DOT BLOCK DORCHESTER, MA

Mixed-Use Residential / Retail Development

Project Notification Form

Submitted Pursuant to Article 80B of the Boston Zoning Code

Submitted by:
DOT BLOCK, LLC
c/o Atlas Investment Group, LLC
35 Fay Street, 107B
Boston, MA 02118

Submitted to:
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

Prepared by:
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Landworks Collaborative
EBI Consulting, LLC
Thompson Farland
Tech Environmental, Inc

June 2, 2015

RODE Architects Inc.   GOODWIN PROCTER   MLF CONSULTING LLC

MLF CONSULTING LLC

June 2, 2015

Mr. Brian Golden, Director
Boston Redevelopment Authority
Boston City Hall, 9th Floor
Boston, MA 02201
Attn: Mr. Gary Uter, Project Assistant

Re: DOT BLOCK
Project Notification Form (PNF)

Dear Director Golden:

DOT BLOCK LLC (the "Proponent") is submitting this Project Notification Form ("PNF"), in accordance with the Article 80B Large Project Review requirements of the Boston Zoning Code for a mixed-use residential / retail development in the Dorchester neighborhood on a Site generally bordered by Pleasant, Greenmount and Hancock Streets, and by Dorchester Avenue. The Proposed Development will include eight four-story, 8-unit buildings; a five-story, 50-unit building; and several 5-6 story, mixed-use buildings with approximately 60,000 square feet of ground floor retail space and a total of 270 upper level residential units, approximately 7,200 square feet of ground level support and service space, and a 25,000 square foot landscaped roof deck, and the buildings will be served by a five-level, 450 space central parking garage and by a separate 22 space covered lot dedicated to retail parking ("Proposed Project").

If the Proponent is successful in acquiring additional parcels at the corner of Greenmount Street and Dorchester Avenue, the Proposed Project would potentially add up to approximately 10,000 square feet of ground floor retail with up to 40 residential units above.

In accordance with Boston Redevelopment Authority ("BRA") requirements, please find attached 10-copies of the PNF plus a CD disk for placing the PNF filing on the BRA website for public review.

The Proposed Project will lead to new construction and since the gross floor area is more than 50,000 gsf, Article 80 requirements will be triggered and preparation of filing(s)

MLF
CONSULTING LLC

under the City of Boston / BRA Large Project Review required, pursuant to Article 80B of the Code. A Revised Letter of Intent to File a Project Notification Form was filed with the Boston Redevelopment Authority for the Proposed Project on May 22, 2015 (attached as **Appendix A** to the PNF).

The project team has had an opportunity to present its plans to the BRA project and urban design staffs, the Mayor's Office of Neighborhood Services, and other city departments, the residents of the adjacent Dorchester neighborhoods, and to local elected and appointed officials for the neighborhood in order to identify issues/concerns as well as design requirements related to the Proposed Project.

The public notice for the PNF is scheduled to appear in the June 3, 2015 issue of the *Boston Herald*.

On behalf of the entire project team, we would like to thank you and the BRA staff assigned to this Project, particularly Gary Uter, Project Assistant for invaluable assistance provided allowing the Proponent to achieve this comprehensive PNF filing.

We believe that the Proposed Project will be a significant addition to the Dorchester neighborhood to help address the need for additional housing.

Sincerely,
Mitchell L. Fischman Consulting LLC
on Behalf of DOT BLOCK LLC

Mitchell L. Fischman

Mitchell L. Fischman, Principal

Attachment: DOT BLOCK Project Notification Form
(10 Copies Plus CD Disk)

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1.0 EXECUTIVE SUMMARY

1.1 Introduction

DOT BLOCK LLC (“The Proponent”) is submitting this Project Notification Form (“PNF”) for the DOT BLOCK Mixed-Use Residential/Retail Development in accordance with the Article 80 requirements of the Boston Zoning Code (“Code”) for a major new development in the Glover’s Corner neighborhood of Dorchester, seeking to introduce eight, four-story, 8-unit buildings, a five-story, 50-unit building and several 5-6 story, mixed-use buildings with approximately 60,000 square feet of ground floor retail space and a total of 270 upper level residential units, approximately 7,200 square feet of ground level support and service space, and a 25,000 square foot landscaped roof deck, and the buildings will be served by a five-level, 450 space central parking garage and by a separate 22 space covered lot dedicated to retail parking (“Proposed Project”). Please see **Table 1-1** below for Proposed Project Program and Dimensions.

Table 1-1. Approximate Proposed Project Program and Dimensions of DOT BLOCK

Lot Area:	206,849 (4,75 Acres)
Gross Square Feet:	Approx. 475,000 gsf (excludes Parking Structure)
Total Number of Residential Units	384 Units
Amount of Retail Space	60,000 gsf
Number of Garage and Covered Lot Parking Spaces	Garage- 450 Spaces Covered Lot- 22 Spaces
FAR:	2.3
Number of Floors:	4 / 5 / 6 Floors
Height:	Up to 70 feet

The Proposed Project will mediate a transition in scale from the dense, but primarily residential buildings of the traditional Dorchester neighborhoods of Savin Hill, Jones Hill, and Meetinghouse Hill up to the commercial activity along Dorchester Avenue. The development team realizes the importance of reflecting the existing residential fabric, but also recognizes the potential of this portion of Dorchester Avenue to sustain a more urban scale typified by the greater activity of mixed-use development. A mix of larger and smaller retailers will anchor the development as well as serve as the transformational impetus for the broader neighborhood - currently an underutilized light industrial area with an inconsistent mix of buildings and vacant sites of varying densities. The Proposed Project will create a density more consistent with a vibrant urban neighborhood-shopping district. Please see **Figure 1-1** for the Project's locus.

The Proposed Project will exceed the 50,000 square foot total build-out size requirement for a project in a Boston neighborhood and therefore will require preparation of filing(s) under the Large Project Review regulations, pursuant to Article 80 of the Code. The Expanded PNF filing is expected to address many issues normally presented in a Draft Project Impact Report ("DPIR") including a transportation analysis, air and noise, shadow, infrastructure, historic resources, and other environmental evaluations that will help explain potential project impacts from the proposed uses, and any needed mitigation measures to reduce these impacts.

1.2 Project Overview

The Project Site ("Site") comprises a total of approximately 4.75 acres (206,849 square feet), and is predominantly located within the Dorchester Neighborhood Shopping zoning sub-district, with a small portion within a 3-Family sub-district. The Site is centrally located in Dorchester, Boston's largest neighborhood, and is bounded by the three distinct and vibrant urban residential neighborhood districts of Meeting House Hill to the south, Jones Hill to the east and Savin Hill to the north/northeast. The Site includes nine (9) existing buildings which are in fair to poor condition; a private way (Greenmount Place) off Greenmount Street; and a 15-foot City of Boston Sewer Easement that runs through a portion of the Site from Dorchester Avenue to Pleasant Street. The existing buildings will be demolished to enable the Proposed Project to be completed. See **Figures 3.0-3** thru **Figure 3.0-7** in **Section 3.0** for photographs of the existing site buildings.

The Project is located within a 10 minute walking radius to the Savin Hill Red Line station, and is served by several bus lines that connect to a transit network that reaches beyond the Boston Metro area. The project will encourage multi-modal transportation habits through the inclusion of bike- and car-sharing programs. Most significantly, with the creation of a pedestrian-only corridor internal to the site and the introduction of 'complete streets' design to the retail experience of Dorchester Avenue and Hancock Street, the project seeks to safely establish a new culture of pedestrian activity in this area currently dominated by the automobile.

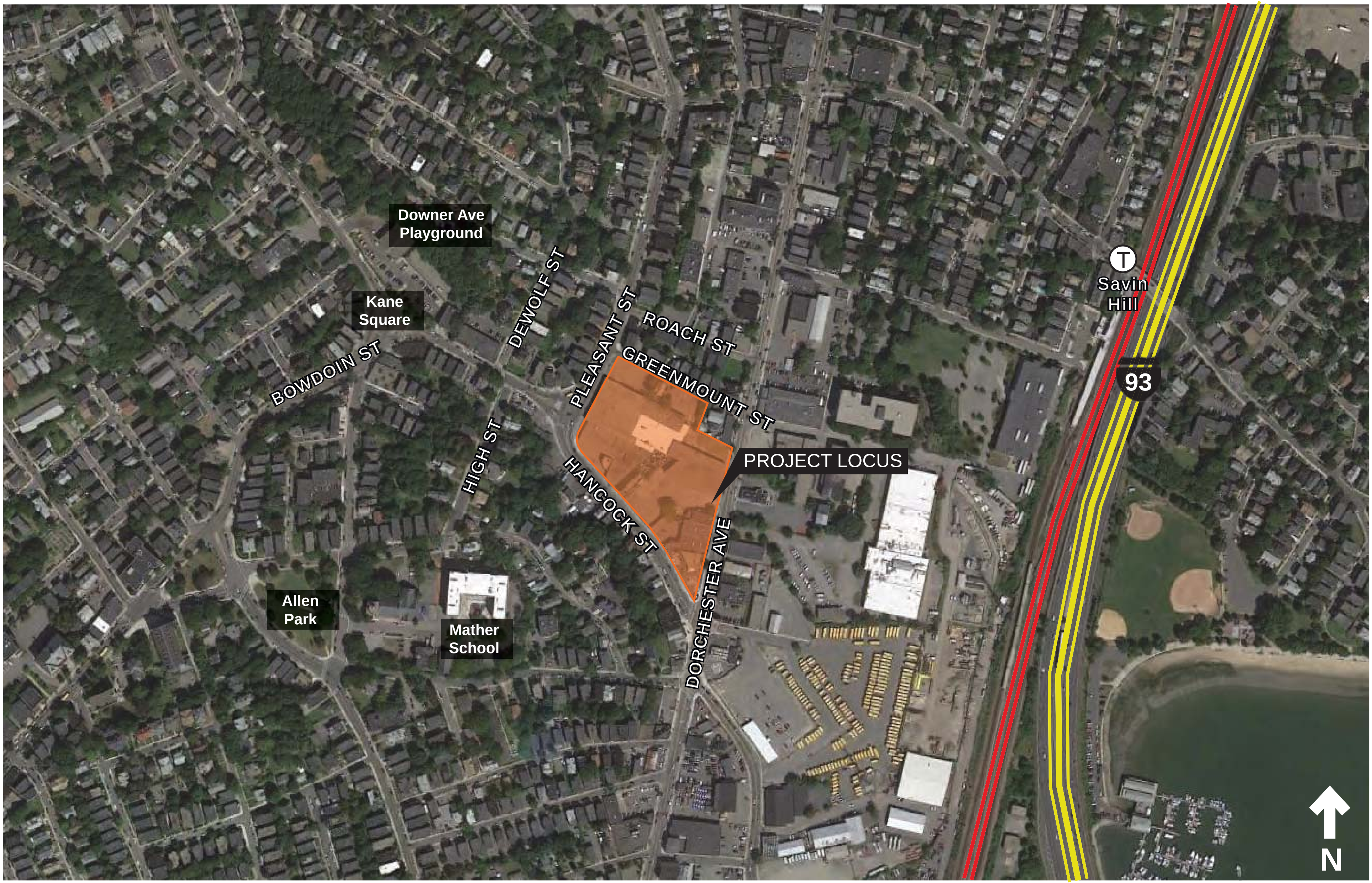


Figure 1-1
Project Locus

The assessors listing of the existing parcels of land within the proposed site totals is presented in the table below.

COB Assessor's Parcel Number PROPOSED PROJECT	Address	Area (SF)
1502595010	1207 Dorchester Avenue	157,684
1502583000	16 Greenmount Street	2,794
1502607000	256 Hancock Street	9,834
	Greenmount Place (Private Way)	1,708
1502599000	1221 Dorchester Avenue	6,369
1502600000	1225 Dorchester Avenue	13,649
1502604000	274 Hancock Street	5,293
1502602000	1245 Dorchester Avenue	7,685
1502603000	284 Hancock Street	1,833
	PROPOSED PROJECT - TOTAL	**206,849**

The Proposed Development will proceed as a single project. However, components of the development will need to be sequenced for logistical reasons, and to satisfy lender requirements and allow for market absorption. Initial construction is expected to include the eastern and southern portions of the development along Dorchester Avenue and Hancock Street. These buildings will include several 5-6 story, mixed-use buildings with approximately 60,000 square feet of ground floor retail space and a total of 270 upper level residential units, approximately 7,200 square feet of ground level support and service space, and a 25,000 square foot landscaped roof deck. The buildings will be served by a five-level, 450 space central parking garage and by a separate 22 space covered lot dedicated to retail parking.

There is expected to be an *interim* condition to screen the completed garage from the adjoining residential areas across Pleasant and Greenmount Streets, as requested by the BRA, until the completion of the full build-out (as described in the paragraph below).

Following completion or substantial completion of the construction described in the prior paragraph, a northern portion of the approximately 206,849 square foot site will be developed for residential and open space uses, including 64 for-sale or rental two-bedroom units in eight separate four-story structures along Pleasant and Greenmount Streets providing 88,760 gsf of floor area. In addition, there will be a single, five-story structure housing 50 for-sale or rental units providing 53,844 gsf of floor area.

As part of the Proponent's development proposal, a portion of the proposed total residential units will also address the City of Boston's Inclusionary Zoning Policy.

A Revised Letter of Intent to File a Project Notification Form was filed with the Boston Redevelopment Authority for the proposed mixed-use development project on May 22, 2015 (See **Appendix A**).

1.3 Potential Future Acquisition Parcels

Corner of Greenmount Street and Dorchester Avenue

The Proponent is seeking to acquire control of the 12,617 square feet at the corner of Dorchester Avenue and Greenmount Street. If the Proponent is successful in acquiring that land, then the Project Site will be increased by 12,617 square feet, and the Project will be increased to include approximately 40 new residences, and 10,000 square feet of additional retail uses. The impacts of this additional development and proposed massing are described in this PNF, and necessary zoning relief in **Tables 2.1** and **2.2** in **Section 2.0.**

The Proponent is seeking to acquire control of the 12,617 square feet at the corner of Dorchester Avenue and Greenmount Street. If the Proponent is successful in acquiring that land, then the Project Site will be increased by 12,617 square feet, and the Project will be increased to include approximately 40 new residences, and approximately 10,000 square feet of additional retail uses. The impacts of this additional development and proposed massing will be fully presented and evaluated in the Project Notification Form.

The listing of the parcels within this future acquisition area is shown in the table below.

COB Assessor's Parcel Number POTENTIAL FUTURE ACQUISITION PARCELS	Address	Area (SF)
1502587000	2 Greenmount Street	7,773
1502588000	1189 Dorchester Avenue	1,070
1502589000	1191 Dorchester Avenue	663
1502590000	1193 Dorchester Avenue	649
1502591000	1195 Dorchester Avenue	664
1502592000	1197 Dorchester Avenue	684
1502593000	1199 Dorchester Avenue	664
	POTENTIAL FUTURE ACQUISITION PARCELS - TOTAL	**12,167**

1.4 Proposed Project

1.4.1 Project Site, Surroundings and Access

The 4.75 acre site, centrally located in Dorchester, Boston's largest neighborhood, is bounded by the three distinct and vibrant urban residential neighborhood districts of Meeting House Hill to the south, Jones Hill to the east and Savin Hill to the north/northeast and by Pleasant, Greenmount and Hancock Streets, and Dorchester Avenue. The site is also in the midst of a very active transportation node. The Southeast Expressway (I-93) is located only a few blocks to the east and it is within a 10-minute walking radius to the Savin Hill MBTA Red Line station, and is served by several bus lines that connect to a transit network that reaches beyond the Boston Metropolitan area. Several major bus lines flank the site on both Dorchester Avenue and Hancock/Pleasant Street. Access to downtown via the MBTA is approximately 15 minutes to South Station. In addition, the JFK/UMass MBTA Commuter Rail station is accessible by either a 25 minute walk or the No. 18 bus route along Dorchester Avenue.

The Proposed Project will encourage multi-modal transportation habits through the inclusion of bike- and car-sharing programs. Most significantly, with the creation of a pedestrian-only corridor internal to the site and the introduction of 'complete streets' design to the retail experience of Dorchester Avenue and Hancock Street, the project seeks to safely establish a new culture of pedestrian activity in this area currently dominated by the automobile.

Currently, this area of Dorchester is under-utilized with an inconsistent collection of buildings of varying scales and massing. Existing businesses that surround the site are an eclectic collection of small restaurants, auto body shops, a carwash, gas station and other similar types of businesses. There is no consistent architectural language or relationship of these businesses to each other or the abutting roadways.

The site is predominantly located within the Dorchester Neighborhood Shopping (NS) zoning sub-district, with a small portion within a 3-Family (3F-D-3000) sub-district. Currently the site includes nine existing buildings, many of which are in poor condition; a private way (Greenmount Place) off Greenmount Street; and a 15-foot City of Boston Sewer Easement that runs through a portion of the Site from Dorchester Avenue to Pleasant Street. The existing buildings will be demolished to enable the Proposed Project to be completed. Please see **Figure 3.0-2. Existing Site Survey** in **Appendix A.**

1.4.2 New Construction Schedule

The Proposed Project will proceed as a single development, with construction moving in sequence from the mixed-use to the residential portions of the site. Initial construction is expected to include the new buildings along Dorchester Avenue and the parking facilities for the entire development, with an expected interim condition to screen the completed parking structure from the adjoining residential areas across Pleasant and Greenmount Streets. Upon substantial completion of these first buildings, construction of the residential buildings will commence.

1.5 Summary of Project Impacts and Mitigation

1.5.1 Urban Design and Landscape Overview

As the initial introduction of large-scale development to this corner of Dorchester, DOT BLOCK is composed of elements meant to respect the surrounding residential neighborhoods – stitching the new development into the existing fabric – while simultaneously increasing density along Dorchester Avenue to support a vibrant new district. The project encompasses the redevelopment of an entire city block, with each street edge presenting a unique urban condition. To address these varied conditions, a careful blend of contextual sensitivity and rigorous place making presents a design that is appropriate and sustainable for the neighborhood, but also proclaims a bold vision for the future of the area.

The project first completes the urban space of its bordering streets – presenting an edge to the site appropriate to its context, and then populating that edge with proportionate scales of activity.

Greenmount and Pleasant Streets are fronted with 8-family structures that reinterpret the familiar rhythm of Dorchester's dense residential neighborhoods. Hancock Street transitions from the small scale of Pleasant Street up to the larger mixed-use buildings through a series of volumes that step up in height and increase in material heft. An assertive street wall defines the edge of Dorchester Avenue, anticipating future development of a similar scale across the avenue; the mass rises confidently at the southern tip of the site to proclaim the important intersection of Glover's Corner.

The project is the redevelopment of a former industrial block, the dimensions of which are out of scale with the typical residential blocks that surround it. To break the scale down to one better suited for residential development, the street wall is broken on three of the site's four frontages. The resulting breaks are connected by a pedestrian path that draws the public realm into and through the site. The path is signified by prominent forms that break from the more regular street walls, and are wrapped in a rich material with a more kinetic detailing (see Section **2.2 Building Design, Massing & Materiality** for more information). The path opens long views through to the site's context, and its edges erode into the ground plane to encourage expanded pedestrian activity for the retail spaces.

1.5.2 Sustainable Design

The Proponent and the Project design team are committed to an integrated design approach and are using 3 LEED Rating Systems to evaluate the project sustainability criteria including: LEED for Homes, LEED for Homes Mid-Rise, and LEED NC for Retail, along with third-party oversight and intends to be LEED Silver certifiable as presented in **Figures 3.8-0** and **3.8-1** at the end of **Section 3.0.** This rating will meet or exceed Boston's Green Building standard. The LEED rating system tracks the sustainable features of the project by achieving points in the following categories: Innovation and Design Process, Location and Linkages, Sustainable Sites; Water Efficiency; Energy and Atmosphere; Materials and Resources; Indoor Environmental Quality; and Awareness and Education.

1.5.3 Pedestrian Wind Analysis

The Proposed Project is similar in mass to buildings in the project vicinity which vary from 4-5 story buildings. Although the proposed new constriction is proposed to be up to 70 feet in height, exceeding the existing zoning height allowance of 40 feet, the DOT BLOCK proposal will be within 20-30 feet of the heights of buildings on the opposite sides of Hancock and Greenmount Streets, and with the lower proposed building heights and setbacks at the existing residential and mixed–use building edges, this maximum height will be mitigated In addition, as there are no hi-rise buildings in the Proposed Project vicinity, the overall wind environment is not expected to change as a result of the Proposed Project.

1.5.4 Shadow Impact Analysis

New shadows introduced by this proposal fall primarily within the proposed development. In the afternoon, especially in winter, there is some shading on neighboring residences on Greenmount Street. This is expected because of the minimal width of the street, and an increased setback was provided at this street edge to compensate. Shadows are limited to a similar residential scale at the north and west existing residential zones. As massing builds up to the south and east of the site, longer eastward shadows develop in the afternoon. These are more out of scale with existing development, however they fall mostly onto commercial and parking zones in the afternoon, so the impact is minimal.

1.5.5 Daylight Analysis

Although the Proposed Project would cause an increase in daylight obstruction when compared to the existing conditions at the mostly vacant site, the Proposed Project was designed to be of a similar massing to existing buildings along Greenmount Street. Although higher along Hancock Street, the width of Hancock Street mitigates any daylight obstruction. The Proposed Project would have reached a maximum of up to 70 feet in height, higher than the existing buildings along Hancock Street as well as the existing zoning height allowance. The additional height will be mitigated by setbacks along the bordering streets and in some areas lower stepped down building heights.. As a result, daylight obstruction values from the Proposed Project are expected to be consistent with, and typical to the surrounding neighborhood areas.

1.5.6 Solar Glare

It is not expected that the Proposed Project will include the use of reflective glass or other reflective materials on the building facades that would result in adverse impacts from reflected solar glare.

1.5.7 Air Quality Analysis

Tech Environmental, Inc., the Project's air quality consultant, conducted analyses to evaluate the existing air quality in the Project area, predict the worst-case air quality impacts from the Project's fuel combustion equipment and evaluate the potential impacts of Project-generated traffic on the air quality at the most congested local intersections (See **Section 4.2**).

Recent representative air quality measurements from the Massachusetts Department of Environmental Protection (DEP) monitors reveal that the existing air quality in the Project area is in compliance with Massachusetts and National Ambient Air Quality Standards (NAAQS) for all of the criteria air pollutants.

The worst-case air quality impacts from the Project's fuel combustion equipment will not have an adverse impact on air quality. The maximum one-hour and eight-hour ambient CO impacts from the fuel combustion equipment, at all locations around the Project site, including background CO concentrations, are predicted to be safely in compliance with the NAAQS for CO.

A microscale air quality analysis was not performed for this Project due to the Project trip generation having minimal impacts on the overall delays at the four intersections. Therefore, the motor vehicle traffic generated by the project will not have a significant impact on air quality at any intersection in the Project area and a microscale air quality analysis is not necessary for this Project. The air quality in the Project area will remain safely in compliance with the NAAQS for CO after the Project is built.

1.5.8 Noise Analysis

Tech Environmental, Inc., the Project's noise consultant, conducted a noise study to determine whether the operation of the proposed Project will comply with the Massachusetts DEP Noise Policy and City of Boston Noise Regulations (See **Section 4.3**).

This acoustical analysis involved five steps: (1) establishment of pre-construction ambient sound levels in the vicinity of the Site; (2) identification of potential major noise sources; (3) development of noise source terms based on manufacturer specifications (where available) and similar project designs; (4) conservative predictions of maximum sound level impacts at sensitive locations using industry standard acoustic methodology; and (5) the incorporation of mitigation measures to ensure compliance with applicable City of Boston noise regulations, ordinances and guidelines and with the DEP Noise Policy.

Nighttime ambient baseline sound level (L_{90}) monitoring was conducted at two locations deemed to be representative of the nearby residential areas, during the time period when human activity is at a minimum and any future noise would be most noticeable. The lowest nighttime L_{90} measured in the Project area was 41 dBA.

The design for the Proposed Project is expected to include the following significant mechanical equipment based on the heating and cooling requirements for each building and each type of space (i.e., residential and retail):

- (419) 2- to 3-ton residential heating/cooling condenser rooftop units on residential portions of 8-14 Greenmount Street, 160-166 Pleasant Street, 250 Hancock Street, 1205 Dorchester Street and 1225 Dorchester Street.
- (2) commercial rooftop heating/cooling units for retail on 250 Hancock Street
- (2) commercial rooftop heating/cooling units for retail on 1205 Dorchester Street
- (2) commercial rooftop heating/cooling units for retail on 1225 Dorchester Street

The Project will not create a noise nuisance condition and will fully comply with the most stringent sound level limits set by the Massachusetts DEP Noise Policy, City of Boston Noise Regulations, and HUD's Residential Site Acceptability Standards.

Noise Mitigation

The Proponent is committed to implementing the following sound level mitigation measures for the Project, as necessary, to comply with the applicable sound level limits and specifications of low-noise mechanical equipment including that the RTUs will be of a low-noise design.

With the mitigation outlined in this report, the DOT BLOCK project will not create a noise nuisance condition and will fully comply with the most stringent sound level limits set by the Massachusetts DEP Noise Policy and City of Boston Noise Regulations

1.5.9 Stormwater Management and Water Quality

The existing storm drain infrastructure surrounding the proposed Site appears to provide adequate capacity to serve the needs of the project. Best Management Practices (BMPs) and sustainable design will be incorporated into the Project wherever practical and applicable.

Stormwater management systems will be designed to remove 80% of the average annual post construction load of Total Suspended Solids (TSS) and provide oil & water separation, as well as phosphorus reduction in compliance with current Boston Water and Sewer Commission (BWSC) requirements.

The proposed stormwater management systems will include a combination of water quality units and groundwater recharge systems. The Project is expected to reduce the volume of stormwater runoff leaving the site as well as improve stormwater water quality (See **Section 4.4**). It is anticipated that the stormwater recharge systems will work to passively infiltrate runoff into the ground with a gravity recharge system. The underground recharge system, and any required site closed drainage systems, will be designed so that there will be no increase in the peak rate of stormwater discharge from the Project Site in the developed condition compared to the existing condition. In addition, for any portions of the project where recharge systems cannot be accommodated, water quality units will be installed to reduce pollutants in stormwater runoff per BWSC standards prior to discharge.

All improvements and connections to BWSC infrastructure will be reviewed as part of the Commission's Site Plan Review process. The process includes a comprehensive design review of the proposed service connections, assessment of project demands, and system capacity.

1.5.10 Solid and Hazardous Waste

Solid Waste

During the preparation of the Site, debris, including asphalt, trash, and demolition debris will be removed from the Project Site. The Proponent will ensure that waste removal and disposal during construction and operation will be in conformance with the City and DEP's Regulations for Solid Waste.

In order to meet the requirements for the Boston Environmental Department and the LEED^{TM} rating system, the Project will include space dedicated to the storage and collection of recyclables, including dedicated dumpsters at the loading area. The recycling program will meet or exceed the City's guidelines, and provide-areas for waste paper and newspaper, metal, glass, and plastics (21 through 27, co-mingled).

Hazardous Waste

Phase 1 Environmental Site Assessments (ESA) have been completed for the 1207 Dorchester Avenue, 16 Greenmount Street, 256 Hancock Street, 1245 Dorchester Avenue and 284 Hancock Street parcels. Phase 1 ESA's for 1221 and 1225 Dorchester Avenue and 274 Hancock Street parcels are in the process of being scheduled but have not yet been completed. A summary of the findings for these additional parcels will be provided to the BRA when available

The 1207 Dorchester Avenue parcel, which is the largest parcel in the Proposed Project, is identified as a State Hazardous Waste Site (SHWS) site due to chlorinated volatile organic compounds (VOC), polynuclear aromatic hydrocarbons (PAH), and metals soil and groundwater contamination under Release Tracking Numbers (RTNs) 3-27184 and 3-27956. Subsurface investigations conducted at the property by Woodard & Curran (W&C) in May 2007 identified the presence of several compounds in soil and groundwater at concentrations greater than applicable Massachusetts Contingency Plan (MCP) Reportable Concentrations (RCs). The applicable category RCS-1 reportable concentrations for soil were exceeded by the following chemicals, in soil samples collected at the following boring locations: boring B-7, cis-1,2-dichloroethylene (cis-1,2 DCE), tetrachloroethylene (PCE), and trichloroethylene (TCE); boring B-8, beryllium; boring B-9, lead; and boring B-10, benzo(a)pyrene. The applicable category RCGW-2 reportable concentrations for groundwater were exceeded by the following chemicals, in groundwater samples collected from the following boring/monitoring well locations: well MW-1, lead; well MW-2, cis-1,2-DCE, PCE, TCE, and vinyl chloride; well MW-3, lead; and well MW-4, lead and zinc. Groundwater samples analyzed for metals were initially not filtered. Subsequent re-sampling and analysis of groundwater for dissolved metals indicated that dissolved lead and zinc were not detectable in groundwater samples from wells MW-1, MW-3, and MW-4, and that a reportable condition did not exist for those parameters in groundwater. In addition, the reportable concentration for beryllium was subsequently raised and the detected beryllium concentration in soil no longer exceeds the reportable concentration. RTN 3-27184 was assigned to the site by the Massachusetts Department of Environmental Protection (MADEP). Subsequent soil gas and groundwater sampling suggested that, based on the presence of chlorinated volatile organic compounds (VOCs) in groundwater and soil gas in the vicinity of an adjacent residential duplex at 2-4 Greenmount Street, a condition of Substantial Release Migration (SRM) could potentially be present. Based on the potential SRM condition, an additional notification was orally made to MADEP and RTN 3-27956 was assigned by MADEP.

A Partial Class B-1 Response Action Outcome (RAO) addressing the portions of the Site where lead and benzo(a)pyrene were identified above RCs was completed and submitted to MADEP in October 2007. Although borings were not completed on the Subject Property, the Disposal Site boundary associated with the Partial Class B-1 RAO includes the northeastern portion of the property.

A Class A-2 RAO was submitted in 2011 for the remainder of the site following additional response actions, which included soil excavation, groundwater injection, and soil, soil gas, groundwater, and indoor air sampling. The results of the testing were used to support a combined Method 1/Method 2 risk assessment, which concluded that a condition of no significant risk of harm to human health, public safety, welfare, and the environment existed at the site. The Disposal Site associated with the Class A-2 RAO does not include portions of the Subject Property.

Based on the regulatory closure as granted by the MADEP through the submittal of the Class B-1 RAO, PAH and metal contaminated soil on the northeastern portion of the property is considered a *historic recognized environmental condition (HREC)*. However, it should be noted that PAH and metal contaminated soils in the vicinity of the Subject Property include fill materials, consisting of sand mixed with brick, ash, coal, and other debris, extending to depths of 5 to 8 feet below grade. These soil types are likely ubiquitous throughout the area and are likely exempt from reporting to the MADEP.

The 1245 Dorchester Avenue and 284 Hancock Street parcels have been occupied by a gasoline filling station since at least 1931. Automotive servicing operations may have been conducted at the property since the early 1950s. Four USTs were historically present on the southern portion of the property. These USTs were removed in 1991 and were replaced with the two existing 5,000-gallon and 6,000-gallon USTs. A subsurface investigation was conducted at the property in 2012, which included the installation of two groundwater monitoring wells at the property. The wells were installed to the west of the existing USTs and north of the pump island, between the pumps and the office. The wells were installed to a depth of 14 feet below grade. Groundwater samples were collected and analyzed for volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), and volatile organic compounds (VOCs). VOC analysis was included due to the presence of a former dry cleaner located upgradient of the site. No exceedances of the MADEP GW-2 Reportable Concentrations were identified. All analytes were below the laboratory detection limits with the exception of methyl tert butyl ether (MTBE). The historic use of the Subject Property is considered a *recognized environmental condition (REC).*

Given that the Property is planned to be redeveloped, a soil management plan will be developed for all parcels to address the management of any residual contaminated soil and/or groundwater that may be encountered during excavation activities. Excess excavated soil generated as part of the planned construction will require characterization to assess its disposition for off-site reuse, disposal, treatment or recycling in accordance with MADEP policy and the Massachusetts Contingency Plan (MCP). As appropriate, the Proponent will retain a Licensed Site Professional (LSP) to manage the environmental aspects of the project, including proper management and/or disposal of contaminated soil and groundwater encountered during construction. The LSP will also prepare required MCP regulatory submittals.

1.5.11 Geotechnical/Groundwater Impacts Analysis

The geotechnical investigations presented in **Section 4.5** provide a general idea of the existing subsurface conditions at the Site and correlate well to previous investigations. Recent investigations generally encountered urban fill (with traces of brick and cinders) over a former upland area at the corner of Pleasant Street and Hancock Street and a former wetland area with peat deposits toward the middle of the Site and Dorchester Avenue. It appears that the loose to medium dense urban fill has been placed directly on unsuitable black silt with trace to little organics and peat. These unsuitable materials are underlain by medium dense sand (along Hancock Street), a highly plastic stiff to very stiff clay, and dense to very dense glacial till. Groundwater levels appear to coincide with the former topsoil materials and are about 5 to 6 feet below the Site on average.

A review of the borings indicates that shallow continuous and/or spread footings may only be appropriate along Pleasant Street and portions of Hancock Street and Greenmount Street. A deep deposit of organic silt and peat, in the central and eastern parts of the Site, will require a deeper foundation design. The foundation must be ungraded to meet the latest edition of the Massachusetts State Building Code (780 CMR 18).

In areas where the deep deposits of unsuitable materials are present, helical piles or geopiers shall be used. These deeper systems will be founded in the medium dense sand, stiff to very stiff clay or glacial till. Where shallow foundations are used, it is anticipated that all unsuitable fill layers will be removed and that footings will bear on the natural stiff to very stiff clay, medium dense sand or compacted structural fill. To accomplish this, a review of the borings indicates that urban fill will have to be over excavated and replaced with structural fill. In lieu of excavation, the foundation design will also consider lowering selective footings into the medium dense sand and stiff clay.

Both surface water and groundwater at the Site appears to flow in an easterly direction from Hancock Street and Pleasant Street toward Dorchester Avenue. The average groundwater depth across the Site, as observed in 2007 and 2015, is about 7 feet deep (EL. 5.7 Boston City Base)..

1.5.12 Construction Impacts Analysis

Section 4. 6 describes impacts likely to result from the Proposed Project's construction and the steps that will be taken to avoid or minimize environmental and transportation-related impacts. The Proponent will employ a construction manager that will be responsible for developing a construction phasing and staging plan and for coordinating construction activities with all appropriate regulatory agencies. The Project's geotechnical consultant will provide consulting services associated with foundation design recommendations, prepare geotechnical specifications, and review the construction contractor's proposed procedures.

Construction is expected to commence in the First Quarter 2016 and will require approximately 16-18 months to complete the initial stages of construction.

