/Executive Office of Transportation (EOT) guidelines. It also follows standard BTM methodologies, including the projection of 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* software was used to facilitate the evaluation of traffic operations based on Highway Capacity Manual¹ (HCM) methodologies.

Based on a review of traffic studies prepared for other nearby development projects and familiarity with the surrounding area, vehicular traffic associated with the Project should be widely dispersed throughout the nearby street network. Considering these and other factors, the following intersections, as shown in Figure 4.1, were included in the study area for the Traffic Impact and Access Study as it is anticipated that Project-related traffic could potentially impact traffic operations:

- › Albany Street/Herald Street
- › Albany Street at Ink Block exit driveway/Route I-93 Southbound on-ramp
- › Albany Street at Ink Block entrance driveway
- › Albany Street/Traveler Street
- › Traveler Street at Ink Block site driveway
- › Traveler Street at the Underground at Ink Block parking lot exit

The transportation analysis considers the following primary analysis scenarios:

- › **2017 Existing Conditions** – based on traffic data collection conducted within the study area as part of this Project in November/December 2017.
- › **2024 No-Build Conditions** – Future conditions for a seven-year time horizon as expected to occur if the Project was not constructed.
- › **2024 Build Conditions** – Future conditions for a seven-year time horizon assuming the construction of the Project.

4.3 Existing Transportation Conditions

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 is also provided. Figure 4.2 shows the existing site access and circulation.

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

4.3.1 Roadways

Albany Street

Albany Street borders the Project Site to the east and functions as a one-way southbound frontage road running parallel to Interstate 93 southbound. In the vicinity of the Project Site, Albany Street provides three travel lanes. Generally, on-street parking is prohibited on Albany Street, with the exception of a small segment adjacent to the AC Hotel site. That roughly 100-foot long area formerly was used for 30-minute parking, but will soon be used as a pick-up/drop-off area by the hotel when it opens in 2018. The sidewalk along the easterly side of Albany Street is located underneath the Route I-93 South on-ramp infrastructure.

Herald Street

Herald Street is located approximately 200 feet to the north of the Project Site and runs one-way in an eastbound direction from Tremont Street to Albany Street. Herald Street provides three travel lanes with parking prohibited on both sides of the roadway. Sidewalks are provided along both sides of Herald Street.

Traveler Street

Traveler Street is located approximately 175 feet to the south of the Project Site and this roadway currently provides single travel lanes in both directions. To the west of Harrison Avenue Traveler Street provides one-way travel in the westbound direction. Parking currently is prohibited on both sides of Traveler Street to the east of Harrison Avenue. However, in conjunction with the Ink Block development currently under construction, on-street parking will be allowed along the northerly side of the road with room for approximately fourteen vehicles. Sidewalks are provided along both sides of Traveler Street and crosswalks are provided at its intersections with Harrison Avenue and Albany Street.

Study Area Intersections

Intersection geometry and physical characteristics are presented below. Traffic operations and level of service (LOS) analysis are presented later in this chapter.

Albany Street/Herald Street

Herald Street intersects Albany Street from the west to form this signalized "T"-type intersection. Herald Street operates as a one-way eastbound roadway consisting of three right-turn only lanes. Albany Street operates as a one-way southbound roadway consisting of three through lanes. Parking is prohibited on both sides of Albany Street and Herald Street. Pedestrians are accommodated with concurrent pedestrian phases under which pedestrians can cross either street unopposed during the signal phase in which the other roadway traffic is moving. Crosswalks are provided across the Herald Street and Albany Street approaches to the intersection.

Albany Street/I-93 On-Ramp/Ink Block Driveway

The intersection of Albany Street with the Route I-93 South On-Ramp and the Ink Block driveway is unsignalized. The Ink Block driveway was modified as part of that site's construction so that only exiting right-turn movements are allowed. Previously, when the Boston Herald was in operation at the adjacent site, entering right-turns also were allowed. Opposite this driveway location, the Route I-93 South on-ramp diverges from Albany Street. Additional striping and signing improvements were required as part of the Ink Block project to help prevent exiting traffic from traveling directly from the site to access the ramp. Albany Street operates as a one-way southbound roadway with three general purpose lanes past this location. Parking is prohibited on both sides of Albany Street and Route I-93 on-ramp at this location. There is a sidewalk along the westerly side of Albany Street with the sidewalk on the opposite side of the road extending underneath Route I-93 immediately to the east of the ramp infrastructure.

Albany Street/Traveler Street

Albany Street/Traveler Street is a four-way signalized intersection with two one-way approaches – Albany Street from the north and Traveler Street from the west. The Albany Street approach consists of an exclusive left-turn lane, a shared left/through lane, and a shared through/right lane. The Traveler Street approach provides one general travel lane which currently is wide enough to operate as two lanes when vehicle demands are present. Parking is prohibited on both sides of Albany Street and Traveler Street in the immediate vicinity of the intersection. Pedestrians are accommodated with an exclusive pedestrian phase. Crosswalks are provided across the southern leg of Albany Street and across both approaches of Traveler Street. As noted later in this chapter, a new crosswalk also will be provided across the southbound Albany Street leg of the intersection in conjunction with planned signal improvements at this location by MassDOT.

Traveler Street/Underground at Ink Block Driveway

The signalized intersection of Traveler Street with the Underground at Ink Block driveway was recently constructed as part of the Underground at Ink Block Driveway. That new facility provides parking for approximately 17 vehicles, along with public space for recreation, dog walking, and other activities. A single exiting, left-turn only lane is provided from this facility onto Traveler Street. Three travel lanes are provided on this eastbound section of Traveler Street. There is a sidewalk along the southerly side of Traveler Street and the Albany Street walkway extends to a Traveler Street crosswalk just west of this intersection.

4.3.2 Existing Volumes

To estimate the existing operational conditions at the study area intersections, a review of existing condition traffic volumes was conducted. This review was done both through traffic counts of automobile, bicycle, and pedestrian traffic, and general observations of traffic conditions in the area.

Existing Vehicular Traffic

Daily traffic volume data was collected along Albany Street adjacent to the Site from Thursday November 30, 2017 through Saturday December 2, 2017. The observed traffic volume data is summarized in Table 4-1.

Table 4-1 Observed Traffic Volume Summary

Daily		Peak Hour								
		Weekday Morning			Weekday Evening			Saturday Midday		
Weekday (vpd) ¹	Saturday (vpd) ¹	Vol. (vph) ²	"K" Factor ³	Directional Flow	Vol. (vph) ²	"K" Factor	Directional Flow	Vol. (vph) ²	"K" Factor	Directional Flow
26,900	26,350	1,600	5.9	100% SB	1,515	5.6	100% SB	1,720	6.5	100% SB

Source: Automatic Traffic Recorder (ATR) counts conducted by VHB in from Thursday November 30, 2017 through Saturday December 2, 2017.

Notes: EB = eastbound, WB = westbound, SB = southbound, NB = northbound. Peak hours do not necessarily coincide with the peak hours of the turning movement counts.

1 Daily traffic expressed in vehicles per day.

2 Peak hour volumes expressed in vehicles per hour.

3 Percent of daily traffic, which occurs during the peak hour.

As shown in Table 3-1, Albany Street carries approximately 26,900 and 26,350 vehicles on a typical weekday and Saturday, respectively. Within the peak weekday morning commuter peak period, traffic volumes peak between 7:45 AM and 8:45 AM. The weekday evening peak hour occurs within the typical weekday evening peak period between 5:00 PM and 6:00 PM. Traffic volumes on Saturdays were similar to those observed on weekdays, with observed to be notably lower with a peak hour volume of 1,155 vehicles observed during the midday lunchtime hours.

In addition to the automatic traffic recorder counts summarized above, manual turning movement counts (TMCs) were conducted in November/December 2017 at the study area intersections. Counts were conducted during the weekday commuter peak periods of 7:00 - 9:00 AM and 4:00 - 6:00 PM on Thursday, November 30, 2017, and during on Saturday, December 2, 2017 during the midday peak period of 11:00 AM – 2:00 PM. Pedestrian crossing movements and bicycle volumes were also counted during these periods. The raw count data are included in Appendix C.

From the turning movement counts, the study area's traffic peak hours were determined to be 7:45 to 8:45 AM for the weekday morning peak, 5:00 to 6:00 PM for the weekday evening peak, and 12:00 to 1:00 PM for the Saturday midday peak.

Seasonality of Count Data

To evaluate the potential for seasonal fluctuation of traffic volumes on roadways near the Project Site, the MassDOT's 2011 Weekday Seasonal Factors, based on MassDOT's statewide traffic data inventory, indicates that traffic volumes in for urban arterials in November and December are typically slightly higher than yearly-average conditions. Accordingly, the volumes did not require any seasonal adjustment, which results in a conservative assessment utilizing slightly above-average conditions.

The resulting 2017 Existing peak-hour traffic volumes are shown in Figures 4.3 through 4.5 for the weekday morning, weekday evening and Saturday midday peak hours, respectively.

4.3.3 Existing Pedestrian Volumes

Sidewalks along the roadway network near the Project Site are in varying condition with striped crosswalks and pedestrian signals provided at the signalized intersections within the study area. Moderate levels of pedestrians were observed on the roadways near the Project Site, with much of the pedestrian traffic being oriented to and from the MBTA bus stops noted above. Refer to Figures 4.6 through 4.8 for pedestrian intersection crossing volumes during the peak hours.

At the signalized intersections of Herald Street/Albany Street, Albany Street/Traveler Street, and Traveler Street at the Underground at Ink Block parking lot exit pedestrians are accommodated in concurrent walk phases. This allows pedestrians to cross while the parallel traffic direction is still moving through the intersection, reducing overall vehicle and pedestrian delays. Pedestrian storage space on the sidewalks and observed pedestrian delays appear to be reasonable at most crosswalk locations during typical peak-hour conditions.

4.3.4 Existing Bicycle Volumes

Currently observed bicycle volumes throughout the traffic study area are highlighted in Figures 4.9 through 4.11 for the weekday morning, weekday evening and Saturday midday peak hours, respectively. A nominal level of bicycling activity was observed during the study area, likely due to late November/December temperatures. However, there is an increased amount of attention in providing improved bicycle amenities within this area. As part of the City of Boston "Boston Bikes" program there is an ongoing 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. Specifically, Albany Street is considered suitable for advanced bikers only due to the higher-volume, one-way roadway configuration, and lack of defined bicycle accommodations.

Boston also has continually been advancing its "Hubway" city-wide bike-sharing program, which will soon be renamed as "Blue Bikes" through a partnership with Blue Cross Blue Shield of Massachusetts. There are already existing bike-share stations located adjacent to the Ink Block site on Harrison Avenue and at the Troy Boston development on the opposite side of Traveler Street from the Project Site. The facilities are shown on Figure 4.12. There also is the potential for a bike share-station being provided within the Underground at Ink Block public space/parking facility on the opposite side of Albany Street under Route I-93.

4.3.5 Existing Public Transportation

The Project Site is currently well served by the Massachusetts Bay Transportation Authority's (MBTA) public transportation services, as shown in Figure 4.13. Access to the Red Line's Broadway Station is a short walk to the east across the Traveler Street Bridge. The Orange Line's Tufts Medical Center Station is located to the north, over the Washington Street Bridge. Both of these rapid transit rail stations are located within a half mile from the Project Site. Four local bus routes serve the study area, including the Silver Line SL4 and SL5 rapid bus routes. Peak period frequencies and headways for MBTA services are summarized in Table 4-2.

Table 4-2 MBTA Service

Service	Origin / Destination	Peak-hour Frequency (minutes)
Red Line – Broadway Station	Alewife – Braintree/Ashmont	9
Orange Line – Tufts Medical Center Station	Oak Grove – Forest Hills	5
Route 9	City Point – Copley Square	5-10
Route 11	City Point – Downtown Bayview	7-22
Silver Line - SL 4	Dudley Station – South Station	5-15
Silver Line - SL 5	Dudley Station – Downtown Crossing	4-12

Source: MBTA

4.3.6 Existing Parking

Figure 4.14 identifies the existing parking provided within the vicinity of the Project Site. Public parking is available at the 175-space parking lot at Underground at Ink Block on the east side of Albany Street under I-93. Parking exists at other nearby on-street or off-street parking locations as well. As discussed later in this study, the Project is not anticipated to have significant parking needs due to the nature of the development, and surrounding public transportation availability. The minimal parking needs associated with the Project are expected to be satisfied through the Underground at Ink Block parking lot noted above.

4.3.7 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 2011 to 2015.

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 intersection in the district in which the town or city is located could indicate safety or geometric issues for a particular intersection. Since Boston is located in MassDOT's District 6, the calculated crash rates were compared to

those of MassDOT District 6, which are 0.76 for signalized intersection and 0.58 for unsignalized intersections. These rates imply that, on average, 0.76 accidents occurred per million vehicles entering signalized intersections throughout District 6, and 0.58 accidents occurred per million vehicles entering unsignalized intersections. It should be noted that the location for some accidents cannot be precisely determined from the database. These locations typically involve interchange intersections. Additionally, some accidents may have occurred but were either not reported or not included in the database, and therefore not considered. A summary of the study intersections vehicle accident history is presented in Table 4-3.

Review of the accident data indicates that while the intersection of Albany Street at Traveler Street is equal to the MassDOT crash rate, the remainder of the intersections are below the MassDOT crash rates for this district. The majority of crashes at Albany Street/Traveler Street are "angle" or "sideswipe in the same direction" type accidents. Some of these crashes could be partly attributable to conflicts between traffic wishing to switch lanes at the intersection.

Crash records are not available in the MassDOT for the private Site driveways, or for the recently constructed Traveler Street at the Underground at Ink Block parking lot exit.

Table 4-3 Vehicular Crash Summary (2011-2015)

	Herald Street	Ink Block Driveway & I-93 On-Ramp	Traveler Street
Signalized?	Yes	No	Yes
MassDOT Average Crash Rate	0.76	0.58	0.76
MassDOT Calculated Crash Rate	0.24	0.02	0.76
Exceeds?	No	No	No
Year			
2011	4	0	6
2012	1	0	6
2013	4	1	5
2014	0	0	4
<u>2015</u>	<u>1</u>	<u>0</u>	<u>2</u>
Total	10	1	23
Collision Type			
Angle	2	0	10
Head-on	0	0	0
Rear-end	8	1	1
Rear-to-rear	0	0	0
Sideswipe, opposite direction	0	0	0
Sideswipe, same direction	0	0	6
Single Vehicle Crash	0	0	5
Unknown	0	0	0
<u>Not Reported</u>	<u>0</u>	<u>0</u>	<u>1</u>
Total	10	1	23
Severity			
Fatal Injury	0	0	1
Non-fatal Injury	2	0	7
Property Only	8	1	13
Not Reported	0	0	2
Unknown	<u>0</u>	<u>0</u>	<u>0</u>
Total	10	1	23
Time of day			
Weekday, 7:00 AM-9:00 AM	0	0	1
Weekday, 4:00 PM – 6:00 PM	0	0	7
Saturday, 11:00 AM – 2:00 PM	0	0	0
Weekday, other time	7	0	12
<u>Weekend, other time</u>	<u>3</u>	<u>1</u>	<u>3</u>
Total	10	1	23
Pavement Conditions			
Dry	9	0	18
Wet	1	1	4
Snow	0	0	0
Ice	0	0	0
<u>Not Reported</u>	<u>0</u>	<u>0</u>	<u>1</u>
Total	10	1	23
Non-Motorist (Ped/Bike)	0	0	1

Source: MassDOT crash data

4.4 Future Transportation Conditions

To assess future transportation conditions, the TIAS considered the following two future scenarios for a seven-year time horizon (2024) from the time of the existing conditions described earlier:

- › **2024 No-Build Condition** – assumes no changes to the Project Site, but with background growth associated with other planned projects and general background regional growth, along with any planned roadway/ infrastructure improvements; and
- › **2024 Build Condition** – assuming the same background growth and any planned infrastructure improvements, but including the redevelopment of the Project Site.

4.4.1 2024 No-Build Condition

The 2024 No-Build Condition was developed to evaluate future transportation conditions in the traffic study area without consideration of the Project. In accordance with MassDOT guidelines, this future analysis year represents a seven-year horizon from 2017 existing conditions. The No-Build Condition provides insight to future traffic conditions as a result of regional growth as well as specific planned projects that are expected to affect the local roadway network.

A background growth rate of half-a-percent per year was applied to the traffic volumes. This growth rate is consistent with both growth rates established by the Boston Transportation Department (BTD) as well as recent traffic studies for other developments in this area.

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

- › **80 East Berkeley Street – The Druker Company, Ltd.** – The proposal for this site involves the construction of 290,000 sf of office space with 18,000 sf of ground floor retail/restaurant space. The background traffic volumes associated with this project were obtained from the August 8, 2013 Expanded Environmental Notification Form.
- › **Boston Medical Institutional Master Plan – Boston University Medical Center** – The 2013 Boston University Medical Center Institutional Master Plan Amendment/Large Project Review considered the expansion of various components of that facility by 2019. Specifically, the analysis included a 27,800 sf expansion to the Moakley Cancer Center and a 78,800 sf inpatient building with supporting office and facility space.
- › **321 Harrison Avenue** – Based on the Conceptual Design Report for this project, approximately 230,000 sf of new office space will be developed on this site.
- › **345 Harrison Avenue – Graybar** – Based on a June 14, 2013 Letter of Intent, the development proposal for this site involves the construction of approximately 560 residential units and 33,000 square feet of retail space.
- › **370-380 Harrison Avenue – Quinzani's Bakery site** – a mixed-use development including 232 apartment units and 92 condominiums, along with 8,500 sf of supporting retail/restaurant space.

- › **Ink Block – Siena** – 76 condominium units remaining out of the 471 originally approved Ink Block residential units within the mixed-use development.
- › **AC Hotel** – a new 200-room hotel recently opened in early March 2018 at 225 Albany Street immediately south of the Project Site.

The resulting 2024 No Build weekday morning, midday, and evening peak hour traffic volumes are shown in Figures 4.15 through 4.17. Supporting data are included in Appendix C.

4.4.2 Planned Roadway Improvements

The City of Boston is planning improvements to the Harrison Avenue corridor in the vicinity of the Project. The design plans for these improvements were funded by the Ink Block proponent as a condition of that Project's approval, and construction is anticipated to start in 2018. The work involves the Harrison Avenue cross-section being reduced from four lanes to two lanes, with additional exclusive turn lanes provided at key intersections. In conjunction with these improvements, separated bike lanes will be provided on both sides of Harrison Avenue from Herald Street southerly to East Berkeley Street. Additional enhancements to signal equipment, phasing, and timing also will be implemented as part of that work, along with streetscape enhancements.

As part of a separate project, the City also will be reconfiguring Washington Street to recue the current four-lane cross-section to provide single lanes in each direction with the accompanying bus-only lanes in each direction. Additional enhancements to bike accommodations also will be implemented.

Both the Harrison Avenue and Washington Street projects will be connected by an improved Traveler Street, as developed as part of the Washington Street design. That work will involve two-way travel being allowed instead of the current one-way westbound configuration. New signal equipment and phasing will be provided at this roadways intersection with both streets.

In addition to these definitively planned improvements, the City also envisioned additional changes in this area as part of its 2012 Albany Corridor Strategic Plan. Most of the improvements considered involve enhancements for pedestrian and bicycle travel, and converting various one-way roadways to allow for two-way travel. However, the sections of Albany Street and Herald Street immediately adjacent to the Site are not expected to be modified significantly.

4.4.3 2024 Build Condition

The 2024 Build Conditions includes the demolition of the existing building on a portion of the Project Site and the construction of a new 250-unit residential building.

Project-generated Trips

To assess the traffic impacts of the Project, trip estimates were based on standard rates from the Institute of Transportation Engineers (ITE) Trip Generation². Trip generation for the proposed 250-unit residential development was estimated based on ITE Land Use Code (LUC) 222 "High-Rise Residential".

This land-use category further characterizes the data into sub-categories of sites located in general urban/suburban, dense multi-use urban, and center city core environments. While the Project setting more closely matches the definition of a center city core, there is limited data for that sub-category. Accordingly, trip generation was estimated using the standard general urban/suburban data, which was then adjusted using mode splits as discussed below to reflect the more urban travel activity expected as part of the Project.

Mode Share and Vehicle Occupancy Rates

After the initial calculation of the base Project trip generation using ITE data, further adjustments were made to account for local mode share following guidelines by the Boston Transportation Department (BTD) for individual city zones. This mode-shared calculation is critical to the evaluation of overall 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. While the Project Site falls within Zone 3, it is located at the corner junction of where Zones 2, 3 8 and 15 all meet. Consistent with the prior studies of the Ink Block and AC Hotel sites, Zone 15 data was used for this study. While use of the Zone 3 data would actually result in less vehicular traffic being projected, use of the Zone 15 data provides a more realistic estimate of the mode shares expected to be found in this area.

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 712. While the Project Site actually falls within Tract 704, the data for Tract 704 were utilized for the same reasons noted above. The results of the adjusted trip generation are provided in Table 4-4.

2 Trip Generation Manual; Tenth Edition; Institute of Transportation Engineers; Washington, D.C.; 2017.

Table 4-4 Project Trip Generation, Total Project-Related Trips by Mode

Time Period / Direction	Public Transportation	Walk/Bike/Other	Vehicle Trips
Weekday Daily			
Enter	110	168	335
<u>Exit</u>	<u>110</u>	<u>168</u>	<u>335</u>
Total	220	337	671
Weekday			
Enter	4	6	11
<u>Exit</u>	<u>20</u>	<u>18</u>	<u>27</u>
Total	24	24	38
Weekday Evening			
Enter	18	17	25
<u>Exit</u>	<u>7</u>	<u>11</u>	<u>19</u>
Total	25	27	44
Saturday Daily			
Enter	111	169	338
<u>Exit</u>	<u>111</u>	<u>169</u>	<u>338</u>
Total	222	339	676
Saturday Midday			
Enter	10	16	31
<u>Exit</u>	<u>6</u>	<u>13</u>	<u>28</u>
Total	16	29	59

Source: Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, Washington D.C. (2017).

Notes: Land Use Codes (LUC) 222 (High-Rise Residential). The base trip generation estimates were subsequently categorized into transit, walk, bike or vehicular trips following BTM's guidelines for Zone 15. Initial trip generation estimates were based on a 245-unit proposal. Traffic generation from the five additional units now proposed results in a negligible increase compared to the vehicle trips shown above after the application of the mode splits.

Due to the urban neighborhood environment and lack of parking within the Project Site, a sizeable portion of the Project-generated trips are expected to use the MBTA transit system, or walk and/or bike. As shown in Table 4-4, the Project will generate 671 and 676 vehicle trips on a typical weekday and Saturday. During the respective weekday morning and evening peak hours the Project will generate 38 and 44 trips and the Project will generate 59 trips during the Saturday midday peak hour. These peak-period estimates likely are conservatively high as most residents traveling to and from work will either walk, bike, or use public transportation. Travel by taxi and private ride-sharing services also should occur on a regular basis. However, that activity should be less commuter related, and more closely associated with off-peak travel. The resulting automobile trip distribution was assigned to the study area roadways as discussed in the following section.

Automobile Trip 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 Area 3 (where 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 Project is summarized in Table 4-5.

Table 4-5 Geographic Trip Distribution

Corridor	Residential Distribution
Albany Street	47%
Herald Street	11%
Harrison Avenue – from north	10%
Harrison Avenue – from south	11%
Frontage Road	19%
East Berkeley Street	2%
Total	100%

The net-new Project-generated vehicle trips were added to the No-Build traffic networks using the distribution patterns summarized in Table 4-5 above. Traffic volume network worksheets are provided in the Appendix C. The resulting 2022 Build Condition networks are shown in Figures 4.18 through 4.20 for the weekday morning, weekday evening and Saturday midday peak hours, respectively.

The Project is unique in that there will not be any parking provided within the Site. However, there still will be vehicular traffic associated with taxis and private ride services visiting the Site. Some residents could also choose to own an automobile and park at an off-site location. This most likely would involve residents leasing a parking space from the Underground at Ink Block parking facility on the opposite side of Albany Street underneath Route I-93. That parking facility is under the control of the Proponent so it is possible that a limited number of spaces could be available to residents choosing to pay to park there. Considering these factors, half of the vehicular traffic was assigned to the Ink Block driveways with the other half assumed to be using the Underground at Ink Block parking lot which has access and egress on the one-way eastbound section of Traveler Street to the east of Albany Street.

A comprehensive operational and capacity analysis of the study area intersections is presented later in this chapter. Potential improvements to area intersections are also discussed later.

4.5 Traffic Operations Analysis

Consistent with MassDOT and BTD guidelines, Synchro software was used to model level of service (LOS) operations at the study area intersections. LOS is a qualitative measure of control delay at an intersection providing an index to the operational qualities of a roadway or intersection.

LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS D is considered acceptable. LOS E indicates vehicles experience significant delay while LOS F suggests unacceptable delay for the average vehicle. LOS thresholds differ for signalized and unsignalized intersections. Longer delays at signalized intersections than at unsignalized intersections are perceived as acceptable.

Table 4-6 below presents the level of service delay threshold criteria as defined in the 2010 Highway Capacity Manual (HCM).

Table 4-6 Level-of-Service Criteria

Level of Service	Un-signalized Intersection	Signalized Intersection
	Control Delay (sec/veh)	Control Delay (sec/veh)
LOS A	0-10	≤ 10
LOS B	> 10-15	> 10-20
LOS C	> 15-25	> 20-35
LOS D	> 25-35	> 35-55
LOS E	> 35-50	> 55-80
LOS F	> 50	> 80

Source: 2010 HCM

Adjustments were made to the Synchro model to include characteristics of the study area such as heavy vehicles, bus operations, parking activity, and pedestrian crossings. The capacity analysis results are summarized in the following sections.

4.5.1 Signalized Capacity Analysis

The LOS results of the signalized capacity analyses are summarized in Table 4-7 for the Existing, No-Build, and Build conditions. Detailed results including delay by approach, queuing and volume to capacity ratio are presented in Appendix C, along with the detailed Synchro results.

Table 4-7 Signalized Intersection Capacity Analysis Summary

Location	2017 Existing Conditions					2024 No-Build Conditions					2024 Build Conditions				
	v/c ¹	Del ²	LOS ³	Veh. queues		v/c	Del	LOS	Veh. queues		v/c	Del	LOS	Veh. queues	
				50th ⁴	95th ⁵				50th	95th				50th	95th
Albany Street at Herald Street															
<u>Weekday Morning</u>															
Herald Street EB R	1.13	96	F	~306	#409	>1.20	>120	F	~364	#471	>1.20	>120	F	~364	#471
Albany Street SB T	<u>0.52</u>	<u>13</u>	<u>B</u>	<u>135</u>	<u>169</u>	0.70	16	B	208	262	0.70	16	B	209	263
Overall	0.76	54	D			0.91	73	E			0.91	73	E		
<u>Weekday Evening</u>															
Herald Street EB R	1.05	41	D	~482	m#539	>1.20	>120	F	~657	#755	>1.20	>120	F	~660	#759
Albany Street SB T	<u>0.52</u>	<u>21</u>	<u>C</u>	<u>173</u>	<u>215</u>	0.70	24	C	261	316	0.71	24	C	264	320
Overall	0.79	33	C			0.98	82	F			0.98	83	F		
<u>Saturday Midday</u>															
Herald Street EB R	0.96	40	D	314	181	1.07	68	E	~423	#534	1.07	70	E	~425	#537
Albany Street SB T	<u>0.58</u>	<u>20</u>	<u>B</u>	<u>#445</u>	<u>226</u>	0.85	27	C	310	378	0.86	27	C	315	384
Overall	0.77	30	C			0.96	46	D			0.96	47	D		
Albany Street at Traveler Street															
<u>Weekday Morning</u>															
Traveler Street EB TR	0.81	61	E	174	233	1.06	116	F	~286	#476	1.06	116	F	~286	#476
Albany Street SB L	0.24	19	B	0	46	0.64	25	C	73	260	0.65	26	C	81	273
Albany Street SB TR	<u>0.44</u>	<u>28</u>	<u>C</u>	<u>431</u>	<u>497</u>	1.02	58	E	~679	#827	1.03	61	E	~692	#840
Overall	0.67	29	C			0.85	56	E			0.85	58	E		
<u>Weekday Evening</u>															
Traveler Street EB TR	>1.20	>120	F	~316	#487	>1.20	>120	F	~539	#750	>1.20	>120	F	~539	#750
Albany Street SB L	0.51	20	B	24	118	0.73	27	C	139	369	0.75	28	C	158	406
Albany Street SB TR	<u>0.58</u>	<u>20</u>	<u>B</u>	<u>222</u>	<u>287</u>	0.77	25	C	343	440	0.78	25	C	349	446
Overall	0.60	50	D			0.82	103	F			0.83	103	F		
<u>Saturday Midday</u>															
Traveler Street EB TR	0.74	49	D	145	227	1.03	98	F	~283	#475	1.03	98	F	~283	\$475
Albany Street SB L	0.44	20	B	0	73	0.73	32	C	119	372	0.77	34	C	146	#456
Albany Street SB TR	<u>0.78</u>	<u>27</u>	<u>C</u>	<u>358</u>	<u>481</u>	1.16	110	F	~710	#857	1.17	115	F	~724	#870
Overall	0.62	28	C			0.89	85	F			0.90	89	F		

1 volume to capacity ratio

2 delay

3 level of service

4 50th percentile queue5 95th percentile queue

~ Volume exceeds capacity, queue is theoretically infinite.

95th percentile volume exceeds capacity, queue may be longer.

m Volume for 95th percentile queue is metered by upstream signal.

n/a Movement not applicable under condition

Table 4-7 Signalized Intersection Capacity Analysis Summary (continued)

Location	2017 Existing Conditions					2024 No-Build Conditions					2024 Build Conditions				
	v/c ¹	Del ²	LOS ³	Veh. queues		v/c	Del	LOS	Veh. queues		v/c	Del	LOS	Veh. queues	
				50th	95th				50th	95th				50th	95th
Travelers Street at Lot 5 Driveway															
<u>Weekday Morning</u>															
Traveler Street EB LT	0.28	2	A	41	36	0.34	2	A	42	m36	0.35	2	A	42	m36
Lot 5 SB R	0.00	0	A	0	0	0.00	0	A	0	0	0.06	43	D	12	32
Overall	0.25	2	A			0.30	2	A			0.31	3	A		
<u>Weekday Evening</u>															
Traveler Street EB LT	0.32	2	A	40	m33	0.40	2	A	40	m32	0.40	2	A	40	m33
Lot 5 SB R	0.05	38	D	10	10	0.02	38	D	4	14	0.05	38	D	11	30
Overall	0.28	3	A			0.34	2	A			0.35	2	A		
<u>Saturday Midday</u>															
Traveler Street EB LT	0.25	3	A	41	7	0.34	3	A	47	m46	0.35	3	A	47	m48
Lot 5 SB R	0.03	38	D	41	12	0.02	38	D	4	14	0.07	38	D	36	58
Overall	0.22	3	A			0.30	3	A			0.31	3	A		

1 volume to capacity ratio

2 delay

3 level of service

4 50th percentile queue5 95th percentile queue

~ Volume exceeds capacity, queue is theoretically infinite.

95th percentile volume exceeds capacity, queue may be longer.

m Volume for 95th percentile queue is metered by upstream signal.

n/a Movement not applicable under condition

As would be expected given the urban area, several of the study area intersections operate with long delays either on some of their individual approaches or for the entire intersection. Detailed discussion regarding the operations the study area intersections highlighted in Table 4-7 is provided in the following sections.

Herald Street/Albany Street

During the peak hours studied, the Herald Street/Albany Street intersection operates at an acceptable LOS D or better. However, during the weekday morning and evening peak hours the Herald Street eastbound right-turn movement onto Albany Street operates over theoretical capacity and at LOS F during the weekday morning peak hour. This movement also is near capacity during Saturday midday peak hour conditions. The operation of this location is further impacted by queues on the Route I-93 South on-ramp extend back onto Albany Street and through the Herald Street/Albany Street intersection on a regular basis. Because of that, while these delays are not attributable to the Herald Street/Albany Street signalized intersection operation, the actual delays still are much greater than that reported by the analysis. From reviewing the intersection geometry and signal operation there are no apparent capacity-enhancing measures that could be implemented to address these issues, which are primarily related to Route I-93. Regardless, depending on the given time period, the Project only will be adding

negligible volumes to either approach – less than one vehicle per every signal cycle – which should not create a perceptible impact.

Albany Street/Traveler Street

The overall Traveler Street/Albany Street signalized intersection currently operates at an acceptable LOS D or better under the 2017 Existing conditions. However, the eastbound Traveler Street approach currently operates at LOS E during the weekday morning peak hour, and over capacity at LOS F during the weekday evening peak hour. These conditions do not yet fully reflect the benefits associated with signal modifications being implemented by MassDOT at this location. While most of those changes have been put in place, some work is still remaining at the northwest corner of the intersection. Specifically, a new Albany Street sidewalk and signal changes will be put in place following the completion of the Siena development's construction next to that corner. The Project is only expected to add minimal volumes to the Traveler Street eastbound intersection approach, so operations should not be notably impacted at this location.

Underground at Ink Block/Traveler Street

As part of the construction of the Underground at Ink Block facility underneath Route I-93 a new signalized egress driveway was provided onto Traveler Street. The driveway operates under the same traffic signal controller as the adjacent Traveler Street/Albany Street so conditions at both locations are closely related. As shown in Table 4-7, this intersection currently operates at LOS A during each of the peak hours studied.

4.5.2 Unsignalized Capacity Analysis

While no new driveways or parking will be provided as part of this Project, residents using taxi or private ride services may use the adjacent Ink Block site to travel between that site and the surrounding roadway system. Detailed results including delay by approach, queuing and volume to capacity ratio are presented in Appendix C, along with the detailed Synchro results.

The analytical methodologies typically used for the analysis of unsignalized intersections use conservative analysis parameters such as high critical gaps. Actual field observations indicate that drivers on minor streets and driveways generally accept smaller gaps in traffic than the default values used in the analysis procedures and therefore experience less delay than reported by the analysis software. Also, the analysis methodologies do not fully take into account the beneficial grouping or platooning effects caused by the 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. The capacity analysis results for the unsignalized study area intersections are summarized in Table 4-8.

Table 4-8 Unsignalized Intersection Capacity Analysis Summary

Location	Critical Movement	Peak Period	2017 Existing Conditions					2024 No-Build Conditions					2024 Build Conditions				
			Dem ¹	v/c ²	Del ³	LOS ⁴	95th Queue ⁵	Dem	v/c	Del	LOS	95th Queue	Dem	v/c	Del	LOS	95th Queue
Albany Street at I-93 On-Ramp/ Ink Block exit	EB TR	Weekday Morning	10	0.02	10	A	2	30	0.05	11	B	4	45	0.07	11	B	6
		Weekday Evening	6	>1.2	Err	F	Err	36	>1.20	Err	F	Err	46	>1.20	Err	F	Err
		Saturday Midday	10	0.02	9	A	1	50	0.08	11	B	6	65	0.10	11	B	9
	SB L	Weekday Morning	590	0.39	7	A	47	665	0.45	8	A	61	665	0.45	8	A	61
		Weekday Evening	1015	0.64	11	B	123	1200	0.80	15	C	243	1200	0.80	15	C	243
		Saturday Midday	775	0.49	8	A	70	870	0.58	10	A	100	870	0.58	10	A	100

- 1 demand
- 2 volume-to-capacity ratio
- 3 delay
- 4 level of service
- 5 95th percentile queue

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Albany Street at Ink Block Driveway

The existing northerly Albany Street driveway is restricted to exiting right-turns only. As shown in Table 4-8, exiting traffic from this driveway is projected to operate at LOS A during the weekday morning and Saturday midday peak hours, but at LOS F during the weekday evening peak hour due to the heavy opposing southbound commuter traffic. These capacity analysis results are also conservative in that they do not account for gaps that will continue to be created by the existing Albany Street signal at Traveler Street. During the phase of the signal when Albany Street is stopped and Traveler Street westbound has a green indication, there is not any opposing traffic in the westbound direction on Traveler Street. This is due to the "No Turn on Red" restriction from Albany Street that will remain in place as part of this Project. Due to that condition, exiting traffic from this driveway may experience slightly lower delays than that reported by the analysis. Regardless, it is expected that the overwhelming majority of Site residents will not use private automobile to travel and from the Site.

4.6 Proposed Site Access Plan

The Project will utilize the existing Ink Block driveways to access and egress the Site as discussed below. As a residential development, the Project will have minimal loading and service needs. Both the automobile access and servicing needs for the Site are discussed in the following sections, and the overall site access plan is shown in Figure 4.21.

4.6.1 Site Access

As the unique nature of the Project will not require on-site parking, vehicular traffic visiting the site should mostly be oriented to pick-up/drop-off activity, and mail and other deliveries. This activity will occur using the same Albany Street driveways current serving the AC Hotel and adjacent Ink Block development. Specifically, these existing driveways will remain in their same general locations, but with some minor alterations to the northerly curb cut. The southerly driveway is located approximately 120 feet to the north of Traveler Street, and will continue to be restricted to entering right-turn movements only. The northerly driveway will remain restricted to allowing exiting right-turns only, but with some accompanying minor physical changes to the driveway design to accommodate the Project. Project traffic also will be able to use the existing Traveler Street and Harrison Avenue driveways to access the Site, but the Project is expected to be oriented primarily to Albany Street.

4.6.2 Pick-Up/Drop-Off Areas

An existing 100-foot long Albany Street parking area next to the AC Hotel site is proposed to be extended as part of this Project. That existing area currently is intended to be used by the hotel for short-term drop-off activity to the hotel as opposed to standard long-term on-street parking. As discussed earlier, the current

Project is expected to have regular visits to and from the area by taxi or private ride-services. Therefore, it would be beneficial to extend the exiting Albany Street area to help avoid any overuse of the existing limited area, which otherwise could result in queues blocking the Albany Street travel lanes. The planned extension would involve the exiting lane being extended by up to 160 feet to the north. The overall use and intent of this area would remain unchanged, but providing the additional storage will help to avoid impacts to Albany Street traffic flow. This feature will require approval from MassDOT as part of its review for the new or amended Access Permit that will be required for the new site use and driveway modifications. On February 13, 2018, the Proponent met with MassDOT to discuss this proposal and provided additional information for review following the meeting. While MassDOT's initial reaction appeared favorable, a formal determination will not be made until the Access Permit application has been submitted.

4.6.3 Parking

The Project is heavily oriented towards tenants (such as young professionals) that predominantly will utilize other forms of travel not requiring private-vehicle ownership. As such, no on-site parking is proposed. Figure 4.14 identifies the existing parking provided which could be available for use in the vicinity of the Project Site. The most likely location for any parking associated with this Project will be at the 175-space parking lot at Underground at Ink Block immediately to the east of the Site under I-93. This parking supply should be more than adequate to accommodate the minimal potential parking needs associated with the Project.

4.6.4 Service and Loading

As noted earlier, by their nature, residential developments have minimal loading needs compared to retail or office uses. For this Project, it is expected that loading activity primarily will be limited to deliveries by mail and other private package delivery services. These deliveries should be quick and nature and should only require a delivery vehicle (likely a small box truck) to be on the Project Site for a few minutes. This activity should be confined to the newly created pick-up/drop-off area along the south side of the Albany Street exit driveway.

The Project also will receive regular trash servicing. The trash transfer area within the Project will be located at the southwesterly corner of the building to the north of the exit driveway. Trash pickup likely will occur on a weekly basis, with the trash bins being wheeled out of the building to the trash truck stopped along the westerly side of the building. This activity only will require the truck to be on the Project Site briefly.

Move-in and move-out activity for residents also should involve considerably smaller trucks than those found at most residential developments. This is due to the Project apartments being pre-furnished, so that most residents will be able to move their belongings in their own vehicles or a small van or truck. This activity, which will be infrequent, will occur within the proposed pick-up/drop-off lane within the Site.

4.6.5 Pedestrian Facilities

As part of the construction of the existing Ink Block and AC Hotel sites, new and improved sidewalks have been installed (or will be installed shortly) on the surrounding roadways. With these improvements, and recent signal improvements in the area, a highly walkable environment will be provided for pedestrians. The Proponent also intends to provide a new pedestrian entrance at the northeast corner of the building. This entrance will be limited to pedestrians only and, as such, no changes will be required to the adjacent Albany Street or Herald Street curblines as part of this work.

4.6.6 Bicycle Facilities

Secure, on-site bicycle storage for 125 bicycles will be provided as part of the Project, along with space for short-term bicycle racks having a 16-bike capacity in total. The bike parking room will be located in a visible location opposite the main lobby entry and is anticipated to include seating and a bike repair station to accommodate and encourage bicycle use. The outdoor bicycle racks will be provided in several locations around the Project Site to accommodate at least 16 bicycles with the ability to provide more if demand exists. Residents and visitors will have access to existing short-term bike parking at Whole Foods and to short- and long-term bicycle parking at Underground at Ink Block.

The area also is currently will served by the Hubway (soon to be "Blue Bikes") bike-sharing program. Existing bike-share stations are located next to the Ink Block site on both Harrison Avenue and at the Troy Boston site to the south of Traveler Street. The potential exists for an additional bike share-station being provided within the Underground at Ink Block public space/parking facility, but there are no definitive plans for that at this time.

4.6.7 Transportation Demand Management

Consistent with the City's goals to reduce auto-dependency, the Project will include Transportation Demand Management (TDM) measures to encourage alternative modes of transportation. TDM measures are most often directed at commuter travel; however, due to the mixed-use nature and nearby public transportation there are opportunities to implement TDM measure for the proposed residential use.

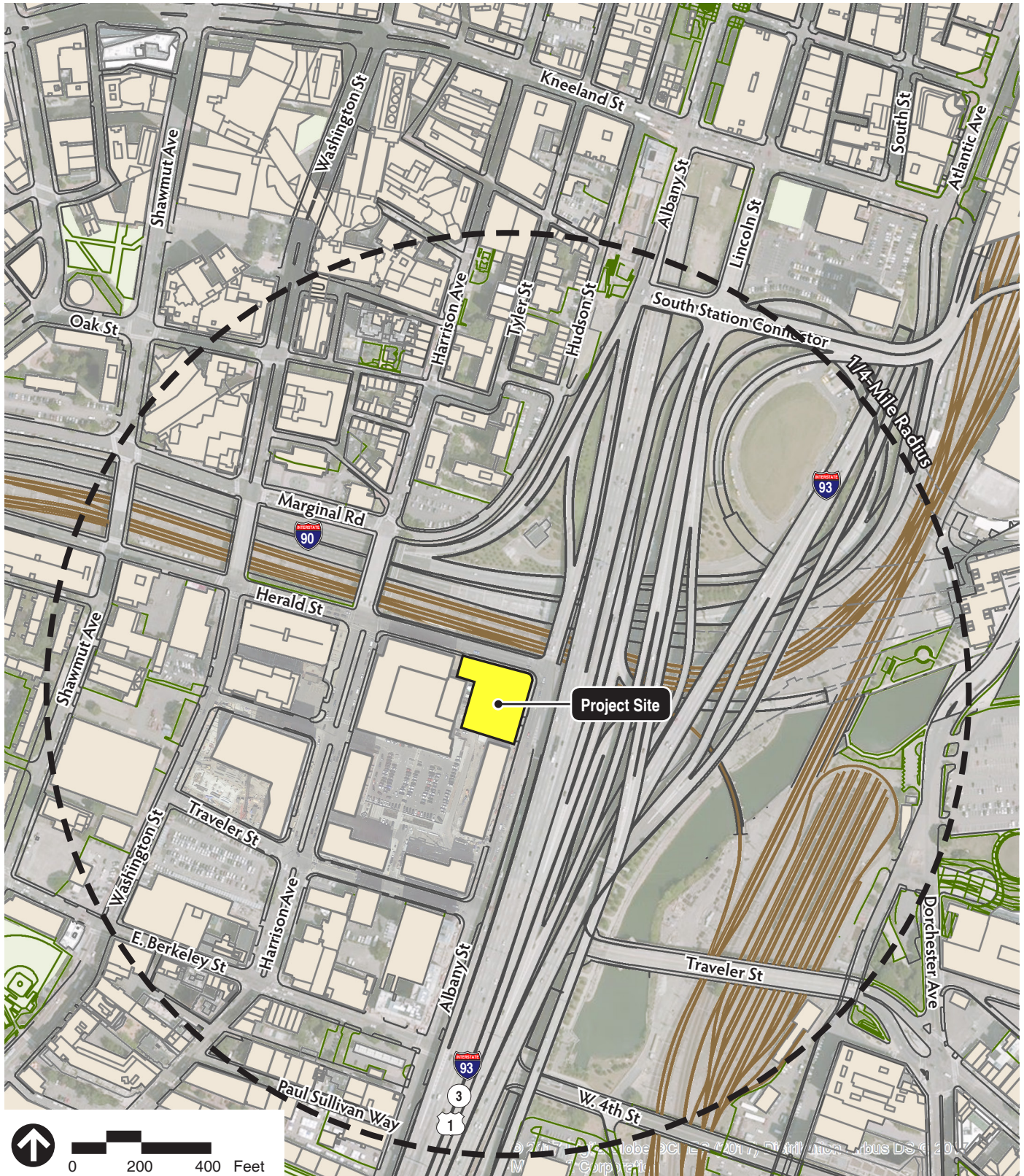
The following discusses the land use types for which TDM measures will be implemented. A description of the TDM elements is presented in this section along with information on how those elements aid residents and visitors getting to and from the Project. Measures being considered as part of the Project include:

- › Provide secure bicycle storage for building residents and employees. As noted earlier, the Project will include a secure, on-site bicycle storage facility containing 125 spaces. The Project also will be designed to include external space for bicycle racks accommodating at least 16 bikes. Ample bicycle parking racks are

available in the area, and secured bicycle parking also is available at the Underground at Ink Block parking lot underneath I-93 opposite the Project Site.

- › No on-site parking will be provided as part of the Project, which should almost entirely eliminate private automobile use associated with the Project. Instead, most residents will utilize nearby MBTA train and bus service, taxis, and private ride services (Uber, Lyft, and others).
- › Designate an on-site Transportation Coordinator to help promote alternative transportation measures. The person in this role will disseminate information on alternate modes of transportation and developing transportation related marketing and education materials, including a website for residents. This would include, but is not limited to, providing transit information such as maps and schedules to new residents in an orientation package.
- › Developing and maintaining information pertaining to pedestrian and cycling access to and from the Project Site.

All TDM measures will be formalized in the Transportation Access Plan Agreement (TAPA) to be executed with BTM.



Source: MassGIS, City of Boston



Figure 4.1
Traffic Study Area

**217 Albany Street
Boston, Massachusetts**

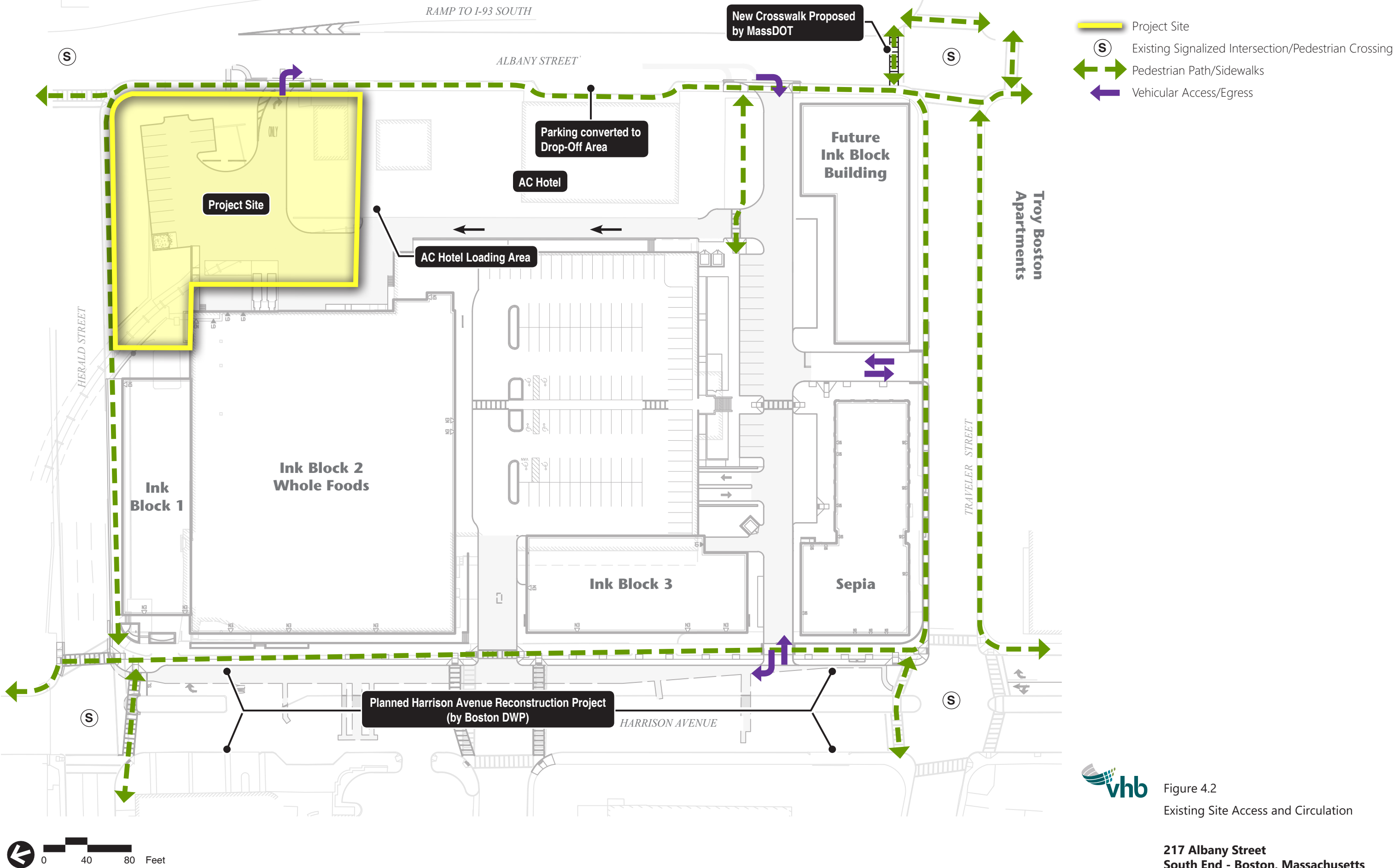
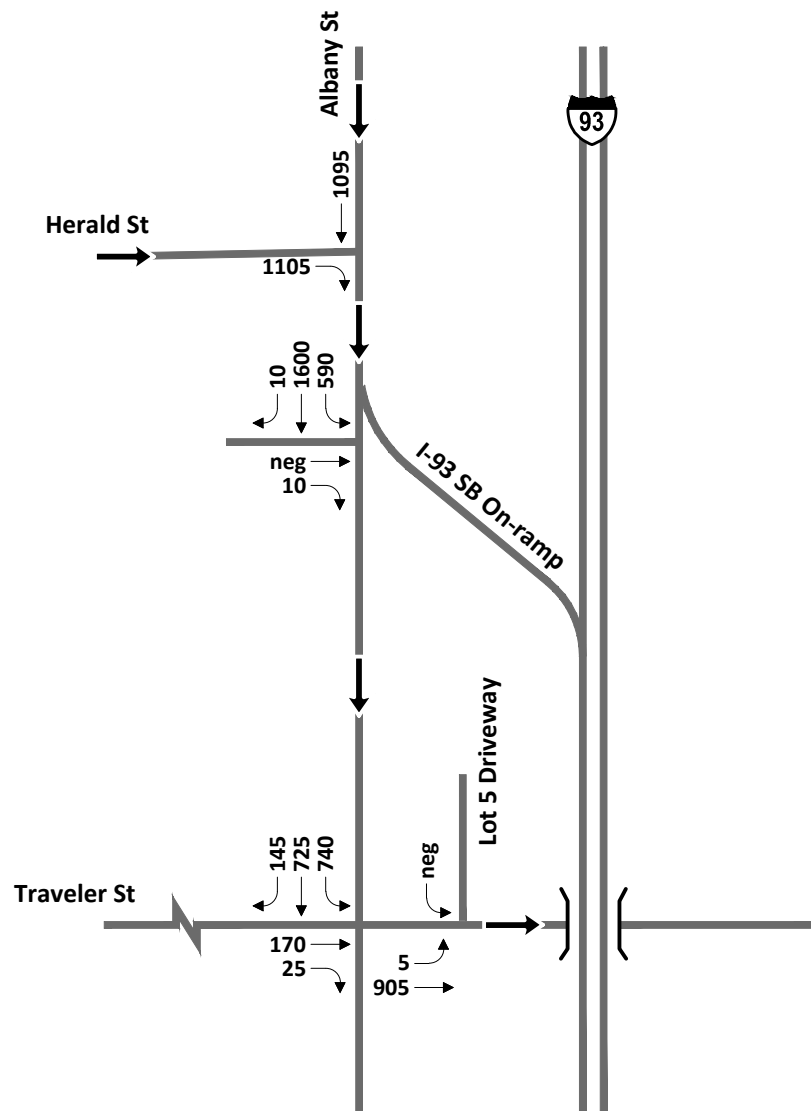


Figure 4.2
Existing Site Access and Circulation



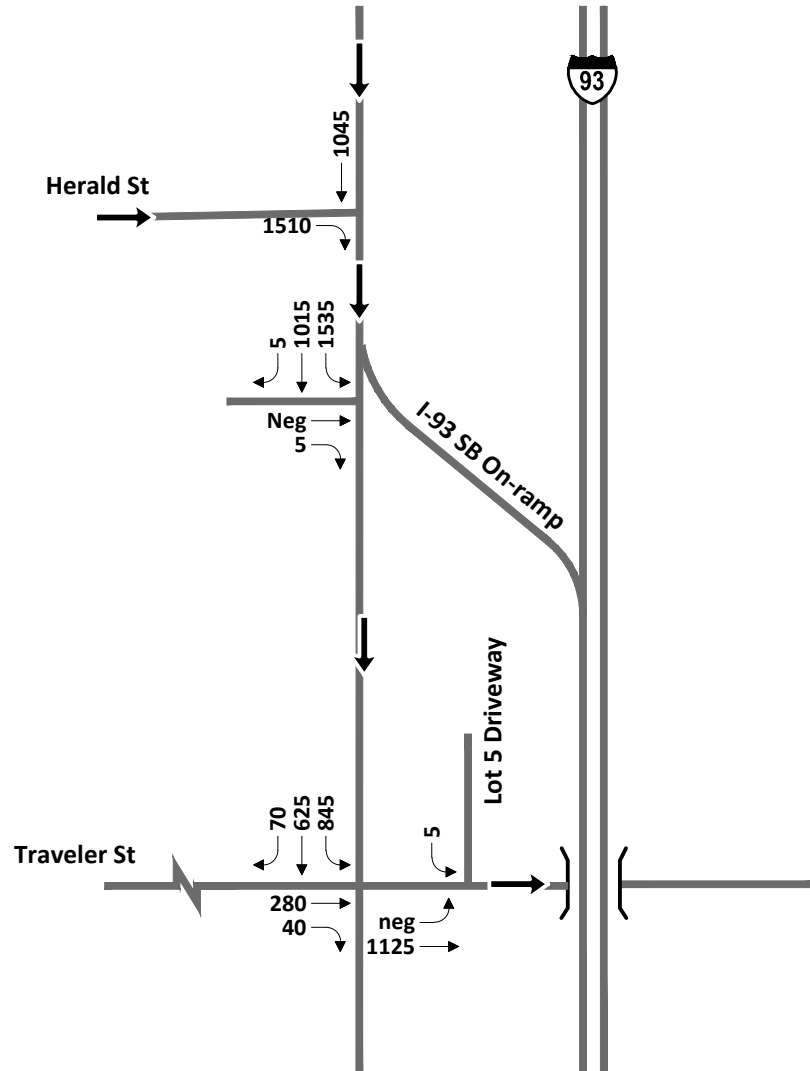
↑
Not to Scale



Figure 4.3

2017 Existing Conditions Weekday Morning
Peak Hour Traffic Volumes

217 Albany Street
Boston, Massachusetts



Not to Scale



Figure 4.4

2017 Existing Conditions Weekday Evening
Peak Hour Traffic Volumes

217 Albany Street
Boston, Massachusetts

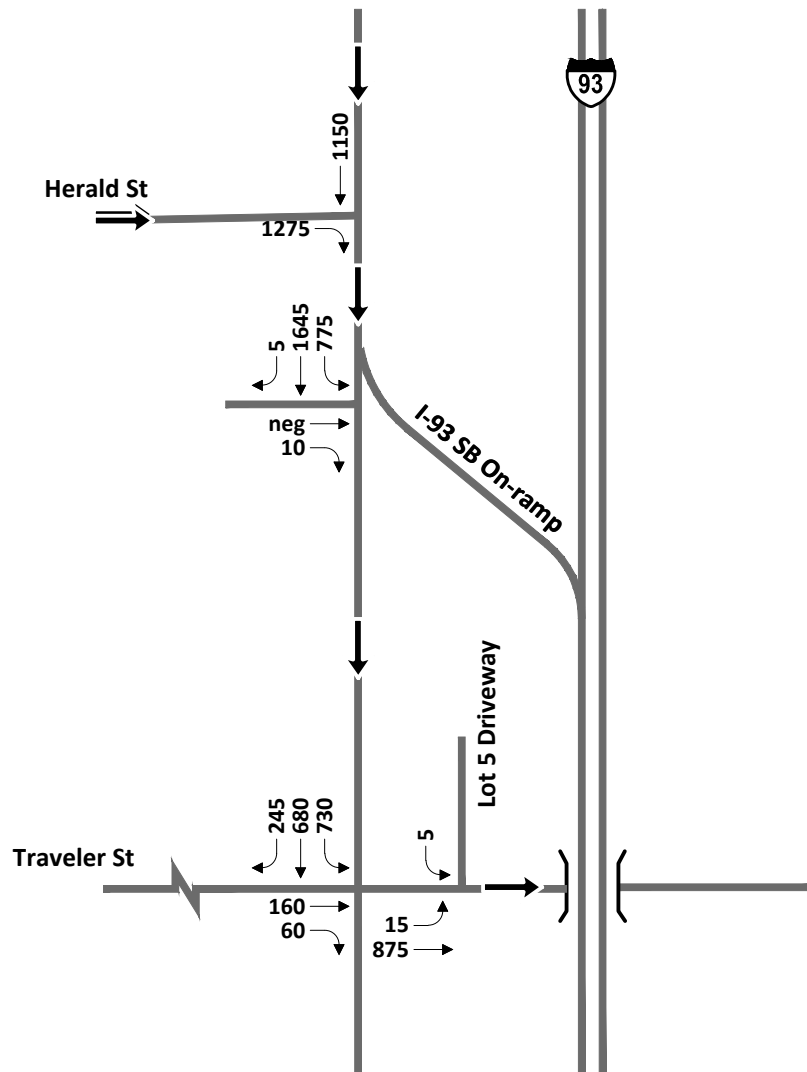


Figure 4.5

2017 Existing Conditions Saturday Midday
Peak Hour Traffic Volumes

217 Albany Street
Boston, Massachusetts

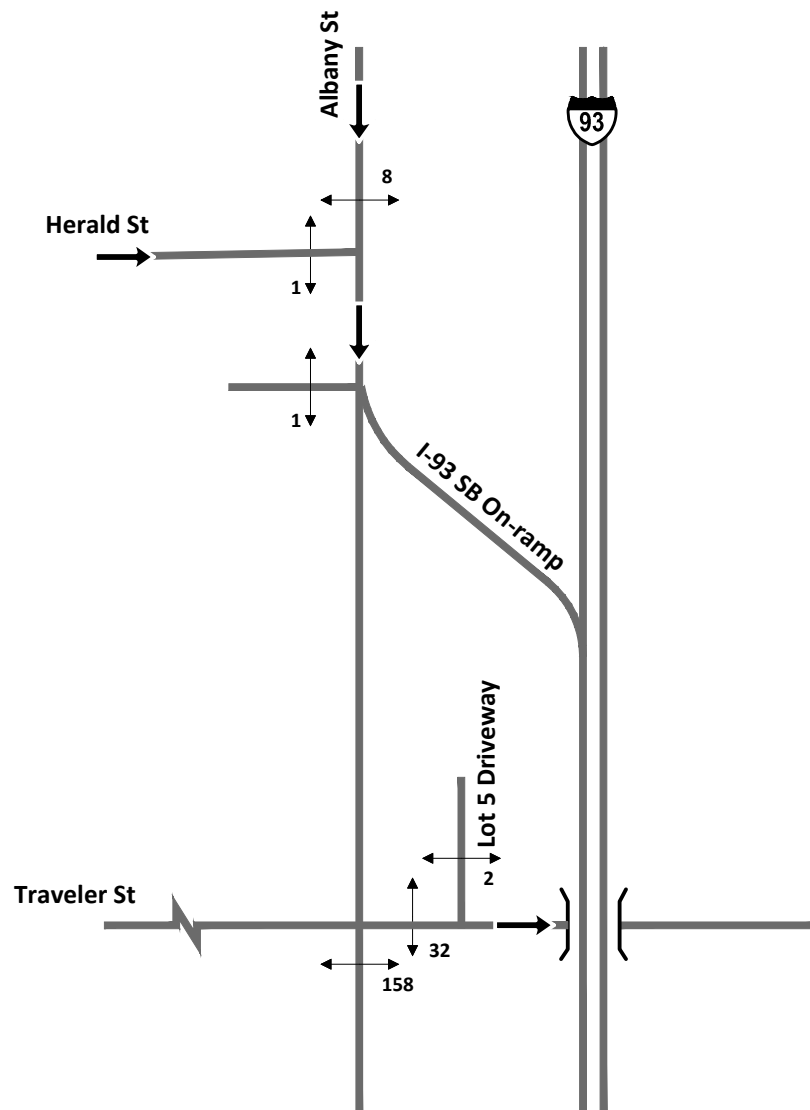


Figure 4.6

Existing Conditions Weekday Morning
Peak Hour Pedestrian Volumes

**217 Albany Street
Boston, Massachusetts**

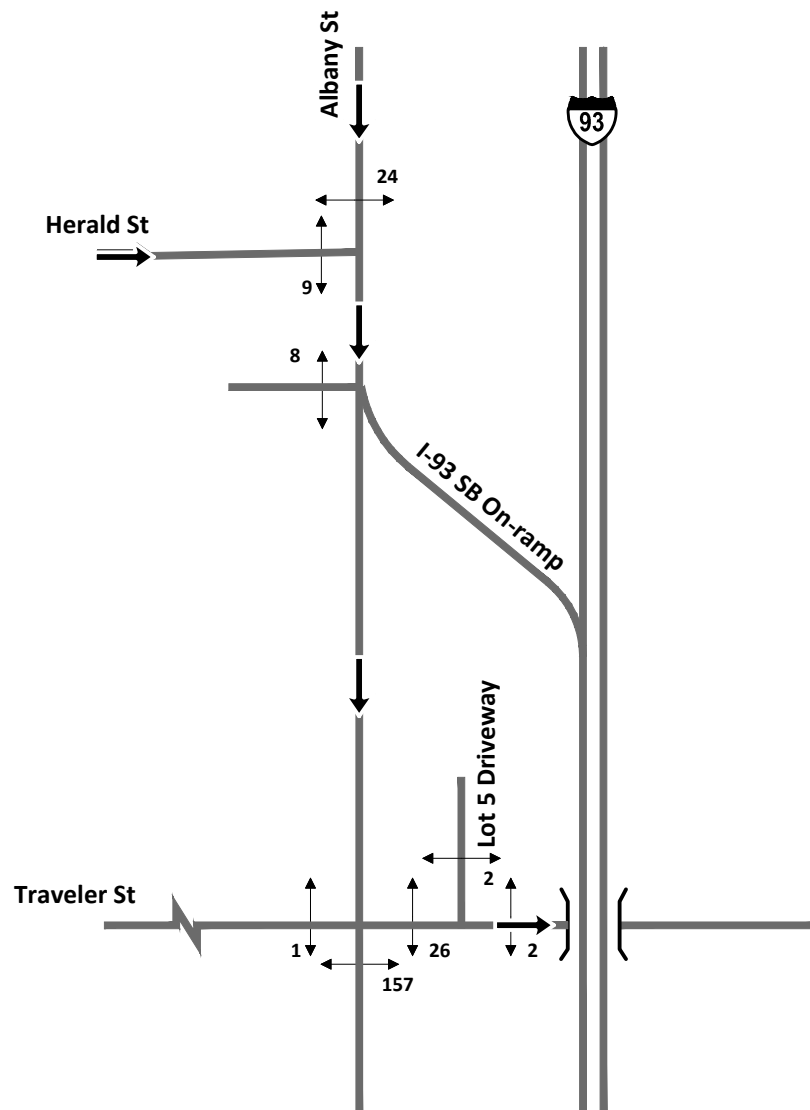
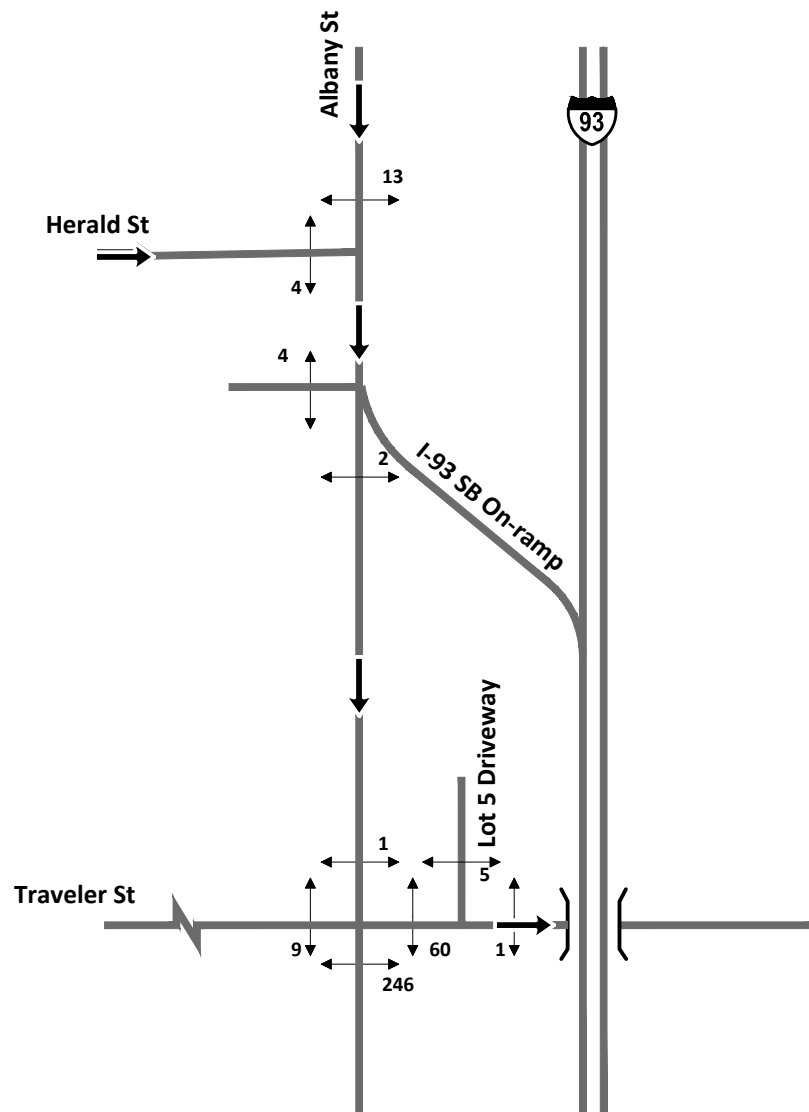


Figure 4.7

Existing Conditions Weekday Evening
Peak Hour Pedestrian Volumes

217 Albany Street
Boston, Massachusetts



Not to Scale



Figure 4.8

Existing Conditions Saturday Midday
Peak Hour Pedestrian Volumes

217 Albany Street
Boston, Massachusetts

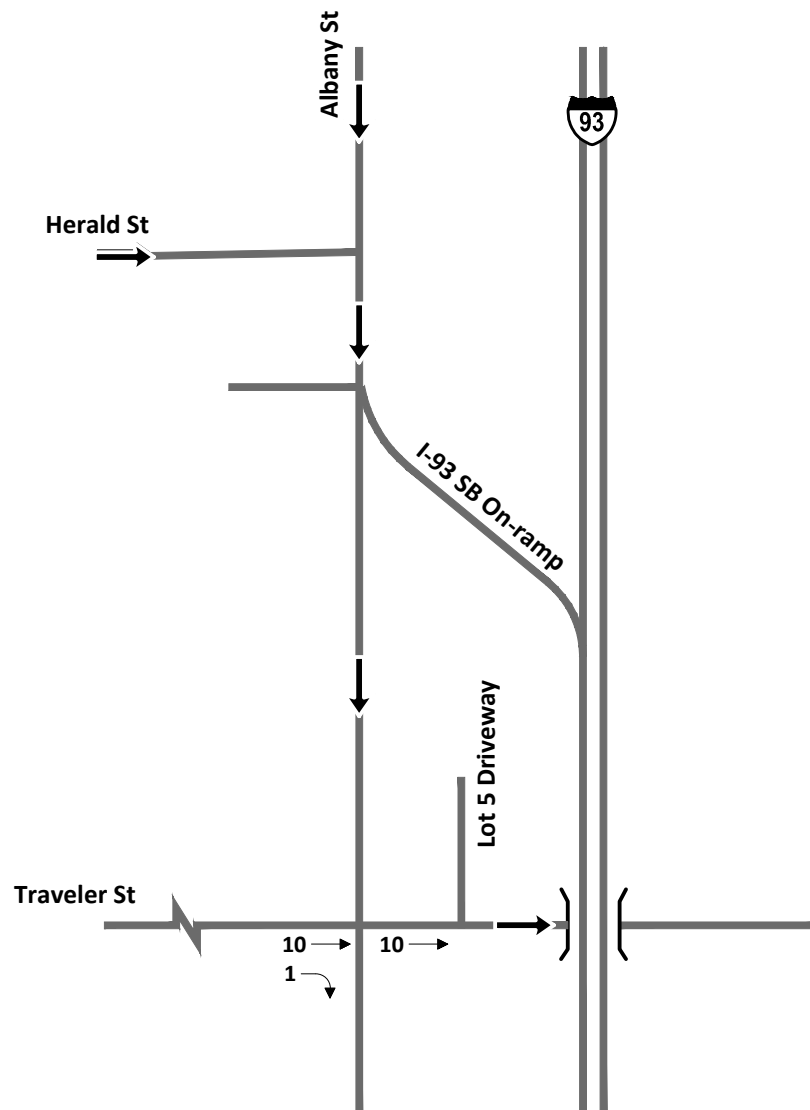


Figure 4.9

Existing Conditions Weekday Morning
Peak Hour Bicycle Volumes

**217 Albany Street
Boston, Massachusetts**

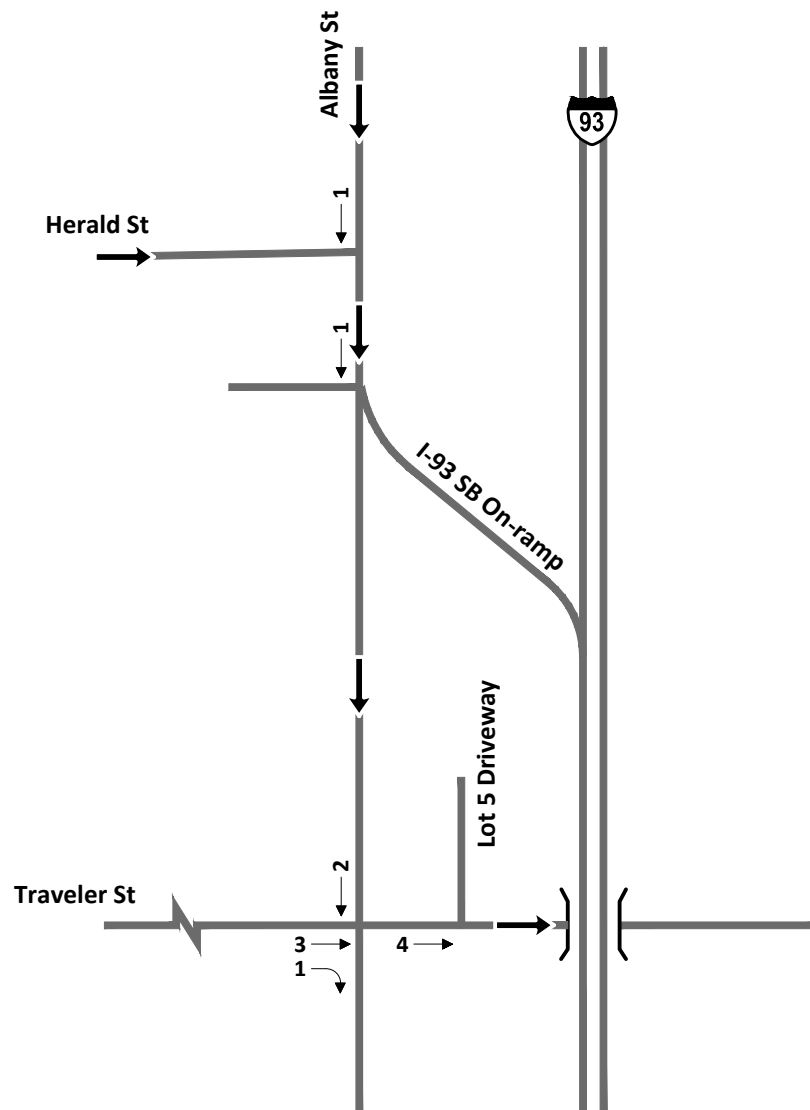
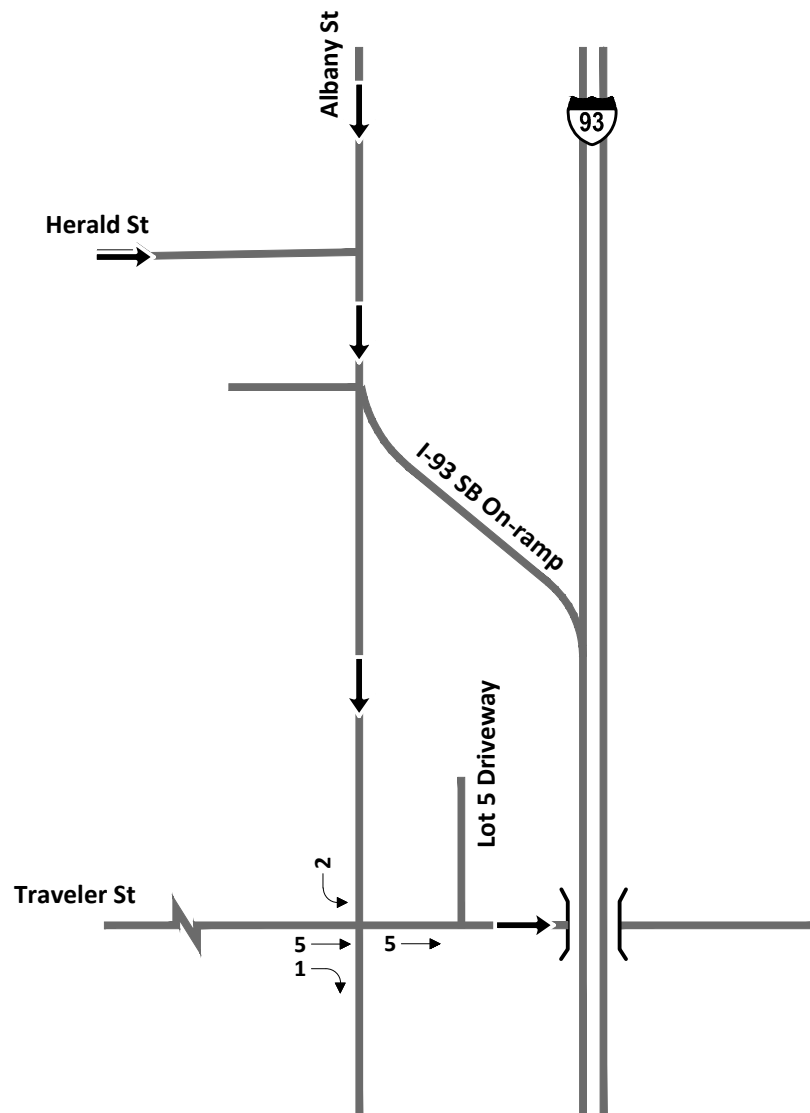


Figure 4.10

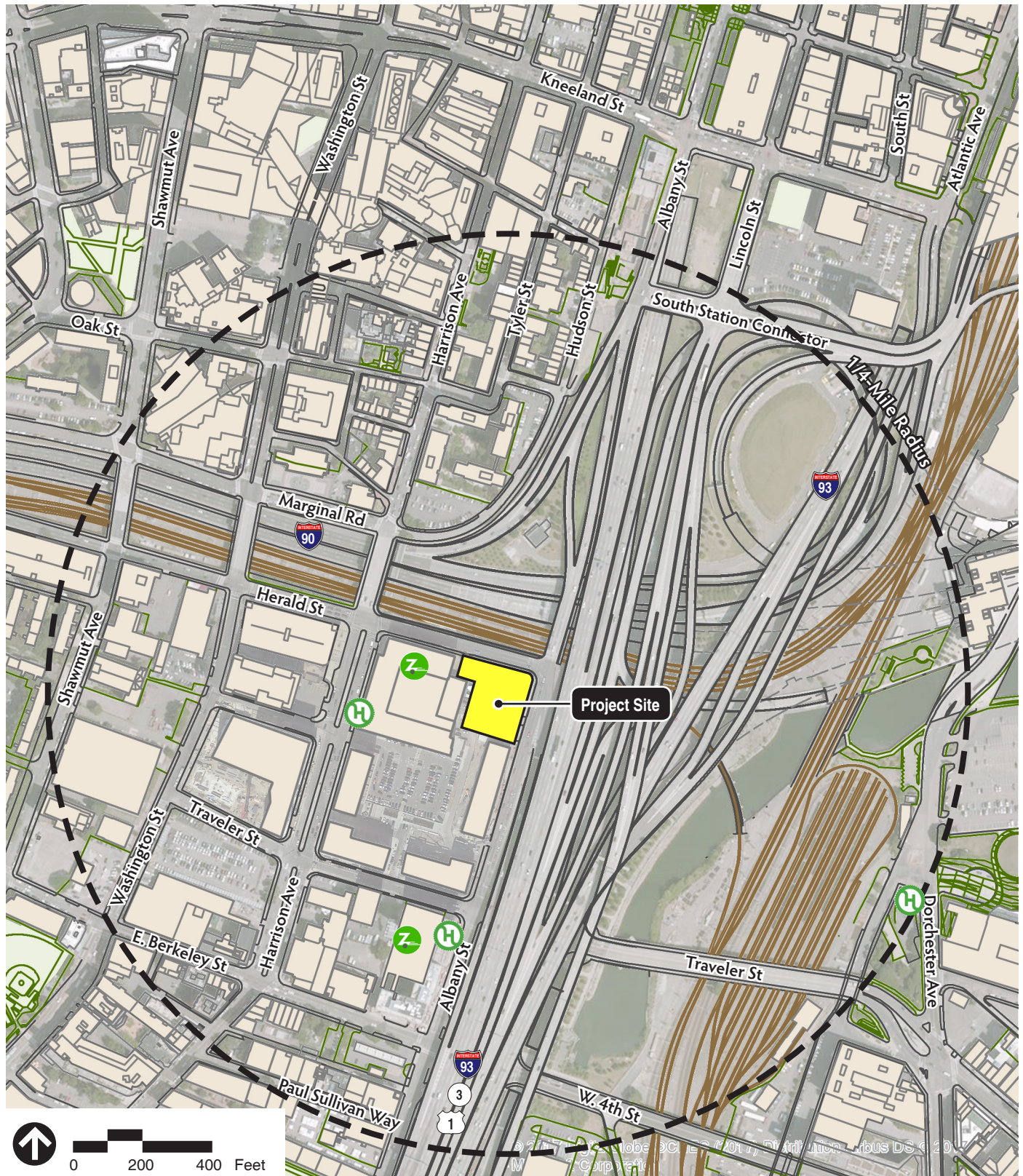
Existing Conditions Weekday Evening
Peak Hour Bicycle Volumes