The Proponent will comply with applicable state and local regulations governing construction of the Project. The Proponent will require that the general contractor comply with the Construction Management Plan ("CMP") developed in consultation with and approved by the Boston Transportation Department ("BTD"), prior to the commencement of construction. The construction manager will be bound by the CMP, which will establish the guidelines for the duration of the Project and will include specific mitigation measures and staging plans to minimize impacts on abutters.

Most construction activities will be accommodated within the current site boundaries. Details of the overall construction schedule, working hours, number of construction workers, worker transportation and parking, number of construction vehicles, and routes will be addressed in detail in a Construction Management Plan to be filed with BTD in accordance with the City's transportation maintenance plan requirements. To minimize transportation impacts during the construction period, there will be limited construction worker parking on-site, carpooling will be encouraged, secure on-site spaces will be provided for workers' supplies and tools so they do not have to be brought to the site each day, and subsidies for MBTA passes will be considered. The Construction Management Plan to be executed with the City prior to commencement of construction will document all committed measures.

1.5.13 Wetlands/Flood Hazard Zone

The existing Project Site is not part of a wetland resource area regulated by the Massachusetts Wetland Protection Act.

Based on the Suffolk County Preliminary Flood Insurance Rate Map (FIRM) Number 25025C0091J, dated November 15, 2013, the Project Site is not located in a special flood hazard area, floodway area, or other flood area.

1.5.14 Historic Resources Component

The Project Site is not within, nor does it directly abut, any listed historic districts or resources. The area surrounding the Project Site is a mixed residential and commercial district with the Southeast Expressway (I-93) within several blocks to the east and the MBTA's Savin Hill Red Line within ¼ mile of the site. While the neighborhood to the west of the Project Site is primarily residential, Dorchester Avenue, located to the east of the Project Site, is characterized primarily by local retail and commercial uses.

While there are no buildings within a quarter mile of the Project Site that are presently on the National Register of Historic Places, the Savin Hill Historic District is located within the buffer to the east of the site. (see **Section 5.0**).

1.5.15 Infrastructure Systems Component

The Project's Civil and MEP Engineers will coordinate with City agencies and private utility companies responsible for the area's utility systems as the design progresses. Utility connections will be designed to minimize impacts to the surrounding area and all appropriate permits and approvals will be obtained prior to construction.

An infrastructure systems analysis (**Section 5.0**) was completed by EBI Consulting ("EBI"), the Project's Civil Engineer. The existing infrastructure surrounding the Site appears sufficient to serve the needs of the Proposed Project. This section describes the existing sanitary sewer, water, and storm drainage systems surrounding the Site and explains how these systems will serve the development. This analysis also discusses any anticipated Project-related impacts on the utilities and identifies mitigation measures to address these potential impacts.

1.5.16 Transportation Component

Section 7.0 presents the comprehensive transportation study completed by Howard Stein Hudson (HSH) for the Proposed Project in conformance with the BTD Transportation Access Plan Guidelines (2001). The study analyzes existing conditions within the Project study area, as well as conditions forecast to be in place under the five-year planning horizon of 2020.

Vehicular access/egress will be provided via the intersection of Hancock Street/Pleasant Street. The site driveway will operate as the fourth leg approaching from the east to the existing three legged intersection, as shown in **Figure 7-11**. As part of the Project, the existing non standard intersection of Hancock Street/Pleasant Street will be reconstructed. The new four way standard intersection will be reconstructed as a modern roundabout. This intersection will be able to accommodate the vehicular traffic volume more efficiently and safer than the existing intersection, while also providing safer pedestrians accommodations through increased pedestrian visibility and shorter crossing distances.

The analysis employs mode use data for the area surrounding the Project site based on 2000 U.S. Census data and BTD data for Area 8, and identifies the number of trips generated by the Project. Based on published data, it is expected that approximately 50 percent of the residential trips and 60 percent of the trip associated with the commercial use will be vehicle trips.

The trip generation of the entire block will add up to 3,200 vehicle trips on a daily basis, with 159 trips during the a.m. peak hour (64 entering/95 exiting) and 241 trips during the a.m. peak hour (138 entering/103 exiting) during the p.m. peak hour.

The Project will provide up to 472 parking spaces including 450 in an on-site above grade garage. An additional 22 parking spaces will be provided in a covered parking area with access via Hancock Street.

Loading and service operations will occur on-site with a commercial loading dock accessed via Hancock Street, west of the covered parking lot driveway. Residential move-in/move-out activity will take place on site adjacent to the garage entrance.

The Proponent is committed to implementing a transportation demand management ("TDM") program that supports the City's efforts to reduce dependency on the automobile by encouraging alternatives to driving alone, especially during peak travel periods. Proposed measures include, but are not limited to, providing transit information (schedules, maps, and fare information) to guests and visitors and on-site bicycle storage, providing a guaranteed ride home program to employees, and providing a transit pass program to the employees. The transportation coordinator will oversee all transportation issues including managing vehicular and valet operations, service and loading, valet parking, and TDM programs.

2.0 GENERAL INFORMATION

2.1 Applicant Information

2.1.1 Project Proponent

DOT BLOCK LLC (the "Proponent") lists Demetrios J. Dasco, owner and managing partner at Atlas Investment Group LLC. as the principal.

Mr. Dasco founded Atlas Investment Group LLC in 2000 and has built an impressive portfolio of value added real estate investment opportunities in Boston and throughout New England. (Partial list)

- Dover Residence (South End)
- Minot Hall (South End)
- Gateway Terrace (South End)
- 62 Mt. Vernon Street (Back Bay)
- Wychmere Harbor Club

Mr. Dasco has extensive experience in property acquisition, development, financing, construction management, sales and marketing asset and property management.

2.1.2 Project Team

Project Name:	DOT BLOCK, Dorchester
Property Owner/Developer	**DOT BLOCK LLC** **c/o Atlas Investment Group LLC** 35 Fay Street 107-B Boston, MA 02110 Demetrios Dasco, Managing Partner Tel: 617-482-3006 dasco@atlasboston.com Catherine M. O'Neill LLC Tel: 607-431-6528 Catherine@catherineoneill.com
Article 80 Permitting	**Mitchell L. Fischman Consulting (MLF Consulting) LLC** 41 Brush Hill Road Newton, MA 02461 Tel : 781-760-1726 Mitchell Fischman mitchfischman@gmail.com
Legal Counsel	**Goodwin Procter** 53 State Street Boston, MA 02109 www.goodwinprocter.com Martin R. Healy Tel: 617-570-1371 mhealy@goodwinprocter.com Jennifer R. Schultz Tel: 617-570-8215 jschultz@goodwinprocter.com

Architect/Shadows	**RODE Architects, Inc.** 535 Albany Street #405 Boston, MA 02118 Rodearchitects.com Tel: 617-422-0090 Eric Robinson eric@rodearchitects.com Kevin S. Deabler kevin@rodearchitects.com Ben Wan ben@rodearchitects.com
Sustainable/LEED Consultant	**Price Sustainability Associates, Inc.** 28 Walnut Street Maynard, MA 01754 Tel: 978-760-2723 Mark Price mark@pricesustainability.com
Landscape Architect	**Landworks Collaborative** 91 Prescott Street Worcester. MA 01605 Tel: 508-770-0660 Robert S. Mulcahy rmulcahy@landworkscollaborative.com
Transportation Planner/Engineer	**Howard Stein Hudson** 11 Beacon Street, Suite 1010 Boston, MA 02108 Tel: 617-482-7080 Guy Busa, gbusa@hshassoc.com Brian Beisel, PTP, bbeisel@hshassoc.com
Civil Engineer	**EBI Consulting** 21 B Street Burlington, MA 01803 Tel:781-425-5110 John Hession, P.E. jhession@ebiconsulting.com

Noise and Air Consultant	**Tech Environmental, Inc.** Hobbs Brook Office Park 303 Wyman Street, Suite 295 Waltham, MA 02451 Tel: 781-890-2220 Marc C. Wallace, QEP, MWallace@techenv.com
Geotechnical Engineer	**Polaris Consultants LLC** 1495 Hancock Street, Suite 205 Quincy, MA 02169 Tel: 617-689-1010 Paul Costello, P.E. pgc@polariscon.com
Surveyor	**Thompson Farland** 398 County Street New Bedford, MA 02740 Tel: 508-717-3479 Christian A. Farland, P.E., LEED AP cfarland@thompsonfarland.com

Construction Commencement	First Quarter 2016
Construction Completion	Second-Third Quarter 2017
Status of Project Design	Schematic

2.1.3 Legal Information

Legal Judgments or Actions Pending Concerning the Proposed Project

None.

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

There is no current or past history of tax arrears on property owned by the Proponent.

Nature and Extent of Any and All Public Easements

A City of Boston 15’ sewer easement crosses the 1207 Dorchester Avenue and 256 Hancock Street parcels running from Dorchester Avenue on the east to Pleasant Street on the west.

2.2 Public Benefits

The Project will provide the following substantial benefits to the City and its residents:

- **DOT BLOCK** creates affordable transit oriented homeownership and affordable rental housing for Bostonians now, and for the 91,000 new residents estimated by the Metropolitan Area Planning Council by 2030.
- **DOT BLOCK** enhances Boston’s largest residential neighborhood and provides its residents with walkable quality mixed retail offerings.
- By demolishing the existing vacant buildings **DOT BLOCK** improves nearby residents and businesses creating pedestrian landscapes and experiences enhanced with street trees and other streetscape amenities.
- **DOT BLOCK** will create a new safer traffic pattern at the intersection of Hancock Street/Pleasant Street by constructing a modern roundabout allowing for safer vehicular and pedestrian access.
- **DOT BLOCK** serves as an example of sustainable and environmentally responsible construction and development; and
- **DOT BLOCK** will create new construction jobs over a 3-year period, and create opportunities for the long term employment of city of Boston residents.

2.3 Regulatory Controls and Permits

The Site is located in two zoning sub-districts, 3F-D-3000 and NS, of the Dorchester Neighborhood Zoning District, Article 65 of the Boston Zoning Code. The 3F-D-3000 sub-district does not permit free-standing multi-family dwellings over three-stories with more than three dwelling units per building. However, the NS sub-district allows multi-family dwellings with more than three dwelling units on the second floor and above. The Proposed Project will exceed the floor area ratio and height limitations for these zoning districts. In addition, variances will be required with respect to certain other dimensional requirements, and use variances or conditional permits will be needed for both the residential and mixed-use buildings. The zoning relief required for the Proposed Project is further described in **Figure 2.1** and **Tables 2.1** and **2.2** below.

The Project will include three principal uses: retail, office and multi-family/residential. A parking garage is also planned for the early stages of construction. The retail/office uses may include general office space, restaurant (general and take-out), general retail, a bank, or other local retail businesses. The multi-family residences are proposed to be constructed in three forms: (1) eight four-story, eight-unit buildings; (2) one five-story 50-unit building; and (3) mixed-use buildings with retail on the ground level and multiple stories of residential units above.

For a project that is subject to Large Project Review, required off-street parking spaces and off-street loading facilities are expected to be determined as a part of the Large Project Review in accordance with the provisions of Article 80 of the Boston Zoning Code. Design elements of the Project will also be reviewed pursuant to Large Project Review.

2.3.1 Mixed-Use Buildings & Parking

The mixed-use buildings within the Proposed Project are planned to be constructed in the NS sub-district only[1] and will have retail/office uses only on the ground floor and residential units on the upper floors. The NS sub-district requires a conditional use permit for general retail business, take-out restaurants and office space, and therefore such conditional use permits will also be sought for the Proposed Project.

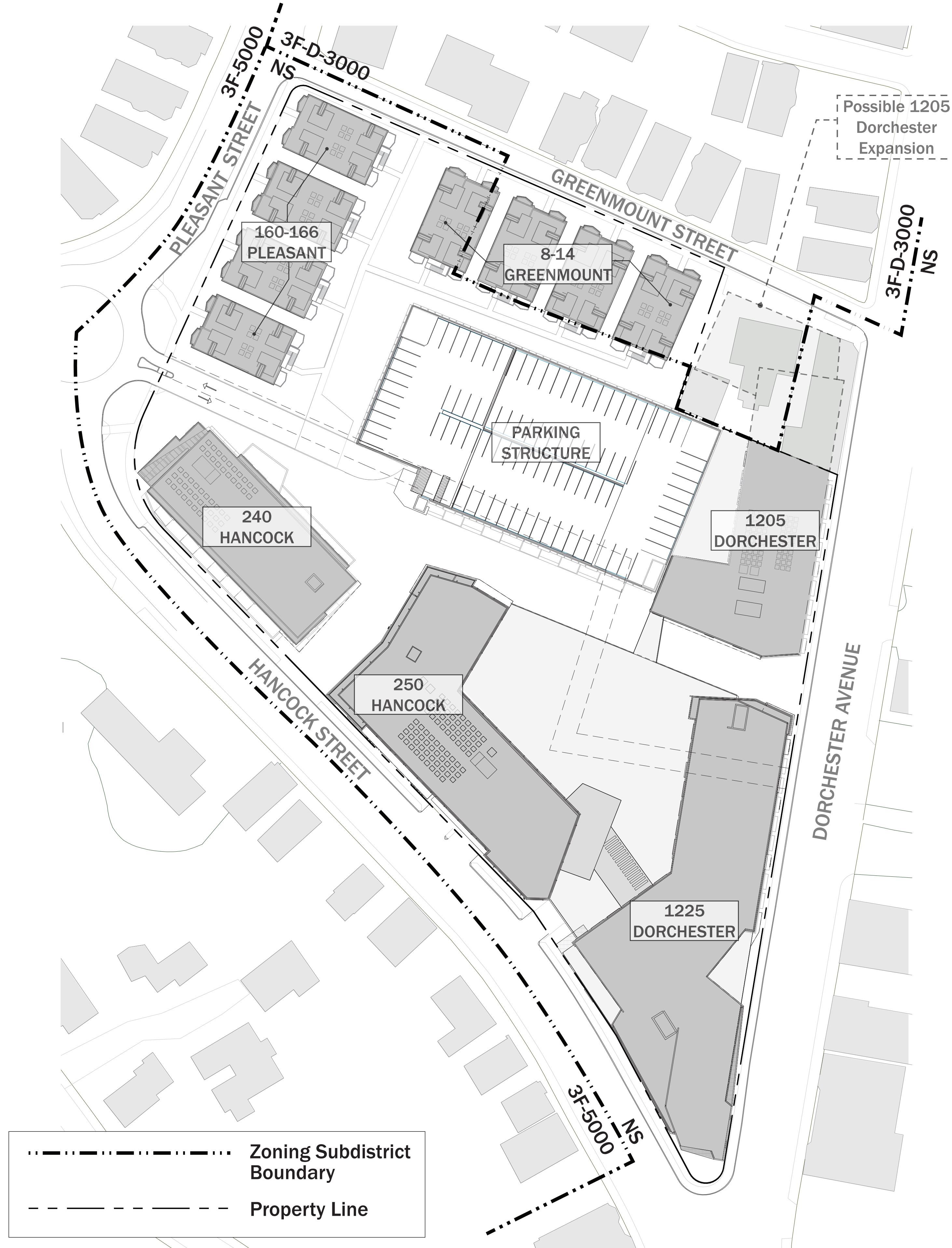
The NS sub-district also forbids parking garages and lots. As described, the Proposed Project includes construction of a five-story, 450 space parking garage to serve the needs of the residential and retail/office uses as well as a 22 space separate covered lot dedicated to retail uses. Relief will be sought for the parking garage and lot if required.

[1] If additional parcels are acquired at the corner of Dorchester Avenue and Greenmount Street (totaling approximately 12,167 square feet), then the Proponent will propose to extend a portion of a mixed-use building from Dorchester Avenue into the 3F-D-3000 sub-district along Greenmount Street. This will require additional relief under the regulations for that sub-district.

2.3.2 Residential Buildings

Three (and a small portion of a fourth) of the planned four-story, eight-family residential buildings will be developed in the 3F-D-3000 sub-district. The 3F-D-3000 sub-district prohibits multi-family developments of more than three-units, and the Proposed Project will therefore require a use variance for the proposed eight-family buildings.

Another four (and the majority of a fifth), four-story, eight-family residential buildings are planned to be developed in the NS sub-district adjacent to a five-story 50-unit residential building and abutting to the south the parking garage and a large mixed-use building. The 50-unit residential building will include residential units on all five levels, including the ground level, as will the four eight-family buildings located within the NS sub-district; therefore a conditional use permit will be required for use of the first floor of these buildings for residential units.



ZONING SUBDISTRICTS MAP
DOT BLOCK

Figure 2.1

TABLE 2.1 DOT BLOCK: THREE-FAMILY (3F-D-3000) ZONING COMPLIANCE

CATEGORY	ALLOWED PER 3F-D-3000	PROPOSED PROJECT				COMMENTS	ZONING VARIANCE REQUIRED	w/ POTENTIAL ACQUISITION OF ADDITIONAL PARCELS (*3)	COMMENTS	ZONING VARIANCE REQUIRED
		8 GREENMOUNT ST.	10 GREENMOUNT ST.	12 GREENMOUNT ST.	14 GREENMOUNT ST.					
LOT AREA / DWELLING UNIT	3,000 SF FOR 1 UNIT + 1,500 SF FOR EA. ADD	PROVIDED: 14,146 SF (*1) REQUIRED PER 3F-D-3000: 49,500 SF (SEE COMMENTS)				(8) UNITS PER BUILDING x (4) BUILDINGS = 32 UNITS	YES	PROVIDED: 21,919 SF (*3) REQUIRED PER 3F-D-3000: 88,500 SF (*4)	26 units in 1205 DORCHESTER fall within the 3F-D-3000 subdistrict	YES
FLOOR AREA RATIO	1.3	3.14 (*1) (FAR = 44,380 GSF / 14,146 SF area of Lot within 3F-D-3000 subdistrict)				11,095 / BUILDING x 4 BUILDINGS	YES	3.20 (*3)(*4) (FAR = 70,180 GSF / 21,919 SF area of Lot within 3F-D-3000 subdistrict)	25,800 GSF of 1205 DORCHESTER fall within the 3F-D-3000 subdistrict	YES
LOT WIDTH	30 FT - MIN.	EAST-WEST = 174'-9" (*2)						EAST-WEST = 234'-6" (*2)		
MIN. LOT FRONTAGE	30 FT - MIN.	174'-9" (*2)						234'-6" (*2)		
FRONT YARD	5 FT	14'-0"						14'-0"		
REAR YARD	15 FT	N/A						N/A		
SIDE YARD	5 FT	E: 15'-0" |W: 10'-0"	E: 10'-0" |W: 10'-0"	E: 10'-0" |W: 10'-0"	E: 10'-0" |W: 48'-9"			20'-11" BETWEEN 1205 DORCHESTER AND 8 GREENMOUNT		
BUILDING HEIGHT	40 FT - MAX.	48'-0"				MEASURED FROM AVG. GRADE	YES	59'-0" (*4)	MEASURED FROM AVG. GRADE	YES
BUILDING STORIES	3 - MAX.	4 STORIES					YES	5 STORIES (*4)		YES
USEABLE OPEN SPACE	MIN. - 300 SQFT / UNIT	5,200 SF PROVIDED (*1) (9,600 SF REQUIRED)				PER LANDSCAPE DRAWINGS	YES	6,510 SF PROVIDED (*3) (17,400 SF REQUIRED (*4))	26 units in 1205 DORCHESTER fall within the 3F-D-3000 subdistrict	YES
OFF-STREET PARKING SPACES	TO BE REVIEWED IN ACCORDANCE WITH ARTICLE-80 LARGE PROJECT	32 SPACES PROVIDED (40 SPACES REQUIRED)				1.25 SPACES / UNIT REQUIRED FOR 4-9 UNIT BUILDINGS	YES	60 SPACES PROVIDED (87 SPACES REQUIRED (*4))	26 units and 3,900 GSF of retail in 1205 DORCHESTER fall within the 3F-D-3000 subdistrict	YES
MAX. REAR YARD OCC. BY ACCESSORY BUILDINGS	20%	N/A						N/A		

FOOTNOTES:

*1. This entry uses calculations based off the area of the Lot solely within the 3F-D-3000 zoning subdistrict; the entire lot area is 206,849 square feet. If the FAR is calculated with respect to the entire Lot, the Gross Floor Area would be 475,629, and the FAR would be 2.30.

*2. This entry uses calculations based off the width and/or frontage of the Lot solely within the 3F-D-3000 zoning subdistrict.

*3. If additional parcels at the corner of Greenmount Street and Dorchester Avenue are acquired, then the amount of property area that falls within the 3F-D-3000 subdistrict will increase by 7,773 square feet. This entry uses calculations based off the area of the Lot solely within the 3F-D-3000 subdistrict; the entire Lot Area with the acquisition of additional parcels is 219,016 square feet. If the FAR is calculated with respect to the entire Lot, the Gross Floor Area would be 518,784, and the FAR would be 2.37.

*4. If additional parcels at the corner of Greenmount Street and Dorchester Avenue are acquired (see footnote 3), then 1205 Dorchester Avenue will be expanded onto those parcels, and a portion of the expanded building falls within the 3F-D-3000 subdistrict. This entry includes only the portion of the expanded 1205 Dorchester Avenue that falls within the 3F-D-3000 subdistrict. Refer to TABLE 2.2 for Zoning Analysis on the portion of 1205 Dorchester Ave that falls within the NS subdistrict.

The dimensions described in this above table may change as the Proposed Project undergoes design review with the BRA.

TABLE 2.2 DOT BLOCK: NEIGHBORHOOD SHOPPING (NS) ZONING COMPLIANCE

CATEGORY	ALLOWED PER NS	PROPOSED PROJECT									COMMENTS	ZONING VARIANCE REQUIRED
		160 PLEASANT ST	162 PLEASANT ST	164 PLEASANT ST	166 PLEASANT ST	PARKING STRUCTURE	1205 DORCHESTER AVE	240 HANCOCK ST	250 HANCOCK ST	1225 DORCHESTER AVE		
MIN. LOT AREA	NONE	PROVIDED: 192,703 SF (*1) REQUIRED PER NS: -										
BUILDING GSF	-	11,095 GSF	11,095 GSF	11,095 GSF	11,095 GSF	132,600 GSF	67,775 GSF	53,844 GSF	265,250 GSF (PER ISD)			
FLOOR AREA RATIO	1.0	2.24 (*1) (FAR = 431,249 GSF / 192,703 SF area of Lot within NS subdistrict)									FAR excludes PARKING STRUCTURE (per BRA article 2A)	YES
LOT WIDTH	NONE	-										
MIN. LOT FRONTAGE	NONE	-										
FRONT YARD	NONE	-										
REAR YARD	20 FT	N/A										
SIDE YARD	NONE	-										
BUILDING HEIGHT	40 FT - MAX.	48'-0"	48'-0"	48'-0"	48'-0"	57'-0"	69'-6"	69'-0"	69'-6"	69'-6"	MEASURED FROM AVG. GRADE	YES
USEABLE OPEN SPACE	MIN. - 50 SF / UNIT	66,650 SF PROVIDED (*1) (17,600 SF REQUIRED)									PER LANDSCAPE DRAWINGS	
OFF-STREET PARKING SPACES	TO BE REVIEWED IN ACCORDANCE WITH ARTICLE-80 LARGE PROJECT	440 SPACES PROVIDED (640 SPACES REQUIRED)									1.25 SPACES / UNIT (4-9 UNITS) 1.50 SPACES / UNIT (10+ UNITS) 2.00 SPACES / 1,000 GSF RETAIL	YES

FOOTNOTES:

*1. This entry uses calculations based off the area of the Lot solely within the NS zoning subdistrict; the entire lot area is 206,849 square feet. If the FAR is calculated with respect to the entire Lot, the Gross Floor Area would be 475,629, and the FAR would be 2.30.

*2. If additional parcels at the corner of Greenmount Street and Dorchester Avenue are acquired, then the amount of property area that falls within the NS subdistrict will increase by 4,394 square feet. This entry uses calculations based off the area of the Lot solely within NS subdistrict; the entire Lot Area with the acquisition of additional parcels is 219,016 square feet. If the FAR is calculated with respect to the entire Lot, the Gross Floor Area would be 518,784, and the FAR would be 2.37.

*3. If additional parcels at the corner of Greenmount Street and Dorchester Avenue are acquired (see footnote 2), then 1205 Dorchester Avenue will be expanded onto those parcels, and a portion of the expanded building falls within the 3F-D-3000 subdistrict. This entry includes only the portion of the expanded 1205 Dorchester Avenue that falls within the NS subdistrict. Refer to TABLE 2.1 for Zoning Analysis on the portion of 1205 Dorchester Ave that falls within the 3F-D-3000 subdistrict.

CATEGORY	ALLOWED PER NS	w/ POTENTIAL ACQUISITION OF ADDITIONAL PARCELS (*2)	COMMENTS	ZONING VARIANCE REQUIRED
MIN. LOT AREA	NONE	PROVIDED: 197,097 SF (*2) REQUIRED PER NS: -		YES
BUILDING GSF	-	**1205 DORCHESTER AVE** EXPANDED GSF: 110,930 GSF	85,130 GSF falls within the NS subdistrict	
FLOOR AREA RATIO	1.0	2.28 (*2)(*3) (FAR = 448,600 GSF / 197,097 SF area of Lot within NS subdistrict)	FAR excludes PARKING STRUCTURE (per BRA article 2A)	YES
LOT WIDTH	NONE	-		
MIN. LOT FRONTAGE	NONE	-		
FRONT YARD	NONE	-		
REAR YARD	20 FT	N/A		
SIDE YARD	NONE	-		
BUILDING HEIGHT	40 FT - MAX.	69'-6"	MEASURED FROM AVG. GRADE	YES
USEABLE OPEN SPACE	MIN. - 50 SF / UNIT	67,150 SF PROVIDED (*2) (18,300 SF REQUIRED (*3))	74 units in 1205 DORCHESTER fall within the NS subdistrict	
OFF-STREET PARKING SPACES	TO BE REVIEWED IN ACCORDANCE WITH ARTICLE-80 LARGE PROJECT	411 SPACES PROVIDED (662 SPACES REQUIRED) (*3)	1.25 SPACES / UNIT (4-9 UNITS) 1.50 SPACES / UNIT (10+ UNITS) 2.00 SPACES / 1,000 GSF RETAIL	YES

The dimensions described in this above table may change as the Proposed Project undergoes design review with the BRA.

2.3.3 Preliminary List of Permits or Other Approvals Which May be Sought

Agency Name	Permit or Action*
Federal Agencies	
U.S. Environmental Protection Agency	Notice of Intent for EPA Construction Activities General Discharge Permit with associated SWPPP, If Required
State Agencies	
MA Department of Environmental Protection, Division of Air Quality Control	Fossil Fuel Permit, If Required
Local Agencies	
Boston Redevelopment Authority	Article 80 Review and Execution of Related Agreements
Boston Transportation Department	Transportation Access Plan Agreement; Construction Management Plan
Boston Department of Public Works Public Improvements Commission	Street/Sidewalk Repair Plan; Curb-Cut Permit; Street/Sidewalk Occupancy Permit; Earth Retention System Plan
Boston Zoning Board of Appeal	Variances / Conditional Use Permits, as Required
Boston Public Safety Commission Committee on Licenses	Permit for Storage of Fuel in (Emergency Storage) Tanks, If Required
Boston Fire Department	Approval of Fire Safety Equipment
Boston Water and Sewer Commission	Approval for Sewer and Water and Connections; Construction Site Dewatering; and Storm Drainage
Boston Department of Inspectional Services	Building Permits; Certificates of Occupancy; Other Construction-Related Permits

*This is a preliminary list based on project information currently available. It is possible that not all of these permits or actions will be required, or that additional permits may be needed.

2.4 Public Review Process and Agency Coordination

In support of the required Article 80 Large Project Review process, the Proponent has and will continue to conduct extensive community outreach with neighbors and abutters of the Site, including meetings and discussions with the Dorchester neighborhood and local elected and appointed officials for the neighborhood. Over the past several months, the Proponent and its team have met with the BRA project team being coordinated by Gary Uter, Project Assistant.

Preliminary plans have been presented to Dorchester's elected officials, the Columbia Savin Hill Civic Planning Board, Columbia Savin Hill Civic Association, Meeting House Hill Civic Association, Jones Hill Civic Association, Hancock Street Civic Association, Freeport Adams Civic Association, and all direct abutters.

The Proponent has also discussed the Proposed Project with representatives of the Boston Redevelopment Authority ("BRA") prior to filing this Project Notification Form in order to identify issues/concerns as well as design requirements related to the Project.

In accordance with Article 80 requirements, an Impact Advisory Committee ("IAG") has been formed and neighborhood meeting will be scheduled to review the PNF and receive community comments on the Project during the PNF public review period.

The Proponent will continue to meet with public agencies, neighborhood representatives, local business organizations, abutting property owners, and other interested parties, and will follow the requirements of Article 80 pertaining to the public review process.

2.5 Development Impact Payment ("DIP") Status

Based on current schematic design plans, it is not anticipated that Development Impact Payments ("DIP"), in accordance with Article 80B-7 of the Code, will be required as the Proposed Project's eligible square feet is expected to be approximately 60,000 gross FAR square feet, and be below the 100,000 gsf threshold where DIP is required.

3.0 URBAN DESIGN AND SUSTAINABILITY COMPONENT

3.1 Urban Design Overview

As the initial introduction of large-scale development to this corner of Dorchester, DOT BLOCK is composed of elements meant to respect the surrounding residential neighborhoods – stitching the new development into the existing fabric – while simultaneously increasing density along Dorchester Avenue to support a vibrant new district. The project encompasses the redevelopment of an entire city block, with each street edge presenting a unique urban condition. To address these varied conditions, a careful blend of contextual sensitivity and rigorous place making presents a design that is appropriate and sustainable for the neighborhood, but also proclaims a bold vision for the future of the area.

The project first completes the urban space of its bordering streets – presenting an edge to the site appropriate to its context, and then populating that edge with proportionate scales of activity. Greenmount and Pleasant Streets are fronted with 8-family structures that reinterpret the familiar rhythm of Dorchester's dense residential neighborhoods. Hancock Street transitions from the small scale of Pleasant Street up to the larger mixed-use buildings through a series of volumes that step up in height and increase in material heft. An assertive street wall defines the edge of Dorchester Avenue, anticipating future development of a similar scale across the avenue; the mass rises confidently at the southern tip of the site to proclaim the important intersection of Glover's Corner.

The project is the redevelopment of a former industrial block, the dimensions of which are out of scale with the typical residential blocks that surround it. To break the scale down to one better suited for residential development, the street wall is broken on three of the site's four frontages. The resulting breaks are connected by a pedestrian path that draws the public realm into and through the site. The path is signified by prominent forms that break from the more regular street walls, and are wrapped in a rich material with a more kinetic detailing (see **Section 3.2 Building Design, Massing & Materiality** for more information). The path opens long views through to the site's context, and its edges erode into the ground plane to encourage expanded pedestrian activity for the retail spaces.

3.1.1 Contextual Sensitivity

The residential buildings are conceived as a natural extension of the contextual scale and density, while also marking the first stage in a transition to the larger scale development of the Mixed-Use buildings. Eight 8-family buildings with 64 ownership units, and a single 5-story building with 50 rental units wrap the north and west edges of the site. These buildings complement the scale of their respective streets, and by completing the urban space of the public way, bring a sense of stability to the area.

The 8-family buildings are composed of an architectural vernacular that is common throughout Dorchester, a contemporary interpretation of a traditional double-bow front 6 family building. Along Greenmount Street, the buildings' bays are reduced in scale by one story to relate to the adjacent existing buildings, and generous front yard setbacks ease congestion on this narrow street. The existing buildings along Pleasant Street are taller and larger in massing and scale. Therefore as the remaining four 8-family buildings turn the corner onto Pleasant Street, the bays take on a greater prominence, raised to the full four-story height. These buildings are designed as two bedroom, two bathroom units averaging approximately 1,140 square feet of living area. The units will have direct access to outdoor space from the individual units with rear yards and decks.

240 Hancock Street is sited at the corner where Pleasant Street bends into Hancock, and the residential neighborhood fabric gives way to a mix of light industrial miscellany. The building reflects this transitional moment with its architecture; by maintaining a relationship with the smaller scaled buildings through materials and articulation while asserting a larger scale massing that bridges to the mixed-use development. The five-story building will anchor a prominent corner of the site, signifying a major pedestrian and vehicular entry into and through the property. The units will be a mix of studio, one and two bedroom units, with large common roof decks on the 5th floor and the roof, an interior bike room, and common lobby/entry area completing the program.

Approximately 36,000 SF of usable open space surrounds these residential buildings. The grounds around each of the 8-families and the 50 unit building will have landscaped elements of varying scales, supporting a variety of outdoor activities common to this type of development. By collocating all of the parking needs in a central structure internal to the site, the quality of open space immediately adjacent to the buildings is greatly enhanced. Each 8-family building has a private rear yard for its residences, backing up to larger landscaped paths that allow for pedestrian circulation within and through the site. A recreation area as well as larger un-programmed open areas will be provided for the use of the residents. The landscaped area around the 50 unit building is more consistent with an urban landscape. Planters, tree wells and seating areas will frame larger open hardscape paving areas, part of a vibrant pedestrian experience that extends towards Dorchester Avenue and the mixed-use buildings.

3.1.2 Place Making

The development addresses the burgeoning commercial corridors of Dorchester Avenue and Hancock Street by proposing greater density and a more varied program. The capacity for activity along these corridors is greater than along Pleasant and Greenmount Streets, and accordingly the project proposes mixed-use development of 5-stories residential over ground floor retail.

At the ground level, to serve both the project and the neighborhood at large, the interior of the development will feature a generous pedestrian "street". The pedestrian corridor connects the adjacent neighboring residential areas of Jones Hill and Meeting House Hill to the new retail of

DOT BLOCK, ultimately connecting through to the broader retail corridor of Dorchester Avenue and onward to the Savin Hill MBTA station. Ground floor retail will define the perimeters of the entire mixed-use buildings, fostering a growth of activity both on the interior street and the bordering public ways of Hancock Street and Dorchester Avenue.

The retail portion of the project consists of approximately 60,000 square feet of available space. The layout out of the retail space lends itself to be sub-divided in a variety of ways, and is capable of accommodating a single larger retailer like an urban-scaled grocer of approximately 30,000 SF. The remaining retail space is well suited for smaller local retailers, such as restaurants, coffee shops, banks and other local neighborhood services. These retailers will set the stage for renewed vibrancy and street life, with many opportunities for outdoor dining and other community events.

The residential portion of these buildings consists of approximately 270 residential units in three 5-story buildings above the retail level. The units will be a mix of studio, one and two bedroom units. Approximately 25,000 square feet of open roof area between the residential buildings provides a central amenity to the residences. Landscape and hardscape areas along with a clubroom and pool area will be accessible to all residents of the development.

If the proponent is successful in acquiring additional parcels at the corner of Greenmount Street and Dorchester Avenue, the project would potentially add roughly 10,000 square feet of ground floor retail with up to 40 residential units above.