**217 Albany Street
Boston, Massachusetts**



Existing Conditions Saturday Midday Peak Hour Bicycle Volumes

**217 Albany Street
Boston, Massachusetts**



Source: MassGIS, City of Boston

- H Hubway Station
- Z Zipcar



Figure 4.12
Existing Bike Share and Car Share Stations

**217 Albany Street
Boston, Massachusetts**

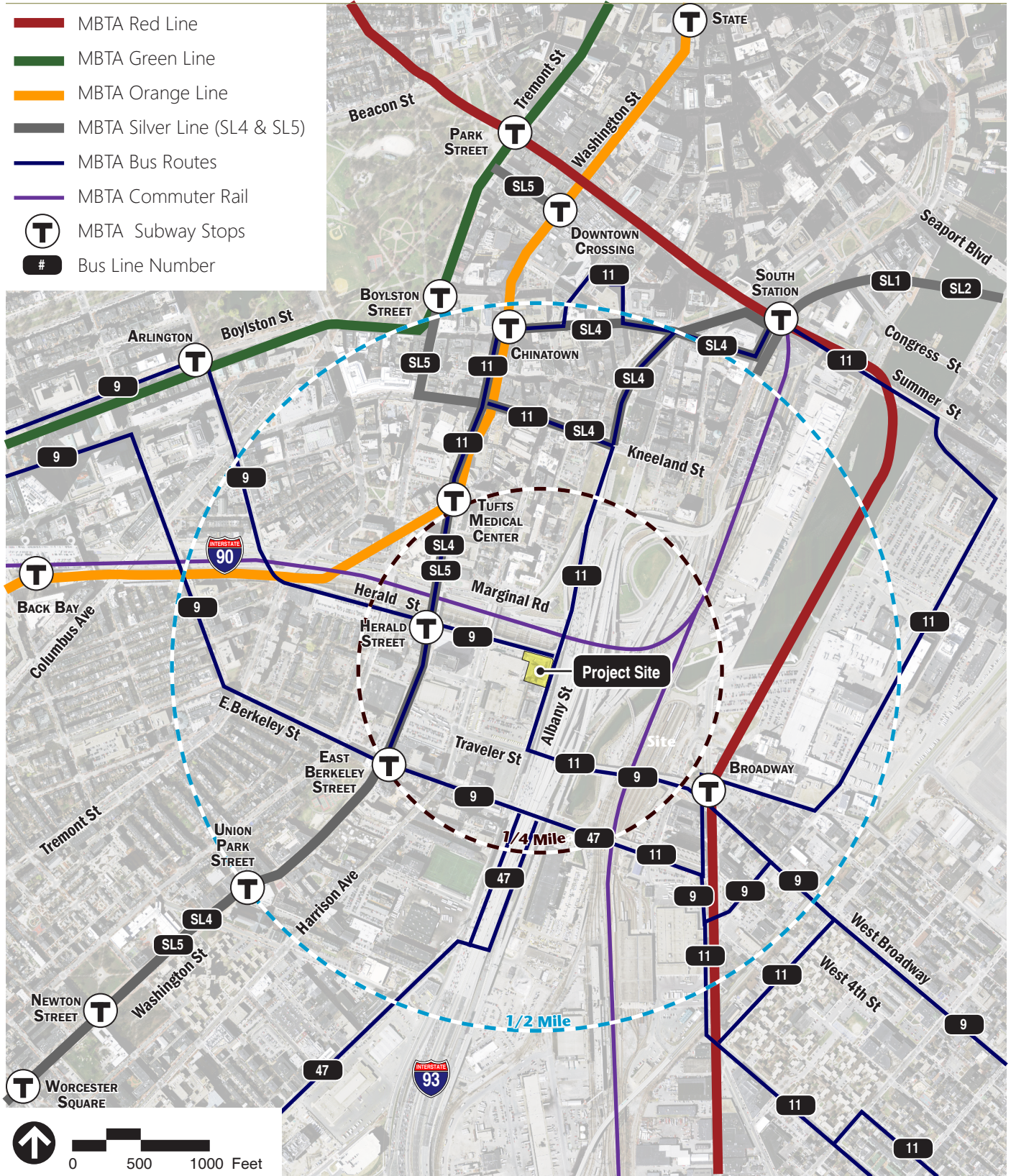


Figure 4.13
Public Transportation

**217 Albany Street
Boston, Massachusetts**

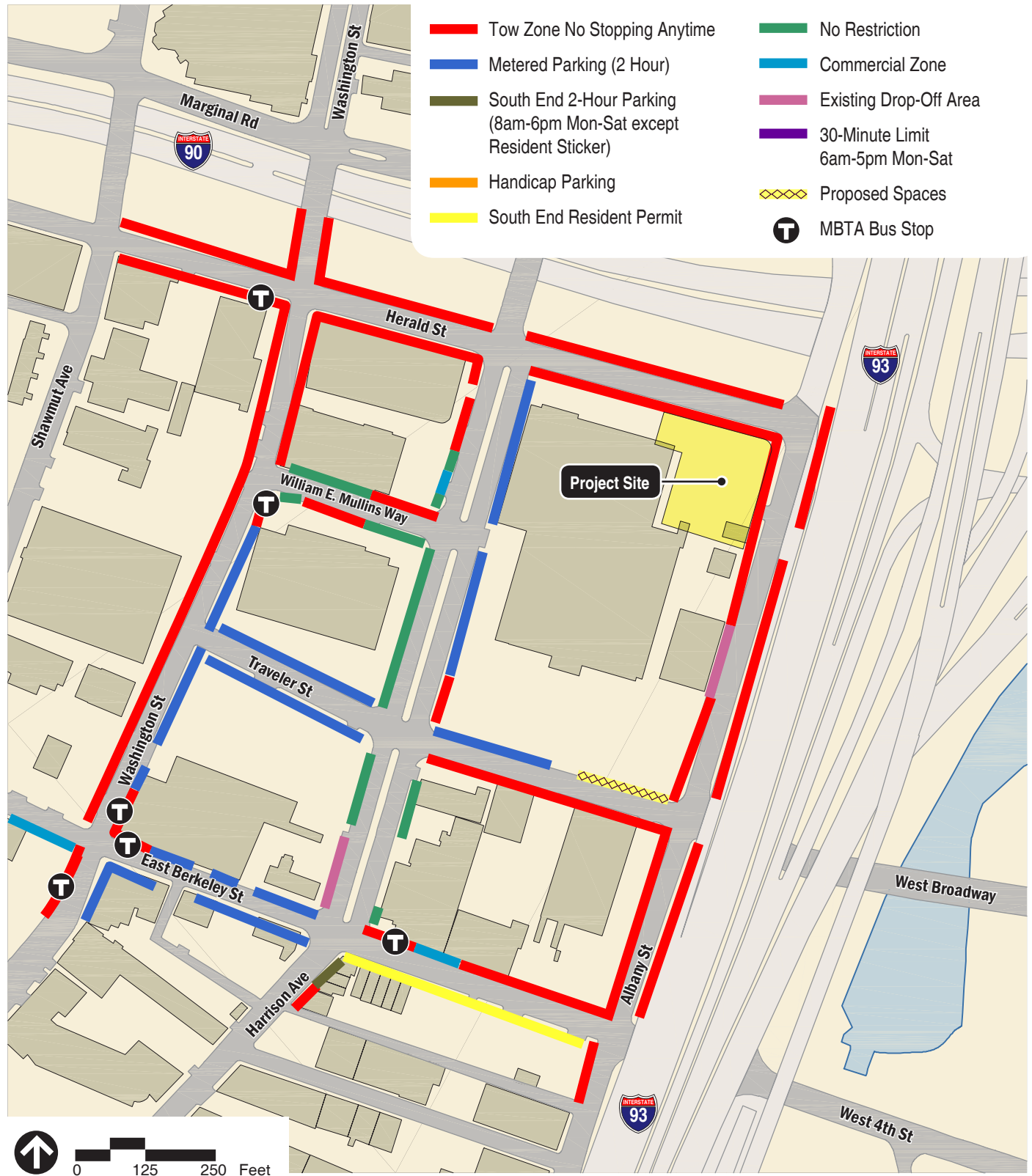
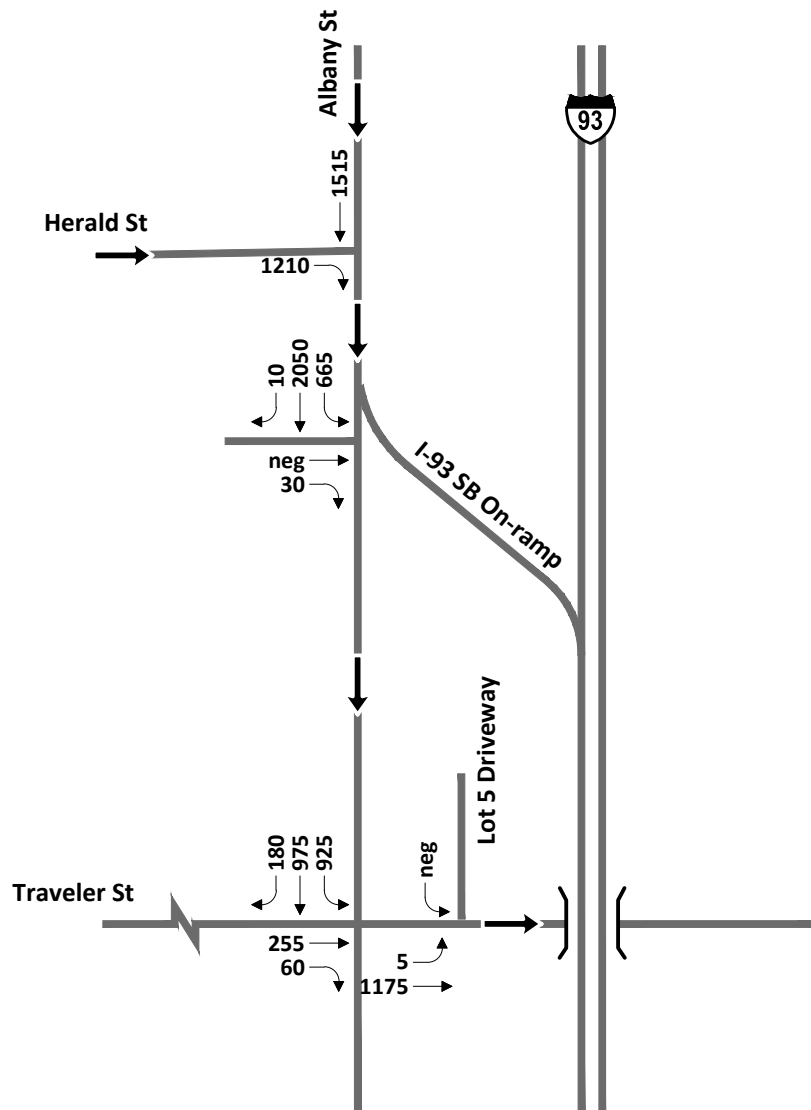


Figure 4.14
Summary of Existing Parking

**217 Albany Street
Boston, Massachusetts**



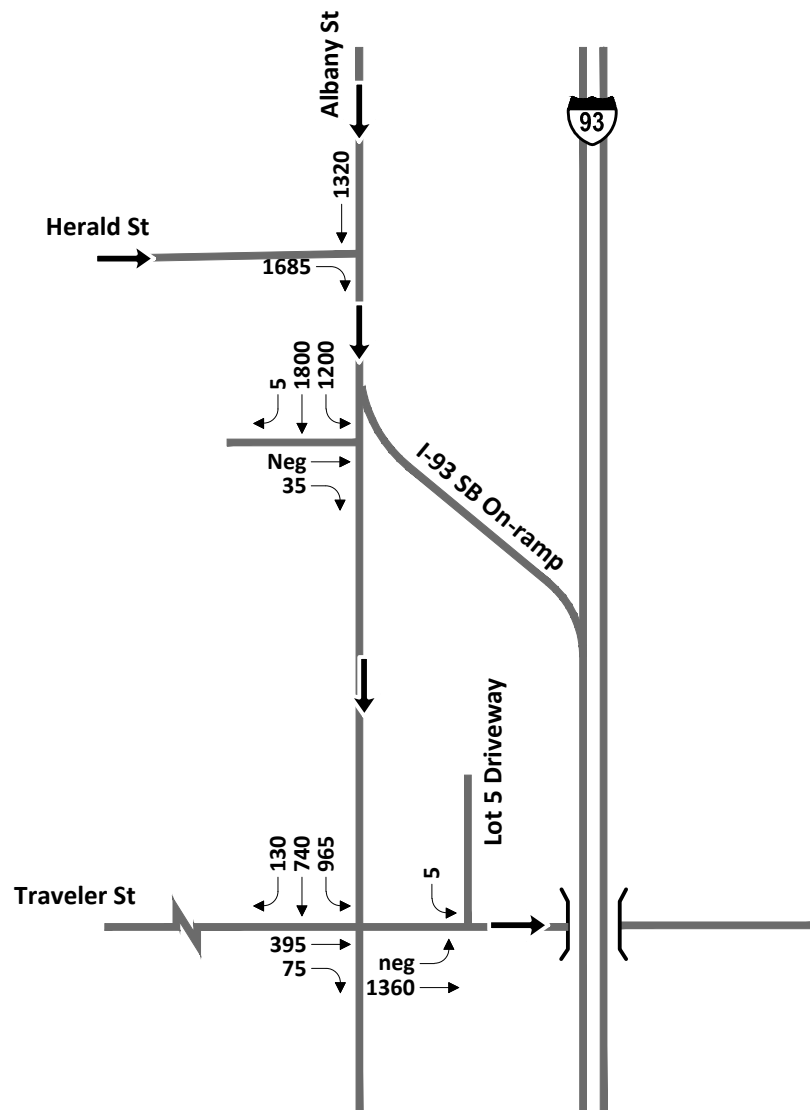
Not to Scale



Figure 4.15

2024 No-Build Conditions Weekday Morning
Peak Hour Traffic Volumes

217 Albany Street
Boston, Massachusetts



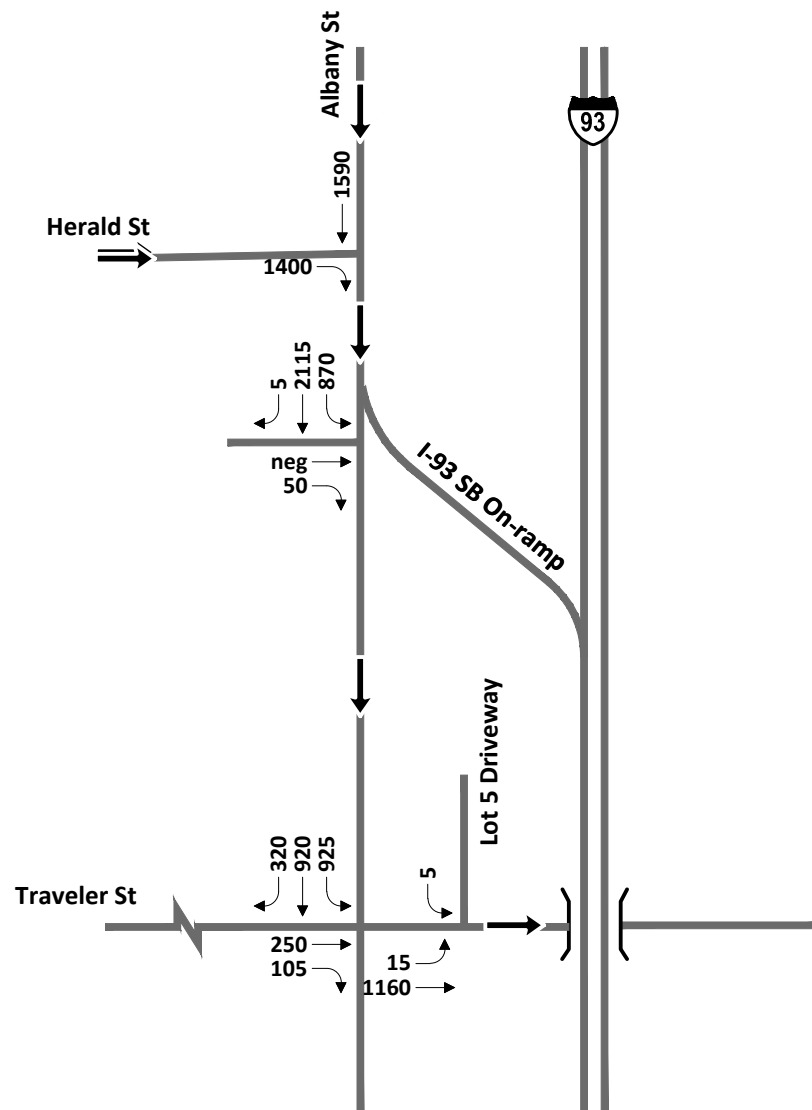
Not to Scale



Figure 4.16

2024 No-Build Conditions Weekday Evening
Peak Hour Traffic Volumes

217 Albany Street
Boston, Massachusetts



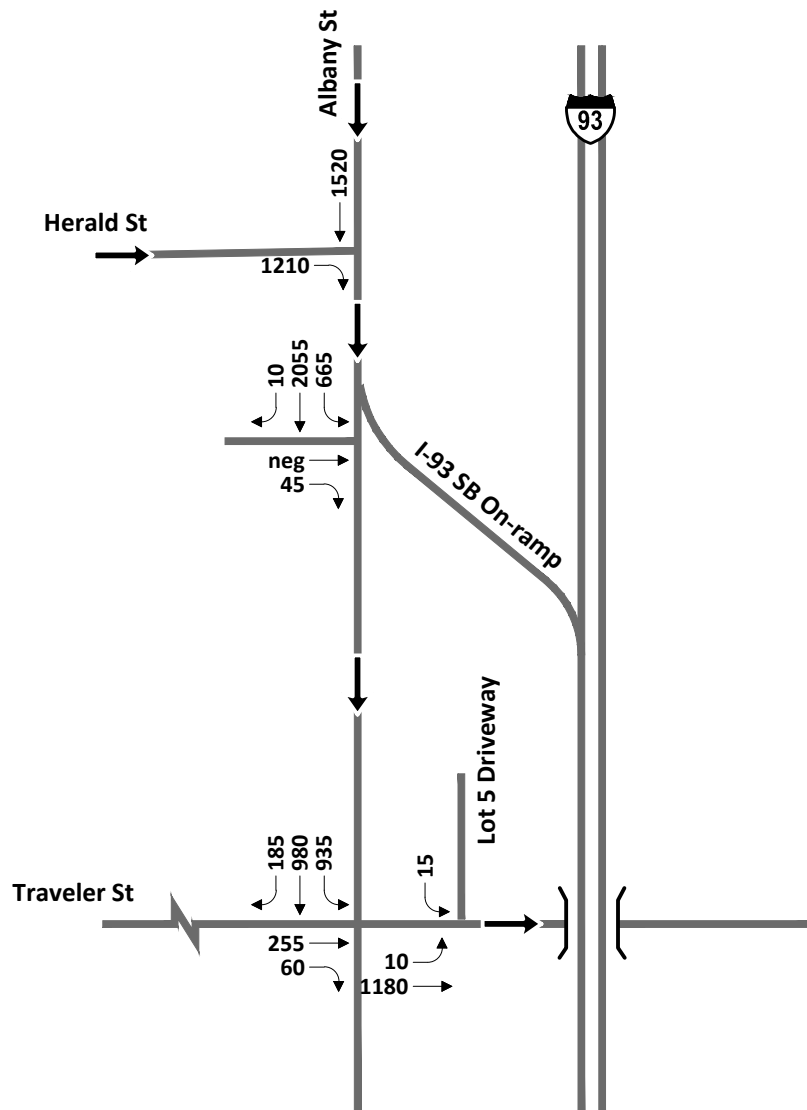
Not to Scale



Figure 4.17

2024 No-Build Conditions Saturday MIDDAY
Peak Hour Traffic Volumes

217 Albany Street
Boston, Massachusetts



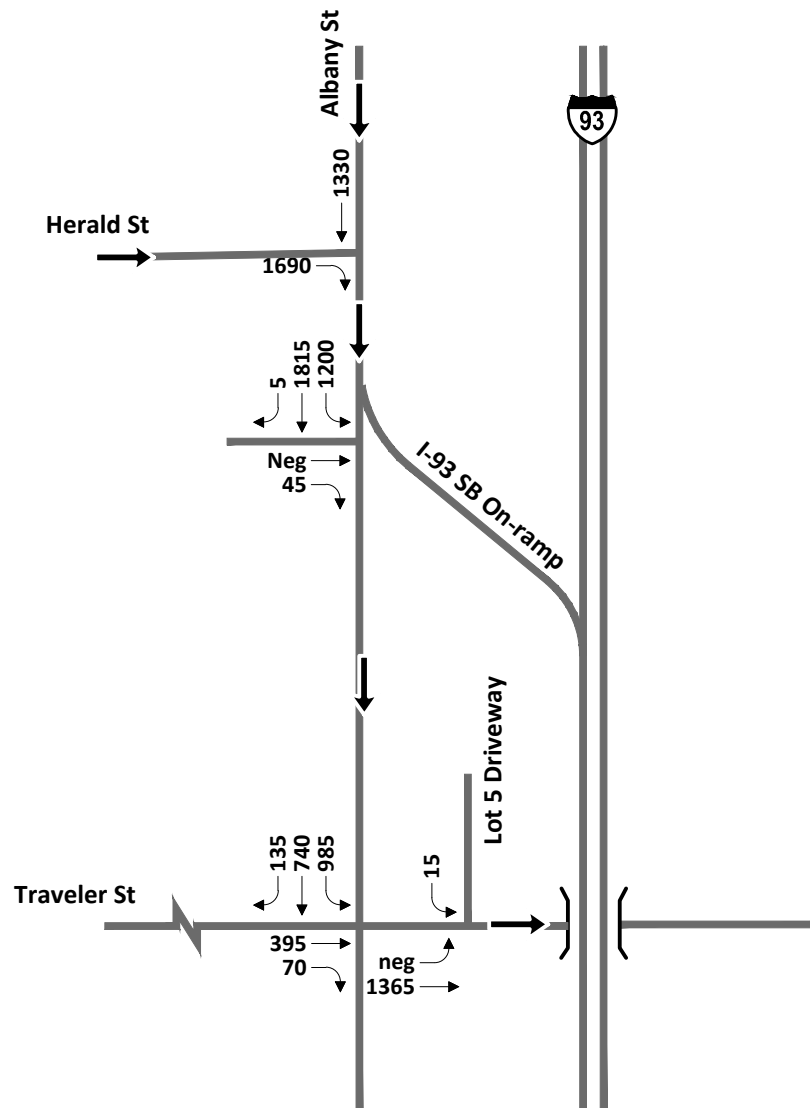
Not to Scale



Figure 4.18

2024 Build Conditions Weekday Morning
Peak Hour Traffic Volumes

217 Albany Street
Boston, Massachusetts



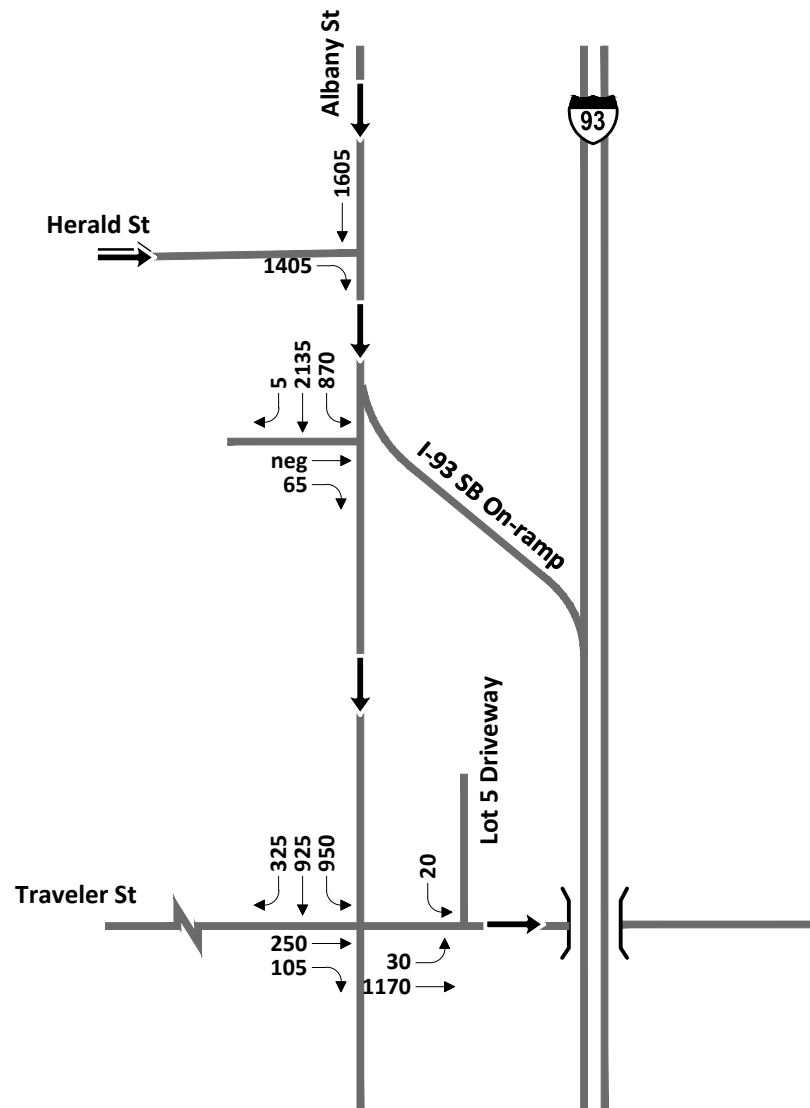
Not to Scale



Figure 4.19

2024 Build Conditions Weekday Evening
Peak Hour Traffic Volumes

217 Albany Street
Boston, Massachusetts



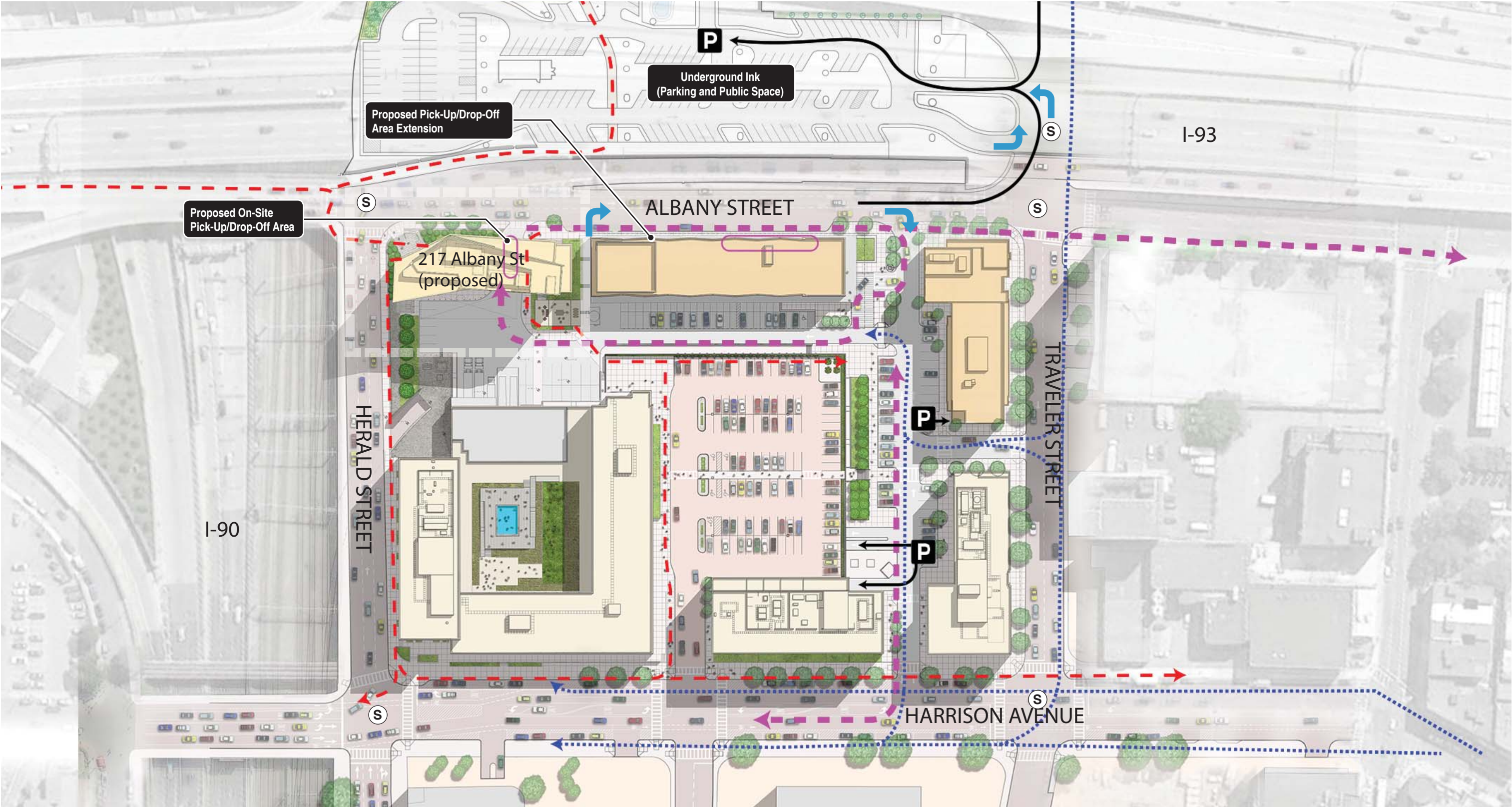
Not to Scale



Figure 4.20

2024 Build Conditions Saturday Midday
Peak Hour Traffic Volumes

217 Albany Street
Boston, Massachusetts



- Vehicular Access
- Pedestrian Access
- Bicycle Access
- Parking
- Existing Signalized Intersection/Pedestrian Crossing

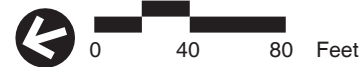


Figure 4.21
Proposed Site Access and Circulation

217 Albany Street
South End - Boston, Massachusetts

5

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 Project. A goal of the 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.

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

- › Wind
- › Air Quality
- › Solid Waste and Hazardous Materials
- › Shadow
- › Water Quality
- › Groundwater
- › Daylight
- › Flood Hazard
- › Geotechnical
- › Solar Glare
- › Noise
- › Construction Period

5.1 Summary of Key Findings and Benefits

The key findings related to environmental protection include:

- › **Wind** – Based on the wind study, the Project is not expected to result in hazardous or unsafe wind conditions that would limit pedestrian access. With the implementation of mitigation measures, such as landscaping, it is expected that the Project does not exceed BPDA wind impact criteria.
- › **Shadow** – Based on the shadow study, the Project will not result in significant shadow impacts. Under almost all conditions, net new shadow created from the Project extends onto the adjacent Ink Block development, or over the surrounding transportation infrastructure (railroad tracks and/or I-93).
- › **Daylight** – Under the Proposed Conditions, the viewpoints along adjacent public ways are expected to experience an increase in skydome obstruction due to the increased height and massing of the new building, as would be expected when increasing the density of an urban site.
- › **Solar Glare** – The use of highly reflective glass or other reflective materials that would result in adverse impacts from reflected solar glare are not anticipated for the building facades.
- › **Air Quality** – Because Project-generated traffic is not expected to be significant during the peak periods (less than 100 trips) or daily period (less than 3,000 trips), the local and regional air quality would not be negatively impacted.

- › **Water Quality** – The Project is expected to comply with both the 2008 DEP Stormwater Management Policy and Standards and local requirements from the Boston Water and Sewer Commission (BWSC) to the maximum extent practicable.
- › **Flood Hazard** - The Project Site is not located within the limits of the effective, nor the preliminary updated, FEMA-designated 100-year or 500-year flood zone. However, the Project frontage along Albany Street in the existing condition is approximately one foot below the designated 100-year flood elevation for the nearby Fort Point Channel and may be susceptible to extreme storm events if a topographic link exists with the Fort Point Channel.
- › **Noise** – Noise readings determined that the sensitive receptor locations in the vicinity of the Project Site currently experience sound levels exceeding the City of Boston’s noise criteria. The Project’s operations will not increase sound levels at the off-site receptor locations. To address ambient elevated noise related to highway traffic and railroad activities, the Project will incorporate wall and window construction procedures as needed to ensure that the interior sound levels will be below the HUD noise criteria.
- › **Solid and Hazardous Waste** – Detected concentrations were not above the Massachusetts Contingency Plan’s (MCP’s) reporting concentrations applicable for the Project Site.
- › **Groundwater** – The Project Site is located in the GCOD, as defined in Article 32 of the Zoning Code, however, groundwater levels are not expected to be lowered as part of the planned construction. Rather, groundwater levels in portions of the Project Site may increase due to stormwater infiltration proposed for the Project.
- › **Geotechnical** – Based on borings performed at the Project Site, subsurface conditions consist of fill and organic soils over silty clay and bedrock; therefore, the proposed building will be supported on driven piles bearing in the glacial till and/or on the bedrock.
- › **Construction** – The Project will develop a detailed Construction Management Plan for approval by Boston Transportation Department (BTD) prior to construction.

5.2 Wind

Pursuant to Section B.1 of the BPDA Development Review Guidelines, a qualitative assessment was conducted to estimate the pedestrian wind conditions around the Project compared to the existing condition, and to provide recommendations for minimizing any potential adverse impacts.

5.2.1 Methodology

Wind flows around the Project and its surroundings were studied by Arup USA, Inc. using drawings, plans, and models of the development, as well as satellite images of

the Project Site and its surroundings. The wind conditions described below are based on the full build-out of the Project.

The wind analysis evaluated the effects of major winds for the Boston area, including northwest, southwest, and easterly storms originating from the northeast, east, and southeast. The architectural model of the Project provided sufficient massing details that would affect wind flows in the area. For areas where wind speeds were projected to exceed acceptable levels, measures to reduce wind speeds and to mitigate potential adverse impacts were indicated.

Pedestrian Wind Comfort Criteria

The BPDA has adopted two standards for assessing the relative wind comfort of pedestrians. First, the BPDA wind design guidance criterion states that an effective gust velocity of 31 mph should not be exceeded more than one percent of the time. The second criteria used by the BPDA to determine the acceptability of the wind conditions on site is used to determine the relative level of pedestrian wind comfort for activities, such as sitting, standing or walking. The criteria are expressed in terms of benchmarks for the one-hour mean wind speed exceeded one percent of the time (i.e., the 99th percentile mean wind speed) and are presented in Table 5-1.

Table 5-1 BPDA Effective Gust Velocity/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 downtown location in Boston is generally comfortable for the pedestrian use of sidewalks and thoroughfares and meets the BPDA effective gust velocity criterion. However, without any mitigation measures, this typical downtown wind climate is likely to be frequently uncomfortable for more passive activities such as sitting.

5.2.2 Existing Wind Conditions

Winds come from the northwest, southwest, and west are the strongest (with speeds greater than 22 mph) and most frequently occurring winds at the Project Site. Storms with reasonable strength also notably arrive from the easterly wind directions. The Project Site sees a slight seasonal shift in winds.

5.2.3 Future Wind Conditions

The proposed building has an asymmetric prismatic shape with its façade angled to both Herald and Albany Streets. The Project also features street-level landscaping

and an overbuilt drop-off area and through-passage for trucks connecting the parking lot to Albany Street.

Although increased wind speeds may be experienced at some locations of the Project, these impacts are expected to be mitigated by incorporating landscaping, canopies or other overhead installations, recessed entrances, windscreens, planters, etc., as necessary.

With the proposed landscaping in place, it is expected that wind conditions along Albany Street will remain acceptable. The Project is not anticipated to generate any unsafe wind conditions around the Project Site or nearby public spaces. Refer to Appendix E for additional detail on the pedestrian wind assessment.

5.3 Shadow

As required by Section 80B-2 of the City of Boston Zoning Code for Large Project review, a shadow impact analysis was conducted for the hours of 9:00 am, 12:00 noon, 3:00pm and 6:00pm during the vernal equinox (March 21), summer solstice (June 21), autumnal equinox (September 21) and winter solstice (December 21).

5.3.1 Methodology

The shadow analysis presents net new shadow for the proposed building, as well as the existing shadows, and illustrates the incremental impact of the Project. The analysis employs the BPDA's 3D model of existing conditions, updated with more detailed information around the Project Site, as available, including several buildings on Harrison Avenue that are currently under construction.

5.3.2 Shadow Analysis Findings

The shadow study results are presented in Figures 5.1a through 5.1c. 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. In general, because of the location of the Project Site at the northeastern corner of Ink Block with major highways to the north and east, new shadow from the Project will be limited to these highways and impact to abutting properties will be very limited. A of the shadow analysis results for each respective period is provided below

Vernal Equinox (March 21)

As shown on Figure 5.1a, the shadow impacts from the vernal equinox and autumnal equinox are virtually identical. Morning shadow will fall mostly on the Project Site, with early morning shadow falling on the Ink 1 building. Throughout the rest of the day, shadows will fall first on a relatively limited area of Herald Street and I-90, and will fall on Albany Street and I-93 in the later afternoon.

Summer Solstice (June 21)

As shown on Figure 5.1b, similar to the vernal and autumnal equinox, shadow impacts in the morning are limited to a relatively small portion of Ink 1 building. Noon shadows will fall on a truck loading area and some of Herald Street. Shadows will track eastward as the day moves into the afternoon, but are not expected to reach I-93 until later in the afternoon.

Autumnal Equinox (September 21)

As mentioned above, the shadow impacts from the vernal equinox and autumnal equinox are virtually identical. Morning shadow will fall mostly on the Project Site, with early morning shadow falling on the Ink 1 building. Throughout the rest of the day, shadows will fall first on a relatively limited area of Herald Street and the Turnpike (I-90), and will fall on Albany Street and I-93 in the later afternoon.

Winter Solstice (December 21)

As shown on Figure 5.1c, the winter solstice creates the least favorable conditions for sunlight in New England. The sun angle during the winter is lower than any other season, causing shadows to elongate. Early morning shadows will primarily impact the Ink 1 building, but as shown in Figure 5.1c, on December 21 shadows are expected to reach buildings north of I-90 for a brief period in the morning including the 9:00am period shown. By 12:00pm shadows have moved well away from existing buildings, falling on Herald Street and I-90. Afternoon shadows are limited to portions of I-93 and spaces in between highway ramps. Shadows will only reach these buildings for a short period around the winter solstice.

5.4 Daylight

The following section describes the anticipated effect on daylight coverage at the Project Site as a result of the Project. An analysis of the percentage of skydome obstructed under the No-Build and Build Conditions is a requirement of Article 80 (Section 80B-2(c)). The daylight analysis was prepared using the BPDA's Daylight Analysis Program ("BRADA") and has been completed in accordance with the requirements of Article 80. The results of the analysis are presented in Figures 5.2a and 5.2b.

5.4.1 BRADA Software

The BRADA program was 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, and the relative reflectivity of the building facades. 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 model inputs were taken from a combination of the BPDA City model, an existing conditions survey, and schematic design plans prepared by the Project's architects. As described above, the BRADA software considers the relative reflectivity of building facades when calculating perceived daylight obstruction. Highly reflective materials are thought to reduce the perceived skydome obstruction when compared to non-reflective materials. For the purposes of this daylight analysis, the building facades are considered non-reflective, resulting in a conservative estimate of daylight obstruction.

5.4.2 Viewpoints

The following viewpoints were used for this daylight analysis:

- › Albany Street – This viewpoint is located on the centerline of Albany Street on the western side of the Project Site.
- › Herald Street – This viewpoint is located on the centerline of Herald Street to the north of the Project Site.

These points represent existing and proposed building façades when viewed from the adjacent public ways.

5.4.3 Results

Under the Existing/No-Build Condition, the skydome is minimally obstructed. The existing site contains primarily surface parking with one existing two-story building. The existing skydome obstructed value is 6.6 percent from both viewpoints (Figures 5.2a through 5.2b).

Under the Proposed Conditions, the viewpoints along the two roadways are expected to experience an increase in skydome obstruction due to the increased height and massing of the new building, as would be expected when increasing the density of an urban site. The increase in skydome obstruction will be offset by improvements to the public realm which are anticipated to improve the overall pedestrian experience as compared to existing conditions.

Table 5-2 presents the estimated skydome obstruction impacts associated with the Project, also shown on Figures 5.2a and 5.2b.

Table 5-2 Existing/No-Build and Build Daylight Conditions

Viewpoint	Existing/No-Build Daylight Obstruction	Build Daylight Obstruction
Albany Street	6.6%	91.4%
Herald Street	6.6%	83.1%

5.5 Solar Glare

The Project is not anticipated to include the use of highly reflective glass or other reflective materials on the building's facades that would result in adverse impacts from reflected solar glare.

5.6 Air Quality

The air quality assessment conducted for the 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 Site 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"). A review of the mesoscale/regional air quality impacts is also qualitatively discussed below.

5.6.1 Background

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.

The Project is located in Boston, which is a CO Maintenance area (although not officially changed on the Greenbook¹, the area is beyond the 20-year maintenance timeframe and therefore could be designated as attainment). Projects located in CO maintenance areas are required to evaluate their CO concentrations with the NAAQS. As such, CO concentrations need to be considered for this Project. Suffolk County is in attainment for the remainder of the criteria pollutants.

5.6.2 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 5-3 presents the NAAQS for CO.

¹ *Nonattainment Areas for Criteria Pollutants*, Greenbook (as of September 30, 2017), <https://www.epa.gov/green-book>. Accessed January 22, 2018.

Table 5-3 National Ambient Air Quality Standards

Pollutant	Primary Standards		
	Level	Averaging Time	Form
Carbon Monoxide	9 ppm (10 mg/m ³)	8-hour	Not to be exceeded more than once per year
	35 ppm (40 mg/m ³)	1-hour	

DEP 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-highest annual values from the previous three years. Looking at the air quality monitor closest to and most representative of the Project Site (the Von Hillern monitor) for the years 2014-2016, the CO background values are 1.7 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 5-4.

Table 5-4 Air Quality Background Concentrations

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

Monitoring Location: Von Hillern, Boston, MA. Years 2014-2016.

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.

5.6.3 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."

5.6.4 Traffic Data

The air quality study uses traffic data (volumes, delays, and speeds) developed for the analysis conditions based upon the traffic analysis. The traffic study area includes the following intersections:

- › Albany Street/Herald Street;
- › Albany Street at Ink Block exit driveway/Route I-93 Southbound on-ramp;
- › Albany Street at Ink Block entrance driveway;
- › Albany Street/Traveler Street;
- › Traveler Street at Ink Block site driveway; and
- › Traveler Street at Underground at Ink Block parking lot exit.

Based on the traffic study presented in Chapter 4, *Transportation*, the Project is expected to generate 38 new vehicle trips in the morning peak hour, 44 new vehicle trips in the evening peak hour, and 59 new vehicle trips in the Saturday midday hour.

5.6.5 Microscale Screening Analysis

An evaluation of the traffic data was conducted under the review guidelines developed by the BPDA for determination of the potential for CO impacts. It was determined that:

- › Project generated traffic is not expected to exceed 100 vehicles per hour during the peak periods; therefore, it is not necessary to consider the percentage increase of traffic volumes on nearby roadways.
- › The Project will generate less than 3,000 or more new average daily trips on the study area roadways. The Project will generate 671 new weekday vehicle trips and 676 new Saturday vehicle trips, less than the 3,000 vehicles per day threshold.

Based on the microscale screening results discussed above, it has been determined that a quantitative CO hotspot analysis is not necessary for the Project, as the BPDA thresholds are not exceeded. No microscale air quality impacts are anticipated.

5.6.6 Mesoscale Air Quality Analysis

The purpose of the mesoscale analysis is to estimate the area-wide emissions of VOC and NO_x during a typical day in the peak ozone season (summer) consistent with the requirements of the State Implementation Plan ("SIP"). A mesoscale analysis evaluates the change in VOC and NO_x emissions from average daily traffic volumes and vehicle emission rates. To demonstrate compliance with the SIP criteria, the air quality study must show the Project's change in daily (24-hour period) VOC and NO_x emissions.

The BPDA requires a mesoscale air quality analysis if a project produces 10,000 or more vehicle trips per day. The Project is not anticipated to generate over 10,000 or more vehicle trips per day, therefore this analysis is not required for the BPDA and no mesoscale air quality impacts are anticipated.

5.7 Water Quality

The Project will likely include improved stormwater management practices, which will improve the water quality and reduce the quantity of stormwater runoff compared to the existing condition. The Project is expected to comply with both the 2008 DEP Stormwater Management Policy and Standards and local requirements from the Boston Water and Sewer Commission (BWSC). One such requirement includes the infiltration of the first inch of stormwater over the site impervious area to supplement groundwater elevations in the Groundwater Conservation Overlay District (GCOD). As a Project located in the GCOD, as defined in Article 32 of the Zoning Code, and, therefore, site infiltration systems must be sized to promote the infiltration of the 1-inch volume over the proposed impervious area. In addition to promoting groundwater levels, the implementation of stormwater management practices will improve water quality and runoff in comparison to existing conditions. Existing water quality units will be used to reduce the pollutant loading of the stormwater entering the stormwater infrastructure from the loading dock area. Refer to Section 6.3 of Chapter 6, *Infrastructure*, for more information.

5.8 Flood Hazard

The Proponent has considered the Project's vulnerability to flooding from construction and operational standpoints. The Project Site is not located within the limits of the effective, nor the preliminary updated, FEMA-designated 100-year (as show in Figure 3.2), or the 500-year flood zone. The Project frontage in the existing condition is elevated above the designated 100-year flood elevation for the nearby Fort Point Channel. Although the Project is elevated above the flood elevation, it is believed that two major transportation systems (the I-93 elevated highway and railroad tracks supporting South Station) physically protect the South End from flooding in the Fort Point Channel by providing a vertical buffer from coastal flooding events. Refer to Section 3.5 of Chapter 3, *Sustainability/Green Building and Climate Change Resiliency*, for a complete assessment of the Project Site's vulnerability to flooding.

5.9 Noise

The noise assessment evaluated the potential noise impacts associated with the Project's activities, including mechanical equipment (e.g., HVAC units, cooling tower) and service activities. This section discusses the fundamentals of noise, noise impact criteria, noise analysis methodology, existing ambient conditions, and potential future sound levels. Noise monitoring was conducted to determine existing sound levels and to assist with the evaluation of future sound levels associated with Project operations.

5.9.1 Noise Fundamentals

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 [dBA] is used to evaluate environmental noise levels. Table 5-5 presents a list of common outdoor and indoor sound levels.

Table 5-5 Common Outdoor and Indoor Sound Levels

Outdoor Sound Levels	Sound Pressure (μPa)*	Sound Level dBA**	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	

Outdoor Sound Levels	Sound Pressure (μPa)*	Sound Level dBA**	Indoor Sound Levels
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.

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

** dBA – A-weighted decibels, which describe pressure logarithmically with respect to 20 μ Pa (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 other sound level descriptors:

- › L90 is the sound level which is exceeded for 90 percent of the time during the time period. The 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.

5.9.2 Noise Impact Criteria

The City of Boston and the United States Department of Housing and Urban Development (HUD) have developed noise impact criteria that establish noise thresholds deemed to result in adverse impacts. The noise analysis for the Project compared existing and future sound levels to the City of Boston's criteria and determined whether or not the Project will generate noise impact at nearby sensitive receptor locations. Since the City of Boston has not developed criteria for assessing interior noise levels, the HUD noise thresholds will be used to evaluate the potential noise impacts from the nearby transportation facilities on the Project's proposed residential units.

City of Boston Noise Impact Criteria

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

Under Chapter 40, Section 21 of the General Laws of the Commonwealth of Massachusetts and the City of Boston Code, Ordinances, Title 7, Section 50, the Air Pollution Control Commission of the City of Boston has adopted Regulations for the Control of Noise in the City of Boston.² These regulations establish maximum allowable sound levels based upon the land use affected by the proposed development. Table 5-6 summarizes the maximum allowable sound levels that should not be exceeded.

Table 5-6 City of Boston Noise Standards by Zoning District

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

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

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 dBA for daytime periods (7:00 AM to 6:00 PM) and 50 dBA for nighttime conditions (6:00 PM to 7:00 AM).

The City of Boston's regulations on construction sound levels state that operation of any construction devices, excluding impact devices, may not exceed 86 dBA during any time period.

HUD Noise Impact Criteria

The United States Department of Housing and Urban Development has established guidelines and procedures, which are presented in The Noise Guidebook³ (Guidebook), in assessing noise impacts on residential developments. The HUD standard is intended to protect residential receptors from sound levels that cause interference with normal activities, such as sleep and conversation

HUD has established an Ldn of 65 dB or lower as an acceptable exterior sound level and an Ldn of 45 dB as an interior standard. Ldn represents a Day-Night average sound level. This is the average of all sound levels that occur during a 24-hour

² City of Boston Air Pollution Control Commission, *Regulations for the Control of Noise in the City of Boston*. (website: http://www.cityofboston.gov/Images/Documents/noise_reg_tcm3-13127.pdf)

³ Section 51.103, *The Noise Guidebook*, U.S. Department of Housing and Urban Development, Office of Environment and Energy.

period, with a significant penalty (10 dB) added to sound levels that occur between 10:00 PM and 7:00 AM. Sound levels above 65 dB but not exceeding 75 dB is normally unacceptable. However with noise attenuation measures (such as special building construction material), a waiver may be granted. HUD considers sound levels above 75 dB to be unacceptable.

The HUD Guidebook states that a noise assessment is required if a proposed development is located near any major noise source, such as airports (within 15 miles), railroads (within 3,000 feet), and major roadways (within 1,000 feet).

5.9.3 Noise Analysis Methodology

The noise analysis consists of two components:

- › The evaluation of noise impacts from activities associated with the Project on nearby sensitive receptor locations; and
- › The evaluation of noise impacts from nearby major transportation facilities on the proposed residential units.

Impacts from Project

The noise analysis evaluated the potential noise impacts associated with the Project's operations, which include the mechanical equipment and service activities. The noise analysis included measurements of existing ambient background sound levels, a quantitative evaluation of potential noise impacts associated with the proposed mechanical equipment, and a qualitative assessment of potential noise impacts associated with the service activities. The study area was evaluated and sensitive receptor locations were identified. The analysis determined the overall potential sound levels at the sensitive receptor locations with the Project's activities.

The noise analysis evaluated sound levels associated with proposed mechanical equipment, such as an energy recovery unit, cooling tower, Rooftop HVAC Unit (RTU), and an emergency generator. The noise analysis determined the potential sound levels at the sensitive receptor locations using the manufacturer's technical specifications for the mechanical equipment. The noise analysis utilized the CadnaA⁴ noise prediction software. The noise analysis projected sound levels from the mechanical equipment to the sensitive receptor locations following the International Organization for Standardization 9613 (ISO 9613) methodology. The analysis considered sound level reductions due to distance and building blockages from the surrounding buildings. The noise analysis calculated the overall maximum sound level that would be experienced at the sensitive receptor locations with the Project's activities. The sensitive receptor locations included the nearest residential buildings and the adjacent hotel.

The noise analysis also evaluated the potential noise impact associated with service vehicle activities from the Project. The analysis examined the site layout and building

⁴ Computer Aided Noise Abatement (CadnaA) software version 2017, DataKustik GmbH.

design, as it relates to the service areas and management of deliveries at the Project Site.

Impacts to Project

The noise analysis also evaluated the potential noise impacts from nearby transportation facilities such airports, railroads, and major highways. HUD's guidance and procedures states that if the proposed residential development is located near a major noise source, i.e., airports (within 15 miles), major highways or roads (within 1,000 feet), or railroads (within 3,000 feet), then the proponent must undertake a noise assessment. The residential component of the Project is located approximately:

- › 2 miles from Logan International Airport;
- › 100-1400 feet from the MBTA and Amtrak railroad tracks;
- › 200-270 feet from Interstate 90 (I-90); and
- › 120-395 feet from Interstate 93 (I-93).

The Project is located at distances that are at or within the HUD requirement for a noise assessment.

Receptor Locations

The noise analysis included an evaluation of the study area to identify sensitive receptor locations, which typically include buildings that maybe sensitive to noise associated with the Project. The noise analysis identified seven receptor locations in the vicinity of the Project. As shown in Figure 5.3, the receptor locations include the following:

- › R1 – 1 Ink Block;
- › R2 – 2 Ink Block;
- › R3 – 3 Ink Block;
- › R4 – Sepia Condominiums;
- › R5—Siena Condominiums; and
- › R6—55 Traveler Street (Troy Boston Apartments)

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

5.9.4 Existing Noise Conditions

Noise measurements were conducted to establish existing sound levels. The existing sound levels were measured using a Type 1 sound analyzer (Larson Davis SoundExpert LxT). Measurements were conducted during the weekday daytime period (2:00 PM to 3:00 PM) and late-night period (10:30 PM to 11:30 PM) in the vicinity of the sensitive receptor locations (see Figure 5.3) on January 2, 2018 and January 3, 2018. The measured sound levels data under existing conditions were

dominated by vehicles traveling on the nearby highway system (such as Interstate 93), vehicles on local roadways, and mechanical equipment from nearby buildings.

The existing measured sound level data are presented in Table 5-7. The L90 sound levels range from 60 dBA to 66 dBA during the daytime period and from 62 dBA to 67 dBA during the nighttime period. These sound levels are considered typical of an active urban area adjacent to an interstate highway. The daytime sound levels were similar the nighttime sound levels because the noise environment was dominated by the interstate and associated ramps. Even though traffic volumes are typically greater during the daytime, vehicles are generally traveling in congestion which consist of “stop and go” patterns. In contrast, traffic during the nighttime are lower in volume but traveling at free-flow speeds.

The result of the noise monitoring program indicates that the sound levels within the study area currently exceed the City of Boston’s daytime standard of 60 dBA for a Residential District as well as the nighttime standard of 50 dBA.

Table 5-7 Existing Measured Sound Levels, dBA

Monitoring Location	City of Boston Residential District Noise Criteria		Measured L90 Sound Levels	
	Daytime	Nighttime	Daytime	Nighttime
M1 – Albany Street	60	50	66	67
M2 – Ink 2 Facade	60	50	60	62

Source: VHB, Inc.

Note: Refer to Figure 5.3 for monitoring locations

5.9.5 Impacts from Project Operations

The noise analysis evaluated the potential noise impacts associated with the Project’s proposed mechanical equipment and service activities. The analysis determined the potential overall sound levels at the nearby sensitive receptor locations.

Mechanical Equipment

The noise sources included in the analysis were an energy recovery unit, a cooling tower, a RTU, and an emergency generator. The mechanical equipment is located on the rooftop of the proposed building behind a screening wall. The noise modeling summed sound levels associated with the Project’s mechanical equipment with the existing sound levels at the receptor locations to predict the overall future sound levels. Table 5-8 presents the Project generated sound levels at the sensitive receptor locations, which range from 30 dBA at the Sepia Condominiums to 39 dBA at 1 Ink Block and 55 Traveler Street. These sound levels are below the existing sound levels. As a result, the Project’s sound levels will not result in a noticeable increase of sound levels at any of the receptor locations. The future total sound

levels will not increase over existing sound levels, as the proposed mechanical equipment are substantially quieter than the existing noise environment. As previously mentioned, sound level changes of less than three decibel is not perceivable by the human ear.

Table 5-8 Project-Related Sound Levels, dBA

Receptor Location	Existing Sound Levels		Project Generated Sound Levels	Total Overall Sound Level	
	Daytime	Nighttime		Daytime	Nighttime
R1-1 Ink Block	60	62	39	60	62
R2-2 Ink Block	60	62	33	60	62
R3-3 Ink Block	60	62	34	60	62
R4-Sepia Condominiums	60	62	30	60	62
R5-Senia Condominiums	66	67	32	66	67
R6-AC Hotel	66	67	34	66	67
R7-55 Traveler St (Troy Boston Apartments)	66	67	39	66	67

Source: VHB

Note: Refer to Figure 5.3 for receptor locations.

Service Activities

The site layout will be designed to accommodate service operations to occur off-street. Due to the proposed use of the Project, the anticipated service vehicles will be attributed to smaller delivery vehicles associated with FedEx, UPS, Amazon, and USPS. The service activities are expected to occur along the southern side of the exit driveway on to Albany Street. Trash pickup is expected to occur on the eastern side of the proposed building. The site layout of the proposed building will shield noise to off-site sensitive receptor locations east of the Ink Block complex. Existing buildings within the Ink Block development will provide shielding to off-site sensitive receptors to the east and south. Since service activities will be shielded by surrounding buildings, noise impacts to the sensitive receptor locations is expected to be negligible.

5.9.6 Impacts to Project's Residential Uses

Based on HUD procedures and guidance, the Project is located within distance of the nearby major transportation facilities, therefore, the noise analysis evaluated noise associated with these facilities.

Airport Activity

Logan International Airport is located approximately two miles east of the Project Site. Noise data from the 2015 Logan Airport Environmental Data Report⁵ indicates that the Project is located beyond the 65 dB Ldn contour. Therefore, the Project will not be impacted by airport activities.

Roadway Activity

The Project Site is in close proximity to I-90 to the north and I-93 to the east. Using HUD's procedures and based on traffic traveling along these major roadways, the sound levels associated with these roadways were calculated to be approximately 79 decibels at the Project's residential units. Traffic volumes representative of the roadways were obtained from the Massachusetts Department of Transportation (MassDOT) Transportation Data Management System⁶.

Table 5-9 summarizes the overall sound level associated with the rail and roadway activities at the Project's residential units.

Table 5-9 Sound Levels at Project Residential Units, dB(A)

Receptor Location	HUD Exterior Noise Criteria	Calculated Ldn Exterior Sound Levels	HUD Interior Noise Criteria	Calculated Ldn Interior Sound Levels
Project Residential Units	65	81	45	36

As shown in Table 5-9, the exterior sound levels exceed the HUD criteria for exterior uses. The internal areas of the buildings can be protected with acoustical walls on the facades of the building abutting the major roadways and rail activities. In order to create a good interior sound environment, the walls must be designed to reduce the transmission of sound through them. The construction of the wall should consider the following:

- › Construction type,
- › Construction material, and
- › Number and location of openings (windows and doors) through the wall.

One way of evaluating the amount of noise reduction that will occur through a wall is by the sound transmission class (STC) rating. Material with a higher STC rating provides a higher noise reduction. The HUD interior criteria for residences is 45 dB(A). The exterior walls facing the major roadways and railroads, should have a design STC goal of 36 dBA in order to reduce the sound levels below HUD's interior goal. In order to meet a specified STC, installation methods will be key in determining the attenuation. Typical single stud walls will probably not meet the

⁵ 2015 Environmental Data Report, Massachusetts Port Authority, <http://www.massport.com/logan-airport/about-logan/noise-abatement/contours>.

⁶ <http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod>

necessary goal of 36 dBA. In order to achieve the necessary attenuation, the exterior walls will most likely require staggered or dual stud construction and/or multiple layers of sheet rock. It is important to note that acoustical ceiling tiles may not prevent sound transmission over the wall. The walls should extend from the floor to the ceiling of the building structure in order to adequately control sound transmission. The number and location of openings should be considered in the wall design.

The windows and doors will be constructed using materials with STC ratings that target a 36 dBA attenuation.

5.9.7 Conclusion of Noise Impact Assessment

The noise analysis evaluated the sound levels associated with the Project. This analysis determined that the sensitive receptor locations in the vicinity of the Project Site currently experience sound levels exceeding the City of Boston's noise criteria. The dominant noise sources contributing to the existing high sound levels in the study area are traffic along the major roadways, such as I-93 and I-90, and nearby rail activities. The sound levels associated with the Project's operations will not contribute to the existing background sound levels at off-site sensitive receptor locations, which currently exceed the City of Boston noise standards. The Project's operations will not increase sound levels at the off-site receptor locations.

In addition, the noise analysis evaluated the sound levels that the residential areas within the Project are expected to experience from the existing traffic along the major roadways, such as I-93 and I-90, and nearby rail activities. As a result, the Project will incorporate wall and window construction procedures to ensure that the interior sound levels will be below the HUD noise criteria. The design of the residential unit's walls and windows will use appropriate materials necessary to ensure that the sound levels from nearby major transportation facilities will not adversely impact the proposed residential units.

5.10 Solid and Hazardous Waste

The majority of the Project Site is within the former Boston Herald property, in which there have been known releases of hazardous materials to soils and/or groundwater at the Project Site. Three releases have been reported to the Massachusetts Department of Environmental Protection (MassDEP) within the Project area; the release areas are shown on Figure 5.4. There are no known releases in the southern portion of the Project Site, which was originally part of the 217 Albany Street property.

Release Tracking Notification (RTN) 3-2724 is an older release associated with releases from former gasoline and diesel fuel underground storage tanks (USTs)/dispensers for the Boston Herald Facility. In 1989, approximately 350 cubic yards of contaminated soils and an unspecified amount of separate phase product were removed and previously existing tanks were replaced. These replacement USTs,

the dispensers and associated piping were removed in March 2012 at which time elevated PID readings were measured in soil. MassDEP was notified and a RTN 3-30743 was assigned to this incident (RTN 3-30743 is within the limits of RTN 3-2724). Approximately 50 cubic yards of contaminated soil was removed; no separate phase product was encountered. Response Action Outcomes (RAOs) were submitted to MassDEP in April 2013 for both of these RTNs, bringing them to regulatory closure. As part of the original Ink Block development, approximately 10 feet of fill was placed within the portion of this RTN area that is within the proposed development area. Thus, petroleum impacted soils that may remain in this area of the Project Site are not expected to be encountered during excavation for the Project.

During construction of Ink Block in 2013, asbestos fibers and elevated concentrations of lead and polycyclic aromatic hydrocarbons (PAHs) were identified within some soils at the Project Site. MassDEP was notified and RTN 3-31735 issued. While testing for these compounds was not specifically performed within the Project Site, the entire Boston Herald property was included in the release area. A Permanent Solution Statement (PSS) was submitted to MassDEP in February 2016. As described in the PSS, an Activity and Use Limitation (AUL) was placed on the former Boston Herald Property (these areas are shaded on Figure 5.4). While the AUL allows for multi-family residential uses, there are restrictions within the AUL that will impact building design and construction. These restrictions include:

- › Earthwork activities will need to be performed under a post-construction Release Abatement Measure (RAM) submitted to MassDEP Bureau of Waste Site Cleanup. A RAM plan will be submitted to MassDEP outlining procedures for management and disposal of excavated soils.
- › A non-traditional asbestos abatement work plan will need to be submitted to MassDEP Bureau of Air and Waste prior to excavation of soils containing (or potentially containing) asbestos fibers. Unless testing of soils indicates otherwise, soils below a "clean" cover placed during original Ink Block construction must be assumed to contain asbestos fibers. The work plan will include air monitoring and other requirements when working in areas with soils containing asbestos.
- › Due to the previous petroleum release, a sub-slab vapor barrier/venting system or first floor ventilated garage is required unless in the Licensed Site Professional's opinion, groundwater monitoring and/or soil gas data show that there is No Significant Risk to building inhabitants without the venting system, barrier and/or ventilated garage. Additional testing is planned to evaluate whether a vapor barrier/venting system is required.
- › A protective barrier is required over existing fill soils (not imported during the original Ink Block construction). The protective barrier is anticipated to consist of:
 - A minimum thickness of one foot of clean fill covered by building slabs;
 - A minimum thickness of one foot of clean fill and pavement with a marker layer separating clean soils from the contaminated soils beneath

(the clean cover would be increased to two feet in those portions of the Site where asbestos fibers have been detected in site soils); or

- A minimum thickness of three feet of clean fill covered by grass or light landscaping with a marker layer separating clean soils from the soils below.

For both the Albany Street property and former Boston Herald property, any excess excavated soils will be tested and disposed of an appropriately licensed facility. The lowest level of the proposed building is generally set above existing grades, generally limiting excavation to that required for pile caps, grade beams and new utilities.

5.10.1 Subsurface Contamination

Several environmental studies have been conducted at the Project Site, including a 2007 Environmental Site Assessment conducted by GZA GeoEnvironmental, Inc. (GZA). As part of that study, site history and regulatory databases were reviewed and groundwater samples were collected from three on-site monitoring wells and analyzed for certain constituents. Petroleum constituents were detected in the three groundwater samples analyzed. However, the detected concentrations were not above the Massachusetts Contingency Plan's (MCP's) reporting concentrations applicable for the Project Site.

Presently, there is no known subsurface contamination requiring notification to the MassDEP. There was a historic release related to replacement of two 10,000-gallon underground storage tanks (USTs) in 1989, at which time approximately 350 cubic yards of petroleum- impacted soil was removed from the Project Site. The two USTs are currently used to store diesel fuel; gasoline was stored in the tanks prior to 1995.

5.10.2 Construction Period

Contaminated soils may be encountered during construction, given the previous release associated with the USTs and the presence of urban fill, as is typical of most Boston properties, at the Project Site. If potentially contaminated soils are identified during construction, they will be handled in accordance with applicable regulations. If excess soil needs to be removed from the Project Site, it will be characterized by chemical testing to assess suitable disposal/recycling options. In the event that subsurface contamination exceeding MCP reporting thresholds is encountered, MassDEP will be notified and the contamination managed in accordance with the MCP.

Past hazardous material surveys conducted by GZA and others have identified asbestos containing materials (ACM) in the on-site buildings. Any ACMs will be abated by a properly licensed contractor prior to building demolition activities. In addition, solid waste generated from the demolition of the existing building will be sorted on the Project Site. Some materials will be reused on the Project Site, while

others will be recycled off-site or disposed of in accordance with federal, state and local regulations.

5.11 Groundwater

Over the past approximately five years, groundwater levels have been measured at and immediately adjacent to the Project Site at about El. 6.0 to 8.2 feet. While there may be temporary fluctuations to above El. 8.2 due to stormwater infiltration immediately west of the proposed building, this infiltration is not anticipated to impact the proposed building since the bottom of the infiltration system is at about El. 9, approximately 10.5 feet below the lowest proposed floor elevation. Similarly, the proposed development should not decrease the groundwater level in the vicinity since the lowest floor elevation is more than 10 feet above previously measured groundwater levels and there will be no permanent pumping.

5.12 Geotechnical

Based on borings performed at the Project Site, subsurface conditions consist of approximately 15 to 20 feet of fill over 5 to 10 feet of organic soils, over approximately 70 to 85 feet of silty clay over 5 to 15 feet of glacial till over bedrock. Previous borings indicate top of bedrock at about El. -100 to -120. The fill, organic and clay layers are compressible; therefore, the proposed building will be supported on driven piles bearing in the glacial till and/or on the bedrock.

In general, proposed grades are within one to two feet of proposed grades, except in the northwest portion of the proposed building where an up to 14-foot raise in grade is planned below the proposed building footprint. Estimated settlement of the adjacent sidewalk due to the raise in grade will be evaluated and, if warranted to limit off-site settlement, lightweight fill used for the raise in grade.

5.13 Temporary Construction Impacts

Construction impacts are temporary in nature and are typically related to air (dust), noise, stormwater runoff, solid waste, and vibration. The Proponent will develop a detailed Construction Management Plan (CMP) for approval by BTM prior to construction. The CMP will include detailed information on construction activities, specific construction mitigation measures, and vehicle routing and staging to minimize impact on the surrounding neighborhoods.

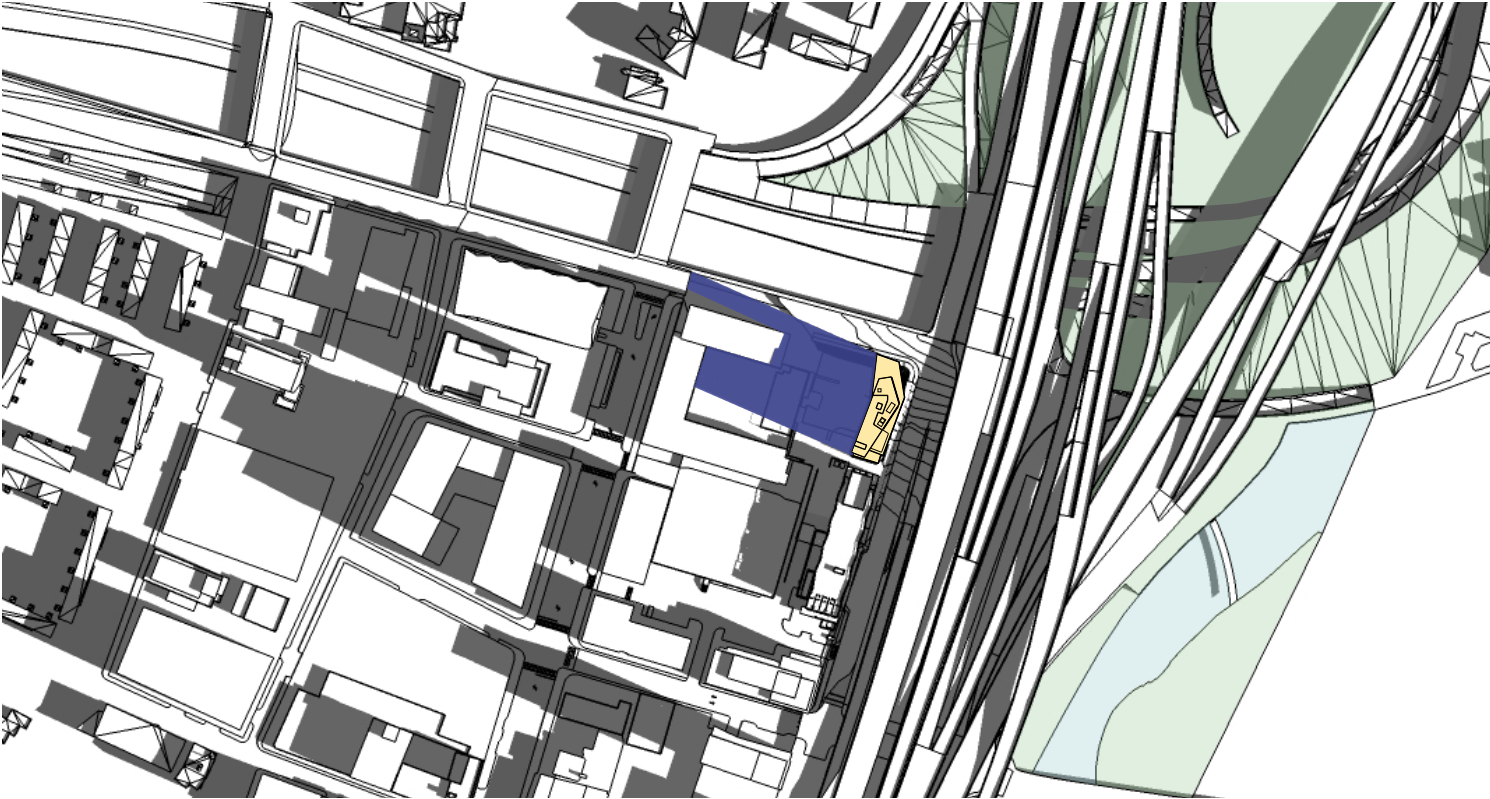
Construction methodologies that ensure public safety and protect nearby residents will be employed. Techniques such as barricades, walkways, and signage will be used. Construction management and scheduling will minimize impacts on the surrounding environment and will include plans for construction worker commuting and parking, routing plans for trucking and deliveries, and control of noise and dust. Proposed CMP elements are subject to refinement and modification as the design of the Project progresses.

Construction of the Project will be completed in a single phase. Demolition is anticipated to begin in the second quarter of 2019 followed by construction and site improvements. The Project is anticipated to be fully constructed and in operation by 2021.

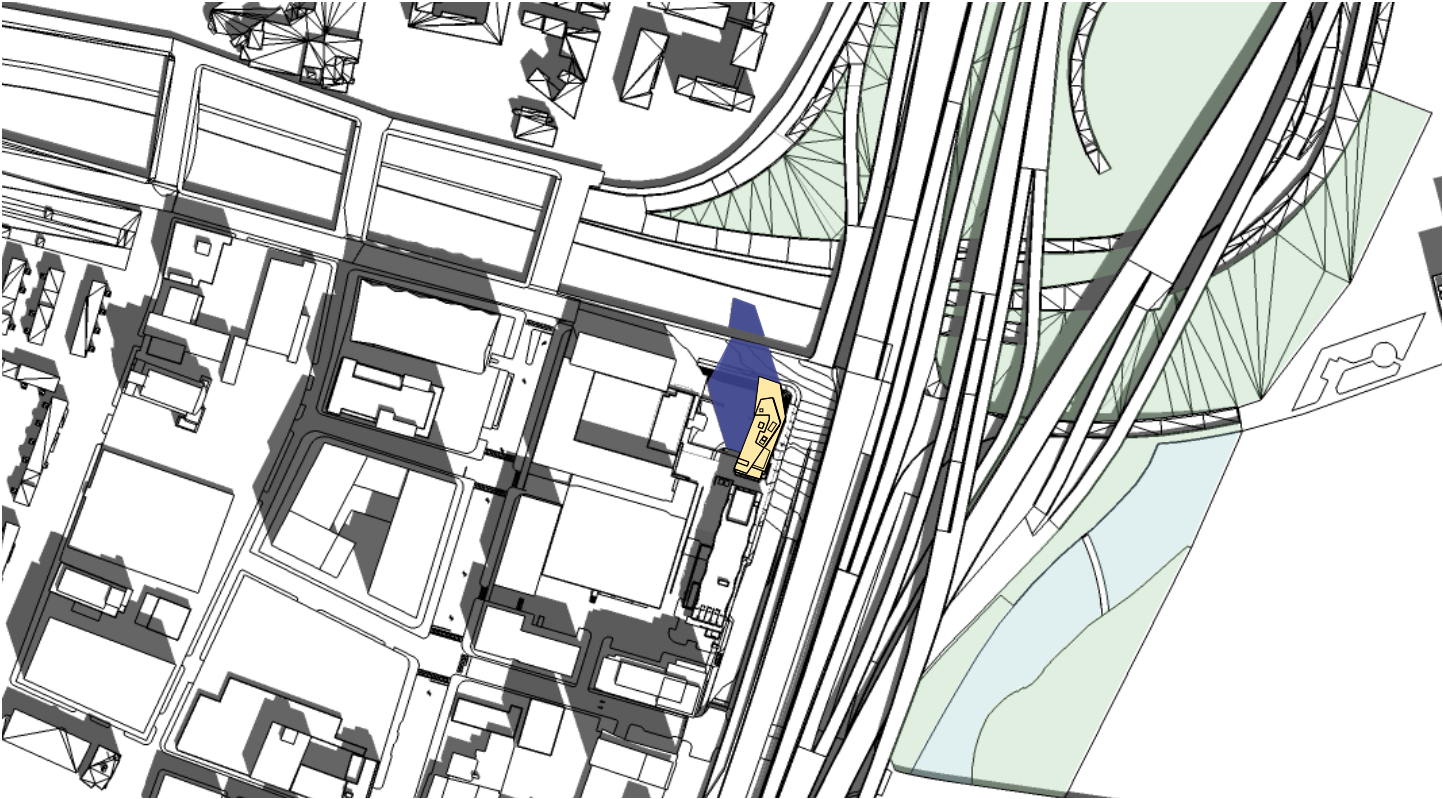
5.14 Rodent Control Post-Construction

During building operations, trash and solid waste removal will be handled by building management through a third-party contractor. Building management will also maintain a service contract with a professional pest control firm to address rodent/pest control during the operational phase of the Project, as needed. In addition, no open top dumpsters will be allowed as an additional precaution to deter infestation.