A five story parking structure of up to 450 spaces will provide for the vehicular support of the entire development. An additional 22 parking spaces can be accommodated in a covered area of Hancock Street at ground level, for dedicated retail use. The parking garage will provide adequate support for the needs of both the retail and residential, with the anticipation that approximately 120 spaces will be reserved for the retail tenants. Control with a traditional validating system will facilitate easy and direct access and exiting for the retail patrons. Internal controls will provide a clear separation between the residential parking areas on the upper floors and the retail patrons on the ground floor.

3.2 Building Design, Massing & Materiality

3.2.1 The Double Bay (160-166 Pleasant St. and 8-14 Greenmount St.)

The design of these 4 story wood framed buildings is rooted and inspired by the Dorchester vernacular. A strong collection of 3 story deck fronts and double bow buildings line Pleasant Street. These buildings present themselves as good examples of early 20th Century buildings in Boston. Building elements such as decks, bays, banding, double-hung windows, and ornament are found in these examples. Respecting the graining and rhythm of this building fabric is the first move in the generation of the 8 family's design.

This is achieved by breaking the volume down with two bay-like elements flanking the main entry. A simple cap element is introduced at the fourth level floor to continue the 3 story nature of the street wall. In addition a series of banding elements run along each floor line, and 2 over 1 double hung windows populate the façade. At the rear of each building a series of decks are introduced as way to add life to and pay homage to the backyard culture of Dorchester. Finally, the buildings are wrapped in cementitious clapboard siding, and planting beds a create sidewalk buffer.

3.2.2 240 Hancock Street

This building is conceived as an anchor, gate, and transition building for the site. Located at the corner of Hancock and Pleasant streets, this building is the termination of both streets' vistas. It is also the mediator between the double bay buildings, and 250 Hancock Street, of the mixed-use buildings. Lastly it is the maker for the pedestrian path and parking entry point. It is with these site conditions in mind that the design begins to take shape.

The project's massing is comprised of 3 main elements. A 5 story volume acts as the base layer while a collection of 4 story elements then breakdown the façade's scale. The massing at the corner of Hancock and Pleasant Street is pushed back on the fifth level to form a terrace space, and is a focal point that terminates the street vistas. This setback element also is the introduction of a material wrapping strategy that follows through the length of the building.

The wrapping starts at the corner of Pleasant Street as a dark metal façade material which then morphs into a canopy element for the terrace. This canopy element transitions into a cornice-like cap for the length of the building before it wraps down the south façade to finally become the main entry canopy. A contrasting material is found on the underside of the terrace canopy, building cap, and entry canopy; providing a warmer and more textured experience at locations nearest direct human contact.

A secondary entry to the building is also found at the corner of Pleasant and Hancock Streets. This entry is the marker for the beginning of the pedestrian path which follows through the site to Dorchester Avenue. Simple 4 story massing volumes can be found at both the pedestrian path and Hancock Street sides of building. These volumes are clad with a light color masonry or metal panel and are populated with mulled windows. The detailing of these elements will create a sense of "base-middle-top." The base will have a water table, and a reveal pattern that continues up the first level. The top of the volumes are marked with reveals, and articulated cap.

Third and finally, the main 5 story body of the building acts as backdrop to the first two design elements. The fenestration and detailing of the cladding relate more directly to the mixed-use buildings across the pedestrian path. This volume transitions into glass as it meets both of the building entries. The main building entry opens onto an active pedestrian node, and is faced by

250 Hancock Street opposite the pedestrian way, the two lobbies working in tandem to enrich this portion of the site.

3.2.3 250 Hancock Street

This building in many ways has dual qualities. The first is that it is the transition between the 5 stories of 240 Hancock Street, and the 6 story volumes that culminate at Dorchester Avenue. Secondly, it is the beginning (or terminating) edge of the retail component to the development as it moves toward Dorchester Avenue.

The ground level of the building is activated by three important sides, the first of which is the second side of a pedestrian zone formed by 240 Hancock and itself. This is where the main residential entry is located, and also completes the lobby to lobby relationship. Secondly, it marks the intersection between this residential lobby zone, and the site’s pedestrian path. It is here at this corner where the internal retail begins. A wrapping canopy element starts the run of storefronts through to Dorchester Avenue. The building is also pulled in at grade to form a potential outdoor seating area for retail tenants. The third and final edge is the retail base along Hancock Street. A wrapping canopy again marks the start of retail storefronts, and also defines the intersection between the pedestrian zone and Hancock Street. The run of retail storefronts and colonnade terminates at the end of the 6 story volume.

The architecture in this case also creates a series of intersecting masses. These masses are key to the 5 to 6 story transition. The 5 story mass forms a connector with Hancock and pedestrian streets, and also creates a relationship with the 5 story mass of its neighbor (240 Hancock Street.) The mass is then wrapped with a dark material with a varied seaming pattern that articulates the pedestrian path. The 6 story volume intersects with it in contrast. This simple form is broken down with a 1-3-2 base-middle-top strategy with simple detailing. Retail at the base, 3 stories of casement windows with relief, and then 2 stories of more vertically oriented fenestration. The 6 story height also continues onto Dorchester Avenue.

3.2.4 1205 Dorchester Avenue

This building is the first piece of the development that is encountered while moving south on Dorchester Ave. 1205 Dorchester Avenue has been given two important responsibilities. It establishes a 6 story density along Dorchester Avenue, and it marks one side of an opening to the retail pedestrian path that runs through the site back to Pleasant Street. It is with this in mind that the massing of this structure begins to take shape.

At the intersection of Greenmount Street and Dorchester Avenue, if the Proponent is successful in acquiring parcels in this location, the massing of the proposed building will be reduced by one story, to respect the lower scale of buildings along Greenmount Street. The face of the building will also be pulled back from the corner, easing the congestion of Greenmount and forming a small moment of relief at the corner.

A very simple and clean building relief makes up main the building façade along Dorchester Avenue, again using the 1-3-2 strategy. At the retail level the storefront gently angles away from a series of columns along the street to provide a more generous pedestrian zone, in anticipation of increased pedestrian activity along this main thoroughfare. The building and materials then fold in from the street to indicate the entry to the retail pedestrian path. This soft moment also sets up a relationship with its partner 1225 Dorchester Avenue.

3.2.5 1225 Dorchester Avenue

The final building in the development is the culmination of the gradual accumulation of density and the resolution of a series of design elements, as described above. At the retail pedestrian path, a 5 Story massing element marks the entry to the path. This element also acts a complementary sculptural element to the larger and more powerful gesture on the corner on Dorchester and Hancock. Between these two elements, the building confidently defines the street edge with an intermediary volume, again articulated with a clean and simple 1-4-1 strategy. The larger moment at the corner or “Keystone” is first expressed by a void in plan that allows the corner element to break off and act on its own, and provides relief to the street wall. Beginning as 6 story volume with a 1 story mechanical parapet, a slight taper ascends to the corner. This results is the climax of the project, in terms of height. At the street level, a colonnade lifts the mass off the street to open up the sidewalk to the corner, continuing the street life culture that is set up by the rest of the project. A tight skin will clad this element, while large windows and a series of fins modulate the façade.

3.2.6 Parking Structure

The final piece in the development is the parking structure. It is designed to accommodate up to 450 cars, and also forms the second edge to the retail pedestrian path. The structure of the garage is a pre-stressed precast concrete construction. It will be clad with a custom metal mesh that allows light into the garage, yet helps to block the vehicle headlights at night. Most importantly the skin of the garage is designed to be an armature for the plant life that surrounds the entire structure. At the base of the garage, planting beds, walls, and benches help to fuel the retail and pedestrian environment with texture and vibrancy.

3.3 Landscape Design

A fundamental landscape design objective for DOT BLOCK is to create a special environment that is uniquely responsive to the site and visionary in its character. This can be achieved by adopting design principles and guidelines that reflect the values of the developer and incorporate many of the physical and symbolic features that are commonly associated with Dorchester. Both the project architecture and associated landscape systems naturally grow out of the history of Dorchester to ensure its unique character and stand in sharp contrast to contemporary suburban development.

A good streetscape is one designed to achieve two fundamental and intimately interrelated objectives:

- By day and night, the physical design of the public space should maximize the safety, security, convenience and enjoyment of all that use it—citizens and visitors, drivers, pedestrians, bicyclists, shoppers and handicapped alike; and
- By day and night, the design of the space should create in the minds of those who use it the memorable image that it is a unique place to live.

It is the Proponent's thesis that these two objectives are not in conflict in any way, and that the achievement of the "*aesthetic*" objective of creating a positive image for the Dorchester streetscape is, in fact, an inevitable and automatic by product of achieving the "*functional*" objective of providing convenience, safety, security, and enjoyment for all users.

To establish a safe, convenient and attractive pedestrian oriented environment within DOT Block, the streetscape and the proposed design of common area landscape zones must consider the function and role of each street as it relates to this vital Dorchester Neighborhood. The location and placement of street trees shall be coordinated in a manner as to not interfere with street lighting. Trees which are in the public right-of-way or pedestrian paths of travel shall also comply with any ADA clearance requirements, both at grade and at the tree canopy. The trees shall be suitable for urban conditions and provide minimum interference to the pedestrian use of the sidewalk and the effectiveness of street lighting.

Hancock Street: This street provides the vital connection to Dorchester Avenue and is a major community corridor. New granite curbing, 6' wide sidewalks, street trees, and street lighting will help to define a safe and continuous pedestrian zone along DOT BLOCK's southern perimeter. New street trees will be planted 30-40 feet on center to help establish a continuous green canopy. Between the building face and side walk edge, a continuous landscape foundation planting will help prove a smooth transition to the public street; and to reinforce a sense of entry to the apartment units. Street lighting will be provided within this frame work to insure proper light levels and safe and convenient pedestrian way finding.

Pleasant Street: The streetscape design vocabulary established on Hancock Street will be extended along the Pleasant Street to insure a consistent image and character to the western perimeter of the site. A 4' continuous landscape planting strip between the curb and sidewalk will provide a landscape zone for the tree planting and help reinforce the residential image /character to the street. Access to the 8-unit buildings will be defined by a series of formal gardens intended to respond to the residential character of Pleasant Street, while providing for a garden entry for each unit.

Greenmount Street: The landscape design for Greenmount Street will respond directly to the scale of the street. New granite curbing and a continuous 5' side walk will provide direct access to the 8-unit buildings. Smaller, ornamental trees with tighter spacing (25' on center) will be planted outside the side walk to respond to this change in scale and to reinforce a strong sense of entry to the residential units.

Dorchester Avenue: The streetscape design for Dorchester Avenue will reinforce its programming as a mixed-mode transportation corridor, while greatly enhancing the pedestrian experience. New granite curbing, 6’ wide sidewalks, street trees, and street lighting will help to define a safe and continuous pedestrian zone typical of a neighborhood main street, establishing this edge of the site as a true neighborhood shopping district.

Pedestrian Plaza: A pedestrian plaza is proposed to provide direct public pedestrian access directly from Pleasant Street to Dorchester Avenue. The Plaza must accommodate future retail or restaurant uses and limited service areas. The varying width of the plaza will require a balance of hard and softscape elements that provide a functional as well as aesthetic role in separating and buffering pedestrian traffic from structured parking areas. The Pedestrian Plaza will accommodate an extensive landscape furnishing program of benches, bollards planters, pots, trash receptacles, bike racks and specialty pedestrian scaled lighting.

Buffer Plantings: Along the eastern perimeter a 7-8 foot evergreen hedge will provide privacy for the 8-unit buildings. The same hedge will be planted around the perimeter of parking structure creating a green wall helping to screen parking from the residences and commercial uses.

3.4 Sustainable Design/Energy Conservation

3.4.1 Introduction

Sustainability informs every design decision. Enduring and efficient buildings conserve embodied energy and reduce the need for natural resources. The Proposed Project analysis, which Includes development of potential future acquisition parcels at the corner of Greenmount Street and Dorchester Avenue, embraces the opportunity to positively influence the urban environment. Its urban location takes advantage of existing infrastructure while enabling convenient access to mass transportation that will reduce dependence on single occupant vehicle trips and minimize transportation impacts.

The Proponent and the Project design team are committed to an integrated design approach and are using 3 LEED Rating Systems to evaluate the project sustainability criteria including: LEED for Homes, LEED for Homes Mid-Rise, and LEED NC for Retail, along with third-party oversight and intends to be LEED Silver certifiable as presented in **Figures 3.8-0** and **3.8-1** at the end of this section. This rating will meet or exceed Boston’s Green Building standard. The LEED rating system tracks the sustainable features of the project by achieving points in following categories: Innovation and Design Process, Location and Linkages, Sustainable Sites; Water Efficiency; Energy and Atmosphere; Materials and Resources; Indoor Environmental Quality; and Awareness and Education.

3.4.2 Innovation and Design Process

The prerequisites and credits, which the Proposed Project hopes to achieve in this category, are listed below:

ID 1.1 Preliminary Rating: (Prerequisite)

- The project team gathered on April 8, 2015, Price Sustainability Associates (PSA) (Green Rater) conducted the Preliminary Rating meeting with the design team and completed the Preliminary Checklist; it was decided to pursue Silver certification as the target goal.

ID 1.2 Energy Expertise for Mid-Rise: (Prerequisite)

- The team has both expertise for Mid-Rise systems and experience modeling ASHRAE 90.1 energy simulation for LEED for Homes Mid-Rise.

ID 2.1 Durability planning: (Prerequisite)

- The durability evaluation form and durability inspection checklist will be completed as the design advances.

ID 2.2 Durability Management: (Prerequisite)

- The Proponent plans to use the durability inspection checklist throughout construction as both an inspection tool and a project management tool for weekly review, to ensure each measures is completed.

ID 2.3 Third-Party Durability Management Verification (3 credits)

- PSA will periodically conduct on-site inspections using the Durability Management Checklist.

3.4.3 Location and Linkages

LL 2 Site Selection: (2 credits)

- The Site does not violate any of the listed environmental sensitivity criteria.

LL 3.2 Infill: (2 credits)

- 75% or more of the perimeter borders previously developed land. The Site is composed of several existing buildings with offices, repair garage, and storage garage uses; the surrounding neighborhood is built-up with two and three-family homes.

LL 4 Existing Infrastructure: (1 credit)

- The Site is within ½ mile of existing water and sewer service lines.

LL 5.1 – 5.3 Community Resources/Public Transit: (3 credits)

- The Site has outstanding transit options. The site is located within a half-mile of Savin Hill on the Red Line. Several MBTA bus routes are also located within a quarter-mile of the Project site. The Proposed Project is expected to generate a total of 190 transit trips per day.

<u>LL 6 Access to Open Space: (1 credit)</u>
- The Site will meet the criteria of being proximate to space greater than ¾ acre within ¼ mile. Allen Park and Coppens Square are walkable by High Street and Church Street.

3.4.4 Sustainable Sites

The development of sustainable sites is at the core of sustainable design. The sustainable sites credit category encourages development on previously developed land, minimizing a building's impact on ecosystems and waterways, regionally appropriate landscaping, smart transportation choices, stormwater runoff management, and reduction of erosion, light pollution, heat island effect, and pollution related to construction and site maintenance.

The points which the Proposed Project hopes to achieve in this category are listed below:

<u>SS 1.1 Erosion Controls during Construction: (Prerequisite)</u>
- The project team will develop and implement an erosion control plan prior to start of construction which will meet each of the required LEED provisions (a – e).

<u>SS 1.2 Minimize Disturbed Area of Site for Mid-Rise: (1 credit)</u>
- Project density is estimated at 102 units/ acre, exceeding the 40 units/acre threshold.

<u>SS 2.1 No invasive plants: (Prerequisite)</u>
- No invasive species will be scheduled or specified in the landscape plan.

<u>SS 2.2 Basic Landscape Design: (1 credit)</u>
- Any installed turf will be drought-tolerant; will not be used in densely shaded areas; and will not be placed in areas with > 25% slope. Mulch, or soils amendments will be used as appropriate, and compacted soil will be tilled to >/= 6 inches.

<u>SS 2.3 Limit Conventional Turf: (1 credit)</u>
- Conventional turf will be kept to 40% of designed softscape, or less.

<u>SS 2.4 Drought Tolerant Plants: (1 credit)</u>
- The landscape architect will select drought tolerant plants (90% or more) for the landscaping plan. Lists of plants and their quantities of each plant will be provided..

<u>SS3.2 Reduce Local Heat Island Effects: (1 credit)</u>

- The roof will be installed with high-albedo material on 75% or more of the roof area.

SS4.1 Permeable Lot for Mid-Rise: (3-4 credits)

- The lot, not including area under roof, will be designed such that at least 90% (potentially 100%) will be permeable to infiltrate stormwater on site.

SS4.2 Permanent Erosion Controls: (1 credit)

- Terracing and retaining walls will be used on steep sloped areas of the Site.

SS 4.3 Storm Water Quality Control for Mid-Rise: (2 credits)

- The Proposed Project will use in-field performance monitoring to demonstrate compliance.

SS 6.1 – 6.3 Compact Development, Very-High Density: (4 credits)

- The Proposed Project will have an approximate density of 102 units per acre, meeting the Very High Density threshold.

SS7.1 Public Transit Mid-Rise: (2 credits)

- The number of transit rides available within ½ mile of the project is in excess of 60 per weekday.

3.4.5 Water Efficiency

Buildings are major users of our potable water supply and conservation of water preserves a natural resource while reducing the amount of energy and chemicals used for sewage treatment. The goal of the Water Efficiency credit category is to encourage smarter use of water, inside and out. Water reduction is typically achieved through more efficient appliances, fixtures and fittings inside and water-wise landscaping outside.

The points which the Proposed Project hopes to achieve in this category are listed below:

WE 2.1 High-Efficiency Irrigation system, Mid-Rise (2 credits)

- Irrigation best-practices will be employed to maximize this credit.

WE 3.1 and WE 3.2 Indoor Water Use: (5 credits)

- Shower heads with 1.75 or less GPM, lavatory faucets will use 1.5 or less GPM and the toilets selected will be less than 1.3 gallons per flush.

WE 3.3 Water Efficient Appliances for Mid-Rise: (2 credits)

- The project will be using high-efficiency clothes washers and dishwashers.

3.4.6 Energy and Atmosphere

According to the U.S. Department of Energy, buildings use 39% of the energy and 74% of the electricity produced each year in the United States. The Energy and Atmosphere credit category encourages a wide variety of energy strategies: commissioning; energy use monitoring; efficient design and construction; efficient appliances, systems and lighting; the use of renewable and clean sources of energy, generated on-site or off-site; and other innovative practices.

The points which the Proposed Project hopes to achieve in this category are listed below:

<u>EA 1.1 Minimum Energy Performance for Mid-Rise: (Prerequisite)</u>
- The Proposed Project will exceed the 15% minimum reduction in energy use according to the ASHRAE90.1 simulation.

<u>EA 1.2 Testing and Verification for Mid-Rise: (Prerequisite)</u>
- The Proposed Project intends to comply with Option 1, Testing & Verification protocol.

<u>EA 1.3 Optimize Energy Performance for Mid-Rise: (5 credits)</u>
- The Proposed Project intends to reach at least a 20% better than reference in the ASHRAE with EPA simulation modeling.

<u>EA 7.2 Pipe Insulation: (1 credit)</u>
- All domestic hot water piping will have R4 pipe insulation installed.

<u>EA 11.1 Refrigerant Charge Test: (Prerequisite)</u>
- All refrigerant lines for air conditioning will be third-party charge tested per manufacturer’s standards.

<u>EA 11.2 Appropriate HVAC Refrigerants: (1 credit)</u>
- R410A refrigerant will used on space cooling systems.

3.4.7 Materials and Resources

During both construction and operations, buildings generate a lot of waste and use a lot of materials and resources. This credit category encourages the selection of sustainable materials, including those that are harvested and manufactured locally, contain high-recycled content, and are rapidly renewable. It also promotes the reduction of waste through building and material reuse, construction waste management, and ongoing recycling programs.

The points which the Proposed Project hopes to achieve in this category are listed below:

MR 1.1 Framing Order Waste Factor: (Prerequisite)
- A calculation of the wood necessary to frame the building and orders of the amount of wood purchased will be made. Orders are not expected to exceed the calculation by more than 10%.

MR 1.5 Off-Site Fabrication: (4 credits)
- Modular construction is proposed to be used in this Project.

MR 2.1 FSC Certified Tropical Woods: (Prerequisite)
- Suppliers will be notified of preference for FSC products and requested to provide information for the country of origin for each wood product. Any tropical woods used will be FSC Certified.

MR 2.2 Environmentally Preferable Products (min. 3 credits)
- The Proposed Project will select environmentally preferable products in accordance with the EPP table to earn a minimum of 3 credits.

MR 3.1 Construction Waste Management Planning: (Prerequisite)
- The Proposed Project will investigate any recycling opportunities in the area and document the waste diverted from the landfill.

MR 3.2 Construction Waste Reduction: (1 credit)
- The Proposed Project will limit the total amounts of waste that will go to the landfill by targeting a 50% reduction.

3.4.8 Indoor Environmental Quality

The U.S. Environmental Protection Agency estimates that Americans spend about 90% of their day indoors, where the air quality can be significantly worse than outside. The Indoor Environmental Quality credit category promotes strategies that can improve indoor air through low emitting materials selection and increased ventilation. It also promotes access to natural daylight and views.

The points which the Proposed Project hopes to achieve in this category are listed below:

EQ 2 Basic Combustion Venting Measures for Mid-Rise: (Prerequisite)
- These measures are included in the design as requirements for basic code compliance in our region. There will be no fireplaces in any of the units and all other measures will be met.

EQ 4.1 Basic Outdoor Air Ventilation: (Prerequisite)

- Continuous ventilation will be provided to each unit to meet the ASHRAE 62.2 – 2007 and ASHRAE 62.1 – 2007 (sec. 4-7) ventilation standards.

EQ 5.1 Basic Local Exhaust: (Prerequisite)

- Bath fans and kitchen area exhaust fans will be ASHRAE 62.2 – 2007 compliant. All of the LEED and ENERGY STAR criteria will be met.

EQ 6.1 Room by Room Load Calculations: (Prerequisite)

- Room by room load calculations will be provided by the HVAC engineer or responsible party stating the calculations were performed according to ACCA Manual J and D.

EQ 7.2 Air Filtering: (Prerequisite)

- MERV 8 filters will be installed on ducted distribution systems.

EQ 8.1 Indoor Contaminant Control During Construction: (1 credit)

- All ductwork will be sealed throughout construction so that debris doesn't contaminate the distribution systems.

EQ 8.2 Indoor Contaminant Control for Mid-Rise (2 credits)

- The Proposed Project will install a central entryway system and in-unit shoe removal and storage near entryways.

EQ 8.3 Preoccupancy Flush (1 credit)

- The buildings will be flushed of airborne contaminants per LEED guidance prior to building turnover.

EQ 10.1 No HVAC in Garage: (Prerequisite)

- There will be no HVAC unit equipment located in the garage.

EQ 10.2 Minimize Pollutants from Garage: (2 credits)

- All penetrations, cracks at base of walls, as well as joist bays will be sealed.
- At conditioned spaces, all doors will be weather-stripped.
- CO detectors will be installed at stairwell leading from garage to living space.

EQ 11 Environmental Tobacco Smoke Control (0.5 credit)

- Restrictions on public smoking will be implemented to reduce smoke exposure and transfer.

EQ 12.1 Compartmentalization of Units (Prerequisite)

- A thorough air-sealing protocol will be implemented to ensure leakage below 0.30 CFM50 per sq. ft. of enclosure.

3.4.9 Awareness and Education

The points which the Proposed Project hopes to achieve in this category are listed below:

<u>AE 1.1 Education of the Homeowner: (Prerequisite)</u>
- An electronic Home Owner's Manual will be created and provided to all occupants.
- A one-hour walk through will be conducted with the occupants in group trainings.

<u>AE 1.3 Public Awareness: (1 credit)</u>
- The Proponent will create a website about the project, highlighting the benefits of LEED Homes.
- The Proponent will work with regional publications on a newspaper article about the Proposed Project.
- The contractor's project sign will include LEED for Homes signage at the exterior of the building site.

<u>AE 2 Education of the Building Manager: (1 credit)</u>
- An operations and training manual will be created and provided to the building manager and a one-hour walk-through will be conducted with the building manager.

3.5 Urban Design Drawings and LEED Checklists

The below urban design drawings, perspectives, and LEED Checklist are contained in this section of the PNF that follows:

Sustainability/LEED Checklists

The below urban design drawings, perspectives, and LEED Checklist are contained in **Appendix B**.

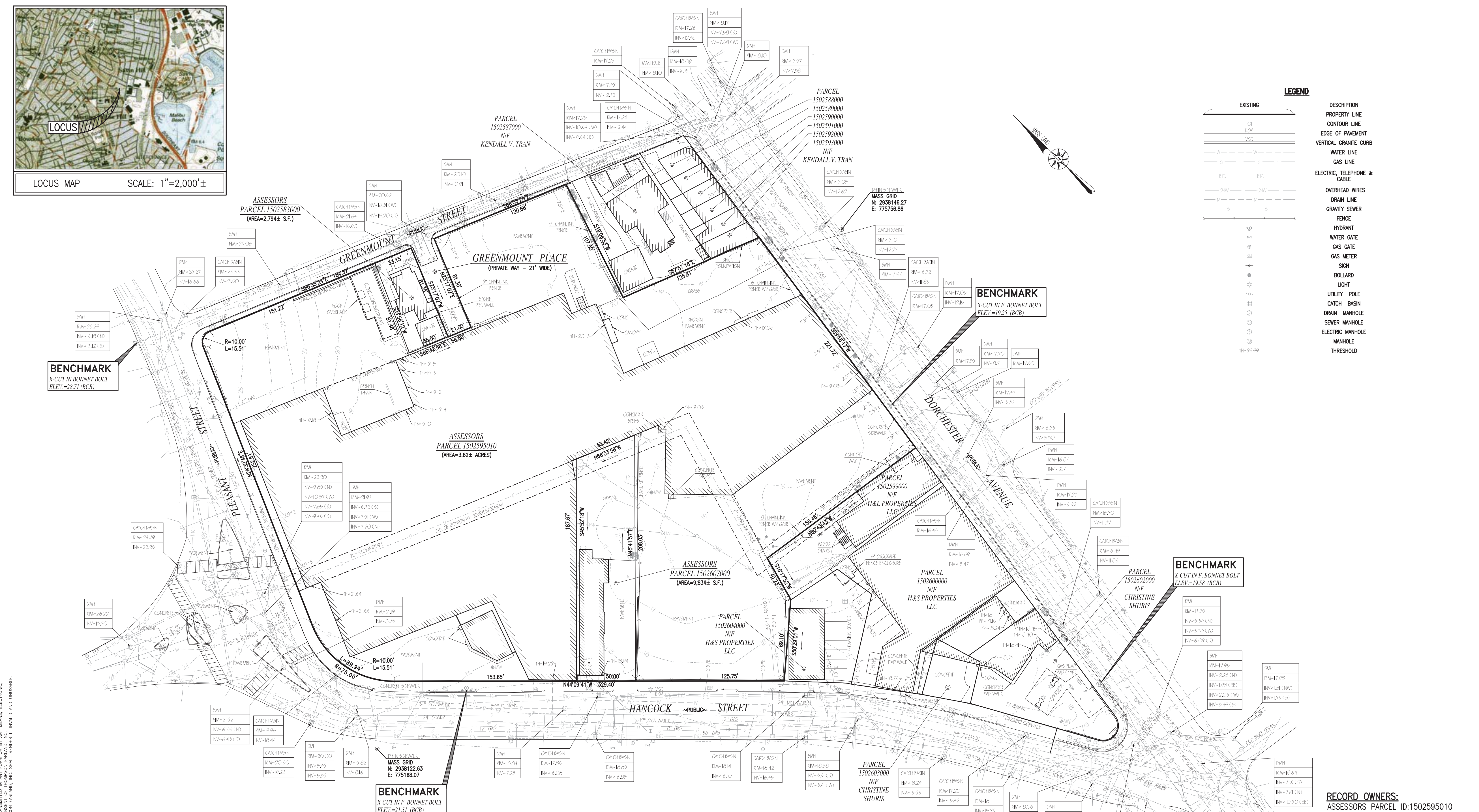
DOT BLOCK

DORCHESTER, MA
Mixed-Use Residential / Retail Development

RODE

LOCUS PLAN
DOT BLOCK

Figure 3.0-1



NOTES:

1. TOPOGRAPHIC AND PROPERTY LINE SURVEY PERFORMED BY THOMPSON FARLAND, INC. IN DECEMBER OF 2014.
2. VERTICAL ELEVATIONS REFER TO THE BOSTON CITY BASE VERTICAL DATUM AND HORIZONTAL LOCATIONS REFER TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
3. GPS POINTS WERE USED TO ESTABLISH ELEVATIONS ON THE NORTH AMERICAN VERTICAL DATUM OF 1988. THESE ELEVATIONS WERE THEN ADJUSTED BY +6.457 FEET TO COINCIDE WITH THE BOSTON CITY BASE VERTICAL DATUM.
4. THE LOCATION AND/OR ELEVATION OF EXISTING SURFACE UTILITIES SHOWN ON THESE PLANS ARE FROM AN ON THE GOUND SURVEY PERFORMED BY THOMPSON FARLAND, INC. IN DECEMBER OF 2014. INVERT ELEVATIONS AND LOCATIONS OF THE SUBSURFACE UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS WERE TAKEN FROM UTILITY AS–BUILT PLANS PROVIDED BY THE BOSTON WATER AND SEWER COMISSION.
5. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORAMTION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTITLITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
6. SEWER EASEMENT TAKEN FROM PLAN NO. 19, SEWAGE WORK FREEPORT STREET, MAY 20 1898.

FLOOD NOTE:

BY GRAPHIC PLOTTING ONLY, THE PROPERTY DEPICTED ON THIS PLAN FALLS IN ZONE X, AS SHOWN ON THE FLOOD INSURANCE RATE MAP 25025C0091G, EFFECTIVE DATE: SEPTEMBER 25, 2009.

RECORD OWNERS:

ASSESSORS PARCEL ID:1502595010
DORCHESTER PLAZA LLC
3215 CALAVERAS ROAD
MILPITAS, CA 95035
DEED BOOK 45731 PAGE 307

ASSESSORS PARCEL ID:1502583000
ROXANN HARVERY
16 GREENMOUNT STREET
DORCHESTER, MA 02125
BOOK 31599 PAGE 151

ASSESSORS PARCEL ID:1502607000
DONATO FEDERICO TS
256 HANCOCK STREET
DORCHESTER, MA 02125
DEED BOOK 30621 PAGE 192

PLAN REFERENCE:

"SUBDIVISION PLAN, #166 PLEASANT STREET, BOSTON, (DORCHESTER) MASS."
BY R.E. CAMERON & ASSOCIATES, INC.
DATED: 12/06/96

REVISIONS

1	3/9/15	VERTICAL DATUM
2	3/11/15	UTILITIES & NOTES

BRIAN J. MURPHY No. 38387

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NEW BEDFORD | TAUNTON | CAMBRIDGE | MARLBOROUGH

DRAWN BY: CKG
DESIGNED BY: –
CHECKED BY: BJM

EXISTING CONDITIONS
166 PLEASANT STREET
ASSESSORS PARCEL ID: 1502595010
DORCHESTER, MASSACHUSETTS

PREPARED FOR: EBI CONSULTING – JOHN HESSION
21 B STREET
BURLINGTON, MA 01803

JANUARY 23, 2015
SCALE: 1"=40'
JOB NO. 14–832
LATEST REVISION: MARCH 11, 2015
SHEET 1 OF 1

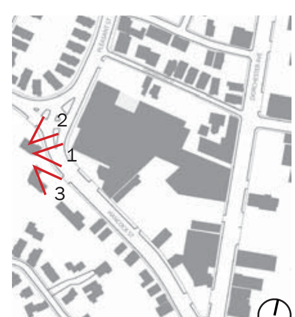
EXISTING SITE SURVEY
DOT BLOCK

Figure 3.0-2

1. View of existing building from corner of Hancock and Pleasant St.

2. View of existing building from corner of Hancock and Pleasant St looking North.

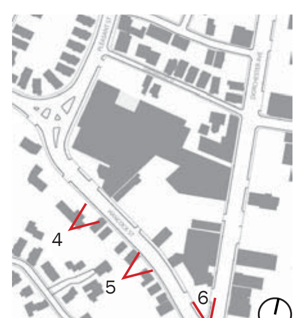
3. View of existing building looking South-East down Hancock St.



4. View of existing building from Hancock St.

5. View of existing building from Hancock St.

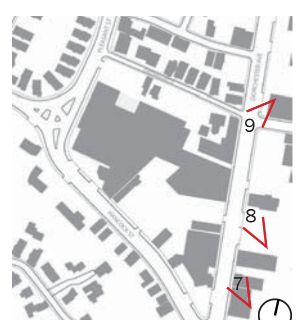
6. Existing building on Dorchester Ave and Hancock St looking North.



7. View of existing building looking North-west up Dorchester Ave.

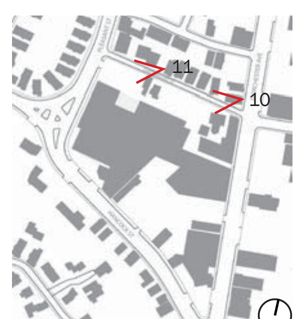
8. View of existing building looking North-west up Dorchester Ave.

9. View of existing building looking South-west down Dorchester Ave.



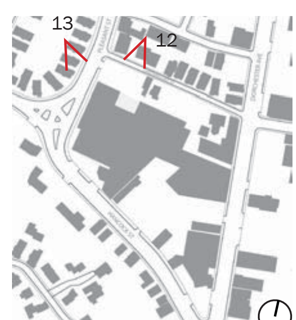
10. View looking West down Greenmount St. towards Pleasant St.

11. View looking West down Greenmount St. towards Pleasant St.



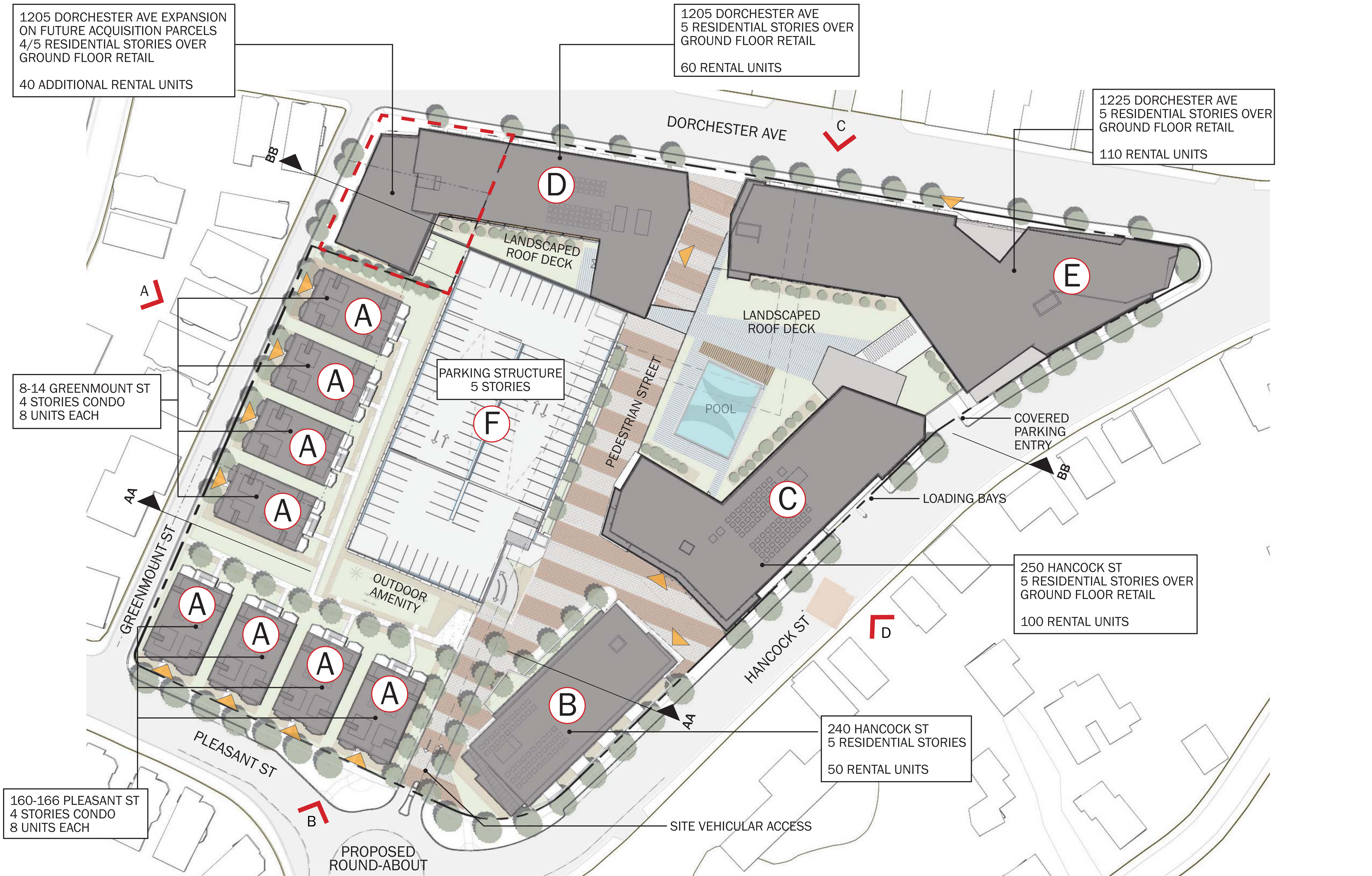
12. View of existing building from corner of Greenmount St. and Pleasant St.

13. View of existing building looking South down Pleasant St.



DOT BLOCK

DORCHESTER, MA
Mixed-Use Residential / Retail Development



RODE

PROJECT SITE PLAN
DOT BLOCK

Figure 3.1-1

RODE

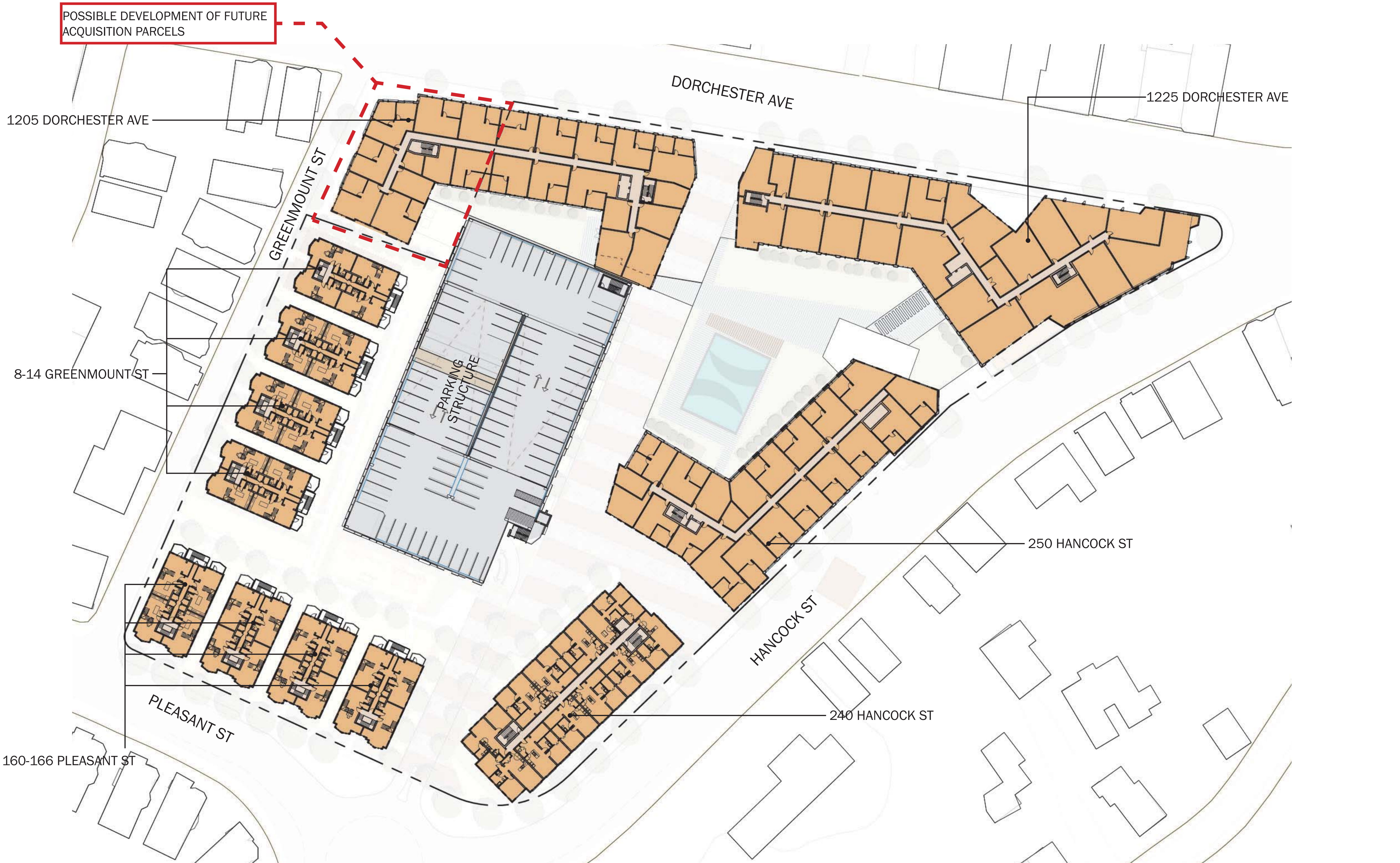
GROUND FLOOR PLAN
DOT BLOCK

Figure 3.1-2

RODE

2ND FLOOR PLAN
DOT BLOCK

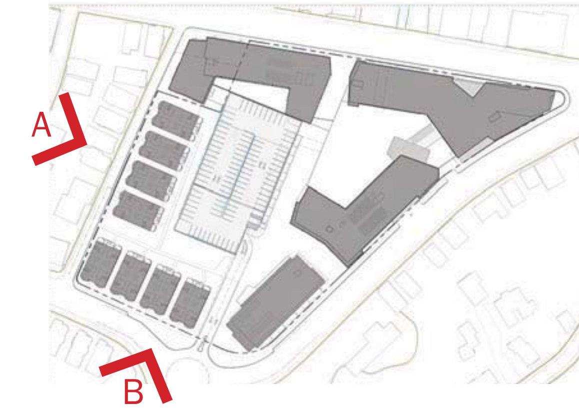
Figure 3.1-3



RODE

TYPICAL UPPER FLOOR PLAN
DOT BLOCK

Figure 3.1-4



POSSIBLE DEVELOPMENT OF FUTURE ACQUISITION PARCELS

A - GREENMOUNT STREET ELEVATION

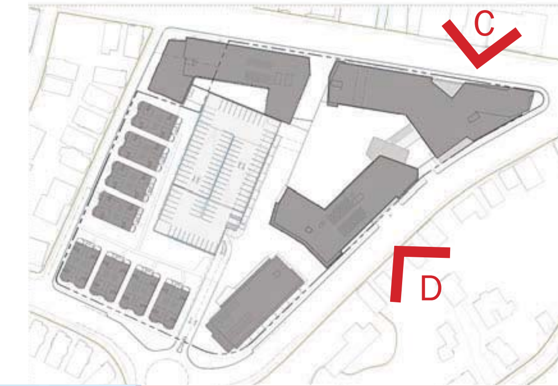
B - PLEASANT STREET ELEVATION

RODE

SITE ELEVATIONS
DOT BLOCK

0' 25' 50' 100'

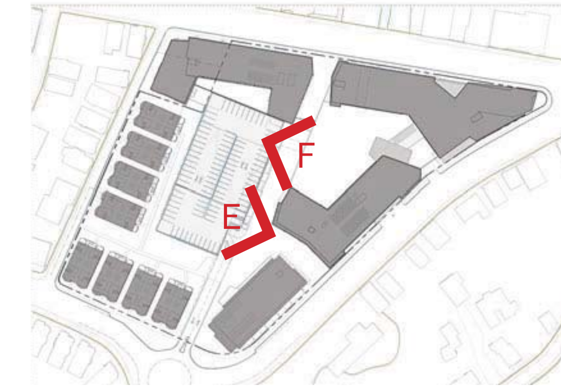
Figure 3.1-5



POSSIBLE DEVELOPMENT OF FUTURE ACQUISITION PARCELS

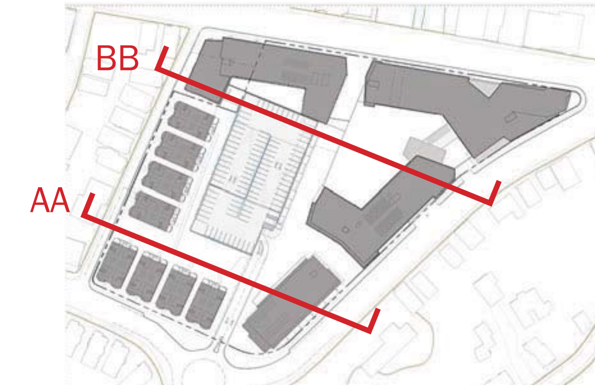
C - DORCHESTER AVENUE ELEVATION

D - HANCOCK STREET ELEVATION



E - PEDESTRIAN PATH ELEVATION SOUTH

F - PEDESTRIAN PATH ELEVATION NORTH



BB SITE SECTION N-S

AA SITE SECTION N-S

PROJECT RENDERING: PERSPECTIVE ALONG GREENMOUNT STREET
DOT BLOCK

Figure 3.1-9

RODE

PROJECT RENDERING: PERSPECTIVE ALONG PLEASANT STREET
DOT BLOCK

Figure 3.1-10

PROJECT RENDERING: 8 FAMILY REAR YARDS
DOT BLOCK

Figure 3.1-11

PROJECT RENDERING: HANCOCK STREET APPROACH
DOT BLOCK

Figure 3.1-12

PROJECT RENDERING: 250 HANCOCK STREET
DOT BLOCK

Figure 3.1-13

PROJECT RENDERING: PEDESTRIAN PATH VIEW TO DORCHESTER AVE
DOT BLOCK

Figure 3.1-14

PROJECT RENDERING: PEDESTRIAN PATH VIEW FROM DORCHESTER AVE
DOT BLOCK

Figure 3.1-15

RODE

PROJECT RENDERING: GLOVER'S CORNER
DOT BLOCK

Figure 3.1-16

RODE

PROJECT RENDERING: DORCHESTER AVE
DOT BLOCK

Figure 3.1-17

for Homes

LEED for Homes Simplified Project Checklist

Builder Name:	
Project Team Leader (if different):	***Eric Robinson, RODE Architects***
Home Address (Street/City/State):	***166 Pleasant Street, Dorchester, MA***

Project Description:

Building type: ***Multi-family*** Project type: ***Multi-family De***

\# of units: ***114*** Avg. Home Size Adjustment: ***-4***

Adjusted Certification Thresholds

Certified: ***41.0*** Gold: ***71.0***

Silver: ***56.0*** Platinum: ***86.0***

Project Point Total

Prelim: *79 + 22 maybe pts* Final: *23*

Certification Level

Prelim: *Gold* Final: *Not Certified*

Final Credit Category Total Points

ID: 0	*SS: 7*	*EA: 16*	*EQ: 0*
LL: 0	*WE: 0*	*MR: 0*	*AE: 0*

Minimum Point Thresholds Not Met for Final Rating

date last updated :

last updated by :

	No.	Credit	OR	Max Points	Project Points Preliminary Y/Pts	Maybe	No	Final Y/Pts
Innovation and Design Process (ID)		(No Minimum Points Required)		Max	Y/Pts	Maybe	No	Y/Pts
1. Integrated Project Planning	1.1	Preliminary Rating		Prereq	Y			
	1.2	Integrated Project Team		1	1	0		0
	1.3	Professional Credentialed with Respect to LEED for Homes		1	0	0	N	0
	1.4	Design Charrette		1	0	1		0
	1.5	Building Orientation for Solar Design		1	0	0	N	0
2. Durability Management Process	2.1	Durability Planning		Prereq	Y			
	2.2	Durability Management		Prereq	Y			
	2.3	Third-Party Durability Management Verification		3	3	0		0
3.Innovative or Regional Design	3.1	Innovation #1		1	0	1		0
	3.2	Innovation #2		1	0	0	N	0
	3.3	Innovation #3		1	0	0	N	0
	3.4	Innovation #4		1	0	0	N	0
		Sub-Total for ID Category:		**11**	4	2		0
Location and Linkages (LL)		(No Minimum Points Required)	OR	Max	Y/Pts	Maybe	No	Y/Pts
1. LEED ND	1	LEED for Neighborhood Development	**LL2-6**	10	0	0	N	0
2. Site Selection	2	Site Selection		2	2	0		0
3. Preferred Locations	3.1	Edge Development	**LL 3.2**	1	0	0	N	0
	3.2	Infill		2	2	0		0
	3.3	Previously Developed		1	1	0		0
4. Infrastructure	4	Existing Infrastructure		1	1	0		0
5. Community Resources/ Transit	5.1	Basic Community Resources / Transit	**LL 5.2, 5.3**	1	0	0	N	0
	5.2	Extensive Community Resources / Transit	**LL 5.3**	2	0	0	N	0
	5.3	Outstanding Community Resources / Transit		3	3	0		0
6. Access to Open Space	6	Access to Open Space		1	1	0		0
		Sub-Total for LL Category:		**10**	10	0		0
Sustainable Sites (SS)		(Minimum of 5 SS Points Required)	OR	Max	Y/Pts	Maybe	No	Y/Pts
1. Site Stewardship	1.1	Erosion Controls During Construction		Prereq	Y			
	1.2	Minimize Disturbed Area of Site		1	1	0		0
2. Landscaping	2.1	No Invasive Plants		Prereq	Y			
	2.2	Basic Landscape Design	**SS 2.5**	2	2	0		0
	2.3	Limit Conventional Turf	**SS 2.5**	3	1	0		2
	2.4	Drought Tolerant Plants	**SS 2.5**	2	1	2		1
	2.5	Reduce Overall Irrigation Demand by at Least 20%		6	0	0	N	0
3. Local Heat Island Effects	3	Reduce Local Heat Island Effects		1	0	1		0
4. Surface Water Management	4.1	Permeable Lot		4	3	1		0
	4.2	Permanent Erosion Controls		1	0	1		0
	4.3	Management of Run-off from Roof		2	1	1		0
5. Nontoxic Pest Control	5	Pest Control Alternatives		2	2	0		0
6. Compact Development	6.1	Moderate Density	**SS 6.2, 6.3**	2	0	0	N	0
	6.2	High Density	**SS 6.3**	3	0	0	N	0
	6.3	Very High Density		4	4	0		4
		Sub-Total for SS Category:		**22**	15	6		7

LEED for Homes Simplified Project Checklist (continued)

				Max Points	Project Points Preliminary			Final
Water Efficiency (WE)		(Minimum of 3 WE Points Required)	OR	Max	Y/Pts	Maybe	No	Y/Pts
1. Water Reuse	1.1	Rainwater Harvesting System	**WE 1.3**	4	0	0	N	0
	1.2	Graywater Reuse System	**WE 1.3**	1	0	0	N	0
	1.3	Use of Municipal Recycled Water System		3	0	0	N	0
2. Irrigation System	2.1	High Efficiency Irrigation System	**WE 2.3**	3	3	0		0
	2.2	Third Party Inspection	**WE 2.3**	1	1	0		0
	2.3	Reduce Overall Irrigation Demand by at Least 45%		4	0	0	N	0
3. Indoor Water Use	3.1	High-Efficiency Fixtures and Fittings		3	1	0		0
	3.2	Very High Efficiency Fixtures and Fittings		6	4	0		0
		Sub-Total for WE Category:		**15**	9	0		0
Energy and Atmosphere (EA)		(Minimum of 0 EA Points Required)	OR	Max	Y/Pts	Maybe	No	Y/Pts
1. Optimize Energy Performance	1.1	Performance of ENERGY STAR for Homes		Prereq	Y			
	1.2	Exceptional Energy Performance		34	16	0		16
7. Water Heating	7.1	Efficient Hot Water Distribution		2	0	2		0
	7.2	Pipe Insulation		1	1	0		0
11. Residential Refrigerant Management	11.1	Refrigerant Charge Test		Prereq	Y			
	11.2	Appropriate HVAC Refrigerants		1	1	0		0
		Sub-Total for EA Category:		**38**	18	2		16
Materials and Resources (MR)		(Minimum of 2 MR Points Required)	OR	Max	Y/Pts	Maybe	No	Y/Pts
1. Material-Efficient Framing	1.1	Framing Order Waste Factor Limit		Prereq	Y			
	1.2	Detailed Framing Documents	**MR 1.5**	1	0	0	N	0
	1.3	Detailed Cut List and Lumber Order	**MR 1.5**	1	0	0	N	0
	1.4	Framing Efficiencies	**MR 1.5**	3	0	0	N	0
	1.5	Off-site Fabrication		4	4	0		0
2. Environmentally Preferable Products	2.1	FSC Certified Tropical Wood		Prereq	Y			
	2.2	Environmentally Preferable Products		8	3	3		0
3. Waste Management	3.1	Construction Waste Management Planning		Prereq	Y			
	3.2	Construction Waste Reduction		3	1	1		0
		Sub-Total for MR Category:		**16**	8	4		0
Indoor Environmental Quality (EQ)		(Minimum of 6 EQ Points Required)	OR	Max	Y/Pts	Maybe	No	Y/Pts
1. ENERGY STAR with IAP	1	ENERGY STAR with Indoor Air Package		13	0	0	N	0
2. Combustion Venting	2.1	Basic Combustion Venting Measures	**EQ 1**	Prereq	Y			
	2.2	Enhanced Combustion Venting Measures	**EQ 1**	2	2	0		0
3. Moisture Control	3	Moisture Load Control	**EQ 1**	1	0	1		0
4. Outdoor Air Ventilation	4.1	Basic Outdoor Air Ventilation	**EQ 1**	Prereq	Y			
	4.2	Enhanced Outdoor Air Ventilation		2	0	2		0
	4.3	Third-Party Performance Testing	**EQ 1**	1	1	0		0
5. Local Exhaust	5.1	Basic Local Exhaust	**EQ 1**	Prereq	Y			
	5.2	Enhanced Local Exhaust		1	1	0		0
	5.3	Third-Party Performance Testing		1	1	0		0
6. Distribution of Space Heating and Cooling	6.1	Room-by-Room Load Calculations	**EQ 1**	Prereq	Y			
	6.2	Return Air Flow / Room by Room Controls	**EQ 1**	1	0	1		0
	6.3	Third-Party Performance Test / Multiple Zones	**EQ 1**	2	0	2		0
7. Air Filtering	7.1	Good Filters	**EQ 1**	Prereq	Y			
	7.2	Better Filters	**EQ 7.3**	1	0	1		0
	7.3	Best Filters		2	0	0	N	0
8. Contaminant Control	8.1	Indoor Contaminant Control during Construction	**EQ 1**	1	1	0		0
	8.2	Indoor Contaminant Control		2	2	0		0
	8.3	Preoccupancy Flush	**EQ 1**	1	1	0		0
9. Radon Protection	9.1	Radon-Resistant Construction in High-Risk Areas	**EQ 1**	Prereq	N/A			
	9.2	Radon-Resistant Construction in Moderate-Risk Areas	**EQ 1**	1	0	1		0
10. Garage Pollutant Protection	10.1	No HVAC in Garage	**EQ 1**	Prereq	Y			
	10.2	Minimize Pollutants from Garage	**EQ 1, 10.4**	2	0	0	N	0
	10.3	Exhaust Fan in Garage	**EQ 1, 10.4**	1	0	0	N	0
	10.4	Detached Garage or No Garage	**EQ 1**	3	3	0		0
		Sub-Total for EQ Category:		**21**	12	8		0
Awareness and Education (AE)		(Minimum of 0 AE Points Required)		Max	Y/Pts	Maybe	No	Y/Pts
1. Education of the Homeowner or Tenant	1.1	Basic Operations Training		Prereq	Y			
	1.2	Enhanced Training		1	1	0		0
	1.3	Public Awareness		1	1	0		0
2. Education of Building Manager	2	Education of Building Manager		1	1	0		0
		Sub-Total for AE Category:		**3**	3	0		0

LEED for Homes Simplified Project Checklist

Addendum: Prescriptive Approach for Energy and Atmosphere (EA) Credits

Points cannot be earned in both the Prescriptive (below) and the Performance Approach (pg 2) of the EA section.

Energy and Atmosphere (EA)		(No Minimum Points Required)	*OR*	Max Points (Max)	Project Points Preliminary Y/Pts	Maybe	No	Final Y/Pts
2. Insulation	2.1	Basic Insulation		Prereq				
	2.2	Enhanced Insulation		2	0	0		0
3. Air Infiltration	3.1	Reduced Envelope Leakage		Prereq				
	3.2	Greatly Reduced Envelope Leakage		2	0	0		0
	3.3	Minimal Envelope Leakage	**EA 3.2**	3	0	0		0
4. Windows	4.1	Good Windows		Prereq				
	4.2	Enhanced Windows		2	0	0		0
	4.3	Exceptional Windows	**EA 4.2**	3	0	0		0
5. Heating and Cooling Distribution System	5.1	Reduced Distribution Losses		Prereq				
	5.2	Greatly Reduced Distribution Losses		2	0	0		0
	5.3	Minimal Distribution Losses	**EA 5.2**	3	0	0		0
6. Space Heating and Cooling Equipment	6.1	Good HVAC Design and Installation		Prereq				
	6.2	High-Efficiency HVAC		2	0	0		0
	6.3	Very High Efficiency HVAC	**EA 6.2**	4	0	0		0
7. Water Heating	7.1	Efficient Hot Water Distribution		2	0	0		0
	7.2	Pipe Insulation		1	0	0		0
	7.3	Efficient Domestic Hot Water Equipment		3	0	0		0
8. Lighting	8.1	ENERGY STAR Lights		Prereq				
	8.2	Improved Lighting		2	0	0		0
	8.3	Advanced Lighting Package	**EA 8.2**	3	0	0		0
9. Appliances	9.1	High-Efficiency Appliances		2	0	0		0
	9.2	Water-Efficient Clothes Washer		1	0	0		0
10. Renewable Energy	10	Renewable Energy System		10	0	0		0
11. Residential Refrigerant Management	11.1	Refrigerant Charge Test		Prereq				
	11.2	Appropriate HVAC Refrigerants		1	0	0		0
			Sub-Total for EA Category:	**38**	18	2		**16**

LEED for Homes Mid-rise Simplified Project Checklist

for Homes

Builder Name:	*To Be Determined*
Project Team Leader (if different):	*Eric Robinson, RODE Architects*
Home Address (Street/City/State):	*Hancock Street, Dorchester, MA*

Project Description:

Building type: ***Mid-rise multi-family*** # of stories: ***6***

# of units: ***305*** Avg. Home Size Adjustment: ***-4***

Adjusted Certification Thresholds

Certified: ***41.0*** Gold: ***71.0***

Silver: ***56.0*** Platinum: ***86.0***

Project Point Total

Prelim: *66 + 20 maybe pts* Final: *9.5*

Certification Level

Prelim: *Silver* Final: *Not Certified*

Final Credit Category Total Points

ID: 0 SS: 1 EA: 7 EQ: 0

LL: 0 WE: 0 MR: 1.5 AE: 0

Minimum Point Thresholds Not Met for Final Rating

date last updated :

last updated by :

				Max Pts	Project Points Preliminary Y/Pts	Maybe	No	Final Y/Pts
Innovation and Design Process (ID)		(No Minimum Points Required)		Max	Y/Pts	Maybe	No	Y/Pts
1. Integrated Project Planning	1.1	Preliminary Rating		Prereq	Y			
	1.2	Energy Expertise for MID-RISE		Prereq	Y			
	1.3	Professional Credentialed with Respect to LEED for Homes		1	0	0	N	0
	1.4	Design Charrette		1	0	1		0
	1.5	Building Orientation for Solar Design		1	0	0	N	0
	1.6	Trades Training for MID-RISE		1	0	1		0
2. Durability Management Process	2.1	Durability Planning		Prereq	Y			
	2.2	Durability Management		Prereq	Y			
	2.3	Third-Party Durability Management Verification		3	3	0		0
3. Innovative or Regional Design	3.1	Innovation #1 ____________		1	0	1		0
	3.2	Innovation #2 ____________		1	0	0		0
	3.3	Innovation #3 ____________		1	0	0		0
	3.4	Innovation #4		1	0	0		0
		Sub-Total for ID Category:		**11**	3	3		**0**
Location and Linkages (LL)		(No Minimum Points Required)	*OR*	Max	Y/Pts	Maybe	No	Y/Pts
1. LEED ND	1	LEED for Neighborhood Development	**LL2-6**	10	0	0	N	0
2. Site Selection	2	Site Selection		2	2	0		0
3. Preferred Locations	3.1	Edge Development		1	0	0	N	0
	3.2	Infill	**LL 3.1**	2	2	0		0
	3.3	Brownfield Redevelopment for MID-RISE		1	0	1		0
4. Infrastructure	4	Existing Infrastructure		1	1	0		0
5. Community Resources/ Transit	5.1	Basic Community Resources for MID-RISE		1	0	0	N	0
	5.2	Extensive Community Resources for MID-RISE	**LL 5.1, 5.3**	2	0	0	N	0
	5.3	Outstanding Community Resources for MID-RISE	**LL 5.1, 5.2**	3	3	0		0
6. Access to Open Space	6	Access to Open Space		1	1	0		0
		Sub-Total for LL Category:		**10**	9	1		**0**
Sustainable Sites (SS)		(Minimum of 5 SS Points Required)	*OR*	Max	Y/Pts	Maybe	No	Y/Pts
1. Site Stewardship	1.1	Erosion Controls During Construction		Prerequisite	Y			
	1.2	Minimize Disturbed Area of Site for MID-RISE		1	1	0		0
2. Landscaping	2.1	No Invasive Plants		Prerequisite	Y			
	2.2	Basic Landscape Design	**SS 2.5**	1	1	0		0
	2.3	Limit Conventional Turf for MID-RISE	**SS 2.5**	2	1	1		1
	2.4	Drought Tolerant Plants for MID-RISE	**SS 2.5**	1	1	0		0
	2.5	Reduce Overall Irrigation Demand by at Least 20% for MID-RISE		3	0	0	N	0
3. Local Heat Island Effects	3.1	Reduce Site Heat Island Effects for MID-RISE		1	0	1		0
	3.2	Reduce Roof Heat Island Effects for MID-RISE		1	1	0		0
4. Surface Water Management	4.1	Permeable Lot for MID-RISE		2	1.5	0.5		0
	4.2	Permanent Erosion Controls		1	1	0		0
	4.3	Stormwater Quality Control for MID-RISE		2	2	0		0
5. Nontoxic Pest Control	5	Pest Control Alternatives		2	0	0	N	0
6. Compact Development	6.1	Moderate Density for MID-RISE		2	0	0	N	0
	6.2	High Density for MID-RISE	**SS 6.1, 6.3**	3	0	0	N	0
	6.3	Very High Density for MID-RISE	**SS 6.1, 6.2**	4	4	0		
7. Alternative Transportation	7.1	Public Transit for MID-RISE		2	2	0		0
	7.2	Bicycle Storage for MID-RISE		1	1	0		0
	7.3	Parking Capacity/Low-Emitting Vehicles for MID-RISE		1	1	0		0
		Sub-Total for SS Category:		**22**	17.5	2.5		**1**

LEED for Homes Mid-rise Pilot Simplified Project Checklist (continued)

Credit	No.	Description		Max Pts	Project Points Preliminary Y/Pts	Maybe	No	Final Y/Pts
Water Efficiency (WE)		(Minimum of 3 WE Points Required)	OR	Max	Y/Pts	Maybe	No	Y/Pts
1. Water Reuse	1	Water Reuse for MID-RISE		5	0	0	N	0
2. Irrigation System	2.1	High Efficiency Irrigation System for MID-RISE	**WE 2.2**	2	2	0		0
	2.2	Reduce Overall Irrigation Demand by at Least 45% for MID-RISE		2	0	0	N	0
3. Indoor Water Use	3.1	High-Efficiency Fixtures and Fittings		3	1	1		0
	3.2	Very High Efficiency Fixtures and Fittings		6	4	0		0
	3.3	Water Efficient Appliances for MID-RISE		2	2	0		0
		Sub-Total for WE Category:		**15**	9	1		0
Energy and Atmosphere (EA)		(Minimum of 0 EA Points Required)	OR	Max	Y/Pts	Maybe	No	Y/Pts
1. Optimize Energy Performance	1.1	Minimum Energy Performance for MID-RISE		Prereq	Y			
	1.2	Testing and Verification for MID-RISE		Prereq	Y			
	1.3	Optimize Energy Performance for MID-RISE		34	7			7
7. Water Heating	7.1	Efficient Hot Water Distribution		2	0	2		0
	7.2	Pipe Insulation		1	1	0		0
11. Residential Refrigerant Management	11.1	Refrigerant Charge Test		Prereq	Y			
	11.2	Appropriate HVAC Refrigerants		1	1	0		0
		Sub-Total for EA Category:		**38**	9	2		7
Materials and Resources (MR)		(Minimum of 2 MR Points Required)	OR	Max	Y/Pts	Maybe	No	Y/Pts
1. Material-Efficient Framing	1.1	Framing Order Waste Factor Limit		Prereq	Y			
	1.2	Detailed Framing Documents	**MR 1.5**	1	0	0	N	0
	1.3	Detailed Cut List and Lumber Order	**MR 1.5**	1	0	0	N	0
	1.4	Framing Efficiencies	**MR 1.5**	3	0	0	N	0
	1.5	Off-site Fabrication		4	4	0		0
2. Environmentally Preferable Products	2.1	FSC Certified Tropical Wood		Prereq	Y			
	2.2	Environmentally Preferable Products		8	3	3		0
3. Waste Management	3.1	Construction Waste Management Planning		Prereq	Y			
	3.2	Construction Waste Reduction		3	1	1		1.5
		Sub-Total for MR Category:		**16**	8	4		1.5
Indoor Environmental Quality (EQ)		(Minimum of 6 EQ Points Required)	OR	Max	Y/Pts	Maybe	No	Y/Pts
2. Combustion Venting	2	Basic Combustion Venting Measures		Prereq	Y			
3. Moisture Control	3	Moisture Load Control		1	0	0	N	0
4. Outdoor Air Ventilation	4.1	Basic Outdoor Air Ventilation for MID-RISE		Prereq	Y			
	4.2	Enhanced Outdoor Air Ventilation for MID-RISE		2	0	0	N	0
	4.3	Third-Party Performance Testing for MID-RISE		1	0	1		0
5. Local Exhaust	5.1	Basic Local Exhaust		Prerequisite	Y			
	5.2	Enhanced Local Exhaust		1	1	0		0
	5.3	Third-Party Performance Testing		1	0	1		0
6. Distribution of Space Heating and Cooling	6.1	Room-by-Room Load Calculations		Prereq	Y			
	6.2	Return Air Flow / Room by Room Controls		1	0	0	N	0
	6.3	Third-Party Performance Test / Multiple Zones		2	0	2		0
7. Air Filtering	7.1	Good Filters		Prereq	Y			
	7.2	Better Filters	**EQ 7.3**	1	0	1		0
	7.3	Best Filters		2	0	0	N	0
8. Contaminant Control	8.1	Indoor Contaminant Control during Construction		1	1	0		0
	8.2	Indoor Contaminant Control for MID-RISE		2	2	0		0
	8.3	Preoccupancy Flush		1	1	0		0
9. Radon Protection	9.1	Radon-Resistant Construction in High-Risk Areas		Prereq	N/A			
	9.2	Radon-Resistant Construction in Moderate-Risk Areas		1	0	0	N	0
10. Garage Pollutant Protection	10.1	No HVAC in Garage for MID-RISE		Prereq	Y			
	10.2	Minimize Pollutants from Garage for MID-RISE	**EQ 10.3**	2	2	0		0
	10.3	Detached Garage or No Garage for MID-RISE		3	0	0	N	0
11. ETS Control	11	Environnmental Tobacco Smoke Reduction for MID-RISE		1	0.5	0.5		0
12. Compartmentalization of Units	12.1	Compartmentalization of Units		Prereq	Y			
	12.2	Enhanced Compartmentalization of Units		1	0	1		0
		Sub-Total for EQ Category:		**21**	7.5	6.5		0
Awareness and Education (AE)		(Minimum of 0 AE Points Required)		Max	Y/Pts	Maybe	No	Y/Pts
1. Education of the Homeowner or Tenant	1.1	Basic Operations Training		Prereq	Y			
	1.2	Enhanced Training		1	1	0		0
	1.3	Public Awareness		1	1	0		0
2. Education of Building Manager	2	Education of Building Manager		1	1	0		0
		Sub-Total for AE Category:		**3**	3	0		0

4.0 ENVIRONMENTAL PROTECTION COMPONENT

4.1 Shadow Impacts Analysis

4.1.1 Introduction

The following shadow analysis was prepared to analyze the shade impact of the project on the surrounding neighborhood. It was used to avoid adverse conditions for the neighborhood. The following times and dates were studied as a sample representative of the shadow cycle throughout a year.