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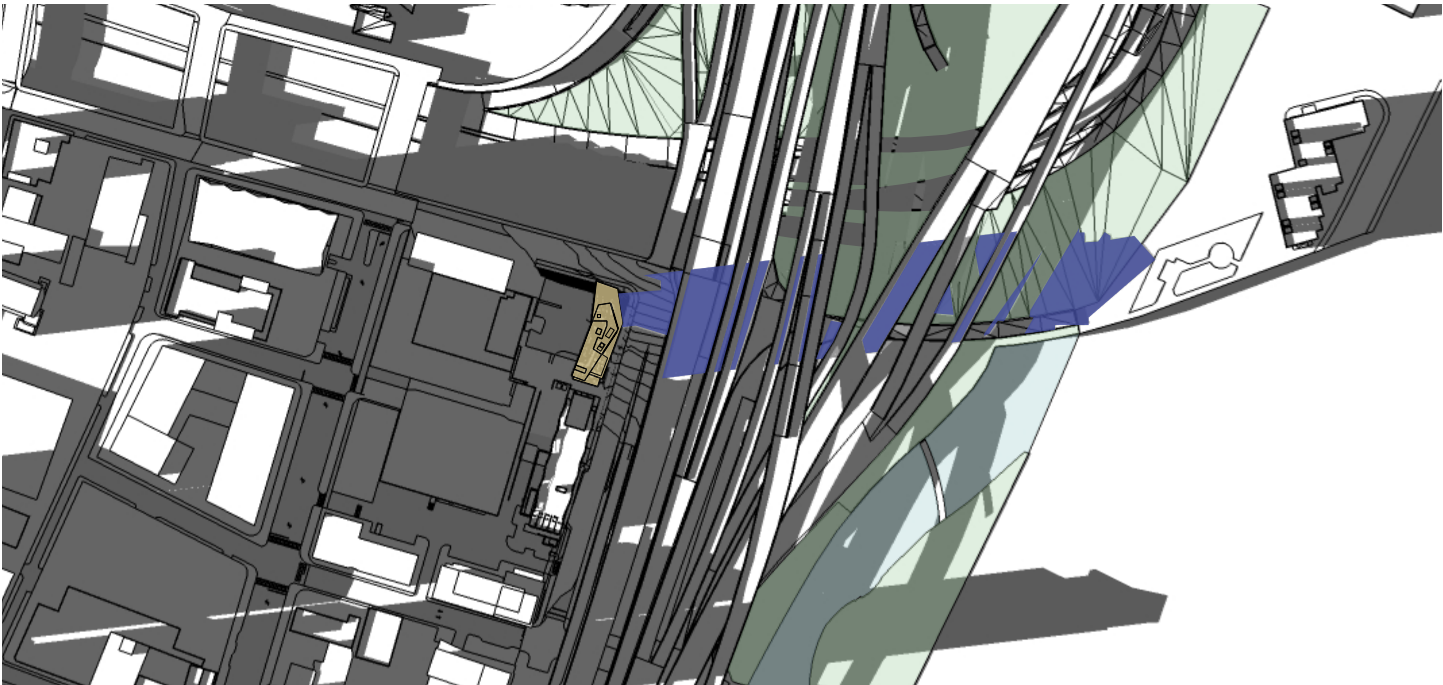
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March - 12:00pm








March - 3:00pm



March- 6:00pm

LEGEND

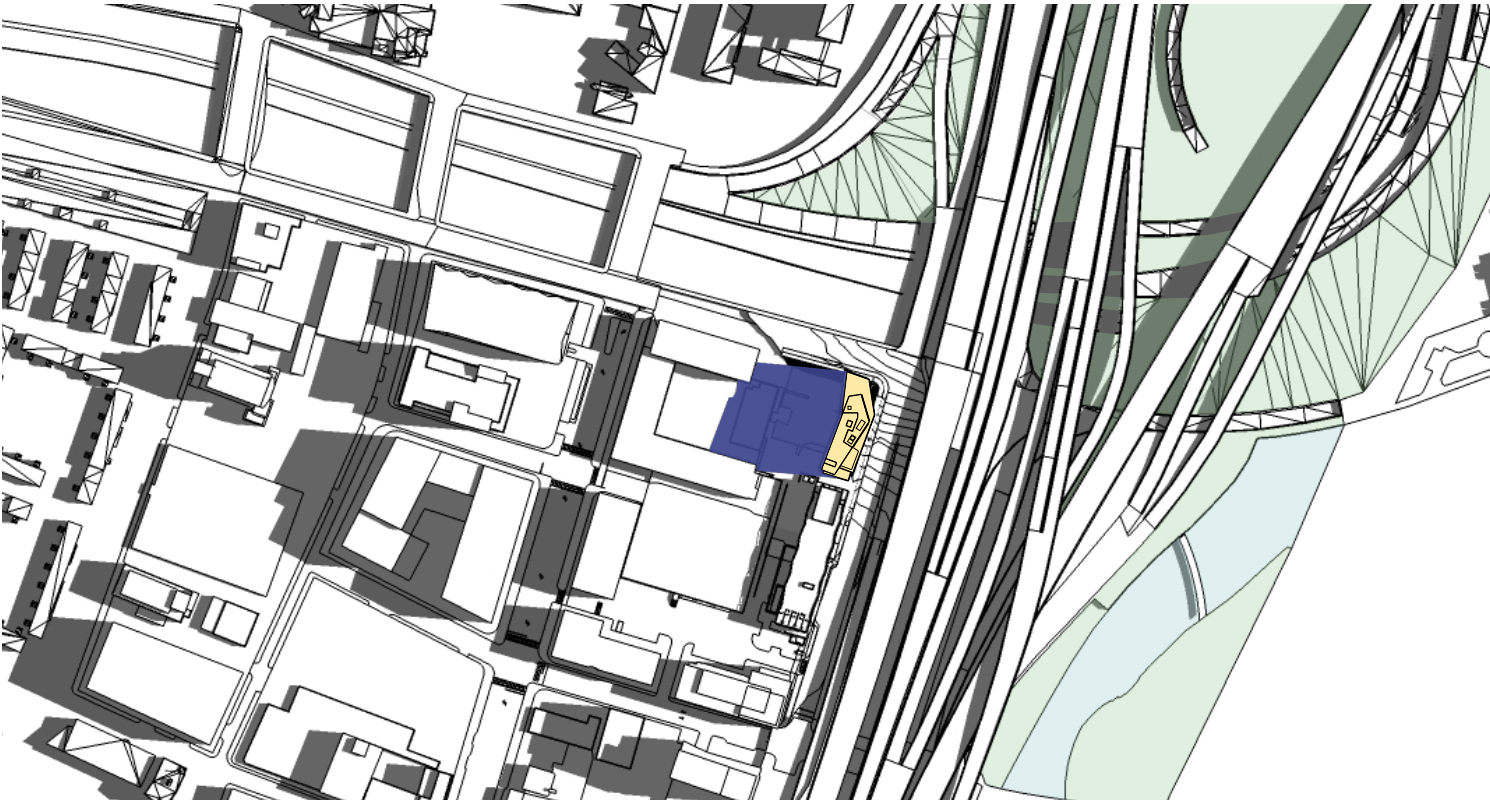


Proposed Building

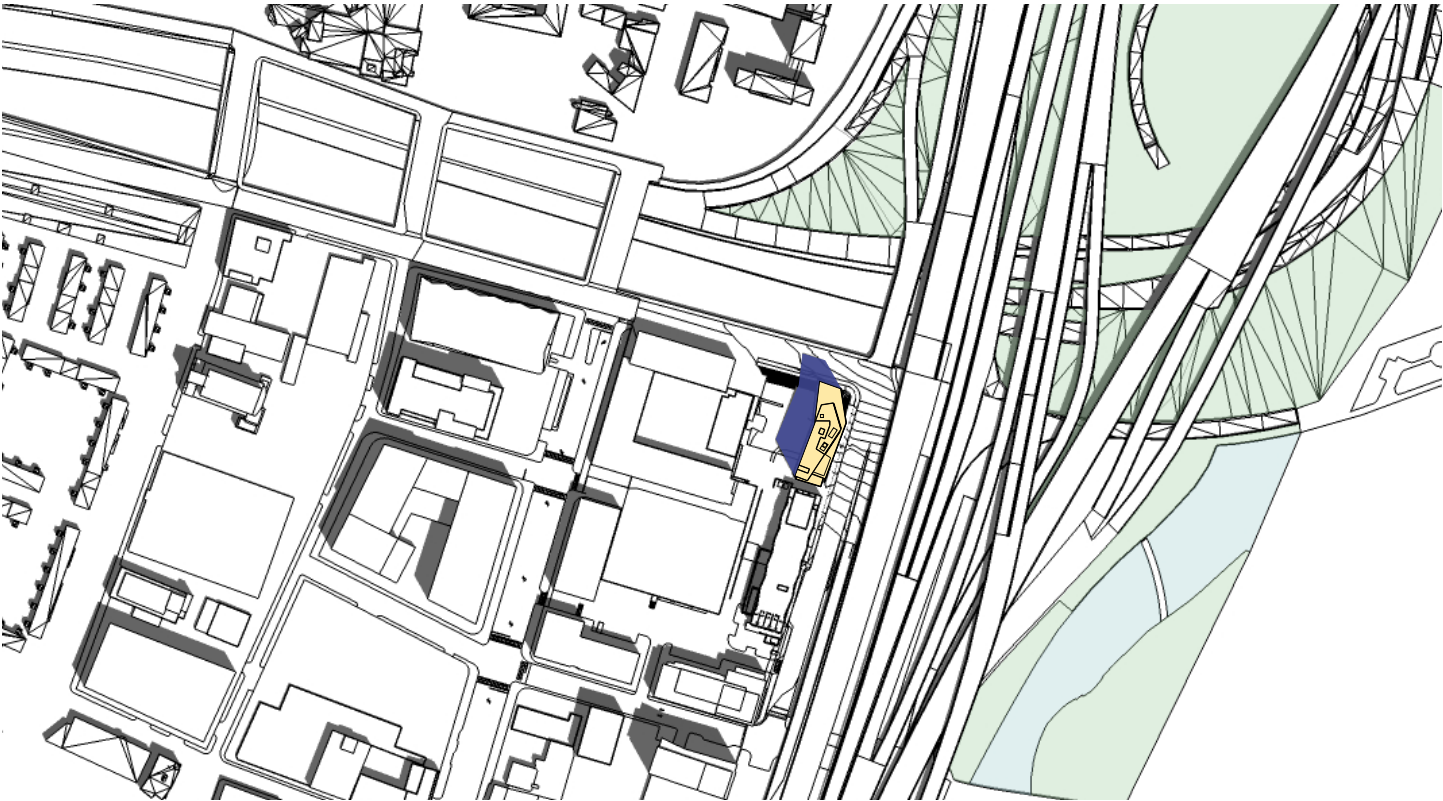
Net New Shadow

Existing Shadow

Green Space



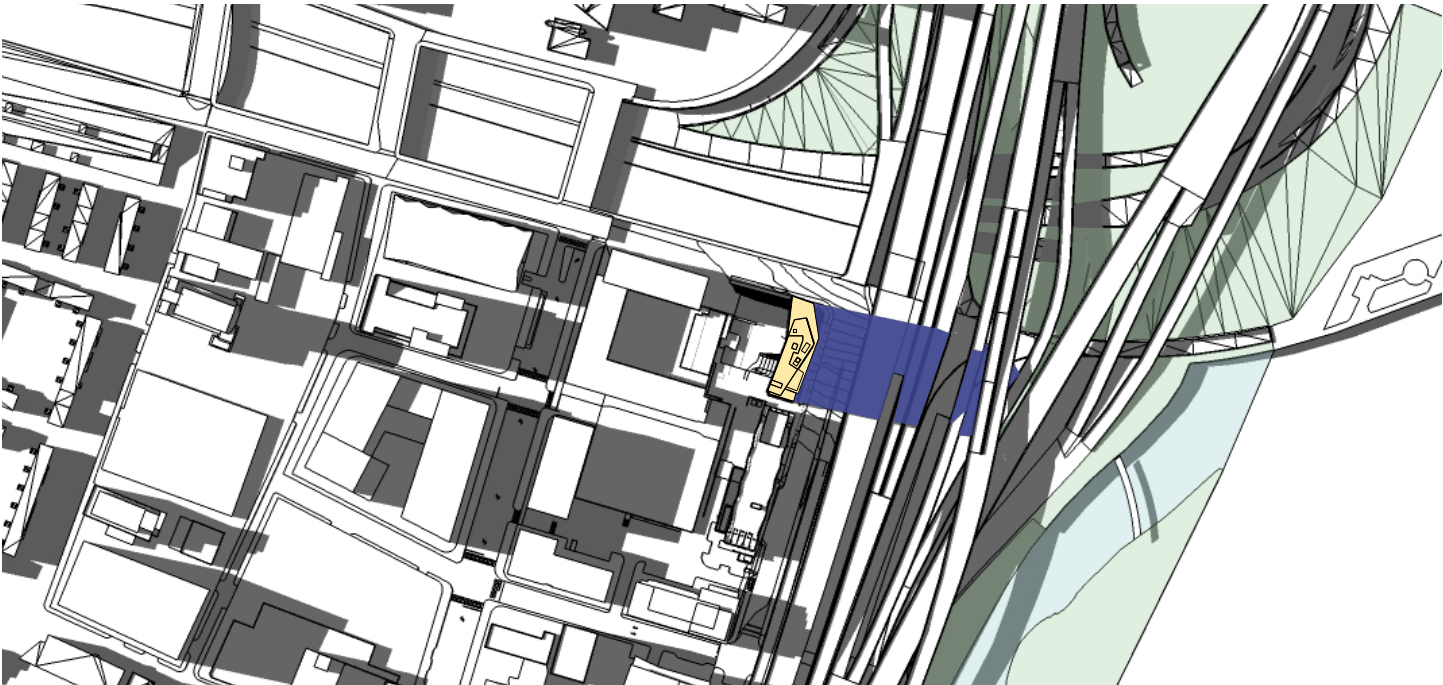
June 21 - 9:00am



June 21 - 12:00pm



June 21- 3:00pm



June 21 - 6:00pm

LEGEND

-  Proposed Building
-  Net New Shadow
-  Existing Shadow
-  Green Space



ELKUS | MANFREDI
ARCHITECTS

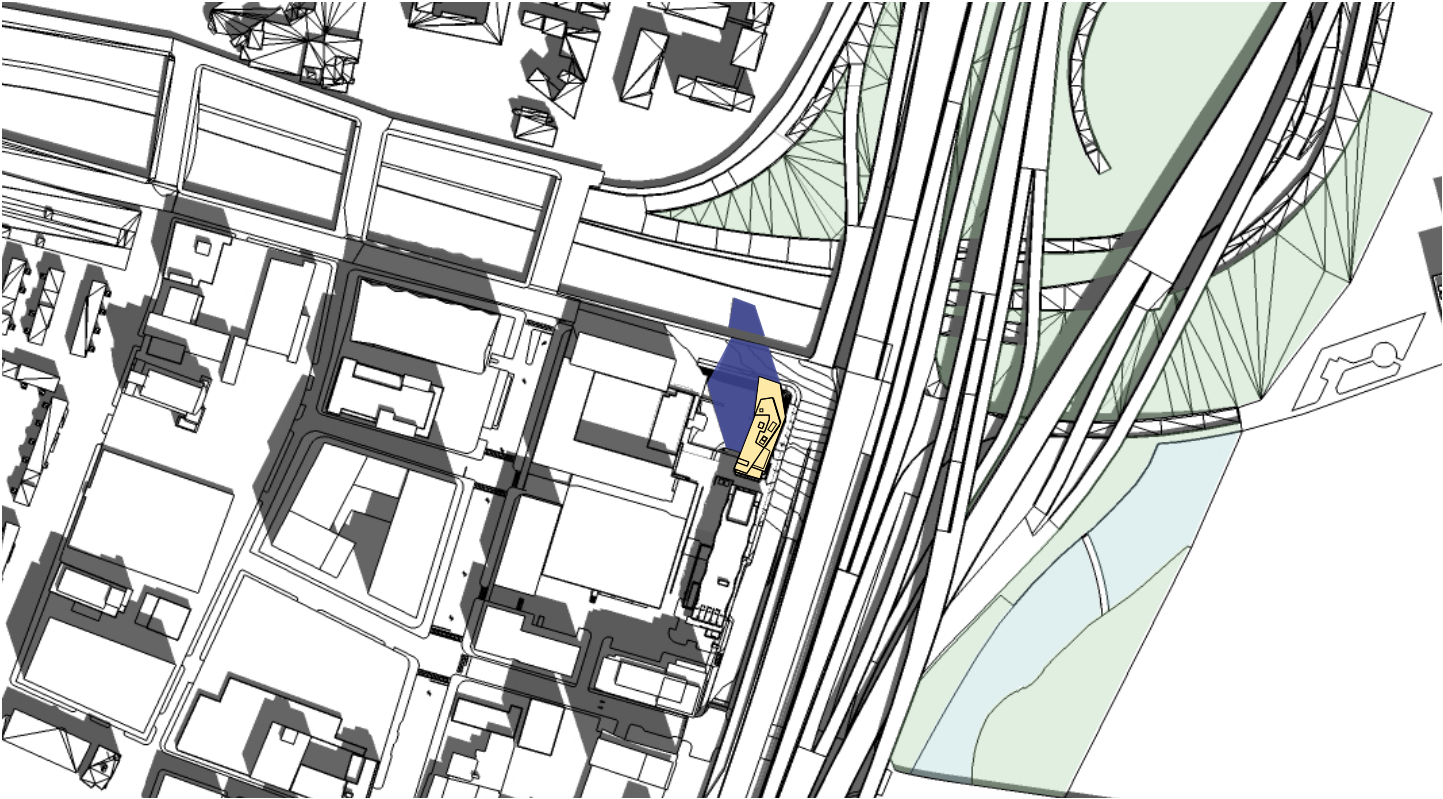
ND NATIONAL
DEVELOPMENT

Figure 5.1b
Shadow Impacts - Summer Solstice

**217 Albany Street
South End - Boston, Massachusetts**



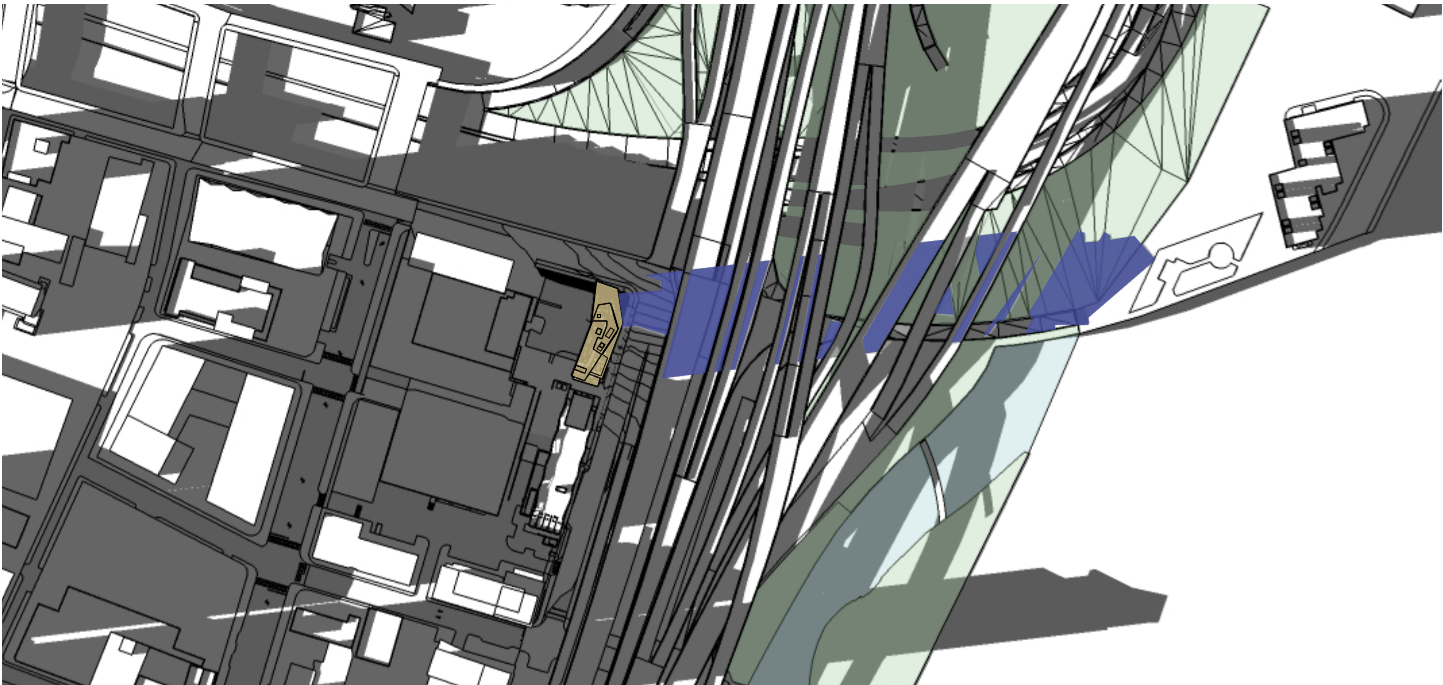
September 21 - 9:00am



September 21 - 12:00pm





September 21 - 3:00pm





September 21 - 6:00pm


LEGEND

 Proposed Building

 Net New Shadow

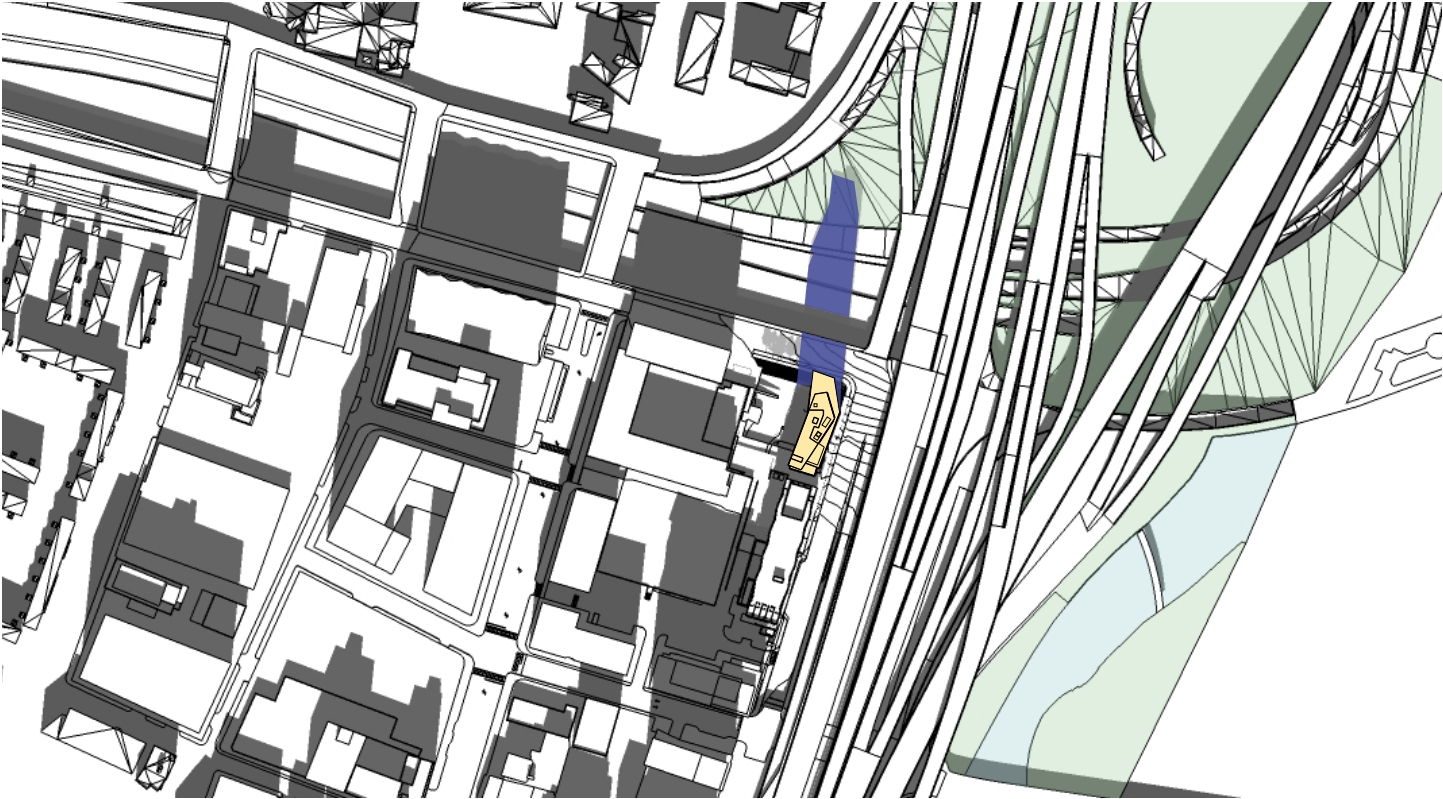
 Existing Shadow

 Green Space

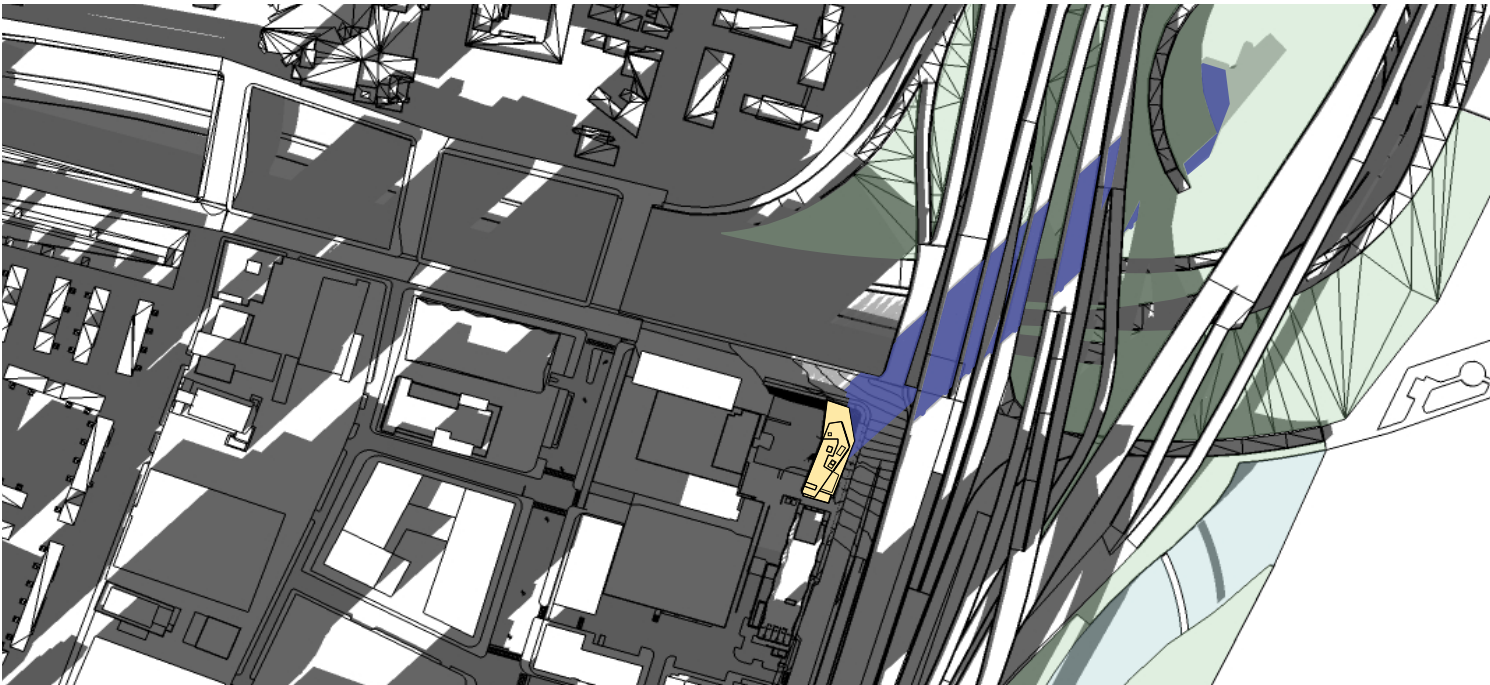




December 21 - 9:00am



December 21 - 12:00pm



December 21- 3:00pm

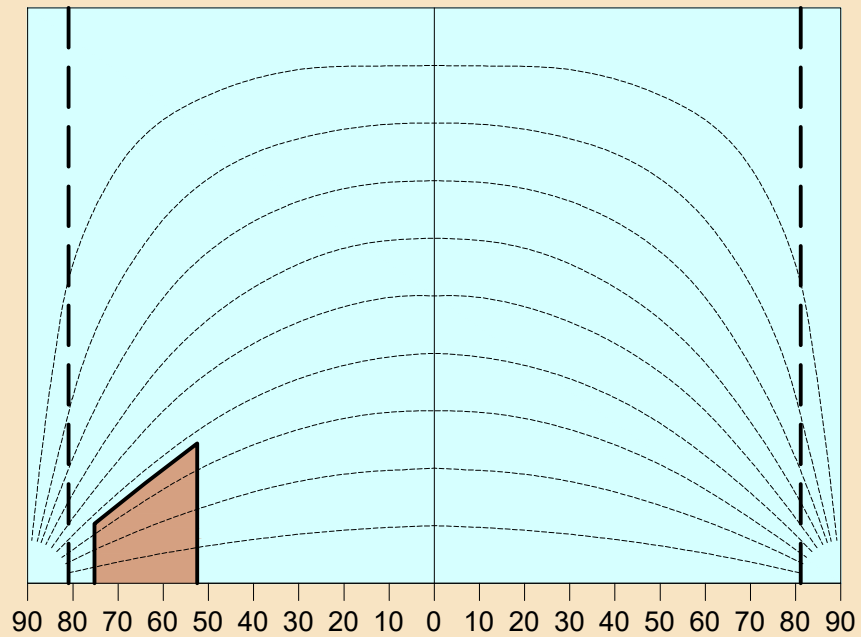
LEGEND

- Proposed Building
- Net New Shadow
- Existing Shadow
- Green Space



Existing

Obstruction of
Skyplane = 6.6%



Proposed

Obstruction of
Skyplane = 91.4%

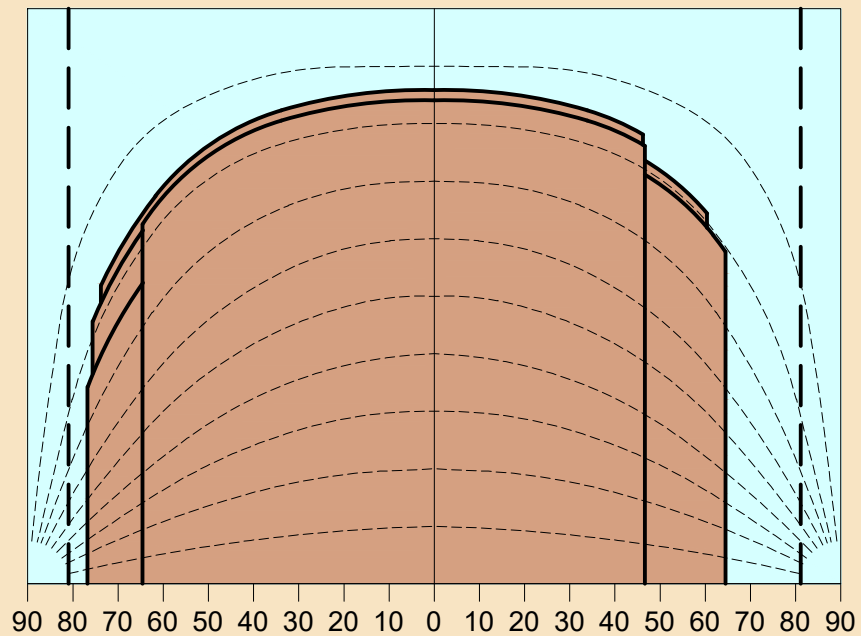
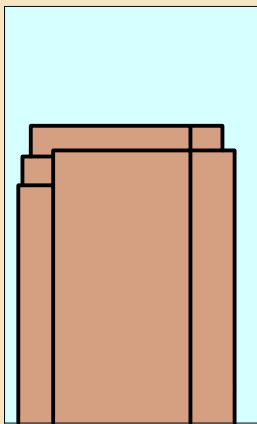


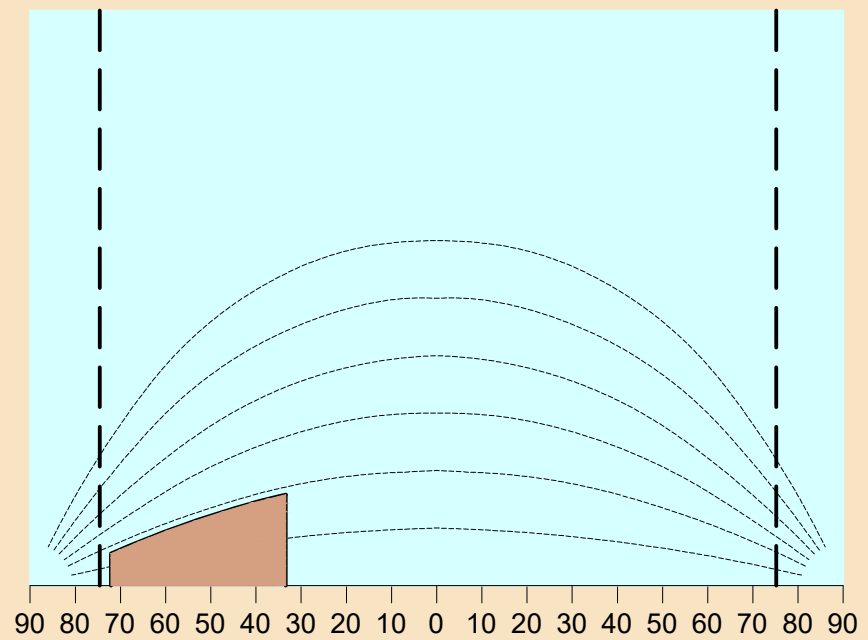
Figure 5.2a

Daylight Analysis
Center of Albany Street

**217 Albany Street
Boston, Massachusetts**

Existing

Obstruction of
Skyplane = 6.6%



Proposed

Obstruction of
Skyplane = 83.1%

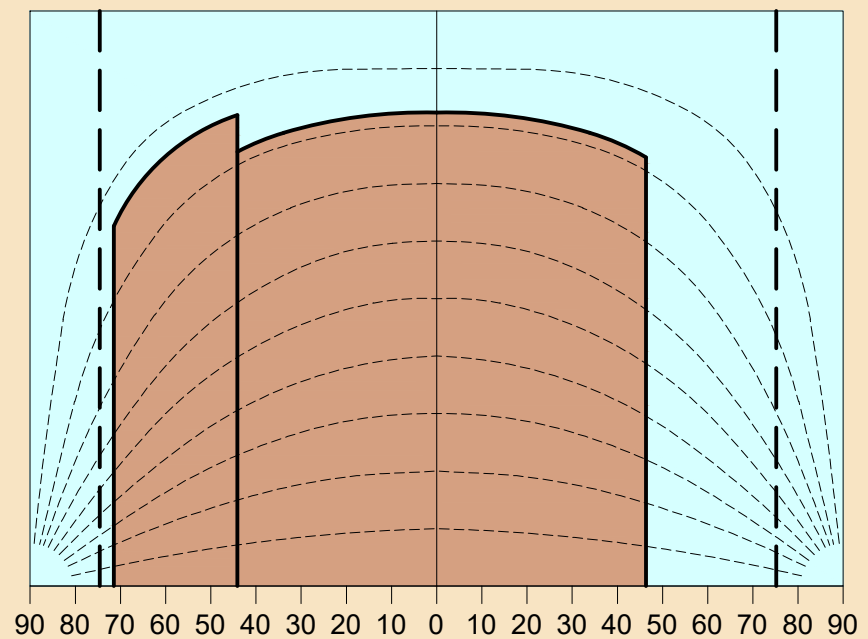
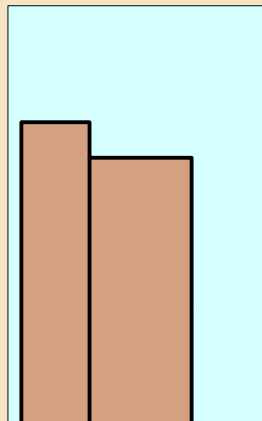
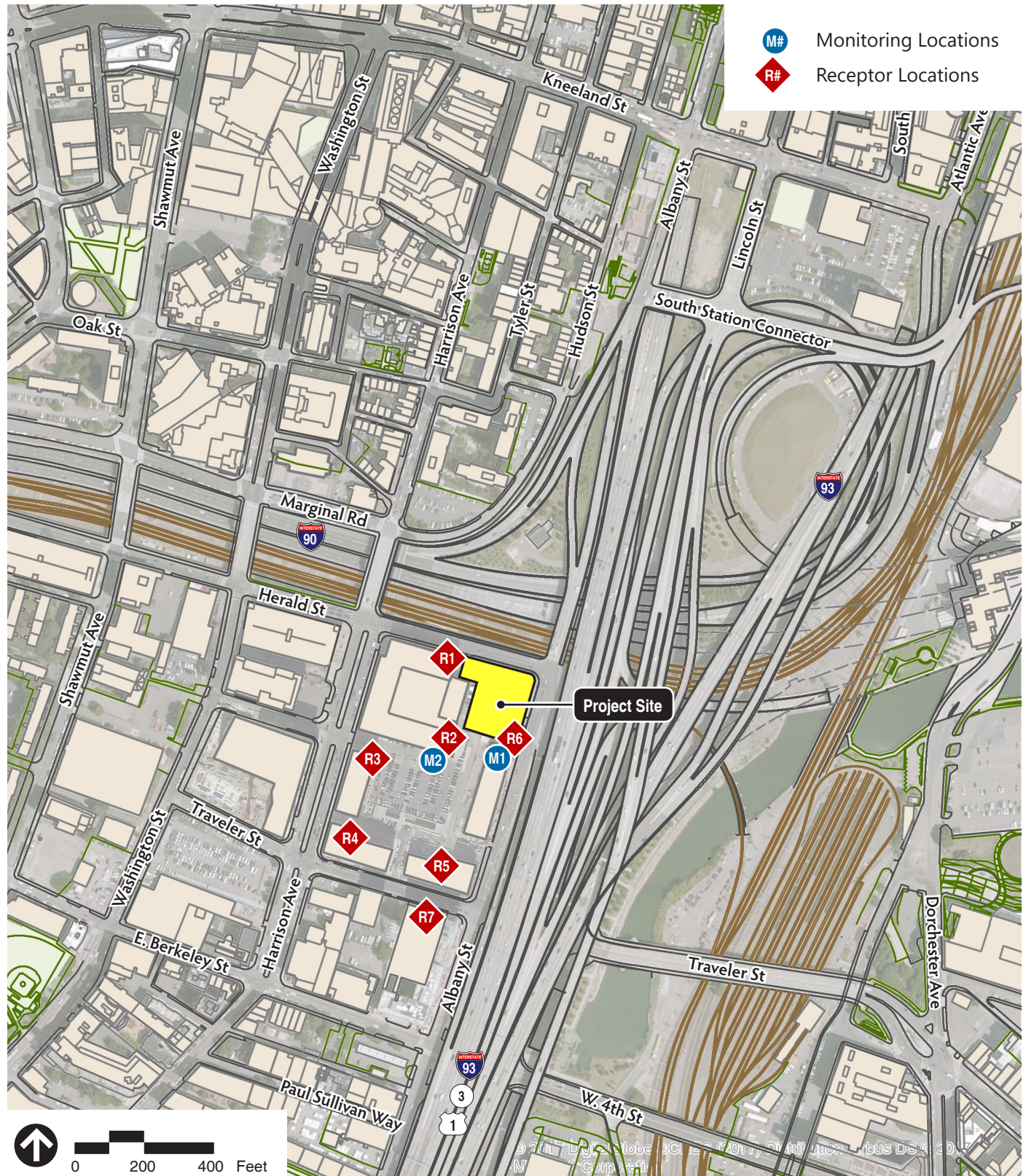


Figure 5.2b

Daylight Analysis
Center of Herald Street

**217 Albany Street
Boston, Massachusetts**

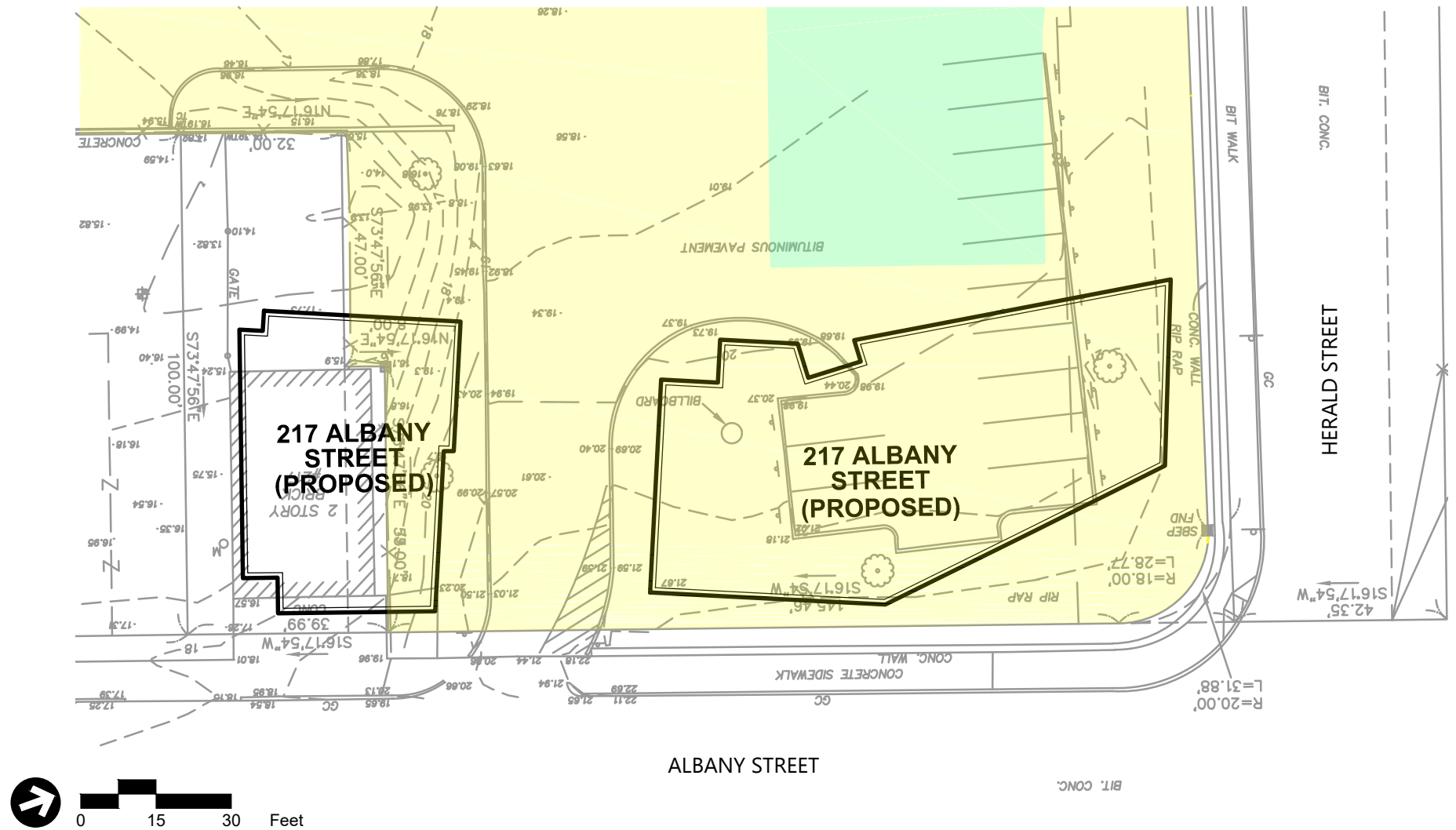


Source: MassGIS, City of Boston



Figure 5.3
Noise Monitoring and Receptor Locations

**217 Albany Street
Boston, Massachusetts**



Source:

Legend:

RTN AREA 3-2724



RTN AREA 3-31735



Prepared By: GZA

Figure 5.4

Release Tracking Number (RTN) Areas

**217 Albany Street
Boston, Massachusetts**

6

Infrastructure

This chapter describes the infrastructure systems that will support the Project. The following utilities are evaluated: wastewater, water, stormwater management, natural gas, electricity, and telecommunications.

The systems discussed below 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 design team during the construction process for the Project.

6.1 Summary of Key Findings and Benefits

The key impact assessment findings related to infrastructure systems include:

- › Based on initial investigations, the existing City and private utilities' infrastructure systems are adequately sized to accept the demand associated with the operation of the Project.
- › The existing Project Site is mostly impervious to rainfall infiltration and includes surface water sheet flowing to adjacent catch basins located on-site.
- › The on-site catch basins are directed to existing stormwater infiltration systems that were recently constructed as a part of the Ink Block construction. Additional stormwater infiltration was included in anticipation of the Project.
- › The Project Site is currently serviced by the BWSC for domestic and fire protection water and sanitary sewage conveyance in Albany Street. Based on the current development program, the Project is estimated to generate approximately 35,970 gallons per day of sanitary sewage and will require approximately 39,567 gallons of water per day.

The key Project-related mitigation measures and/or benefits associated with the infrastructure systems include:

- › The Project may include enhanced stormwater infiltration systems and new vegetated areas, all of which aim to improve water quality and promote the infiltration of stormwater runoff into the ground and evapotranspiration, thereby improving water quality and runoff in comparison to the existing conditions.
- › In compliance with Article 37, the Project is being designed to reduce potable water usage by a minimum 20 percent with the goal to achieve a 30-percent water efficiency.

6.2 Regulatory Context

All connections will be designed and constructed in accordance with applicable city, state and federal standards. A complete list of the anticipated state and local permits associated with Project-related infrastructure is included in Table 1-2 of Chapter 1, *Project Description*. The final design process for the Project will include required engineering analyses and will adhere to applicable protocols and design standards, ensuring that the proposed buildings are properly supported by, and in turn properly use the utility infrastructure of the City and private utilities. Detailed design of the Project-related utility systems will proceed in conjunction with the final design of the buildings and their interior mechanical systems. The following discusses the regulatory framework of utility connection reviews and standards:

- › All improvements and connections to BWSC infrastructure will be reviewed by BWSC as part of the BWSC 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.
- › The Project is located within the Groundwater Conservation Overlay District (GCOD) as defined in Article 32 of the Zoning Code. This zoning article sets forth requirements promoting the infiltration of runoff from impervious site areas within the district. To meet the requirements of this Article, projects within the district must infiltrate to the ground a volume equivalent to 1-inch over the site impervious areas.
- › The Boston Fire Department will review the Project with respect to fire protection measures such as Siamese connections, hydrants, and standpipes.
- › Design of the 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 Massachusetts Department of Transportation through the access permit process, as required.
- › Additional information on the regulatory framework for each utility system is included in subsequent sections of this chapter.

6.3 Stormwater Management

6.3.1 Existing Drainage Conditions

The Project Site is almost entirely impervious in the existing condition. Runoff from the Project Site is captured by catch basins in Albany Street or catch basins in the existing parking lot. The catch basins in Albany Street drain to a 60-inch drain, through a regulator, eventually discharging to the Fort Point Channel via CSO #068. Refer to Figure 6.1 for the location of the existing drain services. On-site infiltration is limited to small landscaped areas. The catch basins in the parking lot drain to an infiltration system located at 225 Albany Street which then drains to the 60-inch drain. Stormwater from the Project Site is expected to that of typical dense, urban

areas having high rates and volumes of runoff with significant pollutant loading of nutrients, gas, and oil from paved surfaces.

6.3.2 Proposed Drainage Conditions

The Project is planned to be designed and constructed to reduce the rate and volume of stormwater entering the Fort Point Channel via the BWSC system, while reducing the pollutant loadings. The drainage system will likely include stormwater management control measures, such as subsurface infiltration chambers. As part of BWSC's review process, the Proponent will consider measures wherever applicable to minimize flows from the Project Site by incorporating the required infiltration system capacity. Refer to Figure 6.2 for the proposed storm drain system.

6.3.3 Compliance with GCOD

The Project Site is located within the Groundwater Conservation Overlay District (GCOD) as defined in Article 32 of the Zoning Code. All new projects within this overlay district are required by the zoning article to infiltrate the volume equivalent to one-inch of the proposed impervious area to groundwater. The Project Site area is equal to approximately 36,070 square feet. The existing condition had approximately 18,424 SF of impervious surface area while the currently proposed development will have a total of approximately 24,209 SF of impervious area. The stormwater management systems for the previous Ink Block site were designed to accommodate the infiltration requirement for future impervious areas associated with the Project. As the Project is increasing impervious area from the existing condition, any impervious areas not accounted for in the stormwater systems constructed under the previous phases of the Ink Block redevelopment will most likely be addressed with additional infiltration system to be compliant with the requirements of GCOD and the BWSC.

6.4 Sanitary Sewage

6.4.1 Existing Sewer System

The BWSC owns and maintains the sanitary sewer infrastructure serving the Project Site. The Project Site is currently serviced by a 30-inch by 36-inch combined sanitary sewer pipe in Albany Street which was relined in 2010.

6.4.2 Proposed Sewer System

The building plumbing has not been designed at this point in the Project, but the design team intends to reuse existing facilities to the greatest extent practicable. The proposed building program consists of 250 units consisting of 327-bedroom residential building.

Table 6-1 Estimated Future Sewer Generation

Program Type	Units	Generation Rate	Sewer Generation (GPD)
Building 1 Residential	327 Bedrooms	110 GPD/Bed	35,970 GPD
TOTAL			35,970 GPD

Note: Based on MassDEP 310 CMR 15.203 flow calculation factors
 GPD Gallons per day

6.4.3 Inflow and Infiltration (I/I) Mitigation

Since the Project is expected to generate net new wastewater flows of approximately 35,970 gallons per day, certain regulatory thresholds are triggered. The BWSC requires that new sewer connections generating greater than 15,000 GPD of net new wastewater flow provide mitigation to offset clean flow inflow and infiltration (I/I) present in the collection system. I/I is the component of flows in sanitary sewer systems that does not come from wastewater generated by building. I/I includes groundwater infiltration from leaking/broken sewer infrastructure, as well as stormwater connections from roof leaders and drainage infrastructure. Following MassDEP and BWSC policy, projects that generate flows more than the 15,000-gallon threshold are responsible for mitigating I/I at a ratio of 4:1 relative to the net-new wastewater generated. The current fee rate for net new I/I is \$2.41 per gallon per day multiplied by a ratio of 4:1. This will result in a mitigation payment for the Project to be determined in coordination with BWSC.

6.5 Domestic Water and Fire Protection

6.5.1 Existing Water Supply System

Domestic and fire protection services are currently provided to the Project Site by BWSC. Albany Street has two water mains, a 12-inch southern low (commonly known as low service) and a 12-inch southern high (commonly known as high service). Both services were constructed in 1997. BWSC Service maps do not indicate direct connections to either main by the existing building on-site. It is thought that the building on-site is serviced from the mains in Albany Street. These existing services will be re-used if possible or cut and capped at the main. There is an existing fire hydrant on Albany Street in front of the proposed building.

6.5.2 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 standard sewage generation rates outlined in the DEP System Sewage Flow Design Criteria, 310 CMR 15.203, the Project will require approximately 39,567 gallons of

water per day. The Proponent will continue to consider and evaluate methods to conserve water as building design evolves.

New water connections will meet the applicable City and State codes and standards. Compliance with the standards for the domestic water system service connection will be reviewed as part of BWSC's Site Plan Review process. Water services to the new building 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, backflow prevention design, and location of hydrants and Siamese connections conform to BWSC and Boston Fire Department (BFD) requirements. The Proponent will provide for the connection of the meter to the BWSC's automatic meter reading system. Fire protection connections on the Project Site will also need approval of the BFD. The Proponent will request record hydrant flow test information from the BWSC to aid in the preliminary water design. In addition, the Proponent will request new hydrant flow tests on the main to which the Proponent intends on connecting.

6.6 Other Utilities

6.6.1 Natural Gas Service

National Grid has a 30-inch-high pressure gas main in Albany Street adjacent to the Project Site. It is anticipated that the Project's HVAC systems will be via a water source heat pump system. The new building is expected to be heated by gas fired hot water boilers, and domestic hot water will be produced by a central gas fired system. Peak gas demand has not been estimated at this time but the Proponent will work with National Grid to confirm adequate system capacity as design progresses.

6.6.2 Electrical Service

Eversource Energy (d/b/a NSTAR Electric) provides electric services in the Project area with a large ductbank in Albany Street and existing switch gear installed in the east of the Project Site. The Proponent will coordinate the design and capacity with Eversource.

6.6.3 Telephone and Telecommunications

There are several telecommunications providers in the area including Verizon, Comcast, and RCN-BecoCom. The Proponent will work with service providers to confirm there is sufficient capacity in the area to provide services, and will select providers for telephone, cable, and data services as the design progresses. Upon selection of providers, the Proponent will coordinate service connections and obtain the appropriate approvals.

6.6.4 Protection of Utilities

Existing public and private utility infrastructure will be protected during the duration of the Project, with the exception of utilities capped on-site for future use. The installation of proposed utilities within the public way will be in accordance with all regulatory bodies, including MassDOT, BWSC, BPWD, the Dig-Safe Program and governing utility company requirements. All appropriate permits will be acquired before construction commences. Specific methods of constructing proposed utilities where they are adjacent to, or connect with, existing water, sewer, or drain infrastructure will be reviewed by the BWSC as part of its Site Plan Review process.

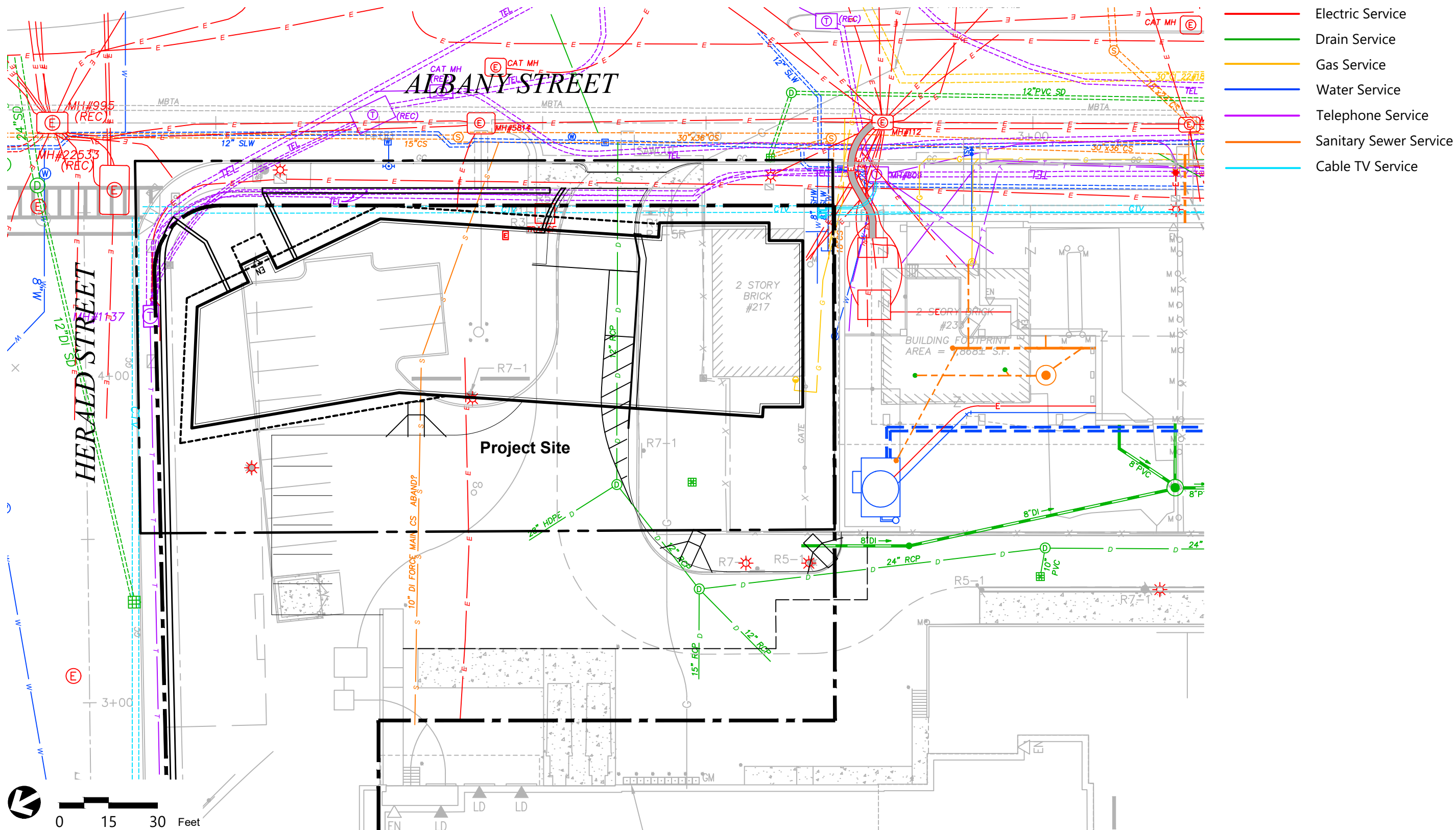


Figure 6.1
Existing Utilities

217 Albany Street
Boston, Massachusetts

7

Historic Resources

This chapter discusses potential effects the Project may have on historic properties located within one-quarter mile of the Project Site. Historic resources were identified through the Massachusetts Historical Commission's (MHC) Massachusetts Cultural Resource Information System (MACRIS) database and mapping tool, and are listed in Table 7-1. Figure 7.1 shows the location of these resources and their proximity to the Project Site.

7.1 Summary of Key Findings and Benefits

The key findings and benefits related to historic resources include:

- › There are no designated or inventoried historic properties located on the Project Site.
- › The Project Site is located at the extreme northeast corner of the South End Landmark District Protection Area. The location is two blocks from the closest boundary edge of the South End Landmark District, which is a local historic district listed in the State Register.
- › The Project Site contains a vacant two-story building constructed c. 1960.
- › Within one-quarter mile of the Project Site, there are 11 areas forms and seven (7) individual inventory forms included in the Inventory of Historic and Archaeological Assets of the Commonwealth (Inventory).
 - Of these, one historic district and one individual property within the one-quarter mile radius are listed in the National and/or State Registers of Historic Places.
- › The Project will have a beneficial impact on the immediate and surrounding area from both an aesthetic and functional standpoint, specifically improving the corner of Albany and Herald Streets as a welcoming entrance into the South End from South Boston.
- › The Project will continue to transform the northeast quadrant of the South End from an industrial area into a vibrant mixed-use urban community consistent with the planning goals of the BPDA Harrison-Albany Corridor Strategic Plan.
- › The Project will encourage pedestrian activity between Downtown, South Boston, and Chinatown.

7.2 Regulatory Context

7.2.1 Boston Landmarks Commission (BLC) Article 80 Review

Submission of this PNF initiates review of the Project by the BLC under the Article 80 Review Process.

7.2.2 South End Landmark District Commission Review

As noted in Section 7.4.2, the Project Site is located within the South End Landmark Protection Area, therefore demolition and Project design is subject to review by the South End Landmark District Commission. A Certificate of Appropriateness application for the Project is anticipated to be filed in the spring of 2018.

7.2.3 Massachusetts Historical Commission Review

The MHC has review authority over projects requiring state or federal funding, licensing, permitting, and/or approvals, in order to evaluate potential direct or indirect impacts to properties listed in, or eligible for listing in, the National and State Registers of Historic Places, in compliance with State Register Review requirements (M.G. L. Chapter 9, Sections 27-27c, as amended by Chapter 254 of the Acts of 1988). Review by the MHC will be initiated by the submission of an MHC Project Notification Form (PNF).

7.3 Historic Context

The Project Site is in an area that was almost completely redeveloped for light industrial and manufacturing in the late 1950s as part of the City's urban renewal activities in the South End. The area previously consisted of a series of short, narrow blocks and alleyways known as the "New York Streets." These streets, which were named after New York cities and towns, were populated with densely clustered brick tenement residential buildings prior to urban redevelopment. Several of the blocks were anchored by larger commercial, manufacturing, and storage buildings along the major roads.

As early as 1943, architect Marcel Breuer created a redevelopment plan for the area, consisting of several large-scale apartment buildings encircling schools, parking, retail blocks, and open space (<http://breuer.syr.edu>). Planning began in earnest in 1952 to create large manufacturing parcels capable of producing increased tax revenue. The small New York Streets blocks were replaced with a layout of larger blocks capable of industrial building development. While a small number of the buildings in the New York Streets were considered compatible with the new industrial zoning of the renewal area and were retained during the urban renewal process, nearly all of the buildings in the area were demolished.

Prior to the 1950s urban renewal initiative, the Project Site was largely within the Oneida Street right-of-way; the existing building was constructed as part of the

subsequent industrial redevelopment. More recently, the area to the west and south of the Project Site has undergone a new wave of mixed-use redevelopment, in accordance with its location within a designated Economic Development Area of the South End Neighborhood District.

7.4 Resources Within the Project Site

The Project Site contains one existing vacant building, the former Transit Insurance Agency Building, which was constructed c. 1960. The building located at 217 Albany Street is not included in the MHC Inventory and has no historic designation. The previous office building is a small, two-story brick building with a rectangular footprint, constructed on a concrete foundation and terminating in a flat, tar and gravel-covered roof. The building measures 28'x45', with the narrow elevation fronting onto Albany Street. It occupies a similarly narrow lot that is paved on the rear west side to accommodate parking. The east façade has two entrances, located at each end of the building face. Both entrances have modern aluminum frames and contain a fully-glazed door and metal door on the north and south end, respectively. Windows throughout the first story consist of three-part steel sash grouped in sets of one, three, and four windows underlined by concrete sills. Steel sash windows in similar configurations also light the second story, and a simple cast stone or wood cornice lines the roofline on the east façade. Since approximately 2015, the second story has been covered by advertising signage.

The building was constructed c. 1960 for the Transit Insurance Agency, which occupied the building until 2016.

7.5 Historic Resources

Properties listed in the Inventory and located within one-quarter mile of the Project Site are summarized in this section and Table 7.1, and shown on Figure 7.1. Within the one-quarter mile study radius are one National Register and State Register-listed district, which is partially contained within the radius, and one individually-listed resource. Ten additional inventoried areas and six individual inventory forms (some including multiple buildings) are located within the radius as well.

A number of properties included in the Inventory and located within the one-quarter mile study radius were demolished subsequent to recordation; while some are noted as such in MACRIS, other instances of demolition were confirmed via site visit, available permit documentation, and street view mapping. Demolished properties are not discussed in this section, and are not included in Table 7-1 or Figure 7.1.

Table 7-1 Historic Resources within One-Quarter Mile of the Project Site

Map No.	Resource Name	Location	MHC Inventory No.	Designation
BOS.AC	South End Landmark District	N/A	BOS.AC	LHD 11/14/1983
BOS.AD	South End Landmark Protection Area	N/A	BOS.AD	N/A
BOS.RK	South End Industrial Survey Area	N/A	BOS.RK	N/A
BOS.SE	Washington-Dover Street Area	N/A	BOS.SE	N/A
N/A	South End Industrial District	N/A	BOS.AH	N/A
BOS.BH	89-103 Hudson Street	89-103 Hudson Street	BOS.BH	N/A
BOS.ABG	1-9 Johnny Court	1-9 Johnny Court	BOS.ABG	N/A
BOS.BI	94-106 Tyler Street	94-106 Tyler Street	BOS.BI	N/A
BOS.BG	71-79 Hudson Street	71-79 Hudson Street	BOS.BG	N/A
BOS.RI	New England Medical Center Area	N/A	BOS.RI	N/A
BOS.ABI	70-85 Tyler Street	70-85 Tyler Street	BOS.ABI	N/A
1	Quincy Grammar School / Kwong Kow School – Chinese Benevolent Society	88-90 Tyler Street	BOS.2229 / BOS.2228	NRIND 8/1/2017
2	Tufts N.E. Medical Center Posner Hall	200 Harrison Avenue	BOS.12790	N/A
3	Rowhouses	211-219 Harrison Avenue	BOS.12794-12798	N/A
4	Rowhouses	223-239 Harrison Avenue	BOS.12799-12803	N/A
5	Rowhouses	29-39 Oak Street	BOS.12818-12823	N/A
6	Joseph P. Cohen Tenement House	16 Pine Street	BOS.12826	N/A
7	Rowhouses	18-20 Pine Street	BOS.12827-12828	N/A
NRIND	National Register of Historic Places, Individual Listing			
LHD	Local Historic District (State Register of Historic Places)			

7.5.1 South End Landmark District (BOS.AC)

The South End Landmark District (BOS.AC) is a Local Historic District (LHD) established on November 14, 1983, and is overseen by the South End Landmark District Commission. Its boundaries are nearly identical to, but are slightly larger than, those of the National Register-listed South End District, the boundaries of which lay just outside of the one-quarter mile study area radius. The major area of deviation between the LHD and the National Register district is on the east boundary; the LHD includes a large area between Pembroke Street, Tremont Street, and West Dedham Street, as well as a number of small areas included near the perimeter of the South End Landmark District, some of which are located within the Project's one-quarter mile study area radius.

Both the South End Industrial Survey Area (BOS.RK) and Washington-Dover Streets Area (BOS.SE), discussed below, partially overlap the South End Landmark District, as well as the Protection Area (BOS.AD), which is also discussed further below.

7.5.2 South End Landmark Protection Area (BOS.AD)

The South End Landmark Protection Area (BOS.AD, referred to as the "Protection Area" in this discussion) was established November 14, 1983 at the same time as the South End Landmark District, and reviews for proposed changes to properties within the Protection Area similarly fall under the South End Landmark District Commission's purview. There is no corresponding inventory form on file with the MHC. This area is in the Inventory, but is not listed in the State Register of Historic Places. The building at 217 Albany Street is located within the boundary of the Protection Area.

The Protection Area is adjacent to the east of the South End Landmark District, extending east to Albany and Frontage Roads, north to the Massachusetts Turnpike, and south to Massachusetts Avenue and Northampton Street. The area contains several inventoried properties located within one-quarter mile radius of the Project Site, most of which are included in the South End Industrial Survey Area (BOS.RK). However, there is one property, the 1870s Holy Trinity (German) Church (BOS.15228), which is located within the Protection Area and within one-quarter mile of the Project Site, but is not included in BOS.RK.

There are three inventoried areas that are wholly contained by, or substantially overlap a portion of, the Protection Area: the South End Industrial Survey Area (BOS.RK), the Washington-Dover Streets Area (BOS.SE), and the South End Industrial District.

South End Industrial Survey Area (BOS.RK)

The South End Industrial Survey Area (BOS.RK) is an 83-acre area located south of the Massachusetts Turnpike and east of Albany Street, which forms much of the northern half of the Protection Area. A small portion of this area also overlaps the South End Landmark District on the south and west sides. The South End Industrial

Survey Area is composed primarily of industrial and commercial structures dated c. 1880-1915, described as mostly multi-story, rectangular buildings with regular fenestration, flat roofs, and masonry cladding. A former power station is also included. Used as machine shops and warehouses, the buildings often contain a first-story commercial component, indicated by heavy granite and iron piers with large glazed windows overlooking the street. Historically, the major industry was furniture making, especially pianos, accompanied by shoemaking, woodworking, and stonecutting businesses.

In March 1990, the MHC issued an opinion that a portion of the South End Industrial Survey Area was eligible for the National Register as a district, in a concurrent statement with FHWA findings as part of the Central Artery-Tunnel project. This portion is roughly bounded by East Berkeley Street, Albany Street, Paul Sullivan Way, and Harrison Avenue. The boundaries of this eligible district are located outside the one-quarter mile study radius.

Washington-Dover Streets Area (BOS.SE)

The Washington-Dover Streets Area (BOS.SE) is located east of the intersection of East Berkeley Street and Washington Street, and overlaps both the Protection Area and the South End Landmark District. The mostly contiguous cluster of masonry buildings at the north boundary of the South End Landmark District represent commercial, residential, and light industrial uses. Constructed c. 1840-1910, these buildings display a number of different styles, including Greek Revival, Romanesque Revival, and Renaissance Revival. Several of the buildings have industrial characteristics such as a flat roof, regular fenestration, and rectangular massing.

South End Industrial District (BOS.AH)

The South End Industrial District (BOS.AH) has no form on file at MHC and its precise boundaries are unknown. There are 12 inventoried properties recorded as part of the area that are mapped within a one-quarter mile radius of the Project Site. Because the same 12 properties are also located in the Protection Area and the South End Industrial Survey Area, it is assumed that the district roughly overlaps with these areas.

7.5.3 Tufts Medical Center

The Tufts Medical Center campus, located north of the Project Site and the I-90 Turnpike corridor, has one inventoried area and one individually inventoried building located within the one-quarter mile study radius.

New England Medical Center Area (BOS.RI)

This inventoried area consists of two 20th century buildings constructed for the center, including the original hospital building of 1930, which is located at the north end of the one-quarter mile radius. Designed by the firm of Andrew, James, Biscoe and Whitmore, the six-story brick building features Georgian Revival style elements.

Posner Hall, 200 Harrison Avenue (BOS.12790)

This four-story dormitory was designed 1953-1954 for the Tufts University Medical School by the firm of McKim, Mead and White. It was designed in the International Style, and the concrete building features banded casement windows, an entry foyer with plywood paneling and aluminum letters spelling "POSNER HALL," as well as a garden patio and recreation room.

7.5.4 Quincy Grammar School / Kwong Kow School – Chinese Benevolent Society (BOS.2229)

Completed in 1859 as a faithful re-creation of an earlier building on the site, a Greek Revival school building designed by Gridley J.F. Bryant, this building was individually listed in the National Register in 2017, as part of a Multiple Property Submission for properties significant to Boston's Chinese immigrant community. The three-story brick building features revival-style architectural elements executed in patterned brick, granite, and marble. A fourth story was destroyed by a hurricane in 1938 and removed. The Quincy Grammar School moved to a new building in 1976, and the former school building was acquired by the Chinese Consolidated Benevolent Association of New England. However, the importance of the school to the population of Chinatown had been solidified by the mid-20th century, and it represents a rare example of an extant institutional building in the community.

Although inventoried separately as BOS.2228, the Quincy School Manual Training Building appears to be part of the National Register-listed property. MACRIS notes the building was constructed in 1907 and is not designated; however, no accompanying form is available and the location indicated on MACRIS mapping is identical to that of the 1913 "manual arts annex" as indicated in the recent National Register form for the school.

7.5.5 Joseph P. Cohen Tenement House, 16 Pine Street (BOS.12826)

This Classical-style four-story tenement house was constructed in 1898. The building features yellow brick, and an arched inset entry topped by granite lintels. The building replaced an earlier brick row house.

7.5.6 John Wells Rowhouses

Several sets of extant, contiguous rowhouses, constructed in the 1830s and 1840s for developer John Wells in what is now the Chinatown neighborhood, are included in the Inventory as areas or as multiple properties recorded on individual inventory forms (BOS.ABG, BOS.12794-12798, BOS.12799-12803, BOS.12818-12823, BOS.12827-12828). These properties all share a similar history, architectural features, and typical alterations.

The buildings exhibit Federal style features such as gable dormers and dentillated eaves, and Greek Revival projecting stone steps. Though originally three stories tall, some of the units have been remodeled to four stories during the late 20th century,

and alterations such as infill and storefront remodeling are common. Similar extant rows on the adjacent Johnny Court and Oak Street create a partially enclosed rear yard in the center of the block, a common feature of the early layout of residential blocks in the area.

7.5.7 Hudson Street and Tyler Street Rowhouses

These adjacent sets of Greek Revival rowhouses on Hudson and Tyler Streets in Chinatown (BOS.BH, BOS.BG, BOS.BI, and BOS.ABI) date to the 1840s, and were part of the South Cove Development's plan for a terminal and railyards for the Boston and Worcester Railroad. The MHC issued an opinion that the rowhouses in these areas were eligible for the National Register as part of a possible Chinatown District (MHC eligibility opinion concurrence with FHWA findings, March 1990 as part of the Central Artery-Tunnel project) on 4/18/1990.

7.6 Archaeological Resources

There are no known archaeological resources within the Project Site that are listed in the State and National Registers or included in the Inventory. The entire Project Site was redeveloped in the 1950s; therefore, it is unlikely that the Project will affect previously unidentified archaeological resources.

7.7 Potential Impacts to Historic Resources

7.7.1 Urban Design and Public Realm

As presented in Chapter 2, *Urban Design*, the Project will create a notable gateway to the New York Streets sub-area of the South End, identified in the Harrison Albany Corridor Strategic Plan of June 2012. There are no historic resources immediately surrounding the Project Site; the nearest resources are located north of I-90, in the South Bay neighborhood. However, the Project will establish the final piece of this 18-hour neighborhood, creating an important link between the historic South End and points north and east, complete with streetscape and landscaping improvements.

7.7.2 Shadow

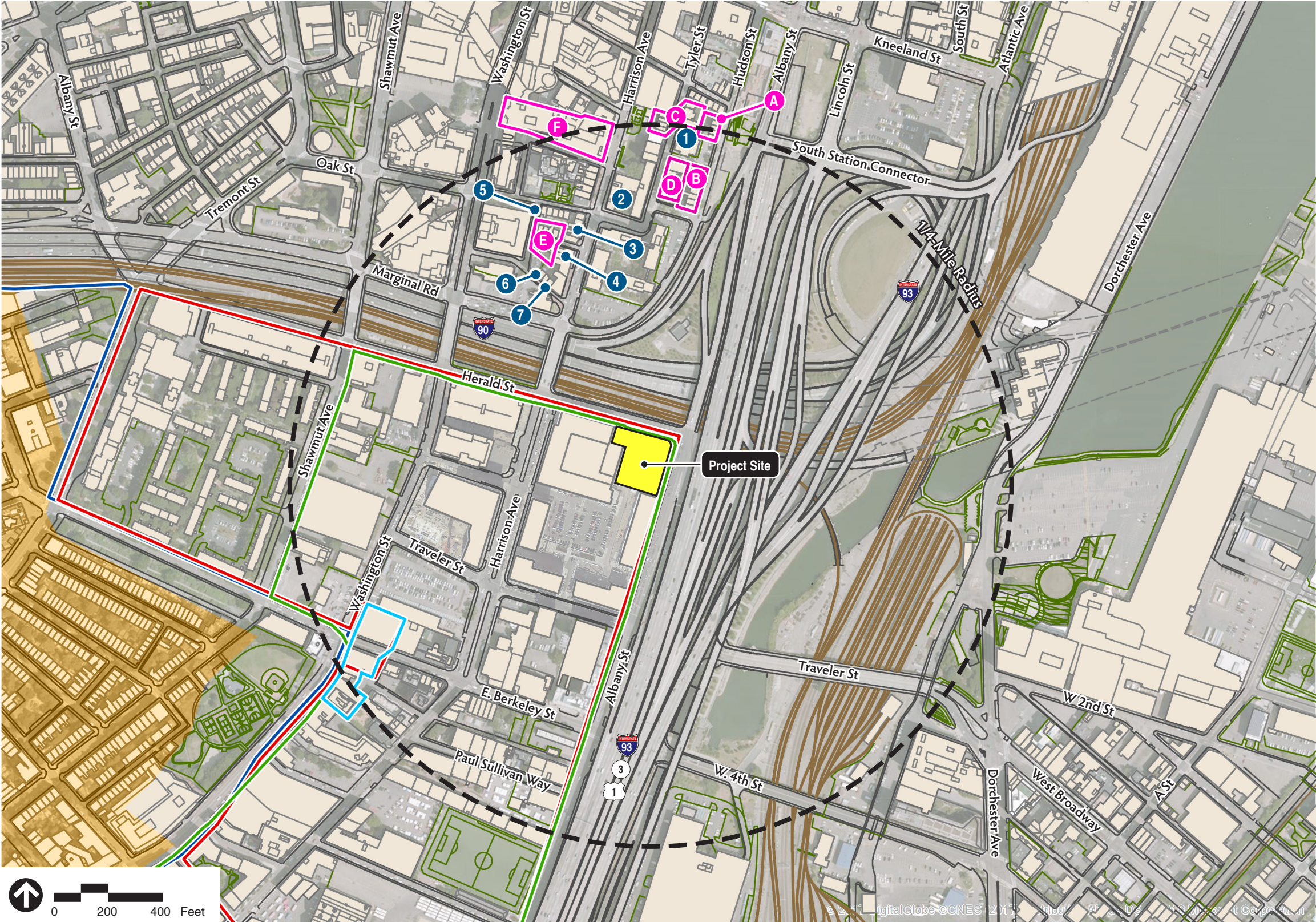
The shadow analysis is presented in Section 5.3 of Chapter 5, *Environmental Protection*. As shown in Figures 5.1a through 5.1c, due to the location of the Project Site at the northeastern corner of Ink Block with major highways to the north and east, net new shadow from the Project is limited to these highways under almost all conditions. Therefore, for nearly all surrounding historic properties, the Project will not result in net new shadow. The single exception is the building at 239 Harrison Avenue (BOS. 12803), which will receive limited net new shadow on its lower stories during the early morning hours around December 21st. This shadow would occur over a period of approximately three weeks, up to a maximum daily duration of 30

minutes between 8:45-9:15am. Due to the limited duration and extent of this net new shadow, shadow impacts are anticipated to be negligible on BOS.12803.

7.7.3 Wind

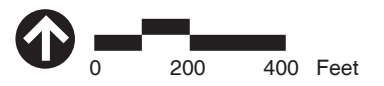
With the proposed landscaping in place, it is expected that wind conditions along Albany Street and Herald Street, immediately surrounding the Project Site and Ink Block development, will remain acceptable. The Project is not anticipated to generate any unsafe wind conditions around the Project Site, or at nearby public spaces or historic properties. The impact of the Project on the surrounding area, where historic resources are located, will be negligible.

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- Project Site
- South End Landmark District (LHD, BOS.AC)
- South End Landmark Protection Area (BOS.AD)
- Washington-Dover Street Area (BOS.SE)
- South End Industrial Survey Area (BOS.RK)*
- 71-79 Hudson Street (BOS.BG)
- 89-103 Hudson Street (BOS.BH)
- 70-85 Tyler Street (BOS.ABI)
- 94-106 Tyler Street (BOS.BI)
- 1-9 Johnny Court (BOS.ABG)
- New England Medical Center Area (BOS.RI)
- South End Historic District
(National Register-listed, located outside of the one-quarter mile study area radius)
* Note: The South End Industrial District (BOS.AH) has no form on file at MHC so its precise boundaries are unknown.

- 1 BOS.2228/BOS.2229 (National Register-Listed)
- 2 BOS.12790
- 3 BOS.12794-12798
- 4 BOS.12799-127803
- 5 BOS.12818-12823
- 6 BOS.12826
- 7 BOS.12827-12828



Source: MassGIS MHC datalayer



Figure 7.1
Historic Resources Located within
One-Quarter Mile of the Project Site

**217 Albany Street
Boston, Massachusetts**

APPENDIX A: Letter of Intent



2310 Washington Street
Newton Lower Falls,
MA 02462

Phone. 617.527.9800
www.natdev.com

November 17, 2017

Brian Golden, Director
Boston Planning and Development Agency
Boston City Hall, 9th Floor
Boston, MA 02201

BPA

'17 NOV 20 PM 4:08:10

**Re: Proposed 245 Unit Co-Living (Residential) Building
217 Albany Street
Letter of Intent to file Project Notification Form**

Dear Director Golden:

This letter serves as Notice of Intent to file a Project Notification Form ("PNF") under Article 80B for Large Project Review with the Boston Planning and Development Agency ("BPDA") in connection with the planned redevelopment of the property at 217 Albany Street ("Project"). The proponent for the Project is 217 Albany II LLC ("Proponent"), an affiliate of National Development.

The proposed project site consists of a lot to be subdivided from excess land at Ink Block fronting on Albany Street, at the corner of Albany and Herald Streets, in the South End neighborhood. The site currently contains one two-story brick building that is to be demolished as part of the redevelopment program. The Proponent intends to develop a new, 245-unit co-living, multifamily residential building that will be a gateway from downtown to the South End neighborhood. This building will provide a new residential alternative not otherwise available in the City, through a service-enhanced residential model, substantial amenity spaces and smaller-sized units. It will also further the City's housing goals, including providing on-site all required affordable housing required under the Inclusionary Development Policy (IDP). As envisioned by the BPDA's Harrison-Albany Strategic Plan, this redevelopment will integrate with the urban design framework and will activate the corner of Herald and Albany Streets. The Proponent will seek variances from the Board of Appeal that may include FAR, height, and open space under Article 64.

Sustainable building and site elements will be incorporated into the design, construction and operation of the Project. The Proponent intends to attain a rating of no less than Certified under the LEED V 2009 New Construction Program. The redevelopment of the Project will include public realm improvements such as landscape improvements and an improved streetscape for pedestrians. Overall, the Project will improve the architectural character and urban design in the area. The City and region as a whole will benefit from job creation and additional tax revenues.

November 17, 2017
Page Two

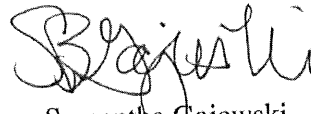
National Development will lead a project team of with extensive experience in the development of similar projects. The team has already conducted several pre-review planning meetings with BPDA staff in accordance with Article 80B-5(1), and will undertake additional outreach with elected officials, abutters and interested neighborhood groups. The Proponent looks forward to working collaboratively with the BPDA, other city agencies and members of the community to produce the best plan possible for this location.

The PNF will be filed in December in accordance with the procedural provisions of Article 80B-5(2). On behalf of the development team, we look forward to working with you and your staff to achieve a successful development project that will greatly benefit the neighborhood and the City of Boston. If you have any questions or need any additional information at this time, please contact me at sgajewski@natdev.com or 617-559-5225.

Sincerely,
217 Albany II LLC



Ted Tye
Managing Partner



Samantha Gajewski
Project Manager

cc: Jonathan Greeley, BPDA
Casey Hines, BPDA
Marc LaCasse, Esq., LaCasse Law, LLC

APPENDIX B: BPDA Checklists

Accessibility Checklist

Climate Change Preparedness and Resilience 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 BPDA 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.

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1. Project Information: <i>If this is a multi-phased or multi-building project, fill out a separate Checklist for each phase/building.</i>			
Project Name:	217 Albany Street		
Primary Project Address:	217 Albany Street, Boston, MA 02118		
Total Number of Phases/Buildings:	N/A		
Primary Contact (Name / Title / Company / Email / Phone):	Samantha Gajewski, National Development 617-559-5225; sgajewski@natdev.com		
Owner / Developer:	ND Acquisitions LLC, an affiliate of National Development		
Architect:	Elkus Manfredi Architects		
Civil Engineer:	VHB		
Landscape Architect:	Copley Wolf Design Group		
Permitting:	VHB		
Construction Management:	Cranshaw Construction		
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)? <i>If yes</i> , identify and explain.	Unknown		
2. Building Classification and Description: <i>This section identifies preliminary construction information about the project including size and uses.</i>			
What are the dimensions of the project?			
Site Area:	36,070 SF	Building Area:	139,965 GFA
Building Height:	170 FT.	Number of Stories:	14

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First Floor Elevation:	20.0 (Floor 1 north), 20'-10" (Floor 1 South)	Is there below grade space:	Yes (Due to existing site grading Level 1 extends at and below grade)	
What is the Construction Type? (Select most appropriate type)				
Steel Frame	Wood Frame	Masonry	Steel Frame	Concrete
What are the principal building uses? (IBC definitions are below – select all appropriate that apply)				
Residential – Mult-unit, Four+	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:	Main building entrance and lobby, mail room, fire command center, bathroom, bicycle storage room, secondary building entrance and co-working/lounge space.			
3. Assessment of Existing Infrastructure for Accessibility: <i>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.</i>				
Provide a description of the neighborhood where this development is located and its identifying topographical characteristics:	The Project is located at the corner of Albany and Herald Streets adjacent to the Ink Block redevelopment. The sidewalk and street level are located above the predominant existing site grade, and are separated from the interior of the site by a retaining wall along the length of both streets. Both Albany and Herald Streets slope up to a high point where they intersect, with significant existing grades along Albany Street.			
List the surrounding accessible MBTA transit lines and their proximity to development site: commuter rail / subway stations, bus stops:	MBTA bus Routes 9, 11 and 47 and the MBTA Silver Line SL4 and SL5 routes all run within ¼-mile of the Project Site, and all MBTA system busses are accessible. The MBTA Red Line West Broadway station is located just over ¼ mile to the east over Broadway Bridge, and the MBTA Orange Line Tufts Medical Center Station is located roughly 1/3-mile to the north on Washington Street. The MBTA classifies both stations as being accessible.			
List the surrounding institutions: hospitals, public housing, elderly and disabled housing developments, educational facilities, others:	The Project Site is generally surrounded by highway infrastructure (Massachusetts Turnpike/I-90 runs east-west just north of Herald Street, and directly to the east of Albany Street lies the elevated Southeast Expressway/Interstate-93/Route 3, which runs north-south) and light industrial/manufacturing businesses. The Pine Street Inn, which provides services for the homeless is located nearby at 444 Harrison Avenue. The Quincy Upper School is located approximately 1,000 feet northwest of the Project Site on the other side of the Massachusetts Turnpike/I-90.			

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List the surrounding government buildings: libraries, community centers, recreational facilities, and other related facilities:	There are no public government buildings in the immediate vicinity of the Project Site. Three public parks are located approximately ¼-mile from the Project Site, including Peter's Park and Rotch Playground in the South End, and Rolling Bridge Park, which is located on the Fort Point Channel.
4. Surrounding Site Conditions – Existing: <i>This section identifies current condition of the sidewalks and pedestrian ramps at the development site.</i>	
Is the development site within a historic district? <i>If yes</i> , identify which district:	The Project Site is located within the South End Landmark District Protection Area.
Are there sidewalks and pedestrian ramps existing at the development site? <i>If yes</i> , list the existing sidewalk and pedestrian ramp dimensions, slopes, materials, and physical condition at the development site:	Yes, the existing sidewalks and pedestrian ramps are concrete, which appear to be mostly intact, along the frontage of the site on Albany Street. The existing longitudinal slope along Albany Street at the project site varies from approximately 6%-8%. The maximum ADA compliant slope for longitudinal slope is 5%, thus it will not be possible to provide an accessible slope along the full length of Albany Street. Based on survey information it appears that the longitudinal slope along Herald Street is less than 5%, providing an accessible route to the Project's secondary entrance at the corner of Albany and Herald.
Are the sidewalks and pedestrian ramps existing-to-remain? <i>If yes</i> , have they been verified as ADA / MAAB compliant (with yellow composite detectable warning surfaces, cast in concrete)? <i>If yes</i> , provide description and photos:	The existing sidewalks and pedestrian ramps are to remain. Sidewalks are planned to be replaced where construction activities cause sidewalk damage, as required at interface with new sidewalks on the Project Site. Any sidewalk panels found to be non-compliant will be replaced. Existing panels do not have detectable warning strip. This will be provided where curb ramps and crosswalk are being replaced, including at the point where the driveway passing under the building meets Albany Street.
5. Surrounding Site Conditions – Proposed <i>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.</i>	
Are the proposed sidewalks consistent with the Boston Complete Street Guidelines? <i>If yes</i> , choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, or Boulevard.	Yes, Industrial.

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What are the total dimensions and slopes of the proposed sidewalks? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone:	<p>Herald Street: Total Sidewalk Width: Approx. 7'-6" Frontage Zone Width: 0', Pedestrian Zone Width: 6'-0" Furnishing Zone Width: 1'-6"</p> <p>Albany Street: Total Sidewalk Width: Approx 7'-6" Frontage Zone Width: 0' Pedestrian Zone Width: Varies 5'-0" to 6'-0" Furnishing Zone Width: Varies between 1'-6" at non-planting areas, and 2'-6" at planting strips along the interior curb edge.</p>
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?	<p>Yes.</p> <p>All public sidewalks to be Concrete with sawn joints.</p>
Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way? <i>If yes</i> , what are the proposed dimensions of the sidewalk café or furnishings and what will the remaining right-of-way clearance be?	No
If the pedestrian right-of-way is on private property, will the proponent seek a pedestrian easement with the Public Improvement Commission (PIC)?	Yes
Will any portion of the Project be going through the PIC? <i>If yes</i> , identify PIC actions and provide details.	Yes, Specific Repair.
<p>6. Accessible Parking: <i>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.</i></p>	
What is the total number of parking spaces provided at the development site? Will these be in a parking lot or garage?	There will be no dedicated parking spaces provided as part of the Project.
What is the total number of accessible spaces provided at the	There will be no dedicated parking spaces provided as part of the Project.

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development site? How many of these are "Van Accessible" spaces with an 8 foot access aisle?	
Will any on-street accessible parking spaces be required? <i>If yes</i> , has the proponent contacted the Commission for Persons with Disabilities regarding this need?	No on-street parking spaces will be provided.
Where is the accessible visitor parking located?	No dedicated visitor parking will be specifically designated for this Project because no dedicated parking will be provided on-site. General visitor parking is available off-site in parking lot located in the middle of the Ink Block, which also serves Whole Foods and other Ink Block buildings. An accessible route will be provided from this parking to the main building entry on Floor 1.
Has a drop-off area been identified? <i>If yes</i> , will it be accessible?	Yes, an accessible drop off area will be provided along a driveway passing under the building. It will have a flush curb with bollards and tactile warning strips along the full length of the drop off and will have less than a 2% grade in any direction.
7. Circulation and Accessible Routes: <i>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.</i>	
Describe accessibility at each entryway: Example: Flush Condition, Stairs, Ramp, Lift or Elevator:	<p>The north entry at the corner of Albany Street and Herald Street provides both stair and ADA ramp access.</p> <p>All other building entries are flush.</p>
Are the accessible entrances and standard entrance integrated? <i>If yes</i> , describe. <i>If no</i> , what is the reason?	<p>All main entry building access points will be ADA-accessible.</p> <p>The north entry at the corner of Albany Street and Herald Street provides both stair and ADA ramp access. The stair and ramp share a common entry point and provide direct access to the building entry.</p> <p>The lobby doors at the vehicular drop-off are accessed via the Albany Street sidewalk.</p> <p>The west service doors at the off-site Whole Foods parking lot are accessed via the Albany Street sidewalk and traveling west along the flush sidewalk and crossing the shared pedestrian/vehicular zone.</p> <p>All other building entries are flush.</p>

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<i>If project is subject to Large Project Review/Institutional Master Plan, describe the accessible routes way-finding / signage package.</i>	Accessible routes are provided from the north corner of Albany and Herald Streets, from the east along the flush sidewalk that runs perpendicular to Albany Street (drop-off area). Additionally, off-site, accessible routes are provided from the west from the Whole Foods parking deck via ramps along the east façade of the Whole Foods building.
8. Accessible Units (Group 2) and Guestrooms: (If applicable) <i>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.</i>	
What is the total number of proposed housing units or hotel rooms for the development?	There will be 250 units total in the Project.
<i>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?</i>	There will be 250 units for rent, including affordable units. There are no for sale units proposed.
<i>If a residential development, how many accessible Group 2 units are being proposed?</i>	At least 13 Group 2 units or 5.2% of the total units in the Project, will be provided.
<i>If a residential development, how many accessible Group 2 units will also be IDP units? If none, describe reason.</i>	Final allocation of Group 2 units has not yet been determined.
<i>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.</i>	N/A
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. <i>If yes, provide reason.</i>	No
Are there interior elevators, ramps or lifts located in the development for access around architectural	Yes, the main elevator bank containing two elevators provides access to all floors of the building, including the upper portion of Floor 2 and the south portion of Floor 1. A secondary single elevator also provides access to all

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barriers and/or to separate floors? <i>If yes, describe:</i>	floors of the building including the north portion of Floor 1 and both the upper and lower portions of Floor 2, providing an accessible means of traversing this level change. This elevator will also provide resident access to the rooftop amenity area.
9. Community Impact: <i>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.</i>	
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?	The Project will provide streetscape improvements with new street trees, and enhance pedestrian experience at Albany and Herald Streets.
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?	The Project will provide a wide array of common and amenity areas for residents and the project team is committed to ensuring all areas are welcoming and fully accessible to persons with disabilities.
Are any restrooms planned in common public spaces? <i>If yes</i> , will any be single-stall, ADA compliant and designated as “Family”/ “Companion” restrooms? <i>If no</i> , explain why not.	A number of restrooms are planned in common public spaces. The final plumbing fixture count and distribution of restrooms has not been determined at this point, but it is anticipated that this will include several single-stall ADA-compliant restrooms.
Has the proponent reviewed the proposed plan with the City of Boston Disability Commissioner or with their Architectural Access staff? <i>If yes</i> , did they approve? <i>If no</i> , what were their comments?	The proposed plan has not yet been reviewed with the City of Boston Disability Commissioner.
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? <i>If no</i> , what recommendations did	The Project has not yet been presented to the City of Boston Disability Advisory Board.