Date	Time
Vernal Equinox (March 21)	9:00am, 12:00pm, 3:00pm
Summer Solstice (June 22)	9:00am, 12:00pm, 3:00pm, 6:00pm
Autumnal Equinox (September 21)	9:00am, 12:00pm, 3:00pm, 6:00pm
Winter Solstice (December 21)	9:00am, 12:00pm, 3:00pm

4.1.2 Vernal Equinox (March 21)

(See **Figures 4.1 - 4.3)**

At 9:00 am shadows extend across Pleasant Street and fall into the front yards of the houses across the street. Additional shadows fall primarily along Hancock Street and into the Hancock-Pleasant traffic circle.

At 12:00 pm shadows extend across Greenmount Street, shading the facades of three structures.

At 3:00 pm shadows extend across Greenmount Street, and onto the adjacent structures from the four-story buildings. Structures along Dorchester Avenue cast shadows across the avenue and onto the facades of buildings on the far side.

4.1.3 Summer Solstice (June 22)

(See **Figures 4.4 - 4.7)**

At 9:00 am shadows fall entirely onto Pleasant Street and Hancock Street.

At 12:00 pm shadows touch on the edge of Greenmount Street only.

At 3:00 pm shadows fall mostly onto Greenmount Street and Dorchester Avenue. Opposite the southern tip of the site, the facades of two structures are cast into shadow.

At 6:00 pm long shadows fall across Dorchester Ave and onto the commercial and parking developments along the entire length of the site.

4.1.4 Autumnal Equinox

(See **Figures 4.8 - 4.11)**

At 9:00 am shadows extend across Pleasant Street and fall into the front yards of the houses across the street. Additional shadows fall primarily along Hancock St and into the Hancock-Pleasant traffic circle.

At 12:00 pm shadows extend across Greenmount Street, shading the facades of three structures.

At 3:00 pm shadows extend across Greenmount Street, and onto the adjacent structures from the four-story buildings. Structures along Dorchester Avenue cast shadows across the avenue and onto the facades of buildings on the far side.

At 6:00 pm shadows fall on the facades of residential buildings along Greenmount Street. New shadows fall across Dorchester Avenue and onto the commercial and parking structures there. This condition is close to sunset.

4.1.5 Winter Solstice (December 21)

(See **Figures 4.12 - 4.14)**

At 9:00am shadows extend across Pleasant Street and Greenmount Street from both the 5 story and 4 story buildings onto the residential buildings opposite the development.

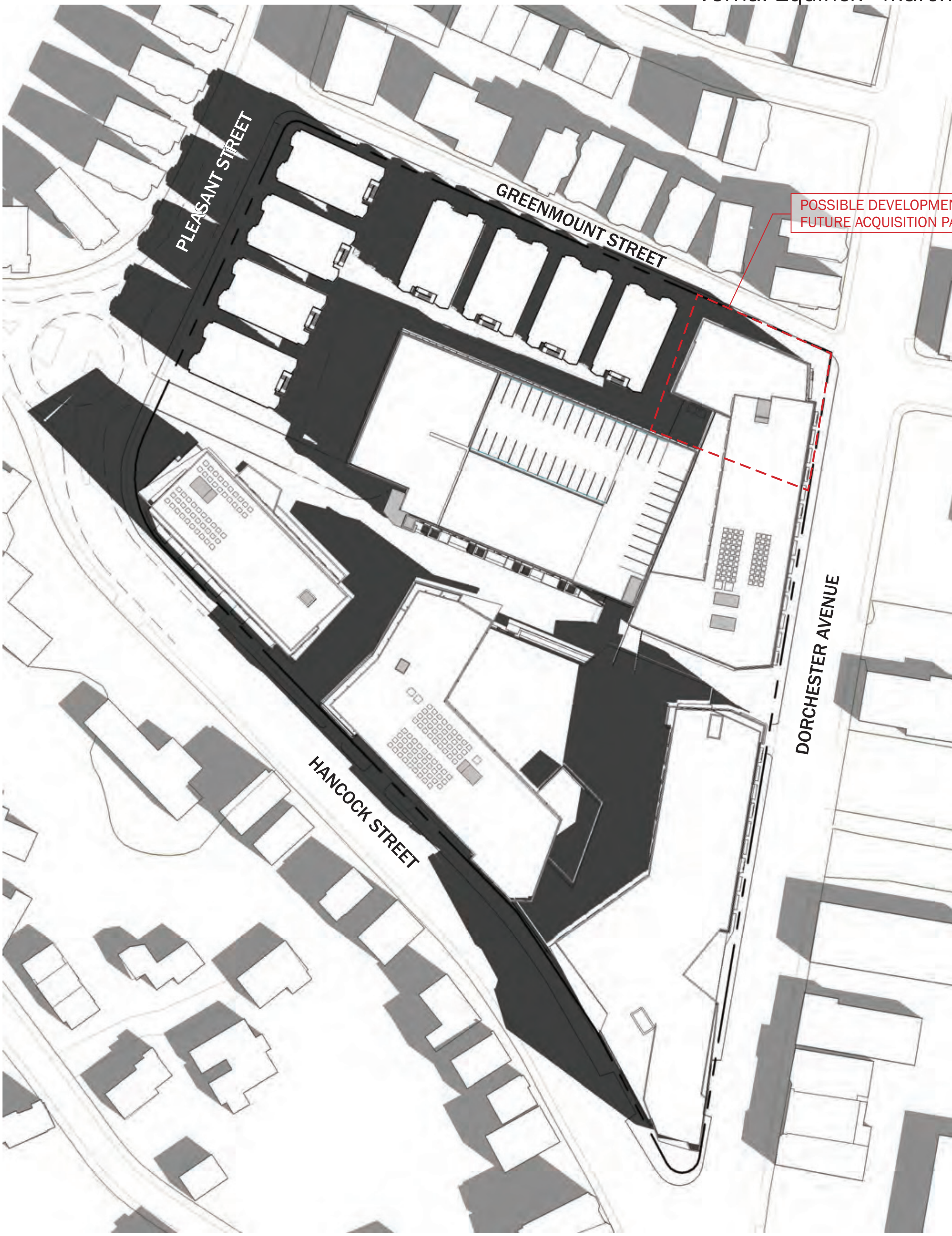
At 12:00pm, shadows extend along Greenmount Street and onto the adjacent buildings. Additional shadows fall onto Pleasant St.

At 3:00pm, shadows extend across Greenmount Street and onto the adjacent structures. New shadows are limited to the Greenmount Street buildings. Along Dorchester Avenue, shadows are cast across the avenue and onto the commercial and parking structures there.

4.1.6 Shadow Summary

New shadows introduced by this proposal fall primarily within the proposed development. In the afternoon, especially in winter, there is some shading on neighboring residences on Greenmount Street. This is expected because of the minimal width of the street, and an increased setback was provided at this street edge to compensate. Shadows are limited to a similar residential scale at the north and west existing residential zones. As massing builds up to the south and east of the site, longer eastward shadows develop in the afternoon. These are more out of scale with existing development, however they fall mostly onto commercial and parking zones in the afternoon, so the impact is minimal.

Vernal Equinox - March 21



9:00 AM

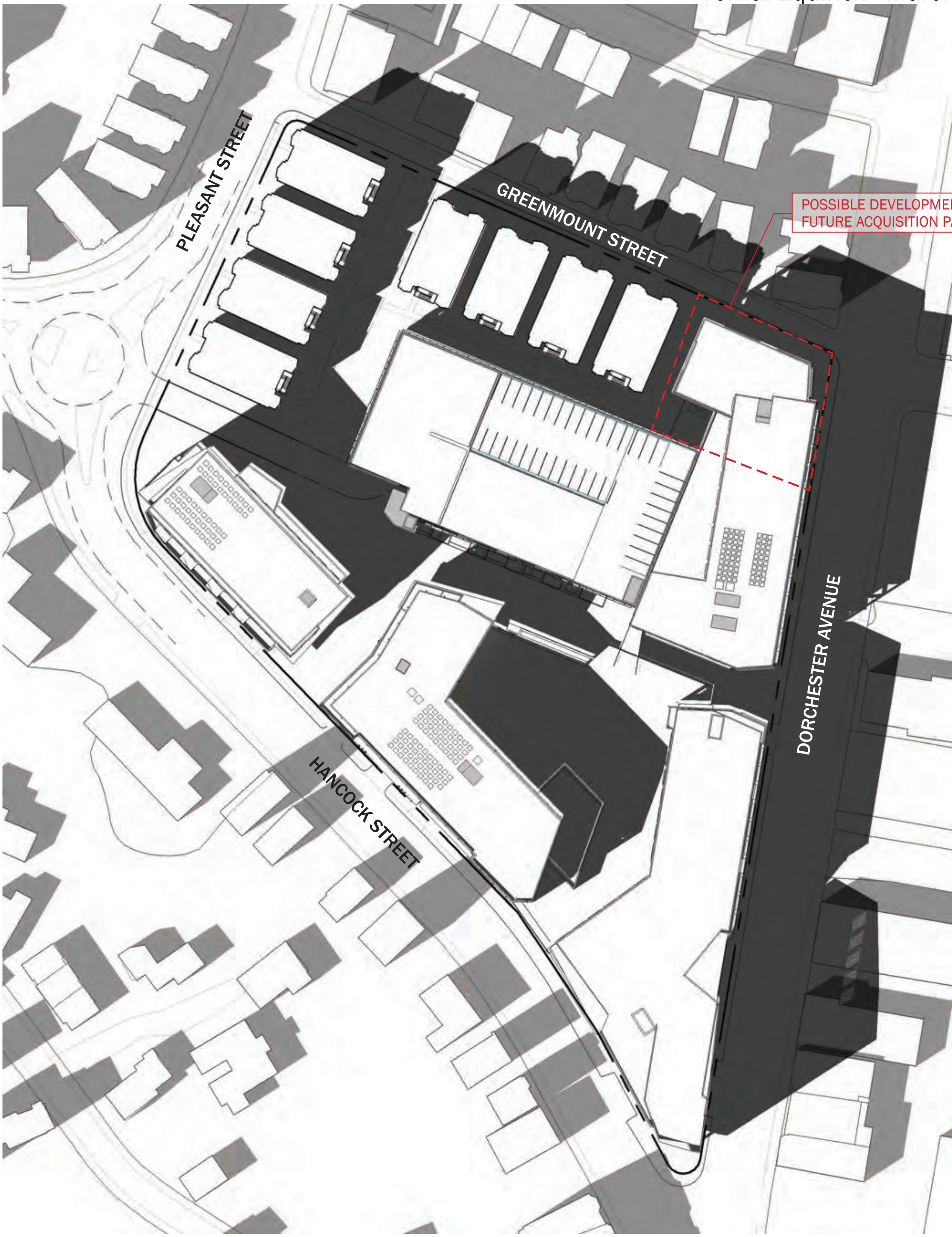
Azimuth 105.5° Elevation 50.85°

Vernal Equinox - March 21

12:00 PM

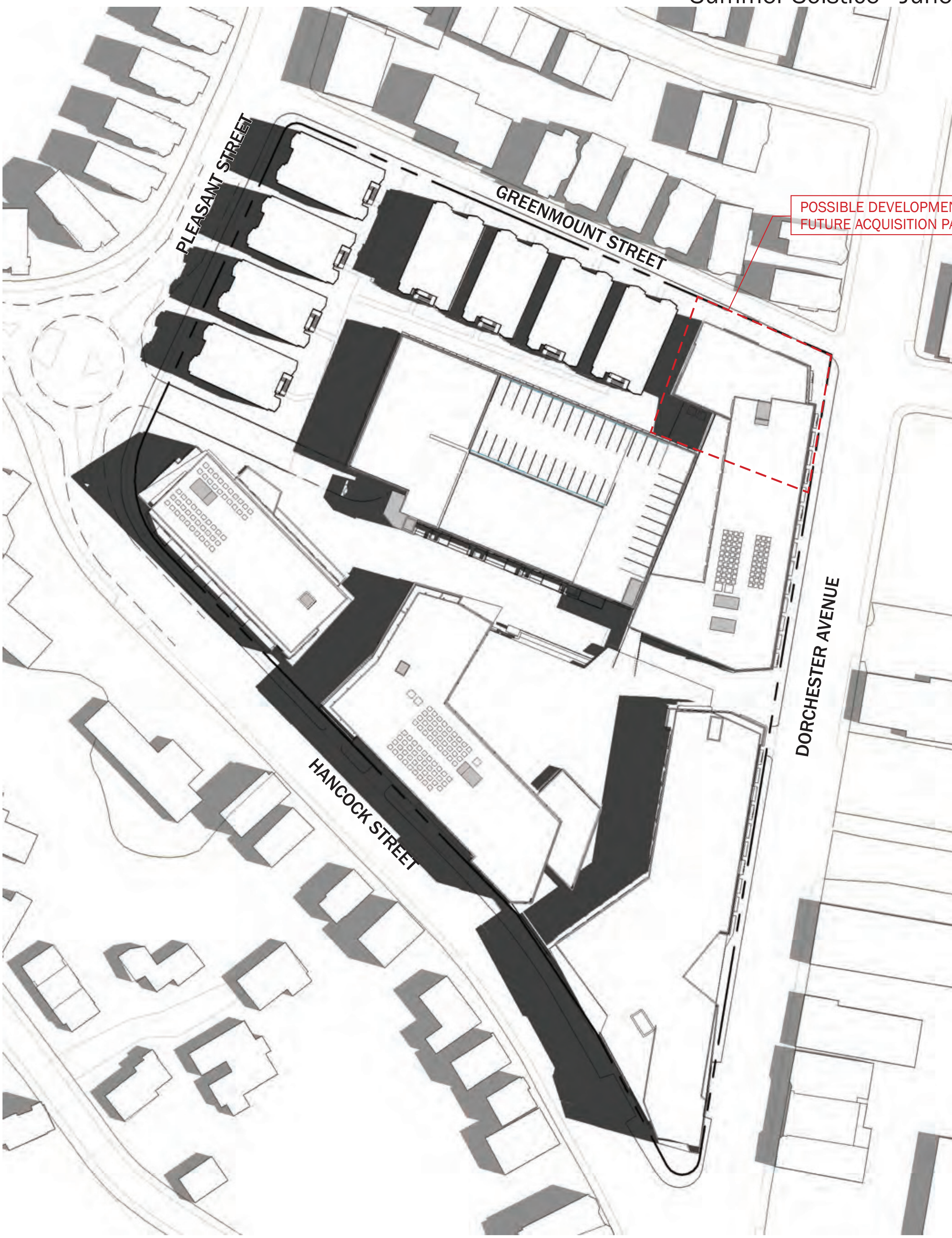
Azimuth 189.7° Elevation 70.87°

Vernal Equinox - March 21



3:00 PM

Azimuth 238.26° Elevation 30.46°



9:00 AM

Azimuth 105.5° Elevation 50.84°

Summer Solstice - June 22

12:00 PM

Azimuth 189.7° Elevation 70.87°

RODE

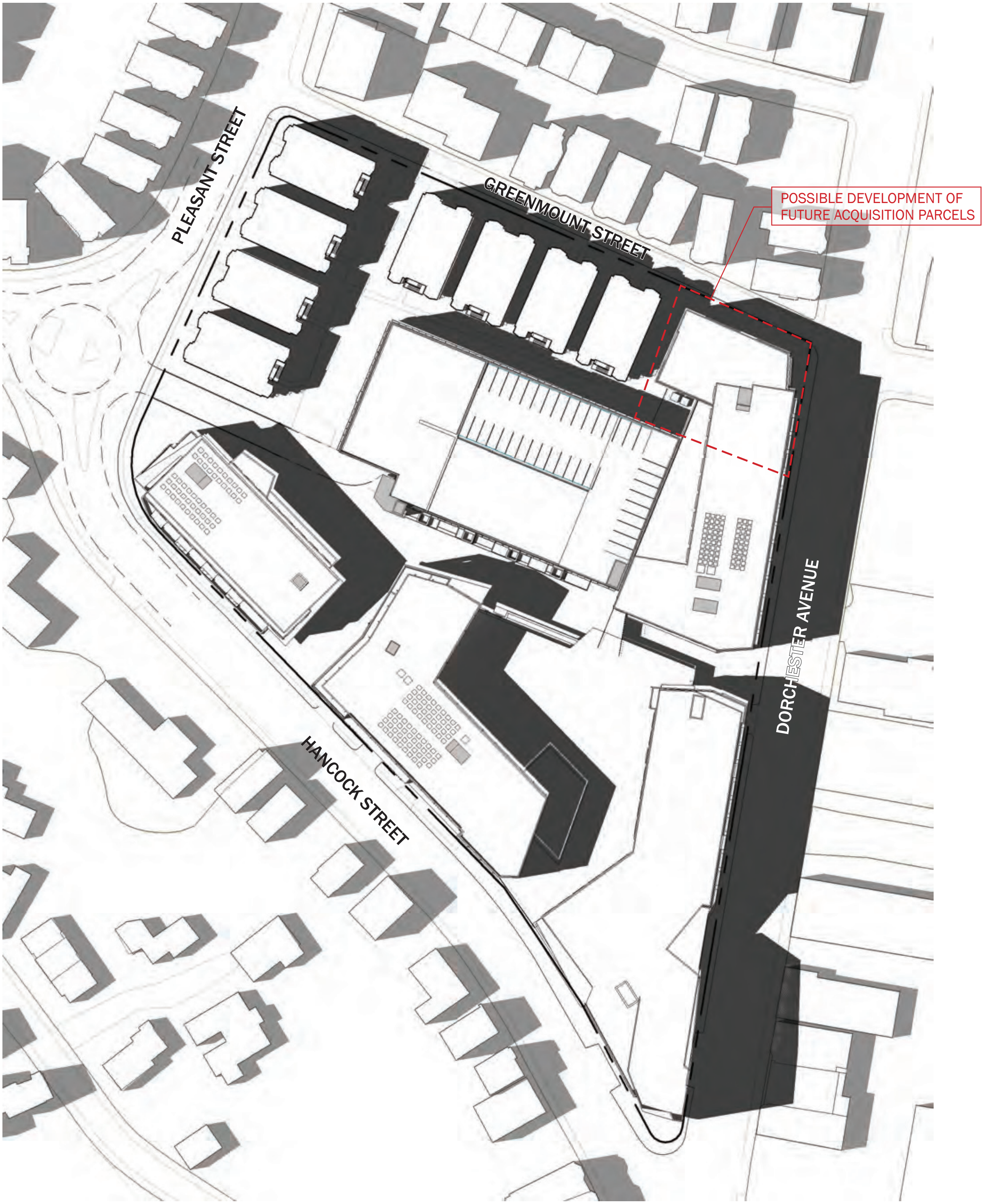
SHADOW STUDY
DOT BLOCK

Net New Shadow
Existing Shadow

N

Figure 4.5

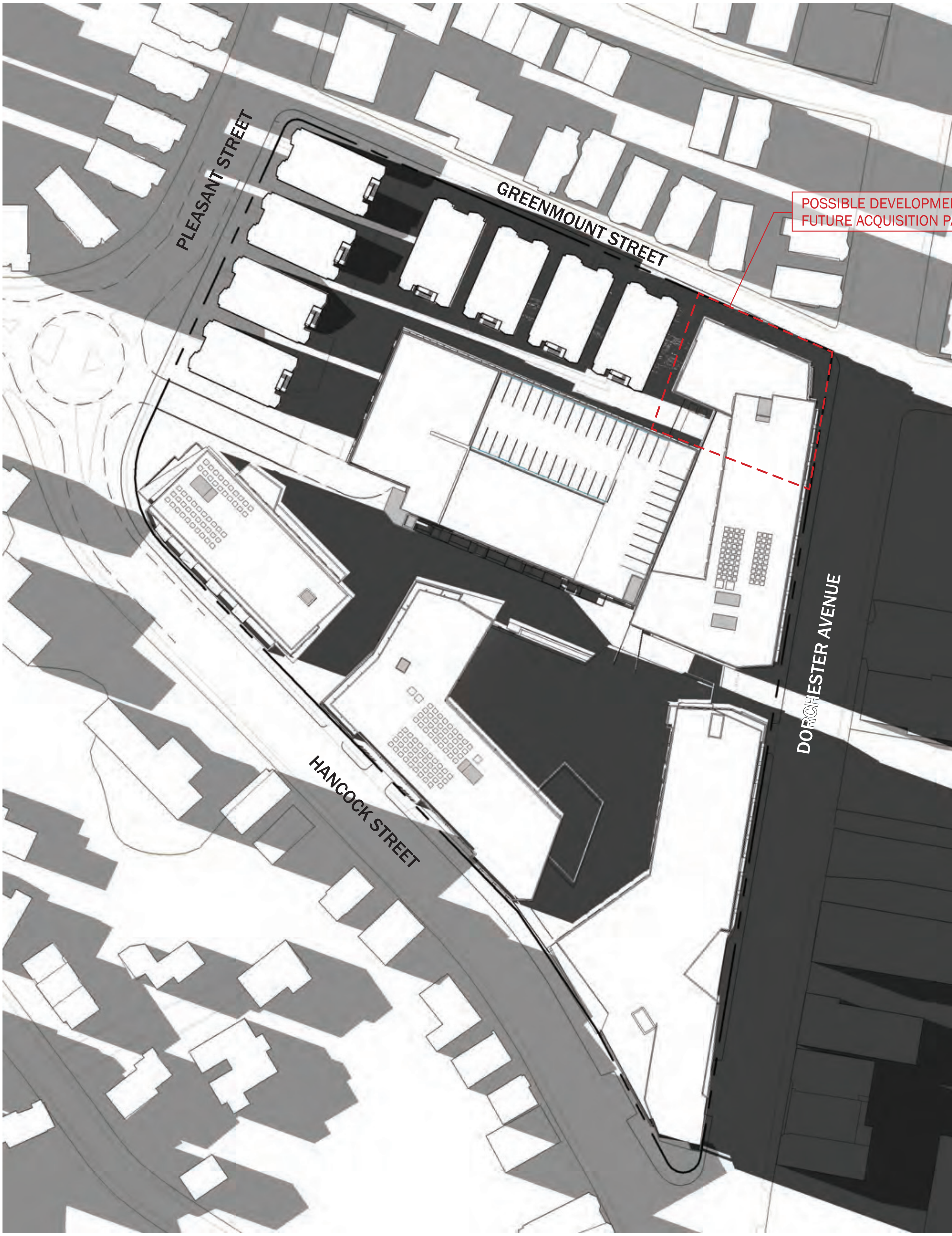
Summer Solstice - June 22



3:00 PM

Azimuth 260.39° Elevation 45.87°

Summer Solstice - June 22



6:00 PM

Azimuth 289.86º Elevation 13.19º

RODE

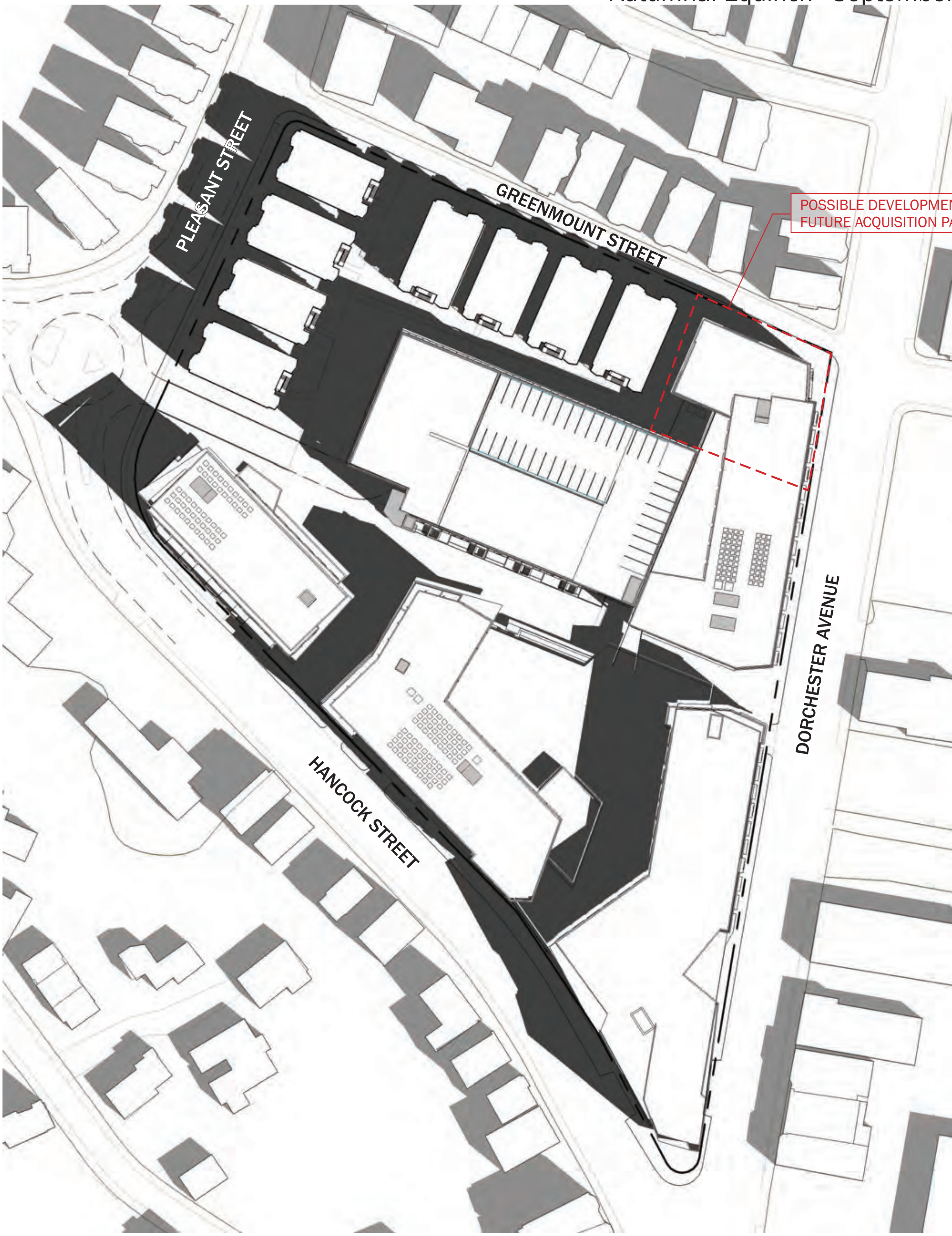
SHADOW STUDY
DOT BLOCK

Net New Shadow
Existing Shadow

N

Figure 4.7

Autumnal Equinox - September 21



9:00 AM

Azimuth 129.29° Elevation 35.17°

Net New Shadow
Existing Shadow

N

Figure 4.8

Autumnal Equinox - September 21

12:00 PM

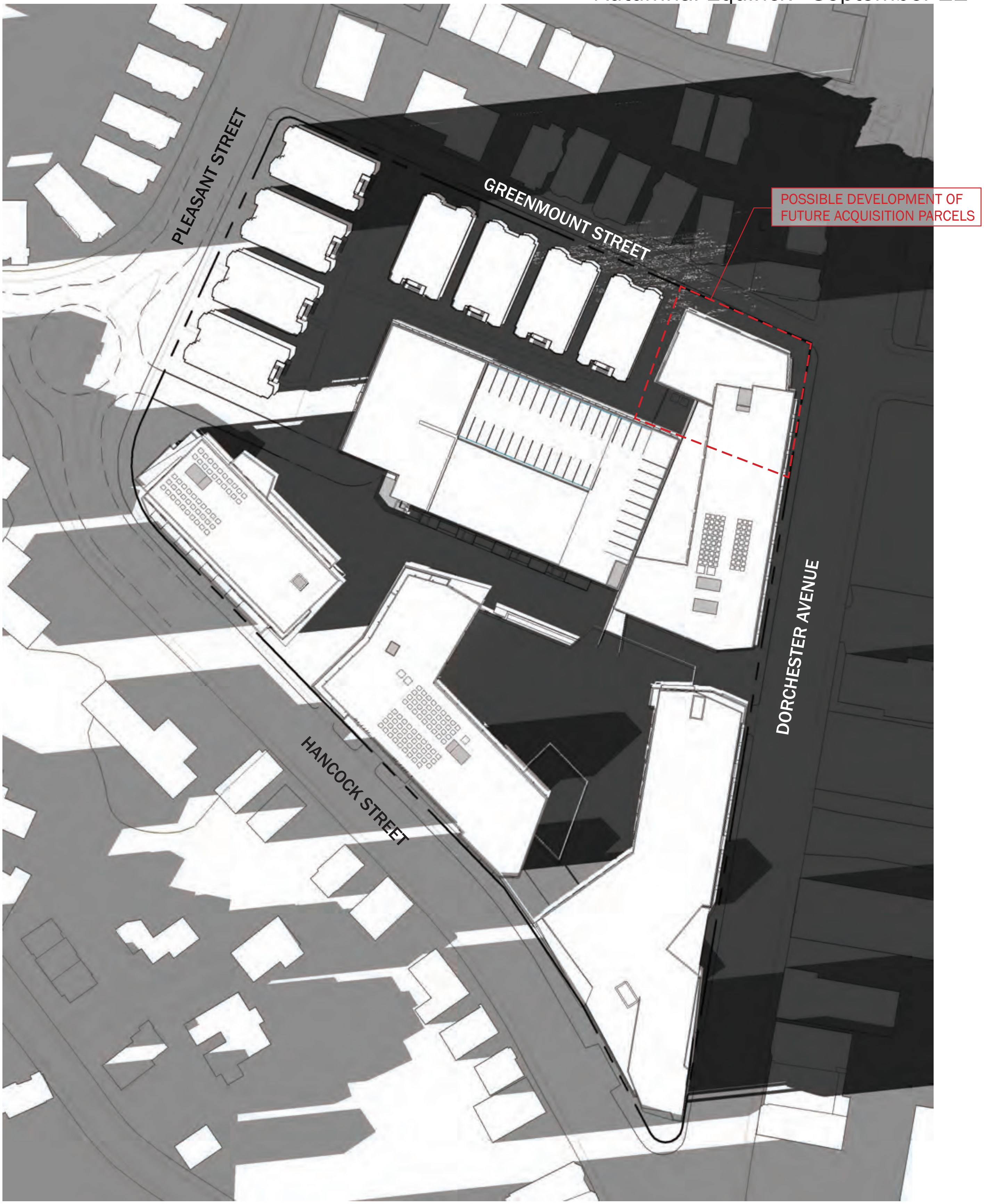
Azimuth 188.55° Elevation 47.59°

Autumnal Equinox - September 21

3:00 PM

Azimuth 241.33° Elevation 28.05°

Autumnal Equinox - September 21



5:00 PM

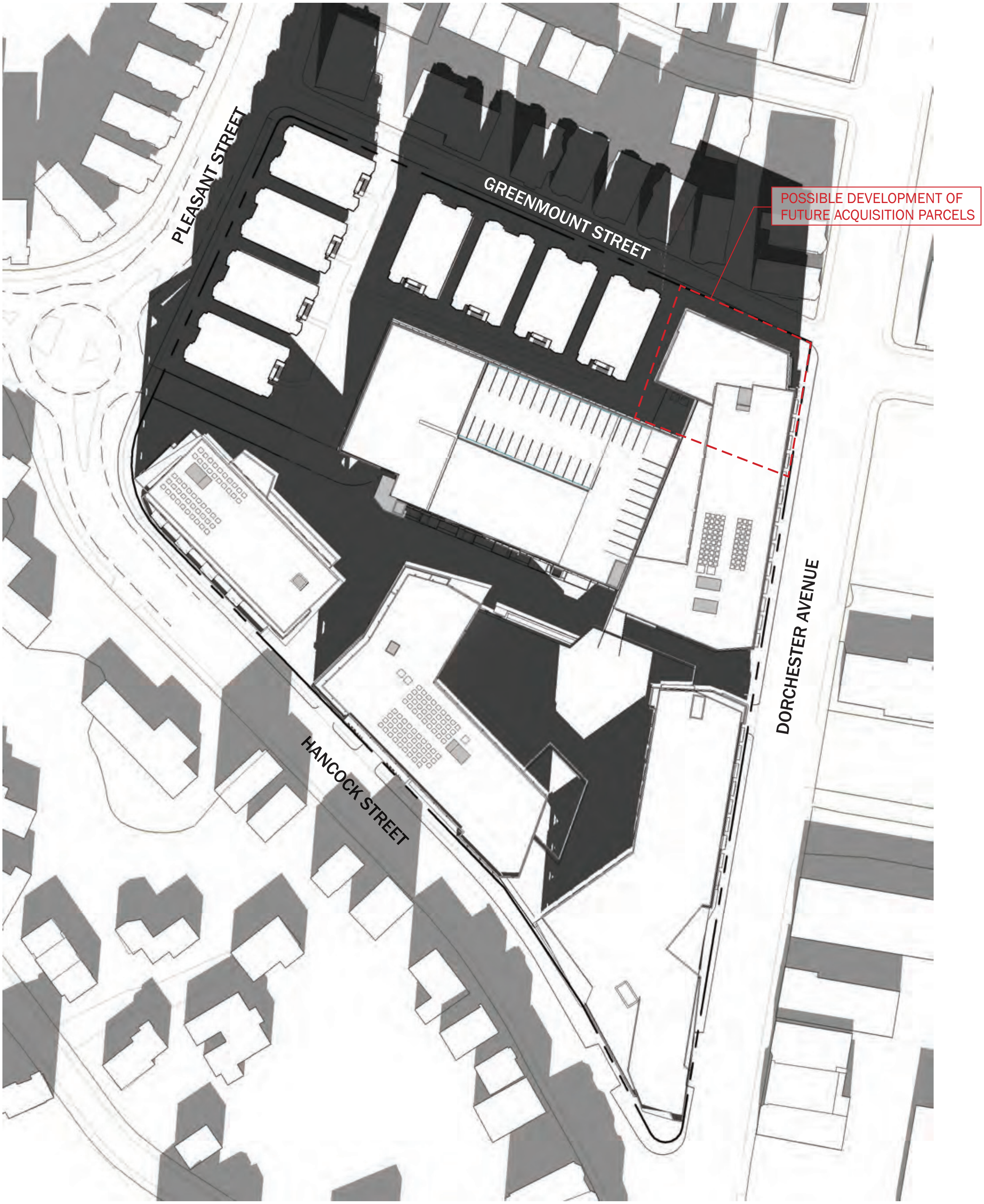
Azimuth 227.23° Elevation 37.42°

Winter Solstice - December 21

9:00 AM

Azimuth 142° Elevation 14.38°

Winter Solstice - December 21



12:00 PM

Azimuth 184.46° Elevation 24.12°

Winter Solstice - December 21

3:00 PM

Azimuth 225.03° Elevation 10.05°

4.2 Air Quality

Tech Environmental, Inc. performed air quality analyses for the proposed mixed-use (the "Project" and/or the "Site") to be located at DOC BLOCK in the Dorchester neighborhood. These analyses consisted of: 1) an evaluation of existing air quality; and 2) an evaluation of potential carbon monoxide (CO) impacts from the operation of the Project's heating system. A microscale air quality analysis was not performed for this Project due to the Project trip generation having minimal impacts on the overall delays at the four intersections

4.2.1 Existing Air Quality

The City of Boston is currently classified as being in attainment of the Massachusetts and National Ambient Air Quality Standards ("NAAQS") for all of the criteria air pollutants except ozone (see **Table 4.2-1**). These air quality standards have been established to protect the public health and welfare in ambient air, with a margin for safety.

The Massachusetts Department of Environmental Protection ("DEP") currently operates air monitors in various locations throughout the city. The closest, most representative, DEP monitors for carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), fine particulate matter ($PM_{2.5}$), coarse particulate matter (PM_{10}), ozone (O_3) and lead (Pb) are located at Dudley Square (Harrison Avenue). Harrison Avenue, Boston, MA.

Table 4.2-2 summarizes the DEP air monitoring data, for the most recent available, complete, three-year period (2011-2013), that are considered to be representative of the project area. **Table 4.2-2** shows that the existing air quality in the Project area is generally much better than the NAAQS. The highest impacts relative to a NAAQS are for ozone and $PM_{2.5}$. Ozone is a regional air pollutant on which the small amount of additional traffic generated by this Project will have an insignificant impact. The Project's operations will not have a significant impact on local $PM_{2.5}$ concentrations.

Table 4.2-1 Massachusetts and National Ambient Air Quality Standards (NAAQS)

Pollutant	Averaging Time	NAAQS (µg/m^3)
SO_2	1-hour^P	196[a]
CO	1-hour^P 8-hour^P	40,000[b] 10,000[b]
NO_2	1-hour^P Annual$^{P/S}$ (Arithmetic Mean)	188[c] 100
PM_{10}	24-hour$^{P/S}$	150
$PM_{2.5}$	24-hour$^{P/S}$ Annual$^{P/S}$ (Arithmetic Mean)	35[d] 12[e,f]
O_3	8-hour$^{P/S}$	147[g]
Pb	Rolling 3-Month Avg.$^{P/S}$ Calendar Quarter$^{P/S}$ (Arithmetic Mean)	0.15 1.5

P = primary standard; S = secondary standard.
[a] 99th percentile 1-hour concentrations in a year (average over three years).
[b] One exceedance per year is allowed.
[c] 98th percentile 1-hour concentrations in a year (average over three years).
[d] 98th percentile 24-hour concentrations in a year (average over three years).
[e] Three-year average of annual arithmetic means.
[f] As of March 18, 2013, the U.S. EPA lowered the $PM_{2.5}$ annual standard from 15 ug/m^3 to 12 ug/m^3.
[g] Three-year average of the annual 4th-highest daily maximum 8-hour ozone concentration must not exceed 0.075 ppm (147 ug/m^3) (effective May 27, 2008) and the annual PM_{10} standard was revoked in 2006.

Table 4.2-2 Representative Existing Air Quality in the Project Area

Pollutant, Averaging Period	Monitor Location	Value ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)	Percent of NAAQS
CO, 1-hour	Harrison Avenue, Boston	2,519	40,000	6%
CO, 8-hour	Harrison Avenue, Boston	1,832	10,000	18%
NO_2, 1-hour	Harrison Avenue, Boston	91.5	188	49%
NO_2, Annual	Harrison Avenue, Boston	34.8	100	35%
Ozone, 8-hour	Harrison Avenue, Boston	129	147	86%
PM_{10}, 24-hour	Harrison Avenue, Boston	41	150	27%
$PM_{2.5}$, 24-hour	Harrison Avenue, Boston	19.2	35	46%
$PM_{2.5}$, Annual	Harrison Avenue, Boston	8.1	12	62%
Lead, Quarterly	Harrison Avenue, Boston	0.003	0.15	2.0%
SO_2, 1-hour	Harrison Avenue, Boston	40.1	196	20%

Source: MassDEP, http://www.mass.gov/dep/air/priorities/aqreports.htm., downloaded October 22, 2014.

Notes:

(1) Annual averages are highest measured during the most recent three-year period for which data are available (2010 - 2013). Values for periods of 24-hours or less are highest, second-highest over the three-year period unless otherwise noted.

(2) The eight-hour ozone value is the 3-year average of the annual fourth-highest values, the 24-hour $PM_{2.5}$ value is the 3-year average of the 98th percentile values, the annual $PM_{2.5}$ value is the 3-year average of the annual values – these are the values used to determine compliance with the NAAQS for these air pollutants.

(3) The one-hour NO_2 value is the 3-year average of the 98th percentile values and the one-hour SO_2 value is the -year average of the 99th percentile values

(4) The one-hour ozone standard was revoked by the US EPA in 2005; the annual PM_{10} standard was revoked in 2006 and the 3-hour SO_2 standard was revoked by the US EPA in 2010.

4.2.2 Impacts from Heating, Mechanical, and Exhaust Systems

The Project will include fuel combustion equipment that will emit air pollutants to the atmosphere when operating. Fuel combustion equipment for the Project will include gas-fired heating and cooling roof top units (RTUs). The objective of this analysis was to determine the maximum CO concentrations at the closest sensitive receptors surrounding the Project. These closest sensitive receptors include: air intakes located on the proposed building and nearby existing buildings, and pedestrians at ground level anywhere near the Project. The RTUs CO emissions were modeled using an U.S. EPA-approved air model.

Building Heating CO Emission Rate

The Project will include fuel combustion equipment that will emit air pollutants to the atmosphere when operating. Fuel combustion equipment for the Project will include RTUs for space heating and cooling system.

EPA's AP-42 document was used to determine the uncontrolled CO emission rate for the gas-fired equipment. The total equipment heat input capacity for the residential and mixed-use phases was conservatively estimated to be approximately 13.65 million Btu per hour (MMBtu/hour). Assuming a heating value of 1,020 Btu/cubic foot of natural gas this translates to approximately 4,080 cubic feet of natural gas burned per hour. Using a CO emission factor of 0.40 lb/10^6 standard cubic feet of natural gas,[2] the maximum total CO emissions from the Project's residential and mixed use phases were 0.53 lbs/hour (0.067 gram/sec). This calculation conservatively assumes that all of the RTUs are operating simultaneously at its full design capacity.

Peak Ambient CO Concentration

Worst-case concentrations of CO from the building heating system were predicted for locations around the building with using AERMOD model (Version 14134) in screening-mode. The results of the air quality analysis for locations outside and around the building are summarized in **Table 4.2-3**. The results in **Table 4.2-3** represent all outside locations on and near the Project Site, including nearby residences. **Appendix C** contains the AERMOD model output.

The AERMOD model in screening-mode was used to predict the maximum concentration of CO by modeling the RTUs emissions as two volume sources using worst-case meteorological conditions for an urban area. The screening-mode option simulates modeling results predicted by AERSCREEN. The predicted concentrations presented here represent the worst-case air quality impacts from the RTUs at all locations on and around the Project. AERMOD predicted one-hour average concentrations of air pollutants.

AERMOD predicted that the maximum one-hour CO concentration from the RTUs will be 0.064 ppm (73.35 $\mu g/m^3$). This concentration represents the maximum CO concentration at any location surrounding the Project.

The maximum predicted eight-hour CO concentration at any ambient (outside) location will be significantly smaller than the one-hour prediction. This is because: 1) the average number of RTUs operating over the peak eight-hour period will be significantly less than the peak one-hour values used to predict the peak one-hour CO impact, and 2) the worst-case meteorological conditions used to predict the peak one-hour impact will not persist for eight consecutive hours.

[2] US EPA, "Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition Volume I: Stationary Point and Area Sources", Table 1.4-1, January 1995 (revised July 1998).

AERSCREEN guidance allows the maximum eight-hour CO impact to be conservatively estimated by multiplying the maximum one-hour impact by a factor of 0.9 (i.e. the eight-hour impact is 90% of the one-hour impact). The maximum predicted eight-hour CO concentration was determined to be approximately 0.057 ppm (0.064 ppm x 0.9).

The U.S. EPA has established National Ambient Air Quality Standards (NAAQS) to protect the public health and welfare in ambient air, with a margin for safety. The NAAQS for CO are 35 ppm for a one-hour average and 9 ppm for an eight-hour average. The Commonwealth of Massachusetts has established the same standards for CO. The CO background values of 2.5 ppm for a one-hour period and 1.8 ppm for an eight-hour period were added to the maximum predicted RTUs ambient impacts to represent the CO contribution from other, more distant, sources. With the background concentration added, the peak, total, one-hour and eight-hour CO impacts from the RTUs, at any location around the building, will be no larger than 2.5 ppm and 1.8 ppm, respectively. These maximum predicted total CO concentrations are safely in compliance with the NAAQS. This analysis demonstrates that the operation of the RTUs will not have an adverse impact on air quality.

Table 4.2-3 Peak Predicted Building Heating System Air Quality Impacts

Location	Peak Predicted One-Hour Impact (ppm)	One-Hour NAAQS (ppm)	Peak Predicted Eight-Hour Impact (ppm)	Eight-Hour NAAQS (ppm)
Outside – Surrounding the Building*	2.5	35 (NAAQS)	1.8	9 (NAAQS)

NAAQS = Massachusetts and National Ambient Air Quality Standards for CO (ppm = parts per million)
* Representative of maximum CO impact at all nearby residences, buildings, and sidewalks.

Conclusions

A conservative air quality analysis demonstrates that there will be no adverse air quality impacts from the operation of the Project's proposed fuel combustion equipment.

4.2.3 Microscale CO Analysis for Selected Intersections

The Boston Redevelopment Authority (BRA) and the Massachusetts DEP typically require a microscale air quality analysis for any intersection in the Project study area where the level of service (LOS) is expected to deteriorate to D and the proposed project causes a 10% increase in traffic or where the level of service is E or F and the project contributes to a reduction in LOS. For such intersections, a microscale air quality analysis is required to examine the carbon monoxide (CO) concentrations at sensitive receptors near the intersection.

A microscale air quality analysis was not performed for this Project due to the Project trip generation having minimal impacts on the overall delays at the four intersections. The Project will generate approximately170 motor vehicle trips during the morning peak traffic hour and approximately 270 motor vehicle trips during the afternoon traffic hour. Under the Build scenario, the overall LOS will be the same or better during the morning peak traffic hour for all intersections, except for the Dorchester Avenue at Hancock Street intersection where the overall LOS degrades from C to D. However, the increase in traffic at this intersection is less than 10%. Under the Build scenario, the overall LOS will be the same or better during the afternoon peak traffic hour for all intersections, and the overall LOS will be the same or better at all intersections, except for the Dorchester Avenue at Hancock Street intersection where the overall LOS degrades from C to D. However, the increase in traffic at this intersection is less than 10%. **Table 4.2-4** shows a comparison of the Existing (2015) and Build (2020) LOS at the four intersections. The motor vehicle trip generation from the Project will not have a significant impact on motor vehicle delays and air pollutant emissions at the analyzed intersections. Therefore, the motor vehicle traffic generated by the Project will not have a significant impact on air quality at any intersection in the Project area and a microscale air quality analysis is not necessary for this Project.

Table 4.2-4 Summary of Build Case Level of Service

Intersection	Existing LOS (AM/PM)	Build LOS (AM/PM)	Requires Analysis?
Dorchester Avenue at Hancock Street – signalized	C/C	D/D	NO*
Dorchester Avenue at East Street - signalized	C/C	C/C	NO
Dorchester Avenue at Greenmount Street - unisgnalized	E/F	E/F	NO
Hancock Street at Pleasant Street - roundabout	E/F	C/C	NO

The LOS shown represents the overall delay at each signalized intersection and the worst approach at the unsignalized intersection. Percentages shown for LOS D are percent increase in traffic from the Project.
*Project does not contribute to reduction in level of service.

Source: Howard/Stein-Hudson Associates, Inc.

4.3 Noise Impacts

Tech Environmental, Inc. performed a noise study to determine whether the operation of the proposed Project will comply with the City of Boston Noise Regulations and the Massachusetts Department of Environmental Protection ("DEP") Noise Policy.

4.3.1 Common Measures of Community Noise

The unit of sound pressure is the decibel (dB). The decibel scale is logarithmic to accommodate the wide range of sound intensities to which the human ear is subjected. A property of the decibel scale is that the sound pressure levels of two separate sounds are not directly additive. For example, if a sound of 70 dB is added to another sound of 70 dB, the total is only a 3-decibel increase (or 73 dB), not a doubling to 140 dB. Thus, every 3 dB increase represents a doubling of sound energy. For broadband sounds, a 3 dB change is the minimum change perceptible to the human ear. **Table 4.3-1** gives the perceived change in loudness of different changes in sound pressure levels.[3]

Table 4.3-1 Subjective Effects of Changes in Sound Pressure Levels

Change in Sound Level	Apparent Change in Loudness
3 dB	Just perceptible
5 dB	Noticeable
10 dB	Twice (or half) as loud

Non-steady noise exposure in a community is commonly expressed in terms of the A-weighted sound level (dBA); A-weighting approximates the frequency response of the human ear. Levels of many sounds change from moment to moment. Some are sharp impulses lasting 1 second or less, while others rise and fall over much longer periods of time. There are various measures of sound pressure designed for different purposes. To establish the background ambient sound level in an area, the L_{90} metric, which is the sound level exceeded 90 percent of the time, is typically used. The L_{90} can also be thought of as the level representing the quietest 10 percent of any time period. Similarly, the L_{10} can also be thought of as the level representing the quietest 90 percent of any time period. The L_{10} and L_{90} are broadband sound pressure measures, i.e., they include sounds at all frequencies.

Sound level measurements typically include an analysis of the sound spectrum into its various frequency components to determine tonal characteristics. The unit of frequency is Hertz (Hz), measuring the cycles per second of the sound pressure waves, and typically the frequency analysis examines nine octave bands from 32 Hz to 8,000 Hz. A source is said to create a pure tone if acoustic energy is concentrated in a narrow frequency range and one octave band has a sound level 3 dB greater than both adjacent octave bands.

The acoustic environment in an urban area such as the Project area results from numerous sources. Observations show that major contributors to the background sound level in the Project area include motor vehicle traffic on local and distant streets, aircraft over-flights, mechanical equipment on nearby buildings, and general city noises such as street sweepers and police/fire

[3] American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc., 1989 ASHRAE Handbook--Fundamentals (I-P) Edition, Atlanta, GA, 1989.

sirens. Typical sound levels associated with various activities and environments are presented in **Table 4.3-2**.

4.3.2 Noise Regulations

Commonwealth Noise Policy

The DEP regulates noise through 310 CMR 7.00, "Air Pollution Control." In these regulations "air contaminant" is defined to include sound and a condition of "air pollution" includes the presence of an air contaminant in such concentration and duration as to "cause a nuisance" or "unreasonably interfere with the comfortable enjoyment of life and property."

Table 4.3-2 Common Indoor and Outdoor 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	
Quiet Urban Area—Daytime		55	Quiet Conversation at 1m
	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	Average Whisper
		15	Broadcast and Recording Studios
	63	10	
		5	Human Breathing
Reference Pressure Level	20	0	Threshold of Hearing

Notes: μPa, or micro-Pascals, describes sound pressure levels (force/area). DBA, or A-weighted decibels, describes sound pressure on a logarithmic scale with respect to 20 μPa (reference pressure level).

Regulation 7.10 prohibits "unnecessary emissions" of noise. The DEP DAQC Policy Statement 90-001 (February 1, 1990) interprets a violation of this noise regulation to have occurred if the noise source causes either:

1. An increase in the broadband sound pressure level of more than 10 dBA above the ambient level; or
2. A "pure tone" condition.

The ambient background level is defined as the L_{90} level as measured during equipment operating hours. A "pure tone" condition occurs when any octave band sound pressure level exceeds both of the two adjacent octave band sound pressure levels by 3 dB or more.

The DEP does not regulate noise from motor vehicles accessing a site or the equipment backup notification alarms. Therefore, the provisions described above only apply to a portion of the sources that may generate sound following construction of the Project.

Local Regulations

The City of Boston Environment Department regulates noise through the Regulations for the Control of Noise as administered by the Air Pollution Control Commission. The Project is located in an area consisting of commercial and residential uses. The Project must comply with Regulation 2.2 for noise levels in Residential Zoning Districts at these residential locations**.** **Table 4.3-3** lists the maximum allowable octave band and broadband sound pressure levels for residential and business districts. Daytime is defined by the City of Boston Noise Regulations as occurring between the hours of 7:00 a.m. and 6:00 p.m. daily except Sunday. Compliance with the most restrictive nighttime residential limits will ensure compliance for other land uses with equal or higher noise limits.

4.3.3 Pre-Construction Sound Level Measurements

Existing baseline sound levels in the Project area were measured during the quietest overnight period when human activity and street traffic were at a minimum, and when the Project's mechanical equipment (the principal sound sources) could be operating. Since the Project's mechanical equipment may operate at any time during a 24-hour day, a weekday between 11:00 p.m. and 4:00 a.m. was selected as the worst-case time period, i.e., the time period when Project-related sounds may be most noticeable due to the quieter background sound levels. Establishing an existing background (L_{90}) during the quietest hours of the facility operation is a conservative approach for noise impact assessment and is required by the DEP Noise Policy.

Table 4.3-3 Maximum Allowable Sound Pressure Levels (dB) City of Boston

Octave Band (Hz)	Zoning District: Residential (Daytime)	Zoning District: Residential (All Other Times)	Zoning District: Business (anytime)
32 Hz	76	68	79
63 Hz	75	67	78
125 Hz	69	61	73
250 Hz	62	52	68
500 Hz	56	46	62
1000 Hz	50	40	56
2000 Hz	45	33	51
4000 Hz	40	28	47
8000 Hz	38	26	44
Broadband (dBA)	**60**	**50**	**65**

The nighttime noise measurement locations are as follows (see the Figure 1 in the **Appendix C**):

Monitoring Location #1: Pleasant Street (west of site)

Monitoring Location #2: Hancock Street (south of site)

Monitoring Location #3: Greenmount Street (north of site)

Broadband (dBA) and octave band sound level measurements were made with a Bruel and Kjaer Model 2250 environmental sound level analyzer, at each monitoring location, for a duration of approximately thirty minutes. The full octave band frequency analysis was performed on the frequencies spanning 16 to 16,000 Hertz. A time-integrated statistical analysis of the data used to quantify the sound variation was also performed, including the calculation of the L_{90}, which is used to set the ambient background sound level.

The B&K model 2250 is equipped with a ½” precision condenser microphone and has an operating range of 5 dB to 140 dB and an overall frequency range of 3.5 Hz to 20,000 Hz. This meter meets or exceeds all requirements set forth in the ANSI S1.4-1983 Standards for Type 1 quality and accuracy and the State and City requirements for sound level instrumentation. Prior to any measurements, this sound analyzer was calibrated with an ANSI Type 1 calibrator that has an accuracy traceable to the National Institute of Standards and Technology (NIST). During all measurements, the B&K 2250 was tripod mounted at approximately five feet above the ground in open areas away from vertical reflecting surfaces.

The sound level monitoring was conducted on Thursday, December 4, 2014. Weather conditions during the sound survey were conducive to accurate sound level monitoring: the temperature was

37°F-39°F, the skies were mostly clear, and the winds were 10 to 15 mph. The microphone of the sound level analyzer was fitted with a 3.5-inch windscreen to negate any effects of wind-generated noise.

The nighttime sound level measurements taken in the vicinity of the Project Site reveal sound levels that are typical for an urban area. A significant source of existing sound at all locations is motor vehicle traffic on local streets, residential and commercial air handling equipment, pedestrians, and distant sirens.

The results of the nighttime baseline sound level measurements are presented in **Table 4.3-4**, and the complete measurement printouts are provided in **Appendix D**. The nighttime background L_{90} level was 40.7 dBA at Location #3, 43.5 dBA at Location #2 and 44.3 at Location #1. The octave band data in **Table 4.3-4** show that no pure tones were detected in the nighttime noise measurements.

Table 4.3-4 Nighttime Baseline Sound Level Measurements, December 4, 2014

Sound Level Measurement	(Location #1) Pleasant Street 12:07 - 12:37 a.m.	(Location #2) Hancock Street 12:47- 1:17a.m.	(Location #3) Greenmount Street 1:22- 1:52 a.m.
Broadband (dBA) Background (L_{90})	44.3	43.5	40.7
Octave Band L_{90} (dB)			
16 Hz	50.4	50.9	48.1
32 Hz	51.3	51.9	49.5
63 Hz	48.7	51.7	49.3
125 Hz	45.4	47.9	44.9
250 Hz	42.0	43.3	40.2
500 Hz	40.8	41.4	38.2
1000 Hz	39.6	38.8	36.6
2000 Hz	35.8	32.4	28.7
4000 Hz	29.1	23.5	17.9
8000 Hz	21.2	16.6	14.9
16000 Hz	13.8	12.2	12.2
Pure Tone?	No	No	No

4.3.4 Reference Data and Candidate Mitigation Measures

The mechanical systems for the Proposed Project are in the early design stage. Typical sound power data for the equipment of the expected size and type for the Project have been used in the acoustic model to represent the Project's mechanical equipment. The sound levels from all potential significant Project noise sources are discussed in this section.

The design for the Proposed Project is expected to include the following significant mechanical equipment based on the heating and cooling requirements for each building and each type of space (i.e., residential and retail):

- (419) 2- to 3-ton residential heating/cooling condenser rooftop units on residential portions of 8-14 Greenmount Street, 160-166 Pleasant Street, 250 Hancock Street, 1205 Dorchester Street and 1225 Dorchester Street.
- (2) commercial rooftop heating/cooling units for retail on 250 Hancock Street
- (2) commercial rooftop heating/cooling units for retail on 1205 Dorchester Street
- (2) commercial rooftop heating/cooling units for retail on 1225 Dorchester Street

The equipment listed above, which will be located on 12 separate building roof levels, was included in the noise impact analysis. All of the rooftop units were assumed to be of a low-noise design. The rooftop units on 8-14 Greenmount Street, 160-166 Pleasant Street, and 250 Hancock Street five were assumed to be very low noise units, similar to Mitsubishi PURY-P120T type. These units were modeled with a sound power level (L_w) = 68 dBA. The Project's traffic was not included in the noise analysis because motor vehicles are exempt under both the City of Boston and Massachusetts DEP noise regulations.

The sound generation profiles for the mechanical equipment noise sources operating concurrently under full-load conditions were used to determine the maximum possible resultant sound levels from the Project Site as a whole, to define a worst-case scenario. To be in compliance with City and DEP regulations, the resultant sound level must not exceed the allowable octave band limits in the City of Boston noise regulation and must be below the allowable incremental noise increase, relative to existing noise levels, as required in the DEP Noise Policy.

This sound level impact analysis was performed using sound generation data for representative equipment to demonstrate compliance with noise regulations. As the building design evolves, the sound generation for the actual equipment selected may differ from the values that were utilized for the analysis.

To minimize the sound level at nearby residences, the following noise mitigation specifications will be incorporated into the final engineering design of the DOT BLOCK project, as necessary, to comply with the applicable sound level criteria:

- **Specification of low-noise mechanical equipment:** The RTUs will be of a low-noise design.

4.3.5 Calculated Future Sound Levels

Methodology

Future maximum sound levels at the upper floors of all existing residences bordering the Project, and at the nearest residential property lines, were calculated with acoustic modeling software assuming simultaneous operation of all mechanical equipment at their maximum loads.

The Cadna-A computer program, a comprehensive 3-dimensional acoustical modeling software package was used to calculate Project generated sound propagation and attenuation.[4] The model is based on ISO 9613, an internationally recognized standard specifically developed to ensure the highly accurate calculation of environmental noise in an outdoor environment. ISO 9613 standard incorporates the propagation and attenuation of sound energy due to divergence with distance, surface and building reflections, air and ground absorption, and sound wave diffraction and shielding effects caused by barriers, buildings, and ground topography.

Receptors

The closest/worst-case sensitive (residential) locations are along Greenmount Street to the north of the project area, along Pleasant Street to the northeast of the project, and along Hancock Street to the south of the project. Thes location was selected based on the proximity of the equipment (smaller distances correspond to larger noise impacts). These locations are expected to receive the largest sound level impacts from the Project's rooftop mechanical equipment. They can be classified as a residential zone.

The sound level impacts from the building's mechanical equipment were predicted at the closest residential locations. Figure 1 in Appendix C shows the locations of the modeled noise receptors. Noise impacts at other nearby noise-sensitive locations (residences, parks, etc.) farther from the Project Site will be less than those predicted for these receptors.

4.3.6 Compliance with State and Local Noise Standards

The City of Boston and DEP noise standards apply to the operation of the mechanical equipment at the proposed Project. The details of the noise predictions are presented in **Tables 4.3-5** through **4.3-9**. The sound impact analysis includes the simultaneous operation of the Project's rooftop HVAC equipment. The predicted sound levels are worst-case predictions that represent all hours of the day, as the analysis assumes full operation of the mechanical equipment 24-hours a day. The typical sound level impacts from the mechanical equipment will likely be lower than what is presented here, since most of the mechanical equipment will operate at full-load only during certain times of the day and during the warmer months of the year, it is not likely that all of the

[4] Cadna-A Computer Aided Noise Abatement Program, Version 4.3

mechanical equipment will operate at the same time. Sound level impacts at locations farther from the Project (e.g. other residences, etc.) will be lower than those presented in this report.

City of Boston Noise Standards

The noise impact analysis results, presented in **Tables 4.3-5** through **4.3-9**, reveal that the sound level impact at the worst-case property line and the closest residence will be between 42 and 43 dBA. The largest sound level impact of 43 dBA is predicted to occur at the 259 Hancock Street. Noise impacts predicted at all locations are in compliance with the City of Boston's nighttime noise limit (50 dBA) for a residential area. Note that sound levels from the Project will be below the residential nighttime limits at all times. The results also demonstrate compliance with the City of Boston, residential, non-daytime, octave band noise limits at all closest locations.

The City of Boston noise limits for business areas are significantly higher than the nighttime noise limits for residential areas (see **Table 4.3-3**). The Project will also easily comply with the City of Boston business area noise limits at all surrounding commercial properties.

Massachusetts DEP Noise Regulations

The predicted sound level impacts at the worst-case property line and the worst-case residential locations were added to the measured L_{90} value of the quietest daily hour to test compliance with DEP's noise criteria. Assuming the Project's mechanical noise is constant throughout the day, the Project will cause the largest increase in sound levels during the period when the lowest background noise occurs. Minimum background sound levels (diurnal) typically occur between 12:00 a.m. and 5:00 a.m.

The predicted sound level impacts at the worst-case property line and the closest residences were added to the L_{90} values measured during the period with the least amount of background noise to test compliance with DEP's noise criteria. The predicted noise impacts at the property line and the closest residences were added to the most-representative measured L_{90} values to determine the largest possible increase in the sound level at each location during the quietest hour at the Project Site.

As shown in **Tables 4.3-5** through **4.3-9**, the Project is predicted to produce a less than 4 dBA change in the background sound levels at all modeled locations. Therefore, the Project’s worst-case sound level impacts during the quietest nighttime periods will be in compliance with the Massachusetts DEP allowed noise increase of 10 dBA. The noise predictions for each octave band indicate that the mechanical equipment will not create a pure tone condition at any location.

Table 4.3-5 Estimated Future Sound Level Impacts – Anytime,1 Greenmount Street – Location R1

Octave Bands	Residential Nighttime	Maximum Predicted Sound Levels*
32 Hz	68	49
63 Hz	67	48
125 Hz	61	46
250 Hz	52	42
500 Hz	46	40
1000 Hz	40	38
2000 Hz	33	32
4000 Hz	28	24
8000 Hz	26	13
Broadband (dBA)	**50**	**42**
Compliance with the City of Boston Noise Regulation?		Yes

Sound Level Metric	Maximum Sound Levels* (dBA)
Existing Nighttime Background, L_{90} (Location #3)	40.7
DOT BLOCK Project*	42.2
Calculated Combined Future Sound Level	44.5
Calculated Incremental Increase	+3.8
Compliance with DEP Noise Policy?	Yes

* Assumes full-load operation of all mechanical equipment.
Note: DEP Policy allows a sound level increase of up to 10 dBA

Table 4.3-6 Estimated Future Sound Level Impacts – Anytime, 9 Greenmount Street – Location R2

Octave Bands	Residential Nighttime	Maximum Predicted Sound Levels*
32 Hz	68	47
63 Hz	67	47
125 Hz	61	45
250 Hz	52	42
500 Hz	46	40
1000 Hz	40	38
2000 Hz	33	31
4000 Hz	28	22
8000 Hz	26	13
Broadband (dBA)	**50**	**42**
Compliance with the City of Boston Noise Regulation?		Yes

Sound Level Metric	Maximum Sound Levels* (dBA)
Existing Nighttime Background, L_{90} (Location #3)	40.7
DOT BLOCK Project*	42.0
Calculated Combined Future Sound Level	44.4
Calculated Incremental Increase	+3.7
Compliance with DEP Noise Policy?	Yes

*Assumes full-load operation of all mechanical equipment.
Note: DEP Policy allows a sound level increase of up to 10 dBA.

Table 4.3-7 Estimated Future Sound Level Impacts – Anytime, 152 Pleasant Street – Location R3

Octave Bands	Residential Nighttime Noise Standards	Maximum Predicted Sound Levels*
32 Hz	68	46
63 Hz	67	46
125 Hz	61	45
250 Hz	52	41
500 Hz	46	40
1000 Hz	40	39
2000 Hz	33	32
4000 Hz	28	24
8000 Hz	26	13
Broadband (dBA)	**50**	**42**
Compliance with the City of Boston Noise Regulation?		Yes

Sound Level Metric	Maximum Sound Levels* (dBA)
Existing Nighttime Background, L_{90} (Location #1)	44.3
DOT BLOCK Project*	42.3
Calculated Combined Future Sound Level	46.4
Calculated Incremental Increase	+ 2.1
Compliance with DEP Noise Policy?	Yes

*Assumes full-load operation of all mechanical equipment.
Note: DEP Policy allows a sound level increase of up to 10 dBA.

Table 4.3-8 Estimated Future Sound Level Impacts – Anytime, 157 Pleasant Street – Location R4

Octave Bands	Residential Nighttime Noise Standards	Maximum Predicted Sound Levels*
32 Hz	68	45
63 Hz	67	46
125 Hz	61	44
250 Hz	52	40
500 Hz	46	40
1000 Hz	40	38
2000 Hz	33	31
4000 Hz	28	23
8000 Hz	26	14
Broadband (dBA)	**50**	**42**
Compliance with the City of Boston Noise Regulation?		Yes

Sound Level Metric	Maximum Sound Levels* (dBA)
Existing Nighttime Background, L_{90} (Location #1)	44.3
DOT BLOCK Project*	41.7
Calculated Combined Future Sound Level	46.2
Calculated Incremental Increase	+ 1.9
Compliance with DEP Noise Policy?	Yes

*Assumes full-load operation of all mechanical equipment.
Note: DEP Policy allows a sound level increase of up to 10 dBA.

Table 4.3-9 Estimated Future Sound Level Impacts – Anytime, 259 Hancock Street – Location R5

Octave Bands	Residential Nighttime Noise Standards	Maximum Predicted Sound Levels*
32 Hz	68	50
63 Hz	67	49
125 Hz	61	46
250 Hz	52	42
500 Hz	46	41
1000 Hz	40	38
2000 Hz	33	33
4000 Hz	28	26
8000 Hz	26	17
Broadband (dBA)	**50**	**43**
Compliance with the City of Boston Noise Regulation?		Yes

Sound Level Metric	Maximum Sound Levels* (dBA)
Existing Nighttime Background, L_{90} (Location #2)	43.5
DOT BLOCK Project*	42.7
Calculated Combined Future Sound Level	46.1
Calculated Incremental Increase	+ 2.6
Compliance with DEP Noise Policy?	Yes

*Assumes full-load operation of all mechanical equipment.
Note: DEP Policy allows a sound level increase of up to 10 dBA.

4.3.7 Conclusions

Sound levels at all nearby sensitive locations and at all property lines will fully comply with the most stringent City of Boston and DEP daytime and nighttime sound level limits.

This acoustic analysis demonstrates that the Project's design will meet the applicable acoustic criteria.

4.4 Stormwater Management and Water Quality

The existing storm drain utility infrastructure within Hancock, Pleasant and Greenmount Streets and Dorchester Avenue surrounding the Project Site appears to provide adequate capacity to serve the needs of the Project. Best Management Practices (BMPs) and sustainable design will be incorporated into the Project wherever practical and applicable.

Stormwater management systems will be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS) and provide oil & water separation, as well as phosphorus reduction in compliance with current Boston Water and Sewer Commission (BWSC) requirements.

The proposed stormwater management systems will include a combination of deep-sump hooded catch basins, water quality units and groundwater recharge systems. The Project is expected to reduce the peak rate and volume of stormwater runoff leaving the site as well as improve stormwater quality. It is anticipated that the stormwater recharge systems will work to passively infiltrate runoff into the ground with a gravity recharge system. The underground recharge system, and any required site closed drainage systems, will be designed so that there will be no increase in the peak rate of stormwater discharge from the Project Site in the developed condition compared to the existing condition. In addition, for any portions of the project where recharge systems cannot be accommodated, water quality units will be installed to reduce pollutants in stormwater runoff prior to discharge to the BWSC drainage system, per BWSC standards.

All improvements and connections to BWSC infrastructure will be reviewed as part of the Commission's Site Plan Review process. The process includes a comprehensive design review of the proposed service connections, assessment of project demands, and system capacity.

4.5 Geotechnical Investigations

Three subsurface investigations have been conducted on the 1207 Dorchester Avenue parcel: one by Woodard & Curran in 2007, environmental based investigations by EBI Consulting (EBI) in 2007 and the recent investigations by Polaris Consultants LLC (Polaris) in January 2015.

4.5.1 Woodard & Curran and EBI Investigations

In May 2007, Woodard & Curran conducted a field investigation program consisting of four borings (B-1, B-2, B-3 and B-4) and eight geoprobes (B-5 through B-11, and B-10A). Five microwells (MW-1 through MW-5) were installed in geoprobes B-6, B-7, B-9, B-11 and B-10A, respectively. The twelve Woodard & Curran explorations provide some significant information. Unfortunately, standard penetration testing is not included with geoprobes and Boring B-1 was ended while still in a "peat" material. Only three of the Woodard & Curran borings (B-2, B-3 and B-4) have been determined to be useful for foundation design.

The EBI explorations were conducted in early November 2007 and focused on the limited remediation area located in the northeast corner of the Site near W&C B-7 (MW-2), where fill was encountered to about 9 to 10 feet. The EBI work also included fourteen geoprobes (EB-1 through EB-14) that yield limited information for foundation design.