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the Advisory Board give to make this project more accessible?	
10. Attachments <i>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.</i>	
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. No parking is proposed as part of the Project.	
Provide a diagram of the accessible route connections through the site, including distances. Refer to Figures B.1 and B.2 – Ground-Level Accessibility Diagram	
Provide a diagram the accessible route to any roof decks or outdoor courtyard space? (if applicable) Refer to Figures B.1 and B.2 – Ground Level Accessibility Diagram (courtyard space) Refer to Figure B.3 – Rooftop Level Accessibility Diagram (roof deck)	
Provide a plan and diagram of the accessible Group 2 units, including locations and route from accessible entry. The final location of Group 2 units has not yet been determined, but all units will be located on an accessible route from building entry.	
Provide any additional drawings, diagrams, photos, or any other material that describes the inclusive and accessible elements of this project.	

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

NOTE: Project filings should be prepared and submitted using the online [Climate Resiliency Checklist](#).

A.1 - Project Information

Project Name:	217 Albany Street		
Project Address:	217 Albany Street, Boston, MA 02118		
Project Address Additional:	N/A		
Filing Type (select)	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	Name Samantha Gajewski	Company National Development	Email sgajewski@natdev.com Phone 617-559-5225
Is MEPA approval required	Yes/No	Date	NA

A.3 - Project Team

Owner / Developer:	217 Albany II LLC, an affiliate of National Development
Architect:	Elkus Manfredi Architects
Engineer:	AHA
Sustainability / LEED:	Elkus Manfredi Architects
Permitting:	VHB
Construction Management:	Cranshaw Construction

A.3 - Project Description and Design Conditions

List the principal Building Uses:	Residential
List the First Floor Uses:	Residential lobby and support uses
List any Critical Site Infrastructure and or Building Uses:	Electrical switchgear and transformer, emergency generator and fuel oil storage, main electric room, and fire command center.

Site and Building

Site Area:	36,070 SF	Building Area:	139,965 GFA
Building Height:	170 Ft	Building Height:	14 Stories
Existing Site Elevation – Low:	13.8 Ft BCB	Existing Site Elevation – High:	25.2 Ft BCB
Proposed Site Elevation – Low:	17.5 Ft BCB	Proposed Site Elevation – High:	29.3 Ft BCB
Proposed First Floor Elevation:	20.0 Ft BCB	Below grade levels:	N/A

Article 37 Green Building:

LEED Version - Rating System :	New Construction	LEED Certification:	Yes ¹ / No
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	(version 4)	
Proposed LEED rating:	Certified/Silver/ Gold/Platinum	Proposed LEED point score: 47 Pts.

1 The Project has been registered with the GBCI under LEED-NC 2009 (version 3) for which the Proponent intends to seek certification under. In compliance with Article 37, this checklist and other Article 80 documentation demonstrates the Project would be certifiable under LEEDv4.

Building Envelope

When reporting R values, differentiate between R discontinuous and R continuous. For example, use "R13" to show R13 discontinuous and use R10c.i. to show R10 continuous. When reporting U value, report total assembly U value including supports and structural elements.

Roof:	28.05 (R)	Exposed Floor:	N/A
Foundation Wall:	10 (R)	Slab Edge (at or below grade):	N/A
Vertical Above-grade Assemblies (%'s are of total vertical area and together should total 100%):			
Area of Opaque Curtain Wall & Spandrel Assembly:	0%	Wall & Spandrel Assembly Value:	0.069 (U)
Area of Framed & Insulated / Standard Wall:	62%	Wall Value	R13 + R7.5ci
Area of Vision Window:	37.75 %	Window Glazing Assembly Value:	0.36 (U)
		Window Glazing SHGC:	0.31 (SHGC)
Area of Doors:	0.25 %	Door Assembly Value:	0.45 (U)

Energy Loads and Performance

For this filing – describe how energy loads & performance were determined

A preliminary energy model was created using the schematic drawings and MEP narratives.			
Annual Electric:	2,100,000 (kWh)	Peak Electric:	1,500 (kW)
Annual Heating:	1,900.0 (MMbtu/hr)	Peak Heating:	1 (MMbtu)
Annual Cooling:	70,000 (Tons/hr)	Peak Cooling:	200 (Tons)
Energy Use - Below ASHRAE 90.1 - 2013:	13%	Have the local utilities reviewed the building energy performance?:	Yes / No
Energy Use - Below Mass. Code:	13%	Energy Use Intensity:	76.7 (kBtu/SF)

Back-up / Emergency Power System

Electrical Generation Output:	250 (kW)	Number of Power Units:	1
System Type:	Rooftop Generator	Fuel Source:	Diesel

Emergency and Critical System Loads (in the event of a service interruption)

Electric:	200 (kW)	Heating:	0.5 (MMbtu/hr)
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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: 933 (Tons)

For this filing - describe how building energy performance has been integrated into project planning, design, and engineering and any supporting analysis or modeling:

High energy performance of the building has been incorporated in the Project via high-efficiency heat pumps, condensing boilers, energy recovery unit serving apartment corridors and a condenser water system.

Describe building specific passive energy efficiency measures including orientation, massing, envelop, and systems:

There is passive energy savings in the condenser water loop where one side of the building will be in the sun and in cooling mode, the other side of the building will be shaded and in heating mode. The condenser water loop therefore acts as a heat sink and can absorb heat from one side and add heat to the opposite side. There are also fewer windows on the southern façade to reduce the cooling load.

Describe building specific active energy efficiency measures including equipment, controls, fixtures, and systems:

The proposed high-efficiency equipment includes: low-flow plumbing fixtures, high-efficiency condensing boilers, energy recovery unit and high efficiency heat pumps.

Describe building specific load reduction strategies including on-site renewable, clean, and energy storage systems:

The condenser water loop will reduce the cooling and heating loads during the shoulder seasons when solar exposure will put one side of the building into heating mode while the opposite side is in cooling. In a conventional system, both the heating and cooling systems would need to operate whereas the condenser water loop balances out the heating and cooling demands.

Describe any area or district scale emission reduction strategies including renewable energy, central energy plants, distributed energy systems, and smart grid infrastructure:

There are not any district scale emission reduction strategies incorporated at this time. Project will consider strategies where feasible as they arise.

Describe any energy efficiency assistance or support provided or to be provided to the project:

There will not be any energy efficiency assistance offered except that tenants will pay for their own utilities which will encourage individuals to be energy efficient.

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):

High energy performance of the proposed building has been incorporated through high efficiency heat pumps, condensing boilers, energy recovery units serving apartment corridors and a condenser water system. In addition, there is passive energy savings in the condenser water loop as one side of the building will be in

the sun and in the cooling mode, while the other side of the building will be shaded and in heating mode.
The Proponent will continue evaluating clean and renewable energy options, including combined heat and power (CHP), solar thermal systems, and air source heat pumps.

In alignment with 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 the 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:	3 Deg.	Temperature Range - High:	103 Deg.
Annual Heating Degree Days:	4136	Annual Cooling Degree Days	1532
What Extreme Heat Event characteristics will be / have been used for project planning			
Days - Above 90°:	25	Days – Above 100°:	10
Number of Heatwaves / Year:	5	Average Duration of Heatwave (Days):	4

Describe all building and site measures to reduce heat-island effect at the site and in the surrounding area:

Heat island effect is reduced by incorporating reflective building materials as well as underground parking nearby.

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:

The proposed building will be cooled by individual heat pumps that can operate independently to maintain indoor conditions at higher outdoor average temperatures.

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:

Interruptions of power can be mitigated in the short term by the emergency generator. Longer power outages could require operable windows to provide ventilation and natural cooling.

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: **5.11 In.**

Describe all building and site measures for reducing storm water run-off:

Proposed infiltration chambers and landscaped areas will help reduce storm water run-off.

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):

Existing and proposed infiltration chambers as well as proposed landscaped areas will help reduce storm water run-off.

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:

-

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:

18.0 Ft BCB

Sea Level Rise - Design Flood Elevation:

20.0 Ft BCB

Site Elevations at Building:

20.0 Ft BCB

First Floor Elevation:

20.0 Ft BCB

Accessible Route Elevation:

20.8 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.:

Existing and proposed infiltration systems will mitigate storm water systems. First floor elevation has been raised to 20.0 Ft. during design process in consideration of the Sea Level Rise – Design Flood Elevation.

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.:

Critical infrastructure including outdoor transformer and switchgear will be designed at, or above the Sea Level Rise Design Flood Elevation.

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:

All indoor spaces and critical infrastructure is planned to be located above the Sea level Rise Design Flood Elevation. Emergency power is currently planned for the building, and operable windows are currently planned to provide ventilation in the event of a sustained power loss. The secondary building entrance on Level 2 at the corner of Albany and Herald streets provides the ability to enter and exit the building at an elevation substantially above the Sea Level Rise Design Flood Elevation in case of a flooding event that would exceed this level. As the design progresses, the proponent will continue to evaluate measures that will contribute to the resiliency of the building.

Describe any strategies that would support rapid recovery after a weather event:

All floors of the building are located above the Sea Level Rise Design Flood Elevation and there are no basement levels so we do not anticipate significant impacts from an extreme flooding event that would require substantial recovery measures.

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.:

Proposed infiltration systems will mitigate storm water systems.

Describe future building adaptation strategies for raising the Sea Level Rise Design Flood Elevation and further protecting critical systems, including permanent and temporary measures:

Critical infrastructure will be designed at, or above the Sea Level Rise Design Flood Elevation.

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



Note: The following transportation supporting documentation is provided electronically on the enclosed CD-ROM. Hard copies are available upon request.

- Traffic Volume Count Data
- MassDOT Seasonal Adjustment Factors
- Public Transportation Bus Routes and Schedules
- Vehicle Crash Data
- Site-specific Background Growth
- Trip Generation Calculations
- Intersection Capacity Analyses
 - 2017 Existing Conditions
 - 2024 No Build Conditions
 - 2024 Build Conditions

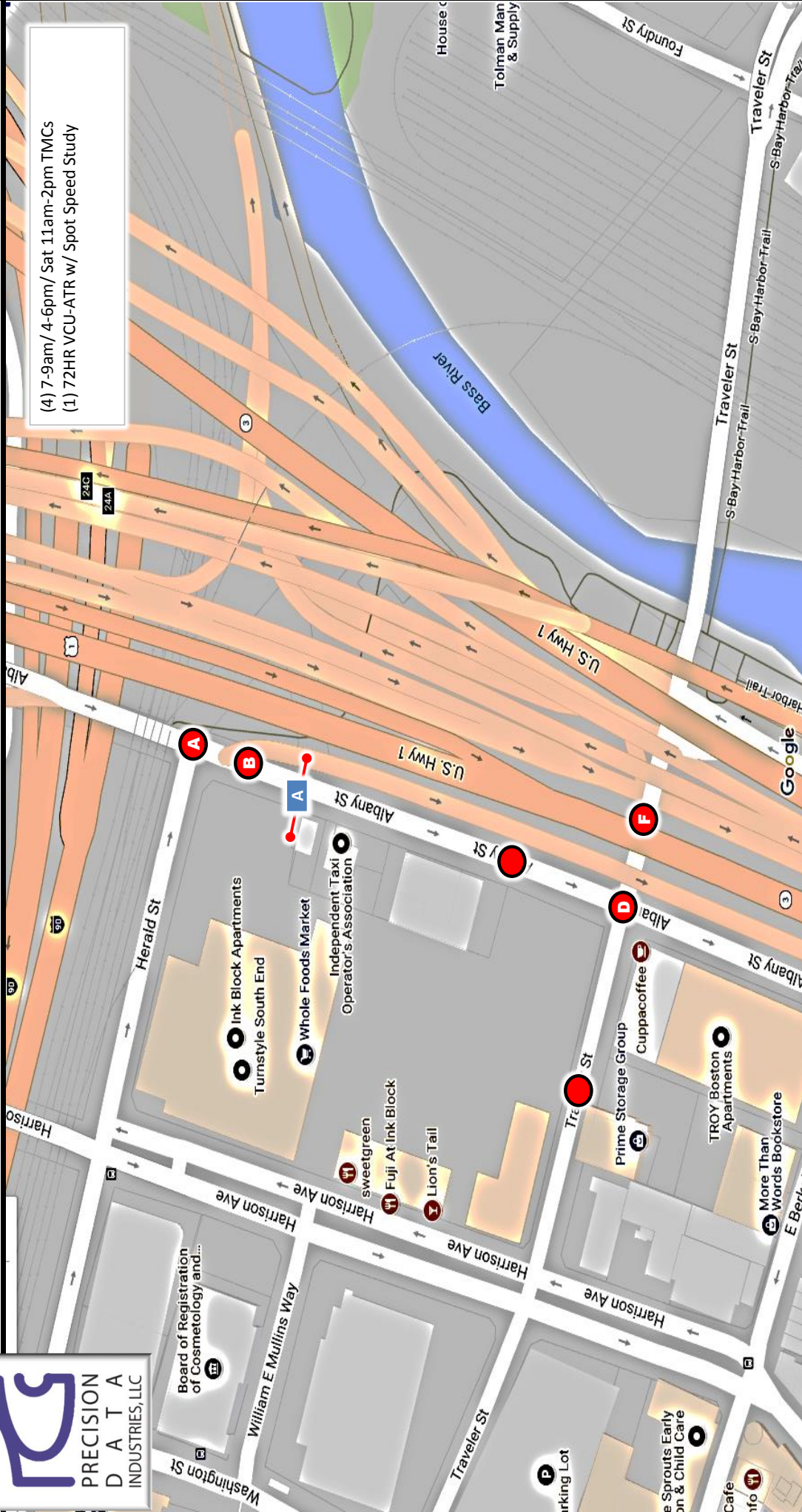
Traffic Volume Count Data



Location Map: 175974 Boston, MA

Precision Data Industries, LLC 46 Morton Street, Framingham, MA 01702 ph: 508-875-0100 email: datarequests@pdillc.com

(4) 7-9am/ 4-6pm/ Sat 11am-2pm TMCs
(1) 72HR VCU-ATR w/ Spot Speed Study



Client:
VHB

Engineer:
P. Dunford

Site Code:
10995.05

Date:
Thurs 11/30 thru Sat 12/2/2017

PDI Job #
175974

City, State:
Boston, MA

Albany Street
just south of Ink Block Exit Driveway
City, State: Boston, MA
Client: VHB/ P. Dunford

Start	11/30/17		Fri		Sat		Sun		Mon		Tue		Wed		Average Day	
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	94	339	137	401	225	394	*	*	*	*	*	*	*	*	152	378
12:15	57	324	98	406	181	425	*	*	*	*	*	*	*	*	112	385
12:30	75	364	67	345	175	401	*	*	*	*	*	*	*	*	106	370
12:45	70	327	69	391	165	406	*	*	*	*	*	*	*	*	101	375
01:00	43	339	67	336	172	363	*	*	*	*	*	*	*	*	94	346
01:15	41	327	69	362	169	370	*	*	*	*	*	*	*	*	93	353
01:30	41	363	71	376	136	356	*	*	*	*	*	*	*	*	83	365
01:45	58	400	54	439	132	353	*	*	*	*	*	*	*	*	81	397
02:00	58	446	52	415	178	397	*	*	*	*	*	*	*	*	96	419
02:15	29	437	59	393	164	391	*	*	*	*	*	*	*	*	84	407
02:30	28	411	55	422	116	329	*	*	*	*	*	*	*	*	66	387
02:45	31	390	33	394	112	347	*	*	*	*	*	*	*	*	59	377
03:00	21	391	35	416	81	399	*	*	*	*	*	*	*	*	46	402
03:15	24	337	26	386	57	445	*	*	*	*	*	*	*	*	36	389
03:30	25	341	27	419	37	370	*	*	*	*	*	*	*	*	30	377
03:45	31	351	39	393	37	384	*	*	*	*	*	*	*	*	36	376
04:00	48	349	43	408	43	396	*	*	*	*	*	*	*	*	45	384
04:15	40	348	51	414	28	447	*	*	*	*	*	*	*	*	40	403
04:30	64	372	62	417	48	375	*	*	*	*	*	*	*	*	58	388
04:45	94	343	89	451	52	487	*	*	*	*	*	*	*	*	78	427
05:00	127	379	120	456	53	408	*	*	*	*	*	*	*	*	100	414
05:15	174	365	159	473	56	439	*	*	*	*	*	*	*	*	130	426
05:30	215	376	212	448	62	431	*	*	*	*	*	*	*	*	163	418
05:45	290	395	276	422	87	398	*	*	*	*	*	*	*	*	218	405
06:00	296	435	277	447	78	385	*	*	*	*	*	*	*	*	217	422
06:15	320	455	289	451	95	393	*	*	*	*	*	*	*	*	235	433
06:30	330	450	338	407	135	393	*	*	*	*	*	*	*	*	268	417
06:45	338	416	324	413	151	447	*	*	*	*	*	*	*	*	271	425
07:00	327	439	337	396	154	399	*	*	*	*	*	*	*	*	273	411
07:15	355	396	373	430	166	377	*	*	*	*	*	*	*	*	298	401
07:30	404	391	366	421	215	384	*	*	*	*	*	*	*	*	328	399
07:45	402	388	434	371	213	349	*	*	*	*	*	*	*	*	350	369
08:00	421	306	410	326	191	311	*	*	*	*	*	*	*	*	341	314
08:15	364	322	377	318	189	265	*	*	*	*	*	*	*	*	310	302
08:30	414	324	429	305	212	279	*	*	*	*	*	*	*	*	352	303
08:45	394	338	391	269	279	278	*	*	*	*	*	*	*	*	355	295
09:00	378	264	424	289	295	307	*	*	*	*	*	*	*	*	366	287
09:15	382	261	416	302	301	287	*	*	*	*	*	*	*	*	366	283
09:30	376	254	420	297	329	297	*	*	*	*	*	*	*	*	375	283
09:45	417	241	401	305	351	321	*	*	*	*	*	*	*	*	390	289
10:00	388	259	400	308	355	318	*	*	*	*	*	*	*	*	381	295
10:15	377	313	346	267	400	276	*	*	*	*	*	*	*	*	374	285
10:30	342	276	398	284	393	325	*	*	*	*	*	*	*	*	378	295
10:45	389	250	366	284	420	256	*	*	*	*	*	*	*	*	392	263
11:00	372	233	331	329	419	248	*	*	*	*	*	*	*	*	374	270
11:15	344	203	366	285	436	262	*	*	*	*	*	*	*	*	382	250
11:30	328	156	392	261	424	249	*	*	*	*	*	*	*	*	381	222
11:45	361	119	355	263	440	224	*	*	*	*	*	*	*	*	385	202
Total	1059	1630	1093	1781	9207	1714	0	0	0	0	0	0	0	0	1024	17083
	7	3	0	1		1									9	
Day Total	26900		28741		26348		0		0		0		0		27332	
% Splits	39.4%	60.6%	38.0%	62.0%	34.9%	65.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	37.5%	62.5%
Peak	07:45	06:15	09:00	04:45	11:00	04:45	-	-	-	-	-	-	-	-	10:45	06:00
Vol.	1601	1760	1661	1828	1719	1765	-	-	-	-	-	-	-	-	1529	1697
P.H.F.	0.951	0.967	0.979	0.966	0.977	0.906									0.975	0.980

Albany Street
just south of Ink Block Exit Driveway
City, State: Boston, MA
Client: VHB/ P. Dunford

Start Time	A.M.	SB	P.M.	Thu 11/30/17										
12:00	94		339											
12:15	57		324											
12:30	75		364											
12:45	70	296	327	1354										
01:00	43		339											
01:15	41		327											
01:30	41		363											
01:45	58	183	400	1429										
02:00	58		446											
02:15	29		437											
02:30	28		411											
02:45	31	146	390	1684										
03:00	21		391											
03:15	24		337											
03:30	25		341											
03:45	31	101	351	1420										
04:00	48		349											
04:15	40		348											
04:30	64		372											
04:45	94	246	343	1412										
05:00	127		379											
05:15	174		365											
05:30	215		376											
05:45	290	806	395	1515										
06:00	296		435											
06:15	320		455											
06:30	330		450											
06:45	338	1284	416	1756										
07:00	327		439											
07:15	355		396											
07:30	404		391											
07:45	402	1488	388	1614										
08:00	421		306											
08:15	364		322											
08:30	414		324											
08:45	394	1593	338	1290										
09:00	378		264											
09:15	382		261											
09:30	376		254											
09:45	417	1553	241	1020										
10:00	388		259											
10:15	377		313											
10:30	342		276											
10:45	389	1496	250	1098										
11:00	372		233											
11:15	344		203											
11:30	328		156											
11:45	361	1405	119	711										
Total	10597		16303											
Percent			100.0 %		0.0%			0.0%						
Day Total		26900												
Peak	07:45	-	06:15	-	-	-	-	-	-	-	-	-	-	-
Vol.	1601	-	1760	-	-	-	-	-	-	-	-	-	-	-
P.H.F.	0.951		0.967											

Albany Street
just south of Ink Block Exit Driveway
City, State: Boston, MA
Client: VHB/ P. Dunford

Start Time	A.M.	SB	P.M.	Fri 12/01/17										
12:00	137		401											
12:15	98		406											
12:30	67		345											
12:45	69	371	391	1543										
01:00	67		336											
01:15	69		362											
01:30	71		376											
01:45	54	261	439	1513										
02:00	52		415											
02:15	59		393											
02:30	55		422											
02:45	33	199	394	1624										
03:00	35		416											
03:15	26		386											
03:30	27		419											
03:45	39	127	393	1614										
04:00	43		408											
04:15	51		414											
04:30	62		417											
04:45	89	245	451	1690										
05:00	120		456											
05:15	159		473											
05:30	212		448											
05:45	276	767	422	1799										
06:00	277		447											
06:15	289		451											
06:30	338		407											
06:45	324	1228	413	1718										
07:00	337		396											
07:15	373		430											
07:30	366		421											
07:45	434	1510	371	1618										
08:00	410		326											
08:15	377		318											
08:30	429		305											
08:45	391	1607	269	1218										
09:00	424		289											
09:15	416		302											
09:30	420		297											
09:45	401	1661	305	1193										
10:00	400		308											
10:15	346		267											
10:30	398		284											
10:45	366	1510	284	1143										
11:00	331		329											
11:15	366		285											
11:30	392		261											
11:45	355	1444	263	1138										
Total	10930		17811											
Percent			100.0 %		0.0%			0.0%						
Day Total		28741												
Peak	09:00	-	04:45	-	-	-	-	-	-	-	-	-	-	-
Vol.	1661	-	1828	-	-	-	-	-	-	-	-	-	-	-
P.H.F.	0.979		0.966											

Albany Street
just south of Ink Block Exit Driveway
City, State: Boston, MA
Client: VHB/ P. Dunford



175974 A Volume
Site Code: 10995.05

Start Time	A.M.	SB	P.M.	Sat 12/02/17										
12:00	225		394											
12:15	181		425											
12:30	175		401											
12:45	165	746	406	1626										
01:00	172		363											
01:15	169		370											
01:30	136		356											
01:45	132	609	353	1442										
02:00	178		397											
02:15	164		391											
02:30	116		329											
02:45	112	570	347	1464										
03:00	81		399											
03:15	57		445											
03:30	37		370											
03:45	37	212	384	1598										
04:00	43		396											
04:15	28		447											
04:30	48		375											
04:45	52	171	487	1705										
05:00	53		408											
05:15	56		439											
05:30	62		431											
05:45	87	258	398	1676										
06:00	78		385											
06:15	95		393											
06:30	135		393											
06:45	151	459	447	1618										
07:00	154		399											
07:15	166		377											
07:30	215		384											
07:45	213	748	349	1509										
08:00	191		311											
08:15	189		265											
08:30	212		279											
08:45	279	871	278	1133										
09:00	295		307											
09:15	301		287											
09:30	329		297											
09:45	351	1276	321	1212										
10:00	355		318											
10:15	400		276											
10:30	393		325											
10:45	420	1568	256	1175										
11:00	419		248											
11:15	436		262											
11:30	424		249											
11:45	440	1719	224	983										
Total	9207		17141											
Percent			100.0 %		0.0%			0.0%						
Day Total		26348												
Peak	11:00	-	04:45	-	-	-	-	-	-	-	-	-	-	-
Vol.	1719	-	1765	-	-	-	-	-	-	-	-	-	-	-
P.H.F.	0.977		0.906											

Albany Street
just south of Ink Block Exit Driveway
City, State: Boston, MA
Client: VHB/ P. Dunford



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

175974 A Class
Site Code: 10995.05

SB

Start Time	Cars	Medium Heavy	Large Heavy											Total
11/30/1														
7	285	11	0	0	0	0	0	0	0	0	0	0	0	296
01:00	164	15	4	0	0	0	0	0	0	0	0	0	0	183
02:00	136	8	2	0	0	0	0	0	0	0	0	0	0	146
03:00	91	9	1	0	0	0	0	0	0	0	0	0	0	101
04:00	223	18	5	0	0	0	0	0	0	0	0	0	0	246
05:00	759	44	3	0	0	0	0	0	0	0	0	0	0	806
06:00	1196	85	3	0	0	0	0	0	0	0	0	0	0	1284
07:00	1387	99	2	0	0	0	0	0	0	0	0	0	0	1488
08:00	1489	102	2	0	0	0	0	0	0	0	0	0	0	1593
09:00	1412	133	8	0	0	0	0	0	0	0	0	0	0	1553
10:00	1380	110	6	0	0	0	0	0	0	0	0	0	0	1496
11:00	1301	98	6	0	0	0	0	0	0	0	0	0	0	1405
12 PM	1284	65	5	0	0	0	0	0	0	0	0	0	0	1354
13:00	1360	66	3	0	0	0	0	0	0	0	0	0	0	1429
14:00	1575	105	4	0	0	0	0	0	0	0	0	0	0	1684
15:00	1350	66	4	0	0	0	0	0	0	0	0	0	0	1420
16:00	1344	67	1	0	0	0	0	0	0	0	0	0	0	1412
17:00	1459	54	2	0	0	0	0	0	0	0	0	0	0	1515
18:00	1699	51	6	0	0	0	0	0	0	0	0	0	0	1756
19:00	1550	61	3	0	0	0	0	0	0	0	0	0	0	1614
20:00	1240	43	7	0	0	0	0	0	0	0	0	0	0	1290
21:00	978	36	6	0	0	0	0	0	0	0	0	0	0	1020
22:00	1075	22	1	0	0	0	0	0	0	0	0	0	0	1098
23:00	693	16	2	0	0	0	0	0	0	0	0	0	0	711
Total	25430	1384	86	0	0	0	0	0	0	0	0	0	0	26900
Percent	94.5%	5.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM														
Peak	08:00	09:00	09:00											08:00
Vol.	1489	133	8											1593
PM														
Peak	18:00	14:00	20:00											18:00
Vol.	1699	105	7											1756

Albany Street
just south of Ink Block Exit Driveway
City, State: Boston, MA
Client: VHB/ P. Dunford



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

175974 A Class
Site Code: 10995.05

SB

Start Time	Cars	Medium Heavy	Large Heavy											Total
12/01/1														
7	347	22	2	0	0	0	0	0	0	0	0	0	0	371
01:00	249	12	0	0	0	0	0	0	0	0	0	0	0	261
02:00	191	7	1	0	0	0	0	0	0	0	0	0	0	199
03:00	116	9	2	0	0	0	0	0	0	0	0	0	0	127
04:00	225	20	0	0	0	0	0	0	0	0	0	0	0	245
05:00	718	45	4	0	0	0	0	0	0	0	0	0	0	767
06:00	1129	93	6	0	0	0	0	0	0	0	0	0	0	1228
07:00	1384	126	0	0	0	0	0	0	0	0	0	0	0	1510
08:00	1499	106	2	0	0	0	0	0	0	0	0	0	0	1607
09:00	1532	123	6	0	0	0	0	0	0	0	0	0	0	1661
10:00	1388	115	7	0	0	0	0	0	0	0	0	0	0	1510
11:00	1360	81	3	0	0	0	0	0	0	0	0	0	0	1444
12 PM	1468	71	4	0	0	0	0	0	0	0	0	0	0	1543
13:00	1425	85	3	0	0	0	0	0	0	0	0	0	0	1513
14:00	1519	102	3	0	0	0	0	0	0	0	0	0	0	1624
15:00	1539	71	4	0	0	0	0	0	0	0	0	0	0	1614
16:00	1618	65	7	0	0	0	0	0	0	0	0	0	0	1690
17:00	1747	50	2	0	0	0	0	0	0	0	0	0	0	1799
18:00	1659	54	5	0	0	0	0	0	0	0	0	0	0	1718
19:00	1562	55	1	0	0	0	0	0	0	0	0	0	0	1618
20:00	1183	33	2	0	0	0	0	0	0	0	0	0	0	1218
21:00	1170	17	6	0	0	0	0	0	0	0	0	0	0	1193
22:00	1114	27	2	0	0	0	0	0	0	0	0	0	0	1143
23:00	1125	10	3	0	0	0	0	0	0	0	0	0	0	1138
Total	27267	1399	75	0	0	0	0	0	0	0	0	0	0	28741
Percent	94.9%	4.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM														
Peak	09:00	07:00	10:00											09:00
Vol.	1532	126	7											1661
PM														
Peak	17:00	14:00	16:00											17:00
Vol.	1747	102	7											1799

Albany Street
just south of Ink Block Exit Driveway
City, State: Boston, MA
Client: VHB/ P. Dunford



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

175974 A Class
Site Code: 10995.05

SB

Start Time	Cars	Medium Heavy	Large Heavy											Total
12/02/1														
7	726	19	1	0	0	0	0	0	0	0	0	0	0	746
01:00	592	14	3	0	0	0	0	0	0	0	0	0	0	609
02:00	558	12	0	0	0	0	0	0	0	0	0	0	0	570
03:00	204	6	2	0	0	0	0	0	0	0	0	0	0	212
04:00	157	14	0	0	0	0	0	0	0	0	0	0	0	171
05:00	233	23	2	0	0	0	0	0	0	0	0	0	0	258
06:00	423	27	9	0	0	0	0	0	0	0	0	0	0	459
07:00	695	44	9	0	0	0	0	0	0	0	0	0	0	748
08:00	821	47	3	0	0	0	0	0	0	0	0	0	0	871
09:00	1228	43	5	0	0	0	0	0	0	0	0	0	0	1276
10:00	1534	33	1	0	0	0	0	0	0	0	0	0	0	1568
11:00	1665	45	9	0	0	0	0	0	0	0	0	0	0	1719
12 PM	1581	44	1	0	0	0	0	0	0	0	0	0	0	1626
13:00	1403	37	2	0	0	0	0	0	0	0	0	0	0	1442
14:00	1435	29	0	0	0	0	0	0	0	0	0	0	0	1464
15:00	1577	19	2	0	0	0	0	0	0	0	0	0	0	1598
16:00	1674	30	1	0	0	0	0	0	0	0	0	0	0	1705
17:00	1640	31	5	0	0	0	0	0	0	0	0	0	0	1676
18:00	1600	18	0	0	0	0	0	0	0	0	0	0	0	1618
19:00	1479	25	5	0	0	0	0	0	0	0	0	0	0	1509
20:00	1108	23	2	0	0	0	0	0	0	0	0	0	0	1133
21:00	1196	15	1	0	0	0	0	0	0	0	0	0	0	1212
22:00	1163	10	2	0	0	0	0	0	0	0	0	0	0	1175
23:00	970	13	0	0	0	0	0	0	0	0	0	0	0	983
Total	25662	621	65	0	0	0	0	0	0	0	0	0	0	26348
Percent	97.4%	2.4%	0.2%	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	06:00											11:00
Vol.	1665	47	9											1719
PM														
Peak	16:00	12:00	17:00											16:00
Vol.	1674	44	5											1705

PDI File #: **175974 A**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	0	243	0	243	0	0	0	0	189	0	0	189	432
7:15 AM	0	279	0	279	0	0	0	0	228	0	0	228	507
7:30 AM	0	272	0	272	0	0	0	0	282	0	0	282	554
7:45 AM	0	259	0	259	0	0	0	0	278	0	0	278	537
Total	0	1053	0	1053	0	0	0	0	977	0	0	977	2030
8:00 AM	0	303	0	303	0	0	0	0	269	0	0	269	572
8:15 AM	0	246	0	246	0	0	0	0	261	0	0	261	507
8:30 AM	0	274	0	274	0	0	0	0	296	0	0	296	570
8:45 AM	0	283	0	283	0	0	0	0	255	0	0	255	538
Total	0	1106	0	1106	0	0	0	0	1081	0	0	1081	2187
Grand Total	0	2159	0	2159	0	0	0	0	2058	0	0	2058	4217
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	51.2	0.0	51.2	0.0	0.0	0.0	0.0	48.8	0.0	0.0	48.8	
Exiting Leg Total	0				4217				0				4217
Cars	0	2013	0	2013	0	0	0	0	1937	0	0	1937	3950
% Cars	0.0	93.2	0.0	93.2	0.0	0.0	0.0	0.0	94.1	0.0	0.0	94.1	93.7
Exiting Leg Total	0				3950				0				3950
Heavy Vehicles	0	146	0	146	0	0	0	0	121	0	0	121	267
% Heavy Vehicles	0.0	6.8	0.0	6.8	0.0	0.0	0.0	0.0	5.9	0.0	0.0	5.9	6.3
Exiting Leg Total	0				267				0				267

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

8:00 AM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
8:00 AM	0	303	0	303	0	0	0	0	269	0	0	269	572
8:15 AM	0	246	0	246	0	0	0	0	261	0	0	261	507
8:30 AM	0	274	0	274	0	0	0	0	296	0	0	296	570
8:45 AM	0	283	0	283	0	0	0	0	255	0	0	255	538
Total Volume	0	1106	0	1106	0	0	0	0	1081	0	0	1081	2187
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.913	0.000	0.913	0.000	0.000	0.000	0.000	0.913	0.000	0.000	0.913	0.956
Cars	0	1035	0	1035	0	0	0	0	1014	0	0	1014	2049
Cars %	0.0	93.6	0.0	93.6	0.0	0.0	0.0	0.0	93.8	0.0	0.0	93.8	93.7
Heavy Vehicles	0	71	0	71	0	0	0	0	67	0	0	67	138
Heavy Vehicles %	0.0	6.4	0.0	6.4	0.0	0.0	0.0	0.0	6.2	0.0	0.0	6.2	6.3
Cars Enter Leg	0	1035	0	1035	0	0	0	0	1014	0	0	1014	2049
Heavy Enter Leg	0	71	0	71	0	0	0	0	67	0	0	67	138
Total Entering Leg	0	1106	0	1106	0	0	0	0	1081	0	0	1081	2187
Cars Exiting Leg	0				2049				0				2049
Heavy Exiting Leg	0				138				0				138
Total Exiting Leg	0				2187				0				2187

PDI File #: **175974 A**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	0	227	0	227	0	0	0	0	178	0	0	178	405
7:15 AM	0	262	0	262	0	0	0	0	219	0	0	219	481
7:30 AM	0	251	0	251	0	0	0	0	268	0	0	268	519
7:45 AM	0	238	0	238	0	0	0	0	258	0	0	258	496
Total	0	978	0	978	0	0	0	0	923	0	0	923	1901
8:00 AM	0	286	0	286	0	0	0	0	255	0	0	255	541
8:15 AM	0	232	0	232	0	0	0	0	248	0	0	248	480
8:30 AM	0	254	0	254	0	0	0	0	274	0	0	274	528
8:45 AM	0	263	0	263	0	0	0	0	237	0	0	237	500
Total	0	1035	0	1035	0	0	0	0	1014	0	0	1014	2049
Grand Total	0	2013	0	2013	0	0	0	0	1937	0	0	1937	3950
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	51.0	0.0	51.0	0.0	0.0	0.0	0.0	49.0	0.0	0.0	49.0	
Exiting Leg Total	0				3950				0				3950

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

8:00 AM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
8:00 AM	0	286	0	286	0	0	0	0	255	0	0	255	541
8:15 AM	0	232	0	232	0	0	0	0	248	0	0	248	480
8:30 AM	0	254	0	254	0	0	0	0	274	0	0	274	528
8:45 AM	0	263	0	263	0	0	0	0	237	0	0	237	500
Total Volume	0	1035	0	1035	0	0	0	0	1014	0	0	1014	2049
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.905	0.000	0.905	0.000	0.000	0.000	0.000	0.925	0.000	0.000	0.925	0.947
Entering Leg	0	1035	0	1035	0	0	0	0	1014	0	0	1014	2049
Exiting Leg				0				2049				0	2049
Total				1035				2049				1014	4098

PDI File #: **175974 A**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Heavy Vehicles (Combined-Large Trucks and Buses)**

	Albany Street				Albany Street				Herald Street				
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
7:00 AM	0	16	0	16	0	0	0	0	11	0	0	11	27
7:15 AM	0	17	0	17	0	0	0	0	9	0	0	9	26
7:30 AM	0	21	0	21	0	0	0	0	14	0	0	14	35
7:45 AM	0	21	0	21	0	0	0	0	20	0	0	20	41
Total	0	75	0	75	0	0	0	0	54	0	0	54	129
8:00 AM	0	17	0	17	0	0	0	0	14	0	0	14	31
8:15 AM	0	14	0	14	0	0	0	0	13	0	0	13	27
8:30 AM	0	20	0	20	0	0	0	0	22	0	0	22	42
8:45 AM	0	20	0	20	0	0	0	0	18	0	0	18	38
Total	0	71	0	71	0	0	0	0	67	0	0	67	138
Grand Total	0	146	0	146	0	0	0	0	121	0	0	121	267
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	54.7	0.0	54.7	0.0	0.0	0.0	0.0	45.3	0.0	0.0	45.3	
Exiting Leg Total	0				267				0				267
Large Trucks	0	103	0	103	0	0	0	0	72	0	0	72	175
% Large Trucks	0.0	70.5	0.0	70.5	0.0	0.0	0.0	0.0	59.5	0.0	0.0	59.5	65.5
Exiting Leg Total	0				175				0				175
Buses	0	43	0	43	0	0	0	0	49	0	0	49	92
% Buses	0.0	29.5	0.0	29.5	0.0	0.0	0.0	0.0	40.5	0.0	0.0	40.5	34.5
Exiting Leg Total	0				92				0				92

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

7:45 AM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:45 AM	0	21	0	21	0	0	0	0	20	0	0	20	41
8:00 AM	0	17	0	17	0	0	0	0	14	0	0	14	31
8:15 AM	0	14	0	14	0	0	0	0	13	0	0	13	27
8:30 AM	0	20	0	20	0	0	0	0	22	0	0	22	42
Total Volume	0	72	0	72	0	0	0	0	69	0	0	69	141
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.857	0.000	0.857	0.000	0.000	0.000	0.000	0.784	0.000	0.000	0.784	0.839
Large Trucks	0	47	0	47	0	0	0	0	41	0	0	41	88
Large Trucks %	0.0	65.3	0.0	65.3	0.0	0.0	0.0	0.0	59.4	0.0	0.0	59.4	62.4
Buses	0	25	0	25	0	0	0	0	28	0	0	28	53
Buses %	0.0	34.7	0.0	34.7	0.0	0.0	0.0	0.0	40.6	0.0	0.0	40.6	37.6
Trucks Enter Leg	0	47	0	47	0	0	0	0	41	0	0	41	88
Bus Enter Leg	0	25	0	25	0	0	0	0	28	0	0	28	53
Total Entering Leg	0	72	0	72	0	0	0	0	69	0	0	69	141
Trucks Exiting Leg				0				88				0	88
Buses Exiting Leg				0				53				0	53
Total Exiting Leg				0				141				0	141

PDI File #: **175974 A**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Large Trucks

	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	0	11	0	11	0	0	0	0	7	0	0	7	18
7:15 AM	0	13	0	13	0	0	0	0	6	0	0	6	19
7:30 AM	0	18	0	18	0	0	0	0	6	0	0	6	24
7:45 AM	0	14	0	14	0	0	0	0	14	0	0	14	28
Total	0	56	0	56	0	0	0	0	33	0	0	33	89
8:00 AM	0	12	0	12	0	0	0	0	7	0	0	7	19
8:15 AM	0	8	0	8	0	0	0	0	8	0	0	8	16
8:30 AM	0	13	0	13	0	0	0	0	12	0	0	12	25
8:45 AM	0	14	0	14	0	0	0	0	12	0	0	12	26
Total	0	47	0	47	0	0	0	0	39	0	0	39	86
Grand Total	0	103	0	103	0	0	0	0	72	0	0	72	175
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	58.9	0.0	58.9	0.0	0.0	0.0	0.0	41.1	0.0	0.0	41.1	
Exiting Leg Total	0				175				0				175

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

7:15 AM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:15 AM	0	13	0	13	0	0	0	0	6	0	0	6	19
7:30 AM	0	18	0	18	0	0	0	0	6	0	0	6	24
7:45 AM	0	14	0	14	0	0	0	0	14	0	0	14	28
8:00 AM	0	12	0	12	0	0	0	0	7	0	0	7	19
Total Volume	0	57	0	57	0	0	0	0	33	0	0	33	90
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.792	0.000	0.792	0.000	0.000	0.000	0.000	0.589	0.000	0.000	0.589	0.804
Entering Leg	0	57	0	57	0	0	0	0	33	0	0	33	90
Exiting Leg				0				90				0	90
Total				57				90				33	180

PDI File #: **175974 A**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	0	5	0	5	0	0	0	0	4	0	0	4	9
7:15 AM	0	4	0	4	0	0	0	0	3	0	0	3	7
7:30 AM	0	3	0	3	0	0	0	0	8	0	0	8	11
7:45 AM	0	7	0	7	0	0	0	0	6	0	0	6	13
Total	0	19	0	19	0	0	0	0	21	0	0	21	40
8:00 AM	0	5	0	5	0	0	0	0	7	0	0	7	12
8:15 AM	0	6	0	6	0	0	0	0	5	0	0	5	11
8:30 AM	0	7	0	7	0	0	0	0	10	0	0	10	17
8:45 AM	0	6	0	6	0	0	0	0	6	0	0	6	12
Total	0	24	0	24	0	0	0	0	28	0	0	28	52
Grand Total	0	43	0	43	0	0	0	0	49	0	0	49	92
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	46.7	0.0	46.7	0.0	0.0	0.0	0.0	53.3	0.0	0.0	53.3	
Exiting Leg Total	0				92				0				92

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

7:45 AM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:45 AM	0	7	0	7	0	0	0	0	6	0	0	6	13
8:00 AM	0	5	0	5	0	0	0	0	7	0	0	7	12
8:15 AM	0	6	0	6	0	0	0	0	5	0	0	5	11
8:30 AM	0	7	0	7	0	0	0	0	10	0	0	10	17
Total Volume	0	25	0	25	0	0	0	0	28	0	0	28	53
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.893	0.000	0.893	0.000	0.000	0.000	0.000	0.700	0.000	0.000	0.700	0.779
Entering Leg	0	25	0	25	0	0	0	0	28	0	0	28	53
Exiting Leg				0				53				0	53
Total				25				53				28	106

PDI File #: **175974 A**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Albany Street						Albany Street						Herald Street						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
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	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	1						0						0						1

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

7:30 AM	Albany Street						Albany Street						Herald Street						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.250	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
Entering Leg	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg	1						0						0						1
Total	2						0						0						2

PDI File #: **175974 A**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Albany Street						Albany Street						Herald Street						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	1	1	2	6
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	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	4	5	0	0	0	0	0	0	0	0	0	1	1	2	7
8:00 AM	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	1	1	4
8:15 AM	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
8:30 AM	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	1	0	1	5
Total	0	0	0	6	6	12	0	0	0	0	0	0	0	0	0	1	1	2	14
Grand Total	0	0	0	7	10	17	0	0	0	0	0	0	0	0	0	2	2	4	21
Approach %	0.0	0.0	0.0	41.2	58.8		0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	50.0	50.0	
Total %	0.0	0.0	0.0	33.3	47.6	81.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	9.5	9.5	19.0
Exiting Leg Total	17						0						4						21

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

8:00 AM	Albany Street						Albany Street						Herald Street						Total	
	from North						from South						from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total		
8:00 AM	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	1	1	4
8:15 AM	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:30 AM	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	1	0	1	5
Total Volume	0	0	0	6	6	12	0	0	0	0	0	0	0	0	0	0	1	1	2	14
% Approach Total	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	50.0	50.0		
PHF	0.000	0.000	0.000	0.750	0.750	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.700
Entering Leg	0	0	0	6	6	12	0	0	0	0	0	0		0	0	0	1	1	2	14
Exiting Leg	12						0						2						14	
Total	24						0						4						28	

PDI File #: **175974 AA**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Albany Street				Albany Street				Herald Street				
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	257	0	257	0	0	0	0	355	0	0	355	612
4:15 PM	0	249	0	249	0	0	0	0	360	0	0	360	609
4:30 PM	0	242	0	242	0	0	0	0	393	0	0	393	635
4:45 PM	0	245	0	245	0	0	0	0	373	0	0	373	618
Total	0	993	0	993	0	0	0	0	1481	0	0	1481	2474
5:00 PM	0	264	0	264	0	0	0	0	385	0	0	385	649
5:15 PM	0	266	0	266	0	0	0	0	361	0	0	361	627
5:30 PM	0	252	0	252	0	0	0	0	383	0	0	383	635
5:45 PM	0	263	0	263	0	0	0	0	381	0	0	381	644
Total	0	1045	0	1045	0	0	0	0	1510	0	0	1510	2555
Grand Total	0	2038	0	2038	0	0	0	0	2991	0	0	2991	5029
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	40.5	0.0	40.5	0.0	0.0	0.0	0.0	59.5	0.0	0.0	59.5	
Exiting Leg Total	0				5029				0				5029
Cars	0	1956	0	1956	0	0	0	0	2915	0	0	2915	4871
% Cars	0.0	96.0	0.0	96.0	0.0	0.0	0.0	0.0	97.5	0.0	0.0	97.5	96.9
Exiting Leg Total	0				4871				0				4871
Heavy Vehicles	0	82	0	82	0	0	0	0	76	0	0	76	158
% Heavy Vehicles	0.0	4.0	0.0	4.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	2.5	3.1
Exiting Leg Total	0				158				0				158

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

5:00 PM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
5:00 PM	0	264	0	264	0	0	0	0	385	0	0	385	649
5:15 PM	0	266	0	266	0	0	0	0	361	0	0	361	627
5:30 PM	0	252	0	252	0	0	0	0	383	0	0	383	635
5:45 PM	0	263	0	263	0	0	0	0	381	0	0	381	644
Total Volume	0	1045	0	1045	0	0	0	0	1510	0	0	1510	2555
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.982	0.000	0.982	0.000	0.000	0.000	0.000	0.981	0.000	0.000	0.981	0.984
Cars	0	1010	0	1010	0	0	0	0	1477	0	0	1477	2487
Cars %	0.0	96.7	0.0	96.7	0.0	0.0	0.0	0.0	97.8	0.0	0.0	97.8	97.3
Heavy Vehicles	0	35	0	35	0	0	0	0	33	0	0	33	68
Heavy Vehicles %	0.0	3.3	0.0	3.3	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.2	2.7
Cars Enter Leg	0	1010	0	1010	0	0	0	0	1477	0	0	1477	2487
Heavy Enter Leg	0	35	0	35	0	0	0	0	33	0	0	33	68
Total Entering Leg	0	1045	0	1045	0	0	0	0	1510	0	0	1510	2555
Cars Exiting Leg	0				2487				0				2487
Heavy Exiting Leg	0				68				0				68
Total Exiting Leg	0				2555				0				2555

PDI File #: **175974 AA**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	246	0	246	0	0	0	0	343	0	0	343	589
4:15 PM	0	235	0	235	0	0	0	0	348	0	0	348	583
4:30 PM	0	235	0	235	0	0	0	0	382	0	0	382	617
4:45 PM	0	230	0	230	0	0	0	0	365	0	0	365	595
Total	0	946	0	946	0	0	0	0	1438	0	0	1438	2384
5:00 PM	0	252	0	252	0	0	0	0	376	0	0	376	628
5:15 PM	0	257	0	257	0	0	0	0	353	0	0	353	610
5:30 PM	0	244	0	244	0	0	0	0	377	0	0	377	621
5:45 PM	0	257	0	257	0	0	0	0	371	0	0	371	628
Total	0	1010	0	1010	0	0	0	0	1477	0	0	1477	2487
Grand Total	0	1956	0	1956	0	0	0	0	2915	0	0	2915	4871
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	40.2	0.0	40.2	0.0	0.0	0.0	0.0	59.8	0.0	0.0	59.8	
Exiting Leg Total	0				4871				0				4871

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

5:00 PM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
5:00 PM	0	252	0	252	0	0	0	0	376	0	0	376	628
5:15 PM	0	257	0	257	0	0	0	0	353	0	0	353	610
5:30 PM	0	244	0	244	0	0	0	0	377	0	0	377	621
5:45 PM	0	257	0	257	0	0	0	0	371	0	0	371	628
Total Volume	0	1010	0	1010	0	0	0	0	1477	0	0	1477	2487
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.982	0.000	0.982	0.000	0.000	0.000	0.000	0.979	0.000	0.000	0.979	0.990
Entering Leg	0	1010	0	1010	0	0	0	0	1477	0	0	1477	2487
Exiting Leg				0				2487				0	2487
Total				1010				2487				1477	4974

PDI File #: **175974 AA**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Heavy Vehicles (Combined-Large Trucks and Buses)**

	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	11	0	11	0	0	0	0	12	0	0	12	23
4:15 PM	0	14	0	14	0	0	0	0	12	0	0	12	26
4:30 PM	0	7	0	7	0	0	0	0	11	0	0	11	18
4:45 PM	0	15	0	15	0	0	0	0	8	0	0	8	23
Total	0	47	0	47	0	0	0	0	43	0	0	43	90
5:00 PM	0	12	0	12	0	0	0	0	9	0	0	9	21
5:15 PM	0	9	0	9	0	0	0	0	8	0	0	8	17
5:30 PM	0	8	0	8	0	0	0	0	6	0	0	6	14
5:45 PM	0	6	0	6	0	0	0	0	10	0	0	10	16
Total	0	35	0	35	0	0	0	0	33	0	0	33	68
Grand Total	0	82	0	82	0	0	0	0	76	0	0	76	158
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	51.9	0.0	51.9	0.0	0.0	0.0	0.0	48.1	0.0	0.0	48.1	
Exiting Leg Total	0				158				0				158
Large Trucks	0	46	0	46	0	0	0	0	30	0	0	30	76
% Large Trucks	0.0	56.1	0.0	56.1	0.0	0.0	0.0	0.0	39.5	0.0	0.0	39.5	48.1
Exiting Leg Total	0				76				0				76
Buses	0	36	0	36	0	0	0	0	46	0	0	46	82
% Buses	0.0	43.9	0.0	43.9	0.0	0.0	0.0	0.0	60.5	0.0	0.0	60.5	51.9
Exiting Leg Total	0				82				0				82

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

4:00 PM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	11	0	11	0	0	0	0	12	0	0	12	23
4:15 PM	0	14	0	14	0	0	0	0	12	0	0	12	26
4:30 PM	0	7	0	7	0	0	0	0	11	0	0	11	18
4:45 PM	0	15	0	15	0	0	0	0	8	0	0	8	23
Total Volume	0	47	0	47	0	0	0	0	43	0	0	43	90
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.783	0.000	0.783	0.000	0.000	0.000	0.000	0.896	0.000	0.000	0.896	0.865
Large Trucks	0	26	0	26	0	0	0	0	13	0	0	13	39
Large Trucks %	0.0	55.3	0.0	55.3	0.0	0.0	0.0	0.0	30.2	0.0	0.0	30.2	43.3
Buses	0	21	0	21	0	0	0	0	30	0	0	30	51
Buses %	0.0	44.7	0.0	44.7	0.0	0.0	0.0	0.0	69.8	0.0	0.0	69.8	56.7
Trucks Enter Leg	0	26	0	26	0	0	0	0	13	0	0	13	39
Bus Enter Leg	0	21	0	21	0	0	0	0	30	0	0	30	51
Total Entering Leg	0	47	0	47	0	0	0	0	43	0	0	43	90
Trucks Exiting Leg				0				39				0	39
Buses Exiting Leg				0				51				0	51
Total Exiting Leg				0				90				0	90

PDI File #: **175974 AA**
 Location: **N: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Large Trucks

	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	6	0	6	0	0	0	0	7	0	0	7	13
4:15 PM	0	5	0	5	0	0	0	0	1	0	0	1	6
4:30 PM	0	5	0	5	0	0	0	0	2	0	0	2	7
4:45 PM	0	10	0	10	0	0	0	0	3	0	0	3	13
Total	0	26	0	26	0	0	0	0	13	0	0	13	39
5:00 PM	0	7	0	7	0	0	0	0	6	0	0	6	13
5:15 PM	0	4	0	4	0	0	0	0	2	0	0	2	6
5:30 PM	0	4	0	4	0	0	0	0	3	0	0	3	7
5:45 PM	0	5	0	5	0	0	0	0	6	0	0	6	11
Total	0	20	0	20	0	0	0	0	17	0	0	17	37
Grand Total	0	46	0	46	0	0	0	0	30	0	0	30	76
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	60.5	0.0	60.5	0.0	0.0	0.0	0.0	39.5	0.0	0.0	39.5	
Exiting Leg Total	0				76				0				76

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

4:00 PM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	6	0	6	0	0	0	0	7	0	0	7	13
4:15 PM	0	5	0	5	0	0	0	0	1	0	0	1	6
4:30 PM	0	5	0	5	0	0	0	0	2	0	0	2	7
4:45 PM	0	10	0	10	0	0	0	0	3	0	0	3	13
Total Volume	0	26	0	26	0	0	0	0	13	0	0	13	39
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.650	0.000	0.650	0.000	0.000	0.000	0.000	0.464	0.000	0.000	0.464	0.750
Entering Leg	0	26	0	26	0	0	0	0	13	0	0	13	39
Exiting Leg				0				39				0	39
Total				26				39				13	78

PDI File #: **175974 AA**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	5	0	5	0	0	0	0	5	0	0	5	10
4:15 PM	0	9	0	9	0	0	0	0	11	0	0	11	20
4:30 PM	0	2	0	2	0	0	0	0	9	0	0	9	11
4:45 PM	0	5	0	5	0	0	0	0	5	0	0	5	10
Total	0	21	0	21	0	0	0	0	30	0	0	30	51
5:00 PM	0	5	0	5	0	0	0	0	3	0	0	3	8
5:15 PM	0	5	0	5	0	0	0	0	6	0	0	6	11
5:30 PM	0	4	0	4	0	0	0	0	3	0	0	3	7
5:45 PM	0	1	0	1	0	0	0	0	4	0	0	4	5
Total	0	15	0	15	0	0	0	0	16	0	0	16	31
Grand Total	0	36	0	36	0	0	0	0	46	0	0	46	82
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	43.9	0.0	43.9	0.0	0.0	0.0	0.0	56.1	0.0	0.0	56.1	
Exiting Leg Total	0				82				0				82

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

4:00 PM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	5	0	5	0	0	0	0	5	0	0	5	10
4:15 PM	0	9	0	9	0	0	0	0	11	0	0	11	20
4:30 PM	0	2	0	2	0	0	0	0	9	0	0	9	11
4:45 PM	0	5	0	5	0	0	0	0	5	0	0	5	10
Total Volume	0	21	0	21	0	0	0	0	30	0	0	30	51
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.583	0.000	0.583	0.000	0.000	0.000	0.000	0.682	0.000	0.000	0.682	0.638
Entering Leg	0	21	0	21	0	0	0	0	30	0	0	30	51
Exiting Leg				0				51				0	51
Total				21				51				30	102

PDI File #: **175974 AA**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Albany Street						Albany Street						Herald Street						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	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	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1
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	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	1	0	1
Approach %	0.0	66.7	0.0	33.3	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	100.0	0.0		
Total %	0.0	50.0	0.0	25.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0	
Exiting Leg Total	1						2						1						4

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

4:15 PM	Albany Street						Albany Street						Herald Street						Total	
	from North						from South						from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total		
4:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	1	0	1	4
% Approach Total	0.0	66.7	0.0	33.3	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.500	0.000	0.250	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.250	0.000	0.250	0.500
Entering Leg	0	2	0	1	0	3	0	0	0	0	0	0		0	0	0	1	0	1	4
Exiting Leg	1						2						1						4	
Total	4						2						2						8	

PDI File #: **175974 AA**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Albany Street						Albany Street						Herald Street						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	1	1	1
4:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	5	4	9	0	0	0	0	0	0	0	0	0	0	1	1	2
5:00 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	1	1	2
5:15 PM	0	0	0	1	4	5	0	0	0	0	0	0	0	0	0	0	0	1	1
5:30 PM	0	0	0	7	6	13	0	0	0	0	0	0	0	0	0	0	6	6	19
5:45 PM	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	11	13	24	0	0	0	0	0	0	0	0	0	0	1	8	9
Grand Total	0	0	0	16	17	33	0	0	0	0	0	0	0	0	0	0	2	9	11
Approach %	0.0	0.0	0.0	48.5	51.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	81.8	
Total %	0.0	0.0	0.0	36.4	38.6	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	20.5	25.0
Exiting Leg Total	33						0						11						44

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

5:00 PM	Albany Street						Albany Street						Herald Street						Total	
	from North						from South						from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total		
5:00 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	1	1	2	5	
5:15 PM	0	0	0	1	4	5	0	0	0	0	0	0	0	0	0	0	1	1	6	
5:30 PM	0	0	0	7	6	13	0	0	0	0	0	0	0	0	0	0	6	6	19	
5:45 PM	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	
Total Volume	0	0	0	11	13	24	0	0	0	0	0	0	0	0	0	1	8	9	33	
% Approach Total	0.0	0.0	0.0	45.8	54.2		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	11.1	88.9		
PHF	0.000	0.000	0.000	0.393	0.542	0.462	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.250	0.333	0.375	0.434
Entering Leg	0	0	0	11	13	24	0	0	0	0	0	0		0	0	0	1	8	9	33
Exiting Leg						24						0							9	33
Total						48						0							18	66

PDI File #: **175974 AAA**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
11:00 AM	0	282	0	282	0	0	0	0	270	0	0	270	552
11:15 AM	0	288	0	288	0	0	0	0	286	0	0	286	574
11:30 AM	0	284	0	284	0	0	0	0	276	0	0	276	560
11:45 AM	0	278	0	278	0	0	0	0	292	0	0	292	570
Total	0	1132	0	1132	0	0	0	0	1124	0	0	1124	2256
12:00 PM	0	289	0	289	0	0	0	0	301	0	0	301	590
12:15 PM	0	292	0	292	0	0	0	0	338	0	0	338	630
12:30 PM	0	299	0	299	0	0	0	0	312	0	0	312	611
12:45 PM	0	268	0	268	0	0	0	0	322	0	0	322	590
Total	0	1148	0	1148	0	0	0	0	1273	0	0	1273	2421
1:00 PM	0	264	0	264	0	0	0	0	298	0	0	298	562
1:15 PM	0	273	0	273	0	0	0	0	319	0	0	319	592
1:30 PM	0	266	0	266	0	0	0	0	338	0	0	338	604
1:45 PM	0	290	0	290	0	0	0	0	339	0	0	339	629
Total	0	1093	0	1093	0	0	0	0	1294	0	0	1294	2387
Grand Total	0	3373	0	3373	0	0	0	0	3691	0	0	3691	7064
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	47.7	0.0	47.7	0.0	0.0	0.0	0.0	52.3	0.0	0.0	52.3	
Exiting Leg Total	0				7064				0				7064
Cars	0	3282	0	3282	0	0	0	0	3592	0	0	3592	6874
% Cars	0.0	97.3	0.0	97.3	0.0	0.0	0.0	0.0	97.3	0.0	0.0	97.3	97.3
Exiting Leg Total	0				6874				0				6874
Heavy Vehicles	0	91	0	91	0	0	0	0	99	0	0	99	190
% Heavy Vehicles	0.0	2.7	0.0	2.7	0.0	0.0	0.0	0.0	2.7	0.0	0.0	2.7	2.7
Exiting Leg Total	0				190				0				190

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
12:00 PM	0	289	0	289	0	0	0	0	301	0	0	301	590
12:15 PM	0	292	0	292	0	0	0	0	338	0	0	338	630
12:30 PM	0	299	0	299	0	0	0	0	312	0	0	312	611
12:45 PM	0	268	0	268	0	0	0	0	322	0	0	322	590
Total Volume	0	1148	0	1148	0	0	0	0	1273	0	0	1273	2421
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.960	0.000	0.960	0.000	0.000	0.000	0.000	0.942	0.000	0.000	0.942	0.961
Cars	0	1126	0	1126	0	0	0	0	1230	0	0	1230	2356
Cars %	0.0	98.1	0.0	98.1	0.0	0.0	0.0	0.0	96.6	0.0	0.0	96.6	97.3
Heavy Vehicles	0	22	0	22	0	0	0	0	43	0	0	43	65
Heavy Vehicles %	0.0	1.9	0.0	1.9	0.0	0.0	0.0	0.0	3.4	0.0	0.0	3.4	2.7
Cars Enter Leg	0	1126	0	1126	0	0	0	0	1230	0	0	1230	2356
Heavy Enter Leg	0	22	0	22	0	0	0	0	43	0	0	43	65
Total Entering Leg	0	1148	0	1148	0	0	0	0	1273	0	0	1273	2421
Cars Exiting Leg	0				2356				0				2356
Heavy Exiting Leg	0				65				0				65
Total Exiting Leg	0				2421				0				2421

PDI File #: **175974 AAA**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Cars

	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
11:00 AM	0	272	0	272	0	0	0	0	260	0	0	260	532
11:15 AM	0	282	0	282	0	0	0	0	282	0	0	282	564
11:30 AM	0	273	0	273	0	0	0	0	268	0	0	268	541
11:45 AM	0	273	0	273	0	0	0	0	285	0	0	285	558
Total	0	1100	0	1100	0	0	0	0	1095	0	0	1095	2195
12:00 PM	0	283	0	283	0	0	0	0	288	0	0	288	571
12:15 PM	0	285	0	285	0	0	0	0	333	0	0	333	618
12:30 PM	0	294	0	294	0	0	0	0	300	0	0	300	594
12:45 PM	0	264	0	264	0	0	0	0	309	0	0	309	573
Total	0	1126	0	1126	0	0	0	0	1230	0	0	1230	2356
1:00 PM	0	255	0	255	0	0	0	0	293	0	0	293	548
1:15 PM	0	266	0	266	0	0	0	0	314	0	0	314	580
1:30 PM	0	257	0	257	0	0	0	0	330	0	0	330	587
1:45 PM	0	278	0	278	0	0	0	0	330	0	0	330	608
Total	0	1056	0	1056	0	0	0	0	1267	0	0	1267	2323
Grand Total	0	3282	0	3282	0	0	0	0	3592	0	0	3592	6874
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	47.7	0.0	47.7	0.0	0.0	0.0	0.0	52.3	0.0	0.0	52.3	
Exiting Leg Total	0				6874				0				6874

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
12:00 PM	0	283	0	283	0	0	0	0	288	0	0	288	571
12:15 PM	0	285	0	285	0	0	0	0	333	0	0	333	618
12:30 PM	0	294	0	294	0	0	0	0	300	0	0	300	594
12:45 PM	0	264	0	264	0	0	0	0	309	0	0	309	573
Total Volume	0	1126	0	1126	0	0	0	0	1230	0	0	1230	2356
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.957	0.000	0.957	0.000	0.000	0.000	0.000	0.923	0.000	0.000	0.923	0.953
Entering Leg	0	1126	0	1126	0	0	0	0	1230	0	0	1230	2356
Exiting Leg				0				2356				0	2356
Total				1126				2356				1230	4712

PDI File #: **175974 AAA**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**



Heavy Vehicles (Combined-Large Trucks and Buses)

	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
11:00 AM	0	10	0	10	0	0	0	0	10	0	0	10	20
11:15 AM	0	6	0	6	0	0	0	0	4	0	0	4	10
11:30 AM	0	11	0	11	0	0	0	0	8	0	0	8	19
11:45 AM	0	5	0	5	0	0	0	0	7	0	0	7	12
Total	0	32	0	32	0	0	0	0	29	0	0	29	61
12:00 PM	0	6	0	6	0	0	0	0	13	0	0	13	19
12:15 PM	0	7	0	7	0	0	0	0	5	0	0	5	12
12:30 PM	0	5	0	5	0	0	0	0	12	0	0	12	17
12:45 PM	0	4	0	4	0	0	0	0	13	0	0	13	17
Total	0	22	0	22	0	0	0	0	43	0	0	43	65
1:00 PM	0	9	0	9	0	0	0	0	5	0	0	5	14
1:15 PM	0	7	0	7	0	0	0	0	5	0	0	5	12
1:30 PM	0	9	0	9	0	0	0	0	8	0	0	8	17
1:45 PM	0	12	0	12	0	0	0	0	9	0	0	9	21
Total	0	37	0	37	0	0	0	0	27	0	0	27	64
Grand Total	0	91	0	91	0	0	0	0	99	0	0	99	190
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	47.9	0.0	47.9	0.0	0.0	0.0	0.0	52.1	0.0	0.0	52.1	
Exiting Leg Total	0				190				0				190
Large Trucks	0	76	0	76	0	0	0	0	75	0	0	75	151
% Large Trucks	0.0	83.5	0.0	83.5	0.0	0.0	0.0	0.0	75.8	0.0	0.0	75.8	79.5
Exiting Leg Total	0				151				0				151
Buses	0	15	0	15	0	0	0	0	24	0	0	24	39
% Buses	0.0	16.5	0.0	16.5	0.0	0.0	0.0	0.0	24.2	0.0	0.0	24.2	20.5
Exiting Leg Total	0				39				0				39

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

Peak Hour Analysis from 12:00 PM to 12:00 PM Begins at:

12:00 PM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
12:00 PM	0	6	0	6	0	0	0	0	13	0	0	13	19
12:15 PM	0	7	0	7	0	0	0	0	5	0	0	5	12
12:30 PM	0	5	0	5	0	0	0	0	12	0	0	12	17
12:45 PM	0	4	0	4	0	0	0	0	13	0	0	13	17
Total Volume	0	22	0	22	0	0	0	0	43	0	0	43	65
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.786	0.000	0.786	0.000	0.000	0.000	0.000	0.827	0.000	0.000	0.827	0.855
Large Trucks	0	19	0	19	0	0	0	0	34	0	0	34	53
Large Trucks %	0.0	86.4	0.0	86.4	0.0	0.0	0.0	0.0	79.1	0.0	0.0	79.1	81.5
Buses	0	3	0	3	0	0	0	0	9	0	0	9	12
Buses %	0.0	13.6	0.0	13.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	20.9	18.5
Trucks Enter Leg	0	19	0	19	0	0	0	0	34	0	0	34	53
Bus Enter Leg	0	3	0	3	0	0	0	0	9	0	0	9	12
Total Entering Leg	0	22	0	22	0	0	0	0	43	0	0	43	65
Trucks Exiting Leg	0				53				0				53
Buses Exiting Leg	0				12				0				12
Total Exiting Leg	0				65				0				65

PDI File #: **175974 AAA**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Large Trucks

	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
11:00 AM	0	9	0	9	0	0	0	0	9	0	0	9	18
11:15 AM	0	4	0	4	0	0	0	0	4	0	0	4	8
11:30 AM	0	11	0	11	0	0	0	0	6	0	0	6	17
11:45 AM	0	4	0	4	0	0	0	0	6	0	0	6	10
Total	0	28	0	28	0	0	0	0	25	0	0	25	53
12:00 PM	0	4	0	4	0	0	0	0	12	0	0	12	16
12:15 PM	0	7	0	7	0	0	0	0	5	0	0	5	12
12:30 PM	0	4	0	4	0	0	0	0	7	0	0	7	11
12:45 PM	0	4	0	4	0	0	0	0	10	0	0	10	14
Total	0	19	0	19	0	0	0	0	34	0	0	34	53
1:00 PM	0	7	0	7	0	0	0	0	3	0	0	3	10
1:15 PM	0	7	0	7	0	0	0	0	3	0	0	3	10
1:30 PM	0	6	0	6	0	0	0	0	5	0	0	5	11
1:45 PM	0	9	0	9	0	0	0	0	5	0	0	5	14
Total	0	29	0	29	0	0	0	0	16	0	0	16	45
Grand Total	0	76	0	76	0	0	0	0	75	0	0	75	151
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	50.3	0.0	50.3	0.0	0.0	0.0	0.0	49.7	0.0	0.0	49.7	
Exiting Leg Total	0				151				0				151

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:30 AM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
11:30 AM	0	11	0	11	0	0	0	0	6	0	0	6	17
11:45 AM	0	4	0	4	0	0	0	0	6	0	0	6	10
12:00 PM	0	4	0	4	0	0	0	0	12	0	0	12	16
12:15 PM	0	7	0	7	0	0	0	0	5	0	0	5	12
Total Volume	0	26	0	26	0	0	0	0	29	0	0	29	55
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.591	0.000	0.591	0.000	0.000	0.000	0.000	0.604	0.000	0.000	0.604	0.809
Entering Leg	0	26	0	26	0	0	0	0	29	0	0	29	55
Exiting Leg				0				55				0	55
Total				26				55				29	110

PDI File #: **175974 AAA**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Buses

	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
11:00 AM	0	1	0	1	0	0	0	0	1	0	0	1	2
11:15 AM	0	2	0	2	0	0	0	0	0	0	0	0	2
11:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
11:45 AM	0	1	0	1	0	0	0	0	1	0	0	1	2
Total	0	4	0	4	0	0	0	0	4	0	0	4	8
12:00 PM	0	2	0	2	0	0	0	0	1	0	0	1	3
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	5	0	0	5	6
12:45 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
Total	0	3	0	3	0	0	0	0	9	0	0	9	12
1:00 PM	0	2	0	2	0	0	0	0	2	0	0	2	4
1:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
1:30 PM	0	3	0	3	0	0	0	0	3	0	0	3	6
1:45 PM	0	3	0	3	0	0	0	0	4	0	0	4	7
Total	0	8	0	8	0	0	0	0	11	0	0	11	19
Grand Total	0	15	0	15	0	0	0	0	24	0	0	24	39
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	38.5	0.0	38.5	0.0	0.0	0.0	0.0	61.5	0.0	0.0	61.5	
Exiting Leg Total	0				39				0				39

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

1:00 PM	Albany Street				Albany Street				Herald Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
1:00 PM	0	2	0	2	0	0	0	0	2	0	0	2	4
1:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
1:30 PM	0	3	0	3	0	0	0	0	3	0	0	3	6
1:45 PM	0	3	0	3	0	0	0	0	4	0	0	4	7
Total Volume	0	8	0	8	0	0	0	0	11	0	0	11	19
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.667	0.000	0.667	0.000	0.000	0.000	0.000	0.688	0.000	0.000	0.688	0.679
Entering Leg	0	8	0	8	0	0	0	0	11	0	0	11	19
Exiting Leg				0				19				0	19
Total				8				19				11	38

PDI File #: **175974 AAA**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Albany Street						Albany Street						Herald Street						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	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	1	0	0	0	0	1	1
1:45 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	2	0	0	0	0	2	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
Approach %	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		
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	100.0	0.0	0.0	0.0	0.0	100.0	
Exiting Leg Total	0						2						0						2

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

1:00 PM	Albany Street						Albany Street						Herald Street						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
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	1	0	0	0	0	1	1
1:45 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	2	0	0	0	0	2	2
% 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	0.500	0.000	0.000	0.000	0.000	0.500	0.500
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
Exiting Leg	0						2						0						2
Total	0						2						2						4

PDI File #: **175974 AAA**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Herald Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Pedestrians

	Albany Street						Albany Street						Herald Street						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	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	3	3	6	0	0	0	0	0	0	0	0	0	0	2	2	8
11:30 AM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	3	6	9	0	0	0	0	0	0	0	0	0	0	2	2	11
12:00 PM	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	3	3	7
12:15 PM	0	0	0	1	7	8	0	0	0	0	0	0	0	0	0	1	0	1	9
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	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	2	11	13	0	0	0	0	0	0	0	0	0	1	3	4	17
1:00 PM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
1:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
1:30 PM	0	0	0	3	4	7	0	0	0	0	0	0	0	0	0	2	0	2	9
1:45 PM	0	0	0	2	3	5	0	0	0	0	0	0	0	0	0	0	2	2	7
Total	0	0	0	5	10	15	0	0	0	0	0	0	0	0	0	2	2	4	19
Grand Total	0	0	0	10	27	37	0	0	0	0	0	0	0	0	0	3	7	10	47
Approach %	0.0	0.0	0.0	27.0	73.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	30.0	70.0		
Total %	0.0	0.0	0.0	21.3	57.4	78.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	14.9	21.3	
Exiting Leg Total	37						0						10						47

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:30 AM	Albany Street						Albany Street						Herald Street						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
11:30 AM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12:00 PM	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	3	3	7
12:15 PM	0	0	0	1	7	8	0	0	0	0	0	0	0	0	0	1	0	1	9
Total Volume	0	0	0	2	13	15	0	0	0	0	0	0	0	0	0	1	3	4	19
% Approach Total	0.0	0.0	0.0	13.3	86.7		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	25.0	75.0		
PHF	0.000	0.000	0.000	0.500	0.464	0.469	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.333	0.528
Entering Leg	0	0	0	2	13	15	0	0	0	0	0	0	0	0	0	1	3	4	19
Exiting Leg						15						0						4	19
Total						30						0						8	38

PDI File #: **175974 B**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
7:00 AM	2	328	113	0	443	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	448
7:15 AM	4	359	146	0	509	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	509
7:30 AM	1	404	151	0	556	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	559
7:45 AM	3	391	151	0	545	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	548
Total	10	1482	561	0	2053	0	0	0	0	0	0	0	0	0	0	11	0	0	0	11	2064
8:00 AM	1	421	153	0	575	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	580
8:15 AM	1	351	138	0	490	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	490
8:30 AM	4	427	148	0	579	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	583
8:45 AM	0	383	145	0	528	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	532
Total	6	1582	584	0	2172	0	0	0	0	0	0	0	0	0	0	13	0	0	0	13	2185
Grand Total	16	3064	1145	0	4225	0	0	0	0	0	0	0	0	0	0	24	0	0	0	24	4249
Approach %	0.4	72.5	27.1	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		
Total %	0.4	72.1	26.9	0.0	99.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.6	
Exiting Leg Total	0					1145					3088					16					4249
Cars	9	2860	1082	0	3951	0	0	0	0	0	0	0	0	0	0	15	0	0	0	15	3966
% Cars	56.3	93.3	94.5	0.0	93.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5	0.0	0.0	0.0	62.5	93.3
Exiting Leg Total	0					1082					2875					9					3966
Heavy Vehicles	7	204	63	0	274	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	283
% Heavy Vehicles	43.8	6.7	5.5	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.5	0.0	0.0	0.0	37.5	6.7
Exiting Leg Total	0					63					213					7					283

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

7:45 AM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway						
	from North					from Southeast					from South					from West						
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total		
7:45 AM	3	391	151	0	545	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	548	
8:00 AM	1	421	153	0	575	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	580	
8:15 AM	1	351	138	0	490	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	490	
8:30 AM	4	427	148	0	579	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	583	
Total Volume	9	1590	590	0	2189	0	0	0	0	0	0	0	0	0	0	12	0	0	0	12	2201	
% Approach Total	0.4	72.6	27.0	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			
PHF	0.563	0.931	0.964	0.000	0.945	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.600	0.000	0.000	0.000	0.600	0.944	
Cars	3	1486	557	0	2046	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	2052	
Cars %	33.3	93.5	94.4	0.0	93.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	50.0	93.2	
Heavy Vehicles	6	104	33	0	143	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	149	
Heavy Vehicles %	66.7	6.5	5.6	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	50.0	6.8	
Cars Enter Leg	3	1486	557	0	2046	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	2052	
Heavy Enter Leg	6	104	33	0	143	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	149	
Total Entering Leg	9	1590	590	0	2189	0	0	0	0	0	0	0	0	0	0	12	0	0	0	12	2201	
Cars Exiting Leg																						
Heavy Exiting Leg																						
Total Exiting Leg																						

PDI File #: **175974 B**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
7:00 AM	2	303	108	0	413	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	417
7:15 AM	3	339	142	0	484	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	484
7:30 AM	1	377	142	0	520	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	523
7:45 AM	1	361	144	0	506	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	509
Total	7	1380	536	0	1923	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10	1933
8:00 AM	1	397	146	0	544	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	545
8:15 AM	0	329	131	0	460	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	460
8:30 AM	1	399	136	0	536	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	538
8:45 AM	0	355	133	0	488	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	490
Total	2	1480	546	0	2028	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	2033
Grand Total	9	2860	1082	0	3951	0	0	0	0	0	0	0	0	0	0	15	0	0	0	15	3966
Approach %	0.2	72.4	27.4	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0		
Total %	0.2	72.1	27.3	0.0	99.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.4	
Exiting Leg Total	0					1082					2875					9					3966

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

7:15 AM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total	
	from North					from Southeast					from South					from West						
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total		
7:15 AM	3	339	142	0	484	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	484	
7:30 AM	1	377	142	0	520	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	523
7:45 AM	1	361	144	0	506	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	509
8:00 AM	1	397	146	0	544	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	545
Total Volume	6	1474	574	0	2054	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	2061
% Approach Total	0.3	71.8	27.9	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			
PHF	0.500	0.928	0.983	0.000	0.944	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.000	0.000	0.583	0.945	
Entering Leg	6	1474	574	0	2054	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	2061	
Exiting Leg	0					574					1481					6					2061	
Total	2054					574					1481					13					4122	

PDI File #: **175974 B**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Heavy Vehicles (Combined-Large Trucks and Buses)

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
7:00 AM	0	25	5	0	30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	31
7:15 AM	1	20	4	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
7:30 AM	0	27	9	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
7:45 AM	2	30	7	0	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
Total	3	102	25	0	130	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	131
8:00 AM	0	24	7	0	31	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	35
8:15 AM	1	22	7	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
8:30 AM	3	28	12	0	43	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	45
8:45 AM	0	28	12	0	40	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	42
Total	4	102	38	0	144	0	0	0	0	0	0	0	0	0	0	8	0	0	0	8	152
Grand Total	7	204	63	0	274	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	283
Approach %	2.6	74.5	23.0	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		
Total %	2.5	72.1	22.3	0.0	96.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	3.2	
Exiting Leg Total	0					63					213					7					283
Large Trucks	7	134	40	0	181	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	190
% Large Trucks	100.0	65.7	63.5	0.0	66.1	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	100.0	67.1
Exiting Leg Total	0					40					143					7					190
Buses	0	70	23	0	93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	93
% Buses	0.0	34.3	36.5	0.0	33.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.9
Exiting Leg Total	0					23					70					0					93

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

8:00 AM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway										
	from North					from Southeast					from South					from West										
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total						
8:00 AM	0	24	7	0	31	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	35				
8:15 AM	1	22	7	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30				
8:30 AM	3	28	12	0	43	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	45				
8:45 AM	0	28	12	0	40	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	42				
Total Volume	4	102	38	0	144	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	152				
% Approach Total	2.8	70.8	26.4	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0						
PHF	0.333	0.911	0.792	0.000	0.837	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.844					
Large Trucks	4	58	29	0	91	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	99				
Large Trucks %	100.0	56.9	76.3	0.0	63.2	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	100.0	65.1				
Buses	0	44	9	0	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53				
Buses %	0.0	43.1	23.7	0.0	36.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.9				
Trucks Enter Leg	4	58	29	0	91	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	99				
Bus Enter Leg	0	44	9	0	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53				
Total Entering Leg	4	102	38	0	144	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	152				
Trucks Exiting Leg																										99
Buses Exiting Leg																										53
Total Exiting Leg																										152

PDI File #: **175974 B**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Large Trucks

	Albany Street						I-93 SB Onramp						Albany Street						Ink Block Exit Driveway						Total
	from North						from Southeast						from South						from West						
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total					
7:00 AM	0	19	2	0	21	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	22				
7:15 AM	1	15	2	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18				
7:30 AM	0	23	2	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25				
7:45 AM	2	19	5	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26				
Total	3	76	11	0	90	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	91				
8:00 AM	0	14	5	0	19	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	23				
8:15 AM	1	13	6	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20				
8:30 AM	3	14	8	0	25	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	27				
8:45 AM	0	17	10	0	27	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	29				
Total	4	58	29	0	91	0	0	0	0	0	0	0	0	0	0	8	0	0	0	8	99				
Grand Total	7	134	40	0	181	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	190				
Approach %	3.9	74.0	22.1	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						
Total %	3.7	70.5	21.1	0.0	95.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	4.7					
Exiting Leg Total	0					40					143					7					190				

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

8:00 AM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total					
	from North					from Southeast					from South					from West										
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total						
8:00 AM	0	14	5	0	19	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	23					
8:15 AM	1	13	6	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20					
8:30 AM	3	14	8	0	25	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	27					
8:45 AM	0	17	10	0	27	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	29					
Total Volume	4	58	29	0	91	0	0	0	0	0	0	0	0	0	0	8	0	0	0	8	99					
% Approach Total	4.4	63.7	31.9	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							
PHF	0.333	0.853	0.725	0.000	0.843	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.853					
Entering Leg	4	58	29	0	91	0	0	0	0	0	0	0	0	0	0	8	0	0	0	8	99					
Exiting Leg	0										29					66					4					99
Total	91					29					66					12					198					

PDI File #: **175974 B**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
7:00 AM	0	6	3	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
7:15 AM	0	5	2	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
7:30 AM	0	4	7	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
7:45 AM	0	11	2	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Total	0	26	14	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
8:00 AM	0	10	2	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
8:15 AM	0	9	1	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
8:30 AM	0	14	4	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
8:45 AM	0	11	2	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Total	0	44	9	0	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
Grand Total	0	70	23	0	93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	93
Approach %	0.0	75.3	24.7	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	75.3	24.7	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					23					70					0					93

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

7:45 AM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
7:45 AM	0	11	2	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
8:00 AM	0	10	2	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
8:15 AM	0	9	1	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
8:30 AM	0	14	4	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Total Volume	0	44	9	0	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
% Approach Total	0.0	83.0	17.0	0.0		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	0.786	0.563	0.000	0.736	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	0.736
Entering Leg	0	44	9	0	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
Exiting Leg	0					9					44					0					53
Total	53					9					44					0					106

PDI File #: **175974 B**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Bicycles (on Roadway and Crosswalks)

	Albany Street								I-93 SB Onramp								Albany Street								Ink Block Exit Driveway								Total
	from North								from Southeast								from South								from West								
	Right	Thru	Bear Left	U-Turn	CW-EB	CW-WB	Total	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Left	U-Turn	CW-NB	CW-SB	Total					
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
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				
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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				
Grand 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				
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	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	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							0				

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

7:00 AM	Albany Street							I-93 SB Onramp							Albany Street							Ink Block Exit Driveway							Total
	from North							from Southeast							from South							from West							
	Right	Thru	Bear Left	U-Turn	CW-EB	CW-WB	Total	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	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	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	0	0	0	0	0	0	0		0
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: **175974 B**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Albany Street								I-93 SB Onramp								Albany Street								Ink Block Exit Driveway								Total
	from North								from Southeast								from South								from West								
	Right	Thru	Bear Left	U-Turn	CW-EB	CW-WB	Total	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Left	U-Turn	CW-NB	CW-SB	Total					
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3				
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1				
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	4	4	4				
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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				
Grand 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	4	4	4				
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	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0						
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0						
Exiting Leg Total	0							0							0							4							4				

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

7:00 AM	Albany Street								I-93 SB Onramp								Albany Street								Ink Block Exit Driveway								Total
	from North								from Southeast								from South								from West								
	Right	Thru	Bear Left	U-Turn	CW-EB	CW-WB	Total	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Left	U-Turn	CW-NB	CW-SB	Total					
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3				
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1				
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4				
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	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	0.000	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	0.333	0.333		0.333				
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4				
Exiting Leg	0								0								0								4								4
Total	0								0								0								8								8

PDI File #: **175974 BB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
4:00 PM	2	352	268	0	622	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	623
4:15 PM	0	357	251	0	608	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	611
4:30 PM	0	375	257	0	632	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	632
4:45 PM	2	346	262	0	610	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	611
Total	4	1430	1038	0	2472	0	0	0	0	0	0	0	0	0	0	3	2	0	0	5	2477
5:00 PM	1	383	255	0	639	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	641
5:15 PM	3	372	259	0	634	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	637
5:30 PM	2	369	246	0	617	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	619
5:45 PM	0	391	253	0	644	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	645
Total	6	1515	1013	0	2534	0	0	0	0	0	0	0	0	0	0	7	1	0	0	8	2542
Grand Total	10	2945	2051	0	5006	0	0	0	0	0	0	0	0	0	0	10	3	0	0	13	5019
Approach %	0.2	58.8	41.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		76.9	23.1	0.0	0.0		
Total %	0.2	58.7	40.9	0.0	99.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.3	
Exiting Leg Total	0					2054					2955					10					5019
Cars	10	2820	2016	0	4846	0	0	0	0	0	0	0	0	0	0	10	2	0	0	12	4858
% Cars	100.0	95.8	98.3	0.0	96.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	66.7	0.0	0.0	92.3	96.8
Exiting Leg Total	0					2018					2830					10					4858
Heavy Vehicles	0	125	35	0	160	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	161
% Heavy Vehicles	0.0	4.2	1.7	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	7.7	3.2
Exiting Leg Total	0					36					125					0					161

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

5:00 PM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
5:00 PM	1	383	255	0	639	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	641
5:15 PM	3	372	259	0	634	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	637
5:30 PM	2	369	246	0	617	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	619
5:45 PM	0	391	253	0	644	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	645
Total Volume	6	1515	1013	0	2534	0	0	0	0	0	0	0	0	0	0	7	1	0	0	8	2542
% Approach Total	0.2	59.8	40.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		87.5	12.5	0.0	0.0		
PHF	0.500	0.969	0.978	0.000	0.984	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.875	0.250	0.000	0.000	0.667	0.985
Cars	6	1458	998	0	2462	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	2469
Cars %	100.0	96.2	98.5	0.0	97.2	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	87.5	97.1
Heavy Vehicles	0	57	15	0	72	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	73
Heavy Vehicles %	0.0	3.8	1.5	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	12.5	2.9
Cars Enter Leg	6	1458	998	0	2462	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	2469
Heavy Enter Leg	0	57	15	0	72	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	73
Total Entering Leg	6	1515	1013	0	2534	0	0	0	0	0	0	0	0	0	0	7	1	0	0	8	2542
Cars Exiting Leg	0					998					1465					6					2469
Heavy Exiting Leg	0					16					57					0					73
Total Exiting Leg	0					1014					1522					6					2542

PDI File #: **175974 BB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
4:00 PM	2	336	261	0	599	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	600
4:15 PM	0	338	246	0	584	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	587
4:30 PM	0	360	254	0	614	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	614
4:45 PM	2	328	257	0	587	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	588
Total	4	1362	1018	0	2384	0	0	0	0	0	0	0	0	0	0	3	2	0	0	5	2389
5:00 PM	1	366	250	0	617	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	619
5:15 PM	3	357	256	0	616	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	618
5:30 PM	2	357	242	0	601	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	603
5:45 PM	0	378	250	0	628	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	629
Total	6	1458	998	0	2462	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	2469
Grand Total	10	2820	2016	0	4846	0	0	0	0	0	0	0	0	0	0	10	2	0	0	12	4858
Approach %	0.2	58.2	41.6	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		83.3	16.7	0.0	0.0		
Total %	0.2	58.0	41.5	0.0	99.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.2	0.0	0.0	0.0	0.2	
Exiting Leg Total	0					2018					2830					10					4858

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

5:00 PM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
5:00 PM	1	366	250	0	617	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	619
5:15 PM	3	357	256	0	616	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	618
5:30 PM	2	357	242	0	601	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	603
5:45 PM	0	378	250	0	628	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	629
Total Volume	6	1458	998	0	2462	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	2469
% Approach Total	0.2	59.2	40.5	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		
PHF	0.500	0.964	0.975	0.000	0.980	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.875	0.000	0.000	0.000	0.875	0.981
Entering Leg	6	1458	998	0	2462	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	2469
Exiting Leg	0					998					1465					6					2469
Total	2462					998					1465					13					4938

PDI File #: **175974 BB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Heavy Vehicles (Combined-Large Trucks and Buses)

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
4:00 PM	0	16	7	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
4:15 PM	0	19	5	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
4:30 PM	0	15	3	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
4:45 PM	0	18	5	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Total	0	68	20	0	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88
5:00 PM	0	17	5	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
5:15 PM	0	15	3	0	18	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	19
5:30 PM	0	12	4	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
5:45 PM	0	13	3	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Total	0	57	15	0	72	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	73
Grand Total	0	125	35	0	160	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	161
Approach %	0.0	78.1	21.9	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	77.6	21.7	0.0	99.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	
Exiting Leg Total	0					36					125					0					161
Large Trucks	0	54	22	0	76	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	77
% Large Trucks	0.0	43.2	62.9	0.0	47.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	47.8
Exiting Leg Total	0					23					54					0					77
Buses	0	71	13	0	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84
% Buses	0.0	56.8	37.1	0.0	52.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.2
Exiting Leg Total	0					13					71					0					84

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

4:00 PM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
4:00 PM	0	16	7	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
4:15 PM	0	19	5	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
4:30 PM	0	15	3	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
4:45 PM	0	18	5	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Total Volume	0	68	20	0	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88
% Approach Total	0.0	77.3	22.7	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.895	0.714	0.000	0.917	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	0.917
Large Trucks	0	25	13	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
Large Trucks %	0.0	36.8	65.0	0.0	43.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.2
Buses	0	43	7	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
Buses %	0.0	63.2	35.0	0.0	56.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.8
Trucks Enter Leg	0	25	13	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
Bus Enter Leg	0	43	7	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
Total Entering Leg	0	68	20	0	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88
Trucks Exiting Leg	0					13					25					0					38
Buses Exiting Leg	0					7					43					0					50
Total Exiting Leg	0					20					68					0					88

PDI File #: **175974 BB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Large Trucks

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
4:00 PM	0	8	5	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
4:15 PM	0	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
4:30 PM	0	4	3	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
4:45 PM	0	11	2	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Total	0	25	13	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
5:00 PM	0	8	4	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
5:15 PM	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	7
5:30 PM	0	6	3	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
5:45 PM	0	9	2	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Total	0	29	9	0	38	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	39
Grand Total	0	54	22	0	76	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	77
Approach %	0.0	71.1	28.9	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	70.1	28.6	0.0	98.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.3	
Exiting Leg Total	0					23					54					0					77

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

4:45 PM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
4:45 PM	0	11	2	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
5:00 PM	0	8	4	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
5:15 PM	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	7
5:30 PM	0	6	3	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Total Volume	0	31	9	0	40	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	41
% Approach Total	0.0	77.5	22.5	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.705	0.563	0.000	0.769	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	0.250	0.788
Entering Leg	0	31	9	0	40	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	41
Exiting Leg					0					10					31					0	41
Total					40					10					31					1	82

PDI File #: **175974 BB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
4:00 PM	0	8	2	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
4:15 PM	0	17	2	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
4:30 PM	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
4:45 PM	0	7	3	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Total	0	43	7	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
5:00 PM	0	9	1	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
5:15 PM	0	9	3	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
5:30 PM	0	6	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
5:45 PM	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	0	28	6	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Grand Total	0	71	13	0	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84
Approach %	0.0	84.5	15.5	0.0		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	84.5	15.5	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					13					71					0					84

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

4:00 PM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
4:00 PM	0	8	2	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
4:15 PM	0	17	2	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
4:30 PM	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
4:45 PM	0	7	3	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Total Volume	0	43	7	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
% Approach Total	0.0	86.0	14.0	0.0		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	0.632	0.583	0.000	0.658	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	0.658
Entering Leg	0	43	7	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
Exiting Leg	0					7					43					0					50
Total	50					7					43					0					100

PDI File #: **175974 BB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Albany Street							I-93 SB Onramp							Albany Street							Ink Block Exit Driveway							Total
	from North							from Southeast							from South							from West							
	Right	Thru	Bear Left	U-Turn	CW-EB	CW-WB	Total	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
5:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 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
5:30 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
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Grand Total	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
Approach %	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0							0							5							0							5

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

4:00 PM	Albany Street							I-93 SB Onramp							Albany Street							Ink Block Exit Driveway							Total
	from North							from Southeast							from South							from West							
	Right	Thru	Bear Left	U-Turn	CW-EB	CW-WB	Total	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.333	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333
Entering Leg	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Exiting Leg	0							0							4							0							4
Total	4							0							4							0							8

PDI File #: **175974 BB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Albany Street							I-93 SB Onramp							Albany Street							Ink Block Exit Driveway							Total
	from North							from Southeast							from South							from West							
	Right	Thru	Bear Left	U-Turn	CW-EB	CW-WB	Total	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1	1	0	0	0	0	1	1	2	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	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	1	4	5	6
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3
5:15 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	1	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
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	2	6	8	8
Grand Total	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	3	10	13	14
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	0.0	0.0	100.0		0.0	0.0	0.0	0.0	23.1	76.9		
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	7.1	7.1	0.0	0.0	0.0	0.0	21.4	71.4	92.9	
Exiting Leg Total	0							0							1							13							14

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

4:15 PM	Albany Street							I-93 SB Onramp							Albany Street							Ink Block Exit Driveway							Total		
	from North							from Southeast							from South							from West									
	Right	Thru	Bear Left	U-Turn	CW-EB	CW-WB	Total	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Left	U-Turn	CW-NB	CW-SB	Total			
4:15 PM	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	1	1	2	3	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3	3	
Total Volume	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	6	8	9	9
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	25.0	75.0				
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.500	0.750	0.667			0.750
Entering Leg	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	6	8	9	9	9
Exiting Leg	0							0							1							8							9		
Total	0							0							2							16							18		

PDI File #: **175974 BBB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
11:00 AM	1	420	139	0	560	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	561
11:15 AM	1	432	148	0	581	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	582
11:30 AM	1	408	147	0	556	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	557
11:45 AM	3	422	154	0	579	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	580
Total	6	1682	588	0	2276	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	2280
12:00 PM	1	391	191	0	583	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	587
12:15 PM	1	419	190	0	610	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	613
12:30 PM	2	402	204	0	608	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	609
12:45 PM	1	403	188	0	592	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	595
Total	5	1615	773	0	2393	0	0	0	0	0	0	0	0	0	0	11	0	0	0	11	2404
1:00 PM	1	395	183	0	579	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	583
1:15 PM	3	370	212	0	585	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	589
1:30 PM	2	410	215	0	627	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	631
1:45 PM	3	404	206	0	613	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	614
Total	9	1579	816	0	2404	0	0	0	0	0	0	0	0	0	0	10	3	0	0	13	2417
Grand Total	20	4876	2177	0	7073	0	0	0	0	0	0	0	0	0	0	25	3	0	0	28	7101
Approach %	0.3	68.9	30.8	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		89.3	10.7	0.0	0.0		
Total %	0.3	68.7	30.7	0.0	99.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.4	
Exiting Leg Total	0					2180					4901					20					7101
Cars	18	4753	2122	0	6893	0	0	0	0	0	0	0	0	0	0	21	3	0	0	24	6917
% Cars	90.0	97.5	97.5	0.0	97.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.0	100.0	0.0	0.0	85.7	97.4
Exiting Leg Total	0					2125					4774					18					6917
Heavy Vehicles	2	123	55	0	180	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	184
% Heavy Vehicles	10.0	2.5	2.5	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	0.0	0.0	0.0	14.3	2.6
Exiting Leg Total	0					55					127					2					184

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

1:00 PM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
1:00 PM	1	395	183	0	579	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	583
1:15 PM	3	370	212	0	585	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	589
1:30 PM	2	410	215	0	627	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	631
1:45 PM	3	404	206	0	613	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	614
Total Volume	9	1579	816	0	2404	0	0	0	0	0	0	0	0	0	0	10	3	0	0	13	2417
% Approach Total	0.4	65.7	33.9	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		76.9	23.1	0.0	0.0		
PHF	0.750	0.963	0.949	0.000	0.959	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.375	0.000	0.000	0.813	0.958
Cars	9	1540	793	0	2342	0	0	0	0	0	0	0	0	0	0	10	3	0	0	13	2355
Cars %	100.0	97.5	97.2	0.0	97.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0	97.4
Heavy Vehicles	0	39	23	0	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62
Heavy Vehicles %	0.0	2.5	2.8	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Cars Enter Leg	9	1540	793	0	2342	0	0	0	0	0	0	0	0	0	0	10	3	0	0	13	2355
Heavy Enter Leg	0	39	23	0	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62
Total Entering Leg	9	1579	816	0	2404	0	0	0	0	0	0	0	0	0	0	10	3	0	0	13	2417
Cars Exiting Leg	0					796					1550					9					2355
Heavy Exiting Leg	0					23					39					0					62
Total Exiting Leg	0					819					1589					9					2417

PDI File #: **175974 BBB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Cars

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
11:00 AM	1	404	136	0	541	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	542
11:15 AM	0	425	145	0	570	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	571
11:30 AM	1	395	144	0	540	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	540
11:45 AM	3	413	149	0	565	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	565
Total	5	1637	574	0	2216	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2218
12:00 PM	0	381	187	0	568	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	572
12:15 PM	1	413	185	0	599	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	600
12:30 PM	2	389	200	0	591	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	592
12:45 PM	1	393	183	0	577	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	580
Total	4	1576	755	0	2335	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	2344
1:00 PM	1	386	178	0	565	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	569
1:15 PM	3	363	210	0	576	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	580
1:30 PM	2	399	207	0	608	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	612
1:45 PM	3	392	198	0	593	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	594
Total	9	1540	793	0	2342	0	0	0	0	0	0	0	0	0	0	10	3	0	0	13	2355
Grand Total	18	4753	2122	0	6893	0	0	0	0	0	0	0	0	0	0	21	3	0	0	24	6917
Approach %	0.3	69.0	30.8	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		87.5	12.5	0.0	0.0		
Total %	0.3	68.7	30.7	0.0	99.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3	
Exiting Leg Total	0					2125					4774					18					6917

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

1:00 PM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
1:00 PM	1	386	178	0	565	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	569
1:15 PM	3	363	210	0	576	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	580
1:30 PM	2	399	207	0	608	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	612
1:45 PM	3	392	198	0	593	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	594
Total Volume	9	1540	793	0	2342	0	0	0	0	0	0	0	0	0	0	10	3	0	0	13	2355
% Approach Total	0.4	65.8	33.9	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		76.9	23.1	0.0	0.0		
PHF	0.750	0.965	0.944	0.000	0.963	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.375	0.000	0.000	0.813	0.962
Entering Leg	9	1540	793	0	2342	0	0	0	0	0	0	0	0	0	0	10	3	0	0	13	2355
Exiting Leg	0					796					1550					9					2355
Total	2342					796					1550					22					4710

PDI File #: **175974 BBB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Heavy Vehicles (Combined-Large Trucks and Buses)

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
11:00 AM	0	16	3	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
11:15 AM	1	7	3	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
11:30 AM	0	13	3	0	16	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	17
11:45 AM	0	9	5	0	14	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	15
Total	1	45	14	0	60	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	62
12:00 PM	1	10	4	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
12:15 PM	0	6	5	0	11	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	13
12:30 PM	0	13	4	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
12:45 PM	0	10	5	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Total	1	39	18	0	58	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	60
1:00 PM	0	9	5	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
1:15 PM	0	7	2	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
1:30 PM	0	11	8	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
1:45 PM	0	12	8	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Total	0	39	23	0	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62
Grand Total	2	123	55	0	180	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	184
Approach %	1.1	68.3	30.6	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		
Total %	1.1	66.8	29.9	0.0	97.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	2.2	
Exiting Leg Total	0					55					127					2					184
Large Trucks	2	90	51	0	143	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	147
% Large Trucks	100.0	73.2	92.7	0.0	79.4	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	100.0	79.9
Exiting Leg Total	0					51					94					2					147
Buses	0	33	4	0	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
% Buses	0.0	26.8	7.3	0.0	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.1
Exiting Leg Total	0					4					33					0					37

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
11:00 AM	0	16	3	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
11:15 AM	1	7	3	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
11:30 AM	0	13	3	0	16	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	17
11:45 AM	0	9	5	0	14	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	15
Total Volume	1	45	14	0	60	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	62
% Approach Total	1.7	75.0	23.3	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.250	0.703	0.700	0.000	0.789	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.816
Large Trucks	1	37	14	0	52	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	54
Large Trucks %	100.0	82.2	100.0	0.0	86.7	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	100.0	87.1
Buses	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Buses %	0.0	17.8	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9
Trucks Enter Leg	1	37	14	0	52	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	54
Bus Enter Leg	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Total Entering Leg	1	45	14	0	60	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	62
Trucks Exiting Leg																					
Buses Exiting Leg																					
Total Exiting Leg																					

PDI File #: **175974 BBB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Large Trucks

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
11:00 AM	0	14	3	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
11:15 AM	1	5	3	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
11:30 AM	0	11	3	0	14	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	15
11:45 AM	0	7	5	0	12	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	13
Total	1	37	14	0	52	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	54
12:00 PM	1	7	4	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
12:15 PM	0	6	5	0	11	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	13
12:30 PM	0	7	3	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
12:45 PM	0	8	5	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Total	1	28	17	0	46	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	48
1:00 PM	0	6	4	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
1:15 PM	0	6	2	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
1:30 PM	0	7	7	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
1:45 PM	0	6	7	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Total	0	25	20	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
Grand Total	2	90	51	0	143	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	147
Approach %	1.4	62.9	35.7	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		
Total %	1.4	61.2	34.7	0.0	97.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7	
Exiting Leg Total	0					51					94					2					147

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
11:00 AM	0	14	3	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
11:15 AM	1	5	3	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
11:30 AM	0	11	3	0	14	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	15
11:45 AM	0	7	5	0	12	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	13
Total Volume	1	37	14	0	52	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	54
% Approach Total	1.9	71.2	26.9	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		
PHF	0.250	0.661	0.700	0.000	0.765	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.794
Entering Leg	1	37	14	0	52	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	54
Exiting Leg	0					14					39					1					54
Total	52					14					39					3					108

PDI File #: **175974 BBB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Buses

	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					Total
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
11:00 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:30 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
12:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	6	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
12:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	11	1	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
1:00 PM	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
1:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:30 PM	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
1:45 PM	0	6	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Total	0	14	3	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Grand Total	0	33	4	0	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
Approach %	0.0	89.2	10.8	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	89.2	10.8	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					4					33					0					37

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

1:00 PM	Albany Street					I-93 SB Onramp					Albany Street					Ink Block Exit Driveway					
	from North					from Southeast					from South					from West					
	Right	Thru	Bear Left	U-Turn	Total	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Thru	Left	U-Turn	Total	Right	Bear Right	Left	U-Turn	Total	
1:00 PM	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
1:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:30 PM	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
1:45 PM	0	6	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Total Volume	0	14	3	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
% Approach Total	0.0	82.4	17.6	0.0		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	0.583	0.750	0.000	0.607	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	0.607
Entering Leg	0	14	3	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Exiting Leg	0					3					14					0					17
Total	17					3					14					0					34

PDI File #: **175974 BBB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Albany Street							I-93 SB Onramp							Albany Street							Ink Block Exit Driveway							Total
	from North							from Southeast							from South							from West							
	Right	Thru	Bear Left	U-Turn	CW-EB	CW-WB	Total	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Left	U-Turn	CW-NB	CW-SB	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	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	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	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	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
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	1	1	1	1
12:15 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
12:30 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
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
1:00 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
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	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	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	0	0	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	0	0	0	0	0	0	1	1	1	1
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	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	
Exiting Leg Total	0							0							0							1							1

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:15 AM	Albany Street							I-93 SB Onramp							Albany Street							Ink Block Exit Driveway							Total
	from North							from Southeast							from South							from West							
	Right	Thru	Bear Left	U-Turn	CW-EB	CW-WB	Total	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Left	U-Turn	CW-NB	CW-SB	Total	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	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	0	0	0	0	0	0	1	1	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250		0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
Exiting Leg	0							0							0							1							1
Total	0							0							0							2							2

PDI File #: **175974 BBB**
 Location: **N: Albany Street S: Albany Street**
 Location: **W: Ink Block Exit Driveway SE: I-93 SB Onramp**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Pedestrians

	Albany Street							I-93 SB Onramp							Albany Street							Ink Block Exit Driveway							Total
	from North							from Southeast							from South							from West							
	Right	Thru	Bear Left	U-Turn	CW-EB	CW-WB	Total	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Left	U-Turn	CW-NB	CW-SB	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	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	0	0	0	0	0	0	0	1	1	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	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	1	1	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	0	1	3
12:15 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
12:30 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	2	0	2	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	3	5
1:00 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
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	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	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	1	0	1	1
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	1	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	4	1	5	7
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	0.0	0.0	100.0		0.0	0.0	0.0	0.0	80.0	20.0		
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	0.0	28.6	28.6	0.0	0.0	0.0	0.0	57.1	14.3	71.4	
Exiting Leg Total	0							0							2							5							7

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:45 AM	Albany Street							I-93 SB Onramp							Albany Street							Ink Block Exit Driveway							Total
	from North							from Southeast							from South							from West							
	Right	Thru	Bear Left	U-Turn	CW-EB	CW-WB	Total	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Left	U-Turn	CW-NB	CW-SB	Total	
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	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	2	2	0	0	0	0	1	0	1	3
12:15 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
12:30 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
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	0	1	3
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	0	1	3
Exiting Leg	0							0							0							1							3
Total	0							0							4							2							6

PDI File #: **175974 D**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	26	153	151	0	330	0	0	0	0	0	0	0	0	0	0	4	22	0	0	26	356
7:15 AM	32	167	152	0	351	0	0	0	0	0	0	0	0	0	0	5	39	0	0	44	395
7:30 AM	30	161	220	0	411	0	0	0	0	0	0	0	0	0	0	11	37	0	0	48	459
7:45 AM	34	162	179	0	375	0	0	0	0	0	0	0	0	0	0	8	50	0	0	58	433
Total	122	643	702	0	1467	0	0	0	0	0	0	0	0	0	0	28	148	0	0	176	1643
8:00 AM	31	207	209	0	447	0	0	0	0	0	0	0	0	0	0	6	32	0	0	38	485
8:15 AM	33	154	137	0	324	0	0	0	0	0	0	0	0	0	0	3	36	0	0	39	363
8:30 AM	49	201	217	0	467	0	0	0	0	0	0	0	0	0	0	8	43	0	0	51	518
8:45 AM	52	161	158	0	371	0	0	0	0	0	0	0	0	0	0	9	29	0	0	38	409
Total	165	723	721	0	1609	0	0	0	0	0	0	0	0	0	0	26	140	0	0	166	1775
Grand Total	287	1366	1423	0	3076	0	0	0	0	0	0	0	0	0	0	54	288	0	0	342	3418
Approach %	9.3	44.4	46.3	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		15.8	84.2	0.0	0.0		
Total %	8.4	40.0	41.6	0.0	90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	8.4	0.0	0.0	10.0	
Exiting Leg Total	0					1711					1420					287					3418
Cars	271	1276	1328	0	2875	0	0	0	0	0	0	0	0	0	0	51	270	0	0	321	3196
% Cars	94.4	93.4	93.3	0.0	93.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.4	93.8	0.0	0.0	93.9	93.5
Exiting Leg Total	0					1598					1327					271					3196
Heavy Vehicles	16	90	95	0	201	0	0	0	0	0	0	0	0	0	0	3	18	0	0	21	222
% Heavy Vehicles	5.6	6.6	6.7	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	6.3	0.0	0.0	6.1	6.5
Exiting Leg Total	0					113					93					16					222

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

7:45 AM	Albany Street					Traveler Street					Albany Street					Traveler Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:45 AM	34	162	179	0	375	0	0	0	0	0	0	0	0	0	0	8	50	0	0	58	433
8:00 AM	31	207	209	0	447	0	0	0	0	0	0	0	0	0	0	6	32	0	0	38	485
8:15 AM	33	154	137	0	324	0	0	0	0	0	0	0	0	0	0	3	36	0	0	39	363
8:30 AM	49	201	217	0	467	0	0	0	0	0	0	0	0	0	0	8	43	0	0	51	518
Total Volume	147	724	742	0	1613	0	0	0	0	0	0	0	0	0	0	25	161	0	0	186	1799
% Approach Total	9.1	44.9	46.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		13.4	86.6	0.0	0.0		
PHF	0.750	0.874	0.855	0.000	0.863	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.781	0.805	0.000	0.000	0.802	0.868
Cars	138	682	692	0	1512	0	0	0	0	0	0	0	0	0	0	25	151	0	0	176	1688
Cars %	93.9	94.2	93.3	0.0	93.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	93.8	0.0	0.0	94.6	93.8
Heavy Vehicles	9	42	50	0	101	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	111
Heavy Vehicles %	6.1	5.8	6.7	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	5.4	6.2
Cars Enter Leg	138	682	692	0	1512	0	0	0	0	0	0	0	0	0	0	25	151	0	0	176	1688
Heavy Enter Leg	9	42	50	0	101	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	111
Total Entering Leg	147	724	742	0	1613	0	0	0	0	0	0	0	0	0	0	25	161	0	0	186	1799
Cars Exiting Leg	0					843					707					138					1688
Heavy Exiting Leg	0					60					42					9					111
Total Exiting Leg	0					903					749					147					1799

PDI File #: **175974 D**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	23	147	138	0	308	0	0	0	0	0	0	0	0	0	0	4	20	0	0	24	332
7:15 AM	30	156	145	0	331	0	0	0	0	0	0	0	0	0	0	5	37	0	0	42	373
7:30 AM	29	145	210	0	384	0	0	0	0	0	0	0	0	0	0	9	33	0	0	42	426
7:45 AM	30	154	165	0	349	0	0	0	0	0	0	0	0	0	0	8	45	0	0	53	402
Total	112	602	658	0	1372	0	0	0	0	0	0	0	0	0	0	26	135	0	0	161	1533
8:00 AM	29	195	195	0	419	0	0	0	0	0	0	0	0	0	0	6	29	0	0	35	454
8:15 AM	30	146	129	0	305	0	0	0	0	0	0	0	0	0	0	3	36	0	0	39	344
8:30 AM	49	187	203	0	439	0	0	0	0	0	0	0	0	0	0	8	41	0	0	49	488
8:45 AM	51	146	143	0	340	0	0	0	0	0	0	0	0	0	0	8	29	0	0	37	377
Total	159	674	670	0	1503	0	0	0	0	0	0	0	0	0	0	25	135	0	0	160	1663
Grand Total	271	1276	1328	0	2875	0	0	0	0	0	0	0	0	0	0	51	270	0	0	321	3196
Approach %	9.4	44.4	46.2	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		15.9	84.1	0.0	0.0		
Total %	8.5	39.9	41.6	0.0	90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		1.6	8.4	0.0	0.0	10.0	
Exiting Leg Total	0					1598					1327					271					3196

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

7:45 AM	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:45 AM	30	154	165	0	349	0	0	0	0	0	0	0	0	0	0	8	45	0	0	53	402
8:00 AM	29	195	195	0	419	0	0	0	0	0	0	0	0	0	0	6	29	0	0	35	454
8:15 AM	30	146	129	0	305	0	0	0	0	0	0	0	0	0	0	3	36	0	0	39	344
8:30 AM	49	187	203	0	439	0	0	0	0	0	0	0	0	0	0	8	41	0	0	49	488
Total Volume	138	682	692	0	1512	0	0	0	0	0	0	0	0	0	0	25	151	0	0	176	1688
% Approach Total	9.1	45.1	45.8	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		14.2	85.8	0.0	0.0		
PHF	0.704	0.874	0.852	0.000	0.861	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.781	0.839	0.000	0.000	0.830	0.865
Entering Leg	138	682	692	0	1512	0	0	0	0	0	0	0	0	0	0	25	151	0	0	176	1688
Exiting Leg	0					843					707					138					1688
Total	1512					843					707					314					3376

PDI File #: **175974 D**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Heavy Vehicles (Combined-Large Trucks and Buses)

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
7:00 AM	3	6	13	0	22	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	24
7:15 AM	2	11	7	0	20	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	22
7:30 AM	1	16	10	0	27	0	0	0	0	0	0	0	0	0	0	0	2	4	0	0	6	33
7:45 AM	4	8	14	0	26	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	31
Total	10	41	44	0	95	0	0	0	0	0	0	0	0	0	0	0	2	13	0	0	15	110
8:00 AM	2	12	14	0	28	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	31
8:15 AM	3	8	8	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
8:30 AM	0	14	14	0	28	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	30
8:45 AM	1	15	15	0	31	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	32
Total	6	49	51	0	106	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0	6	112
Grand Total	16	90	95	0	201	0	0	0	0	0	0	0	0	0	0	0	3	18	0	0	21	222
Approach %	8.0	44.8	47.3	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		14.3	85.7	0.0	0.0			
Total %	7.2	40.5	42.8	0.0	90.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		1.4	8.1	0.0	0.0	9.5	
Exiting Leg Total	0					113					93					16					222	
Large Trucks	13	65	54	0	132	0	0	0	0	0	0	0	0	0	0	0	3	9	0	0	12	144
% Large Trucks	81.3	72.2	56.8	0.0	65.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	50.0	0.0	0.0	57.1	64.9
Exiting Leg Total	0					63					68					13					144	
Buses	3	25	41	0	69	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9	78
% Buses	18.8	27.8	43.2	0.0	34.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	42.9	35.1
Exiting Leg Total	0					50					25					3					78	

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

7:15 AM	Albany Street					Traveler Street					Albany Street					Traveler Street					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
7:15 AM	2	11	7	0	20	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	22
7:30 AM	1	16	10	0	27	0	0	0	0	0	0	0	0	0	0	0	2	4	0	0	6	33
7:45 AM	4	8	14	0	26	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	31
8:00 AM	2	12	14	0	28	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	31
Total Volume	9	47	45	0	101	0	0	0	0	0	0	0	0	0	0	0	2	14	0	0	16	117
% Approach Total	8.9	46.5	44.6	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		12.5	87.5	0.0	0.0			
PHF	0.563	0.734	0.804	0.000	0.902	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.700	0.000	0.000	0.667	0.886	
Large Trucks	7	39	25	0	71	0	0	0	0	0	0	0	0	0	0	0	2	8	0	0	10	81
Large Trucks %	77.8	83.0	55.6	0.0	70.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	57.1	0.0	0.0	62.5	69.2	
Buses	2	8	20	0	30	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	36
Buses %	22.2	17.0	44.4	0.0	29.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.9	0.0	0.0	37.5	30.8	
Trucks Enter Leg	7	39	25	0	71	0	0	0	0	0	0	0	0	0	0	0	2	8	0	0	10	81
Bus Enter Leg	2	8	20	0	30	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	36
Total Entering Leg	9	47	45	0	101	0	0	0	0	0	0	0	0	0	0	0	2	14	0	0	16	117
Trucks Exiting Leg	0					33					41					7					81	
Buses Exiting Leg	0					26					8					2					36	
Total Exiting Leg	0					59					49					9					117	

PDI File #: **175974 D**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Large Trucks

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
7:00 AM	3	5	8	0	16	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	17
7:15 AM	1	10	4	0	15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	16
7:30 AM	1	14	8	0	23	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	27
7:45 AM	3	6	7	0	16	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	20
Total	8	35	27	0	70	0	0	0	0	0	0	0	0	0	0	0	2	8	0	0	10	80
8:00 AM	2	9	6	0	17	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	18
8:15 AM	2	6	3	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
8:30 AM	0	7	6	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
8:45 AM	1	8	12	0	21	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	22
Total	5	30	27	0	62	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	64
Grand Total	13	65	54	0	132	0	0	0	0	0	0	0	0	0	0	0	3	9	0	0	12	144
Approach %	9.8	49.2	40.9	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		25.0	75.0	0.0	0.0			
Total %	9.0	45.1	37.5	0.0	91.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		2.1	6.3	0.0	0.0	8.3	
Exiting Leg Total	0					63					68					13					144	

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

7:15 AM	Albany Street					Traveler Street					Albany Street					Traveler Street					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
7:15 AM	1	10	4	0	15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	16
7:30 AM	1	14	8	0	23	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	27	
7:45 AM	3	6	7	0	16	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	20	
8:00 AM	2	9	6	0	17	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	18	
Total Volume	7	39	25	0	71	0	0	0	0	0	0	0	0	0	0	2	8	0	0	10	81	
% Approach Total	9.9	54.9	35.2	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		20.0	80.0	0.0	0.0			
PHF	0.583	0.696	0.781	0.000	0.772	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.000	0.000	0.625	0.750	
Entering Leg	7	39	25	0	71	0	0	0	0	0	0	0	0	0	0	2	8	0	0	10	81	
Exiting Leg	0					33					41					7					81	
Total	71					33					41					17					162	

PDI File #: **175974 D**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
7:00 AM	0	1	5	0	6	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	7
7:15 AM	1	1	3	0	5	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	6
7:30 AM	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	6
7:45 AM	1	2	7	0	10	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	11
Total	2	6	17	0	25	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	30
8:00 AM	0	3	8	0	11	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	13
8:15 AM	1	2	5	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
8:30 AM	0	7	8	0	15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	17
8:45 AM	0	7	3	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Total	1	19	24	0	44	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	48
Grand Total	3	25	41	0	69	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	78
Approach %	4.3	36.2	59.4	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0			
Total %	3.8	32.1	52.6	0.0	88.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	0.0	0.0	11.5		
Exiting Leg Total	0					50					25					3					78	

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

7:45 AM	Albany Street					Traveler Street					Albany Street					Traveler Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:45 AM	1	2	7	0	10	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
8:00 AM	0	3	8	0	11	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
8:15 AM	1	2	5	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	7	8	0	15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Total Volume	2	14	28	0	44	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5
% Approach Total	4.5	31.8	63.6	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.500	0.500	0.875	0.000	0.733	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.721
Entering Leg	2	14	28	0	44	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	49
Exiting Leg	0					33					14					2					49
Total	44					33					14					7					98

PDI File #: **175974 D**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Albany Street							Traveler Street							Albany Street							Traveler Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	3	0	0	0	0	3	5
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	5	0	0	0	0	5	7
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	2	0	0	0	0	2	4
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	1	1	1	4	0	0	0	0	5	9
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2	4
Total	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	1	3	4	1	9	0	0	0	0	10	19
Grand Total	0	0	0	0	0	0	0	0	0	0	1	5	6	0	0	0	0	0	2	3	5	1	14	0	0	0	0	15	26
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	16.7	83.3		0.0	0.0	0.0	0.0	40.0	60.0		6.7	93.3	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	3.8	19.2	23.1		0.0	0.0	0.0	0.0	7.7	11.5	19.2	3.8	53.8	0.0	0.0	0.0	0.0	57.7	
Exiting Leg Total	0							20							6							0							26

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

7:45 AM	Albany Street							Traveler Street							Albany Street							Traveler Street								
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	3	0	0	0	0	3	5	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	2	0	0	0	0	2	4	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	1	1	1	1	4	0	0	0	0	5	9
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	2	2	4	1	10	0	0	0	0	11	20
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	20.0	80.0		0.0	0.0	0.0	0.0	50.0	50.0		9.1	90.9	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	0.250	0.500	0.417		0.000	0.000	0.000	0.000	0.500	0.500	0.500	0.250	0.625	0.000	0.000	0.000	0.000	0.550	0.556	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	2	2	4	1	10	0	0	0	0	11	20
Exiting Leg	0							15							5							0							20	
Total	0							20							9							11							40	

PDI File #: **175974 D**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Albany Street							Traveler Street							Albany Street							Traveler Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	13	15	28	0	0	0	0	0	0	0	35
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	12	18	30	0	0	0	0	0	0	0	32
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	15	10	25	0	0	0	0	0	0	0	28
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	26	17	43	0	0	0	0	0	0	0	46
Total	0	0	0	0	0	0	0	0	0	0	0	4	11	15	0	0	0	0	66	60	126	0	0	0	0	0	0	0	141
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	18	10	28	0	0	0	0	0	0	0	31
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	4	11	15	0	0	0	0	26	21	47	0	0	0	0	0	0	0	62
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	5	6	0	0	0	0	24	12	36	0	0	0	0	0	0	0	42
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	3	8	11	0	0	0	0	30	16	46	0	0	0	0	0	0	0	57
Total	0	0	0	0	0	0	0	0	0	0	0	9	26	35	0	0	0	0	98	59	157	0	0	0	0	0	0	0	192
Grand Total	0	0	0	0	0	0	0	0	0	0	0	13	37	50	0	0	0	0	164	119	283	0	0	0	0	0	0	0	333
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	26.0	74.0		0.0	0.0	0.0	0.0	58.0	42.0		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	3.9	11.1	15.0	0.0	0.0	0.0	0.0	49.2	35.7	85.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0							50							283							0							333

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

8:00 AM	Albany Street							Traveler Street							Albany Street							Traveler Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	18	10	28	0	0	0	0	0	0	0	31
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	4	11	15	0	0	0	0	26	21	47	0	0	0	0	0	0	0	62
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	5	6	0	0	0	0	24	12	36	0	0	0	0	0	0	0	42
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	3	8	11	0	0	0	0	30	16	46	0	0	0	0	0	0	0	57
Total Volume	0	0	0	0	0	0	0	0	0	0	0	9	26	35	0	0	0	0	98	59	157	0	0	0	0	0	0	0	192
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	25.7	74.3		0.0	0.0	0.0	0.0	62.4	37.6		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	0.563	0.591	0.583	0.000	0.000	0.000	0.000	0.817	0.702	0.835	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.774
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	9	26	35	0	0	0	0	98	59	157	0	0	0	0	0	0	0	192
Exiting Leg	0							35							157							0							192
Total	0							70							314							0							384

PDI File #: **175974 DD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	22	144	184	0	350	0	0	0	0	0	0	0	0	0	0	7	79	0	0	86	436
4:15 PM	12	160	175	0	347	0	0	0	0	0	0	0	0	0	0	10	74	0	0	84	431
4:30 PM	11	135	227	0	373	0	0	0	0	0	0	0	0	0	0	9	98	0	0	107	480
4:45 PM	9	155	173	0	337	0	0	0	0	0	0	0	0	0	0	9	72	0	0	81	418
Total	54	594	759	0	1407	0	0	0	0	0	0	0	0	0	0	35	323	0	0	358	1765
5:00 PM	15	164	210	0	389	0	0	0	0	0	0	0	0	0	0	8	63	0	0	71	460
5:15 PM	15	160	203	0	378	0	0	0	0	0	0	0	0	0	0	7	85	0	0	92	470
5:30 PM	18	140	213	0	371	0	0	0	0	0	0	0	0	0	0	15	67	0	0	82	453
5:45 PM	21	145	218	0	384	0	0	0	0	0	0	0	0	0	0	12	66	0	0	78	462
Total	69	609	844	0	1522	0	0	0	0	0	0	0	0	0	0	42	281	0	0	323	1845
Grand Total	123	1203	1603	0	2929	0	0	0	0	0	0	0	0	0	0	77	604	0	0	681	3610
Approach %	4.2	41.1	54.7	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		11.3	88.7	0.0	0.0		
Total %	3.4	33.3	44.4	0.0	81.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	16.7	0.0	0.0	18.9	
Exiting Leg Total	0					2207					1280					123					3610
Cars	122	1151	1535	0	2808	0	0	0	0	0	0	0	0	0	0	75	584	0	0	659	3467
% Cars	99.2	95.7	95.8	0.0	95.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.4	96.7	0.0	0.0	96.8	96.0
Exiting Leg Total	0					2119					1226					122					3467
Heavy Vehicles	1	52	68	0	121	0	0	0	0	0	0	0	0	0	0	2	20	0	0	22	143
% Heavy Vehicles	0.8	4.3	4.2	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	3.3	0.0	0.0	3.2	4.0
Exiting Leg Total	0					88					54					1					143

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

5:00 PM	Albany Street					Traveler Street					Albany Street					Traveler Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
5:00 PM	15	164	210	0	389	0	0	0	0	0	0	0	0	0	0	8	63	0	0	71	460
5:15 PM	15	160	203	0	378	0	0	0	0	0	0	0	0	0	0	7	85	0	0	92	470
5:30 PM	18	140	213	0	371	0	0	0	0	0	0	0	0	0	0	15	67	0	0	82	453
5:45 PM	21	145	218	0	384	0	0	0	0	0	0	0	0	0	0	12	66	0	0	78	462
Total Volume	69	609	844	0	1522	0	0	0	0	0	0	0	0	0	0	42	281	0	0	323	1845
% Approach Total	4.5	40.0	55.5	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	87.0	0.0	0.0		
PHF	0.821	0.928	0.968	0.000	0.978	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.700	0.826	0.000	0.000	0.878	0.981
Cars	69	588	809	0	1466	0	0	0	0	0	0	0	0	0	0	41	274	0	0	315	1781
Cars %	100.0	96.6	95.9	0.0	96.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.6	97.5	0.0	0.0	97.5	96.5
Heavy Vehicles	0	21	35	0	56	0	0	0	0	0	0	0	0	0	0	1	7	0	0	8	64
Heavy Vehicles %	0.0	3.4	4.1	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.5	0.0	0.0	2.5	3.5
Cars Enter Leg	69	588	809	0	1466	0	0	0	0	0	0	0	0	0	0	41	274	0	0	315	1781
Heavy Enter Leg	0	21	35	0	56	0	0	0	0	0	0	0	0	0	0	1	7	0	0	8	64
Total Entering Leg	69	609	844	0	1522	0	0	0	0	0	0	0	0	0	0	42	281	0	0	323	1845
Cars Exiting Leg	0					1083					629					69					1781
Heavy Exiting Leg	0					42					22					0					64
Total Exiting Leg	0					1125					651					69					1845

PDI File #: **175974 DD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	22	136	177	0	335	0	0	0	0	0	0	0	0	0	0	7	75	0	0	82	417
4:15 PM	11	150	166	0	327	0	0	0	0	0	0	0	0	0	0	10	70	0	0	80	407
4:30 PM	11	131	216	0	358	0	0	0	0	0	0	0	0	0	0	8	98	0	0	106	464
4:45 PM	9	146	167	0	322	0	0	0	0	0	0	0	0	0	0	9	67	0	0	76	398
Total	53	563	726	0	1342	0	0	0	0	0	0	0	0	0	0	34	310	0	0	344	1686
5:00 PM	15	156	202	0	373	0	0	0	0	0	0	0	0	0	0	8	61	0	0	69	442
5:15 PM	15	155	192	0	362	0	0	0	0	0	0	0	0	0	0	7	82	0	0	89	451
5:30 PM	18	136	206	0	360	0	0	0	0	0	0	0	0	0	0	15	65	0	0	80	440
5:45 PM	21	141	209	0	371	0	0	0	0	0	0	0	0	0	0	11	66	0	0	77	448
Total	69	588	809	0	1466	0	0	0	0	0	0	0	0	0	0	41	274	0	0	315	1781
Grand Total	122	1151	1535	0	2808	0	0	0	0	0	0	0	0	0	0	75	584	0	0	659	3467
Approach %	4.3	41.0	54.7	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		11.4	88.6	0.0	0.0		
Total %	3.5	33.2	44.3	0.0	81.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		2.2	16.8	0.0	0.0	19.0	
Exiting Leg Total	0					2119					1226					122					3467

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

5:00 PM	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
5:00 PM	15	156	202	0	373	0	0	0	0	0	0	0	0	0	0	8	61	0	0	69	442
5:15 PM	15	155	192	0	362	0	0	0	0	0	0	0	0	0	0	7	82	0	0	89	451
5:30 PM	18	136	206	0	360	0	0	0	0	0	0	0	0	0	0	15	65	0	0	80	440
5:45 PM	21	141	209	0	371	0	0	0	0	0	0	0	0	0	0	11	66	0	0	77	448
Total Volume	69	588	809	0	1466	0	0	0	0	0	0	0	0	0	0	41	274	0	0	315	1781
% Approach Total	4.7	40.1	55.2	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		13.0	87.0	0.0	0.0		
PHF	0.821	0.942	0.968	0.000	0.983	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.683	0.835	0.000	0.000	0.885	0.987
Entering Leg	69	588	809	0	1466	0	0	0	0	0	0	0	0	0	0	41	274	0	0	315	1781
Exiting Leg	0					1083					629					69					1781
Total	1466					1083					629					384					3562

PDI File #: **175974 DD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Heavy Vehicles (Combined-Large Trucks and Buses)

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total		
	from North					from East					from South					from West							
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total			
4:00 PM	0	8	7	0	15	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	19	
4:15 PM	1	10	9	0	20	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	24	
4:30 PM	0	4	11	0	15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	16	
4:45 PM	0	9	6	0	15	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	20
Total	1	31	33	0	65	0	0	0	0	0	0	0	0	0	0	0	1	13	0	0	14	79	
5:00 PM	0	8	8	0	16	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	18
5:15 PM	0	5	11	0	16	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	19
5:30 PM	0	4	7	0	11	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	13
5:45 PM	0	4	9	0	13	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	14	
Total	0	21	35	0	56	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0	8	64	
Grand Total	1	52	68	0	121	0	0	0	0	0	0	0	0	0	0	0	2	20	0	0	22	143	
Approach %	0.8	43.0	56.2	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		9.1	90.9	0.0	0.0				
Total %	0.7	36.4	47.6	0.0	84.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		1.4	14.0	0.0	0.0	15.4		
Exiting Leg Total	0					88					54					1					143		
Large Trucks	1	34	17	0	52	0	0	0	0	0	0	0	0	0	0	0	1	14	0	0	15	67	
% Large Trucks	100.0	65.4	25.0	0.0	43.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	70.0	0.0	0.0	68.2	46.9	
Exiting Leg Total	0					31					35					1					67		
Buses	0	18	51	0	69	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	7	76	
% Buses	0.0	34.6	75.0	0.0	57.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	30.0	0.0	0.0	31.8	53.1	
Exiting Leg Total	0					57					19					0					76		

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

4:00 PM	Albany Street					Traveler Street					Albany Street					Traveler Street					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	8	7	0	15	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	19
4:15 PM	1	10	9	0	20	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	24
4:30 PM	0	4	11	0	15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	16	
4:45 PM	0	9	6	0	15	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	20
Total Volume	1	31	33	0	65	0	0	0	0	0	0	0	0	0	0	1	13	0	0	14	79	
% Approach Total	1.5	47.7	50.8	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		7.1	92.9	0.0	0.0			
PHF	0.250	0.775	0.750	0.000	0.813	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.650	0.000	0.000	0.700	0.823	
Large Trucks	1	18	4	0	23	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	30	
Large Trucks %	100.0	58.1	12.1	0.0	35.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.8	0.0	0.0	50.0	38.0	
Buses	0	13	29	0	42	0	0	0	0	0	0	0	0	0	0	1	6	0	0	7	49	
Buses %	0.0	41.9	87.9	0.0	64.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	46.2	0.0	0.0	50.0	62.0	
Trucks Enter Leg	1	18	4	0	23	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	30	
Bus Enter Leg	0	13	29	0	42	0	0	0	0	0	0	0	0	0	0	1	6	0	0	7	49	
Total Entering Leg	1	31	33	0	65	0	0	0	0	0	0	0	0	0	0	1	13	0	0	14	79	
Trucks Exiting Leg	0					11					18					1					30	
Buses Exiting Leg	0					35					14					0					49	
Total Exiting Leg	0					46					32					1					79	

PDI File #: **175974 DD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Large Trucks

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	5	3	0	8	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	12
4:15 PM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	4
4:30 PM	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:45 PM	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	10
Total	1	18	4	0	23	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	30
5:00 PM	0	5	1	0	6	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	8
5:15 PM	0	3	4	0	7	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	10
5:30 PM	0	4	3	0	7	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	9
5:45 PM	0	4	5	0	9	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	10
Total	0	16	13	0	29	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0	8	37
Grand Total	1	34	17	0	52	0	0	0	0	0	0	0	0	0	0	0	1	14	0	0	15	67
Approach %	1.9	65.4	32.7	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		6.7	93.3	0.0	0.0			
Total %	1.5	50.7	25.4	0.0	77.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	20.9	0.0	0.0	22.4		
Exiting Leg Total	0					31					35					1					67	

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

4:45 PM	Albany Street					Traveler Street					Albany Street					Traveler Street					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:45 PM	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	10
5:00 PM	0	5	1	0	6	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	8
5:15 PM	0	3	4	0	7	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	10
5:30 PM	0	4	3	0	7	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	9
Total Volume	0	20	8	0	28	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	37
% Approach Total	0.0	71.4	28.6	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.000	0.625	0.500	0.000	0.875	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.750	0.925	
Entering Leg	0	20	8	0	28	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	37
Exiting Leg	0					17					20					0					37	
Total	28					17					20					9					74	

PDI File #: **175974 DD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	3	4	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
4:15 PM	0	8	9	0	17	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	20
4:30 PM	0	1	10	0	11	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	12
4:45 PM	0	1	6	0	7	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	10
Total	0	13	29	0	42	0	0	0	0	0	0	0	0	0	0	1	6	0	0	7	49
5:00 PM	0	3	7	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
5:15 PM	0	2	7	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
5:30 PM	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	5	22	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Grand Total	0	18	51	0	69	0	0	0	0	0	0	0	0	0	0	1	6	0	0	7	76
Approach %	0.0	26.1	73.9	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		14.3	85.7	0.0	0.0		
Total %	0.0	23.7	67.1	0.0	90.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	7.9	0.0	0.0	9.2	
Exiting Leg Total	0					57					19					0					76

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

4:15 PM	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:15 PM	0	8	9	0	17	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	20
4:30 PM	0	1	10	0	11	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	12
4:45 PM	0	1	6	0	7	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	10
5:00 PM	0	3	7	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Total Volume	0	13	32	0	45	0	0	0	0	0	0	0	0	0	0	1	6	0	0	7	52
% Approach Total	0.0	28.9	71.1	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		14.3	85.7	0.0	0.0		
PHF	0.000	0.406	0.800	0.000	0.662	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.000	0.000	0.583	0.650
Entering Leg	0	13	32	0	45	0	0	0	0	0	0	0	0	0	0	1	6	0	0	7	52
Exiting Leg	0					38					14					0					52
Total	45					38					14					7					104

PDI File #: **175974 DD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Albany Street							Traveler Street							Albany Street							Traveler Street							Total	
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	
4:15 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	3	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	0	2	0	0	0	0	2	5
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	2	3
Total	0	1	0	0	1	0	2	0	0	0	0	1	1	2	0	0	0	0	3	2	5	1	3	0	0	0	0	4	13	
5:00 PM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	1	4
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2	3
Total	0	2	0	0	0	0	2	0	0	0	0	1	1	2	0	0	0	0	2	2	4	1	3	0	0	0	0	4	12	
Grand Total	0	3	0	0	1	0	4	0	0	0	0	2	2	4	0	0	0	0	5	4	9	2	6	0	0	0	0	8	25	
Approach %	0.0	75.0	0.0	0.0	25.0	0.0		0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	55.6	44.4		25.0	75.0	0.0	0.0	0.0	0.0			
Total %	0.0	12.0	0.0	0.0	4.0	0.0	16.0	0.0	0.0	0.0	0.0	8.0	8.0	16.0	0.0	0.0	0.0	0.0	20.0	16.0	36.0	8.0	24.0	0.0	0.0	0.0	0.0	32.0		
Exiting Leg Total	1							10							14							0							25	

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

4:00 PM	Albany Street							Traveler Street							Albany Street							Traveler Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
4:15 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	1	0	1	0	2	0	0	0	0	2	5
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	2	3
Total Volume	0	1	0	0	1	0	2	0	0	0	0	1	1	2	0	0	0	0	3	2	5	1	3	0	0	0	0	4	13
% Approach Total	0.0	50.0	0.0	0.0	50.0	0.0		0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	60.0	40.0		25.0	75.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.250	0.250	0.250	0.000	0.000	0.000	0.000	0.750	0.500	0.625	0.250	0.375	0.000	0.000	0.000	0.500	0.650	
Entering Leg	0	1	0	0	1	0	2	0	0	0	0	1	1	2	0	0	0	0	3	2	5	1	3	0	0	0	0	4	13
Exiting Leg	1							5							7							0							13
Total	3							7							12							4							26

PDI File #: **175974 DD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Albany Street							Traveler Street							Albany Street							Traveler Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	7	13	20	0	0	0	0	0	0	0	22
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	11	14	25	0	0	0	0	0	0	0	27
4:30 PM	0	0	0	0	1	0	1	0	0	0	0	2	3	5	0	0	0	0	6	23	29	0	0	0	0	0	4	4	39
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	7	16	23	0	0	0	0	0	0	0	27
Total	0	0	0	0	1	0	1	0	0	0	0	5	8	13	0	0	0	0	31	66	97	0	0	0	0	0	4	4	115
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	13	23	36	0	0	0	0	0	0	0	40
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	5	3	8	0	0	0	0	17	23	40	0	0	0	0	0	0	0	48
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	21	22	43	0	0	0	0	0	1	1	51
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	14	20	34	0	0	0	0	0	0	0	39
Total	0	0	0	0	0	0	0	0	0	0	0	13	11	24	0	0	0	0	65	88	153	0	0	0	0	0	1	1	178
Grand Total	0	0	0	0	1	0	1	0	0	0	0	18	19	37	0	0	0	0	96	154	250	0	0	0	0	0	5	5	293
Approach %	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	48.6	51.4		0.0	0.0	0.0	0.0	38.4	61.6		0.0	0.0	0.0	0.0	0.0	100.0		
Total %	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0	6.1	6.5	12.6	0.0	0.0	0.0	0.0	32.8	52.6	85.3	0.0	0.0	0.0	0.0	0.0	1.7	1.7	
Exiting Leg Total	1							37							250							5							293

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

5:00 PM	Albany Street							Traveler Street							Albany Street							Traveler Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	13	23	36	0	0	0	0	0	0	0	40
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	5	3	8	0	0	0	0	17	23	40	0	0	0	0	0	0	0	48
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	21	22	43	0	0	0	0	0	1	1	51
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	14	20	34	0	0	0	0	0	0	0	39
Total Volume	0	0	0	0	0	0	0	0	0	0	0	13	11	24	0	0	0	0	65	88	153	0	0	0	0	0	1	1	178
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	54.2	45.8		0.0	0.0	0.0	0.0	42.5	57.5		0.0	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	0.000	0.650	0.688	0.750	0.000	0.000	0.000	0.000	0.774	0.957	0.890	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.873
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	13	11	24	0	0	0	0	65	88	153	0	0	0	0	0	1	1	178
Exiting Leg	0							24							153							1							178
Total	0							48							306							2							356

PDI File #: **175974 DDD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	45	161	208	0	414	0	0	0	0	0	0	0	0	0	0	15	35	0	0	50	464
11:15 AM	48	194	197	0	439	0	0	0	0	0	0	0	0	0	0	15	42	0	0	57	496
11:30 AM	66	137	179	0	382	0	0	0	0	0	0	0	2	0	2	10	43	0	0	53	437
11:45 AM	64	139	197	0	400	0	0	0	0	0	0	0	2	0	2	20	27	0	0	47	449
Total	223	631	781	0	1635	0	0	0	0	0	0	0	4	0	4	60	147	0	0	207	1846
12:00 PM	59	185	191	0	435	0	0	0	0	0	0	0	0	0	0	17	42	0	0	59	494
12:15 PM	64	158	168	0	390	0	0	0	0	0	0	0	0	0	0	15	42	0	0	57	447
12:30 PM	57	165	178	0	400	0	0	0	0	0	0	0	0	0	0	13	39	0	0	52	452
12:45 PM	64	160	190	0	414	0	0	0	0	0	0	0	0	0	0	13	39	0	0	52	466
Total	244	668	727	0	1639	0	0	0	0	0	0	0	0	0	0	58	162	0	0	220	1859
1:00 PM	70	140	173	0	383	0	0	0	0	0	0	0	0	0	0	18	33	0	0	51	434
1:15 PM	68	140	174	0	382	0	0	0	0	0	0	0	0	0	0	14	44	0	0	58	440
1:30 PM	63	159	178	0	400	0	0	0	0	0	0	0	0	0	0	15	33	0	0	48	448
1:45 PM	64	155	186	0	405	0	0	0	0	0	0	0	0	0	0	16	33	0	0	49	454
Total	265	594	711	0	1570	0	0	0	0	0	0	0	0	0	0	63	143	0	0	206	1776
Grand Total	732	1893	2219	0	4844	0	0	0	0	0	0	0	4	0	4	181	452	0	0	633	5481
Approach %	15.1	39.1	45.8	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		28.6	71.4	0.0	0.0		
Total %	13.4	34.5	40.5	0.0	88.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	3.3	8.2	0.0	0.0	11.5	
Exiting Leg Total	0					2671					2074					736					5481
Cars	725	1857	2131	0	4713	0	0	0	0	0	0	0	4	0	4	175	447	0	0	622	5339
% Cars	99.0	98.1	96.0	0.0	97.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	96.7	98.9	0.0	0.0	98.3	97.4
Exiting Leg Total	0					2578					2032					729					5339
Heavy Vehicles	7	36	88	0	131	0	0	0	0	0	0	0	0	0	0	6	5	0	0	11	142
% Heavy Vehicles	1.0	1.9	4.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	1.1	0.0	0.0	1.7	2.6
Exiting Leg Total	0					93					42					7					142

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:15 AM	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:15 AM	48	194	197	0	439	0	0	0	0	0	0	0	0	0	0	15	42	0	0	57	496
11:30 AM	66	137	179	0	382	0	0	0	0	0	0	0	2	0	2	10	43	0	0	53	437
11:45 AM	64	139	197	0	400	0	0	0	0	0	0	0	2	0	2	20	27	0	0	47	449
12:00 PM	59	185	191	0	435	0	0	0	0	0	0	0	0	0	0	17	42	0	0	59	494
Total Volume	237	655	764	0	1656	0	0	0	0	0	0	0	4	0	4	62	154	0	0	216	1876
% Approach Total	14.3	39.6	46.1	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		28.7	71.3	0.0	0.0		
PHF	0.898	0.844	0.970	0.000	0.943	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.775	0.895	0.000	0.000	0.915	0.946
Cars	234	650	732	0	1616	0	0	0	0	0	0	0	4	0	4	59	153	0	0	212	1832
Cars %	98.7	99.2	95.8	0.0	97.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	95.2	99.4	0.0	0.0	98.1	97.7
Heavy Vehicles	3	5	32	0	40	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	44
Heavy Vehicles %	1.3	0.8	4.2	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.6	0.0	0.0	1.9	2.3
Cars Enter Leg	234	650	732	0	1616	0	0	0	0	0	0	0	4	0	4	59	153	0	0	212	1832
Heavy Enter Leg	3	5	32	0	40	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	44
Total Entering Leg	237	655	764	0	1656	0	0	0	0	0	0	0	4	0	4	62	154	0	0	216	1876
Cars Exiting Leg	0					885					709					238					1832
Heavy Exiting Leg	0					33					8					3					44
Total Exiting Leg	0					918					717					241					1876

PDI File #: **175974 DDD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Cars

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	45	155	198	0	398	0	0	0	0	0	0	0	0	0	0	15	34	0	0	49	447
11:15 AM	48	192	192	0	432	0	0	0	0	0	0	0	0	0	0	15	41	0	0	56	488
11:30 AM	66	135	170	0	371	0	0	0	0	0	0	0	2	0	2	8	43	0	0	51	424
11:45 AM	62	138	189	0	389	0	0	0	0	0	0	0	2	0	2	20	27	0	0	47	438
Total	221	620	749	0	1590	0	0	0	0	0	0	0	4	0	4	58	145	0	0	203	1797
12:00 PM	58	185	181	0	424	0	0	0	0	0	0	0	0	0	0	16	42	0	0	58	482
12:15 PM	63	156	164	0	383	0	0	0	0	0	0	0	0	0	0	14	40	0	0	54	437
12:30 PM	56	161	168	0	385	0	0	0	0	0	0	0	0	0	0	13	39	0	0	52	437
12:45 PM	64	156	181	0	401	0	0	0	0	0	0	0	0	0	0	13	39	0	0	52	453
Total	241	658	694	0	1593	0	0	0	0	0	0	0	0	0	0	56	160	0	0	216	1809
1:00 PM	68	138	168	0	374	0	0	0	0	0	0	0	0	0	0	18	33	0	0	51	425
1:15 PM	68	135	170	0	373	0	0	0	0	0	0	0	0	0	0	13	43	0	0	56	429
1:30 PM	63	155	172	0	390	0	0	0	0	0	0	0	0	0	0	15	33	0	0	48	438
1:45 PM	64	151	178	0	393	0	0	0	0	0	0	0	0	0	0	15	33	0	0	48	441
Total	263	579	688	0	1530	0	0	0	0	0	0	0	0	0	0	61	142	0	0	203	1733
Grand Total	725	1857	2131	0	4713	0	0	0	0	0	0	0	4	0	4	175	447	0	0	622	5339
Approach %	15.4	39.4	45.2	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		28.1	71.9	0.0	0.0		
Total %	13.6	34.8	39.9	0.0	88.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	3.3	8.4	0.0	0.0	11.7	
Exiting Leg Total	0					2578					2032					729					5339

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:15 AM	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:15 AM	48	192	192	0	432	0	0	0	0	0	0	0	0	0	0	15	41	0	0	56	488
11:30 AM	66	135	170	0	371	0	0	0	0	0	0	0	2	0	2	8	43	0	0	51	424
11:45 AM	62	138	189	0	389	0	0	0	0	0	0	0	2	0	2	20	27	0	0	47	438
12:00 PM	58	185	181	0	424	0	0	0	0	0	0	0	0	0	0	16	42	0	0	58	482
Total Volume	234	650	732	0	1616	0	0	0	0	0	0	0	4	0	4	59	153	0	0	212	1832
% Approach Total	14.5	40.2	45.3	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		27.8	72.2	0.0	0.0		
PHF	0.886	0.846	0.953	0.000	0.935	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.738	0.890	0.000	0.000	0.914	0.939
Entering Leg	234	650	732	0	1616	0	0	0	0	0	0	0	4	0	4	59	153	0	0	212	1832
Exiting Leg	0					885					709					238					1832
Total	1616					885					713					450					3664

PDI File #: **175974 DDD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Heavy Vehicles (Combined-Large Trucks and Buses)

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
11:00 AM	0	6	10	0	16	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	17
11:15 AM	0	2	5	0	7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	8
11:30 AM	0	2	9	0	11	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	13
11:45 AM	2	1	8	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Total	2	11	32	0	45	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	49
12:00 PM	1	0	10	0	11	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	12
12:15 PM	1	2	4	0	7	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	10
12:30 PM	1	4	10	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
12:45 PM	0	4	9	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Total	3	10	33	0	46	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	50
1:00 PM	2	2	5	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
1:15 PM	0	5	4	0	9	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	11
1:30 PM	0	4	6	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
1:45 PM	0	4	8	0	12	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	13
Total	2	15	23	0	40	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	43
Grand Total	7	36	88	0	131	0	0	0	0	0	0	0	0	0	0	0	6	5	0	0	11	142
Approach %	5.3	27.5	67.2	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		54.5	45.5	0.0	0.0			
Total %	4.9	25.4	62.0	0.0	92.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	3.5	0.0	0.0	7.7		
Exiting Leg Total	0					93					42					7					142	
Large Trucks	6	26	61	0	93	0	0	0	0	0	0	0	0	0	0	0	6	5	0	0	11	104
% Large Trucks	85.7	72.2	69.3	0.0	71.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0	73.2
Exiting Leg Total	0					66					32					6					104	
Buses	1	10	27	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
% Buses	14.3	27.8	30.7	0.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.8
Exiting Leg Total	0					27					10					1					38	

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Albany Street					Traveler Street					Albany Street					Traveler Street					Total						
	from North					from East					from South					from West											
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total							
12:00 PM	1	0	10	0	11	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	12					
12:15 PM	1	2	4	0	7	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	3	10					
12:30 PM	1	4	10	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15					
12:45 PM	0	4	9	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13					
Total Volume	3	10	33	0	46	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	50					
% Approach Total	6.5	21.7	71.7	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0								
PHF	0.750	0.625	0.825	0.000	0.767	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.250	0.000	0.000	0.333	0.833						
Large Trucks	3	7	25	0	35	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	39					
Large Trucks %	100.0	70.0	75.8	0.0	76.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0		78.0					
Buses	0	3	8	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11					
Buses %	0.0	30.0	24.2	0.0	23.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.0					
Trucks Enter Leg	3	7	25	0	35	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	39					
Bus Enter Leg	0	3	8	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11					
Total Entering Leg	3	10	33	0	46	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	50					
Trucks Exiting Leg																										3	39
Buses Exiting Leg																										0	11
Total Exiting Leg																										3	50

PDI File #: **175974 DDD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Large Trucks

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
11:00 AM	0	5	8	0	13	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	14
11:15 AM	0	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	5
11:30 AM	0	1	7	0	8	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	10
11:45 AM	1	1	6	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Total	1	8	24	0	33	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	37
12:00 PM	1	0	7	0	8	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	9
12:15 PM	1	2	4	0	7	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	3	10
12:30 PM	1	1	7	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
12:45 PM	0	4	7	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Total	3	7	25	0	35	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	39
1:00 PM	2	2	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
1:15 PM	0	5	3	0	8	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	10
1:30 PM	0	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
1:45 PM	0	2	4	0	6	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	7
Total	2	11	12	0	25	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	28
Grand Total	6	26	61	0	93	0	0	0	0	0	0	0	0	0	0	6	5	0	0	11	104	
Approach %	6.5	28.0	65.6	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		54.5	45.5	0.0	0.0			
Total %	5.8	25.0	58.7	0.0	89.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	4.8	0.0	0.0	10.6		
Exiting Leg Total	0					66					32					6					104	

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Albany Street					Traveler Street					Albany Street					Traveler Street					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
12:00 PM	1	0	7	0	8	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	9
12:15 PM	1	2	4	0	7	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	3	10
12:30 PM	1	1	7	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
12:45 PM	0	4	7	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Total Volume	3	7	25	0	35	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	39
% Approach Total	8.6	20.0	71.4	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0			
PHF	0.750	0.438	0.893	0.000	0.795	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.250	0.000	0.000	0.333	0.886	
Entering Leg	3	7	25	0	35	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	39	
Exiting Leg	0					27					9					3					39	
Total	35					27					9					7					78	

PDI File #: **175974 DDD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Buses

	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:15 AM	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:30 AM	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:45 AM	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	1	3	8	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
12:00 PM	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	3	3	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
12:45 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	3	8	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
1:00 PM	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
1:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:30 PM	0	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
1:45 PM	0	2	4	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	0	4	11	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Grand Total	1	10	27	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
Approach %	2.6	26.3	71.1	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	2.6	26.3	71.1	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					27					10					1					38

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

1:00 PM	Albany Street					Traveler Street					Albany Street					Traveler Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
1:00 PM	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
1:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:30 PM	0	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
1:45 PM	0	2	4	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total Volume	0	4	11	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
% Approach Total	0.0	26.7	73.3	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.688	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625
Entering Leg	0	4	11	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Exiting Leg	0					11					4					0					15
Total	15					11					4					0					30

PDI File #: **175974 DDD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Albany Street							Traveler Street							Albany Street							Traveler Street							Total	
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	3
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	0
11:45 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	4
12:00 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	5	6
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	2	3
12:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total	0	0	2	0	0	0	2	0	0	0	0	0	0	1	1	0	0	0	0	1	1	2	1	5	0	0	0	2	8	13
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	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	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	2	2	0	0	0	0	0	0	0	0	2
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	7	0	0	0	0	7	7
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	10	0	0	0	0	0	10	12
Grand Total	0	1	3	0	0	0	4	0	0	0	0	0	0	1	1	0	0	0	0	1	3	4	2	16	0	0	0	2	20	29
Approach %	0.0	25.0	75.0	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	25.0	75.0		10.0	80.0	0.0	0.0	0.0	10.0			
Total %	0.0	3.4	10.3	0.0	0.0	0.0	13.8	0.0	0.0	0.0	0.0	0.0	3.4	3.4	0.0	0.0	0.0	0.0	3.4	10.3	13.8	6.9	55.2	0.0	0.0	0.0	6.9	69.0		
Exiting Leg Total	0							20							7							2							29	

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:45 AM	Albany Street							Traveler Street							Albany Street							Traveler Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
11:45 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:00 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	5	6
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	2	3
12:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3
Total Volume	0	0	3	0	0	0	3	0	0	0	0	0	1	1	0	0	0	0	1	1	2	1	4	0	0	0	2	7	13
% Approach Total	0.0	0.0	100.0	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	50.0	50.0		14.3	57.1	0.0	0.0	0.0	28.6		
PHF	0.000	0.000	0.750	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.250	0.333	0.000	0.000	0.000	0.250	0.350	0.542
Entering Leg	0	0	3	0	0	0	3	0	0	0	0	0	1	1	0	0	0	0	1	1	2	1	4	0	0	0	2	7	13
Exiting Leg	0							8							3							2							13
Total	3							9							5							9							26

PDI File #: **175974 DDD**
 Location: **N: Albany Street S: Albany Street**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Pedestrians

	Albany Street							Traveler Street							Albany Street							Traveler Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	9	2	11	0	0	0	0	49	9	58	0	0	0	0	0	0	0	69
11:15 AM	0	0	0	0	0	1	1	0	0	0	0	3	2	5	0	0	0	0	31	2	33	0	0	0	0	0	1	1	40
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	5	5	10	0	0	0	0	36	14	50	0	0	0	0	0	1	1	61
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	12	3	15	0	0	0	0	48	10	58	0	0	0	0	0	0	0	73
Total	0	0	0	0	0	1	1	0	0	0	0	29	12	41	0	0	0	0	164	35	199	0	0	0	0	0	2	2	243
12:00 PM	0	0	0	0	1	0	1	0	0	0	0	8	3	11	0	0	0	0	40	14	54	0	0	0	0	0	0	0	66
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	19	0	19	0	0	0	0	46	14	60	0	0	0	0	0	0	0	79
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	13	8	21	0	0	0	0	48	28	76	0	0	0	0	0	0	0	97
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	7	8	0	0	0	0	32	22	54	0	0	0	0	0	0	0	62
Total	0	0	0	0	1	0	1	0	0	0	0	41	18	59	0	0	0	0	166	78	244	0	0	0	0	0	0	0	304
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	8	12	0	0	0	0	30	28	58	0	0	0	0	0	1	1	71
1:15 PM	0	0	0	0	0	1	1	0	0	0	0	2	2	4	0	0	0	0	28	27	55	0	0	0	0	0	2	2	62
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	9	13	22	0	0	0	0	56	45	101	0	0	0	0	0	4	4	127
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	7	9	0	0	0	0	39	39	78	0	0	0	0	0	0	0	87
Total	0	0	0	0	0	1	1	0	0	0	0	17	30	47	0	0	0	0	153	139	292	0	0	0	0	0	7	7	347
Grand Total	0	0	0	0	1	2	3	0	0	0	0	87	60	147	0	0	0	0	483	252	735	0	0	0	0	0	9	9	894
Approach %	0.0	0.0	0.0	0.0	33.3	66.7		0.0	0.0	0.0	0.0	59.2	40.8		0.0	0.0	0.0	0.0	65.7	34.3		0.0	0.0	0.0	0.0	0.0	100.0		
Total %	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.0	0.0	0.0	0.0	9.7	6.7	16.4	0.0	0.0	0.0	0.0	54.0	28.2	82.2	0.0	0.0	0.0	0.0	0.0	1.0	1.0	
Exiting Leg Total	3							147							735							9							894

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

1:00 PM	Albany Street							Traveler Street							Albany Street							Traveler Street							Total	
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	8	12	0	0	0	0	30	28	58	0	0	0	0	0	0	1	1	71
1:15 PM	0	0	0	0	0	1	1	0	0	0	0	2	2	4	0	0	0	0	28	27	55	0	0	0	0	0	0	2	2	62
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	9	13	22	0	0	0	0	56	45	101	0	0	0	0	0	0	4	4	127
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	7	9	0	0	0	0	39	39	78	0	0	0	0	0	0	0	0	87
Total Volume	0	0	0	0	0	1	1	0	0	0	0	17	30	47	0	0	0	0	153	139	292	0	0	0	0	0	0	7	7	347
% Approach Total	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	36.2	63.8		0.0	0.0	0.0	0.0	52.4	47.6		0.0	0.0	0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.472	0.577	0.534	0.000	0.000	0.000	0.000	0.683	0.772	0.723	0.000	0.000	0.000	0.000	0.000	0.438	0.438		0.683
Entering Leg	0	0	0	0	0	1	1	0	0	0	0	17	30	47	0	0	0	0	153	139	292	0	0	0	0	0	0	7	7	347
Exiting Leg	1							47							292							7							347	
Total	2							94							584							14							694	

PDI File #: **175974 F**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	170	4	0	174	174
7:15 AM	0	1	0	1	0	0	0	0	193	0	0	193	194
7:30 AM	0	0	0	0	0	0	0	0	251	1	0	252	252
7:45 AM	0	1	0	1	0	0	0	0	225	0	0	225	226
Total	0	2	0	2	0	0	0	0	839	5	0	844	846
8:00 AM	0	0	0	0	0	0	0	0	237	3	0	240	240
8:15 AM	0	0	0	0	0	0	0	0	177	0	0	177	177
8:30 AM	0	0	0	0	0	0	0	0	264	0	0	264	264
8:45 AM	0	0	0	0	0	0	0	0	190	2	0	192	192
Total	0	0	0	0	0	0	0	0	868	5	0	873	873
Grand Total	0	2	0	2	0	0	0	0	1707	10	0	1717	1719
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		99.4	0.6	0.0		
Total %	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	99.3	0.6	0.0	99.9	
Exiting Leg Total	10				1709				0				1719
Cars	0	2	0	2	0	0	0	0	1597	10	0	1607	1609
% Cars	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	93.6	100.0	0.0	93.6	93.6
Exiting Leg Total	10				1599				0				1609
Heavy Vehicles	0	0	0	0	0	0	0	0	110	0	0	110	110
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	0.0	0.0	6.4	6.4
Exiting Leg Total	0				110				0				110

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

7:15 AM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:15 AM	0	1	0	1	0	0	0	0	193	0	0	193	194
7:30 AM	0	0	0	0	0	0	0	0	251	1	0	252	252
7:45 AM	0	1	0	1	0	0	0	0	225	0	0	225	226
8:00 AM	0	0	0	0	0	0	0	0	237	3	0	240	240
Total Volume	0	2	0	2	0	0	0	0	906	4	0	910	912
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		99.6	0.4	0.0		
PHF	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.902	0.333	0.000	0.903	0.905
Cars	0	2	0	2	0	0	0	0	847	4	0	851	853
Cars %	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	93.5	100.0	0.0	93.5	93.5
Heavy Vehicles	0	0	0	0	0	0	0	0	59	0	0	59	59
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0	6.5	6.5
Cars Enter Leg	0	2	0	2	0	0	0	0	847	4	0	851	853
Heavy Enter Leg	0	0	0	0	0	0	0	0	59	0	0	59	59
Total Entering Leg	0	2	0	2	0	0	0	0	906	4	0	910	912
Cars Exiting Leg					849				0				853
Heavy Exiting Leg					59				0				59
Total Exiting Leg	4				908				0				912

PDI File #: **175974 F**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	156	4	0	160	160
7:15 AM	0	1	0	1	0	0	0	0	184	0	0	184	185
7:30 AM	0	0	0	0	0	0	0	0	237	1	0	238	238
7:45 AM	0	1	0	1	0	0	0	0	207	0	0	207	208
Total	0	2	0	2	0	0	0	0	784	5	0	789	791
8:00 AM	0	0	0	0	0	0	0	0	219	3	0	222	222
8:15 AM	0	0	0	0	0	0	0	0	169	0	0	169	169
8:30 AM	0	0	0	0	0	0	0	0	248	0	0	248	248
8:45 AM	0	0	0	0	0	0	0	0	177	2	0	179	179
Total	0	0	0	0	0	0	0	0	813	5	0	818	818
Grand Total	0	2	0	2	0	0	0	0	1597	10	0	1607	1609
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		99.4	0.6	0.0		
Total %	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	99.3	0.6	0.0	99.9	
Exiting Leg Total	10				1599				0				1609

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

7:15 AM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:15 AM	0	1	0	1	0	0	0	0	184	0	0	184	185
7:30 AM	0	0	0	0	0	0	0	0	237	1	0	238	238
7:45 AM	0	1	0	1	0	0	0	0	207	0	0	207	208
8:00 AM	0	0	0	0	0	0	0	0	219	3	0	222	222
Total Volume	0	2	0	2	0	0	0	0	847	4	0	851	853
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		99.5	0.5	0.0		
PHF	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.893	0.333	0.000	0.894	0.896
Entering Leg	0	2	0	2	0	0	0	0	847	4	0	851	853
Exiting Leg				4				849				0	853
Total				6				849				851	1706

PDI File #: **175974 F**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Heavy Vehicles (Combined-Large Trucks and Buses)

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	14	0	0	14	14
7:15 AM	0	0	0	0	0	0	0	0	9	0	0	9	9
7:30 AM	0	0	0	0	0	0	0	0	14	0	0	14	14
7:45 AM	0	0	0	0	0	0	0	0	18	0	0	18	18
Total	0	0	0	0	0	0	0	0	55	0	0	55	55
8:00 AM	0	0	0	0	0	0	0	0	18	0	0	18	18
8:15 AM	0	0	0	0	0	0	0	0	8	0	0	8	8
8:30 AM	0	0	0	0	0	0	0	0	16	0	0	16	16
8:45 AM	0	0	0	0	0	0	0	0	13	0	0	13	13
Total	0	0	0	0	0	0	0	0	55	0	0	55	55
Grand Total	0	0	0	0	0	0	0	0	110	0	0	110	110
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Exiting Leg Total	0				110				0				110
Large Trucks	0	0	0	0	0	0	0	0	65	0	0	65	65
% Large Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.1	0.0	0.0	59.1	59.1
Exiting Leg Total	0				65				0				65
Buses	0	0	0	0	0	0	0	0	45	0	0	45	45
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.9	0.0	0.0	40.9	40.9
Exiting Leg Total	0				45				0				45

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

7:45 AM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:45 AM	0	0	0	0	0	0	0	0	18	0	0	18	18
8:00 AM	0	0	0	0	0	0	0	0	18	0	0	18	18
8:15 AM	0	0	0	0	0	0	0	0	8	0	0	8	8
8:30 AM	0	0	0	0	0	0	0	0	16	0	0	16	16
Total Volume	0	0	0	0	0	0	0	0	60	0	0	60	60
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.833	0.000	0.000	0.833	0.833
Large Trucks	0	0	0	0	0	0	0	0	28	0	0	28	28
Large Trucks %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.7	0.0	0.0	46.7	46.7
Buses	0	0	0	0	0	0	0	0	32	0	0	32	32
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.3	0.0	0.0	53.3	53.3
Trucks Enter Leg	0	0	0	0	0	0	0	0	28	0	0	28	28
Bus Enter Leg	0	0	0	0	0	0	0	0	32	0	0	32	32
Total Entering Leg	0	0	0	0	0	0	0	0	60	0	0	60	60
Trucks Exiting Leg				0				28				0	28
Buses Exiting Leg				0				32				0	32
Total Exiting Leg				0				60				0	60

PDI File #: **175974 F**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Large Trucks

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	10	0	0	10	10
7:15 AM	0	0	0	0	0	0	0	0	6	0	0	6	6
7:30 AM	0	0	0	0	0	0	0	0	11	0	0	11	11
7:45 AM	0	0	0	0	0	0	0	0	11	0	0	11	11
Total	0	0	0	0	0	0	0	0	38	0	0	38	38
8:00 AM	0	0	0	0	0	0	0	0	8	0	0	8	8
8:15 AM	0	0	0	0	0	0	0	0	3	0	0	3	3
8:30 AM	0	0	0	0	0	0	0	0	6	0	0	6	6
8:45 AM	0	0	0	0	0	0	0	0	10	0	0	10	10
Total	0	0	0	0	0	0	0	0	27	0	0	27	27
Grand Total	0	0	0	0	0	0	0	0	65	0	0	65	65
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Exiting Leg Total	0				65				0				65

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

7:00 AM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	10	0	0	10	10
7:15 AM	0	0	0	0	0	0	0	0	6	0	0	6	6
7:30 AM	0	0	0	0	0	0	0	0	11	0	0	11	11
7:45 AM	0	0	0	0	0	0	0	0	11	0	0	11	11
Total Volume	0	0	0	0	0	0	0	0	38	0	0	38	38
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.864	0.000	0.000	0.864	0.864
Entering Leg	0	0	0	0	0	0	0	0	38	0	0	38	38
Exiting Leg				0				38				0	38
Total				0				38				38	76

PDI File #: **175974 F**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	4	0	0	4	4
7:15 AM	0	0	0	0	0	0	0	0	3	0	0	3	3
7:30 AM	0	0	0	0	0	0	0	0	3	0	0	3	3
7:45 AM	0	0	0	0	0	0	0	0	7	0	0	7	7
Total	0	0	0	0	0	0	0	0	17	0	0	17	17
8:00 AM	0	0	0	0	0	0	0	0	10	0	0	10	10
8:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	5
8:30 AM	0	0	0	0	0	0	0	0	10	0	0	10	10
8:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	3
Total	0	0	0	0	0	0	0	0	28	0	0	28	28
Grand Total	0	0	0	0	0	0	0	0	45	0	0	45	45
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Exiting Leg Total	0				45				0				45