In general, the 2007 boring and geoprobes encountered a 2- to 8-foot-deep layer of urban fill. Pockets of brown/black "peat" were found below the urban fill – an indication that there was a poor effort in stripping former topsoil materials before filling. Boring B-1 was ended in the peat (11 feet to 14 feet deep). Boring B-3 encountered peat from 9- to 10-feet-deep over a dark grey very stiff to stiff clay. Geoprobe B-9 also encountered peat and clay from 11.5 to 15 feet (again the boring ended in a clay/peat material). Several of the EBI geoprobes encountered "peat" from about 9 to 11 feet (EB-2, EB-3, EB-5, EB-7, EB-11, EB-13 and EB-14). Stiff to very stiff clay with varying layers and lenses of silt and sand were encountered below the urban fill and "peat".

4.5.2 Polaris Investigation (January 2015)

In order to further assess subsurface conditions, Polaris developed and implemented a subsurface investigation program. The program consisted of drilling eight borings (B-101 through B-108) on the 1207 Dorchester Avenue parcel.

Carr-Dee Drilling Corporation of Medford drilled boreholes B-101 through B-108 between January 19 and January 21, 2015, to depths ranging from 27 feet to 62 feet. The borings were advanced using a combination of small diameter (2¼-inch) hollow stem augers and drive-and-washing techniques with 3-inch casing. Soil samples were obtained using a 2-inch split spoon sampler and Standard Penetration Test (SPT) procedures. Soil samples were collected at the ground surface and then following at 5-foot intervals. The drilling operations were observed by a senior geotechnical engineer from Polaris who recorded observations and logged the results.

4.5.3 Subsurface Stratigraphy

The boring logs are summarized in Table 4.5- 1 and generally encountered the following from the ground surface to depth:

- <u>ASPHALT AND CONCRETE</u>– A large majority of the explorations (with the exception of B-1 and B-3) encountered a thin 1- to 3-inch thick layer of asphalt. Boring B-104 also encountered a 5-inch thick concrete slab just below the asphalt.

- <u>FILL</u> – All explorations encountered a loose to dense layer of silty sand and sand fill materials, with gravel and varying amounts of brick and cinder fragments. The fill layer was encountered to approximate depths of 4- to 9-feet, and was typically around 8.5 feet deep.

- <u>SILT AND ORGANIC SILT</u> – Eight of the twelve borings encountered a dark brown to black silt layer with varying amounts of organic material. This layer is assumed to be the former topsoil layer and was observed from 7- to 14-feet deep. The material was not observed in borings B-2, B-4 and B-108. It is assumed that the area off Pleasant Street is a former upland area that has been filled. This layer is unsuitable for foundation bearing.

- <u>SILTY ORGANIC and PEAT</u> – Five of the twelve borings encountered a 3- to 5-foot-thick silty organic and peat layer below the former topsoil. The layer was encountered in the vicinity of borings B-1, B-101, B-103, B-105 and B-106, and is most likely associated with a former wetland area located along Dorchester Avenue. This layer is unsuitable for foundation bearing.

- <u>SAND</u> – Two borings (B-104 and B-105) encountered a fine to medium sand with varying amounts of gravel and silt. The natural sand layer is medium dense and appears to be an isolated upland deposit and was encountered to approximate depths of 18.5 to 28.5 feet. The deposit appears to be limited to the area along Hancock Street.

- <u>CLAY</u> – All of the deeper borings, with the exception of B-105, encountered a highly plastic clay from a depth of 4 feet to 18.5 feet. The clay ranged in thickness from 1-foot-thick (B-103) to 36-foot-thick (B-106) and was stiff to very stiff. The clay appears to increase in thickness toward Dorchester Avenue.

- <u>GLACIAL TILL</u> – Six borings (B-102, B-103, B-104, B-105, B-106 and B-108) encountered a dense to very dense glacial deposit below the clay. The materials consisted of a non-homogeneous fine to course sand, with varying amounts of silt, clay and gravel. The layer was encountered at depths of 13.5-feet to 54.5 feet and is dense to very dense.

Table 4.5- 1 Summary of Boring Data

Boring No.	Approx. Ground Elevation (Feet)	Depth of Urban Fill (Feet)	Depth of Former Organic Silt/Peat (Feet)	Depth of Clay (Feet)	Depth of Sand (Feet)	Depth of Glacial Till (Feet)	Groundwater Depth (Feet) and Elevation *Boston City Base*
Woodard & Curran							
B-1		0.0-7.0	7.0-11.0/14.0+ (P)				
B-2		0.1-9.0		10.5-27.0			
B-3		0.0-8.5	8.5-10.5	10.5-42.0			
B-4		0.2-4.0		4.0-16.0			
Polaris Consultants							
B-101	15.8+/-	0.2-8.5	8.5-13.5/18.5 (P)	18.5-32			
B-102 & MW-102	21.5 +/-	0.1-8.5	8.5-11.0	11.0-13.5		13.5-27.0	
B-103	17.1 +/-	0.2-9.0	8.5-13.5/18.0 (P)	18.0-19.0		19.0-27.0	5.5 (EL. 11.6)
B-104	21.5 +/-	0.1-9.0	9.0-14.0	14.0-18.5	18.5-23.5	23.5-31.0	9.0 (EL. 12.5)
B-105	18.5 +/-	0.2-8.5	8.5-13.5/18.5 (P)		18.5-28.5	28.5-37.0	
B-106	16.5 +/-	0.2-8.5	8.5-13.5/18.5 (P)	18.5-54.5		54.5-62.0	
B-107	21.5 +/-	0.2-9.0	9.0-10.0	10.0-32.0			
B-108	19.5 +/1	0.1-5.0		5.0-49.0		49.0-57.0	

4.5.4 Stormwater and Groundwater Observations

Based on a review of the topographic information, it appears that storm water flow across the Site is in an easterly direction, toward the drainage system on Dorchester Avenue. A detailed summary of the existing and proposed drainage systems is provided in **Section 6.3.**

Historic groundwater observations are summarized in Table 2. In 2007, groundwater was observed at depths of about 5 feet (B-6/MW-1) to 9 feet (B-4). Due to the drilling methods used in January 2015, natural water was only observed in two borings (B-103 and B-104). Water was observed at a depth of about 11.6 to 12.5 feet, or about Elevation 5.1 to 6.0 (Boston City Base).

Groundwater appears to be flowing in an easterly direction, from Hancock Street and Pleasant Street to Dorchester Avenue.

It is noted that groundwater conditions were observed at the time of drilling activities and should be expected to vary.

Table 4.5- 2 Historic Groundwater Observations

Well No.	Ground Elevation (Feet)	Approx. Depth to Groundwater (Feet)	Approx. Groundwater Elevation (Feet)	Date and Time Recorded
MW-1	21.5 +/-	5.5	16.0	May 24, 2007
MW-2	18.5 +/-	7.5	11.0	May 24, 2007
MW-3	16.5 +/-	7.5 (?)	9.0	May 24, 2007
MW-4	21.5 +/-	7.5	14.0	May 24, 2007
MW-5	18.5 +/-	7.5 (?)	11.0	May 24, 2007
B-103	17.1 +/-	5.5	11.6	January 21, 2015
B-104	21.5 +/-	9.0	12.5	January 19, 2015
Average		**7.1**	12.2	

4.5.5 Conclusions

The geotechnical investigations presented herein provide a general idea of the existing subsurface conditions at the Site and correlate well to previous investigations. Recent investigations generally encountered urban fill (with traces of brick and cinders) over a former upland area at the corner of Pleasant Street and Hancock Street and a former wetland area with peat deposits toward the middle of the Site and Dorchester Avenue. It appears that the loose to medium dense urban fill has been placed directly on unsuitable black silt with trace to little organics and peat. These unsuitable materials are underlain by medium dense sand (along Hancock Street), a highly plastic stiff to very stiff clay, and dense to very dense glacial till. Groundwater levels appear to coincide with the former topsoil materials and are about 5 to 6 feet below the Site on average.

A review of the borings indicates that shallow continuous and/or spread footings may only be appropriate along Pleasant Street and portions of Hancock Street and Greenmount Street. A deep deposit of organic silt and peat, in the central and eastern parts of the Site, will require a deeper foundation design. The foundation must be ungraded to meet the latest edition of the Massachusetts State Building Code (780 CMR 18).

In areas where the deep deposits of unsuitable materials are present, helical piles or geopiers shall be used. These deeper systems will be founded in the medium dense sand, stiff to very stiff clay or glacial till. Where shallow foundations are used, it is anticipated that all unsuitable fill layers will be removed and that footings will bear on the natural stiff to very stiff clay, medium dense sand or compacted structural fill. To accomplish this, a review of the borings indicates that urban fill will have to be over excavated and replaced with structural fill. In lieu of excavation, the foundation design will also consider lowering selective footings into the medium dense sand and stiff clay.

Both surface water and groundwater at the Site appears to flow in an easterly direction from Hancock Street and Pleasant Street toward Dorchester Avenue. The average groundwater depth across the Site, as observed in 2007 and 2015, is about 7 feet deep (EL. 12.2 Boston City Base).

4.6 Construction Impact

The following section describes impacts likely to result from the DOT BLOCK Project construction and the steps that will be taken to avoid or minimize environmental and transportation-related impacts. The Proponent will employ a construction manager that will be responsible for developing a construction phasing and staging plan and for coordinating construction activities with all appropriate regulatory agencies. The Project's geotechnical consultant will provide consulting services associated with foundation design recommendations, prepare geotechnical specifications, and review the construction contractor's proposed procedures.

4.6.1 Construction Management Plan

The Proponent will comply with applicable state and local regulations governing construction of the Project. The Proponent will require that the general contractor comply with the Construction Management Plan, ("CMP") developed in consultation with and approved by the Boston Transportation Department ("BTD"), prior to the commencement of construction. The construction manager will be bound by the CMP, which will establish the guidelines for the duration of the Project and will include specific mitigation measures and staging plans to minimize impacts on abutters.

Proper pre-construction planning with the neighborhood will be essential to the successful construction of this Project. Construction methodologies that will ensure safety will be employed, signage will include construction manager contact information with emergency contact numbers. The Proponent will also coordinate construction with other ongoing projects in the neighborhood.

4.6.2 Proposed Construction Program

Construction Activity Schedule

The initial construction period for the Proposed Project is expected to last approximately 12- 18 months, beginning in the First Quarter 2016 and reaching initial completion in the Third or Fourth Quarter 2017. The City of Boston Noise and Work Ordinances will dictate the normal work hours, which will be from 7:00 AM to 6:00 PM, Monday through Friday.

Perimeter Protection/Public Safety

The CMP will describe any necessary sidewalk closures, pedestrian re-routings, and barrier placements and/or fencing deemed necessary to ensure safety around the Site perimeter. If possible, the sidewalk will remain open to pedestrian traffic during the construction period. Barricades and secure fencing will be used to isolate construction areas from pedestrian traffic. In addition, sidewalk areas and walkways near construction activities will be well marked and lighted to ensure pedestrian safety.

Proper signage will be placed at every corner of the Project as well as those areas that may be confusing to pedestrians and automobile traffic.

The Proponent will continue to coordinate with all pertinent regulatory agencies and representatives of the surrounding neighborhoods to ensure they are informed of any changes in construction activities.

4.6.3 Construction Traffic Impacts

Construction Vehicle Routes

Estimated truck deliveries and routes are identified in at the end of this section. Specific truck routes will be established with BTD through the CMP. These established truck routes will prohibit travel on any residential side streets. Construction contracts will include clauses restricting truck travel to BTD requirements. Maps showing approved truck routes will be provided to all suppliers, contractors, and subcontractors. It is anticipated that all deliveries will be via I-93, from Dorchester Avenue direct to the site, not passing through any residential areas.

Construction Worker Parking

The number of workers required for construction of the Project will vary during the construction period. However, it is anticipated that all construction workers will arrive and depart prior to peak traffic periods.

Limited parking in designated areas of the Project Site and lay-down area(s) will be allowed. Parking will be discouraged in the immediate neighborhood. Further, public transit use will be encouraged with the Proponent and construction manager working to ensure the construction workers are informed of the public transportation options serving the area. Terms and conditions related to worker parking will be written into each subcontractor's contract. The contractor will provide a weekly orientation with all new personnel to ensure enforcement of this policy.

Pedestrian Traffic

The Site abuts sidewalks on two streets. Pedestrian traffic may be temporarily impacted in these areas. The Construction Manager will minimize the impact the construction of the proposed building will have and the adjacent sidewalks. The contractor will implement a plan that will clearly denote all traffic patterns. Safety measures such as jersey barriers, fencing, and signage will be used to direct pedestrian traffic around the construction site and to secure the work area.

4.6.4 Construction Environmental Impacts and Mitigation

Construction Air Quality

Construction activities may generate fugitive dust, which will result in a localized increase of airborne particle levels. Fugitive dust emission from construction activities will depend on such factors as the properties of the emitting surface (e.g. moisture content), meteorological variables, and construction practices employed.

To reduce the emission of fugitive dust and minimize impacts on the local environment the construction contractor will adhere to a number of strictly enforceable mitigation measures. These measures may include:

- Using wetting agents to control and suppress dust from construction debris;
- Ensuring that all trucks traveling to and from the Project Site will be fully covered;
- Removing construction debris regularly;
- Monitoring construction practices closely to ensure any emissions of dust are negligible;
- Cleaning streets and sidewalks to minimize dust and dirt accumulation;
- Monitoring construction activities by the job site superintendent and safety officer; and
- Wheel-washing trucks before they leave the Project Site during the excavation phase.

Construction Noise Impacts

To reduce the noise impacts of construction on the surrounding neighborhood, a number of noise mitigation measures will be included in the CMP. Some of the measures that may be taken to ensure a low level of noise emissions include:

- Initiating a proactive program for compliance to the City of Boston's noise limitation impact;
- Scheduling of work during regular working hours as much as possible;
- Using mufflers on all equipment and ongoing maintenance of intake and exhaust mufflers;
- Muffling enclosures on continuously operating equipment, such as air compressors and welding generators;
- Scheduling construction activities so as to avoid the simultaneous operation of the noisiest construction activities;
- Turning off all idling equipment;
- Reminding truck drivers that trucks cannot idle more than five (5) minutes unless the engine is required to operate lifts of refrigeration units;
- Locating noisy equipment at locations that protect sensitive locations and neighborhoods through shielding or distance;
- Installing a site barricade at certain locations;
- Identifying and maintaining truck routes to minimize traffic and noise throughout the project;
- Replacing specific construction techniques by less noisy ones where feasible-e.g., using vibration pile driving instead of impact driving if practical and mixing concrete off-site instead of on-site; and
- Maintaining all equipment to have proper sound attenuation devices.

4.6.5 Rodent Control

The City of Boston enforces the requirements established under Massachusetts State Sanitary Code, Chapter 11, 105 CMR 410.550. This policy establishes that the elimination of rodents is required for issuance of any building permits. During construction, rodent control service visits will be made by a certified rodent control firm to monitor the situation.

4.6.6 Utility Protection During Construction

During construction, the City or Commonwealth's infrastructure will be protected using sheeting and shoring, temporary relocations, and construction staging as required. The contractor will be required to coordinate all protection measures, temporary supports, and temporary shutdowns of all utilities with the appropriate utility owners and/or agencies. The contractor will also be required to provide adequate notification to the utility owner/operator prior to any work commencing on their utility. Also, in the event a utility cannot be maintained in service during a switch-over to a temporary or permanent system, the contractor will be required to coordinate the shutdown with the utility owners/operators and Project abutters to minimize impacts and inconveniences accordingly.

5.0 HISTORIC RESOURCES COMPONENT

The following section provides a discussion of the existing buildings on the Project Site and the historic districts in the Project vicinity.

5.1 Project Site and Existing Buildings

Originally was one of the largest towns in the Massachusetts Bay Colony, Dorchester included South Boston, Hyde Park, Milton, Wrentham, Stoughton, Dedham, Sharon, Foxboro, and Canton. The town was primarily a rural farming community until its annexation to Boston on January 4, 1870.

Dorchester soon became one of Boston's industrial centers with the chocolate manufacturer, Walter Baker & Co., serving as a major city employer and the first gristmill opening in 1634 on the bank of the Neponset River. Dorchester once contained the only powder-mill, the only paper-mill, the only cracker manufactory, the only chocolate-mill and the only playing-card manufactory in the whole country. Dorchester was also known for shipbuilding, horseshoe nail manufacturing at the Putnam Nail Company, and popular fruits including the Dorchester blackberry and the President Wilder strawberry.

The neighborhood's architecture is widely recognized and examples of 18th century homes and Federal era and Greek Revival buildings can be found throughout. The area is most famous for its three-family homes designed from the mid to late 19th century by architects such as Edwin J. Lewis, Jr., John A. Fox and Luther Briggs, Jr. among many others.

According to files at the Massachusetts Historical Commission, the on-site structures are not listed in the National or State Register of Historic Places, or the Inventory of Historical and Archaeological Assets of the Commonwealth. It is not expected that the Project will cause adverse impacts on any historic or architectural elements of nearby historic resources outside the Project Site (see **Figure 5-1** at the end of this section for historic resources in the Project vicinity).

5.2 Historic Districts and Resources

The Project Site is not within, nor does it directly abut, any listed historic districts or resources. The area surrounding the Project Site is a mixed residential and commercial district with the Southeast Expressway (I-93) within several blocks to the east and the MBTA's Savin Hill Red Line within ¼ mile of the site. While the neighborhood to the west of the Project Site is primarily residential, Dorchester Avenue, located to the east of the Project Site, is characterized primarily by local retail and commercial uses.

While there are no buildings within a quarter mile of the Project Site that are presently on the National Register of Historic Places, the Savin Hill Historic District is located within the buffer to the east of the site. A discussion of this historic district, as well as several other historic places identified by the Massachusetts Cultural Resource Information System (MACRIS), is provided below in **Table 5-1**..

5.3 Savin Hill District

Located east of the Project Site, just past the Southeast Expressway (I-93), the Savin Hill Historic District is bounded by the Boston Globe parking lot and a park on the north, William T. Morrissey Boulevard and Dorchester Bay on the east, Malibu Beach on the south, and on the west by the Southeast Expressway (I-93). Separated by the Southeast Expressway from the rest of Dorchester, Savin Hill is primarily residential neighborhood with the existing high quality housing stock dating from the mid 1840s. The predominant three-decker and two-family housing is located at the edges of the district, with the larger homes found in the interior and along the eastern water's edge. It should be noted that this area satisfies criteria A and C of the National Register of Historic Places and might also be designated a Boston Landmarks district.

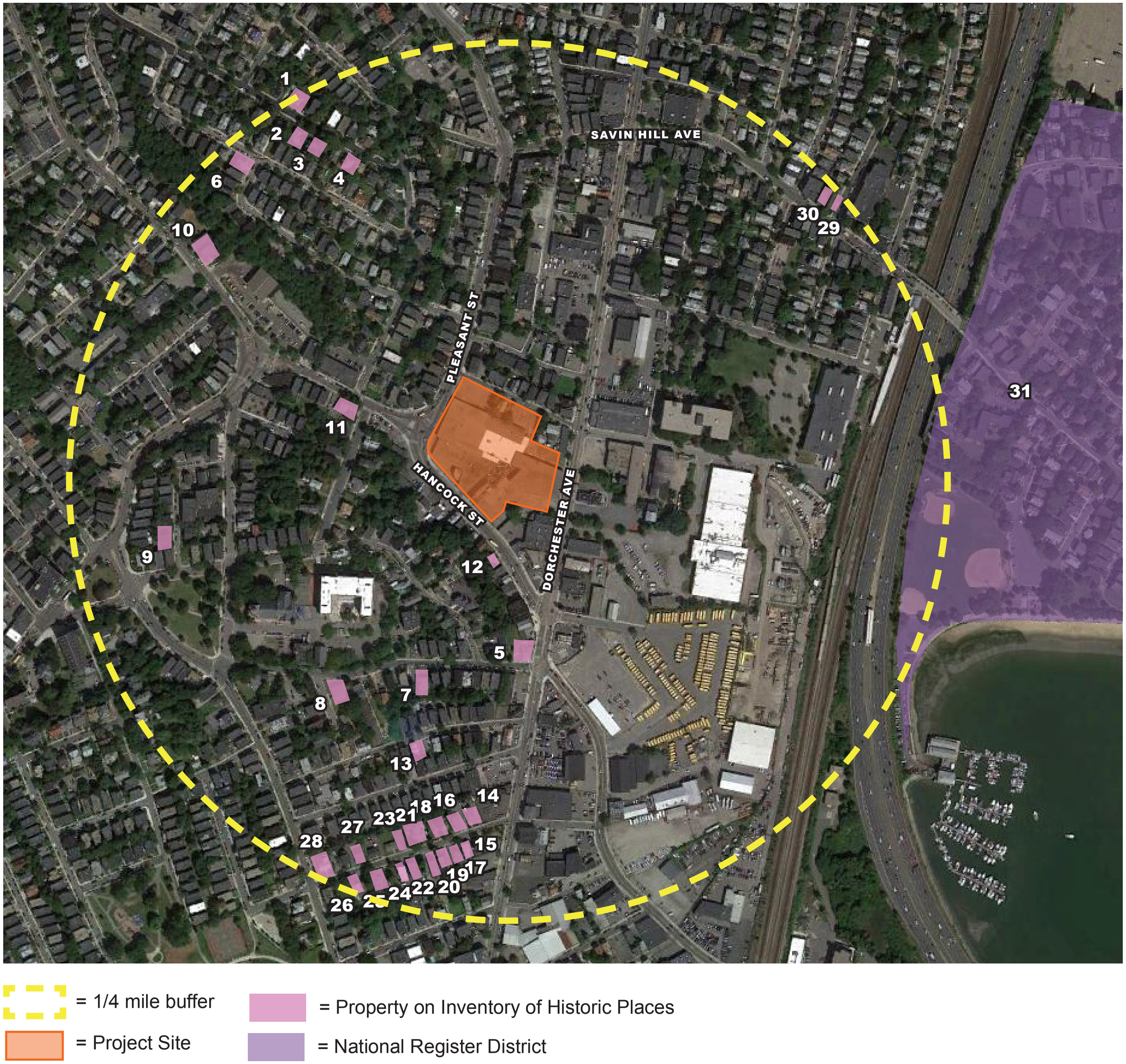
Table 5-1 Individual Historic Resources in the Vicinity of the Project Site

Name (Key to Historic Resources Figure 5-1)	Address	Listing/Designation
S.O. Chase House (#1) [z]	120 Cushing Ave	Inventory of Historic Places
A.K. Kent House (#2)	123 Cushing Ave	Inventory of Historic Places
Elizabeth A. Jolly House (#3)	125 Cushing Ave	Inventory of Historic Places
Annie Shumway House (#4)	131 Cushing Ave	Inventory of Historic Places
Andrew Glover-Franklin Farrington Store (#5)	1259-1261 Dorchester Ave	Inventory of Historic Places
William P. Lally House (#6)	76 Downer Ave	Inventory of Historic Places
Alexander Glover House (#7)	32 East St	Inventory of Historic Places
Stetson House (#8)	54-56 East St	Inventory of Historic Places
#9	8-12 Fifield St	Inventory of Historic Places
Evelyn F. McEnany Three-Decker (#10)	134 Hancock St	Inventory of Historic Places
George W. Carter – William Austin Double House (#11)	199-201 Hancock St	Inventory of Historic Places

D. Gorman House (#12)	279-281 Hancock St	Inventory of Historic Places
Isaac H. Dunn House (#13)	30 Hecla St	Inventory of Historic Places
John G. Glover-Wood House (#14)	35-37 Linden St	Inventory of Historic Places
Marjorie A. Johnson Richards House (#15)	38 Linden St	Inventory of Historic Places
#16	39 Linden St	Inventory of Historic Places
Jonathan B. Wheelock House (#17)	40 Linden St	Inventory of Historic Places
Elijah Hall House (#18)	41 Linden St	Inventory of Historic Places
Horatio F. Park House (#19)	44 Linden St	Inventory of Historic Places
Samuel S. Drew House (#20)	46 Linden St	Inventory of Historic Places
George M. Anderson – Mary Fry Double House (#21)	47-49 Linden St	Inventory of Historic Places
#22	52 Linden St	Inventory of Historic Places
#23	53 Linden St	Inventory of Historic Places
#24	56 Linden St	Inventory of Historic Places
Richard B. Everett – A.H. Glover House (#25)	64 Linden St	Inventory of Historic Places
Henry Richards – Annie E. Carroll House (#26)	70 Linden St	Inventory of Historic Places
#27	71 Linden St	Inventory of Historic Places
Joseph P. Frizzell House (#28)	75 Linden St	Inventory of Historic Places
#29	92 Savin Hill Ave	Inventory of Historic Places
#30	90 Savin Hill Ave	Inventory of Historic Places
Savin Hill Historic District (#31)		National Register Historic District

5.4 Archaeological Resources

Upon researching the Site on the Boston Inventory Map at Massachusetts Historic Commission, it was determined that there are no existing pre-historic or historic archaeological sites on the Site, nor are there any within a quarter mile of the Project Site.



1 = S.O. Chase House (120 Cushing Ave)
2 = A.K. Kent House (123 Cushing Ave)
3 = Elizabeth A. Jolly House (125 Cushing Ave)
4 = Annie Shumway House (131 Cushing Ave)
5 = Andrew Glover-Franklin Farrington Store (1259-1261 Dorchester Ave)
6 = William P. Lally House (76 Downer Ave)
7 = Alexander Glover House (32 East St)
8 = Stetson House (54-56 East St)
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27 = 71 Linden St
28 = Joseph P. Frizzell House (75 Linden St)
29 = 92 Savin Hill Ave
30 = 90 Savin Hill Ave
31 = Savin Hill Hsitoric District

Figure 5 - 1
Historic Resources

6.0 INFRASTRUCTURE SYSTEMS COMPONENT

The existing utility infrastructure surrounding the Site appears sufficient to serve the needs of the Project. The following sections describe the existing sanitary sewer, water, and storm drainage systems surrounding the Site and explain how these systems will serve the development. This section also discusses any anticipated Project-related impacts on the utilities and identifies mitigation measures to address these potential impacts. Additionally, a brief description of the private utility services including energy, electrical, telephone, cable and natural gas systems is included.

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 systems discussed below include those owned or managed by the BWSC and private utility companies. There will be close coordination among these entities and with the project engineers and architects during the Design Development Phase of the Project. 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.

6.1 Sanitary Sewer System

6.1.1 Existing Sewer System

The BWSC owns and maintains the sanitary sewer system adjacent to the Site (See **Figure 6-1**). The sanitary sewer mains in the vicinity of the Project Site include: a15-inch (material not identified) and 10-inch PVC sanitary sewer located in Dorchester Avenue, a 24-inch PVC sanitary sewer in Hancock Street, a 12-inch PVC sanitary sewer in Pleasant Street and a 12-inch PVC in Greenmount Street.

6.1.2 Project-Generated Sewage Flow

The Project as currently proposed includes a mix of residential and commercial uses. The sewage flow for the project has been estimated in accordance with 310 CMR 7.15.203: System Sewage Flow Design Criteria and is summarized in **Table 6-1.** The Project will generate an estimated 78,610 gallons per day (gpd).

RODE

BWSC SEWER SYSTEM MAP

DOT BLOCK

Fig 6-1

Table 6-1 Projected Sanitary Sewer Flows

Use*	Quantity	Unit Flow Rate	Estimated Maximum Daily Flow (gpd)
Residential			
Eight 8-Unit Residential Buildings (2 bedroom units)	128 Bedrooms	110 gpd/bedroom	14,080 gpd
50-Unit Residential Building	60 Bedrooms	110 gpd/bedroom	6,600 gpd
Mixed-Use**			
Retail	23,700 sf	50 gpd/1,000 sf	1,185 gpd
Supermarket	33,100 sf	97 gpd/1,000 sf	3,210 gpd
Restaurant	11,400 sf (estimated 285 total seats	35 gpd/seat	9,975 gpd
310-Unit Residential	396 Bedrooms	110 gpd/bedroom	43,560 gpd
Total			**78,610 gpd**

*Uses identified are preliminary and subject to change in the final plans.
**Includes development of potential future acquisition parcels at the corner of Greenmount Street and Dorchester Avenue.

6.1.3 Sanitary Sewer Connection

The Proponent will coordinate with BWSC on the design, capacity and connections of the proposed sanitary sewer system. The design anticipates the installation of a private sanitary sewer network in the Project Site with a single connection to the BWSC sewer to serve the residential buildings and direct service connections to Dorchester Avenue and Hancock Street for the mixed-use buildings. The private sanitary sewer network will collect sanitary sewage from the 50-unit residential building adjacent to Hancock Street and the eight 8-unit buildings along Pleasant and Greenmount Streets and will convey the flows to the north to the existing 12-inch PVC sanitary sewer located in Greenmount Street. The Project's sewage and stormwater flows will connect separately to the BWSC infrastructure, and any illicit connections found during construction will be removed.

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

6.1.4 Sewer System Mitigation

The environmental design goals for the Proposed Project include reducing wastewater volumes by incorporating efficient fixtures into the design. Water conservation measures such as low-flow fixtures, aerated showerheads, dual-flush toilets and low consumption appliances are being considered to reduce water consumption and sewage generation.

6.2 Water System

6.2.1 Existing Water Service

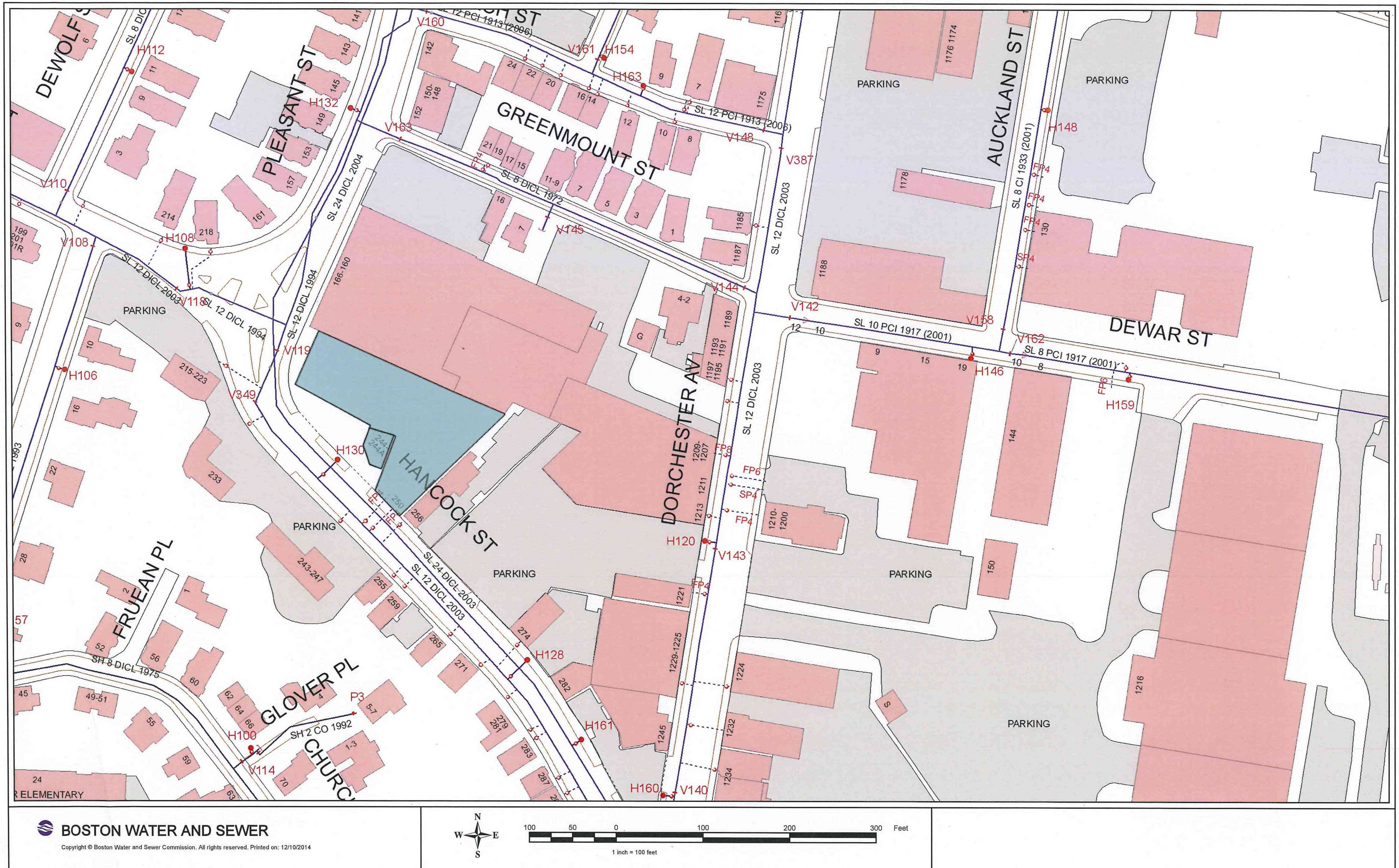
The water mains in the vicinity of the Project Site are owned and maintained by BWSC (see **Figure 6-2**). There are five different water systems/service districts within the City, which provide service to portions of the City based on ground surface elevation. The five systems are southern low (commonly known as low service), southern high (commonly known as high service), southern extra high, northern low, and northern high. The water mains in the vicinity of the Project Site are part of the southern low service system.There is a 12-inch ductile iron cement-lined (DICL) water main located in Dorchester Avenue, a 12-inch and 24-inch ductile iron cement-lined (DICL) water main in Hancock and Pleasant Streets and an 8-inch ductile iron cement-lined (DICL) in Greenmount Street.

According to BWSC's records, there are several existing services to the Project Site from Dorchester Avenue, Hancock Street and Greenmount Street. It is anticipated that these existing services will not be utilized as part of the proposed project.

There are approximately seven (7) existing hydrants immediately adjacent to or within close proximity to the Project Site. The hydrants are located on Dorchester Avenue, Hancock Street and Pleasant Street. The Proponent will confirm that the hydrants are sufficient for the development and coordinate any proposed changes in locations with BWSC and the Boston Fire Department (BFD) during the detailed design phase. Hydrant flow tests will be conducted as part of the Project design.

6.2.2 Anticipated Water Consumption

The Project's water demand estimate for domestic services is based on the proposed Project's estimated sewage generation, described above. A conservative factor of 1.1 (110%) is applied to the estimated average daily wastewater flow to account for consumption, system losses, and other usages to estimate an average daily water demand. The Project's estimated domestic water demand is 86,471 gpd (based on the sewage generation estimate of 78,610 gpd). The water for the Project will be supplied by the BWSC system.



RODE

BWSC WATER SYSTEM MAP

DOT BLOCK

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Fig 6-2

6.2.3 Proposed Water Service

The design anticipates the installation of a private pipe network in the Project Site to serve the residential buildings and direct service connections to Dorchester Avenue and Hancock Street for the mixed-use buildings. The private pipe network will connect through from Hancock Street to Greenmount Street with service connections to the nine (9) residential buildings. Compliance with the standards for the water system service connections will be reviewed as part of BWSC's Site Plan 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 conforming to BWSC and BFD requirements.