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

7:45 AM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:45 AM	0	0	0	0	0	0	0	0	7	0	0	7	7
8:00 AM	0	0	0	0	0	0	0	0	10	0	0	10	10
8:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	5
8:30 AM	0	0	0	0	0	0	0	0	10	0	0	10	10
Total Volume	0	0	0	0	0	0	0	0	32	0	0	32	32
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.800	0.000	0.000	0.800	0.800
Entering Leg	0	0	0	0	0	0	0	0	32	0	0	32	32
Exiting Leg				0				32				0	32
Total				0				32				32	64

PDI File #: **175974 F**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Ink Underground parking driveway						Traveler Street						Traveler Street						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3
Total	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	4	4
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	2	1	7	7
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	4	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	1	0	5	5
Total	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	7	2	20	20
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	7	2	25	25
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		64.0	0.0	0.0	28.0	8.0		
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	64.0	0.0	0.0	28.0	8.0	100.0	
Exiting Leg Total	0						16						9						25

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

8:00 AM	Ink Underground parking driveway						Traveler Street						Traveler Street						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	4	4
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	2	1	7	7
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	4	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	1	0	5	5
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	7	2	20	20
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		55.0	0.0	0.0	35.0	10.0			
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	0.688	0.000	0.000	0.875	0.500	0.714		0.714
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	7	2	20		20
Exiting Leg	0						11						9							20
Total	0						11						29							40

PDI File #: **175974 F**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Ink Underground parking driveway						Traveler Street						Traveler Street						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	3	3	6	7
7:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3	0	3	4
7:30 AM	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	3	0	3	5	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	5	5	
Total	0	0	0	1	2	3	0	0	0	0	1	1	0	0	0	13	4	17	21	
8:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	3	1	4	5	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	4	15	15	
8:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	4	1	5	6	
8:45 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	8	4	12	13	
Total	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	26	10	36	39	
Grand Total	0	0	0	2	4	6	0	0	0	0	1	1	0	0	0	39	14	53	60	
Approach %	0.0	0.0	0.0	33.3	66.7		0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	73.6	26.4			
Total %	0.0	0.0	0.0	3.3	6.7	10.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	0.0	0.0	65.0	23.3	88.3		
Exiting Leg Total	6						1						53						60	

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

8:00 AM	Ink Underground parking driveway						Traveler Street						Traveler Street						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
8:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	3	1	4	5
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	4	15	15
8:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	4	1	5	6
8:45 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	8	4	12	13
Total Volume	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	26	10	36	39
% Approach Total	0.0	0.0	0.0	33.3	66.7		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	72.2	27.8	
PHF	0.000	0.000	0.000	0.250	0.500	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.591	0.625	0.600	0.650
Entering Leg	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	26	10	36	39
Exiting Leg	3						0						36						39
Total	6						0						72						78

PDI File #: **175974 FF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	259	0	0	259	259
4:15 PM	0	0	0	0	0	0	0	0	255	0	0	255	255
4:30 PM	0	6	0	6	0	0	0	0	316	0	0	316	322
4:45 PM	0	0	0	0	0	0	0	0	253	0	0	253	253
Total	0	6	0	6	0	0	0	0	1083	0	0	1083	1089
5:00 PM	0	1	0	1	0	0	0	0	269	0	0	269	270
5:15 PM	0	0	0	0	0	0	0	0	290	0	0	290	290
5:30 PM	0	3	0	3	0	0	0	0	281	1	0	282	285
5:45 PM	0	0	0	0	0	0	0	0	271	0	0	271	271
Total	0	4	0	4	0	0	0	0	1111	1	0	1112	1116
Grand Total	0	10	0	10	0	0	0	0	2194	1	0	2195	2205
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	99.5	0.0	0.0	99.5	
Exiting Leg Total	1				2204				0				2205
Cars	0	10	0	10	0	0	0	0	2110	1	0	2111	2121
% Cars	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	96.2	100.0	0.0	96.2	96.2
Exiting Leg Total	1				2120				0				2121
Heavy Vehicles	0	0	0	0	0	0	0	0	84	0	0	84	84
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	3.8	3.8
Exiting Leg Total	0				84				0				84

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

4:30 PM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:30 PM	0	6	0	6	0	0	0	0	316	0	0	316	322
4:45 PM	0	0	0	0	0	0	0	0	253	0	0	253	253
5:00 PM	0	1	0	1	0	0	0	0	269	0	0	269	270
5:15 PM	0	0	0	0	0	0	0	0	290	0	0	290	290
Total Volume	0	7	0	7	0	0	0	0	1128	0	0	1128	1135
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.292	0.000	0.292	0.000	0.000	0.000	0.000	0.892	0.000	0.000	0.892	0.881
Cars	0	7	0	7	0	0	0	0	1087	0	0	1087	1094
Cars %	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	96.4	0.0	0.0	96.4	96.4
Heavy Vehicles	0	0	0	0	0	0	0	0	41	0	0	41	41
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	3.6
Cars Enter Leg	0	7	0	7	0	0	0	0	1087	0	0	1087	1094
Heavy Enter Leg	0	0	0	0	0	0	0	0	41	0	0	41	41
Total Entering Leg	0	7	0	7	0	0	0	0	1128	0	0	1128	1135
Cars Exiting Leg				0				1094				0	1094
Heavy Exiting Leg				0				41				0	41
Total Exiting Leg				0				1135				0	1135

PDI File #: **175974 FF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	246	0	0	246	246
4:15 PM	0	0	0	0	0	0	0	0	243	0	0	243	243
4:30 PM	0	6	0	6	0	0	0	0	308	0	0	308	314
4:45 PM	0	0	0	0	0	0	0	0	243	0	0	243	243
Total	0	6	0	6	0	0	0	0	1040	0	0	1040	1046
5:00 PM	0	1	0	1	0	0	0	0	258	0	0	258	259
5:15 PM	0	0	0	0	0	0	0	0	278	0	0	278	278
5:30 PM	0	3	0	3	0	0	0	0	272	1	0	273	276
5:45 PM	0	0	0	0	0	0	0	0	262	0	0	262	262
Total	0	4	0	4	0	0	0	0	1070	1	0	1071	1075
Grand Total	0	10	0	10	0	0	0	0	2110	1	0	2111	2121
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	99.5	0.0	0.0	99.5	
Exiting Leg Total	1				2120				0				2121

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

4:30 PM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:30 PM	0	6	0	6	0	0	0	0	308	0	0	308	314
4:45 PM	0	0	0	0	0	0	0	0	243	0	0	243	243
5:00 PM	0	1	0	1	0	0	0	0	258	0	0	258	259
5:15 PM	0	0	0	0	0	0	0	0	278	0	0	278	278
Total Volume	0	7	0	7	0	0	0	0	1087	0	0	1087	1094
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.292	0.000	0.292	0.000	0.000	0.000	0.000	0.882	0.000	0.000	0.882	0.871
Entering Leg	0	7	0	7	0	0	0	0	1087	0	0	1087	1094
Exiting Leg				0				1094				0	1094
Total				7				1094				1087	2188

PDI File #: **175974 FF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Heavy Vehicles (Combined-Large Trucks and Buses)**

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	13	0	0	13	13
4:15 PM	0	0	0	0	0	0	0	0	12	0	0	12	12
4:30 PM	0	0	0	0	0	0	0	0	8	0	0	8	8
4:45 PM	0	0	0	0	0	0	0	0	10	0	0	10	10
Total	0	0	0	0	0	0	0	0	43	0	0	43	43
5:00 PM	0	0	0	0	0	0	0	0	11	0	0	11	11
5:15 PM	0	0	0	0	0	0	0	0	12	0	0	12	12
5:30 PM	0	0	0	0	0	0	0	0	9	0	0	9	9
5:45 PM	0	0	0	0	0	0	0	0	9	0	0	9	9
Total	0	0	0	0	0	0	0	0	41	0	0	41	41
Grand Total	0	0	0	0	0	0	0	0	84	0	0	84	84
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Exiting Leg Total	0				84				0				84
Large Trucks	0	0	0	0	0	0	0	0	32	0	0	32	32
% Large Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.1	0.0	0.0	38.1	38.1
Exiting Leg Total	0				32				0				32
Buses	0	0	0	0	0	0	0	0	52	0	0	52	52
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.9	0.0	0.0	61.9	61.9
Exiting Leg Total	0				52				0				52

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

4:00 PM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	13	0	0	13	13
4:15 PM	0	0	0	0	0	0	0	0	12	0	0	12	12
4:30 PM	0	0	0	0	0	0	0	0	8	0	0	8	8
4:45 PM	0	0	0	0	0	0	0	0	10	0	0	10	10
Total Volume	0	0	0	0	0	0	0	0	43	0	0	43	43
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.827	0.000	0.000	0.827	0.827
Large Trucks	0	0	0	0	0	0	0	0	11	0	0	11	11
Large Trucks %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.6	0.0	0.0	25.6	25.6
Buses	0	0	0	0	0	0	0	0	32	0	0	32	32
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.4	0.0	0.0	74.4	74.4
Trucks Enter Leg	0	0	0	0	0	0	0	0	11	0	0	11	11
Bus Enter Leg	0	0	0	0	0	0	0	0	32	0	0	32	32
Total Entering Leg	0	0	0	0	0	0	0	0	43	0	0	43	43
Trucks Exiting Leg				0				11				0	11
Buses Exiting Leg				0				32				0	32
Total Exiting Leg				0				43				0	43

PDI File #: **175974 FF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Large Trucks

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	7	0	0	7	7
4:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	0	0	0	0	0	0	0	11	0	0	11	11
5:00 PM	0	0	0	0	0	0	0	0	5	0	0	5	5
5:15 PM	0	0	0	0	0	0	0	0	5	0	0	5	5
5:30 PM	0	0	0	0	0	0	0	0	6	0	0	6	6
5:45 PM	0	0	0	0	0	0	0	0	5	0	0	5	5
Total	0	0	0	0	0	0	0	0	21	0	0	21	21
Grand Total	0	0	0	0	0	0	0	0	32	0	0	32	32
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Exiting Leg Total	0				32				0				32

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

5:00 PM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
5:00 PM	0	0	0	0	0	0	0	0	5	0	0	5	5
5:15 PM	0	0	0	0	0	0	0	0	5	0	0	5	5
5:30 PM	0	0	0	0	0	0	0	0	6	0	0	6	6
5:45 PM	0	0	0	0	0	0	0	0	5	0	0	5	5
Total Volume	0	0	0	0	0	0	0	0	21	0	0	21	21
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.875	0.000	0.000	0.875	0.875
Entering Leg	0	0	0	0	0	0	0	0	21	0	0	21	21
Exiting Leg				0				21				0	21
Total				0				21				21	42

PDI File #: **175974 FF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	6	0	0	6	6
4:15 PM	0	0	0	0	0	0	0	0	11	0	0	11	11
4:30 PM	0	0	0	0	0	0	0	0	7	0	0	7	7
4:45 PM	0	0	0	0	0	0	0	0	8	0	0	8	8
Total	0	0	0	0	0	0	0	0	32	0	0	32	32
5:00 PM	0	0	0	0	0	0	0	0	6	0	0	6	6
5:15 PM	0	0	0	0	0	0	0	0	7	0	0	7	7
5:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
5:45 PM	0	0	0	0	0	0	0	0	4	0	0	4	4
Total	0	0	0	0	0	0	0	0	20	0	0	20	20
Grand Total	0	0	0	0	0	0	0	0	52	0	0	52	52
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Exiting Leg Total	0				52				0				52

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

4:00 PM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	6	0	0	6	6
4:15 PM	0	0	0	0	0	0	0	0	11	0	0	11	11
4:30 PM	0	0	0	0	0	0	0	0	7	0	0	7	7
4:45 PM	0	0	0	0	0	0	0	0	8	0	0	8	8
Total Volume	0	0	0	0	0	0	0	0	32	0	0	32	32
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.727	0.000	0.000	0.727	0.727
Entering Leg	0	0	0	0	0	0	0	0	32	0	0	32	32
Exiting Leg				0				32				0	32
Total				0				32				32	64

PDI File #: **175974 FF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Ink Underground parking driveway						Traveler Street						Traveler Street						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	3	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	3	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	2	7	7
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	1	0	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
Total	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	2	11	11
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		81.8	0.0	0.0	0.0	18.2		
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	81.8	0.0	0.0	0.0	18.2	100.0	
Exiting Leg Total	0						9						2						11

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

4:00 PM	Ink Underground parking driveway						Traveler Street						Traveler Street						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	3	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	3	3
4:45 PM	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	5	0	0	0	2	7	7
% 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	71.4	0.0	0.0	0.0	28.6		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.000	0.500	0.583	0.583
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	2	7	7
Exiting Leg	0						5						2						7
Total	0						5						9						14

PDI File #: **175974 FF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Thursday, November 30, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Ink Underground parking driveway						Traveler Street						Traveler Street						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	4
4:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	1	3	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
4:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	1	3	4
Total	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	9	4	13	15
5:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	6	6
5:30 PM	0	0	0	1	0	1	0	0	0	1	1	2	0	0	0	0	2	2	5
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4	4
Total	0	0	0	1	1	2	0	0	0	1	1	2	0	0	0	2	10	12	16
Grand Total	0	0	0	3	1	4	0	0	0	1	1	2	0	0	0	11	14	25	31
Approach %	0.0	0.0	0.0	75.0	25.0		0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	44.0	56.0		
Total %	0.0	0.0	0.0	9.7	3.2	12.9	0.0	0.0	0.0	3.2	3.2	6.5	0.0	0.0	0.0	35.5	45.2	80.6	
Exiting Leg Total	4						2						25						31

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

4:00 PM	Ink Underground parking driveway						Traveler Street						Traveler Street						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	4
4:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	1	3	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
4:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	1	3	4
Total Volume	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	9	4	13	15
% Approach Total	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	69.2	30.8		
PHF	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.500	0.813	0.938
Entering Leg	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	9	4	13	15
Exiting Leg	2						0						13						15
Total	4						0						26						30

PDI File #: **175974 FFF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	0	0	239	1	0	240	240
11:15 AM	0	1	0	1	0	0	0	0	238	2	0	240	241
11:30 AM	0	0	0	0	0	0	0	0	219	4	0	223	223
11:45 AM	0	0	0	0	0	0	0	0	227	0	0	227	227
Total	0	1	0	1	0	0	0	0	923	7	0	930	931
12:00 PM	0	1	0	1	0	0	0	0	225	8	0	233	234
12:15 PM	0	2	0	2	0	0	0	0	203	6	0	209	211
12:30 PM	0	0	0	0	0	0	0	0	218	2	0	220	220
12:45 PM	0	1	0	1	0	0	0	0	231	0	0	231	232
Total	0	4	0	4	0	0	0	0	877	16	0	893	897
1:00 PM	0	2	0	2	0	0	0	0	206	2	0	208	210
1:15 PM	0	3	0	3	0	0	0	0	217	3	0	220	223
1:30 PM	0	4	0	4	0	0	0	0	217	3	0	220	224
1:45 PM	0	8	0	8	0	0	0	0	225	2	0	227	235
Total	0	17	0	17	0	0	0	0	865	10	0	875	892
Grand Total	0	22	0	22	0	0	0	0	2665	33	0	2698	2720
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		98.8	1.2	0.0		
Total %	0.0	0.8	0.0	0.8	0.0	0.0	0.0	0.0	98.0	1.2	0.0	99.2	
Exiting Leg Total	33				2687				0				2720
Cars	0	22	0	22	0	0	0	0	2575	33	0	2608	2630
% Cars	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	96.6	100.0	0.0	96.7	96.7
Exiting Leg Total	33				2597				0				2630
Heavy Vehicles	0	0	0	0	0	0	0	0	90	0	0	90	90
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	3.3	3.3
Exiting Leg Total	0				90				0				90

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	0	0	239	1	0	240	240
11:15 AM	0	1	0	1	0	0	0	0	238	2	0	240	241
11:30 AM	0	0	0	0	0	0	0	0	219	4	0	223	223
11:45 AM	0	0	0	0	0	0	0	0	227	0	0	227	227
Total Volume	0	1	0	1	0	0	0	0	923	7	0	930	931
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		99.2	0.8	0.0		
PHF	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.965	0.438	0.000	0.969	0.966
Cars	0	1	0	1	0	0	0	0	891	7	0	898	899
Cars %	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	96.5	100.0	0.0	96.6	96.6
Heavy Vehicles	0	0	0	0	0	0	0	0	32	0	0	32	32
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	3.4	3.4
Cars Enter Leg	0	1	0	1	0	0	0	0	891	7	0	898	899
Heavy Enter Leg	0	0	0	0	0	0	0	0	32	0	0	32	32
Total Entering Leg	0	1	0	1	0	0	0	0	923	7	0	930	931
Cars Exiting Leg				7				892				0	899
Heavy Exiting Leg				0				32				0	32
Total Exiting Leg				7				924				0	931

PDI File #: **175974 FFF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Cars

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	0	0	228	1	0	229	229
11:15 AM	0	1	0	1	0	0	0	0	233	2	0	235	236
11:30 AM	0	0	0	0	0	0	0	0	210	4	0	214	214
11:45 AM	0	0	0	0	0	0	0	0	220	0	0	220	220
Total	0	1	0	1	0	0	0	0	891	7	0	898	899
12:00 PM	0	1	0	1	0	0	0	0	215	8	0	223	224
12:15 PM	0	2	0	2	0	0	0	0	197	6	0	203	205
12:30 PM	0	0	0	0	0	0	0	0	209	2	0	211	211
12:45 PM	0	1	0	1	0	0	0	0	222	0	0	222	223
Total	0	4	0	4	0	0	0	0	843	16	0	859	863
1:00 PM	0	2	0	2	0	0	0	0	201	2	0	203	205
1:15 PM	0	3	0	3	0	0	0	0	212	3	0	215	218
1:30 PM	0	4	0	4	0	0	0	0	211	3	0	214	218
1:45 PM	0	8	0	8	0	0	0	0	217	2	0	219	227
Total	0	17	0	17	0	0	0	0	841	10	0	851	868
Grand Total	0	22	0	22	0	0	0	0	2575	33	0	2608	2630
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		98.7	1.3	0.0		
Total %	0.0	0.8	0.0	0.8	0.0	0.0	0.0	0.0	97.9	1.3	0.0	99.2	
Exiting Leg Total	33				2597				0				2630

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	0	0	228	1	0	229	229
11:15 AM	0	1	0	1	0	0	0	0	233	2	0	235	236
11:30 AM	0	0	0	0	0	0	0	0	210	4	0	214	214
11:45 AM	0	0	0	0	0	0	0	0	220	0	0	220	220
Total Volume	0	1	0	1	0	0	0	0	891	7	0	898	899
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		99.2	0.8	0.0		
PHF	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.956	0.438	0.000	0.955	0.952
Entering Leg	0	1	0	1	0	0	0	0	891	7	0	898	899
Exiting Leg				7				892				0	899
Total				8				892				898	1798

PDI File #: **175974 FFF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Heavy Vehicles (Combined-Large Trucks and Buses)

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	0	0	11	0	0	11	11
11:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	5
11:30 AM	0	0	0	0	0	0	0	0	9	0	0	9	9
11:45 AM	0	0	0	0	0	0	0	0	7	0	0	7	7
Total	0	0	0	0	0	0	0	0	32	0	0	32	32
12:00 PM	0	0	0	0	0	0	0	0	10	0	0	10	10
12:15 PM	0	0	0	0	0	0	0	0	6	0	0	6	6
12:30 PM	0	0	0	0	0	0	0	0	9	0	0	9	9
12:45 PM	0	0	0	0	0	0	0	0	9	0	0	9	9
Total	0	0	0	0	0	0	0	0	34	0	0	34	34
1:00 PM	0	0	0	0	0	0	0	0	5	0	0	5	5
1:15 PM	0	0	0	0	0	0	0	0	5	0	0	5	5
1:30 PM	0	0	0	0	0	0	0	0	6	0	0	6	6
1:45 PM	0	0	0	0	0	0	0	0	8	0	0	8	8
Total	0	0	0	0	0	0	0	0	24	0	0	24	24
Grand Total	0	0	0	0	0	0	0	0	90	0	0	90	90
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Exiting Leg Total	0				90				0				90
Large Trucks	0	0	0	0	0	0	0	0	63	0	0	63	63
% Large Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.0	0.0	0.0	70.0	70.0
Exiting Leg Total	0				63				0				63
Buses	0	0	0	0	0	0	0	0	27	0	0	27	27
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0	30.0	30.0
Exiting Leg Total	0				27				0				27

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
12:00 PM	0	0	0	0	0	0	0	0	10	0	0	10	10
12:15 PM	0	0	0	0	0	0	0	0	6	0	0	6	6
12:30 PM	0	0	0	0	0	0	0	0	9	0	0	9	9
12:45 PM	0	0	0	0	0	0	0	0	9	0	0	9	9
Total Volume	0	0	0	0	0	0	0	0	34	0	0	34	34
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.850	0.000	0.000	0.850	0.850
Large Trucks	0	0	0	0	0	0	0	0	27	0	0	27	27
Large Trucks %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	79.4	0.0	0.0	79.4	79.4
Buses	0	0	0	0	0	0	0	0	7	0	0	7	7
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.6	0.0	0.0	20.6	20.6
Trucks Enter Leg	0	0	0	0	0	0	0	0	27	0	0	27	27
Bus Enter Leg	0	0	0	0	0	0	0	0	7	0	0	7	7
Total Entering Leg	0	0	0	0	0	0	0	0	34	0	0	34	34
Trucks Exiting Leg				0				27				0	27
Buses Exiting Leg				0				7				0	7
Total Exiting Leg				0				34				0	34

PDI File #: **175974 FFF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Large Trucks

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	0	0	9	0	0	9	9
11:15 AM	0	0	0	0	0	0	0	0	3	0	0	3	3
11:30 AM	0	0	0	0	0	0	0	0	7	0	0	7	7
11:45 AM	0	0	0	0	0	0	0	0	5	0	0	5	5
Total	0	0	0	0	0	0	0	0	24	0	0	24	24
12:00 PM	0	0	0	0	0	0	0	0	8	0	0	8	8
12:15 PM	0	0	0	0	0	0	0	0	6	0	0	6	6
12:30 PM	0	0	0	0	0	0	0	0	6	0	0	6	6
12:45 PM	0	0	0	0	0	0	0	0	7	0	0	7	7
Total	0	0	0	0	0	0	0	0	27	0	0	27	27
1:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
1:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
1:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
1:45 PM	0	0	0	0	0	0	0	0	4	0	0	4	4
Total	0	0	0	0	0	0	0	0	12	0	0	12	12
Grand Total	0	0	0	0	0	0	0	0	63	0	0	63	63
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Exiting Leg Total	0				63				0				63

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
12:00 PM	0	0	0	0	0	0	0	0	8	0	0	8	8
12:15 PM	0	0	0	0	0	0	0	0	6	0	0	6	6
12:30 PM	0	0	0	0	0	0	0	0	6	0	0	6	6
12:45 PM	0	0	0	0	0	0	0	0	7	0	0	7	7
Total Volume	0	0	0	0	0	0	0	0	27	0	0	27	27
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.844	0.000	0.000	0.844	0.844
Entering Leg	0	0	0	0	0	0	0	0	27	0	0	27	27
Exiting Leg				0				27				0	27
Total				0				27				27	54

PDI File #: **175974 FFF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Buses

	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
11:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
11:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
11:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	0	0	0	0	0	0	0	8	0	0	8	8
12:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
12:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	0	0	0	0	0	0	0	7	0	0	7	7
1:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
1:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
1:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
1:45 PM	0	0	0	0	0	0	0	0	4	0	0	4	4
Total	0	0	0	0	0	0	0	0	12	0	0	12	12
Grand Total	0	0	0	0	0	0	0	0	27	0	0	27	27
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Exiting Leg Total	0				27				0				27

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

1:00 PM	Ink Underground parking driveway				Traveler Street				Traveler Street				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
1:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
1:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
1:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
1:45 PM	0	0	0	0	0	0	0	0	4	0	0	4	4
Total Volume	0	0	0	0	0	0	0	0	12	0	0	12	12
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.750	0.750
Entering Leg	0	0	0	0	0	0	0	0	12	0	0	12	12
Exiting Leg				0				12				0	12
Total				0				12				12	24

PDI File #: **175974 FFF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Ink Underground parking driveway						Traveler Street						Traveler Street						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
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	1	0	0	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
12:45 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	5	0	0	0	0	5	5
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
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	3	0	0	0	0	3	3
Total	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	10
Approach %	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		
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	100.0	0.0	0.0	0.0	0.0	100.0	
Exiting Leg Total	0						10						0						10

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Ink Underground parking driveway						Traveler Street						Traveler Street						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5
% 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	0.625	0.000	0.000	0.000	0.000	0.625	0.625
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5
Exiting Leg	0						5						0						5
Total	0						5						5						10

PDI File #: **175974 FFF**
 Location: **N: Ink Underground parking driveway**
 Location: **E: Traveler Street W: Traveler Street**
 City, State: **Boston, MA**
 Client: **VHB/ P. Dunford**
 Site Code: **10995.05**
 Count Date: **Saturday, December 2, 2017**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Pedestrians

	Ink Underground parking driveway						Traveler Street						Traveler Street						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9	11	11
11:15 AM	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	3	3	6	8
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	8	8
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	14	16	16
Total	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	11	30	41	43
12:00 PM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	2	8	10	12
12:15 PM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	17	17	19
12:30 PM	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	8	13	21	23
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	2	9	9
Total	0	0	0	1	4	5	0	0	0	1	0	1	0	0	0	17	40	57	63
1:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	5	5	10	11
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	4
1:30 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	13	5	18	19
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	2	9	9
Total	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	27	14	41	43
Grand Total	0	0	0	3	6	9	0	0	0	1	0	1	0	0	0	55	84	139	149
Approach %	0.0	0.0	0.0	33.3	66.7		0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	39.6	60.4		
Total %	0.0	0.0	0.0	2.0	4.0	6.0	0.0	0.0	0.0	0.7	0.0	0.7	0.0	0.0	0.0	36.9	56.4	93.3	
Exiting Leg Total	9						1						139						149

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:45 AM	Ink Underground parking driveway						Traveler Street						Traveler Street						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	14	16	16
12:00 PM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	2	8	10	12
12:15 PM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	17	17	19
12:30 PM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	17	17	19
Total Volume	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	4	56	60	66
% Approach Total	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	6.7	93.3		
PHF	0.000	0.000	0.000	0.000	0.750	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.824	0.882	0.868
Entering Leg	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	4	56	60	66
Exiting Leg	6						0						60						66
Total	12						0						120						132

MassDOT Seasonal Adjustment Factors

MASSACHUSETTS HIGHWAY DEPARTMENT - STATEWIDE TRAFFIC DATA COLLECTION

2011 WEEKDAY SEASONAL FACTORS *

* Note: These are weekday factors. The average of the factors for the year will not equal 1, as weekend data are not considered.

FACTOR GROUP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
GROUP 1 - WEST INTERSTATE	0.98	0.93	0.90	0.89	0.90	0.88	0.91	0.90	0.89	0.89	0.93	0.95
Use group 2 for R5, R6, & R0												
GROUP 2 - RURAL MAJOR COLLECTOR (R-5)	1.12	1.12	1.07	0.99	0.91	0.90	0.86	0.86	0.92	0.93	1.01	1.05
GROUP 3A - RECREATIONAL **(1-4) See below	1.26	1.25	1.20	1.06	0.96	0.89	0.76	0.76	0.92	0.99	1.08	1.14
GROUP 3B - RECREATIONAL *** (5) See below	1.22	1.26	1.22	1.06	0.96	0.90	0.72	0.74	0.97	1.02	1.14	1.15
GROUP 4 - I-495 INTERSTATE	1.02	1.00	1.00	0.96	0.92	0.89	0.85	0.83	0.93	0.96	1.01	1.03
GROUP 5 - EAST INTERSTATE	1.04	1.00	0.96	0.93	0.92	0.91	0.91	0.89	0.93	0.93	0.96	1.01
GROUP 6: Use group 6 for U2, U3, U5, U6, U0, R2, & R3												
URBAN ARTERIALS, COLLECTORS & RURAL ARTERIALS (R-2, R-3)	1.03	1.01	0.96	0.92	0.91	0.90	0.92	0.92	0.93	0.92	0.97	0.97
GROUP 7 - I-84 PROXIMITY (STA. 17, 3921)	1.24	1.24	1.15	1.04	0.99	1.00	0.93	0.89	1.05	1.05	1.05	1.12
GROUP 8 - I-295 PROXIMITY (STA. 6590)	1.00	0.99	0.95	0.92	0.94	0.91	0.93	0.92	0.95	0.94	0.97	0.95
GROUP 9 - I-195 PROXIMITY (STA. 7)	1.13	1.05	1.03	0.95	0.89	0.87	0.86	0.79	0.88	0.91	0.99	1.03

RECREATIONAL: (ALL YEARS)

**GROUP 3A:

1. CAPE COD (ALL TOWNS)

2. PLYMOUTH (SOUTH OF RTE. 3A)

7014, 7079, 7080, 7090, 7091, 7092, 7093, 7094, 7095, 7096, 7097, 7108, 7178

3. MARTHA'S VINEYARD

4. NANTUCKET

***GROUP 3B:

5. PERMANENTS 2 & 189

1066, 1067, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092,

1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104,

1105, 1106, 1107, 1108, 1113, 1114, 1116, 2196, 2197, 2198

2011 AXLE CORRECTION FACTORS

ROAD INVENTORY

AXLE CORRECTION

FUNCTIONAL CLASSIFICATION

FACTOR

RURAL

1

0.95

2

0.97

3

0.98

0.98

URBAN

1

0.96

2,3

0.98

5

0.98

0.99

I-84

0.90

ROUND OFF

0 - 999.....10

> 1,000.....100

Apply I-84 factor to stations:

3290, 3921, 3929

Public Transportation Bus Routes and Schedules

This map shows the area around Downtown Crossing and South Station in Boston. Key features include:

- Stations:** Downtown Crossing, South Station, Courthouse, WTC, Tufts Medical, China Town, Herald St, Broadway, East St, Berkeley St, Union Sq, Park St, Newton St, Worcester Sq, Massachusetts Ave, Lenox St, Melnea Cass Blvd, Dudley Square, Andrew, Newmarket, McCormack Housing, BaySide Expo Center, JFK/UMass, Uphams Corner, Dudley St, Warren St, Blue Hill Ave, and Dudley St.
- Transit Lines:** Silver Line SL 1, Silver Line SL 2, Orange Line, Red Line, and Silver Line SL 3.
- Streets:** Boylston St, Berkeley St, Broadway, Herald St, East St, Union Sq, Park St, Newton St, Worcester Sq, Massachusetts Ave, Lenox St, Melnea Cass Blvd, Dudley Square, Andrew, Newmarket, McCormack Housing, BaySide Expo Center, JFK/UMass, Uphams Corner, Dudley St, Warren St, Blue Hill Ave, and Dudley St.
- Other Landmarks:** Rows Wharf, Hingham Ferry, Farringham Rd, City Point, E. 1st St, E. 4th St, E. 8th St, E. 11th St, E. 12th St, E. 13th St, E. 14th St, E. 15th St, E. 16th St, E. 17th St, E. 18th St, E. 19th St, E. 20th St, E. 21st St, E. 22nd St, E. 23rd St, E. 24th St, E. 25th St, E. 26th St, E. 27th St, E. 28th St, E. 29th St, E. 30th St, E. 31st St, E. 32nd St, E. 33rd St, E. 34th St, E. 35th St, E. 36th St, E. 37th St, E. 38th St, E. 39th St, E. 40th St, E. 41st St, E. 42nd St, E. 43rd St, E. 44th St, E. 45th St, E. 46th St, E. 47th St, E. 48th St, E. 49th St, E. 50th St, E. 51st St, E. 52nd St, E. 53rd St, E. 54th St, E. 55th St, E. 56th St, E. 57th St, E. 58th St, E. 59th St, E. 60th St, E. 61st St, E. 62nd St, E. 63rd St, E. 64th St, E. 65th St, E. 66th St, E. 67th St, E. 68th St, E. 69th St, E. 70th St, E. 71st St, E. 72nd St, E. 73rd St, E. 74th St, E. 75th St, E. 76th St, E. 77th St, E. 78th St, E. 79th St, E. 80th St, E. 81st St, E. 82nd St, E. 83rd St, E. 84th St, E. 85th St, E. 86th St, E. 87th St, E. 88th St, E. 89th St, E. 90th St, E. 91st St, E. 92nd St, E. 93rd St, E. 94th St, E. 95th St, E. 96th St, E. 97th St, E. 98th St, E. 99th St, E. 100th St.

Legend:

- Indicates MBTA pass and fare sales locations.
- Fare vending machines are also located at all subway stations and Dudley Station.

Indicates MBTA pass and fare sales locations.
Fare vending machines are also located at all subway stations and Dudley Station.

9

Weekday

9

Saturday

9

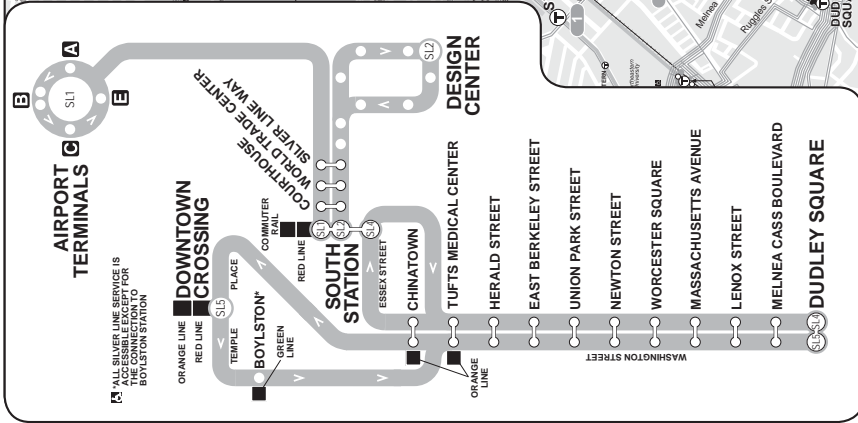
Sunday

Inbound			Outbound			Inbound			Outbound		
Leave City Point	Arrive Broadway Station	Arrive Copley Square	Leave Copley Square	Arrive Broadway Station	Arrive City Point	Leave City Point	Arrive Broadway Station	Arrive Copley Square	Leave Copley Square	Arrive Broadway Station	Arrive City Point
5:13A	5:24A	5:36A	L5:41A	5:47A	5:55A	5:10A	5:21A	5:32A	5:40A	5:46A	5:53A
5:35	5:46	5:58	L6:03	6:11	6:22	5:35	5:46	5:57	6:05	6:11	6:21
5:57	6:09	6:25	L6:25	6:33	6:44	6:00	6:11	6:22	6:30	6:36	6:46
6:10	6:23	6:39	L6:38	6:49	6:52	6:25	6:36	6:47	6:50	6:56	7:06
6:20	6:33	6:49	L6:44	6:52	7:03	6:50	7:01	7:15	7:25	7:31	7:41
6:30	6:43	6:59	L6:54	7:02	7:13	Every	20 Mins.	Until	Every	20 Mins.	Until
6:35	6:50	7:12	L7:04	7:12	7:23	Every	20 Mins.	Until	Every	20 Mins.	Until
6:40	6:53	7:29	L7:17	7:25	7:39	11:50	12:04P	12:21P	11:45	11:55	12:10P
6:50	7:04	7:34	L7:30	7:39	7:54	12:10P	12:24P	12:41P	12:05P	12:15P	12:30P
7:00	7:15	7:35	L7:41	7:50	8:05	12:30	12:44	1:01	Every	1:05	1:29
7:05	7:20	7:45	L7:46	7:55	8:10	12:50	1:04	1:21	1:05	1:15	1:30
7:10	7:25	7:50	L7:51	8:06	8:15	1:10	1:24	1:41	1:25	1:35	1:50
7:15	7:30	7:55	L7:56	8:12	8:27	1:30	1:44	2:01	1:45	1:55	2:10
7:20	7:35	8:19	L8:03	8:18	8:32	1:50	2:04	2:21	2:05	2:15	2:30
7:25	7:50	8:19	L8:09	8:19	8:33	2:10	2:24	2:41	2:25	2:35	2:50
7:46	8:03	8:26	L8:15	8:24	8:38	2:30	2:44	3:01	2:45	2:55	3:10
7:48	8:05	8:28	L8:17	8:26	8:41	2:50	3:03	3:20	3:25	3:35	3:50
7:54	8:10	8:34	L8:24	8:33	8:47	3:10	3:23	3:40	3:45	3:56	4:13
7:54	8:11	8:35	L8:32	8:41	8:55	3:30	3:43	4:00	3:45	3:56	4:13
L8:02	8:18	8:42	L8:40	8:49	9:03	3:50	4:03	4:20	4:05	4:16	4:32
L8:02	8:19	8:43	Every	10 Mins.	or Less	4:10	4:23	4:40	4:25	4:36	4:50
L8:10	8:26	8:50	Every	10 Mins.	or Less	4:30	4:43	5:00	4:45	4:55	5:09
L8:10	8:26	8:50	Every	10 Mins.	or Less	4:55	5:08	5:25	5:10	5:20	5:34
8:10	8:26	8:50	10:15	10:24	10:39	5:20	5:33	5:50	5:35	5:45	5:59
8:15	8:31	8:54	10:30	10:39	10:54	5:45	5:58	6:13	6:00	6:10	6:24
Every	7 Mins.	or Less	10:50	10:59	11:14	6:10	6:22	6:37	6:50	6:35	6:49
Every	9:05	9:26	11:15	11:24	11:41	6:35	6:47	7:02	7:20	7:00	7:12
Every	10 Mins.	or Less	11:38	11:49	12:07P	7:00	7:12	7:27	7:15	7:23	7:35
10:04	10:11	10:20	12:03P	12:14P	12:32P	7:25	7:37	7:52	7:40	7:48	8:00
10:04	10:18	10:37	12:30	12:41	12:59	7:50	8:02	8:17	8:05	8:13	8:25
10:21	10:35	10:54	12:55	1:06	1:24	8:15	8:27	8:40	8:32	8:40	8:52
10:37	10:51	11:10	1:30	1:41	1:59	8:40	8:51	9:04	9:02	9:10	9:21
11:01	11:15	11:34	1:40	1:51	2:09	9:00	9:11	9:24	9:32	9:40	9:51
11:26	11:50	12:09	Every	15 Mins.	or Less	9:30	9:41	9:54	10:02	10:10	10:21
11:46	12:10P	12:19P	2:40	Is 3:04	3:11	10:00	10:11	10:24	10:32	10:40	10:51
12:12P	12:25P	12:44P	3:20	Is 3:04	3:20	10:30	10:41	10:54	11:02	11:10	11:21
12:36	12:50	1:09	3:35	3:08	3:29	11:00	11:11	11:24	11:32	11:40	11:51
Every	1:15	1:34	3:55	3:15	3:34	11:30	11:41	11:54	12:02A	12:10A	12:21A
Every	4:35	4:54	4:06	4:09	4:31	12:00M	12:11A	12:24A	12:32	12:40	12:51
Every	5:13	5:35	4:53	5:08	5:33	12:30A	12:41	12:54	12:55	1:03	1:14
Every	5:10	5:10	5:10	5:15	5:37	1:00	1:11	1:24	1:25	1:33	1:44
Every	6:15	6:28	6:49	6:49	6:52	1:30	1:41	1:54	1:32	1:40	1:51
6:28	6:41	7:02	Every	6 Mins.	Until	1:50	2:01	2:14	1:42	1:50	2:01
6:33	6:46	7:07	6:58	7:08	7:18	2:10	2:21	2:34	1:50	2:00	2:11
6:42	6:55	7:16	6:58	7:08	7:26	2:30	2:41	2:54	2:10	2:20	2:31
6:53	7:06	7:37	7:04	7:16	7:34	2:50	3:01	3:14	2:30	2:40	2:51
7:02	7:15	7:34	7:12	7:24	7:42	3:10	3:21	3:34	2:50	3:00	3:11
7:07	7:20	7:38	Every	8 Mins.	Until	3:30	3:41	3:54	3:10	3:20	3:31
7:19	7:31	7:47	8:00	8:12	8:25	3:50	4:01	4:14	3:30	3:40	3:51
7:36	7:48	7:57	8:12	8:22	8:35	4:10	4:21	4:34	3:50	4:00	4:11
7:57	8:09	8:18	8:34	8:44	8:57	4:30	4:41	4:54	4:10	4:20	4:31
8:02	8:13	8:28	8:48	8:58	9:11	4:50	5:01	5:14	4:30	4:40	4:51
8:21	8:32	8:47	9:03	9:13	9:26	5:10	5:21	5:34	4:50	5:00	5:11
8:31	8:43	8:58	9:28	9:38	9:51	5:30	5:41	5:54	5:10	5:20	5:31
8:56	9:07	9:23	9:53	10:05	10:18	5:50	6:01	6:14	5:30	5:40	5:51
9:30	9:41	9:54	Every	25 Mins.	Until	6:10	6:21	6:34	5:50	6:00	6:11
9:50	10:06A	12:06A	12:25A	12:34A	12:43A	6:30	6:41	6:54	6:10	6:20	6:31
12:00A	12:00A	12:30A	12:55	1:02	1:13	6:50	7:01	7:14	6:30	6:40	6:51

</

schedule change

Silver Line SL1, SL2, SL4, SL5



Silver Line

Winter December 31, 2017 - March 31, 2018

- SL1 Logan Airport-South Station
- SL2 Design Center-South Station
- SL4 Dudley Station-South Station at Essex Street
- SL5 Dudley Station-Downtown Crossing at Temple Place

Serving

- Federal Courthouse
- World Trade Center
- Silver Line Way
- Logan Airport terminals
- Dudley Station
- Red Line



Massachusetts Bay Transportation Authority **massDOT**

Information 617-222-3200 • 1-800-392-6100 (TTY) 617-222-5146 • www.mbta.com

*SNOW ROUTE

During snow storms or when slippery road conditions are present, the Silver Line SL2 route will be cancelled. To view service updates or request T-Alerts sent via email or text message, visit www.mbta.com.

Snow route SL2

Omits 88 Black Falcon Avenue. Use bus stop on Drydock Avenue.

[illegible]

T Fares

PRICE PER TRIP	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	\$1.70	\$1.50	\$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
UNLIMITED TRIP PASSES				
1-Day	\$12.00	\$12.00	\$12.00	\$12.00
7-Day	\$21.25	\$21.25	\$21.25	\$21.25
Monthly	\$55.00	\$55.00	\$84.50	\$84.50
Senior/TAP Monthly\$30.00/month for unlimited travel on Local Bus and Rapid Transit				

VALID PASSES: LinkPass (\$84.50/mo.); Student LinkPass* (\$30/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;

* Available to students through participating middle schools and

high schools.

*** Available to Medicare cardholders, seniors 65+, and persons with disabilities

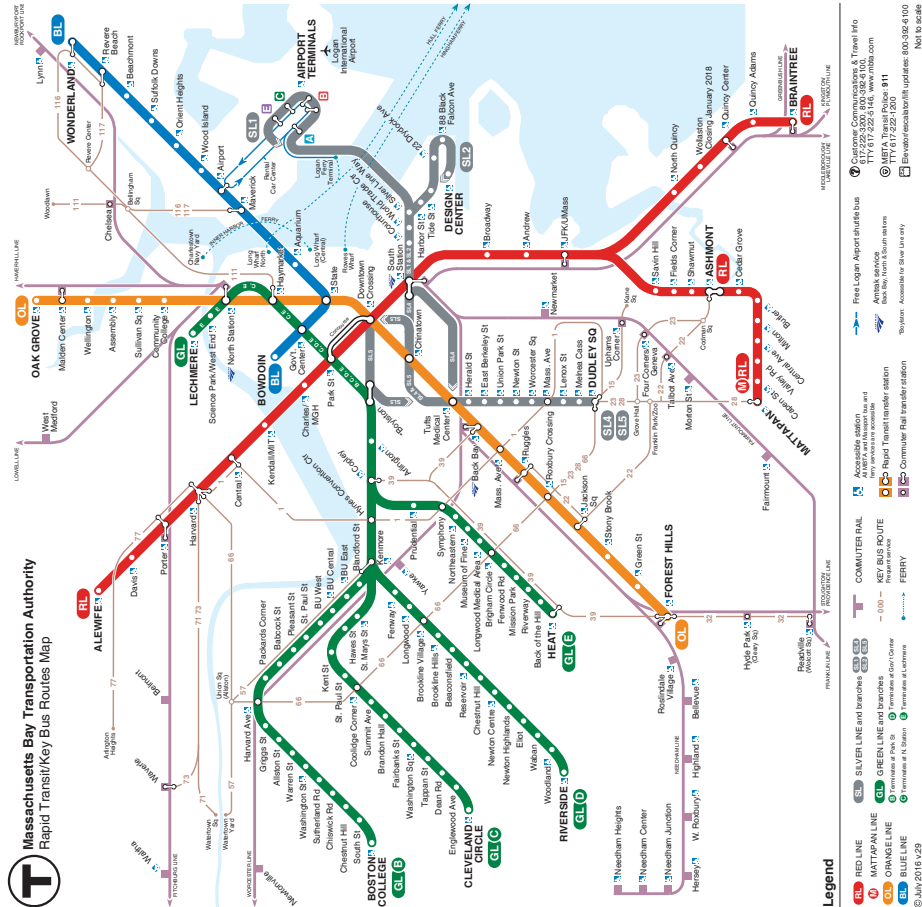
****For Silver Line SL4 or SL5 pay \$2.75. Also see "transfers."**

TRANSFERS

paying with a CharlieTicket or CharlieCard, discounted transfers that are available are automatic — just use the same ticket or card throughout your trip. If paying with cash onboard a vehicle, free transfers are only allowed between rapid transit lines and inside paid platform areas at gated stations.

SCHEDULES

Schedules are available at the following stations: Park Street, Airport, Malden Center, North Station, South Station, Downtown Crossing (Orange Line Level), Back Bay, Downtown Crossing (Orange Line Level), Haymarket (Green Line Level), Quincy Center, and Quincy College. Schedules are also available at the State Transportation Building (10 Park Plaza), 45 High St., and online at mbta.com.



Rapid Transit

Winter December 31, 2017 - March 31, 2018



Blue Line



Green Line



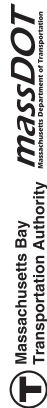
Orange Line



Red Line



Silver Line



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Information 617-222-3200 • 1-800-392-6100

(TTY) 617-222-5146 • www.mbta.com

Rapid Transit Line	Weekday					Saturday					Sunday					Schedule Periods (approximate): AM Rush Hour: 6:30 AM - 9:00 AM Midday: 9:00 AM - 3:30 PM PM Rush Hour: 3:30 PM - 6:30 PM Evening: 6:30 PM - 8:00 PM Late Night: 8:00 PM - CLOSE Red Line Note: *Braintree Line: Construction on Wollaston Station will begin in January 2018. Wollaston Station will be closed during construction and shuttle buses will operate between Wollaston and North Quincy Stations. Please visit mbta.com/alerts for updated service information. Mattapan Note: Saturday and Sunday before 10:00 AM and after 8:00 PM trips depart every 26 minutes and the rest of the day every 12 minutes. Also, see Mattapan Line Schedule Card. Green Line Notes: 1 - The first two C Line AM inbound trips run through to Lechmere Station on weekdays. 2 - The first B Line and second C Line AM inbound trips run through to Lechmere Station on weekends. 3 - The 12:32AM trip from Heath St is the last connecting train to other lines downtown. The 12:47AM trip from Heath St. runs in service to Lechmere with no guaranteed connections. f - After exiting Ted Williams Tunnel bus will only service World Trade Center and South Station stops. w - Last trips wait at some stations, primarily in the Downtown area, for connecting service. Departure times are approximate. Winter 2018 Holidays January 1: see Sunday January 15 & February 19: see Saturday Silver Line see Weekday		
	First Trip	AM Peak	Midday	PM Peak	Late Night	Last Trip	First Trip	AM Peak	PM Peak	Evening	Late Night	Last Trip	First Trip	AM Peak	PM Peak		Evening	Late Night
Red Line Alewife Braintree*	5:24AM 5:15AM	9 min 9 min	14 min 14 min	9 min 9 min	12 min 12 min	12:15AM 12:17AM	5:24AM 5:15AM	14 min 14 min	14 min 14 min	14 min 14 min	14 min 14 min	12:15AM 12:17AM	6:08AM 6:00AM	15 min 15 min	15 min 15 min	15 min 15 min	16 min 16 min	12:15AM 12:17AM
Alewife Ashmont	5:16AM 5:16AM	9 min 9 min	14 min 14 min	9 min 9 min	12 min 12 min	12:22AM 12:30AM	5:16AM 5:16AM	14 min 14 min	14 min 14 min	14 min 14 min	14 min 14 min	12:22AM 12:30AM	6:00AM 6:00AM	15 min 15 min	15 min 15 min	15 min 15 min	16 min 16 min	12:22AM 12:30AM
"M" Ashmont Mattapan	5:17AM 5:05AM	5 min 5 min	8 min 8 min	5 min 5 min	12 min 12 min	1:05AM 12:53AM	5:15AM 5:05AM	26 min 26 min	12 min 12 min	12 min 12 min	26 min 26 min	1:05AM 12:53AM	6:03AM 5:51AM	26 min 26 min	12 min 12 min	12 min 12 min	26 min 26 min	1:05AM 12:53AM
Blue Line Wonderland Orient Heights	5:13AM 5:13AM 5:29AM	5 min 5 min 5 min	9 min 9 min 9 min	5 min 5 min 5 min	9 min 9 min 9 min	12:28AM 12:33AM 1:00AM	5:25AM 5:13AM 5:29AM	9 min 9 min 9 min	9 min 9 min 9 min	9 min 9 min 9 min	13 min 13 min 13 min	12:28AM 12:33AM 1:00AM	5:58AM 6:03AM 6:21AM	13 min 13 min 13 min	9 min 9 min 9 min	9 min 9 min 9 min	13 min 13 min 13 min	12:28AM 12:33AM 1:00AM
Orange Line Oak Grove Forest Hills	5:16AM 5:16AM	6 min 6 min	9 min 9 min	6 min 6 min	10 min 10 min	12:30AM 12:28AM	5:16AM 5:16AM	10 min 10 min	9 min 9 min	11 min 11 min	11 min 11 min	12:30AM 12:28AM	6:00AM 6:00AM	13 min 13 min	11 min 11 min	11 min 11 min	11 min 11 min	12:30AM 12:28AM
Green Line B Boston College Park Street	5:01AM 5:42AM	6 min 6 min	8 min 8 min	6 min 6 min	8 min 8 min	12:10AM 12:52AM	4:45AM ² 5:40AM ¹	11 min 11 min	7 min 7 min	7 min 7 min	11 min 11 min	12:09AM 12:52AM	5:20AM ² 6:12AM ¹	12 min 12 min	9 min 9 min	9 min 9 min	7 min 7 min	12:10AM 12:52AM
C Cleveland Circle North Station	5:01AM ¹ 5:55AM	6 min 6 min	9 min 9 min	7 min 7 min	10 min 10 min	12:10AM 12:46AM	4:50AM ² 5:30AM	10 min 10 min	9 min 9 min	8 min 8 min	10 min 10 min	12:10AM 12:46AM	5:30AM ² 6:06AM	12 min 12 min	11 min 11 min	11 min 11 min	9 min 9 min	12:10AM 12:46AM
D Riverside Government Ctr.	4:56AM 5:41AM	6 min 6 min	8 min 8 min	6 min 6 min	8 min 8 min	12:05AM 12:49AM	4:55AM 5:38AM	13 min 13 min	9 min 9 min	8 min 8 min	10 min 10 min	12:02AM 12:49AM	5:25AM 6:10AM	13 min 13 min	11 min 11 min	11 min 11 min	11 min 11 min	12:05AM 12:49AM
E Lechmere Heath Street	5:01AM 5:38AM	6 min 6 min	8 min 8 min	6 min 6 min	9 min 9 min	12:30AM ³ 12:47AM	5:01AM 5:39AM	11 min 11 min	9 min 9 min	11 min 11 min	11 min 11 min	12:30AM ³ 12:47AM	5:35AM 6:15AM	12 min 12 min	12 min 12 min	12 min 12 min	12 min 12 min	12:30AM ³ 12:47AM
Silver Line SL1 Logan Airport South Station	5:38AM 5:40AM	8 min 8 min	8 min 8 min	10 min 10 min	8 min 8 min	12:44AM 12:30AM	5:33AM 5:35AM	12 min 12 min	12 min 12 min	12 min 12 min	12 min 12 min	12:45AM 12:30AM	5:50AM 6:12AM	12 min 12 min	8 min 8 min	8 min 8 min	8 min 8 min	12:45AM 12:30AM
SL2 Design Center South Station	6:03AM 5:45AM	5 min 5 min	10 min 10 min	5 min 5 min	9 min 9 min	12:30AM 12:50AM	6:10AM 5:50AM	15 min 15 min	15 min 15 min	15 min 15 min	15 min 15 min	12:35AM 12:49AM	6:50AM 6:35AM	15 min 15 min	15 min 15 min	15 min 15 min	15 min 15 min	12:34AM 12:48AM
Additional Waterfront-only service Silver Line Way South Station	5:28AM 5:35AM	5 min 5 min				12:53AM	5:28AM					12:26AM	6:05AM					1:01AM
SL4 Dudley Station South Station	5:20AM 5:35AM	12 min 12 min	16 min 16 min	14 min 14 min	12 min 12 min	12:20AM 12:39AM	5:23AM 5:40AM	15 min 15 min	15 min 15 min	15 min 15 min	20 min 20 min	12:20AM 12:40AM	6:02AM 6:20AM	15 min 15 min	15 min 15 min	15 min 15 min	20 min 20 min	12:20AM 12:40AM
SL5 Dudley Station Downtown Xing	5:15AM 5:32AM	8 min 8 min	10 min 10 min	8 min 8 min	7 min 7 min	12:53AM 1:07AM	5:19AM 5:34AM	10 min 10 min	10 min 10 min	11 min 11 min	11 min 11 min	12:46AM 1:00AM	6:00AM 6:15AM	10 min 10 min	8 min 8 min	9 min 9 min	9 min 9 min	12:25AM 12:47AM

Schedule Periods (approximate):
 AM Rush Hour: 6:30 AM - 9:00 AM
 Midday: 9:00 AM - 3:30 PM
 PM Rush Hour: 3:30 PM - 6:30 PM
 Evening: 6:30 PM - 8:00 PM
 Late Night: 8:00 PM - CLOSE

Red Line Note:

*Braintree Line:
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w - Last trips wait at some stations, primarily in the Downtown area, for connecting service. Departure times are approximate.

Winter 2018 Holidays
 January 1: see Sunday
 January 15 & February 19: see Saturday
 Silver Line see Weekday

Vehicle Crash Data

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston, MA COUNT DATE : 11/30/2017

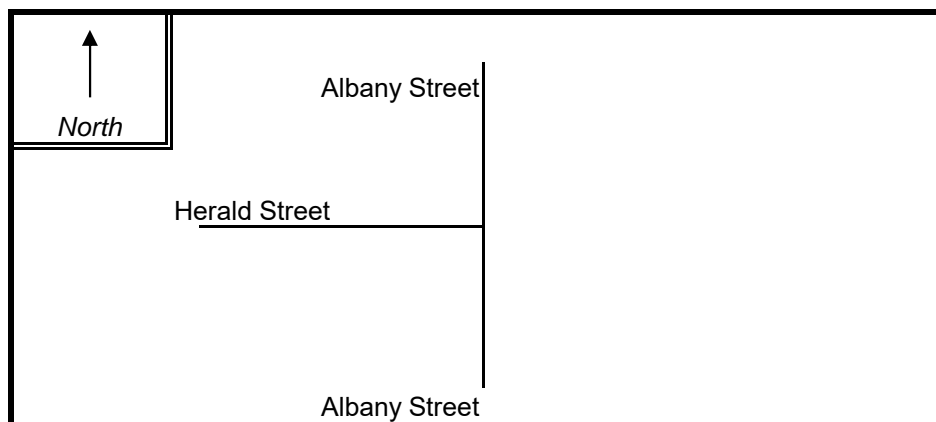
DISTRICT : 6 UNSIGNALIZED : 0.58 SIGNALIZED : X 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Albany Street

MINOR STREET(S) : Herald 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) :		1,045	1,510			2,555

" K " FACTOR :

0.090

INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

28,389

TOTAL # OF CRASHES :

10

OF YEARS :

5

AVERAGE # OF CRASHES PER YEAR (A) :

2.00

CRASH RATE CALCULATION :

0.19

RATE = $\frac{(A * 1,000,000)}{(V * 365)}$

Comments : MassDOT Accident Data

Project Title & Date: _____

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston, MA COUNT DATE : 11/30/2017

DISTRICT : 6 UNSIGNALIZED : SIGNALIZED : 0.76

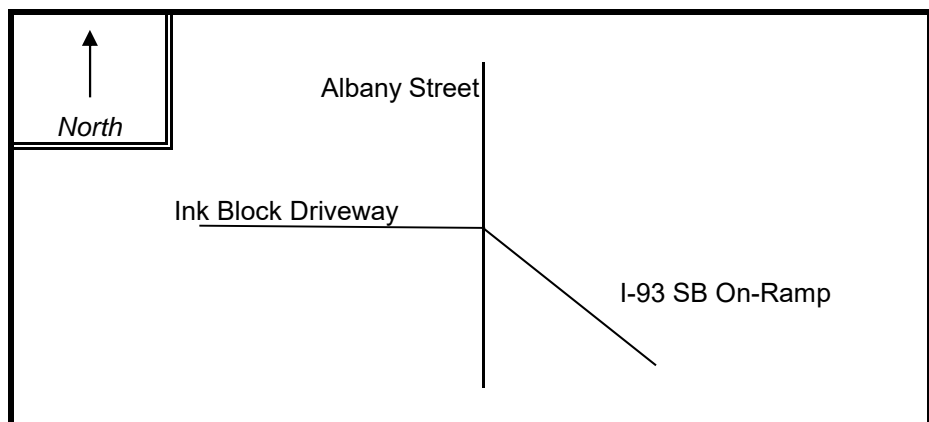
~ INTERSECTION DATA ~

MAJOR STREET : Albany Street

MINOR STREET(S) : Ink Block Driveway

I-93 SB On-Ramp

**INTERSECTION
DIAGRAM**
(Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :		2,555	5			2,560

" K " FACTOR :

0.090

INTERSECTION ADT (**V**) = TOTAL DAILY
APPROACH VOLUME :

28,444

TOTAL # OF CRASHES :

1

OF
YEARS :

5

AVERAGE # OF
CRASHES PER YEAR
(**A**) :

0.20

CRASH RATE CALCULATION :

0.02

$$\text{RATE} = \frac{(A * 1,000,000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date: _____

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Boston, MA COUNT DATE : 2/15/2011

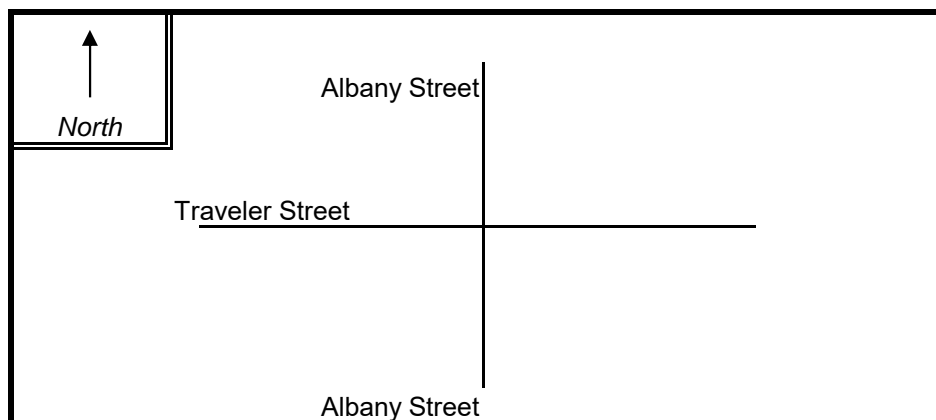
DISTRICT : 6 UNSIGNALIZED : SIGNALIZED : 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Albany Street

MINOR STREET(S) : Traveler 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) :		1,540	320			1,860

" K " FACTOR :

0.090

INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

20,667

TOTAL # OF CRASHES :

23

OF YEARS :

5

AVERAGE # OF CRASHES PER YEAR (A) :

4.60

CRASH RATE CALCULATION :

0.61

$$\text{RATE} = \frac{(A * 1,000,000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date: _____

Day	Crash Date	Crash Time	Crash Severity	Number of NonFatal Injuries	Number of Fatal Injuries	Number of Vehicles	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Sequence of Events	Vehicle Configuration	Age of Driver - Youngest Known	Age of Driver - Oldest Known	Driver Contributing Codes	Non Motorist Type	Road Surface	Ambient Light	Weather Condition	Roadway	Near Intersection Roadway
Herald Street at Albany Street																					
Saturday	6/25/2011	2:27:00 AM	Non-fatal injury		1	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)	25-34	35-44	D1:(No improper driving) D2:(Operating vehicle in erratic, reckless,		Wet	Dark - lighted roadway	Cloudy/ Rain	ALBANY STREET	HERALD STREET
Friday	8/5/2011	2:23:00 AM	Property damage only (none injured)		0	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)	21-24	35-44	D1:(No improper driving) D2:(Followed too closely)		Dry	Dark - lighted roadway	Clear	ALBANY STREET	HERALD STREET
Thursday	10/13/2011	11:55:00 AM	Property damage only (none injured)		0	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)	35-44	65-74	D1:(No improper driving) D2:(Inattention)		Dry	Daylight	Clear	ALBANY STREET	HERALD STREET
Saturday	11/5/2011	1:55:00 AM	Property damage only (none injured)		0	0	2	Rear-end	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)	25-34	25-34	D1:(No improper driving) D2:()		Dry	Dark - lighted roadway	Clear	ALBANY STREET	HERALD STREET
Friday	7/20/2012	4:45:00 AM	Property damage only (none injured)		0	0	2	Rear-end	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)	25-34	55-64	D1:(Followed too closely) D2:(No improper driving)		Dry	Dark - lighted roadway	Clear	HERALD STREET / ALBANY STREET	
Friday	3/15/2013	3:01:00 PM	Property damage only (none injured)		0	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Bus (seats for more than 15 people, including driver)) V2:(Passenger car)	25-34	35-44	D1:(Inattention) D2:(No improper driving)		Dry	Daylight	Clear	ALBANY STREET / HERALD STREET	
Monday	4/1/2013	8:32:00 PM	Property damage only (none injured)		0	0	2	Angle	V1: Turning right / V2:Turning right	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Bus (seats for more than 15 people, including driver)) V2:(Passenger car)	55-64	55-64	D1:(Unknown) D2:(Unknown),(Unknown)		Dry	Dark - lighted roadway	Cloudy/ Cloudy	HERALD STREET / ALBANY STREET	
Thursday	5/2/2013	2:28:00 AM	Non-fatal injury		1	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)	21-24	21-24	D1:(Inattention) D2:(No improper driving)		Dry	Dark - lighted roadway	Clear	ALBANY STREET / HERALD STREET	
Sunday	9/15/2013	8:06:00 AM	Property damage only (none injured)		0	0	2	Angle	V1: Turning right / V2:Turning right	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)	21-24	25-34	D1:(Operating vehicle in erratic, reckless, careless, negligent or D1:(Inattention) D2:(No improper driving)		Dry	Daylight	Clear	ALBANY STREET / HERALD STREET	
Friday	8/7/2015	12:20:00 AM	Property damage only (none injured)		0	0	2	Rear-end	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)	21-24	21-24			Dry	Dark - lighted roadway	Clear	ALBANY STREET	HERALD STREET
Albany Street at Ink Block Driveway & I-93 On-Ramp																					
Sunday	10/27/2013	7:34:00 AM	Property damage only (none injured)		0	0	1	Head-on	V1: Travelling straight ahead	V1:E	V1:(Other)	V1:(Collision with motor vehide in traffic),(Collision with other fixed object(wall, building, tunnel, etc.))	25-34	25-34	D1:()		Wet	Daylight	Rain	RAMP - ALBANY STREET TO RT 93 SB / ALBANY STREET	
Traveler Street at Albany Street																					
Tuesday	4/19/2011	5:31:00 PM	Non-fatal injury		2	0	2	Sideswipe, same direction	V1: Turning left / V2:Travelling straight ahead	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)	35-44	55-64	D1:(No improper driving),(No improper driving) D2:(Disregarded		Wet	Daylight	Rain/Rain	ALBANY STREET / TRAVELER STREET	
Thursday	4/28/2011	4:22:00 PM	Property damage only (none injured)		0	0	2	Angle	V1: Travelling straight ahead / V2:Turning left	V1:8 / V2:8	V1:(Collision with other fixed object (wall, building, tunnel, etc.)) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)	21-24	25-34	D1:(Disregarded traffic signs, signals, road markings) D2:(No		Wet	Daylight	Rain/ Cloudy	ALBANY STREET / TRAVELER STREET	
Monday	5/2/2011	4:10:00 PM	Property damage only (none injured)		0	0	2	Angle	V1: Turning left / V2:Turning left	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)	45-54	65-74	D1:(No improper driving) D2:(Failure to keep in proper lane or running		Dry	Daylight	Clear	ALBANY STREET	TRAVELER STREET
Tuesday	5/10/2011	6:20:00 PM	Property damage only (none injured)		0	0	2	Sideswipe, same direction	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)	25-34	35-44	D1:(No improper driving) D2:(No improper driving)		Dry	Daylight	Cloudy	ALBANY STREET / TRAVELER STREET / BROADWAY	
Monday	12/5/2011	8:40:00 AM	Property damage only (none injured)		0	0	2	Angle	V1: Turning left / V2:Travelling straight ahead	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Single-unit truck (2-axis, 6-tire))	25-34	35-44	D1:(No improper driving) D2:(Disregarded traffic signs, signals, road		Dry	Daylight	Clear	ALBANY STREET / TRAVELER STREET	
Saturday	12/10/2011	2:21:00 AM	Property damage only (none injured)		0	0	1	Single vehicle crash	V1: Turning left	V1:E	V1:(Collision with light pole or other post/support)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)	25-34	25-34	D1:(Other improper action)		Dry	Dark - lighted roadway	Clear	TRAVELER STREET / ALBANY STREET	
Friday	2/3/2012	3:22:00 PM	Property damage only (none injured)		0	0	2	Sideswipe, same direction	V1: Turning left / V2:Travelling straight ahead	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)	16-20	16-20	D1:(No improper driving) D2:(Disregarded traffic signs, signals, road		Dry	Daylight	Clear	SOUTHBOUND FRONTAGE ROAD / TRAVELER STREET /	
Tuesday	2/21/2012	8:19:00 PM	Property damage only (none injured)		0	0	2	Angle	V1: Travelling straight ahead / V2:Not reported	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:()	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)	25-34	55-64	D1:(No improper driving),(No improper driving) D2:()		Dry	Dark - lighted roadway	Cloudy/Cloudy	ALBANY STREET / TRAVELER STREET	
Wednesday	3/7/2012	9:50:00 AM	Property damage only (none injured)		0	0	2	Angle	V1: Turning left / V2:Travelling straight ahead	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)	35-44	35-44	D1:(No improper driving),(No improper driving) D2:(Disregarded		Dry	Daylight	Clear/Clear	ALBANY STREET / TRAVELER STREET	
Monday	3/19/2012	7:15:00 PM	Non-fatal injury		2	0	2	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:S / V2:8	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Bus (seats for more than 15 people, including driver)) V2:(Passenger car)	21-24	55-64	D1:(No improper driving) D2:(Disregarded traffic signs, signals, road		Dry	Dusk	Clear	ALBANY STREET / TRAVELER STREET	
Sunday	4/22/2012	5:15:00 PM	Not Reported		0	0	2	Not reported	V1: Not reported / V2:Not reported	V1:8 / V2:8	V1:() V2:()	V2: V1:() V2:()	35-44	55-64	D1:() D2:()		Not reported	Not reported	Not Reported	ALBANY STREET / TRAVELER STREET	
Wednesday	9/19/2012	4:30:00 PM	Property damage only (none injured)		0	0	2	Angle	V1: Travelling straight ahead / V2:Turning left	V1:S / V2:E	V1:() V2:(Collision with motor vehicle in traffic)	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	25-34	45-54	D1:(Disregarded traffic signs, signals, road markings) D2:(No		Dry	Daylight	Clear	TRAVELER STREET / ALBANY STREET / BROADWAY	
Tuesday	3/5/2013	1:44:00 AM	Non-fatal injury		2	0	1	Single vehicle crash	V1: Travelling straight ahead	V1:S	V1:(Collision with light pole or other post/support)	V1:(Collision with curb),(Collision with light pole or other post/support)	25-34	25-34	D1:(Inattention)		Dry	Dark - lighted roadway	Cloudy	ALBANY STREET	TRAVELER STREET
Thursday	3/14/2013	4:23:00 PM	Property damage only (none injured)		0	0	1	Single vehicle crash	V1: Turning left	V1:E	V1:(Collision with motor vehicle in traffic)	V1:(Collision with motor vehicle in traffic)	25-34	25-34	D1:(No improper driving)		Dry	Daylight	Clear	ALBANY STREET / TRAVELER STREET /	
Wednesday	3/27/2013	5:00:00 PM	Non-fatal injury		1	0	2	Sideswipe, same direction	V1: Turning left / V2:Travelling straight ahead	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle 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)	25-34	45-54	D1:(No improper driving),(No improper driving) D2:(Disregarded		Dry	Daylight	Clear/Clear	ALBANY STREET / TRAVELER STREET	
Monday	9/2/2013	1:30:00 PM	Non-fatal injury		2	0	2	Sideswipe, same direction	V1: Travelling straight ahead / V2:Turning left	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Bus (seats for more than 15 people, including driver))	16-20	45-54	D1:(Made an improper turn) D2:(No improper driving)		Dry	Daylight	Cloudy	ALBANY STREET / TRAVELER STREET	
Friday	9/13/2013	1:35:00 PM	Property damage only (none injured)		0	0	2	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:8 / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)	25-34	35-44	D1:(No improper driving) D2:(Disregarded traffic signs, signals, road		Wet	Dark - lighted roadway	Rain/ Cloudy	ALBANY STREET / TRAVELER STREET	
Friday	1/10/2014	4:00:00 AM	Property damage only (none injured)		0	0	2	Angle	V1: Travelling straight ahead / V2:Turning left	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Single-unit truck (3-or-more axes))	25-34	55-64	D1:(Disregarded traffic signs, signals, road markings) D2:(No		Wet	Dark - roadway not lighted	Rain	ALBANY STREET / TRAVELER STREET	
Sunday	4/13/2014	3:11:00 AM	Non-fatal injury		1	0	2	Angle	V1: Travelling straight ahead / V2:Making U-turn	V1:W / V2:N	V1:(Collision with impact attenuator/crash cushion) V2:(Collision with impact attenuator/crash cushion)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)	25-34	35-44	D1:(No improper driving),(No improper driving) D2:(Made an		Dry	Dark - lighted roadway	Clear/Clear	ALBANY STREET / TRAVELER STREET	
Tuesday	5/20/2014	4:58:00 PM	Non-fatal injury		1	0	1	Single vehicle crash	V1: Turning right	V1:E	V1:(Collision with cyclist (bicycle, tricycle, unicycle, pedal car))	V1:(Collision with cyclist)	55-64	55-64	D1:(Unknown),(Unknown)	P2-Pedalcyclist (bicycle, tricycle, unicycle, pedal car)	Dry	Daylight	Clear/Clear	TRAVELER STREET / ALBANY STREET	
Thursday	5/22/2014	8:01:00 PM	Property damage only (none injured)		0	0	2	Sideswipe, same direction	V1: Turning left / V2:Turning left	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Unknown heavy truck, cannot classify)	21-24	25-34	D1:(Unknown),(Unknown) D2:(Unknown),(Unknown		Dry	Daylight	Clear/Clear	ALBANY STREET / TRAVELER STREET	
Wednesday	9/9/2015	6:01:00 PM	Not Reported		0	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)	35-44	35-44	D1:(No improper driving) D2:(Followed too closely)		Dry	Daylight	Clear	ALBANY STREET / TRAVELER STREET	
Wednesday	9/23/2015	5:10:00 PM	Fatal injury		0	1	2	Single vehicle crash	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Bus (seats for more than 15 people, including driver)) V2:(Motorcycle)	45-54	55-64	D1:() D2:()		Dry	Daylight	Clear	ALBANY STREET / TRAVELER STREET	

Site-specific Background Growth

Ink Block
Site-Specific Growth - Background Projects

	1			2			3			4			5			6			7			8					
	Boston Medical IMP			80 East Berkely - Druker			Graybar			321 Harrison Avenue			370-380 Harrison Avenue			AC Hotel			Siena Building (Remaining 76 Residential Units Only)			MassDOT I-93			Total Background Projects		
	AM	PM	SAT	AM	PM	SAT	AM	PM	SAT	AM	PM	SAT	AM	PM	SAT	AM	PM	SAT	AM	PM	SAT	AM	PM	SAT	AM	PM	SAT
<u>Herald/Albany</u> Herald EB right Albany SB thru	5	2	2	3 20	36 6	15 10	23	45	42	4	15	2	12 3	11 9	8 6	7 16	6 13	10 21	2	8	7	270	115	270	26 339	68 198	35 358
<u>Traveler/Albany</u> Lot 5 SWB left Traveler EB thru Travler EB right Albany SB left Albany SB thru Albany SB right	5	2	2	20	6	10	32 28 23	28 24 45	36 31 42	8	32	4	18 1 3	15 1 9	11 1 6	9 4	16 6	19 7	7 3	5 2	8 3	105 150	30 35	105 150	0 74 35 105 175 26	0 96 33 30 43 54	0 78 42 105 162 48
<u>Albany/Herald drive</u> Herald drive EB thru (93 SB) Herald drive EB right (Albany) Albany SB left Albany SB thru Albany SB right	5	2	2	3 20	36 6	15 10	23	45	42	4	15	2	12 3	11 9	8 6	19 23	32 18	38 31	2	8	7	15 255	50 65	15 255	0 19 34 331 0	0 32 112 153 0	0 38 40 353 0
<u>Ink Underground Parking Drwy/Traveler</u> Ink Drwy SB left Traveler EB left Traveler EB thru							32	28	36	8	32	4	18	15	11	9	16	19	7	5	8	105	30	105	0 179	0 126	0 183









Trip Generation Calculations

Ink Block Program Site Trips

											Pass-by Rate =
	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
Weekday Daily Residential - Apts		1,177		1,295					220	337	671
In	245	589	1.1	647	17%	26%	57%	1.1	110	168	335
Out	units	589	1.1	647	17%	26%	57%	1.1	110	168	335
AM Residential - Apts		81		90					24	24	38
In	245	20	1.1	22	19%	27%	54%	1.1	4	6	11
Out	units	62	1.1	68	29%	27%	44%	1.1	20	18	27
PM Residential - Apts		92		101					25	27	44
In	245	56	1.1	62	29%	27%	44%	1.1	18	17	25
Out	units	36	1.1	39	19%	27%	54%	1.1	7	11	19
SAT Daily Residential - Apts		1,185		1,304					222	339	676
In	245	593	1.1	652	17%	26%	57%	1.1	111	169	338
Out	units	593	1.1	652	17%	26%	57%	1.1	111	169	338
SAT Residential - Apts		100		110					16	29	59
In	245	55	1.1	60	17%	26%	57%	1.1	10	16	31
Out	units	45	1.1	49	12%	26%	62%	1.1	6	13	28









Notes:
LUC 820 - Retail
LUC 220 Apartments
LUC 230 Residential Condominium/Townhouse
LUC 850 - Supermarket
Mode Split: BTD Area 15
VOR for Residential based on Census Tract data for area 712 and Retail based on local data

Intersection Capacity Analyses

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	1105	0	0	1095	0
Future Volume (vph)	0	1105	0	0	1095	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		No				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			158	348	
Travel Time (s)	12.3			3.6	7.9	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.89	0.89
Heavy Vehicles (%)	6%	6%	2%	2%	7%	7%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1188	0	0	1230	0
Number of Detectors		1			1	
Detector Template						
Leading Detector (ft)		50			50	
Trailing Detector (ft)		0			0	
Detector 1 Position(ft)		0			0	
Detector 1 Size(ft)		50			50	
Detector 1 Type		Cl+Ex			Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0			0.0	
Detector 1 Queue (s)		0.0			0.0	
Detector 1 Delay (s)		0.0			0.0	
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Detector Phase		2			1	
Switch Phase						
Minimum Initial (s)		8.0			8.0	
Minimum Split (s)		23.0			23.0	
Total Split (s)		32.0			48.0	
Total Split (%)		40.0%			60.0%	
Maximum Green (s)		27.0			43.0	
Yellow Time (s)		4.0			4.0	
All-Red Time (s)		1.0			1.0	
Lost Time Adjust (s)		0.0			0.0	
Total Lost Time (s)		5.0			5.0	
Lead/Lag		Lag			Lead	
Lead-Lag Optimize?		Yes			Yes	
Vehicle Extension (s)		2.0			2.0	
Recall Mode		Max			C-Max	
Walk Time (s)		7.0			7.0	
Flash Dont Walk (s)		5.0			5.0	
Pedestrian Calls (#/hr)		4			1	
v/c Ratio		1.13			0.52	
Control Delay		96.6			12.9	
Queue Delay		0.0			0.0	
Total Delay		96.6			12.9	
Queue Length 50th (ft)		~306			135	
Queue Length 95th (ft)		#409			169	
Internal Link Dist (ft)	460			78	268	
Turn Bay Length (ft)						
Base Capacity (vph)		1055			2345	
Starvation Cap Reductn		0			0	
Spillback Cap Reductn		0			0	
Storage Cap Reductn		0			0	
Reduced v/c Ratio		1.13			0.52	
Intersection Summary						
Area Type:	CBD					
Cycle Length: 80						
Actuated Cycle Length: 80						
Offset: 19 (24%), Referenced to phase 1: SBT, Start of Green						
Natural Cycle: 55						
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: 3: Albany Street & Herald Street



						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	1105	0	0	1095	0
Future Volume (vph)	0	1105	0	0	1095	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.76			0.91	
Frt		0.85			1.00	
Flt Protected		1.00			1.00	
Satd. Flow (prot)		3126			4363	
Flt Permitted		1.00			1.00	
Satd. Flow (perm)		3126			4363	
Peak-hour factor, PHF	0.93	0.93	0.92	0.92	0.89	0.89
Adj. Flow (vph)	0	1188	0	0	1230	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1188	0	0	1230	0
Heavy Vehicles (%)	6%	6%	2%	2%	7%	7%
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Actuated Green, G (s)		27.0			43.0	
Effective Green, g (s)		27.0			43.0	
Actuated g/C Ratio		0.34			0.54	
Clearance Time (s)		5.0			5.0	
Vehicle Extension (s)		2.0			2.0	
Lane Grp Cap (vph)		1055			2345	
v/s Ratio Prot		c0.38			c0.28	
v/s Ratio Perm						
v/c Ratio		1.13			0.52	
Uniform Delay, d1		26.5			11.9	
Progression Factor		1.00			1.00	
Incremental Delay, d2		69.2			0.8	
Delay (s)		95.7			12.8	
Level of Service		F			B	
Approach Delay (s)	95.7			0.0	12.8	
Approach LOS	F			A	B	
Intersection Summary						
HCM 2000 Control Delay		53.5		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)		10.0
Intersection Capacity Utilization		60.5%		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	Ø6
Lane Configurations		↔								↔	↔			
Traffic Volume (vph)	0	170	25	0	0	0	0	0	0	740	725	145		
Future Volume (vph)	0	170	25	0	0	0	0	0	0	740	725	145		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes	Yes		No		
Link Speed (mph)		30			25			30			30			
Link Distance (ft)		513			85			208			557			
Travel Time (s)		11.7			2.3			4.7			12.7			
Confl. Peds. (#/hr)			158							32				
Confl. Bikes (#/hr)			10											
Peak Hour Factor	0.80	0.80	0.80	0.92	0.92	0.92	0.92	0.92	0.92	0.86	0.86	0.86		
Heavy Vehicles (%)	0%	6%	0%	2%	2%	2%	2%	2%	2%	7%	6%	6%		
Shared Lane Traffic (%)										28%				
Lane Group Flow (vph)	0	244	0	0	0	0	0	0	0	619	1253	0		
Number of Detectors		1								1	1			
Detector Template														
Leading Detector (ft)		50								50	50			
Trailing Detector (ft)		0								0	0			
Detector 1 Position(ft)		0								0	0			
Detector 1 Size(ft)		50								50	50			
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex			
Detector 1 Channel														
Detector 1 Extend (s)		0.0								0.0	0.0			
Detector 1 Queue (s)		0.0								0.0	0.0			
Detector 1 Delay (s)		0.0								0.0	0.0			
Turn Type		NA								Split	NA			
Protected Phases		3								1	1		2	6
Permitted Phases														
Detector Phase		3								1	1			
Switch Phase														
Minimum Initial (s)		8.0								10.0	10.0		4.0	4.0
Minimum Split (s)		24.0								24.0	24.0		23.0	23.0
Total Split (s)		30.0								66.0	66.0		24.0	24.0
Total Split (%)		25.0%								55.0%	55.0%		20%	20%
Maximum Green (s)		25.0								61.0	61.0		20.0	20.0
Yellow Time (s)		3.5								4.0	4.0		3.0	3.0
All-Red Time (s)		1.5								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	5.0			
Lead/Lag														
Lead-Lag Optimize?														
Vehicle Extension (s)		2.0								2.0	2.0		2.0	2.0
Recall Mode		None								C-Max	C-Max		None	None
Walk Time (s)													7.0	7.0
Flash Dont Walk (s)													12.0	12.0
Pedestrian Calls (#/hr)													96	96
v/c Ratio		0.81								0.60	0.82			
Control Delay		65.8								4.0	28.6			
Queue Delay		0.3								0.2	0.0			
Total Delay		66.1								4.3	28.6			
Queue Length 50th (ft)		174								0	431			
Queue Length 95th (ft)		233								46	497			
Internal Link Dist (ft)		433			5			128			477			
Turn Bay Length (ft)														
Base Capacity (vph)		327								1026	1531			
Starvation Cap Reductn		0								0	0			
Spillback Cap Reductn		4								70	1			
Storage Cap Reductn		0								0	0			
Reduced v/c Ratio		0.76								0.65	0.82			









Intersection Summary

Area Type: CBD
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 8 (7%), Referenced to phase 1:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 5: Albany Street & Traveler Street



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	170	25	0	0	0	0	0	0	740	725	145
Future Volume (vph)	0	170	25	0	0	0	0	0	0	740	725	145
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	
Lane Util. Factor		1.00								0.91	0.91	
Frpb, ped/bikes		0.97								1.00	1.00	
Flpb, ped/bikes		1.00								1.00	1.00	
Frt		0.98								1.00	0.98	
Flt Protected		1.00								0.95	0.99	
Satd. Flow (prot)		1544								1382	2844	
Flt Permitted		1.00								0.95	0.99	
Satd. Flow (perm)		1544								1382	2844	
Peak-hour factor, PHF	0.80	0.80	0.80	0.92	0.92	0.92	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	0	212	31	0	0	0	0	0	0	860	843	169
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	289	15	0
Lane Group Flow (vph)	0	239	0	0	0	0	0	0	0	330	1238	0
Confl. Peds. (#/hr)			158								32	
Confl. Bikes (#/hr)			10									
Heavy Vehicles (%)	0%	6%	0%	2%	2%	2%	2%	2%	2%	7%	6%	6%
Turn Type		NA								Split	NA	
Protected Phases		3								1	1	
Permitted Phases												
Actuated Green, G (s)		23.0								64.0	64.0	
Effective Green, g (s)		23.0								64.0	64.0	
Actuated g/C Ratio		0.19								0.53	0.53	
Clearance Time (s)		5.0								5.0	5.0	
Vehicle Extension (s)		2.0								2.0	2.0	
Lane Grp Cap (vph)		295								737	1516	
v/s Ratio Prot		c0.15								0.24	c0.44	
v/s Ratio Perm												
v/c Ratio		0.81								0.45	0.82	
Uniform Delay, d1		46.4								17.2	23.1	
Progression Factor		1.00								1.00	1.00	
Incremental Delay, d2		14.7								2.0	5.0	
Delay (s)		61.1								19.1	28.1	
Level of Service		E								B	C	
Approach Delay (s)		61.1			0.0			0.0			25.1	
Approach LOS		E			A			A			C	
Intersection Summary												
HCM 2000 Control Delay		29.3										C
HCM 2000 Volume to Capacity ratio		0.67										
Actuated Cycle Length (s)		120.0								14.0		
Intersection Capacity Utilization		55.1%								B		
Analysis Period (min)		15										
c Critical Lane Group												

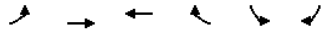
									
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø6
Lane Configurations									
Traffic Volume (vph)	5	905	0	0	0	0			
Future Volume (vph)	5	905	0	0	0	0			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Right Turn on Red				Yes		Yes			
Link Speed (mph)		30	30		30				
Link Distance (ft)		85	103		205				
Travel Time (s)		1.9	2.3		4.7				
Confl. Peds. (#/hr)	2								
Peak Hour Factor	0.86	0.86	0.92	0.92	0.25	0.25			
Heavy Vehicles (%)	0%	7%	2%	2%	2%	2%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	0	1058	0	0	0	0			
Number of Detectors	1	2			1				
Detector Template	Left	Thru			Left				
Leading Detector (ft)	20	100			20				
Trailing Detector (ft)	0	0			0				
Detector 1 Position(ft)	0	0			0				
Detector 1 Size(ft)	20	6			20				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0			0.0				
Detector 1 Queue (s)	0.0	0.0			0.0				
Detector 1 Delay (s)	0.0	0.0			0.0				
Detector 2 Position(ft)		94							
Detector 2 Size(ft)		6							
Detector 2 Type		Cl+Ex							
Detector 2 Channel									
Detector 2 Extend (s)		0.0							
Turn Type	Perm	NA			Prot				
Protected Phases		1 3			2		1	3	6
Permitted Phases	1 3								
Detector Phase	1 3	1 3			2				
Switch Phase									
Minimum Initial (s)					4.0		10.0	8.0	4.0
Minimum Split (s)					23.0		24.0	24.0	23.0
Total Split (s)					24.0		66.0	30.0	24.0
Total Split (%)					20.0%		55%	25%	20%
Maximum Green (s)					20.0		61.0	25.0	20.0
Yellow Time (s)					3.0		4.0	3.5	3.0
All-Red Time (s)					1.0		1.0	1.5	1.0
Lost Time Adjust (s)					0.0				
Total Lost Time (s)					4.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)					2.0		2.0	2.0	2.0
Recall Mode					None		C-Max	None	None
Walk Time (s)									7.0
Flash Dont Walk (s)									12.0
Pedestrian Calls (#/hr)									96
v/c Ratio		0.28							
Control Delay		2.3							
Queue Delay		0.0							
Total Delay		2.3							
Queue Length 50th (ft)		41							
Queue Length 95th (ft)		36							
Internal Link Dist (ft)		5	23		125				
Turn Bay Length (ft)									
Base Capacity (vph)		3690							
Starvation Cap Reductn		0							
Spillback Cap Reductn		0							
Storage Cap Reductn		0							
Reduced v/c Ratio		0.29							

Intersection Summary
















Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 8 (7%), Referenced to phase 1:SRTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated














Splits and Phases: 29: Traveler Street & Lot 5 Driveway





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		←↑↑			←↑	
Traffic Volume (vph)	5	905	0	0	0	0
Future Volume (vph)	5	905	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0				
Lane Util. Factor		0.91				
Frpb, ped/bikes		1.00				
Flpb, ped/bikes		1.00				
Frt		1.00				
Flt Protected		1.00				
Satd. Flow (prot)		4848				
Flt Permitted		1.00				
Satd. Flow (perm)		4848				
Peak-hour factor, PHF	0.86	0.86	0.92	0.92	0.25	0.25
Adj. Flow (vph)	6	1052	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1058	0	0	0	0
Confl. Peds. (#/hr)	2					
Heavy Vehicles (%)	0%	7%	2%	2%	2%	2%
Turn Type	Perm	NA			Prot	
Protected Phases		1 3			2	
Permitted Phases	1 3					
Actuated Green, G (s)		92.0				
Effective Green, g (s)		92.0				
Actuated g/C Ratio		0.77				
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)		3716				
v/s Ratio Prot						
v/s Ratio Perm		0.22				
v/c Ratio		0.28				
Uniform Delay, d1		4.2				
Progression Factor		0.52				
Incremental Delay, d2		0.0				
Delay (s)		2.2				
Level of Service		A				
Approach Delay (s)		2.2	0.0		0.0	
Approach LOS		A	A		A	
Intersection Summary						
HCM 2000 Control Delay		2.2		HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio		0.25				
Actuated Cycle Length (s)		120.0		Sum of lost time (s)		14.0
Intersection Capacity Utilization		21.8%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

											
Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (vph)	0	0	10	0	0	0	590	1600	10	0	0
Future Volume (vph)	0	0	10	0	0	0	590	1600	10	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30				30			30		30	
Link Distance (ft)	124				557			158		179	
Travel Time (s)	2.8				12.7			3.6		4.1	
Confl. Peds. (#/hr)									1		
Peak Hour Factor	0.60	0.60	0.60	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92
Heavy Vehicles (%)	0%	0%	50%	2%	2%	2%	6%	7%	67%	2%	2%
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	17	0	0	0	0	0	2316	0	0	0
Sign Control	Stop				Free			Free		Stop	
Intersection Summary											
Area Type:	CBD										
Control Type:	Unsignalized										

											
Movement	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations											
Traffic Volume (veh/h)	0	0	10	0	0	0	590	1600	10	0	0
Future Volume (Veh/h)	0	0	10	0	0	0	590	1600	10	0	0
Sign Control	Stop				Free			Free		Stop	
Grade	0%				0%			0%		0%	
Peak Hour Factor	0.60	0.60	0.60	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	0	0	17	0	0	0	621	1684	11	0	0
Pedestrians	1										
Lane Width (ft)	12.0										
Walking Speed (ft/s)	4.0										
Percent Blockage	0										
Right turn flare (veh)											
Median type					None			None			
Median storage (veh)											
Upstream signal (ft)					557			158			
pX, platoon unblocked	0.83	0.83	0.83	0.83						0.83	
vC, conflicting volume	2932	2932	568	1696			0			2938	0
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	2615	2615	0	1128			0			2622	0
IC, single (s)	7.5	6.5	7.9	4.1			4.2			6.5	6.9
IC, 2 stage (s)											
tF (s)	3.5	4.0	3.8	2.2			2.3			4.0	3.3
p0 queue free %	100	100	98	100			61			100	100
cM capacity (veh/h)	7	12	787	511			1593			12	1084
Direction, Lane #	EB 1	SB 1	SB 2	SB 3							
Volume Total	17	1042	842	432							
Volume Left	0	621	0	0							
Volume Right	17	0	0	11							
cSH	787	1593	1700	1700							
Volume to Capacity	0.02	0.39	0.50	0.25							
Queue Length 95th (ft)	2	47	0	0							
Control Delay (s)	9.7	7.0	0.0	0.0							
Lane LOS	A	A									
Approach Delay (s)	9.7	3.2									
Approach LOS	A										
Intersection Summary											
Average Delay			3.2								
Intersection Capacity Utilization			57.9%		ICU Level of Service				B		
Analysis Period (min)			15								

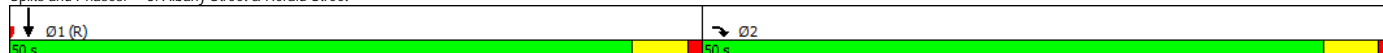



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	
Traffic Volume (vph)	0	1510	0	0	1045	0
Future Volume (vph)	0	1510	0	0	1045	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		No				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			158	348	
Travel Time (s)	12.3			3.6	7.9	
Peak Hour Factor	0.98	0.98	0.92	0.92	0.98	0.98
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1541	0	0	1066	0
Number of Detectors		1			1	
Detector Template						
Leading Detector (ft)		50			50	
Trailing Detector (ft)		0			0	
Detector 1 Position(ft)		0			0	
Detector 1 Size(ft)		50			50	
Detector 1 Type		CI+Ex			CI+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0			0.0	
Detector 1 Queue (s)		0.0			0.0	
Detector 1 Delay (s)		0.0			0.0	
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Detector Phase		2			1	
Switch Phase						
Minimum Initial (s)		8.0			8.0	
Minimum Split (s)		23.0			23.0	
Total Split (s)		50.0			50.0	
Total Split (%)		50.0%			50.0%	
Maximum Green (s)		45.0			45.0	
Yellow Time (s)		4.0			4.0	
All-Red Time (s)		1.0			1.0	
Lost Time Adjust (s)		0.0			0.0	
Total Lost Time (s)		5.0			5.0	
Lead/Lag		Lag			Lead	
Lead-Lag Optimize?		Yes			Yes	
Vehicle Extension (s)		2.0			2.0	
Recall Mode		Max			C-Max	
Walk Time (s)		7.0			7.0	
Flash Dont Walk (s)		5.0			5.0	
Pedestrian Calls (#/hr)		12			5	
v/c Ratio		1.05			0.52	
Control Delay		44.9			20.9	
Queue Delay		0.0			0.0	
Total Delay		44.9			20.9	
Queue Length 50th (ft)		~482			173	
Queue Length 95th (ft)		m#539			215	
Internal Link Dist (ft)	460			78	268	
Turn Bay Length (ft)						
Base Capacity (vph)		1462			2039	
Starvation Cap Reductn		0			0	
Spillback Cap Reductn		0			0	
Storage Cap Reductn		0			0	
Reduced v/c Ratio		1.05			0.52	




Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 75 (75%), Referenced to phase 1:SBT, Start of Green
Natural Cycle: 60
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: 3: Albany Street & Herald Street



						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		TTT			TTT	
Traffic Volume (vph)	0	1510	0	0	1045	0
Future Volume (vph)	0	1510	0	0	1045	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.76			0.91	
Frt		0.85			1.00	
Flt Protected		1.00			1.00	
Satd. Flow (prot)		3249			4532	
Flt Permitted		1.00			1.00	
Satd. Flow (perm)		3249			4532	
Peak-hour factor, PHF	0.98	0.98	0.92	0.92	0.98	0.98
Adj. Flow (vph)	0	1541	0	0	1066	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1541	0	0	1066	0
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Actuated Green, G (s)		45.0			45.0	
Effective Green, g (s)		45.0			45.0	
Actuated g/C Ratio		0.45			0.45	
Clearance Time (s)		5.0			5.0	
Vehicle Extension (s)		2.0			2.0	
Lane Grp Cap (vph)		1462			2039	
v/s Ratio Prot		c0.47			c0.24	
v/s Ratio Perm						
v/c Ratio		1.05			0.52	
Uniform Delay, d1		27.5			19.8	
Progression Factor		0.26			1.00	
Incremental Delay, d2		34.0			1.0	
Delay (s)		41.0			20.7	
Level of Service		D			C	
Approach Delay (s)	41.0			0.0	20.7	
Approach LOS	D			A	C	
Intersection Summary						
HCM 2000 Control Delay		32.7		HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio		0.79				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)	10.0	
Intersection Capacity Utilization		69.9%		ICU Level of Service	C	
Analysis Period (min)		15				
c Critical Lane Group						

















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø6
Lane Configurations														
Traffic Volume (vph)	0	280	40	0	0	0	0	0	0	845	625	70		
Future Volume (vph)	0	280	40	0	0	0	0	0	0	845	625	70		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red		Yes				Yes			Yes	Yes		No		
Link Speed (mph)		30			25			30			30			
Link Distance (ft)		513			85			208			557			
Travel Time (s)		11.7			2.3			4.7			12.7			
Confl. Peds. (#/hr)			157							26		1		
Confl. Bikes (#/hr)			3									2		
Peak Hour Factor	0.88	0.88	0.88	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98		
Heavy Vehicles (%)	0%	2%	2%	2%	2%	2%	2%	2%	2%	4%	3%	0%		
Shared Lane Traffic (%)										23%				
Lane Group Flow (vph)	0	363	0	0	0	0	0	0	0	664	907	0		
Number of Detectors		1								1	1			
Detector Template														
Leading Detector (ft)		50								50	50			
Trailing Detector (ft)		0								0	0			
Detector 1 Position(ft)		0								0	0			
Detector 1 Size(ft)		50								50	50			
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex			
Detector 1 Channel														
Detector 1 Extend (s)		0.0								0.0	0.0			
Detector 1 Queue (s)		0.0								0.0	0.0			
Detector 1 Delay (s)		0.0								0.0	0.0			
Turn Type		NA								Split	NA			
Protected Phases		3								1	1		2	6
Permitted Phases														
Detector Phase		3								1	1			
Switch Phase														
Minimum Initial (s)		8.0								10.0	10.0		4.0	4.0
Minimum Split (s)		13.0								15.0	15.0		23.0	23.0
Total Split (s)		25.0								61.0	61.0		24.0	24.0
Total Split (%)		22.7%								55.5%	55.5%		22%	22%
Maximum Green (s)		20.0								56.0	56.0		20.0	20.0
Yellow Time (s)		3.5								4.0	4.0		3.0	3.0
All-Red Time (s)		1.5								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	5.0			
Lead/Lag														
Lead-Lag Optimize?														
Vehicle Extension (s)		2.0								2.0	2.0		2.0	2.0
Recall Mode		None								C-Max	C-Max		None	None
Walk Time (s)														7.0
Flash Dont Walk (s)														12.0
Pedestrian Calls (#/hr)														93
v/c Ratio		1.23								0.65	0.59			
Control Delay		169.9								5.5	19.2			
Queue Delay		0.1								0.3	0.0			
Total Delay		170.0								5.8	19.2			
Queue Length 50th (ft)		~316								24	222			
Queue Length 95th (ft)		#487								118	287			
Internal Link Dist (ft)		433			5			128			477			
Turn Bay Length (ft)														
Base Capacity (vph)		294								1024	1548			
Starvation Cap Reductn		0								0	0			
Spillback Cap Reductn		3								71	2			
Storage Cap Reductn		0								0	0			
Reduced v/c Ratio		1.25								0.70	0.59			

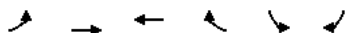
Intersection Summary

Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 1:SBTL, 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: 5: Albany Street & Traveler Street



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	280	40	0	0	0	0	0	0	845	625	70
Future Volume (vph)	0	280	40	0	0	0	0	0	0	845	625	70
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	
Lane Util. Factor		1.00								0.91	0.91	
Frpb, ped/bikes		0.97								1.00	1.00	
Flpb, ped/bikes		1.00								1.00	1.00	
Frt		0.98								1.00	0.99	
Flt Protected		1.00								0.95	0.99	
Satd. Flow (prot)		1594								1421	2949	
Flt Permitted		1.00								0.95	0.99	
Satd. Flow (perm)		1594								1421	2949	
Peak-hour factor, PHF	0.88	0.88	0.88	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98
Adj. Flow (vph)	0	318	45	0	0	0	0	0	0	862	638	71
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	289	21	0
Lane Group Flow (vph)	0	358	0	0	0	0	0	0	0	375	886	0
Confl. Peds. (#/hr)			157							26		1
Confl. Bikes (#/hr)			3									2
Heavy Vehicles (%)	0%	2%	2%	2%	2%	2%	2%	2%	2%	4%	3%	0%
Turn Type		NA								Split	NA	
Protected Phases		3								1	1	
Permitted Phases												
Actuated Green, G (s)		20.0								57.0	57.0	
Effective Green, g (s)		20.0								57.0	57.0	
Actuated g/C Ratio		0.18								0.52	0.52	
Clearance Time (s)		5.0								5.0	5.0	
Vehicle Extension (s)		2.0								2.0	2.0	
Lane Grp Cap (vph)		289								736	1528	
v/s Ratio Prot		c0.22								0.26	c0.30	
v/s Ratio Perm												
v/c Ratio		1.24								0.51	0.58	
Uniform Delay, d1		45.0								17.4	18.3	
Progression Factor		1.00								1.00	1.00	
Incremental Delay, d2		133.6								2.5	1.6	
Delay (s)		178.6								19.9	19.9	
Level of Service		F								B	B	
Approach Delay (s)		178.6		0.0			0.0				19.9	
Approach LOS		F		A			A				B	
Intersection Summary												
HCM 2000 Control Delay		49.7		HCM 2000 Level of Service						D		
HCM 2000 Volume to Capacity ratio		0.60										
Actuated Cycle Length (s)		110.0		Sum of lost time (s)					14.0			
Intersection Capacity Utilization		61.0%		ICU Level of Service					B			
Analysis Period (min)		15										
c Critical Lane Group												














Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø6
Lane Configurations		↔↔↔			↔				
Traffic Volume (vph)	0	1125	0	0	5	0			
Future Volume (vph)	0	1125	0	0	5	0			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Right Turn on Red				Yes		Yes			
Link Speed (mph)		30	30		30				
Link Distance (ft)		85	118		142				
Travel Time (s)		1.9	2.7		3.2				
Confl. Peds. (#/hr)					2				
Peak Hour Factor	0.96	0.96	0.92	0.92	0.33	0.33			
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	0	1172	0	0	15	0			
Number of Detectors	1	2			1				
Detector Template	Left	Thru			Left				
Leading Detector (ft)	20	100			20				
Trailing Detector (ft)	0	0			0				
Detector 1 Position(ft)	0	0			0				
Detector 1 Size(ft)	20	6			20				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0			0.0				
Detector 1 Queue (s)	0.0	0.0			0.0				
Detector 1 Delay (s)	0.0	0.0			0.0				
Detector 2 Position(ft)		94							
Detector 2 Size(ft)		6							
Detector 2 Type		Cl+Ex							
Detector 2 Channel									
Detector 2 Extend (s)		0.0							
Turn Type		NA			Prot				
Protected Phases		1 3			2		1	3	6
Permitted Phases	1 3								
Detector Phase	1 3	1 3			2				
Switch Phase									
Minimum Initial (s)					4.0		10.0	8.0	4.0
Minimum Split (s)					23.0		15.0	13.0	23.0
Total Split (s)					24.0		61.0	25.0	24.0
Total Split (%)					21.8%		55%	23%	22%
Maximum Green (s)					20.0		56.0	20.0	20.0
Yellow Time (s)					3.0		4.0	3.5	3.0
All-Red Time (s)					1.0		1.0	1.5	1.0
Lost Time Adjust (s)					0.0				
Total Lost Time (s)					4.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)					2.0		2.0	2.0	2.0
Recall Mode					None		C-Max	None	None
Walk Time (s)									7.0
Flash Dont Walk (s)									12.0
Pedestrian Calls (#/hr)									93
v/c Ratio		0.32			0.09				
Control Delay		2.3			41.8				
Queue Delay		0.0			0.0				
Total Delay		2.3			41.8				
Queue Length 50th (ft)		40			10				
Queue Length 95th (ft)		m33			10				
Internal Link Dist (ft)		5	38		62				
Turn Bay Length (ft)									
Base Capacity (vph)		3718			328				
Starvation Cap Reductn		0			0				
Spillback Cap Reductn		0			0				
Storage Cap Reductn		0			0				
Reduced v/c Ratio		0.32			0.05				

Intersection Summary
















Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 1:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.
















Splits and Phases: 29: Traveler Street & Lot 5 Driveway



						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		  			 	
Traffic Volume (vph)	0	1125	0	0	5	0
Future Volume (vph)	0	1125	0	0	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0	
Lane Util. Factor		0.91			1.00	
Frpb, ped/bikes		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		4988			1805	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		4988			1805	
Peak-hour factor, PHF	0.96	0.96	0.92	0.92	0.33	0.33
Adj. Flow (vph)	0	1172	0	0	15	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1172	0	0	15	0
Confl. Peds. (#/hr)					2	
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%
Turn Type		NA			Prot	
Protected Phases		1 3			2	
Permitted Phases	1 3					
Actuated Green, G (s)		82.0			19.0	
Effective Green, g (s)		82.0			19.0	
Actuated g/C Ratio		0.75			0.17	
Clearance Time (s)					4.0	
Vehicle Extension (s)					2.0	
Lane Grp Cap (vph)		3718			311	
v/s Ratio Prot		c0.23			c0.01	
v/s Ratio Perm						
v/c Ratio		0.32			0.05	
Uniform Delay, d1		4.7			38.0	
Progression Factor		0.47			1.00	
Incremental Delay, d2		0.0			0.0	
Delay (s)		2.2			38.0	
Level of Service		A			D	
Approach Delay (s)		2.2	0.0		38.0	
Approach LOS		A	A		D	
Intersection Summary						
HCM 2000 Control Delay		2.6		HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio		0.28				
Actuated Cycle Length (s)		110.0		Sum of lost time (s)		14.0
Intersection Capacity Utilization		32.6%		ICU Level of Service		A
Analysis Period (min)		15				









c Critical Lane Group

											
Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (vph)	0	1	5	0	0	0	1015	1535	5	0	0
Future Volume (vph)	0	1	5	0	0	0	1015	1535	5	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30				30			30		30	
Link Distance (ft)	124				557			158		179	
Travel Time (s)	2.8				12.7			3.6		4.1	
Confl. Peds. (#/hr)									8		
Confl. Bikes (#/hr)									1		
Peak Hour Factor	0.67	0.67	0.67	0.92	0.92	0.92	0.98	0.98	0.98	0.92	0.92
Heavy Vehicles (%)	0%	100%	0%	2%	2%	2%	1%	4%	0%	2%	2%
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	8	0	0	0	0	0	2607	0	0	0
Sign Control	Stop				Free			Free		Stop	
Intersection Summary											
Area Type:	CBD										
Control Type:	Unsignalized										

											
Movement	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (veh/h)	0	1	5	0	0	0	1015	1535	5	0	0
Future Volume (Veh/h)	0	1	5	0	0	0	1015	1535	5	0	0
Sign Control	Stop				Free			Free		Stop	
Grade	0%				0%			0%		0%	
Peak Hour Factor	0.67	0.67	0.67	0.92	0.92	0.92	0.98	0.98	0.98	0.92	0.92
Hourly flow rate (vph)	0	1	7	0	0	0	1036	1566	5	0	0
Pedestrians	8										
Lane Width (ft)	12.0										
Walking Speed (ft/s)	4.0										
Percent Blockage	1										
Right turn flare (veh)											
Median type					None			None			
Median storage (veh)											
Upstream signal (ft)					557			158			
pX, platoon unblocked	0.84	0.84	0.84	0.84					0.84		
vC, conflicting volume	3648	3648	532	1579			0		3651	0	
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	3484	3484	0	1013			0		3487	0	
tC, single (s)	7.5	8.5	6.9	4.1			4.1		6.5	6.9	
tC, 2 stage (s)											
tF (s)	3.5	5.0	3.3	2.2			2.2		4.0	3.3	
p0 queue free %	100	0	99	100			36		100	100	
cM capacity (veh/h)	1	0	908	566			1629			2	1084
Direction, Lane #	EB 1	SB 1	SB 2	SB 3							
Volume Total	8	1428	783	396							
Volume Left	0	1036	0	0							
Volume Right	7	0	0	5							
cSH	2	1629	1700	1700							
Volume to Capacity	3.52	0.64	0.46	0.23							
Queue Length 95th (ft)	Err	123	0	0							
Control Delay (s)	Err	10.5	0.0	0.0							
Lane LOS	F	B									
Approach Delay (s)	Err	5.7									
Approach LOS	F										
Intersection Summary											
Average Delay			36.3								
Intersection Capacity Utilization			72.5%		ICU Level of Service				C		
Analysis Period (min)			15								

Lanes, Volumes, Timings
3: Albany Street & Herald Street

01/10/2018

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	1275	0	0	1150	0
Future Volume (vph)	0	1275	0	0	1150	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red	No		Yes			
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			158	348	
Travel Time (s)	12.3			3.6	7.9	
Peak Hour Factor	0.94	0.94	0.92	0.92	0.96	0.96
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1356	0	0	1198	0
Number of Detectors		1			1	
Detector Template						
Leading Detector (ft)		50			50	
Trailing Detector (ft)		0			0	
Detector 1 Position(ft)		0			0	
Detector 1 Size(ft)		50			50	
Detector 1 Type		CI+Ex			CI+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0			0.0	
Detector 1 Queue (s)		0.0			0.0	
Detector 1 Delay (s)		0.0			0.0	
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Detector Phase		2			1	
Switch Phase						
Minimum Initial (s)		8.0			8.0	
Minimum Split (s)		23.0			23.0	
Total Split (s)		45.0			45.0	
Total Split (%)		50.0%			50.0%	
Maximum Green (s)		40.0			40.0	
Yellow Time (s)		4.0			4.0	
All-Red Time (s)		1.0			1.0	
Lost Time Adjust (s)		0.0			0.0	
Total Lost Time (s)		5.0			5.0	
Lead/Lag		Lag			Lead	
Lead-Lag Optimize?		Yes			Yes	
Vehicle Extension (s)		2.0			2.0	
Recall Mode		None			Max	
Walk Time (s)		7.0			7.0	
Flash Dont Walk (s)		5.0			5.0	
Pedestrian Calls (#/hr)		7			2	
v/c Ratio		0.96			0.58	
Control Delay		41.7			19.9	
Queue Delay		0.0			0.0	
Total Delay		41.7			19.9	
Queue Length 50th (ft)		314			181	
Queue Length 95th (ft)		#445			226	
Internal Link Dist (ft)	460			78	268	
Turn Bay Length (ft)						
Base Capacity (vph)		1445			2056	
Starvation Cap Reductn		0			0	
Spillback Cap Reductn		0			0	
Storage Cap Reductn		0			0	
Reduced v/c Ratio		0.94			0.58	

Intersection Summary

Area Type: CBD

Cycle Length: 90

Actuated Cycle Length: 89.1



Natural Cycle: 55

Control Type: Actuated-Uncoordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Albany Street & Herald Street

 Ø1	 Ø2
45 s	45 s





HCM Signalized Intersection Capacity Analysis
3: Albany Street & Herald Street

01/10/2018

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	1275	0	0	1150	0
Future Volume (vph)	0	1275	0	0	1150	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.76			0.91	
Frt		0.85			1.00	
Flt Protected		1.00			1.00	
Satd. Flow (prot)		3217			4577	
Flt Permitted		1.00			1.00	
Satd. Flow (perm)		3217			4577	
Peak-hour factor, PHF	0.94	0.94	0.92	0.92	0.96	0.96
Adj. Flow (vph)	0	1356	0	0	1198	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1356	0	0	1198	0
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Actuated Green, G (s)		39.0			40.0	
Effective Green, g (s)		39.0			40.0	
Actuated g/C Ratio		0.44			0.45	
Clearance Time (s)		5.0			5.0	
Vehicle Extension (s)		2.0			2.0	
Lane Grp Cap (vph)		1409			2057	
v/s Ratio Prot		c0.42			c0.26	
v/s Ratio Perm						
v/c Ratio		0.96			0.58	
Uniform Delay, d1		24.3			18.3	
Progression Factor		1.00			1.00	
Incremental Delay, d2		15.7			1.2	
Delay (s)		40.0			19.5	
Level of Service		D			B	
Approach Delay (s)	40.0			0.0	19.5	
Approach LOS	D			A	B	
Intersection Summary						
HCM 2000 Control Delay		30.4		HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.77				
Actuated Cycle Length (s)		89.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		66.1%		ICU Level of Service		C
Analysis Period (min)		15				
c Critical Lane Group						

Lanes, Volumes, Timings
5: Albany Street & Traveler Street

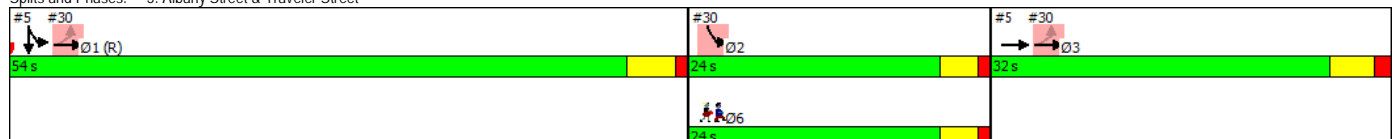
01/10/2018

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø6
Lane Group														
Lane Configurations														
Traffic Volume (vph)	0	160	60	0	0	0	0	0	0	730	680	245		
Future Volume (vph)	0	160	60	0	0	0	0	0	0	730	680	245		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red		Yes				Yes			Yes	Yes		No		
Link Speed (mph)		30			30			30			30			
Link Distance (ft)		513			161			208			557			
Travel Time (s)		11.7			3.7			4.7			12.7			
Confl. Peds. (#/hr)			246							60		9		
Confl. Bikes (#/hr)			5											
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.94	0.94		
Heavy Vehicles (%)	0%	1%	3%	2%	2%	2%	2%	2%	2%	5%	1%	1%		
Shared Lane Traffic (%)										20%				
Lane Group Flow (vph)	0	237	0	0	0	0	0	0	0	622	1139	0		
Number of Detectors		1								1	1			
Detector Template														
Leading Detector (ft)		50								50	50			
Trailing Detector (ft)		0								0	0			
Detector 1 Position(ft)		0								0	0			
Detector 1 Size(ft)		50								50	50			
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex			
Detector 1 Channel														
Detector 1 Extend (s)		0.0								0.0	0.0			
Detector 1 Queue (s)		0.0								0.0	0.0			
Detector 1 Delay (s)		0.0								0.0	0.0			
Turn Type		NA								Split	NA			
Protected Phases		3								1	1		2	6
Permitted Phases														
Detector Phase		3								1	1			
Switch Phase														
Minimum Initial (s)		8.0								10.0	10.0		4.0	4.0
Minimum Split (s)		13.0								15.0	15.0		23.0	23.0
Total Split (s)		32.0								54.0	54.0		24.0	24.0
Total Split (%)		29.1%								49.1%	49.1%		22%	22%
Maximum Green (s)		27.0								49.0	49.0		20.0	20.0
Yellow Time (s)		3.5								4.0	4.0		3.0	3.0
All-Red Time (s)		1.5								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	5.0			
Lead/Lag														
Lead-Lag Optimize?														
Vehicle Extension (s)		2.0								2.0	2.0		2.0	2.0
Recall Mode		None								C-Max	C-Max		None	None
Walk Time (s)														7.0
Flash Dont Walk (s)														12.0
Pedestrian Calls (#/hr)														160
v/c Ratio		0.75								0.62	0.78			
Control Delay		52.7								4.5	28.3			
Queue Delay		0.0								0.0	0.0			
Total Delay		52.7								4.5	28.3			
Queue Length 50th (ft)		145								0	358			
Queue Length 95th (ft)		227								73	481			
Internal Link Dist (ft)		433			81			128			477			
Turn Bay Length (ft)														
Base Capacity (vph)		376								1011	1455			
Starvation Cap Reductn		0								0	0			
Spillback Cap Reductn		0								0	0			
Storage Cap Reductn		0								0	0			
Reduced v/c Ratio		0.63								0.62	0.78			

Intersection Summary
















Area Type: CBD
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 11 (10%), Referenced to phase 1:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 5: Albany Street & Traveler Street



HCM Signalized Intersection Capacity Analysis
5: Albany Street & Traveler Street

01/10/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	160	60	0	0	0	0	0	0	730	680	245
Future Volume (vph)	0	160	60	0	0	0	0	0	0	730	680	245
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	
Lane Util. Factor		1.00								0.91	0.91	
Frpb, ped/bikes		0.91								1.00	0.99	
Flpb, ped/bikes		1.00								1.00	1.00	
Frt		0.96								1.00	0.97	
Flt Protected		1.00								0.95	0.99	
Satd. Flow (prot)		1479								1408	2920	
Flt Permitted		1.00								0.95	0.99	
Satd. Flow (perm)		1479								1408	2920	
Peak-hour factor, PHF	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	0	172	65	0	0	0	0	0	0	777	723	261
RTOR Reduction (vph)	0	13	0	0	0	0	0	0	0	314	10	0
Lane Group Flow (vph)	0	224	0	0	0	0	0	0	0	308	1129	0
Confl. Peds. (#/hr)			246							60		9
Confl. Bikes (#/hr)			5									
Heavy Vehicles (%)	0%	1%	3%	2%	2%	2%	2%	2%	2%	5%	1%	1%
Turn Type		NA								Split	NA	
Protected Phases		3								1	1	
Permitted Phases												
Actuated Green, G (s)		22.5								54.5	54.5	
Effective Green, g (s)		22.5								54.5	54.5	
Actuated g/C Ratio		0.20								0.50	0.50	
Clearance Time (s)		5.0								5.0	5.0	
Vehicle Extension (s)		2.0								2.0	2.0	
Lane Grp Cap (vph)		302								697	1446	
v/s Ratio Prot		c0.15								0.22	c0.39	
v/s Ratio Perm												
v/c Ratio		0.74								0.44	0.78	
Uniform Delay, d1		41.0								17.9	22.8	
Progression Factor		1.00								1.00	1.00	
Incremental Delay, d2		8.3								2.0	4.3	
Delay (s)		49.4								20.0	27.1	
Level of Service		D								B	C	
Approach Delay (s)		49.4			0.0			0.0			24.6	
Approach LOS		D			A			A			C	
Intersection Summary												
HCM 2000 Control Delay			27.5			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)				14.0		
Intersection Capacity Utilization			59.6%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
30: Traveler Street & Lot 5 Driveway

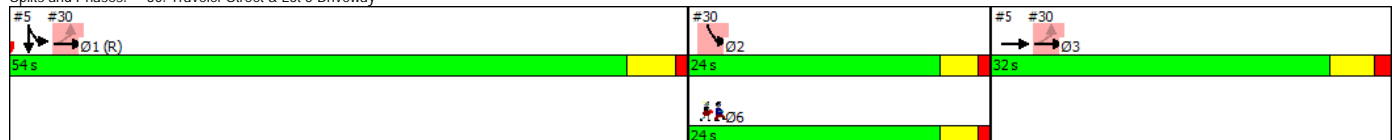
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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø6
Lane Configurations		↔↔↔			↔				
Traffic Volume (vph)	15	875	0	0	5	0			
Future Volume (vph)	15	875	0	0	5	0			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Right Turn on Red				Yes		Yes			
Link Speed (mph)		30	30		30				
Link Distance (ft)		161	152		138				
Travel Time (s)		3.7	3.5		3.1				
Confl. Peds. (#/hr)	5				1				
Peak Hour Factor	0.96	0.96	0.92	0.92	0.50	0.50			
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	0	927	0	0	10	0			
Number of Detectors	1	2			1				
Detector Template	Left	Thru			Left				
Leading Detector (ft)	20	100			20				
Trailing Detector (ft)	0	0			0				
Detector 1 Position(ft)	0	0			0				
Detector 1 Size(ft)	20	6			20				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0			0.0				
Detector 1 Queue (s)	0.0	0.0			0.0				
Detector 1 Delay (s)	0.0	0.0			0.0				
Detector 2 Position(ft)		94							
Detector 2 Size(ft)		6							
Detector 2 Type		Cl+Ex							
Detector 2 Channel									
Detector 2 Extend (s)		0.0							
Turn Type	Perm	NA			Prot				
Protected Phases		1 3			2		1	3	6
Permitted Phases	1 3								
Detector Phase	1 3	1 3			2				
Switch Phase									
Minimum Initial (s)					4.0		10.0	8.0	4.0
Minimum Split (s)					23.0		15.0	13.0	23.0
Total Split (s)					24.0		54.0	32.0	24.0
Total Split (%)					21.8%		49%	29%	22%
Maximum Green (s)					20.0		49.0	27.0	20.0
Yellow Time (s)					3.0		4.0	3.5	3.0
All-Red Time (s)					1.0		1.0	1.5	1.0
Lost Time Adjust (s)					0.0				
Total Lost Time (s)					4.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)					2.0		2.0	2.0	2.0
Recall Mode					None		C-Max	None	None
Walk Time (s)									7.0
Flash Dont Walk (s)									12.0
Pedestrian Calls (#/hr)									160
v/c Ratio		0.25			0.08				
Control Delay		2.9			45.2				
Queue Delay		0.7			0.0				
Total Delay		3.6			45.2				
Queue Length 50th (ft)		41			7				
Queue Length 95th (ft)		41			12				
Internal Link Dist (ft)		81	72		58				
Turn Bay Length (ft)									
Base Capacity (vph)		3696			328				
Starvation Cap Reductn		2301			0				
Spillback Cap Reductn		0			0				
Storage Cap Reductn		0			0				
Reduced v/c Ratio		0.66			0.03				

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 11 (10%), Referenced to phase 1:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 30: Traveler Street & Lot 5 Driveway



HCM Signalized Intersection Capacity Analysis
30: Traveler Street & Lot 5 Driveway
















01/10/2018

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		←↑↑			↑	
Traffic Volume (vph)	15	875	0	0	5	0
Future Volume (vph)	15	875	0	0	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0	
Lane Util. Factor		0.91			1.00	
Frpb, ped/bikes		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		4986			1805	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		4986			1805	
Peak-hour factor, PHF	0.96	0.96	0.92	0.92	0.50	0.50
Adj. Flow (vph)	16	911	0	0	10	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	927	0	0	10	0
Confl. Peds. (#/hr)	5				1	
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%
Turn Type	Perm	NA			Prot	
Protected Phases		1 3			2	
Permitted Phases	1 3					
Actuated Green, G (s)		82.0			19.0	
Effective Green, g (s)		82.0			19.0	
Actuated g/C Ratio		0.75			0.17	
Clearance Time (s)					4.0	
Vehicle Extension (s)					2.0	
Lane Grp Cap (vph)		3716			311	
v/s Ratio Prot					c0.01	
v/s Ratio Perm		0.19				
v/c Ratio		0.25			0.03	
Uniform Delay, d1		4.4			37.9	
Progression Factor		0.63			1.00	
Incremental Delay, d2		0.0			0.0	
Delay (s)		2.8			37.9	
Level of Service		A			D	
Approach Delay (s)		2.8	0.0		37.9	
Approach LOS		A	A		D	
Intersection Summary						
HCM 2000 Control Delay		3.1		HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio		0.22				
Actuated Cycle Length (s)		110.0		Sum of lost time (s)		14.0
Intersection Capacity Utilization		28.0%		ICU Level of Service		A
Analysis Period (min)		15				

c Critical Lane Group
















Lanes, Volumes, Timings
11: Albany Street & Driveway

01/10/2018

											
Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (vph)	0	0	10	0	0	0	775	1645	5	0	0
Future Volume (vph)	0	0	10	0	0	0	775	1645	5	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30				30			30		30	
Link Distance (ft)	138				557			158		179	
Travel Time (s)	3.1				12.7			3.6		4.1	
Confl. Peds. (#/hr)			2						4		
Peak Hour Factor	0.69	0.69	0.69	0.92	0.92	0.92	0.98	0.98	0.98	0.92	0.92
Heavy Vehicles (%)	0%	0%	18%	2%	2%	2%	2%	2%	20%	2%	2%
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	14	0	0	0	0	0	2475	0	0	0
Sign Control	Stop				Free			Free		Stop	
Intersection Summary											
Area Type:	CBD										
Control Type:	Unsignalized										

HCM Unsignalized Intersection Capacity Analysis
11: Albany Street & Driveway

01/10/2018

											
Movement	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (veh/h)	0	0	10	0	0	0	775	1645	5	0	0
Future Volume (Veh/h)	0	0	10	0	0	0	775	1645	5	0	0
Sign Control	Stop				Free			Free		Stop	
Grade	0%				0%			0%		0%	
Peak Hour Factor	0.69	0.69	0.69	0.92	0.92	0.92	0.98	0.98	0.98	0.92	0.92
Hourly flow rate (vph)	0	0	14	0	0	0	791	1679	5	0	0
Pedestrians	4				2						
Lane Width (ft)	12.0				0.0						
Walking Speed (ft/s)	4.0				4.0						
Percent Blockage	0				0						
Right turn flare (veh)											
Median type					None			None			
Median storage (veh)											
Upstream signal (ft)					557			158			
pX, platoon unblocked	0.81	0.81	0.81	0.81					0.81		
vC, conflicting volume	3268	3268	568	1688			0			3270	0
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	2985	2985	0	1042			0		2988	0	
tC, single (s)	7.5	6.5	7.3	4.1			4.1		6.5	6.9	
tC, 2 stage (s)											
tF (s)	3.5	4.0	3.5	2.2			2.2		4.0	3.3	
p0 queue free %	100	100	98	100			51		100	100	
cM capacity (veh/h)	3	6	839	537			1622			6	1084
Direction, Lane #	EB 1	SB 1	SB 2	SB 3							
Volume Total	14	1211	840	425							
Volume Left	0	791	0	0							
Volume Right	14	0	0	5							
cSH	839	1622	1700	1700							
Volume to Capacity	0.02	0.49	0.49	0.25							
Queue Length 95th (ft)	1	70	0	0							
Control Delay (s)	9.4	8.2	0.0	0.0							
Lane LOS	A	A									
Approach Delay (s)	9.4	4.0									
Approach LOS	A										
Intersection Summary											
Average Delay			4.0								
Intersection Capacity Utilization			63.6%		ICU Level of Service				B		
Analysis Period (min)			15								



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	
Traffic Volume (vph)	0	1210	0	0	1515	0
Future Volume (vph)	0	1210	0	0	1515	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		No				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			158	348	
Travel Time (s)	12.3			3.6	7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	2%	2%	7%	7%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1315	0	0	1647	0
Number of Detectors		1			1	
Detector Template						
Leading Detector (ft)		50			50	
Trailing Detector (ft)		0			0	
Detector 1 Position(ft)		0			0	
Detector 1 Size(ft)		50			50	
Detector 1 Type		CI+Ex			CI+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0			0.0	
Detector 1 Queue (s)		0.0			0.0	
Detector 1 Delay (s)		0.0			0.0	
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Detector Phase		2			1	
Switch Phase						
Minimum Initial (s)		8.0			8.0	
Minimum Split (s)		23.0			23.0	
Total Split (s)		32.0			48.0	
Total Split (%)		40.0%			60.0%	
Maximum Green (s)		27.0			43.0	
Yellow Time (s)		4.0			4.0	
All-Red Time (s)		1.0			1.0	
Lost Time Adjust (s)		0.0			0.0	
Total Lost Time (s)		5.0			5.0	
Lead/Lag		Lag			Lead	
Lead-Lag Optimize?		Yes			Yes	
Vehicle Extension (s)		2.0			2.0	
Recall Mode		Max			C-Max	
Walk Time (s)		7.0			7.0	
Flash Dont Walk (s)		5.0			5.0	
Pedestrian Calls (#/hr)		4			1	
v/c Ratio		1.25			0.70	
Control Delay		145.6			15.8	
Queue Delay		0.0			0.0	
Total Delay		145.6			15.8	
Queue Length 50th (ft)		~364			208	
Queue Length 95th (ft)		#471			262	
Internal Link Dist (ft)	460			78	268	
Turn Bay Length (ft)						
Base Capacity (vph)		1055			2345	
Starvation Cap Reductn		0			0	
Spillback Cap Reductn		0			0	
Storage Cap Reductn		0			0	
Reduced v/c Ratio		1.25			0.70	

Intersection Summary




Area Type: CBD
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 19 (24%), Referenced to phase 1:SBT, 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: 3: Albany Street & Herald Street





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		TTT			TTT	
Traffic Volume (vph)	0	1210	0	0	1515	0
Future Volume (vph)	0	1210	0	0	1515	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.76			0.91	
Frt		0.85			1.00	
Flt Protected		1.00			1.00	
Satd. Flow (prot)		3126			4363	
Flt Permitted		1.00			1.00	
Satd. Flow (perm)		3126			4363	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1315	0	0	1647	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1315	0	0	1647	0
Heavy Vehicles (%)	6%	6%	2%	2%	7%	7%
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Actuated Green, G (s)		27.0			43.0	
Effective Green, g (s)		27.0			43.0	
Actuated g/C Ratio		0.34			0.54	
Clearance Time (s)		5.0			5.0	
Vehicle Extension (s)		2.0			2.0	
Lane Grp Cap (vph)		1055			2345	
v/s Ratio Prot		c0.42			c0.38	
v/s Ratio Perm						
v/c Ratio		1.25			0.70	
Uniform Delay, d1		26.5			13.7	
Progression Factor		1.00			1.00	
Incremental Delay, d2		118.9			1.8	
Delay (s)		145.4			15.5	
Level of Service		F			B	
Approach Delay (s)	145.4			0.0	15.5	
Approach LOS	F			A	B	
Intersection Summary						
HCM 2000 Control Delay		73.2		HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio		0.91				
Actuated Cycle Length (s)		80.0		Sum of lost time (s)	10.0	
Intersection Capacity Utilization		72.2%		ICU Level of Service	C	
Analysis Period (min)		15				
c Critical Lane Group						
















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø6
Lane Configurations														
Traffic Volume (vph)	0	255	60	0	0	0	0	0	0	925	975	180		
Future Volume (vph)	0	255	60	0	0	0	0	0	0	925	975	180		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red		Yes				Yes			Yes	Yes		No		
Link Speed (mph)		30			25			30			30			
Link Distance (ft)		513			85			208			557			
Travel Time (s)		11.7			2.3			4.7			12.7			
Confl. Peds. (#/hr)			158							32				
Confl. Bikes (#/hr)			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		
Heavy Vehicles (%)	0%	6%	0%	2%	2%	2%	2%	2%	2%	7%	6%	6%		
Shared Lane Traffic (%)										26%				
Lane Group Flow (vph)	0	342	0	0	0	0	0	0	0	744	1517	0		
Number of Detectors		1								1	1			
Detector Template														
Leading Detector (ft)		50								50	50			
Trailing Detector (ft)		0								0	0			
Detector 1 Position(ft)		0								0	0			
Detector 1 Size(ft)		50								50	50			
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex			
Detector 1 Channel														
Detector 1 Extend (s)		0.0								0.0	0.0			
Detector 1 Queue (s)		0.0								0.0	0.0			
Detector 1 Delay (s)		0.0								0.0	0.0			
Turn Type		NA								Split	NA			
Protected Phases		3								1	1		2	6
Permitted Phases														
Detector Phase		3								1	1			
Switch Phase														
Minimum Initial (s)		8.0								10.0	10.0		4.0	4.0
Minimum Split (s)		24.0								24.0	24.0		23.0	23.0
Total Split (s)		30.0								66.0	66.0		24.0	24.0
Total Split (%)		25.0%								55.0%	55.0%		20%	20%
Maximum Green (s)		25.0								61.0	61.0		20.0	20.0
Yellow Time (s)		3.5								4.0	4.0		3.0	3.0
All-Red Time (s)		1.5								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	5.0			
Lead/Lag														
Lead-Lag Optimize?														
Vehicle Extension (s)		2.0								2.0	2.0		2.0	2.0
Recall Mode		None								C-Max	C-Max		None	None
Walk Time (s)														7.0
Flash Dont Walk (s)														12.0
Pedestrian Calls (#/hr)														96
v/c Ratio		1.06								0.74	1.02			
Control Delay		112.1								9.6	57.5			
Queue Delay		4.8								0.7	0.2			
Total Delay		116.8								10.3	57.8			
Queue Length 50th (ft)		~286								73	~679			
Queue Length 95th (ft)		#476								260	#827			
Internal Link Dist (ft)		433			5			128			477			
Turn Bay Length (ft)														
Base Capacity (vph)		322								999	1486			
Starvation Cap Reductn		0								0	0			
Spillback Cap Reductn		4								70	1			
Storage Cap Reductn		0								0	0			
Reduced v/c Ratio		1.08								0.80	1.02			
















Intersection Summary
















Area Type: CBD
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 8 (7%), Referenced to phase 1:SBTL, 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.

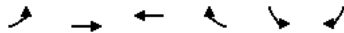
Splits and Phases: 5: Albany Street & Traveler Street



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	255	60	0	0	0	0	0	0	925	975	180
Future Volume (vph)	0	255	60	0	0	0	0	0	0	925	975	180
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	
Lane Util. Factor		1.00								0.91	0.91	
Frpb, ped/bikes		0.95								1.00	1.00	
Flpb, ped/bikes		1.00								1.00	1.00	
Frt		0.97								1.00	0.98	
Flt Protected		1.00								0.95	0.99	
Satd. Flow (prot)		1516								1382	2850	
Flt Permitted		1.00								0.95	0.99	
Satd. Flow (perm)		1516								1382	2850	
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	277	65	0	0	0	0	0	0	1005	1060	196
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	286	14	0
Lane Group Flow (vph)	0	335	0	0	0	0	0	0	0	458	1503	0
Confl. Peds. (#/hr)			158							32		
Confl. Bikes (#/hr)			10									
Heavy Vehicles (%)	0%	6%	0%	2%	2%	2%	2%	2%	2%	7%	6%	6%
Turn Type		NA								Split	NA	
Protected Phases		3								1	1	
Permitted Phases												
Actuated Green, G (s)		25.0								62.0	62.0	
Effective Green, g (s)		25.0								62.0	62.0	
Actuated g/C Ratio		0.21								0.52	0.52	
Clearance Time (s)		5.0								5.0	5.0	
Vehicle Extension (s)		2.0								2.0	2.0	
Lane Grp Cap (vph)		315								714	1472	
v/s Ratio Prot		c0.22								0.33	c0.53	
v/s Ratio Perm												
v/c Ratio		1.06								0.64	1.02	
Uniform Delay, d1		47.5								21.0	29.0	
Progression Factor		1.00								1.00	1.00	
Incremental Delay, d2		68.4								4.4	29.0	
Delay (s)		115.9								25.4	58.0	
Level of Service		F								C	E	
Approach Delay (s)		115.9			0.0			0.0			47.3	
Approach LOS		F			A			A			D	
Intersection Summary												
HCM 2000 Control Delay			56.3			HCM 2000 Level of Service					E	
HCM 2000 Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)				14.0		
Intersection Capacity Utilization			72.8%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

											
Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (vph)	0	0	30	0	0	0	665	2050	10	0	0
Future Volume (vph)	0	0	30	0	0	0	665	2050	10	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30				30			30		30	
Link Distance (ft)	124				557			158		179	
Travel Time (s)	2.8				12.7			3.6		4.1	
Confl. Peds. (#/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
Heavy Vehicles (%)	0%	0%	50%	2%	2%	2%	6%	7%	67%	2%	2%
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	33	0	0	0	0	0	2962	0	0	0
Sign Control	Stop				Free			Free		Stop	
Intersection Summary											
Area Type:	CBD										
Control Type:	Unsignalized										

											
Movement	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (veh/h)	0	0	30	0	0	0	665	2050	10	0	0
Future Volume (Veh/h)	0	0	30	0	0	0	665	2050	10	0	0
Sign Control	Stop				Free			Free		Stop	
Grade	0%				0%			0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	33	0	0	0	723	2228	11	0	0
Pedestrians	1										
Lane Width (ft)	12.0										
Walking Speed (ft/s)	4.0										
Percent Blockage	0										
Right turn flare (veh)											
Median type					None			None			
Median storage (veh)											
Upstream signal (ft)					557			158			
pX, platoon unblocked	0.73	0.73	0.73	0.73					0.73		
vC, conflicting volume	3680	3680	749	2240			0		3686	0	
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	3374	3374	0	1394			0		3381	0	
tC, single (s)	7.5	6.5	7.9	4.1			4.2		6.5	6.9	
tC, 2 stage (s)											
tF (s)	3.5	4.0	3.8	2.2			2.3		4.0	3.3	
p0 queue free %	100	100	95	100			55		100	100	
cM capacity (veh/h)	1	3	689	354			1593		3	1084	
Direction, Lane #	EB 1	SB 1	SB 2	SB 3							
Volume Total	33	1280	1114	568							
Volume Left	0	723	0	0							
Volume Right	33	0	0	11							
cSH	689	1593	1700	1700							
Volume to Capacity	0.05	0.45	0.66	0.33							
Queue Length 95th (ft)	4	61	0	0							
Control Delay (s)	10.5	7.8	0.0	0.0							
Lane LOS	B	A									
Approach Delay (s)	10.5	3.4									
Approach LOS	B										
Intersection Summary											
Average Delay			3.5								
Intersection Capacity Utilization			69.3%		ICU Level of Service				C		
Analysis Period (min)			15								

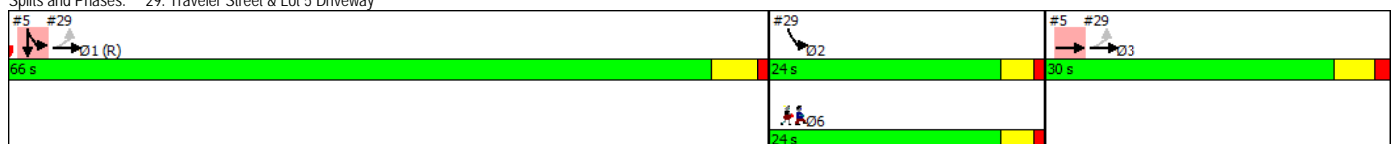


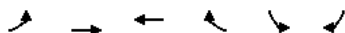
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø6
Lane Configurations		↔↔↔			↔				
Traffic Volume (vph)	5	1175	0	0	0	0			
Future Volume (vph)	5	1175	0	0	0	0			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Right Turn on Red				Yes		Yes			
Link Speed (mph)		30	30		30				
Link Distance (ft)		85	103		205				
Travel Time (s)		1.9	2.3		4.7				
Confl. Peds. (#/hr)	2								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Heavy Vehicles (%)	0%	7%	2%	2%	2%	2%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	0	1282	0	0	0	0			
Number of Detectors	1	2			1				
Detector Template	Left	Thru			Left				
Leading Detector (ft)	20	100			20				
Trailing Detector (ft)	0	0			0				
Detector 1 Position(ft)	0	0			0				
Detector 1 Size(ft)	20	6			20				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0			0.0				
Detector 1 Queue (s)	0.0	0.0			0.0				
Detector 1 Delay (s)	0.0	0.0			0.0				
Detector 2 Position(ft)		94							
Detector 2 Size(ft)		6							
Detector 2 Type		Cl+Ex							
Detector 2 Channel									
Detector 2 Extend (s)		0.0							
Turn Type	Perm	NA			Prot				
Protected Phases		1 3			2		1	3	6
Permitted Phases	1 3								
Detector Phase	1 3	1 3			2				
Switch Phase									
Minimum Initial (s)					4.0		10.0	8.0	4.0
Minimum Split (s)					23.0		24.0	24.0	23.0
Total Split (s)					24.0		66.0	30.0	24.0
Total Split (%)					20.0%		55%	25%	20%
Maximum Green (s)					20.0		61.0	25.0	20.0
Yellow Time (s)					3.0		4.0	3.5	3.0
All-Red Time (s)					1.0		1.0	1.5	1.0
Lost Time Adjust (s)					0.0				
Total Lost Time (s)					4.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)					2.0		2.0	2.0	2.0
Recall Mode					None		C-Max	None	None
Walk Time (s)									7.0
Flash Dont Walk (s)									12.0
Pedestrian Calls (#/hr)									96
v/c Ratio		0.34							
Control Delay		2.1							
Queue Delay		0.0							
Total Delay		2.1							
Queue Length 50th (ft)		42							
Queue Length 95th (ft)		m36							
Internal Link Dist (ft)		5	23		125				
Turn Bay Length (ft)									
Base Capacity (vph)		3717							
Starvation Cap Reductn		0							
Spillback Cap Reductn		0							
Storage Cap Reductn		0							
Reduced v/c Ratio		0.34							

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 8 (7%), Referenced to phase 1:SBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 29: Traveler Street & Lot 5 Driveway





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↔↔			↔	
Traffic Volume (vph)	5	1175	0	0	0	0
Future Volume (vph)	5	1175	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0				
Lane Util. Factor		0.91				
Frpb, ped/bikes		1.00				
Flpb, ped/bikes		1.00				
Frt		1.00				
Flt Protected		1.00				
Satd. Flow (prot)		4848				
Flt Permitted		1.00				
Satd. Flow (perm)		4848				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1277	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1282	0	0	0	0
Confl. Peds. (#/hr)	2					
Heavy Vehicles (%)	0%	7%	2%	2%	2%	2%
Turn Type	Perm	NA			Prot	
Protected Phases		1 3			2	
Permitted Phases	1 3					
Actuated Green, G (s)		92.0				
Effective Green, g (s)		92.0				
Actuated g/C Ratio		0.77				
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)		3716				
v/s Ratio Prot						
v/s Ratio Perm		0.26				
v/c Ratio		0.34				
Uniform Delay, d1		4.4				
Progression Factor		0.45				
Incremental Delay, d2		0.0				
Delay (s)		2.0				
Level of Service		A				
Approach Delay (s)		2.0	0.0		0.0	
Approach LOS		A	A		A	
Intersection Summary						
HCM 2000 Control Delay		2.0	HCM 2000 Level of Service		A	
HCM 2000 Volume to Capacity ratio		0.30				
Actuated Cycle Length (s)		120.0	Sum of lost time (s)		14.0	
Intersection Capacity Utilization		27.0%	ICU Level of Service		A	
Analysis Period (min)		15				

c Critical Lane Group

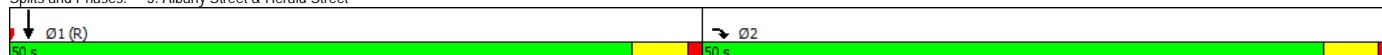



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	
Traffic Volume (vph)	0	1685	0	0	1320	0
Future Volume (vph)	0	1685	0	0	1320	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		No				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			158	348	
Travel Time (s)	12.3			3.6	7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1832	0	0	1435	0
Number of Detectors		1			1	
Detector Template						
Leading Detector (ft)		50			50	
Trailing Detector (ft)		0			0	
Detector 1 Position(ft)		0			0	
Detector 1 Size(ft)		50			50	
Detector 1 Type		CI+Ex			CI+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0			0.0	
Detector 1 Queue (s)		0.0			0.0	
Detector 1 Delay (s)		0.0			0.0	
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Detector Phase		2			1	
Switch Phase						
Minimum Initial (s)		8.0			8.0	
Minimum Split (s)		23.0			23.0	
Total Split (s)		50.0			50.0	
Total Split (%)		50.0%			50.0%	
Maximum Green (s)		45.0			45.0	
Yellow Time (s)		4.0			4.0	
All-Red Time (s)		1.0			1.0	
Lost Time Adjust (s)		0.0			0.0	
Total Lost Time (s)		5.0			5.0	
Lead/Lag		Lag			Lead	
Lead-Lag Optimize?		Yes			Yes	
Vehicle Extension (s)		2.0			2.0	
Recall Mode		Max			C-Max	
Walk Time (s)		7.0			7.0	
Flash Dont Walk (s)		5.0			5.0	
Pedestrian Calls (#/hr)		12			5	
v/c Ratio		1.25			0.70	
Control Delay		133.5			24.5	
Queue Delay		0.0			0.0	
Total Delay		133.5			24.5	
Queue Length 50th (ft)		~657			261	
Queue Length 95th (ft)		#755			316	
Internal Link Dist (ft)	460			78	268	
Turn Bay Length (ft)						
Base Capacity (vph)		1462			2039	
Starvation Cap Reductn		0			0	
Spillback Cap Reductn		0			0	
Storage Cap Reductn		0			0	
Reduced v/c Ratio		1.25			0.70	




Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 75 (75%), Referenced to phase 1:SBT, 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: 3: Albany Street & Herald Street



						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	
Traffic Volume (vph)	0	1685	0	0	1320	0
Future Volume (vph)	0	1685	0	0	1320	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.76			0.91	
Frt		0.85			1.00	
Flt Protected		1.00			1.00	
Satd. Flow (prot)		3249			4532	
Flt Permitted		1.00			1.00	
Satd. Flow (perm)		3249			4532	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1832	0	0	1435	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1832	0	0	1435	0
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Actuated Green, G (s)		45.0			45.0	
Effective Green, g (s)		45.0			45.0	
Actuated g/C Ratio		0.45			0.45	
Clearance Time (s)		5.0			5.0	
Vehicle Extension (s)		2.0			2.0	
Lane Grp Cap (vph)		1462			2039	
v/s Ratio Prot		c0.56			c0.32	
v/s Ratio Perm						
v/c Ratio		1.25			0.70	
Uniform Delay, d1		27.5			22.1	
Progression Factor		0.33			1.00	
Incremental Delay, d2		118.0			2.1	
Delay (s)		127.1			24.2	
Level of Service		F			C	
Approach Delay (s)	127.1			0.0	24.2	
Approach LOS	F			A	C	
Intersection Summary						
HCM 2000 Control Delay		81.9		HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio		0.98				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)	10.0	
Intersection Capacity Utilization		80.3%		ICU Level of Service	D	
Analysis Period (min)		15				
c Critical Lane Group						
















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø6
Lane Configurations														
Traffic Volume (vph)	0	395	75	0	0	0	0	0	0	965	740	130		
Future Volume (vph)	0	395	75	0	0	0	0	0	0	965	740	130		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes	Yes		No		
Link Speed (mph)		30			25			30			30			
Link Distance (ft)		513			85			208			557			
Travel Time (s)		11.7			2.3			4.7			12.7			
Confl. Peds. (#/hr)			157							26		1		
Confl. Bikes (#/hr)			3									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%	2%	2%	2%	2%	2%	2%	2%	2%	4%	3%	0%		
Shared Lane Traffic (%)										23%				
Lane Group Flow (vph)	0	511	0	0	0	0	0	0	0	808	1186	0		
Number of Detectors		1								1	1			
Detector Template														
Leading Detector (ft)		50								50	50			
Trailing Detector (ft)		0								0	0			
Detector 1 Position(ft)		0								0	0			
Detector 1 Size(ft)		50								50	50			
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex			
Detector 1 Channel														
Detector 1 Extend (s)		0.0								0.0	0.0			
Detector 1 Queue (s)		0.0								0.0	0.0			
Detector 1 Delay (s)		0.0								0.0	0.0			
Turn Type		NA								Split	NA			
Protected Phases		3								1	1		2	6
Permitted Phases														
Detector Phase		3								1	1			
Switch Phase														
Minimum Initial (s)		8.0								10.0	10.0		4.0	4.0
Minimum Split (s)		13.0								15.0	15.0		23.0	23.0
Total Split (s)		25.0								61.0	61.0		24.0	24.0
Total Split (%)		22.7%								55.5%	55.5%		22%	22%
Maximum Green (s)		20.0								56.0	56.0		20.0	20.0
Yellow Time (s)		3.5								4.0	4.0		3.0	3.0
All-Red Time (s)		1.5								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	5.0			
Lead/Lag														
Lead-Lag Optimize?														
Vehicle Extension (s)		2.0								2.0	2.0		2.0	2.0
Recall Mode		None								C-Max	C-Max		None	None
Walk Time (s)														7.0
Flash Dont Walk (s)														12.0
Pedestrian Calls (#/hr)														93
v/c Ratio		1.76								0.80	0.77			
Control Delay		382.9								132.0	24.7			
Queue Delay		0.2								1.3	0.0			
Total Delay		383.1								14.3	24.7			
Queue Length 50th (ft)		~539								139	343			
Queue Length 95th (ft)		#750								369	440			
Internal Link Dist (ft)		433				5		128			477			
Turn Bay Length (ft)														
Base Capacity (vph)		291								1010	1539			
Starvation Cap Reductn		0								0	0			
Spillback Cap Reductn		5								71	2			
Storage Cap Reductn		0								0	0			
Reduced v/c Ratio		1.79								0.86	0.77			
















Intersection Summary
















Area Type: CBD
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 1:SBTL, 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.

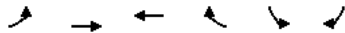
Splits and Phases: 5: Albany Street & Traveler Street



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	395	75	0	0	0	0	0	0	965	740	130
Future Volume (vph)	0	395	75	0	0	0	0	0	0	965	740	130
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	
Lane Util. Factor		1.00								0.91	0.91	
Frpb, ped/bikes		0.96								1.00	1.00	
Flpb, ped/bikes		1.00								1.00	1.00	
Frt		0.98								1.00	0.98	
Flt Protected		1.00								0.95	0.99	
Satd. Flow (prot)		1570								1421	2934	
Flt Permitted		1.00								0.95	0.99	
Satd. Flow (perm)		1570								1421	2934	
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	429	82	0	0	0	0	0	0	1049	804	141
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	274	19	0
Lane Group Flow (vph)	0	504	0	0	0	0	0	0	0	534	1167	0
Confl. Peds. (#/hr)			157							26		1
Confl. Bikes (#/hr)			3									2
Heavy Vehicles (%)	0%	2%	2%	2%	2%	2%	2%	2%	2%	4%	3%	0%
Turn Type		NA								Split	NA	
Protected Phases		3								1	1	
Permitted Phases												
Actuated Green, G (s)		20.0								57.0	57.0	
Effective Green, g (s)		20.0								57.0	57.0	
Actuated g/C Ratio		0.18								0.52	0.52	
Clearance Time (s)		5.0								5.0	5.0	
Vehicle Extension (s)		2.0								2.0	2.0	
Lane Grp Cap (vph)		285								736	1520	
v/s Ratio Prot		c0.32								0.38	c0.40	
v/s Ratio Perm												
v/c Ratio		1.77								0.73	0.77	
Uniform Delay, d1		45.0								20.5	21.2	
Progression Factor		1.00								1.00	1.00	
Incremental Delay, d2		360.5								6.2	3.8	
Delay (s)		405.5								26.6	25.0	
Level of Service		F								C	C	
Approach Delay (s)		405.5			0.0			0.0			25.7	
Approach LOS		F			A			A			C	
Intersection Summary												
HCM 2000 Control Delay			103.1			HCM 2000 Level of Service					F	
HCM 2000 Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			110.0			Sum of lost time (s)				14.0		
Intersection Capacity Utilization			76.7%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

											
Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (vph)	0	1	35	0	0	0	1200	1800	5	0	0
Future Volume (vph)	0	1	35	0	0	0	1200	1800	5	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30				30			30		30	
Link Distance (ft)	124				557			158		179	
Travel Time (s)	2.8				12.7			3.6		4.1	
Confl. Peds. (#/hr)									8		
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
Heavy Vehicles (%)	0%	100%	0%	2%	2%	2%	1%	4%	0%	2%	2%
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	39	0	0	0	0	0	3266	0	0	0
Sign Control	Stop				Free			Free		Stop	
Intersection Summary											
Area Type:	CBD										
Control Type:	Unsignalized										

											
Movement	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (veh/h)	0	1	35	0	0	0	1200	1800	5	0	0
Future Volume (Veh/h)	0	1	35	0	0	0	1200	1800	5	0	0
Sign Control	Stop				Free			Free		Stop	
Grade	0%				0%			0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	38	0	0	0	1304	1957	5	0	0
Pedestrians	8										
Lane Width (ft)	12.0										
Walking Speed (ft/s)	4.0										
Percent Blockage	1										
Right turn flare (veh)											
Median type					None			None			
Median storage (veh)											
Upstream signal (ft)					557			158			
pX, platoon unblocked	0.75	0.75	0.75	0.75					0.75		
vC, conflicting volume	4576	4576	663	1970			0		4578	0	
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	4601	4601	0	1130			0		4604	0	
tC, single (s)	7.5	8.5	6.9	4.1			4.1		6.5	6.9	
tC, 2 stage (s)											
tF (s)	3.5	5.0	3.3	2.2			2.2		4.0	3.3	
p0 queue free %	100	0	95	100			20		100	100	
cM capacity (veh/h)	0	0	813	458			1629		0	1084	
Direction, Lane #	EB 1	SB 1	SB 2	SB 3							
Volume Total	39	1793	978	494							
Volume Left	0	1304	0	0							
Volume Right	38	0	0	5							
cSH	1	1629	1700	1700							
Volume to Capacity	76.16	0.80	0.58	0.29							
Queue Length 95th (ft)	Err	243	0	0							
Control Delay (s)	Err	15.3	0.0	0.0							
Lane LOS	F	C									
Approach Delay (s)	Err	8.4									
Approach LOS	F										
Intersection Summary											
Average Delay			126.3								
Intersection Capacity Utilization			83.9%		ICU Level of Service				E		
Analysis Period (min)			15								



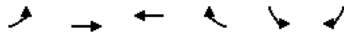
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø6
Lane Configurations									
Traffic Volume (vph)	0	1360	0	0	5	0			
Future Volume (vph)	0	1360	0	0	5	0			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Right Turn on Red				Yes		Yes			
Link Speed (mph)		30	30		30				
Link Distance (ft)		85	118		142				
Travel Time (s)		1.9	2.7		3.2				
Confl. Peds. (#/hr)					2				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	0	1478	0	0	5	0			
Number of Detectors	1	2			1				
Detector Template	Left	Thru			Left				
Leading Detector (ft)	20	100			20				
Trailing Detector (ft)	0	0			0				
Detector 1 Position(ft)	0	0			0				
Detector 1 Size(ft)	20	6			20				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0			0.0				
Detector 1 Queue (s)	0.0	0.0			0.0				
Detector 1 Delay (s)	0.0	0.0			0.0				
Detector 2 Position(ft)		94							
Detector 2 Size(ft)		6							
Detector 2 Type		Cl+Ex							
Detector 2 Channel									
Detector 2 Extend (s)		0.0							
Turn Type		NA			Prot				
Protected Phases		1 3			2		1	3	6
Permitted Phases	1 3								
Detector Phase	1 3	1 3			2				
Switch Phase									
Minimum Initial (s)					4.0		10.0	8.0	4.0
Minimum Split (s)					23.0		15.0	13.0	23.0
Total Split (s)					24.0		61.0	25.0	24.0
Total Split (%)					21.8%		55%	23%	22%
Maximum Green (s)					20.0		56.0	20.0	20.0
Yellow Time (s)					3.0		4.0	3.5	3.0
All-Red Time (s)					1.0		1.0	1.5	1.0
Lost Time Adjust (s)					0.0				
Total Lost Time (s)					4.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)					2.0		2.0	2.0	2.0
Recall Mode					None		C-Max	None	None
Walk Time (s)									7.0
Flash Dont Walk (s)									12.0
Pedestrian Calls (#/hr)									93
v/c Ratio		0.40			0.04				
Control Delay		1.9			44.2				
Queue Delay		0.0			0.0				
Total Delay		1.9			44.2				
Queue Length 50th (ft)		40			4				
Queue Length 95th (ft)		m32			14				
Internal Link Dist (ft)		5	38		62				
Turn Bay Length (ft)									
Base Capacity (vph)		3718			328				
Starvation Cap Reductn		0			0				
Spillback Cap Reductn		0			0				
Storage Cap Reductn		0			0				
Reduced v/c Ratio		0.40			0.02				

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 1:SBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 29: Traveler Street & Lot 5 Driveway





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↔↔			↔	
Traffic Volume (vph)	0	1360	0	0	5	0
Future Volume (vph)	0	1360	0	0	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0	
Lane Util. Factor		0.91			1.00	
Frpb, ped/bikes		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		4988			1805	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		4988			1805	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1478	0	0	5	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1478	0	0	5	0
Confl. Peds. (#/hr)					2	
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%
Turn Type		NA			Prot	
Protected Phases		1 3			2	
Permitted Phases	1 3					
Actuated Green, G (s)		82.0			19.0	
Effective Green, g (s)		82.0			19.0	
Actuated g/C Ratio		0.75			0.17	
Clearance Time (s)					4.0	
Vehicle Extension (s)					2.0	
Lane Grp Cap (vph)		3718			311	
v/s Ratio Prot		c0.30			c0.00	
v/s Ratio Perm						
v/c Ratio		0.40			0.02	
Uniform Delay, d1		5.1			37.7	
Progression Factor		0.37			1.00	
Incremental Delay, d2		0.0			0.0	
Delay (s)		1.9			37.8	
Level of Service		A			D	
Approach Delay (s)		1.9	0.0		37.8	
Approach LOS		A	A		D	
Intersection Summary						
HCM 2000 Control Delay		2.0		HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio		0.34				
Actuated Cycle Length (s)		110.0		Sum of lost time (s)	14.0	
Intersection Capacity Utilization		37.1%		ICU Level of Service	A	
Analysis Period (min)		15				

c Critical Lane Group



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	
Traffic Volume (vph)	0	1400	0	0	1590	0
Future Volume (vph)	0	1400	0	0	1590	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		No				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			158	348	
Travel Time (s)	12.3			3.6	7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1522	0	0	1728	0
Number of Detectors		1			1	
Detector Template						
Leading Detector (ft)		50			50	
Trailing Detector (ft)		0			0	
Detector 1 Position(ft)		0			0	
Detector 1 Size(ft)		50			50	
Detector 1 Type		CI+Ex			CI+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0			0.0	
Detector 1 Queue (s)		0.0			0.0	
Detector 1 Delay (s)		0.0			0.0	
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Detector Phase		2			1	
Switch Phase						
Minimum Initial (s)		8.0			8.0	
Minimum Split (s)		23.0			23.0	
Total Split (s)		45.0			45.0	
Total Split (%)		50.0%			50.0%	
Maximum Green (s)		40.0			40.0	
Yellow Time (s)		4.0			4.0	
All-Red Time (s)		1.0			1.0	
Lost Time Adjust (s)		0.0			0.0	
Total Lost Time (s)		5.0			5.0	
Lead/Lag		Lag			Lead	
Lead-Lag Optimize?		Yes			Yes	
Vehicle Extension (s)		2.0			2.0	
Recall Mode		None			Max	
Walk Time (s)		7.0			7.0	
Flash Dont Walk (s)		5.0			5.0	
Pedestrian Calls (#/hr)		7			2	
v/c Ratio		1.07			0.85	
Control Delay		69.3			27.4	
Queue Delay		0.0			0.0	
Total Delay		69.3			27.4	
Queue Length 50th (ft)		~423			310	
Queue Length 95th (ft)		#534			378	
Internal Link Dist (ft)	460			78	268	
Turn Bay Length (ft)						
Base Capacity (vph)		1429			2034	
Starvation Cap Reductn		0			0	
Spillback Cap Reductn		0			0	
Storage Cap Reductn		0			0	
Reduced v/c Ratio		1.07			0.85	

Intersection Summary

Area Type: CBD

Cycle Length: 90

Actuated Cycle Length: 90

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: 3: Albany Street & Herald Street

↓ Ø1	↘ Ø2
45 s	45 s



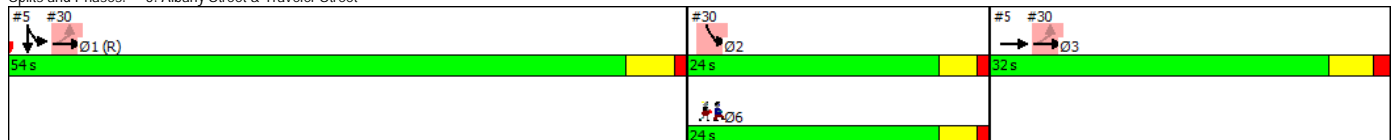
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	
Traffic Volume (vph)	0	1400	0	0	1590	0
Future Volume (vph)	0	1400	0	0	1590	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.76			0.91	
Frt		0.85			1.00	
Flt Protected		1.00			1.00	
Satd. Flow (prot)		3217			4577	
Flt Permitted		1.00			1.00	
Satd. Flow (perm)		3217			4577	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1522	0	0	1728	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1522	0	0	1728	0
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Actuated Green, G (s)		40.0			40.0	
Effective Green, g (s)		40.0			40.0	
Actuated g/C Ratio		0.44			0.44	
Clearance Time (s)		5.0			5.0	
Vehicle Extension (s)		2.0			2.0	
Lane Grp Cap (vph)		1429			2034	
v/s Ratio Prot		c0.47			c0.38	
v/s Ratio Perm						
v/c Ratio		1.07			0.85	
Uniform Delay, d1		25.0			22.3	
Progression Factor		1.00			1.00	
Incremental Delay, d2		43.2			4.7	
Delay (s)		68.2			27.0	
Level of Service		E			C	
Approach Delay (s)	68.2			0.0	27.0	
Approach LOS	E			A	C	
Intersection Summary						
HCM 2000 Control Delay		46.3		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)	10.0	
Intersection Capacity Utilization		78.7%		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	Ø6
Lane Configurations														
Traffic Volume (vph)	0	250	105	0	0	0	0	0	0	925	920	320		
Future Volume (vph)	0	250	105	0	0	0	0	0	0	925	920	320		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes	Yes		No		
Link Speed (mph)		30			30			30			30			
Link Distance (ft)		513			161			208			557			
Travel Time (s)		11.7			3.7			4.7			12.7			
Confl. Peds. (#/hr)			246							60		9		
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 (%)	0%	1%	3%	2%	2%	2%	2%	2%	2%	5%	1%	1%		
Shared Lane Traffic (%)										20%				
Lane Group Flow (vph)	0	386	0	0	0	0	0	0	0	804	1549	0		
Number of Detectors		1								1	1			
Detector Template														
Leading Detector (ft)		50								50	50			
Trailing Detector (ft)		0								0	0			
Detector 1 Position(ft)		0								0	0			
Detector 1 Size(ft)		50								50	50			
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex			
Detector 1 Channel														
Detector 1 Extend (s)		0.0								0.0	0.0			
Detector 1 Queue (s)		0.0								0.0	0.0			
Detector 1 Delay (s)		0.0								0.0	0.0			
Turn Type		NA								Split	NA			
Protected Phases		3								1	1		2	6
Permitted Phases														
Detector Phase		3								1	1			
Switch Phase														
Minimum Initial (s)		8.0								10.0	10.0		4.0	4.0
Minimum Split (s)		13.0								15.0	15.0		23.0	23.0
Total Split (s)		32.0								54.0	54.0		24.0	24.0
Total Split (%)		29.1%								49.1%	49.1%		22%	22%
Maximum Green (s)		27.0								49.0	49.0		20.0	20.0
Yellow Time (s)		3.5								4.0	4.0		3.0	3.0
All-Red Time (s)		1.5								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	5.0			
Lead/Lag														
Lead-Lag Optimize?														
Vehicle Extension (s)		2.0								2.0	2.0		2.0	2.0
Recall Mode		None								C-Max	C-Max		None	None
Walk Time (s)														7.0
Flash Dont Walk (s)														12.0
Pedestrian Calls (#/hr)														160
v/c Ratio		1.03								0.83	1.16			
Control Delay		94.8								14.5	108.9			
Queue Delay		0.0								0.0	0.0			
Total Delay		94.8								14.5	108.9			
Queue Length 50th (ft)		~283								119	~710			
Queue Length 95th (ft)		#475								372	#857			
Internal Link Dist (ft)		433			81			128			477			
Turn Bay Length (ft)														
Base Capacity (vph)		374								973	1338			
Starvation Cap Reductn		0								0	0			
Spillback Cap Reductn		0								0	0			
Storage Cap Reductn		0								0	0			
Reduced v/c Ratio		1.03								0.83	1.16			
















Intersection Summary
















Area Type: CBD
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 11 (10%), Referenced to phase 1:SBTL, 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.

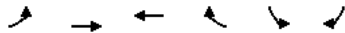
Splits and Phases: 5: Albany Street & Traveler Street



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	250	105	0	0	0	0	0	0	925	920	320
Future Volume (vph)	0	250	105	0	0	0	0	0	0	925	920	320
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	
Lane Util. Factor		1.00								0.91	0.91	
Frpb, ped/bikes		0.91								1.00	0.99	
Flpb, ped/bikes		1.00								1.00	1.00	
Frt		0.96								1.00	0.97	
Flt Protected		1.00								0.95	0.99	
Satd. Flow (prot)		1469								1408	2924	
Flt Permitted		1.00								0.95	0.99	
Satd. Flow (perm)		1469								1408	2924	
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	272	114	0	0	0	0	0	0	1005	1000	348
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	334	10	0
Lane Group Flow (vph)	0	372	0	0	0	0	0	0	0	470	1539	0
Confl. Peds. (#/hr)			246							60		9
Confl. Bikes (#/hr)			5									
Heavy Vehicles (%)	0%	1%	3%	2%	2%	2%	2%	2%	2%	5%	1%	1%
Turn Type		NA								Split	NA	
Protected Phases		3								1	1	
Permitted Phases												
Actuated Green, G (s)		27.0								50.0	50.0	
Effective Green, g (s)		27.0								50.0	50.0	
Actuated g/C Ratio		0.25								0.45	0.45	
Clearance Time (s)		5.0								5.0	5.0	
Vehicle Extension (s)		2.0								2.0	2.0	
Lane Grp Cap (vph)		360								640	1329	
v/s Ratio Prot		c0.25								0.33	c0.53	
v/s Ratio Perm												
v/c Ratio		1.03								0.73	1.16	
Uniform Delay, d1		41.5								24.6	30.0	
Progression Factor		1.00								1.00	1.00	
Incremental Delay, d2		56.6								7.3	80.0	
Delay (s)		98.1								31.9	110.0	
Level of Service		F								C	F	
Approach Delay (s)		98.1		0.0			0.0				83.3	
Approach LOS		F		A			A				F	
Intersection Summary												
HCM 2000 Control Delay			85.4							F		
HCM 2000 Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			110.0							14.0		
Intersection Capacity Utilization			79.0%							D		
Analysis Period (min)			15									
c Critical Lane Group												

											
Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (vph)	0	0	50	0	0	0	870	2115	5	0	0
Future Volume (vph)	0	0	50	0	0	0	870	2115	5	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30				30			30		30	
Link Distance (ft)	138				557			158		179	
Travel Time (s)	3.1				12.7			3.6		4.1	
Confl. Peds. (#/hr)			2						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
Heavy Vehicles (%)	0%	0%	18%	2%	2%	2%	2%	2%	20%	2%	2%
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	54	0	0	0	0	0	3250	0	0	0
Sign Control	Stop				Free			Free		Stop	
Intersection Summary											
Area Type:	CBD										
Control Type:	Unsignalized										

											
Movement	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (veh/h)	0	0	50	0	0	0	870	2115	5	0	0
Future Volume (Veh/h)	0	0	50	0	0	0	870	2115	5	0	0
Sign Control	Stop				Free			Free		Stop	
Grade	0%				0%			0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	54	0	0	0	946	2299	5	0	0
Pedestrians	4				2						
Lane Width (ft)	12.0				0.0						
Walking Speed (ft/s)	4.0				4.0						
Percent Blockage	0				0						
Right turn flare (veh)											
Median type					None			None			
Median storage (veh)											
Upstream signal (ft)					557			158			
pX, platoon unblocked	0.67	0.67	0.67	0.67						0.67	
vC, conflicting volume	4198	4198	775	2308			0			4200	0
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	4046	4046	0	1214			0			4050	0
tC, single (s)	7.5	6.5	7.3	4.1			4.1			6.5	6.9
tC, 2 stage (s)											
tF (s)	3.5	4.0	3.5	2.2			2.2			4.0	3.3
p0 queue free %	100	100	92	100			42			100	100
cM capacity (veh/h)	0	1	688	379			1622			1	1084
Direction, Lane #	EB 1	SB 1	SB 2	SB 3							
Volume Total	54	1521	1150	580							
Volume Left	0	946	0	0							
Volume Right	54	0	0	5							
cSH	688	1622	1700	1700							
Volume to Capacity	0.08	0.58	0.68	0.34							
Queue Length 95th (ft)	6	100	0	0							
Control Delay (s)	10.7	9.8	0.0	0.0							
Lane LOS	B	A									
Approach Delay (s)	10.7	4.6									
Approach LOS	B										
Intersection Summary											
Average Delay			4.7								
Intersection Capacity Utilization			75.9%		ICU Level of Service				D		
Analysis Period (min)			15								

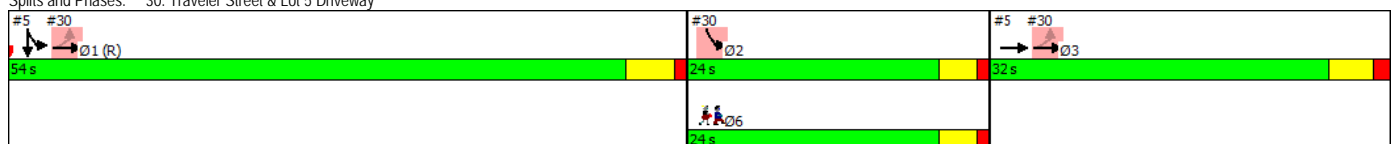


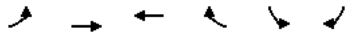
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø6
Lane Configurations		↔↔↔			↔				
Traffic Volume (vph)	15	1160	0	0	5	0			
Future Volume (vph)	15	1160	0	0	5	0			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Right Turn on Red				Yes		Yes			
Link Speed (mph)		30	30		30				
Link Distance (ft)		161	152		138				
Travel Time (s)		3.7	3.5		3.1				
Confl. Peds. (#/hr)	5				1				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	0	1277	0	0	5	0			
Number of Detectors	1	2			1				
Detector Template	Left	Thru			Left				
Leading Detector (ft)	20	100			20				
Trailing Detector (ft)	0	0			0				
Detector 1 Position(ft)	0	0			0				
Detector 1 Size(ft)	20	6			20				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0			0.0				
Detector 1 Queue (s)	0.0	0.0			0.0				
Detector 1 Delay (s)	0.0	0.0			0.0				
Detector 2 Position(ft)		94							
Detector 2 Size(ft)		6							
Detector 2 Type		Cl+Ex							
Detector 2 Channel									
Detector 2 Extend (s)		0.0							
Turn Type	Perm	NA			Prot				
Protected Phases		1 3			2		1	3	6
Permitted Phases	1 3								
Detector Phase	1 3	1 3			2				
Switch Phase									
Minimum Initial (s)					4.0		10.0	8.0	4.0
Minimum Split (s)					23.0		15.0	13.0	23.0
Total Split (s)					24.0		54.0	32.0	24.0
Total Split (%)					21.8%		49%	29%	22%
Maximum Green (s)					20.0		49.0	27.0	20.0
Yellow Time (s)					3.0		4.0	3.5	3.0
All-Red Time (s)					1.0		1.0	1.5	1.0
Lost Time Adjust (s)					0.0				
Total Lost Time (s)					4.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)					2.0		2.0	2.0	2.0
Recall Mode					None		C-Max	None	None
Walk Time (s)									7.0
Flash Dont Walk (s)									12.0
Pedestrian Calls (#/hr)									160
v/c Ratio		0.34			0.04				
Control Delay		2.7			44.2				
Queue Delay		3.0			0.0				
Total Delay		5.7			44.2				
Queue Length 50th (ft)		47			4				
Queue Length 95th (ft)		m46			14				
Internal Link Dist (ft)		81	72		58				
Turn Bay Length (ft)									
Base Capacity (vph)		3716			328				
Starvation Cap Reductn		2292			0				
Spillback Cap Reductn		0			0				
Storage Cap Reductn		0			0				
Reduced v/c Ratio		0.90			0.02				

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 11 (10%), Referenced to phase 1:SBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 30: Traveler Street & Lot 5 Driveway





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↔↔			↔	
Traffic Volume (vph)	15	1160	0	0	5	0
Future Volume (vph)	15	1160	0	0	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0	
Lane Util. Factor		0.91			1.00	
Frpb, ped/bikes		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		4987			1805	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		4987			1805	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	1261	0	0	5	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1277	0	0	5	0
Confl. Peds. (#/hr)	5				1	
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%
Turn Type	Perm	NA			Prot	
Protected Phases		1 3			2	
Permitted Phases	1 3					
Actuated Green, G (s)		82.0			19.0	
Effective Green, g (s)		82.0			19.0	
Actuated g/C Ratio		0.75			0.17	
Clearance Time (s)					4.0	
Vehicle Extension (s)					2.0	
Lane Grp Cap (vph)		3717			311	
v/s Ratio Prot					c0.00	
v/s Ratio Perm		0.26				
v/c Ratio		0.34			0.02	
Uniform Delay, d1		4.8			37.7	
Progression Factor		0.53			1.00	
Incremental Delay, d2		0.0			0.0	
Delay (s)		2.6			37.8	
Level of Service		A			D	
Approach Delay (s)		2.6	0.0		37.8	
Approach LOS		A	A		D	
Intersection Summary						
HCM 2000 Control Delay		2.7		HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio		0.30				
Actuated Cycle Length (s)		110.0		Sum of lost time (s)		14.0
Intersection Capacity Utilization		33.6%		ICU Level of Service		A
Analysis Period (min)		15				

c Critical Lane Group




Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	
Traffic Volume (vph)	0	1210	0	0	1520	0
Future Volume (vph)	0	1210	0	0	1520	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		No				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			158	348	
Travel Time (s)	12.3			3.6	7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	2%	2%	7%	7%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1315	0	0	1652	0
Number of Detectors		1			1	
Detector Template						
Leading Detector (ft)		50			50	
Trailing Detector (ft)		0			0	
Detector 1 Position(ft)		0			0	
Detector 1 Size(ft)		50			50	
Detector 1 Type		CI+Ex			CI+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0			0.0	
Detector 1 Queue (s)		0.0			0.0	
Detector 1 Delay (s)		0.0			0.0	
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Detector Phase		2			1	
Switch Phase						
Minimum Initial (s)		8.0			8.0	
Minimum Split (s)		23.0			23.0	
Total Split (s)		32.0			48.0	
Total Split (%)		40.0%			60.0%	
Maximum Green (s)		27.0			43.0	
Yellow Time (s)		4.0			4.0	
All-Red Time (s)		1.0			1.0	
Lost Time Adjust (s)		0.0			0.0	
Total Lost Time (s)		5.0			5.0	
Lead/Lag		Lag			Lead	
Lead-Lag Optimize?		Yes			Yes	
Vehicle Extension (s)		2.0			2.0	
Recall Mode		Max			C-Max	
Walk Time (s)		7.0			7.0	
Flash Dont Walk (s)		5.0			5.0	
Pedestrian Calls (#/hr)		4			1	
v/c Ratio		1.25			0.70	
Control Delay		145.6			15.8	
Queue Delay		0.0			0.0	
Total Delay		145.6			15.8	
Queue Length 50th (ft)		~364			209	
Queue Length 95th (ft)		#471			263	
Internal Link Dist (ft)	460			78	268	
Turn Bay Length (ft)						
Base Capacity (vph)		1055			2345	
Starvation Cap Reductn		0			0	
Spillback Cap Reductn		0			0	
Storage Cap Reductn		0			0	
Reduced v/c Ratio		1.25			0.70	

Intersection Summary

Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 19 (24%), Referenced to phase 1:SBT, 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: 3: Albany Street & Herald Street



						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		TTT			TTT	
Traffic Volume (vph)	0	1210	0	0	1520	0
Future Volume (vph)	0	1210	0	0	1520	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.76			0.91	
Frt		0.85			1.00	
Flt Protected		1.00			1.00	
Satd. Flow (prot)		3126			4363	
Flt Permitted		1.00			1.00	
Satd. Flow (perm)		3126			4363	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1315	0	0	1652	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1315	0	0	1652	0
Heavy Vehicles (%)	6%	6%	2%	2%	7%	7%
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Actuated Green, G (s)		27.0			43.0	
Effective Green, g (s)		27.0			43.0	
Actuated g/C Ratio		0.34			0.54	
Clearance Time (s)		5.0			5.0	
Vehicle Extension (s)		2.0			2.0	
Lane Grp Cap (vph)		1055			2345	
v/s Ratio Prot		c0.42			c0.38	
v/s Ratio Perm						
v/c Ratio		1.25			0.70	
Uniform Delay, d1		26.5			13.8	
Progression Factor		1.00			1.00	
Incremental Delay, d2		118.9			1.8	
Delay (s)		145.4			15.6	
Level of Service		F			B	
Approach Delay (s)	145.4			0.0	15.6	
Approach LOS	F			A	B	
Intersection Summary						
HCM 2000 Control Delay		73.1		HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio		0.91				
Actuated Cycle Length (s)		80.0		Sum of lost time (s)	10.0	
Intersection Capacity Utilization		72.3%		ICU Level of Service	C	
Analysis Period (min)		15				
c Critical Lane Group						
















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø6
Lane Configurations														
Traffic Volume (vph)	0	255	60	0	0	0	0	0	0	935	980	185		
Future Volume (vph)	0	255	60	0	0	0	0	0	0	935	980	185		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes	Yes		No		
Link Speed (mph)		30			25			30			30			
Link Distance (ft)		513			85			208			557			
Travel Time (s)		11.7			2.3			4.7			12.7			
Confl. Peds. (#/hr)			158							32				
Confl. Bikes (#/hr)			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		
Heavy Vehicles (%)	0%	6%	0%	2%	2%	2%	2%	2%	2%	7%	6%	6%		
Shared Lane Traffic (%)										26%				
Lane Group Flow (vph)	0	342	0	0	0	0	0	0	0	752	1530	0		
Number of Detectors		1								1	1			
Detector Template														
Leading Detector (ft)		50								50	50			
Trailing Detector (ft)		0								0	0			
Detector 1 Position(ft)		0								0	0			
Detector 1 Size(ft)		50								50	50			
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex			
Detector 1 Channel														
Detector 1 Extend (s)		0.0								0.0	0.0			
Detector 1 Queue (s)		0.0								0.0	0.0			
Detector 1 Delay (s)		0.0								0.0	0.0			
Turn Type		NA								Split	NA			
Protected Phases		3								1	1		2	6
Permitted Phases														
Detector Phase		3								1	1			
Switch Phase														
Minimum Initial (s)		8.0								10.0	10.0		4.0	4.0
Minimum Split (s)		24.0								24.0	24.0		23.0	23.0
Total Split (s)		30.0								66.0	66.0		24.0	24.0
Total Split (%)		25.0%								55.0%	55.0%		20%	20%
Maximum Green (s)		25.0								61.0	61.0		20.0	20.0
Yellow Time (s)		3.5								4.0	4.0		3.0	3.0
All-Red Time (s)		1.5								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	5.0			
Lead/Lag														
Lead-Lag Optimize?														
Vehicle Extension (s)		2.0								2.0	2.0		2.0	2.0
Recall Mode		None								C-Max	C-Max		None	None
Walk Time (s)														7.0
Flash Dont Walk (s)														12.0
Pedestrian Calls (#/hr)														96
v/c Ratio		1.06								0.75	1.03			
Control Delay		112.1								10.0	60.5			
Queue Delay		4.8								0.8	0.2			
Total Delay		116.8								10.8	60.7			
Queue Length 50th (ft)		~286								81	~692			
Queue Length 95th (ft)		#476								273	#840			
Internal Link Dist (ft)		433				5		128			477			
Turn Bay Length (ft)														
Base Capacity (vph)		322								999	1484			
Starvation Cap Reductn		0								0	0			
Spillback Cap Reductn		4								70	1			
Storage Cap Reductn		0								0	0			
Reduced v/c Ratio		1.08								0.81	1.03			
















Intersection Summary
















Area Type: CBD
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 8 (7%), Referenced to phase 1:SBTL, 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: 5: Albany Street & Traveler Street



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	255	60	0	0	0	0	0	0	935	980	185
Future Volume (vph)	0	255	60	0	0	0	0	0	0	935	980	185
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	
Lane Util. Factor		1.00								0.91	0.91	
Frpb, ped/bikes		0.95								1.00	1.00	
Flpb, ped/bikes		1.00								1.00	1.00	
Frt		0.97								1.00	0.98	
Flt Protected		1.00								0.95	0.99	
Satd. Flow (prot)		1516								1382	2849	
Flt Permitted		1.00								0.95	0.99	
Satd. Flow (perm)		1516								1382	2849	
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	277	65	0	0	0	0	0	0	1016	1065	201
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	286	14	0
Lane Group Flow (vph)	0	335	0	0	0	0	0	0	0	466	1516	0
Confl. Peds. (#/hr)			158							32		
Confl. Bikes (#/hr)			10									
Heavy Vehicles (%)	0%	6%	0%	2%	2%	2%	2%	2%	2%	7%	6%	6%
Turn Type		NA								Split	NA	
Protected Phases		3								1	1	
Permitted Phases												
Actuated Green, G (s)		25.0								62.0	62.0	
Effective Green, g (s)		25.0								62.0	62.0	
Actuated g/C Ratio		0.21								0.52	0.52	
Clearance Time (s)		5.0								5.0	5.0	
Vehicle Extension (s)		2.0								2.0	2.0	
Lane Grp Cap (vph)		315								714	1471	
v/s Ratio Prot		c0.22								0.34	c0.53	
v/s Ratio Perm												
v/c Ratio		1.06								0.65	1.03	
Uniform Delay, d1		47.5								21.2	29.0	
Progression Factor		1.00								1.00	1.00	
Incremental Delay, d2		68.4								4.6	31.8	
Delay (s)		115.9								25.8	60.8	
Level of Service		F								C	E	
Approach Delay (s)		115.9			0.0			0.0			49.2	
Approach LOS		F			A			A			D	
Intersection Summary												
HCM 2000 Control Delay			57.9			HCM 2000 Level of Service					E	
HCM 2000 Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)				14.0		
Intersection Capacity Utilization			73.2%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

											
Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (vph)	0	0	45	0	0	0	665	2055	10	0	0
Future Volume (vph)	0	0	45	0	0	0	665	2055	10	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30				30			30		30	
Link Distance (ft)	124				557			158		179	
Travel Time (s)	2.8				12.7			3.6		4.1	
Confl. Peds. (#/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
Heavy Vehicles (%)	0%	0%	50%	2%	2%	2%	6%	7%	67%	2%	2%
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	49	0	0	0	0	0	2968	0	0	0
Sign Control	Stop				Free			Free		Stop	
Intersection Summary											
Area Type:	CBD										
Control Type:	Unsignalized										

											
Movement	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (veh/h)	0	0	45	0	0	0	665	2055	10	0	0
Future Volume (Veh/h)	0	0	45	0	0	0	665	2055	10	0	0
Sign Control	Stop				Free			Free		Stop	
Grade	0%				0%			0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	49	0	0	0	723	2234	11	0	0
Pedestrians	1										
Lane Width (ft)	12.0										
Walking Speed (ft/s)	4.0										
Percent Blockage	0										
Right turn flare (veh)											
Median type					None			None			
Median storage (veh)											
Upstream signal (ft)					557			158			
pX, platoon unblocked	0.73	0.73	0.73	0.73					0.73		
vC, conflicting volume	3686	3686	751	2246			0		3692	0	
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	3380	3380	0	1396			0		3387	0	
tC, single (s)	7.5	6.5	7.9	4.1			4.2		6.5	6.9	
tC, 2 stage (s)											
tF (s)	3.5	4.0	3.8	2.2			2.3		4.0	3.3	
p0 queue free %	100	100	93	100			55		100	100	
cM capacity (veh/h)	1	3	687	352			1593		3	1084	
Direction, Lane #	EB 1	SB 1	SB 2	SB 3							
Volume Total	49	1282	1117	570							
Volume Left	0	723	0	0							
Volume Right	49	0	0	11							
cSH	687	1593	1700	1700							
Volume to Capacity	0.07	0.45	0.66	0.34							
Queue Length 95th (ft)	6	61	0	0							
Control Delay (s)	10.6	7.8	0.0	0.0							
Lane LOS	B	A									
Approach Delay (s)	10.6	3.4									
Approach LOS	B										
Intersection Summary											
Average Delay			3.5								
Intersection Capacity Utilization			69.4%		ICU Level of Service				C		
Analysis Period (min)			15								

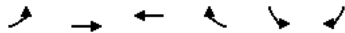
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø6
Lane Configurations		↔↔↔			↔				
Traffic Volume (vph)	10	1180	0	0	15	0			
Future Volume (vph)	10	1180	0	0	15	0			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Right Turn on Red				Yes		Yes			
Link Speed (mph)		30	30		30				
Link Distance (ft)		85	103		205				
Travel Time (s)		1.9	2.3		4.7				
Confl. Peds. (#/hr)	2								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Heavy Vehicles (%)	0%	7%	2%	2%	2%	2%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	0	1294	0	0	16	0			
Number of Detectors	1	2			1				
Detector Template	Left	Thru			Left				
Leading Detector (ft)	20	100			20				
Trailing Detector (ft)	0	0			0				
Detector 1 Position(ft)	0	0			0				
Detector 1 Size(ft)	20	6			20				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0			0.0				
Detector 1 Queue (s)	0.0	0.0			0.0				
Detector 1 Delay (s)	0.0	0.0			0.0				
Detector 2 Position(ft)		94							
Detector 2 Size(ft)		6							
Detector 2 Type		Cl+Ex							
Detector 2 Channel									
Detector 2 Extend (s)		0.0							
Turn Type	Perm	NA			Prot				
Protected Phases		1 3			2		1	3	6
Permitted Phases	1 3								
Detector Phase	1 3	1 3			2				
Switch Phase									
Minimum Initial (s)					4.0		10.0	8.0	4.0
Minimum Split (s)					23.0		24.0	24.0	23.0
Total Split (s)					24.0		66.0	30.0	24.0
Total Split (%)					20.0%		55%	25%	20%
Maximum Green (s)					20.0		61.0	25.0	20.0
Yellow Time (s)					3.0		4.0	3.5	3.0
All-Red Time (s)					1.0		1.0	1.5	1.0
Lost Time Adjust (s)					0.0				
Total Lost Time (s)					4.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)					2.0		2.0	2.0	2.0
Recall Mode					None		C-Max	None	None
Walk Time (s)									7.0
Flash Dont Walk (s)									12.0
Pedestrian Calls (#/hr)									96
v/c Ratio		0.35			0.10				
Control Delay		2.1			47.3				
Queue Delay		0.0			0.0				
Total Delay		2.1			47.3				
Queue Length 50th (ft)		42			12				
Queue Length 95th (ft)		m36			32				
Internal Link Dist (ft)		5	23		125				
Turn Bay Length (ft)									
Base Capacity (vph)		3718			295				
Starvation Cap Reductn		0			0				
Spillback Cap Reductn		0			0				
Storage Cap Reductn		0			0				
Reduced v/c Ratio		0.35			0.05				

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 8 (7%), Referenced to phase 1:SBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 29: Traveler Street & Lot 5 Driveway





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↔↔			↔	
Traffic Volume (vph)	10	1180	0	0	15	0
Future Volume (vph)	10	1180	0	0	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0	
Lane Util. Factor		0.91			1.00	
Frpb, ped/bikes		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		4848			1770	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		4848			1770	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	1283	0	0	16	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1294	0	0	16	0
Confl. Peds. (#/hr)	2					
Heavy Vehicles (%)	0%	7%	2%	2%	2%	2%
Turn Type	Perm	NA			Prot	
Protected Phases		1 3			2	
Permitted Phases	1 3					
Actuated Green, G (s)		92.0			19.0	
Effective Green, g (s)		92.0			19.0	
Actuated g/C Ratio		0.77			0.16	
Clearance Time (s)					4.0	
Vehicle Extension (s)					2.0	
Lane Grp Cap (vph)		3716			280	
v/s Ratio Prot					c0.01	
v/s Ratio Perm		0.27				
v/c Ratio		0.35			0.06	
Uniform Delay, d1		4.5			42.9	
Progression Factor		0.44			1.00	
Incremental Delay, d2		0.0			0.0	
Delay (s)		2.0			42.9	
Level of Service		A			D	
Approach Delay (s)		2.0	0.0		42.9	
Approach LOS		A	A		D	
Intersection Summary						
HCM 2000 Control Delay		2.5		HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio		0.31				
Actuated Cycle Length (s)		120.0		Sum of lost time (s)		14.0
Intersection Capacity Utilization		33.8%		ICU Level of Service		A
Analysis Period (min)		15				

c Critical Lane Group

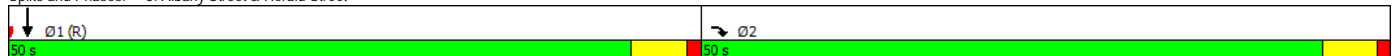



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	
Traffic Volume (vph)	0	1690	0	0	1330	0
Future Volume (vph)	0	1690	0	0	1330	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		No				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			158	348	
Travel Time (s)	12.3			3.6	7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1837	0	0	1446	0
Number of Detectors		1			1	
Detector Template						
Leading Detector (ft)		50			50	
Trailing Detector (ft)		0			0	
Detector 1 Position(ft)		0			0	
Detector 1 Size(ft)		50			50	
Detector 1 Type		CI+Ex			CI+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0			0.0	
Detector 1 Queue (s)		0.0			0.0	
Detector 1 Delay (s)		0.0			0.0	
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Detector Phase		2			1	
Switch Phase						
Minimum Initial (s)		8.0			8.0	
Minimum Split (s)		23.0			23.0	
Total Split (s)		50.0			50.0	
Total Split (%)		50.0%			50.0%	
Maximum Green (s)		45.0			45.0	
Yellow Time (s)		4.0			4.0	
All-Red Time (s)		1.0			1.0	
Lost Time Adjust (s)		0.0			0.0	
Total Lost Time (s)		5.0			5.0	
Lead/Lag		Lag			Lead	
Lead-Lag Optimize?		Yes			Yes	
Vehicle Extension (s)		2.0			2.0	
Recall Mode		Max			C-Max	
Walk Time (s)		7.0			7.0	
Flash Dont Walk (s)		5.0			5.0	
Pedestrian Calls (#/hr)		12			5	
v/c Ratio		1.26			0.71	
Control Delay		135.1			24.6	
Queue Delay		0.0			0.0	
Total Delay		135.1			24.6	
Queue Length 50th (ft)		~660			264	
Queue Length 95th (ft)		#759			320	
Internal Link Dist (ft)	460			78	268	
Turn Bay Length (ft)						
Base Capacity (vph)		1462			2039	
Starvation Cap Reductn		0			0	
Spillback Cap Reductn		0			0	
Storage Cap Reductn		0			0	
Reduced v/c Ratio		1.26			0.71	
















Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 75 (75%), Referenced to phase 1:SBT, 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: 3: Albany Street & Herald Street



						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	
Traffic Volume (vph)	0	1690	0	0	1330	0
Future Volume (vph)	0	1690	0	0	1330	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.76			0.91	
Frt		0.85			1.00	
Flt Protected		1.00			1.00	
Satd. Flow (prot)		3249			4532	
Flt Permitted		1.00			1.00	
Satd. Flow (perm)		3249			4532	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1837	0	0	1446	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1837	0	0	1446	0
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Actuated Green, G (s)		45.0			45.0	
Effective Green, g (s)		45.0			45.0	
Actuated g/C Ratio		0.45			0.45	
Clearance Time (s)		5.0			5.0	
Vehicle Extension (s)		2.0			2.0	
Lane Grp Cap (vph)		1462			2039	
v/s Ratio Prot		c0.57			c0.32	
v/s Ratio Perm						
v/c Ratio		1.26			0.71	
Uniform Delay, d1		27.5			22.2	
Progression Factor		0.33			1.00	
Incremental Delay, d2		119.5			2.1	
Delay (s)		128.7			24.3	
Level of Service		F			C	
Approach Delay (s)	128.7			0.0	24.3	
Approach LOS	F			A	C	
Intersection Summary						
HCM 2000 Control Delay		82.7		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.98				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		80.7%		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	Ø6
Lane Configurations														
Traffic Volume (vph)	0	395	75	0	0	0	0	0	0	985	740	135		
Future Volume (vph)	0	395	75	0	0	0	0	0	0	985	740	135		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes	Yes		No		
Link Speed (mph)		30			25			30			30			
Link Distance (ft)		513			85			208			557			
Travel Time (s)		11.7			2.3			4.7			12.7			
Confl. Peds. (#/hr)			157							26		1		
Confl. Bikes (#/hr)			3									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%	2%	2%	2%	2%	2%	2%	2%	2%	4%	3%	0%		
Shared Lane Traffic (%)										23%				
Lane Group Flow (vph)	0	511	0	0	0	0	0	0	0	825	1197	0		
Number of Detectors		1								1	1			
Detector Template														
Leading Detector (ft)		50								50	50			
Trailing Detector (ft)		0								0	0			
Detector 1 Position(ft)		0								0	0			
Detector 1 Size(ft)		50								50	50			
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex			
Detector 1 Channel														
Detector 1 Extend (s)		0.0								0.0	0.0			
Detector 1 Queue (s)		0.0								0.0	0.0			
Detector 1 Delay (s)		0.0								0.0	0.0			
Turn Type		NA								Split	NA			
Protected Phases		3								1	1		2	6
Permitted Phases														
Detector Phase		3								1	1			
Switch Phase														
Minimum Initial (s)		8.0								10.0	10.0		4.0	4.0
Minimum Split (s)		13.0								15.0	15.0		23.0	23.0
Total Split (s)		25.0								61.0	61.0		24.0	24.0
Total Split (%)		22.7%								55.5%	55.5%		22%	22%
Maximum Green (s)		20.0								56.0	56.0		20.0	20.0
Yellow Time (s)		3.5								4.0	4.0		3.0	3.0
All-Red Time (s)		1.5								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	5.0			
Lead/Lag														
Lead-Lag Optimize?														
Vehicle Extension (s)		2.0								2.0	2.0		2.0	2.0
Recall Mode		None								C-Max	C-Max		None	None
Walk Time (s)														7.0
Flash Dont Walk (s)														12.0
Pedestrian Calls (#/hr)														93
v/c Ratio		1.76								0.82	0.78			
Control Delay		382.9								14.2	25.0			
Queue Delay		0.2								1.6	0.0			
Total Delay		383.1								15.8	25.0			
Queue Length 50th (ft)		-539								158	349			
Queue Length 95th (ft)		#750								406	446			
Internal Link Dist (ft)		433						128			477			
Turn Bay Length (ft)														
Base Capacity (vph)		291								1010	1539			
Starvation Cap Reductn		0								0	0			
Spillback Cap Reductn		5								71	2			
Storage Cap Reductn		0								0	0			
Reduced v/c Ratio		1.79								0.88	0.78			














Intersection Summary
















Area Type: CBD
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 1:SBTL, 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.

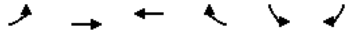
Splits and Phases: 5: Albany Street & Traveler Street



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	395	75	0	0	0	0	0	0	985	740	135
Future Volume (vph)	0	395	75	0	0	0	0	0	0	985	740	135
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	
Lane Util. Factor		1.00								0.91	0.91	
Frpb, ped/bikes		0.96								1.00	1.00	
Flpb, ped/bikes		1.00								1.00	1.00	
Frt		0.98								1.00	0.98	
Flt Protected		1.00								0.95	0.99	
Satd. Flow (prot)		1570								1421	2932	
Flt Permitted		1.00								0.95	0.99	
Satd. Flow (perm)		1570								1421	2932	
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	429	82	0	0	0	0	0	0	1071	804	147
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	274	19	0
Lane Group Flow (vph)	0	504	0	0	0	0	0	0	0	551	1178	0
Confl. Peds. (#/hr)			157							26		1
Confl. Bikes (#/hr)			3									2
Heavy Vehicles (%)	0%	2%	2%	2%	2%	2%	2%	2%	2%	4%	3%	0%
Turn Type		NA								Split	NA	
Protected Phases		3								1	1	
Permitted Phases												
Actuated Green, G (s)		20.0								57.0	57.0	
Effective Green, g (s)		20.0								57.0	57.0	
Actuated g/C Ratio		0.18								0.52	0.52	
Clearance Time (s)		5.0								5.0	5.0	
Vehicle Extension (s)		2.0								2.0	2.0	
Lane Grp Cap (vph)		285								736	1519	
v/s Ratio Prot		c0.32								0.39	c0.40	
v/s Ratio Perm												
v/c Ratio		1.77								0.75	0.78	
Uniform Delay, d1		45.0								20.9	21.3	
Progression Factor		1.00								1.00	1.00	
Incremental Delay, d2		360.5								6.9	3.9	
Delay (s)		405.5								27.8	25.3	
Level of Service		F								C	C	
Approach Delay (s)		405.5			0.0			0.0			26.3	
Approach LOS		F			A			A			C	
Intersection Summary												
HCM 2000 Control Delay			102.8			HCM 2000 Level of Service					F	
HCM 2000 Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			110.0			Sum of lost time (s)				14.0		
Intersection Capacity Utilization			77.2%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

											
Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations											
Traffic Volume (vph)	0	1	45	0	0	0	1200	1815	5	0	0
Future Volume (vph)	0	1	45	0	0	0	1200	1815	5	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30				30			30		30	
Link Distance (ft)	124				557			158		179	
Travel Time (s)	2.8				12.7			3.6		4.1	
Confl. Peds. (#/hr)									8		
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
Heavy Vehicles (%)	0%	100%	0%	2%	2%	2%	1%	4%	0%	2%	2%
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	50	0	0	0	0	0	3282	0	0	0
Sign Control	Stop				Free			Free		Stop	
Intersection Summary											
Area Type:	CBD										
Control Type:	Unsignalized										

											
Movement	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (veh/h)	0	1	45	0	0	0	1200	1815	5	0	0
Future Volume (Veh/h)	0	1	45	0	0	0	1200	1815	5	0	0
Sign Control	Stop				Free			Free		Stop	
Grade	0%				0%			0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	49	0	0	0	1304	1973	5	0	0
Pedestrians	8										
Lane Width (ft)	12.0										
Walking Speed (ft/s)	4.0										
Percent Blockage	1										
Right turn flare (veh)											
Median type					None			None			
Median storage (veh)											
Upstream signal (ft)					557			158			
pX, platoon unblocked	0.75	0.75	0.75	0.75						0.75	
vC, conflicting volume	4592	4592	668	1986			0			4594	0
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	4622	4622	0	1138			0			4626	0
tC, single (s)	7.5	8.5	6.9	4.1			4.1			6.5	6.9
tC, 2 stage (s)											
tF (s)	3.5	5.0	3.3	2.2			2.2			4.0	3.3
p0 queue free %	100	0	94	100			20			100	100
cM capacity (veh/h)	0	0	810	453			1629			0	1084
Direction, Lane #	EB 1	SB 1	SB 2	SB 3							
Volume Total	50	1797	986	498							
Volume Left	0	1304	0	0							
Volume Right	49	0	0	5							
cSH	1	1629	1700	1700							
Volume to Capacity	80.14	0.80	0.58	0.29							
Queue Length 95th (ft)	Err	243	0	0							
Control Delay (s)	Err	15.3	0.0	0.0							
Lane LOS	F	C									
Approach Delay (s)	Err	8.4									
Approach LOS	F										
Intersection Summary											
Average Delay			158.3								
Intersection Capacity Utilization			83.9%		ICU Level of Service				E		
Analysis Period (min)			15								



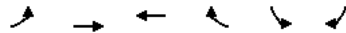
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø6
Lane Configurations									
Traffic Volume (vph)	15	1365	0	0	15	0			
Future Volume (vph)	15	1365	0	0	15	0			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Right Turn on Red				Yes		Yes			
Link Speed (mph)		30	30		30				
Link Distance (ft)		85	118		142				
Travel Time (s)		1.9	2.7		3.2				
Confl. Peds. (#/hr)					2				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	0	1500	0	0	16	0			
Number of Detectors	1	2			1				
Detector Template	Left	Thru			Left				
Leading Detector (ft)	20	100			20				
Trailing Detector (ft)	0	0			0				
Detector 1 Position(ft)	0	0			0				
Detector 1 Size(ft)	20	6			20				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0			0.0				
Detector 1 Queue (s)	0.0	0.0			0.0				
Detector 1 Delay (s)	0.0	0.0			0.0				
Detector 2 Position(ft)		94							
Detector 2 Size(ft)		6							
Detector 2 Type		Cl+Ex							
Detector 2 Channel									
Detector 2 Extend (s)		0.0							
Turn Type	Perm	NA			Prot				
Protected Phases		1 3			2		1	3	6
Permitted Phases	1 3								
Detector Phase	1 3	1 3			2				
Switch Phase									
Minimum Initial (s)					4.0		10.0	8.0	4.0
Minimum Split (s)					23.0		15.0	13.0	23.0
Total Split (s)					24.0		61.0	25.0	24.0
Total Split (%)					21.8%		55%	23%	22%
Maximum Green (s)					20.0		56.0	20.0	20.0
Yellow Time (s)					3.0		4.0	3.5	3.0
All-Red Time (s)					1.0		1.0	1.5	1.0
Lost Time Adjust (s)					0.0				
Total Lost Time (s)					4.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)					2.0		2.0	2.0	2.0
Recall Mode					None		C-Max	None	None
Walk Time (s)									7.0
Flash Dont Walk (s)									12.0
Pedestrian Calls (#/hr)									93
v/c Ratio		0.40			0.09				
Control Delay		1.9			42.1				
Queue Delay		0.0			0.0				
Total Delay		1.9			42.1				
Queue Length 50th (ft)		40			11				
Queue Length 95th (ft)		m33			30				
Internal Link Dist (ft)		5	38		62				
Turn Bay Length (ft)									
Base Capacity (vph)		3716			328				
Starvation Cap Reductn		0			0				
Spillback Cap Reductn		0			0				
Storage Cap Reductn		0			0				
Reduced v/c Ratio		0.40			0.05				

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 1:SBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 29: Traveler Street & Lot 5 Driveway





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↔↔			↔	
Traffic Volume (vph)	15	1365	0	0	15	0
Future Volume (vph)	15	1365	0	0	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0	
Lane Util. Factor		0.91			1.00	
Frpb, ped/bikes		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		4987			1805	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		4987			1805	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	1484	0	0	16	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1500	0	0	16	0
Confl. Peds. (#/hr)					2	
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%
Turn Type	Perm	NA			Prot	
Protected Phases		1 3			2	
Permitted Phases	1 3					
Actuated Green, G (s)		82.0			19.0	
Effective Green, g (s)		82.0			19.0	
Actuated g/C Ratio		0.75			0.17	
Clearance Time (s)					4.0	
Vehicle Extension (s)					2.0	
Lane Grp Cap (vph)		3717			311	
v/s Ratio Prot					c0.01	
v/s Ratio Perm		0.30				
v/c Ratio		0.40			0.05	
Uniform Delay, d1		5.1			38.0	
Progression Factor		0.36			1.00	
Incremental Delay, d2		0.0			0.0	
Delay (s)		1.9			38.0	
Level of Service		A			D	
Approach Delay (s)		1.9	0.0		38.0	
Approach LOS		A	A		D	
Intersection Summary						
HCM 2000 Control Delay		2.2		HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio		0.35				
Actuated Cycle Length (s)		110.0		Sum of lost time (s)		14.0
Intersection Capacity Utilization		37.5%		ICU Level of Service		A
Analysis Period (min)		15				

c Critical Lane Group




Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	
Traffic Volume (vph)	0	1405	0	0	1605	0
Future Volume (vph)	0	1405	0	0	1605	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		No				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			158	348	
Travel Time (s)	12.3			3.6	7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1527	0	0	1745	0
Number of Detectors		1			1	
Detector Template						
Leading Detector (ft)		50			50	
Trailing Detector (ft)		0			0	
Detector 1 Position(ft)		0			0	
Detector 1 Size(ft)		50			50	
Detector 1 Type		CI+Ex			CI+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0			0.0	
Detector 1 Queue (s)		0.0			0.0	
Detector 1 Delay (s)		0.0			0.0	
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Detector Phase		2			1	
Switch Phase						
Minimum Initial (s)		8.0			8.0	
Minimum Split (s)		23.0			23.0	
Total Split (s)		45.0			45.0	
Total Split (%)		50.0%			50.0%	
Maximum Green (s)		40.0			40.0	
Yellow Time (s)		4.0			4.0	
All-Red Time (s)		1.0			1.0	
Lost Time Adjust (s)		0.0			0.0	
Total Lost Time (s)		5.0			5.0	
Lead/Lag		Lag			Lead	
Lead-Lag Optimize?		Yes			Yes	
Vehicle Extension (s)		2.0			2.0	
Recall Mode		None			Max	
Walk Time (s)		7.0			7.0	
Flash Dont Walk (s)		5.0			5.0	
Pedestrian Calls (#/hr)		7			2	
v/c Ratio		1.07			0.86	
Control Delay		70.5			27.9	
Queue Delay		0.0			0.0	
Total Delay		70.5			27.9	
Queue Length 50th (ft)		~425			315	
Queue Length 95th (ft)		#537			384	
Internal Link Dist (ft)	460			78	268	
Turn Bay Length (ft)						
Base Capacity (vph)		1429			2034	
Starvation Cap Reductn		0			0	
Spillback Cap Reductn		0			0	
Storage Cap Reductn		0			0	
Reduced v/c Ratio		1.07			0.86	

Intersection Summary

Area Type:	CBD
Cycle Length:	90
Actuated Cycle Length:	90
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: 3: Albany Street & Herald Street

↓ Ø1	↘ Ø2
45 s	45 s

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	
Traffic Volume (vph)	0	1405	0	0	1605	0
Future Volume (vph)	0	1405	0	0	1605	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.76			0.91	
Frt		0.85			1.00	
Flt Protected		1.00			1.00	
Satd. Flow (prot)		3217			4577	
Flt Permitted		1.00			1.00	
Satd. Flow (perm)		3217			4577	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1527	0	0	1745	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1527	0	0	1745	0
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Turn Type		Prot			NA	
Protected Phases		2			1	
Permitted Phases						
Actuated Green, G (s)		40.0			40.0	
Effective Green, g (s)		40.0			40.0	
Actuated g/C Ratio		0.44			0.44	
Clearance Time (s)		5.0			5.0	
Vehicle Extension (s)		2.0			2.0	
Lane Grp Cap (vph)		1429			2034	
v/s Ratio Prot		c0.47			c0.38	
v/s Ratio Perm						
v/c Ratio		1.07			0.86	
Uniform Delay, d1		25.0			22.4	
Progression Factor		1.00			1.00	
Incremental Delay, d2		44.5			5.0	
Delay (s)		69.5			27.4	
Level of Service		E			C	
Approach Delay (s)	69.5			0.0	27.4	
Approach LOS	E			A	C	
Intersection Summary						
HCM 2000 Control Delay		47.0		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)		10.0
Intersection Capacity Utilization		79.2%		ICU Level of Service		D
Analysis Period (min)		15				
c Critical Lane Group						

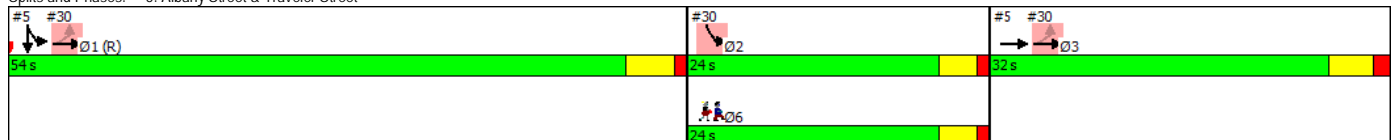


















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø6
Lane Configurations		↔								↔	↔			
Traffic Volume (vph)	0	250	105	0	0	0	0	0	0	950	925	325		
Future Volume (vph)	0	250	105	0	0	0	0	0	0	950	925	325		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Right Turn on Red			Yes			Yes			Yes	Yes		No		
Link Speed (mph)		30			30			30			30			
Link Distance (ft)		513			161			208			557			
Travel Time (s)		11.7			3.7			4.7			12.7			
Confl. Peds. (#/hr)			246							60		9		
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 (%)	0%	1%	3%	2%	2%	2%	2%	2%	2%	5%	1%	1%		
Shared Lane Traffic (%)										20%				
Lane Group Flow (vph)	0	386	0	0	0	0	0	0	0	826	1565	0		
Number of Detectors		1								1	1			
Detector Template														
Leading Detector (ft)		50								50	50			
Trailing Detector (ft)		0								0	0			
Detector 1 Position(ft)		0								0	0			
Detector 1 Size(ft)		50								50	50			
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex			
Detector 1 Channel														
Detector 1 Extend (s)		0.0								0.0	0.0			
Detector 1 Queue (s)		0.0								0.0	0.0			
Detector 1 Delay (s)		0.0								0.0	0.0			
Turn Type		NA								Split	NA			
Protected Phases		3								1	1		2	6
Permitted Phases														
Detector Phase		3								1	1			
Switch Phase														
Minimum Initial (s)		8.0								10.0	10.0		4.0	4.0
Minimum Split (s)		13.0								15.0	15.0		23.0	23.0
Total Split (s)		32.0								54.0	54.0		24.0	24.0
Total Split (%)		29.1%								49.1%	49.1%		22%	22%
Maximum Green (s)		27.0								49.0	49.0		20.0	20.0
Yellow Time (s)		3.5								4.0	4.0		3.0	3.0
All-Red Time (s)		1.5								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	5.0			
Lead/Lag														
Lead-Lag Optimize?														
Vehicle Extension (s)		2.0								2.0	2.0		2.0	2.0
Recall Mode		None								C-Max	C-Max		None	None
Walk Time (s)														7.0
Flash Dont Walk (s)														12.0
Pedestrian Calls (#/hr)														160
v/c Ratio		1.03								0.85	1.17			
Control Delay		94.8								16.4	113.8			
Queue Delay		0.0								0.0	0.0			
Total Delay		94.8								16.4	113.8			
Queue Length 50th (ft)		~283								146	~724			
Queue Length 95th (ft)		#475								#456	#870			
Internal Link Dist (ft)		433			81			128			477			
Turn Bay Length (ft)														
Base Capacity (vph)		374								973	1338			
Starvation Cap Reductn		0								0	0			
Spillback Cap Reductn		0								0	0			
Storage Cap Reductn		0								0	0			
Reduced v/c Ratio		1.03								0.85	1.17			
















Intersection Summary
















Area Type: CBD
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 11 (10%), Referenced to phase 1:SBTL, 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.

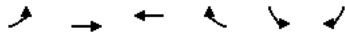
Splits and Phases: 5: Albany Street & Traveler Street



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	250	105	0	0	0	0	0	0	950	925	325
Future Volume (vph)	0	250	105	0	0	0	0	0	0	950	925	325
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	
Lane Util. Factor		1.00								0.91	0.91	
Frpb, ped/bikes		0.91								1.00	0.99	
Flpb, ped/bikes		1.00								1.00	1.00	
Frt		0.96								1.00	0.97	
Flt Protected		1.00								0.95	0.99	
Satd. Flow (prot)		1469								1408	2922	
Flt Permitted		1.00								0.95	0.99	
Satd. Flow (perm)		1469								1408	2922	
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	272	114	0	0	0	0	0	0	1033	1005	353
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	334	10	0
Lane Group Flow (vph)	0	372	0	0	0	0	0	0	0	492	1555	0
Confl. Peds. (#/hr)			246							60		9
Confl. Bikes (#/hr)			5									
Heavy Vehicles (%)	0%	1%	3%	2%	2%	2%	2%	2%	2%	5%	1%	1%
Turn Type		NA								Split	NA	
Protected Phases		3								1	1	
Permitted Phases												
Actuated Green, G (s)		27.0								50.0	50.0	
Effective Green, g (s)		27.0								50.0	50.0	
Actuated g/C Ratio		0.25								0.45	0.45	
Clearance Time (s)		5.0								5.0	5.0	
Vehicle Extension (s)		2.0								2.0	2.0	
Lane Grp Cap (vph)		360								640	1328	
v/s Ratio Prot		c0.25								0.35	c0.53	
v/s Ratio Perm												
v/c Ratio		1.03								0.77	1.17	
Uniform Delay, d1		41.5								25.2	30.0	
Progression Factor		1.00								1.00	1.00	
Incremental Delay, d2		56.6								8.6	85.2	
Delay (s)		98.1								33.8	115.2	
Level of Service		F								C	F	
Approach Delay (s)		98.1			0.0			0.0			87.1	
Approach LOS		F			A			A			F	
Intersection Summary												
HCM 2000 Control Delay			88.6							F		
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			110.0							14.0		
Intersection Capacity Utilization			79.7%							D		
Analysis Period (min)			15									
c Critical Lane Group												

											
Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (vph)	0	0	65	0	0	0	870	2135	5	0	0
Future Volume (vph)	0	0	65	0	0	0	870	2135	5	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30				30			30		30	
Link Distance (ft)	138				557			158		179	
Travel Time (s)	3.1				12.7			3.6		4.1	
Confl. Peds. (#/hr)			2						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
Heavy Vehicles (%)	0%	0%	18%	2%	2%	2%	2%	2%	20%	2%	2%
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	71	0	0	0	0	0	3272	0	0	0
Sign Control	Stop				Free			Free		Stop	
Intersection Summary											
Area Type:	CBD										
Control Type:	Unsignalized										

											
Movement	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations								  			
Traffic Volume (veh/h)	0	0	65	0	0	0	870	2135	5	0	0
Future Volume (Veh/h)	0	0	65	0	0	0	870	2135	5	0	0
Sign Control	Stop				Free			Free		Stop	
Grade	0%				0%			0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	71	0	0	0	946	2321	5	0	0
Pedestrians	4				2						
Lane Width (ft)	12.0				0.0						
Walking Speed (ft/s)	4.0				4.0						
Percent Blockage	0				0						
Right turn flare (veh)											
Median type					None			None			
Median storage (veh)											
Upstream signal (ft)					557			158			
pX, platoon unblocked	0.66	0.66	0.66	0.66					0.66		
vC, conflicting volume	4220	4220	782	2330			0			4222	0
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	4076	4076	0	1220			0		4080	0	
tC, single (s)	7.5	6.5	7.3	4.1			4.1		6.5	6.9	
tC, 2 stage (s)											
tF (s)	3.5	4.0	3.5	2.2			2.2		4.0	3.3	
p0 queue free %	100	100	90	100			42		100	100	
cM capacity (veh/h)	0	1	682	374			1622			1	1084
Direction, Lane #	EB 1	SB 1	SB 2	SB 3							
Volume Total	71	1526	1160	585							
Volume Left	0	946	0	0							
Volume Right	71	0	0	5							
cSH	682	1622	1700	1700							
Volume to Capacity	0.10	0.58	0.68	0.34							
Queue Length 95th (ft)	9	100	0	0							
Control Delay (s)	10.9	9.8	0.0	0.0							
Lane LOS	B	A									
Approach Delay (s)	10.9	4.6									
Approach LOS	B										
Intersection Summary											
Average Delay			4.7								
Intersection Capacity Utilization			77.3%		ICU Level of Service				D		
Analysis Period (min)			15								

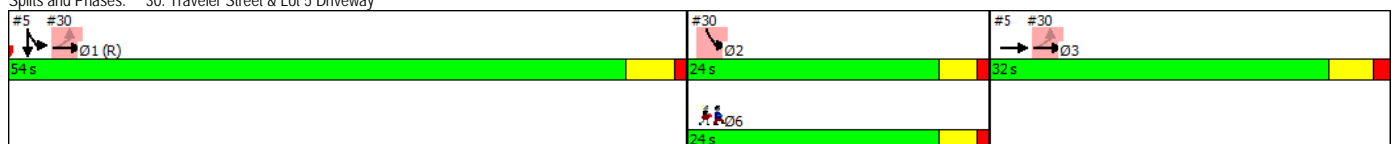


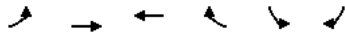
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø1	Ø3	Ø6
Lane Configurations		↔↔↔			↔				
Traffic Volume (vph)	30	1170	0	0	20	0			
Future Volume (vph)	30	1170	0	0	20	0			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Right Turn on Red				Yes		Yes			
Link Speed (mph)		30	30		30				
Link Distance (ft)		161	152		138				
Travel Time (s)		3.7	3.5		3.1				
Confl. Peds. (#/hr)	5				1				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	0	1305	0	0	22	0			
Number of Detectors	1	2			1				
Detector Template	Left	Thru			Left				
Leading Detector (ft)	20	100			20				
Trailing Detector (ft)	0	0			0				
Detector 1 Position(ft)	0	0			0				
Detector 1 Size(ft)	20	6			20				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0			0.0				
Detector 1 Queue (s)	0.0	0.0			0.0				
Detector 1 Delay (s)	0.0	0.0			0.0				
Detector 2 Position(ft)		94							
Detector 2 Size(ft)		6							
Detector 2 Type		Cl+Ex							
Detector 2 Channel									
Detector 2 Extend (s)		0.0							
Turn Type	Perm	NA			Prot				
Protected Phases		1 3			2		1	3	6
Permitted Phases	1 3								
Detector Phase	1 3	1 3			2				
Switch Phase									
Minimum Initial (s)					4.0		10.0	8.0	4.0
Minimum Split (s)					23.0		15.0	13.0	23.0
Total Split (s)					24.0		54.0	32.0	24.0
Total Split (%)					21.8%		49%	29%	22%
Maximum Green (s)					20.0		49.0	27.0	20.0
Yellow Time (s)					3.0		4.0	3.5	3.0
All-Red Time (s)					1.0		1.0	1.5	1.0
Lost Time Adjust (s)					0.0				
Total Lost Time (s)					4.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)					2.0		2.0	2.0	2.0
Recall Mode					None		C-Max	None	None
Walk Time (s)									7.0
Flash Dont Walk (s)									12.0
Pedestrian Calls (#/hr)									160
v/c Ratio		0.35			0.13				
Control Delay		2.7			43.0				
Queue Delay		3.6			0.0				
Total Delay		6.2			43.0				
Queue Length 50th (ft)		47			15				
Queue Length 95th (ft)		m48			36				
Internal Link Dist (ft)		81	72		58				
Turn Bay Length (ft)									
Base Capacity (vph)		3717			328				
Starvation Cap Reductn		2289			0				
Spillback Cap Reductn		0			0				
Storage Cap Reductn		0			0				
Reduced v/c Ratio		0.91			0.07				

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 11 (10%), Referenced to phase 1:SBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 30: Traveler Street & Lot 5 Driveway





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↔↔			↔	
Traffic Volume (vph)	30	1170	0	0	20	0
Future Volume (vph)	30	1170	0	0	20	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0	
Lane Util. Factor		0.91			1.00	
Frpb, ped/bikes		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		4986			1805	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		4986			1805	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	1272	0	0	22	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1305	0	0	22	0
Confl. Peds. (#/hr)	5				1	
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%
Turn Type	Perm	NA			Prot	
Protected Phases		1 3			2	
Permitted Phases	1 3					
Actuated Green, G (s)		82.0			19.0	
Effective Green, g (s)		82.0			19.0	
Actuated g/C Ratio		0.75			0.17	
Clearance Time (s)					4.0	
Vehicle Extension (s)					2.0	
Lane Grp Cap (vph)		3716			311	
v/s Ratio Prot					c0.01	
v/s Ratio Perm		0.26				
v/c Ratio		0.35			0.07	
Uniform Delay, d1		4.8			38.1	
Progression Factor		0.53			1.00	
Incremental Delay, d2		0.0			0.0	
Delay (s)		2.6			38.1	
Level of Service		A			D	
Approach Delay (s)		2.6	0.0		38.1	
Approach LOS		A	A		D	
Intersection Summary						
HCM 2000 Control Delay		3.1		HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio		0.31				
Actuated Cycle Length (s)		110.0		Sum of lost time (s)		14.0
Intersection Capacity Utilization		34.0%		ICU Level of Service		A
Analysis Period (min)		15				

c Critical Lane Group

APPENDIX D: Greenhouse Gas (GHG) and Air Quality Supporting Documentation

ASHRAE 90.1-2013 Energy Model

Stationary Source GHG Emissions Calculation

Ink Block 7 -

ASHRAE 90.1-2013 Energy Model

4/4/2018

5:44 PM

		Baseline	Design Case
Interior Lighting	Energy use(kWh)	396,326	396,326
	Demand (kW)	53.69	53.69
Exterior Lighting	Energy use(kWh)	25,585	25,585
	Demand (kW)	6.71	6.71
Space Heating	Energy use(kWh)	0	12,895
	Demand (kW)	0	13
Space Heating	Energy use (Therms)	22,017	18,455
	Demand (MBH)	1,310.0	850.0
Space Cooling	Energy use(kWh)	216,634	240,714
	Demand (kW)	295.55	282.92
Pumps	Energy use(kWh)	32,406	45,852
	Demand (kW)	7.78	15.43
Heat Rejection	Energy use(kWh)	0	2,698
	Demand (kW)	0	7
Fans- Interior	Energy use(kWh)	505,194	433,898
	Demand (kW)	64	52
Receptacle Equipment	Energy use(kWh)	696,560	696,560
	Demand (kW)	85	85
Elevator	Energy use(kWh)	216,360	216,360
	Demand (kW)	45.00	45
Service Water Heating	Energy use (Therms)	26,994	15,421
	Demand (MBH)	430.0	230
Total Regulated Energy Cost (\$)			
Electricity		\$288,291.00	\$285,783.00
Fuel		\$68,027	\$47,020.00
Building Total		\$356,318	\$332,803
Total Electricity	Energy use(kWh)	2,089,067	2,070,890
Total Gas	Use(Therms)	49,011	33,876
Total Energy	Use(MBtuh)	12,031	10,455

Savings		COST	6.60%
		ENERGY	13.1%

Ink7 Expanded PNF
Stationary Source GHG Emissions

Scenario	Annual Electric Consumption (kWh)	Annual Gas Consumption (Therms)	Total Energy (MMBtu/)	Annual Electric GHG (Short Tons/Yr)	Annual Gas GHG (Short Tons/Yr)	Total GHG (Short Tons/Yr)
Baseline	2,089,067	49,011	12,031	742	287	1,028
Design	2,070,890	33,876	10,455	735	198	933
Savings	18,177	15,135	1,576	6	89	95
			13.1%			9.2%

CONVERSION TABLE

CONVERT	MULTIPLY BY
KWH TO MWH	0.001
MWH TO LBS ¹	710.0
THERMS TO MMBTU	0.1
LBS TO SHORT TONS	0.0005
kBTU to KWH	0.293
MMBTU to LBS ²	117.0

1. mwh to lbs of CO2 conversion factor from 2016 ISO New England Electric Generator Air Emissions Report
2. https://www.eia.gov/environment/emissions/co2_vol_mass.cfm

APPENDIX E: Environmental Protection Supporting Documentation

Final Wind Study Report

Elkus Manfredi Architects

217 Albany Street

Desk Based Wind Comfort / Hazard
Assessment

AJ/001

Issue | April 3, 2018

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.




Job number 259486

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ARUP

Document Verification

ARUP

Job title		217 Albany Street		Job number	
				259486	
Document title		Desk Based Wind Comfort / Hazard Assessment		File reference	
Document ref		AJ/001			
Revision	Date	Filename	20180403 Wind Desk Study.docx		
Draft 1	04 January, 2018	Description	First draft		
			Prepared by	Checked by	Approved by
		Name	Adam Jaffe / Giulia Matteoni	Melissa Burton / Andrew Allsop	Melissa Burton
		Signature			
Issue	April 3rd, 2018	Filename			
		Description			
			Prepared by	Checked by	Approved by
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Appendix A

Site Specific Wind Climate

1 Introduction

1.1 Background

A pedestrian wind study was conducted for the Project 217 Albany Street in Boston, Massachusetts, by Arup to assess the effect of the proposed Project on local conditions in pedestrian areas around the study site. The No Build (present condition including approved, but not yet built projects in the area) and the Build (including the Project in the presence of all existing and approved surroundings) conditions were evaluated qualitatively from extensive experience in wind tunnel testing and computational modelling of similar project types in similar wind environments.

This study is based on drawings, plans, and models of the development provided by Elkus Manfredi Architects, satellite images of the site and its surroundings from Google Earth. The wind conditions and hazards reported here are based on the final site state where all landscaping and canopies are fully implemented.

This qualitative analysis evaluates the effects of major winds for the Boston area, including northwest, southwest, and easterly storms originating from the northeast, east and southeast. The evaluation includes, in addition to the Boston Planning and Development Agency's (BPDA) effective gust criterion an assessment of the wind conditions based on the mean hourly wind speeds expected on site.

From our qualitative evaluation the Project will not result in any new unacceptable or unsafe wind conditions in and around the Project Site. It is however important to note that some uncertainty remains in predicting wind comfort and hazard conditions qualitatively. Additional quantitative specificity could be provided through wind tunnel testing or computational simulation.

Throughout the report the wind speeds are discussed relative to their frequency of occurrence stated. Higher wind speeds do have the potential to occur, but on a less frequent basis.

1.2 Project Description

The project is a proposed 185 ft tall building at 217 Albany Street. Due to the height of the building a wind study has been conducted pursuant to the Section B.1 of the BPDA Development Review Guidelines for the Project Notification Form (PNF) to further describe the project and expected wind conditions on site.



Figure 1 – Rendering of the 217 Albany Street tower

2 Overview

The presence of a taller building among lower buildings and infrastructure provides the potential for windiness in surrounding areas. The windiness depends both on the arrangement of buildings and structures within their surroundings and their orientation compared to the prevailing winds.

When strong winds approach a bluff façade the façade will act to split the flow. The winds encountering the top one-third of the building will tend to accelerate up and over the top of the building as the winds seek the fastest path from the high-pressure region created on the windward façade to the low-pressure region created on the leeward façade of the building. Winds encountering the lower two-thirds of the building tend to be pushed, or *downdrafted*, to ground level. Downdrafts carry the same energy as the winds at the upper level. As a result, increased levels of windiness are experienced at ground level, especially around building corners where winds accelerate, see Figure 2 (left).

Local acceleration of winds occurs when two buildings are positioned side by side (*funnelling*). This mechanism is critical when the spacing between buildings is in the range between 25-100% of the building's width, see Figure 2 (right).

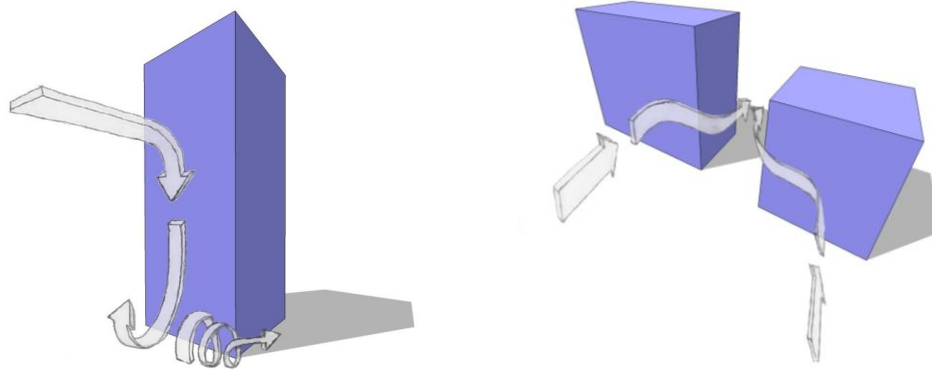


Figure 2 - (Left) Downdraft with corner acceleration. (Right) Funnelling

The occurrence of these mechanisms for the proposed development is discussed in the following sections.

2.1 Criteria Describing Wind Conditions

Acceptance criteria for pedestrian level winds were those of the Boston Planning and Development Agency (BPDA).

The BPDA has adopted two standards for assessing the relative wind comfort of pedestrians. First, the BPDA wind design guidance criterion states that an effective gust velocity¹ of 31 mph should not be exceeded more than one percent of the time. The second criteria used by the BPDA to determine the acceptability of the wind conditions on site is used to determine the relative level of pedestrian wind comfort for activities such as sitting, standing or walking.

Table 1 describes the effective gust velocity and hourly mean wind speeds satisfying each of the criteria categories when exceeded less than 1% of the time.

In general, the wind conditions in Boston downtown areas are comfortable for pedestrian walking use. However, for sitting and standing related activities wind alleviation measures would typically need to be locally employed.

¹ The effective gust velocity (EGV) is defined as $egv = U + 1.5 fvc$, where U is the mean windspeed at a particular location and fvc is the root mean square of the fluctuating velocity component measured at the same location over the same time interval.

Table 1 – Pedestrian safety / comfort wind standards

Activity Area	Effective Gust Velocity (EGV) / Mean Hourly (MH)	Permitted Annual Occurrence Frequency
“Limit” for All Pedestrian Areas	EGV = 31 mph	1%
“Dangerous”	MH > 27 mph	1%
“Uncomfortable” for Walking	MH > 19 and ≤ 27 mph	1%
Comfortable for “Walking”	MH > 15 and ≤ 19 mph	1%
Comfortable for “Standing”	MH > 12 and ≤ 15 mph	1%
Comfortable for “Sitting”	MH ≤ 12 mph	1%

2.2 Wind Climate at Site

The annual and seasonal wind climate in Boston is presented in Figure 3 in the form of wind roses. The wind roses indicate the direction and strength of hourly mean winds across all times of the day and all seasons. They are based on historical wind data (2005-2015) recorded at Logan International Airport, corrected for terrain exposure. Details of the wind climate assessment are presented in Appendix A.

The 3D figures for the wind roses show bands of occurrence of wind speeds in 4.5 mph steps. The vertical height of the band indicates the frequency of occurrence of wind speeds in that band.

As shown in Figure 3, the winds from the northwest, southwest, and west are the strongest (with speeds greater than 22.5 mph) and most frequently occurring winds at the site. Storms with reasonable strength also notably arrive from the easterly wind directions in the spring and summer months. The site sees a slight seasonal shift in winds. In the case of strong winds, northeast and west-northwest are the dominant wind directions.

Note that 3s gust wind speeds are typically about 50% faster than hourly mean wind speeds.

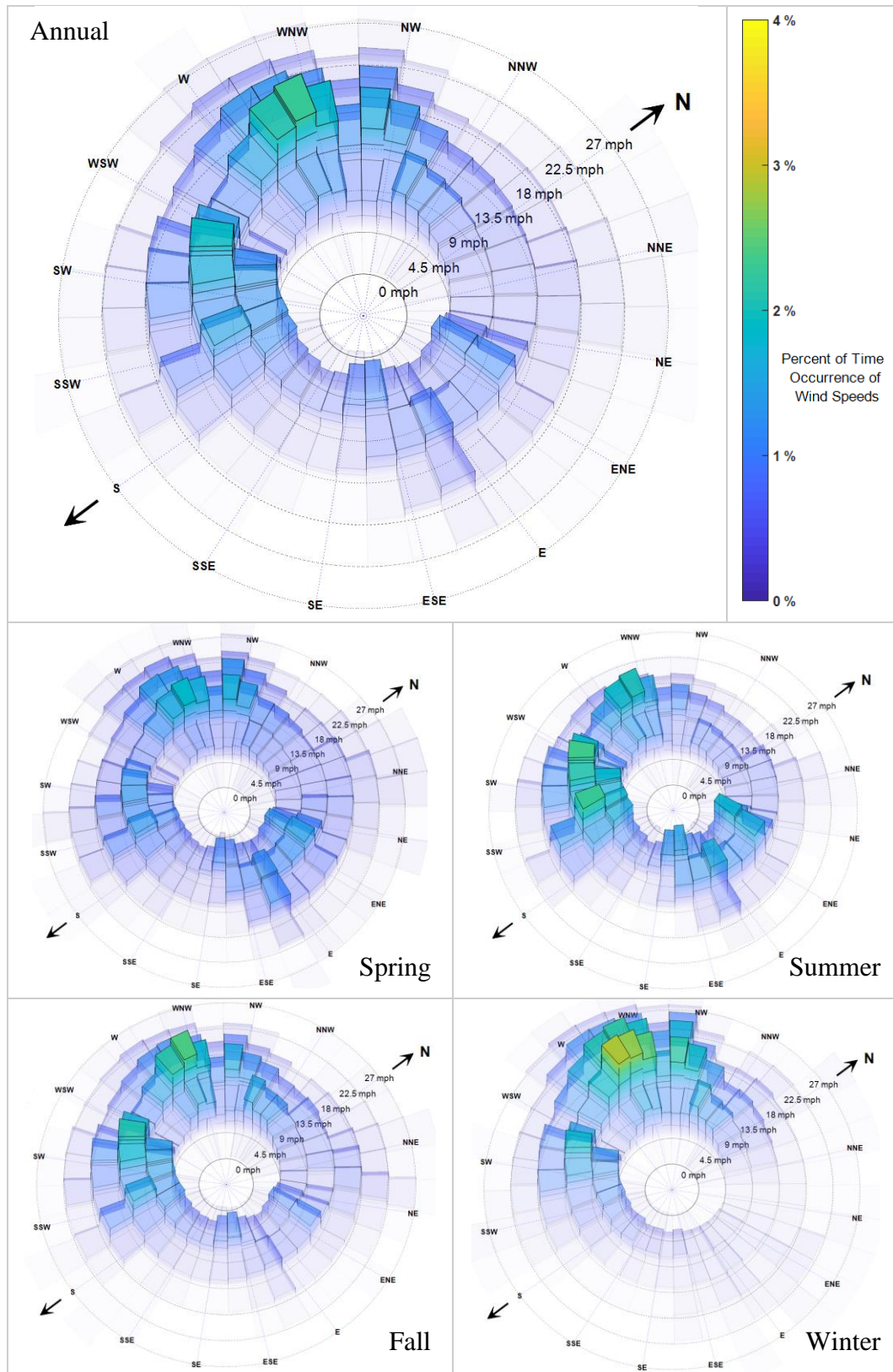


Figure 3– Wind roses indicating direction and strength of hourly mean winds in Boston

3 Project Description

The 217 Albany Street development consists of six buildings built or under construction in the densely developed South End neighborhood near downtown Boston. Five of these buildings are mixed-use blocks between five and eight stories tall, with retail at street level and residential above. The sixth building is a six story hotel.

The site is bordered to the north by Herald Street and to the east by Albany Street, beyond which are rail lines and the Massachusetts Turnpike to the north and an elevated section of US Highway 1 to the east. The development is also bordered to the south by Traveler Street and to the west by Harrison Avenue. The surrounding buildings to the south and west are primarily medium-rise mixed use and low-rise residential buildings. Taller buildings are currently proposed and under construction around the site, including the east side of Harrison.

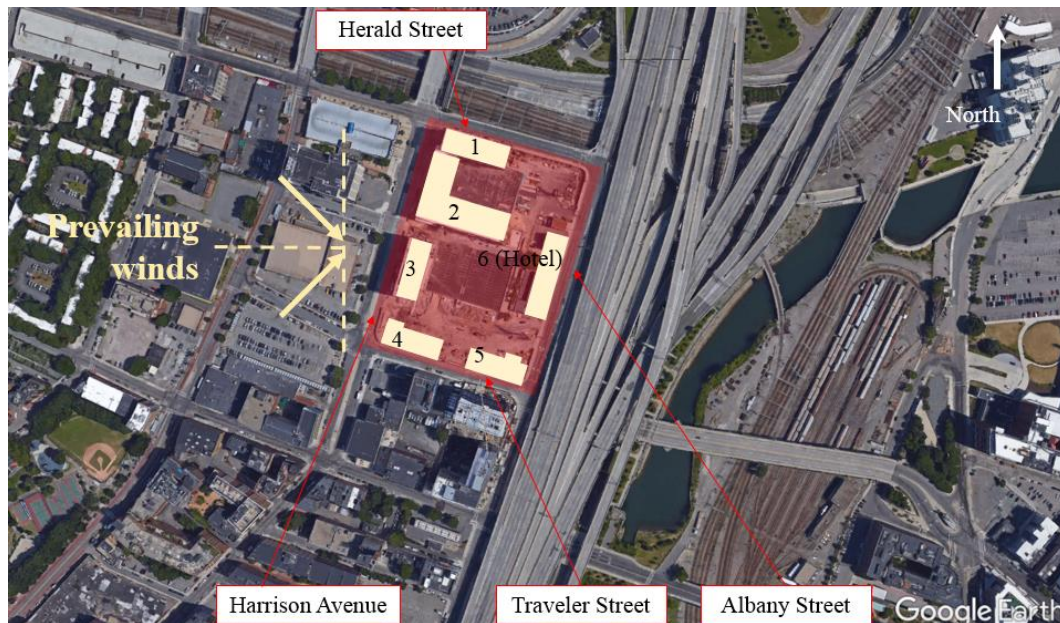


Figure 4— Satellite view of the existing site showing site boundary and constructed or partially constructed buildings (Google Earth image current as of July 2017)

The proposed seventh building is a 185' tall residential tower. The 217 Albany Street project site sits in the northeast corner of the development (see Figure 5). To the immediate north and east of the building site are Herald and Albany Streets. To the south is the AC Hotel, while to the southwest is a parking and circulation area. To the west of the tower site is a parking area, beyond which are the Ink 1 and Ink 2 medium-rise buildings of the development.

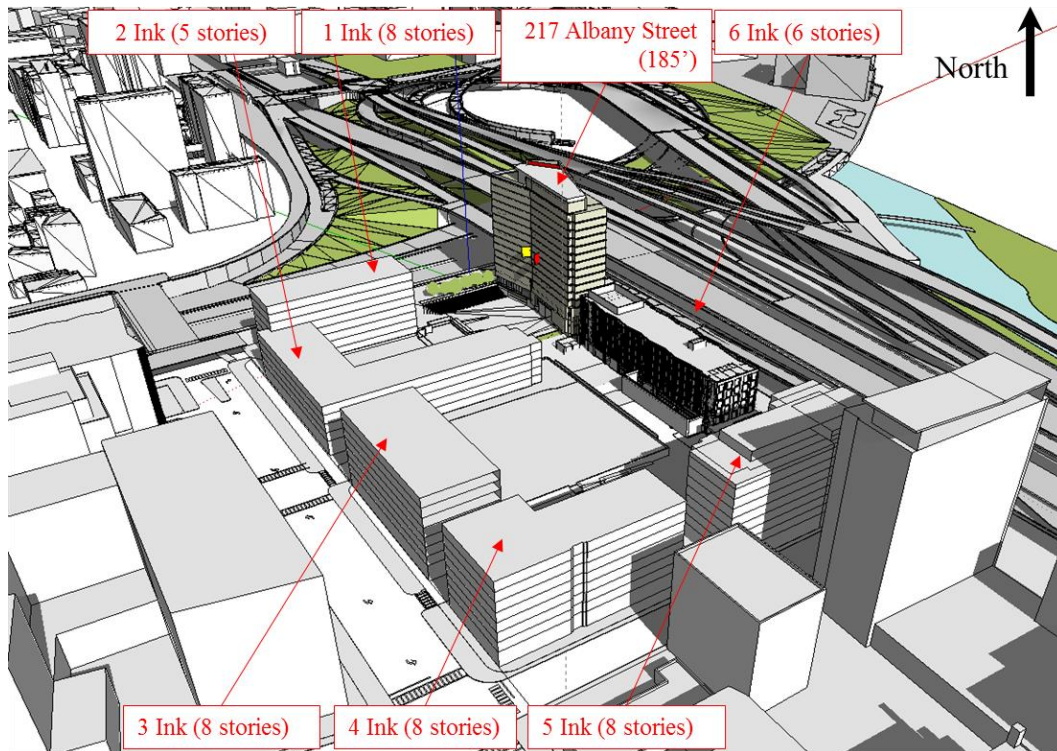


Figure 5— 3D view of the development site including 217 Albany Street

The tower is an assymmetric prismatic shape with its façade angled to both Herald and Albany Streets. The development also features street-level landscaping and an overbuilt drop-off area and through-passage for trucks connecting the parking lot and loading area to Albany Street.

4 No Build Conditions

Given the general shelter of the site provided by nearby infrastructure and the current lack of built development on the site the No Build wind conditions are predicted to be suitable for “Standing” or “Walking” annually. Uncomfortable or unsuitable wind conditions are not expected to occur at any location on site.

5 Build Conditions

Downdrafts will form on the windward side of the building whenever wind is incident on the façade. The proposed building is particularly exposed to this phenomenon because the surrounding buildings and infrastructure do not provide substantive shelter.

The landscaping plan and canopy considered over the Project’s secondary entrance will act to aid to break down the energy in these downdrafts in addition to directly sheltering pedestrians from the downdrafted flow. The 8 ft setback of

the tower at the third floor also helps to provide a shelf to catch and deflect some of the downdrafted flow. It is expected that the wind conditions at the secondary entrance will be suitable for “Standing” or “Walking”.

Winds downdrafted by the west and east facades of the Project will accelerate around the corners and create a calm stagnation region on the sides of the structure and high-speed separated region further away from it. Windiness around the building corners will be abated through the inclusion of the landscaping plan given for the project and are expected to be suitable for “Walking”.



Figure 6 – Ground level landscaping plan

High-pressure air will travel by all available routes to low-pressure regions elsewhere. The overbuilt drop-off area next to the primary lobby provides such a path for air to access or escape the western parking lot. This area will tend to be windier than either the parking lot or the street on either side of it.

The landscaping plan given above, with the large planned street trees to the east of the overbuilt drop-off area will help to break up the high winds accelerating through. Landscaping in this form is essential to aiding in the reduction of high wind flows in this area.

The main building entrance is recessed by 5ft and has a vestibule lobby, as shown in Figure 7 below, in order to shelter and protect pedestrian's accessing the building. Wind conditions are expected to be suitable for “Walking” throughout the area with the potential to have windier conditions approaching “Uncomfortable” in some locations.



Figure 7 – Ground level plan

5.1.1 Overall Impact

In some locations in and around the Project the wind conditions are expected to be less comfortable than the No Build condition. In general, wind conditions are expected to be suitable for “Walking”, but with some discrete locations potentially approaching conditions that are “Uncomfortable”. These minor changes to the No Build conditions are to be expected for a Project with an existing site that is current vacant of buildings.

Based on the qualitative assessment of various wind mitigation strategies, the Project incorporates many positive design features to mitigate the potential impacts due to wind. The cumulative effect of the adoption of the landscaping plan, the recessed main entrance, and the canopy over the secondary entrance contributes to improved and more comfortable wind conditions around the Project. A qualitative overview of the expected wind conditions in and around the Project is given in Figure 9.

5.1.2 Off-Site Impact

Under the Build conditions winds are likely to marginally increase along Albany and Herald streets. However, with the planned street side landscaping, wind conditions at off-site sidewalks are predicted to remain suitable for “Walking”. It is expected that the effective gust criterion would be met annually at all locations.

6 Conclusions

A qualitative desk study of the Project has been carried out to help assess the windiness in and around the proposed building and assess potential impact to pedestrians. The study is based on evaluation of satellite images of the area and its

surroundings, drawings and models of the proposed building, and Arup's extensive previous experience with wind tunnel and computational modelling studies of similar buildings.

Impacts of the proposed building have been assessed in accordance with the BPDA criteria.

With the inclusion of the wind abatement measures in the Project landscaping and design plans, the overall wind conditions expected in the surrounding areas are largely expected to be similar to the existing (No Build) conditions. The wind conditions are generally expected to be suitable for the intended use. It is expected that in the Build configuration the effective gust criterion will be met in and around the Project site.

The wind conditions reported here are based on the final condition where construction of all buildings within the Project masterplan is complete. In order to understand wind conditions quantitatively as opposed to qualitatively further physical or numerical simulation work would be required.

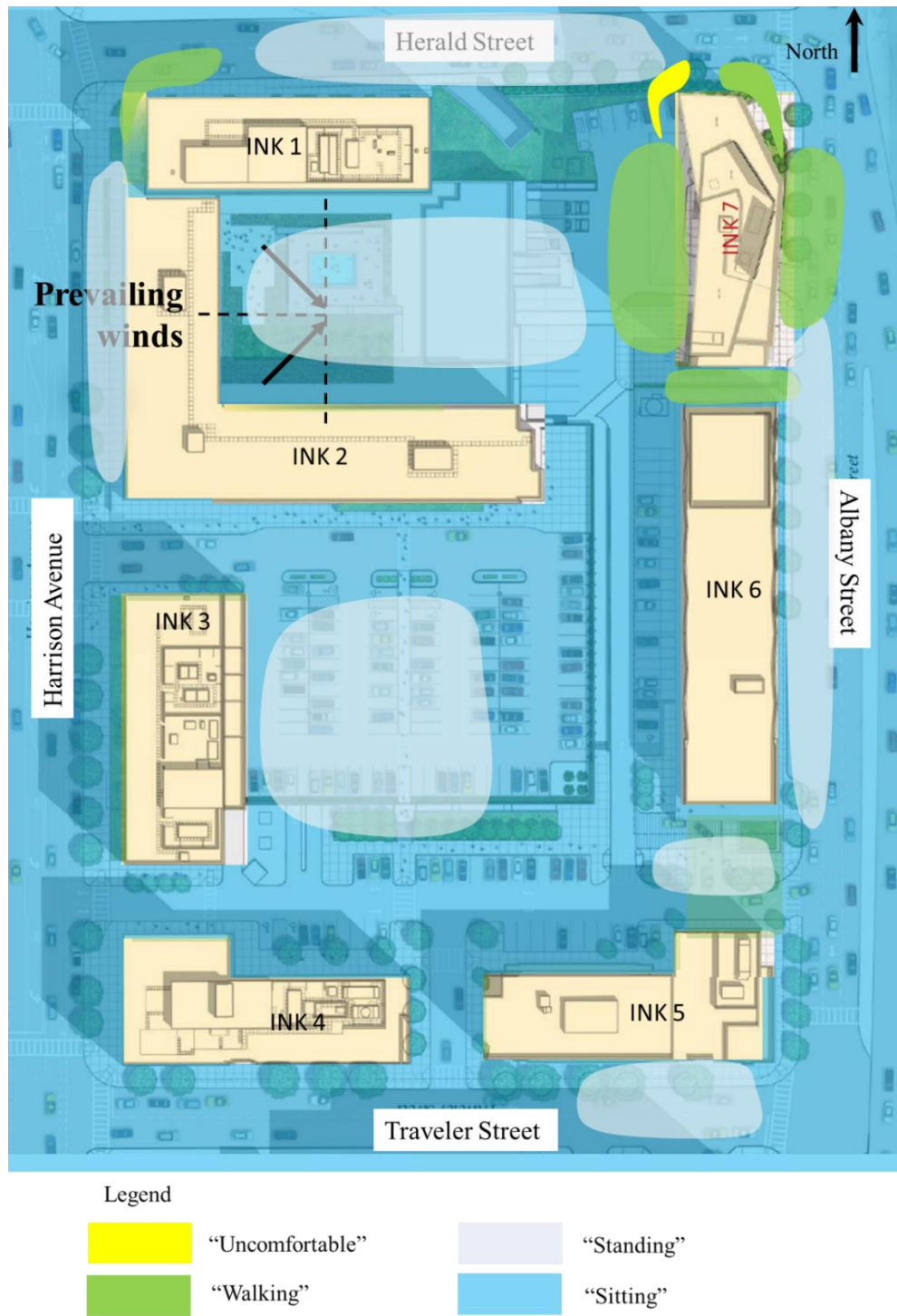


Figure 8 – Qualitative overview of wind conditions within the masterplan with planned landscaping plan

Appendix A

Site Specific Wind Climate

A1 Site Specific Wind Climate

A1.1 Climate Data

Substantial hourly time histories of historic wind data records were taken from the weather station at Logan International Airport [ID: 725090 14739 (2005-2014)]. The weather station is east of the project site (see Figure A1).

These historic wind records were collected from the National Climate Data Center, which preserves climate and historical weather data gathered by the National Oceanic and Atmospheric Administration (NOAA).



Figure A1 – Location of project site and weather stations where wind data records were collected

Effective height of the anemometer has been taken as 33 ft. The site has records of the hourly mean wind speed in one-hour intervals which are acquired in routine weather reports.

A1.2 Methodology of Wind Record Analysis

The procedure for analyzing the wind records included the following components:

1. **Data Quality:** check the quality of measurements and separate mixed climate records

2. **Exposure Correction:** transpose the wind data records from each anemometer site (considering an elevation, terrain, and topographical correction) to be consistent with open terrain
3. **Parent Wind Distribution:** assess the frequency of occurrence of the regular winds on a seasonal basis

The following sections describe in detail each of the above steps and provide a final summary of wind speeds appropriate for use at the project site.

A1.3 Data Quality

Wind records were scanned for statistical outliers and anomalies. These include: high wind speeds which were uncorrelated to a known substantial event; data gaps (as a result of anemometer faults); and step-changes (as a result of a change in the data recording method or in the anemometer position relative to shelter).

The data record from Logan Airport was of high quality. All data reported below come from analysis of this record.

A1.4 Exposure Correction

The widely accepted Deaves and Harris log-law wind model of the atmospheric boundary layer, as defined in Engineering Sciences Data Unit (ESDU)², was used to estimate the upwind terrain. A detailed survey of terrain roughness was carried out for the airport weather stations using satellite images. The wind speeds were transposed to a surface roughness classified as ‘open-country terrain’³. The analysis was completed for 30 degree sectors and up to a distance of 25 miles from the anemometer site. Surface roughness length, z_o , was chosen to be consistent with the model used in ESDU.

A further ESDU terrain assessment was carried out for the project site, and the wind speeds estimated for open-country were then transposed to the project site.

A1.5 Parent Wind Distribution

The term ‘parent winds’ is used to describe the wind speeds making up the complete wind record and are the wind speeds that we would expect to experience with daily and monthly occurrence. The parent winds were separated by season and direction. Statistical distributions were then fit to the histograms of wind strength and frequency of occurrence.

² Item 01008

³ ASCE 7-10 Exposure Category C, $z_0 = 0.02\text{m}$, Ref. Table C26.7-1, p.540