6.2.4 Water Supply System Mitigation

As discussed in the Sewer System Mitigation Section, water conservation measures such as low-flow fixtures, aerated showerheads, dual-flush toilets and low consumption appliances are being considered to reduce water consumption. Water usage for landscape irrigation will be significantly reduced by the selection of native and adaptive plantings, and using soil moisture sensors as part of the irrigation system.

6.3 Storm Drainage System

6.3.1 Existing Drainage Conditions

The Project Site is a 4.75 acre parcel of land. Currently, the Site is occupied by a large vacant industrial building with a detached smaller industrial building, an auto body shop, a two-family home with a detached garage, a gasoline filling station with automotive repair services and retail buildings. With the exception of a small landscape area around the two-family home, the balance of the Site is paved or consists of other impervious material. There are no catch basins that exist on the Site today; however there is a trench drain at the loading dock for the large industrial building that collects surface runoff at a low point at the north-west corner of the Site. There is no identified connection to the BWSC drainage or sewer systems from this trench drain. The Site generally slopes from the northwest (intersection of Pleasant and Greenmount Streets) to the southeast towards Dorchester Avenue. Site generated stormwater runoff drains predominantly to storm drainage facilities in Dorchester Avenue with smaller areas draining to Hancock and Greenmount Streets (See **Figure 6-1**). There are no existing detention, recharge or stormwater water quality facilities to mitigate stormwater runoff quantity or quality.

6.3.2 Proposed Drainage Systems

The proposed stormwater management systems will include a combination of catch basins with deep-sumps and oil trap hoods, water quality units and groundwater recharge systems. The groundwater recharge system will recharge 1-inch of runoff from impervious areas in accordance with BWSC requirements, where feasible. In addition to the decrease in stormwater runoff as a result of the groundwater recharge systems, the Project will result in a decrease in impervious area and therefore, a reduction of stormwater runoff. In addition to the reduction in the peak rate and volume of stormwater runoff, the Project is expected to improve stormwater quality. It is anticipated that the stormwater recharge systems will work to passively infiltrate runoff into the ground with a gravity recharge system. The underground recharge system, and any required site closed drainage systems, will be designed so that there will be no increase in the peak rate of stormwater discharge from the Project Site in the developed condition compared to the existing condition. In addition, for any portions of the project where recharge systems cannot be accommodated, water quality units will be installed to reduce pollutants in stormwater runoff per BWSC standards prior to discharge.

All improvements and connections to BWSC infrastructure will be reviewed as part of the Commission's Site Plan Review process. The process includes a comprehensive design review of the proposed service connections, assessment of project demands, and system capacity. The Project will meet the Department of Environmental Protection's (DEP) Stormwater Management Standards for redevelopment.

6.4 Water Quality

The proposed stormwater management system will include a combination of deep-sump hooded catch basins, water quality units and groundwater recharge systems. The Project is expected to reduce the volume of stormwater runoff leaving the Site as well as improve stormwater quality. For any portions of the project where recharge systems cannot be accommodated, water quality units will be installed to reduce pollutants in stormwater runoff per BWSC standards prior to discharge.

Erosion and sediment control measures will be implemented during construction to minimize the transport of site soils to off-site areas and BWSC storm drain systems. During construction, erosion controls will be installed within and around the perimeter of the Site and existing catch basins in the public rights-of-way long the Project frontage will be protected with silt socks to provide for sediment removal from runoff. These controls will be inspected and maintained throughout the construction phase until all areas of disturbance have been stabilized through the placement of pavement, structure, or vegetative cover.

All necessary dewatering associated with construction activities will be conducted in accordance with applicable BWSC, United States Environmental Protection Agency (USEPA), Massachusetts Water Resources Authority (MWRA) regulations and other appropriate discharge permit requirements.

Stormwater management controls will be established in compliance with BWSC standards, and the Project will reduce stormwater flow, pollutants, or sediments that would potentially impact nearby water bodies including Dorchester Bay and Boston Harbor

6.5 Energy Systems

The electrical, heating and energy systems for the proposed Project have not yet been designed. Information on these systems will be made available to the appropriate utilities as Project design progresses.

6.5.1 Electrical System

Eversource owns the electrical system in the vicinity of the Project Site. It is expected that adequate service is available in the existing electrical systems in the vicinity of the Project. The Proponent will work with Eversource as the design progresses and Project electric demands are determined to confirm adequate system capacity, service connection location and transformer locations.

6.6 Telephone and Cable Systems

Verizon and Comcast provide telephone, cable and internet services in the vicinity of the Project Site. The Proponent will select private telecommunications companies to provide telephone, cable, and internet services. Upon selection of a provider or providers, the Proponent will coordinate service connection locations and obtain appropriate approvals.

6.7 Natural Gas System

National Grid owns and maintains natural gas services in the public rights-of-way adjacent to the Project Site. The Project is expected to utilize natural gas for heating and domestic hot water. The actual size and location of the building services and gas meter locations will be coordinated with the project architect and National Grid.

6.8 Utility Protection During Construction

Existing public and private utility infrastructure located within adjacent public rights-of-way will be protected during the construction of the proposed Project. The installation of proposed utility connections within public rights-of-way will be undertaken in accordance with BWSC, Boston Public Works Department, Dig Safe and applicable private utility company requirements. Specific methods for constructing proposed utilities where they are near to, or connect with, existing water, sanitary sewer, and storm drain facilities will be reviewed by BWSC as part of its Site Plan Review process. All necessary permits will be obtained before the commencement of work.

The Proponent will continue to work and coordinate with BWSC and the private utility companies to ensure safe and coordinate utility construction activities as part of the Proposed Project.

7.0 TRANSPORTATION COMPONENT

7.1 Introduction

Howard Stein Hudson (HSH) has conducted an evaluation of the transportation impacts of the proposed redevelopment of the DOT BLOCK in Dorchester, MA (the “Project” and/or the “Site”). This transportation study adheres to the Boston Transportation Department (BTD) Transportation Access Plan Guidelines and Article 80 Large Project Review process. This study includes an evaluation of existing conditions, future conditions with and without the Project, projected parking demand, loading operations, transit services, and pedestrian activity.

7.1.1 Project Description

The Project consists of the construction of approximately 320 residential apartment units, 64 residential condominiums, and approximately 60,000 square feet of commercial space. The Project will also provide up to 450 parking spaces in an enclosed garage and 22 separate parking spaces in a covered lot.

For purposes of the traffic analysis, however, the building program includes the proponent successfully acquiring the additional parcels at the corner of Greenmount Street and Dorchester Avenue. The building program includes 355 to 360 residential apartments, 64 residential condominiums, and approximately 68,200 square feet of ground floor retail.

7.1.2 Study Area

The transportation study area is generally bounded by Dorchester Avenue to the east, Hancock Street to the south, Pleasant Street to the west, and Greenmount Street to the north. The study area consists of the following four intersections in the vicinity of the Project site, also shown on **Figure 7-1**:

- Dorchester Avenue/Hancock Street/Hoyt Street (signalized);
- Dorchester Avenue/Freeport Street/East Street (signalized);
- Dorchester Avenue/Greenmount Street/Dewar Street (unsignalized); and
- Hancock Street/Pleasant Street (unsignalized).

7.1.3 Study Methodology

This transportation study and supporting analyses were conducted in accordance with BTD guidelines and is described below.

Figure 7-1.
Study Area Intersections

The 2015 Existing Condition analysis includes an inventory of the existing transportation conditions such as traffic characteristics, parking, curb usage, transit, pedestrian circulation, bicycle facilities, loading, and site conditions. Existing counts for vehicles, bicycles, and pedestrians were collected at the study area intersections. A traffic data collection effort forms the basis for the transportation analysis conducted as part of this evaluation.

The future transportation conditions analysis evaluates potential transportation impacts associated with the Project. Long-term impacts are evaluated for the year 2020, based on a five-year horizon from the year of the filing of this traffic study.

The 2020 No-Build Condition scenario includes both general background traffic growth, traffic growth associated with specific developments (not including this Project) and transportation improvements that are planned in the vicinity of the Project site.

The 2020 Build Condition scenario includes a net increase in traffic volume due to the addition of Project-generated trip estimates to the traffic volumes developed as part of the 2020 No-Build Condition scenario. Expected roadway, parking, transit, pedestrian, and bicycle accommodations, as well as loading capabilities and deficiencies are identified.

The final part of the transportation study identifies measures to mitigate Project-related impacts and to address any traffic, pedestrian, bicycle, transit, safety, or construction related issues that are necessary to accommodate the Project.

An evaluation of short-term traffic impacts associated with construction activities is also provided.

7.2 Existing Condition

This section includes descriptions of existing study area roadway geometries, intersection traffic control, peak-hour vehicular and pedestrian volumes, average daily traffic volumes, transit availability, parking, curb usage, and loading conditions.

7.2.1 Existing Roadway Conditions

The study area includes the following roadways, which are categorized according to the Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning functional classifications:

Dorchester Avenue borders the Project site to the east, is classified as an urban principal arterial, and runs in a north-south direction through the study area. Dorchester Avenue continues north to the neighborhood of South Boston and to the south through Dorchester to the Milton Town Line. In the vicinity of the Project site, Dorchester Avenue typically consists of one travel lane and a parking lane in each direction. At key intersections, such as the pair of signalized intersections within the study area, the parking lane is replaced with a turning lane. North of the intersection with Hancock Street and Hoyt Street, bike lanes are marked in each direction. South of the intersection with East Street and Freeport Street, bike sharrows are marked in each direction. Sidewalks are provided along both sides of Dorchester Avenue.

Pleasant Street borders the Project site to the west, is classified as an urban minor arterial and runs in a north-south direction through the study area. Pleasant Street consists of one travel lane in each direction with on-street parking on both sides. Sidewalks are provided along both sides of Pleasant Street.

Hancock Street borders the Project site to the south, is classified as an urban minor arterial, and generally runs east-west through the study area. Hancock Street generally consists of one travel lane in each direction with on-street parking on both sides, although parking restrictions exist on certain segments of the road. Sidewalks are provided along both sides of Hancock Street.

Freeport Street is located south of the Project site on the east side of Dorchester Avenue, is classified as an urban principal arterial, and generally runs in an east-west direction. Freeport Street consists of a single travel lane and a curbside bike lane in each direction without any on-street parking. Sidewalks are provided along both sides of Freeport Street.

Greenmount Street borders the Project site to the north, is classified as a local roadway, and runs one-way eastbound through the study area. Greenmount Street runs on-way eastbound from Pleasant Street to Dorchester Avenue at the intersection of Dewar Street. Greenmount Street consists of a single travel lane with no on-street parking. Narrow sidewalks are provided along both sides of Greenmount Street.

Dewar Street is located northeast of the Project site, is classified as a local roadway, and runs in an east-west direction. Dewar Street runs from Dorchester Avenue to the west to a dead end in the east in a primarily industrial zone. Dewar Street consists of one travel lane in each direction with no centerline marking. On-street parking is not allowed on the northern side of the street. Sidewalks are provided along both sides of Dewar Street.

Hoyt Street is located southeast of the Project site, is classified as a local roadway, and runs in an east-west direction. Hoyt Street provides access to a parking lot used by Boston Public School buses. Hoyt Street consists of one travel lane in each direction with no on-street parking. Sidewalks are provided along both sides of Hoyt Street.

East Street is located south of the Project site, is classified as a local roadway, and runs one-way eastbound through the study area. East Street runs one-way eastbound towards Dorchester Avenue at the intersection with Freeport Street. East Street consists of a single travel lane with on-street parking on one side. Sidewalks are provided along both sides of East Street to a point approximately 500 feet west of Dorchester Avenue. Further west, a sidewalk is only provided on the southern side of the street.

7.2.2 Existing Intersection Conditions

The existing study area intersections are described below. Intersection characteristics such as traffic control, lane usage, pedestrian facilities, pavement markings, and adjacent land use are described.

Dorchester Avenue at Hancock Street and Hoyt Street is a four-leg, signalized intersection. The signal also controls the adjacent intersection of Dorchester Avenue at Freeport Street and East Street.

The Dorchester Avenue northbound approach consists of a left-turn only lane and a through/right-turn lane. The Dorchester Avenue southbound approach consists of a left-turn/through lane and a through/right-turn lane. Bike sharrows are painted on both Dorchester Avenue approaches. In addition, a bike box is designated on the Dorchester Avenue northbound approach. An MBTA bus stop exists on the Dorchester Avenue southbound approach.

The Hancock Street eastbound approach consists of two right-turn only lanes. The Hoyt Street westbound approach consists of a single left-turn/through/right-turn lane.

Sidewalks are provided along both sides of each intersection leg. Crosswalks and pedestrian signals are provided along the east, north, and west sides of the intersection. On-street parking is not permitted along any intersection approach.

Dorchester Avenue at Freeport Street and **East Street** is a four-leg, signalized intersection. The signal also controls the intersection of Dorchester Avenue at Hancock Street and Hoyt Street.

The Dorchester Avenue northbound approach consists of a through-only lane and a through/right-turn lane. The Dorchester Avenue southbound approach consists of a left-turn only lane and a through-only lane. Bike sharrows are painted on both Dorchester Avenue approaches. In addition, bike boxes are designated on both Dorchester Avenue approaches.

The East Street eastbound approach (one-way eastbound) consists of a single left-turn/through/right-turn lane. The Freeport Street westbound approach consists of a single right-turn only lane. In addition, a driveway for a gas station located on the northeast corner of the intersection utilizes the signal. Vehicles exiting the gas station go concurrently with the East Street approach.

Sidewalks are provided along both sides of each intersection leg. Crosswalks and pedestrian signals are provided across each approach except the Dorchester Avenue southbound approach.

On-street parking is not permitted on any intersection approach except the East Street eastbound approach.

Dorchester Avenue at Greenmount Street and Dewar Street is a four-leg, unsignalized intersection.

The Dorchester Avenue northbound approach consists of a single through/right-turn lane. The Dorchester Avenue southbound approach consists of a single left-turn/through lane. Bike lanes are marked on both Dorchester Avenue approaches.

The Greenmount Street eastbound approach (one-way) consists of a single left-turn/through/right-turn lane. The Dewar Street westbound approach consists of a single left-turn/through/right-turn lane with no marked centerline.

Sidewalks are provided along both sides of each intersection leg. No crosswalks or pedestrian signals are provided. On-street parking is permitted on both Dorchester Avenue approaches.

Hancock Street at Pleasant Street is a three-leg, unsignalized intersection with several medians and islands located within the intersection. A raised triangular island separates the eastbound left-turning vehicles and the northbound left-turning vehicles waiting for gaps in traffic.

The yield-controlled Hancock Street eastbound approach does not have lane markings but is wide enough to accommodate a left-turn queue and a right-turn queue. There is a break in the median on north-south roadway to allow for a left-turning vehicle to make a two-stage crossing.

The yield-controlled Hancock Street northbound approach consists of a single left-turn/through lane. The yield-controlled Pleasant Street southbound approach consists of a single through and right-turn lane. However, a gap in the median on the north-south roadway allows a northbound vehicle yielding to southbound traffic to wait without blocking the northbound through traffic flow.

Sidewalks are provided along both sides of each intersection leg. Crosswalks and pedestrian crossing islands are provided across each approach. On-street parking is only permitted on the Pleasant Street southbound approach.

7.2.3 Existing Parking and Curb Use

An inventory of the on-street parking in the vicinity of the Project was collected. On-street parking is generally allowed along Dorchester Avenue and Hancock Street in the vicinity of the site, most with no restrictions. On-street parking is not allowed along Dewar Street, Greenmount Street, or Hoyt Street. There are no public commercial off-street parking lots or garages within a quarter-mile of the Project site. Bus stops are located along both sides of Dorchester Avenue and the northern side of Dewar Street. The on-street parking regulations within the study area are shown in **Figure 7-2**.

Car Sharing Services

Car sharing enables easy access to short term vehicular transportation. Vehicles are rented on an hourly or daily basis, and all vehicle costs (gas, maintenance, insurance, and parking) are included in the rental fee. Vehicles are checked out for a specific time period and returned to their designated location.

Car sharing, predominantly served by Zipcar in the Boston area, provides easy access to vehicular transportation for those who do not own cars. The nearby car sharing locations within a half-mile of the Project site are shown in **Figure 7-3.**

7.2.4 Existing Traffic Data

Traffic volume data was collected at the four study area intersections on November 19, 2014. Turning Movement Counts (TMCs) and vehicle classification counts were conducted during the weekday a.m. and p.m. peak periods (7:00 – 9:00 a.m. and 4:00 – 6:00 p.m., respectively). The traffic classification counts included car, heavy vehicle, pedestrian, and bicycle movements.

The detailed traffic counts are provided in **Appendix E**. Based on the TMCs, the weekday a.m. peak hour vehicular traffic volumes occur between 7:15 and 8:15 a.m. The weekday p.m. peak hour occurs between 5:00 and 6:00 p.m.

Seasonal Adjustment

In order to account for seasonal variation in traffic volumes throughout the year, data provided by MassDOT were reviewed. The most recent (2011) MassDOT Weekday Seasonal Factors were used to determine the need for seasonal adjustments to the November 2014 TMCs. The seasonal adjustment factor for November for roadways similar to the study area (Group 6) is 0.97. This indicates that average month traffic volumes are approximately three percent less than the traffic volumes that were collected. The traffic counts were not adjusted downward to reflect average month conditions in order to provide a conservatively high analysis consistent with the peak season traffic volumes. The MassDOT 2011 Weekday Seasonal Factors table is provided in **Appendix E**.

7.2.5 Existing Traffic Volumes

Existing traffic volumes were collected to develop the 2015 Existing Condition vehicular traffic volumes. The 2015 Existing weekday morning and evening peak hour traffic volumes are shown in **Figure 7-4** and **Figure 7-5**, respectively.

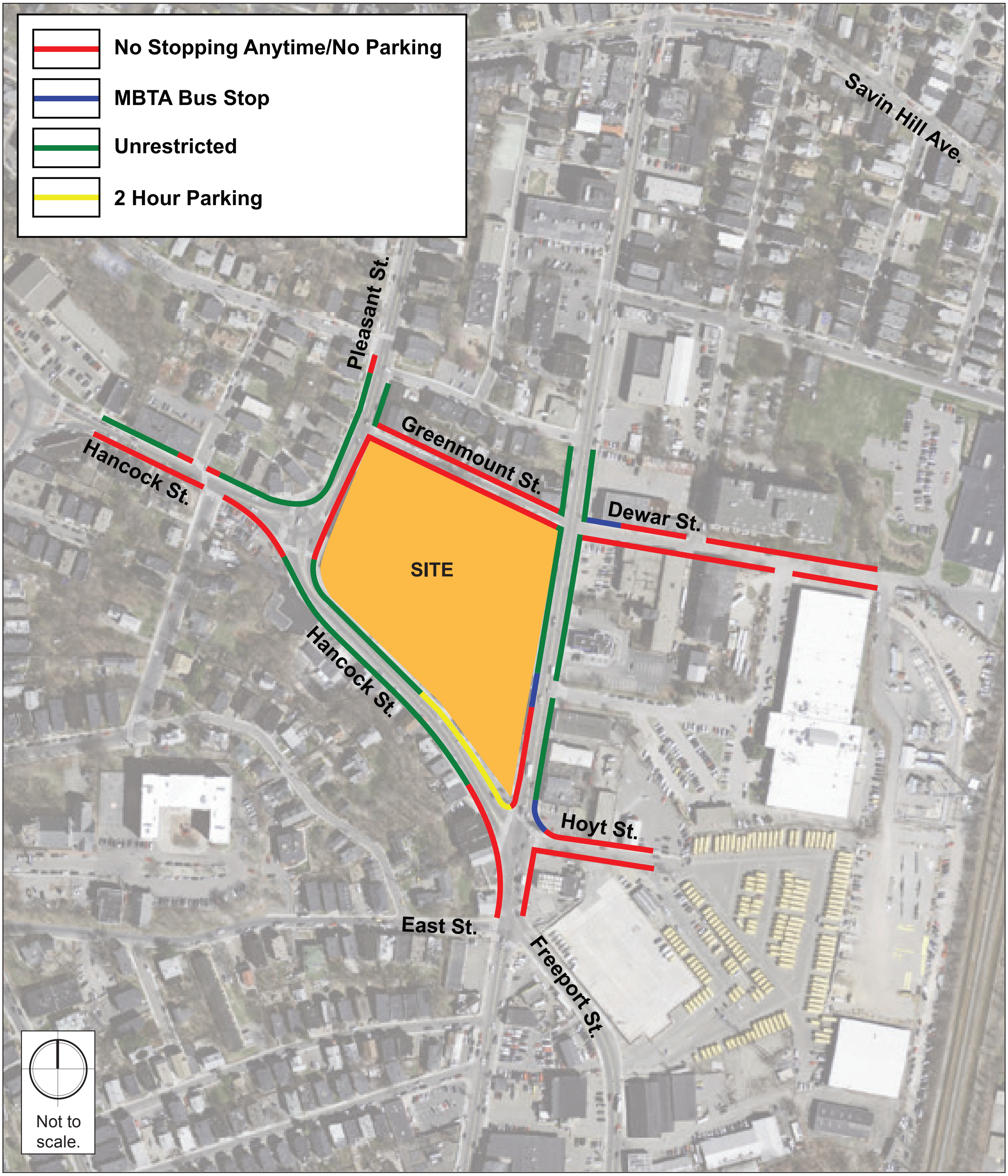


Figure 7-2.
On-Street Parking Regulations

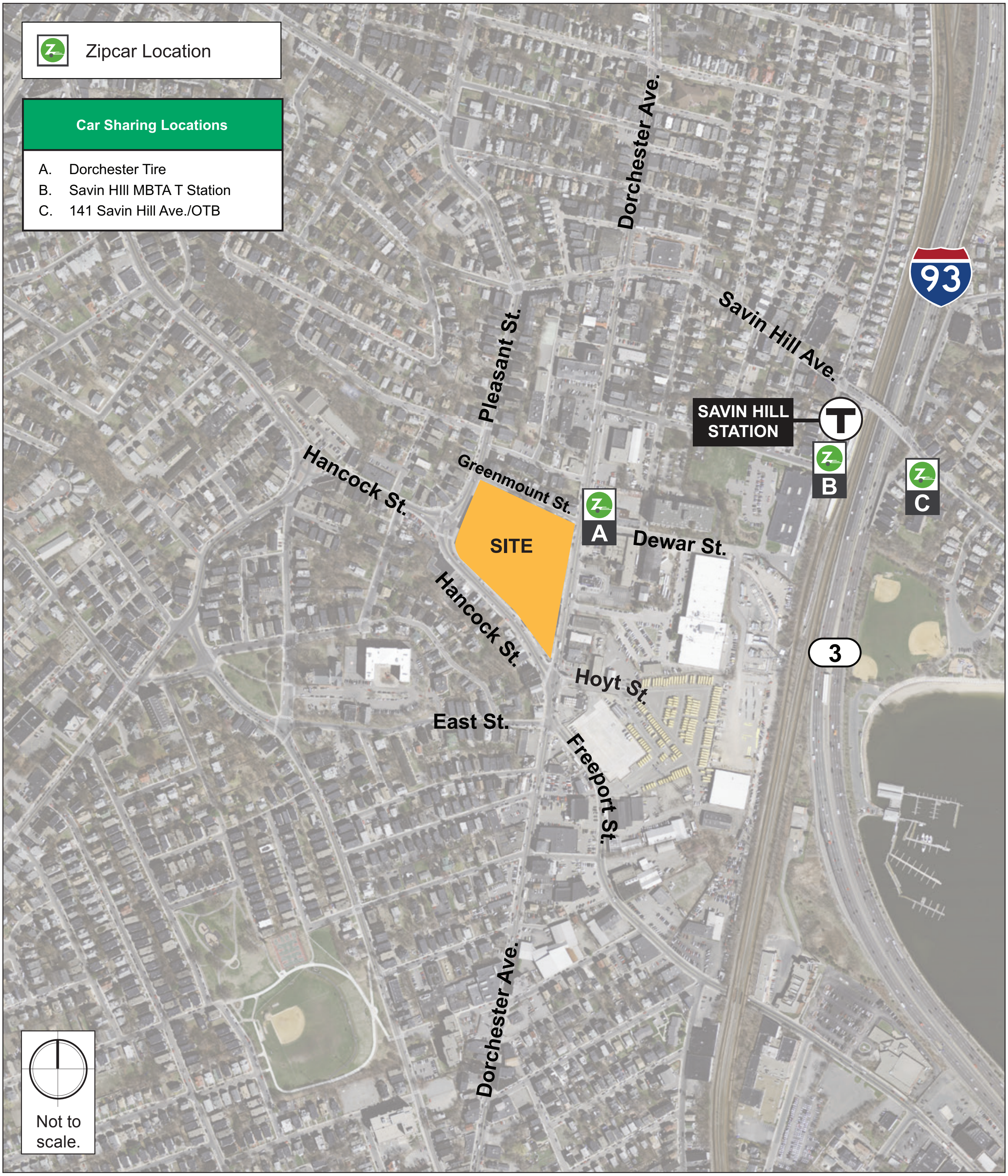


Figure 7-3.
Car Sharing Locations

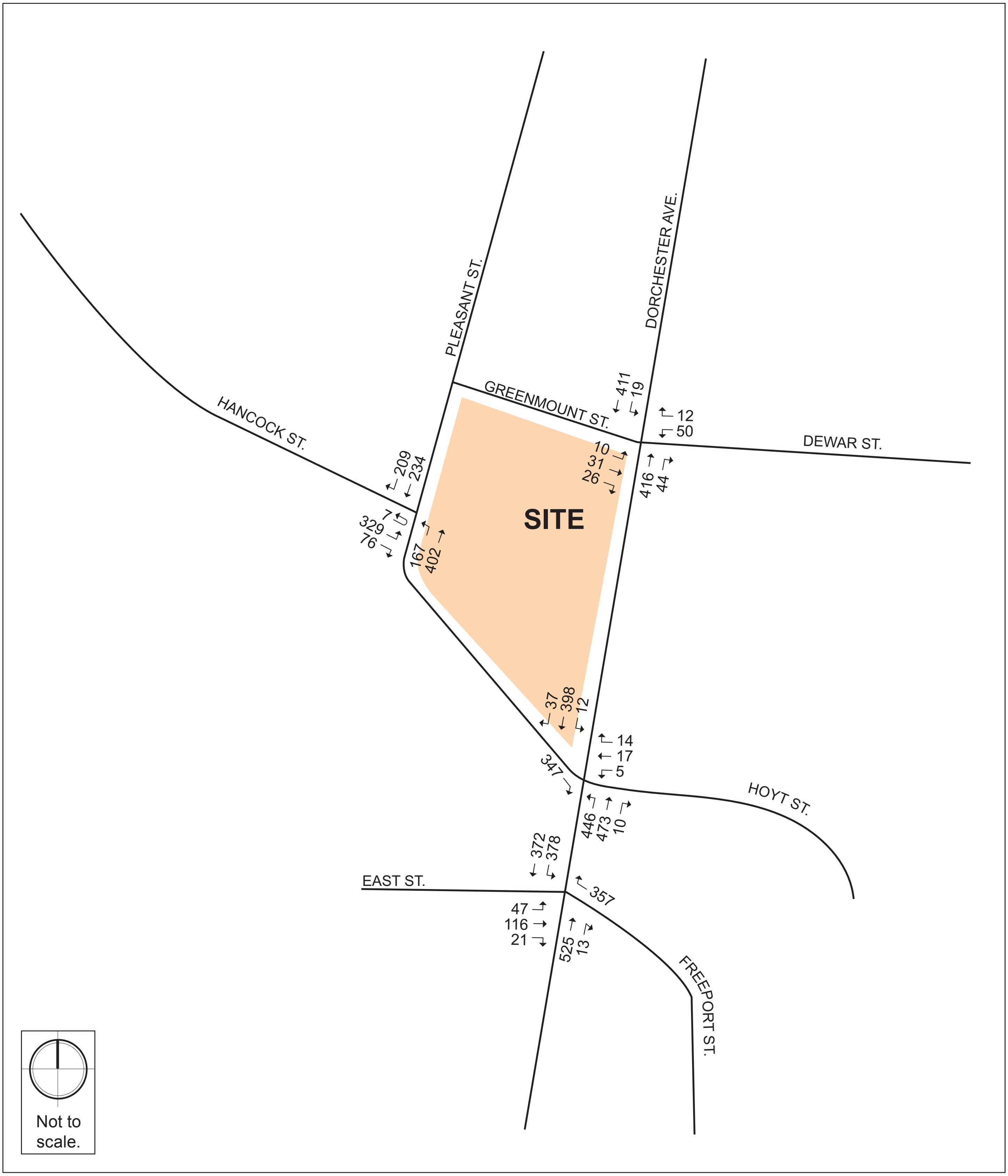


Figure 7-4.
Existing Condition (2015) Vehicular Traffic Volumes, a.m. Peak Hour

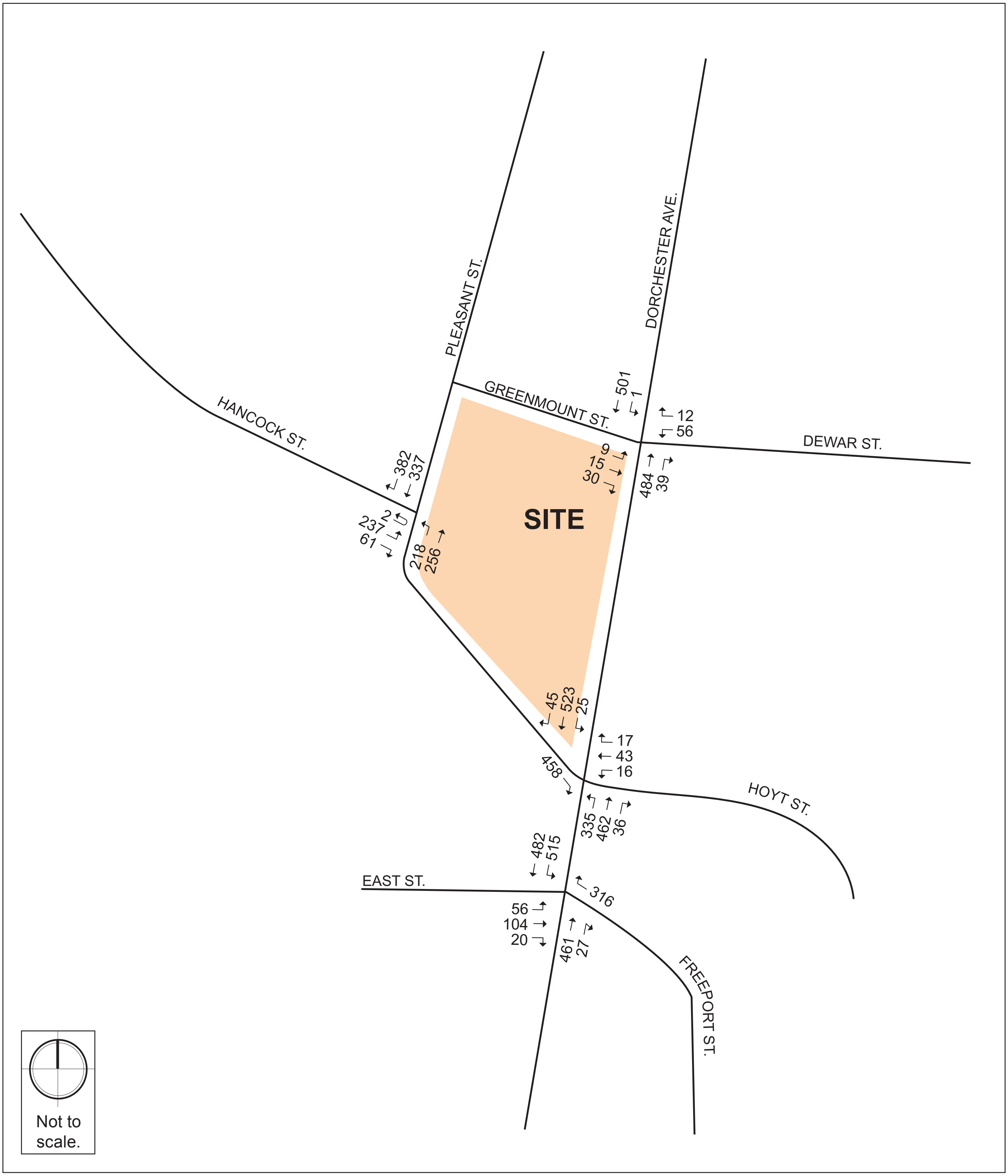


Figure 7-5.
Existing Condition (2015) Vehicular Traffic Volumes, p.m. Peak Hour

MLF CONSULTING LLC

HOWARD STEIN HUDSON
Engineers + Planners

DOT BLOCK - EPNF
Transportation Component

7.2.6 Existing Bicycle Volumes and Accommodations

In recent years, bicycle use has increased dramatically throughout the City of Boston. The Project site is conveniently located in close proximity to several bicycle facilities. The City of Boston's "Bike Routes of Boston" map indicates that Pleasant Street and Hancock Street between Pleasant Street and Dorchester Avenue are designated as beginner routes suitable for all types of bicyclists including newer cyclists, cyclists with limited on-road experience and/or children. Dorchester Avenue itself is designated as an intermediate route north of the intersection with Hancock Street and Hoyt Street where bike lanes are provided, and as an advanced route south of the intersection where there is no bike lane. An intermediate route is suitable for riders with some on-road experience and an advanced route is suitable for more traffic-confident cyclists.

Bicycle counts were conducted concurrent with the vehicular TMCs, and are presented in **Figure 7-6**. As shown in the figure, bicycle volumes are heaviest along Dorchester Avenue during the peak periods.

7.2.7 Existing Pedestrian Volumes and Accommodations

In general, sidewalks are provided along all roadways and are in good condition. Crosswalks are provided at all study area intersections except the unsignalized intersection of Dorchester Avenue/Greenmount Street/Dewar Street. Pedestrian signal equipment is provided at both of the signalized study area intersections. Dorchester Avenue provides pedestrian access to the Savin Hill section of Dorchester, including the Savin Hill station on the MBTA Red Line. Hancock Street provides pedestrian access to another neighborhood hub at Uphams Corner.

To determine the amount of pedestrian activity within the study area, pedestrian counts were conducted concurrent with the TMCs at the study area intersection and are presented in **Figure 7-7**. As shown in the figure, pedestrian activity is heavy throughout the study area.

7.2.8 Existing Transit Services

The Project site is located approximately a half-mile walk from the Savin Hill MBTA station. Savin Hill Station is located on the Ashmont branch of the MBTA Red Line, a rapid transit line which provides service to Cambridge, downtown Boston, Dorchester, and the southeast suburbs via a connection to the Braintree branch at the MBTA JFK/UMass Station. Three MBTA bus routes have stops within a quarter-mile of the Project site, including key bus route 15. **Figure 7-8** maps the public transportation services located in close proximity to the Project site. **Table 7-1** shows the schedules of the bus and rail transit services closest to the Project site.

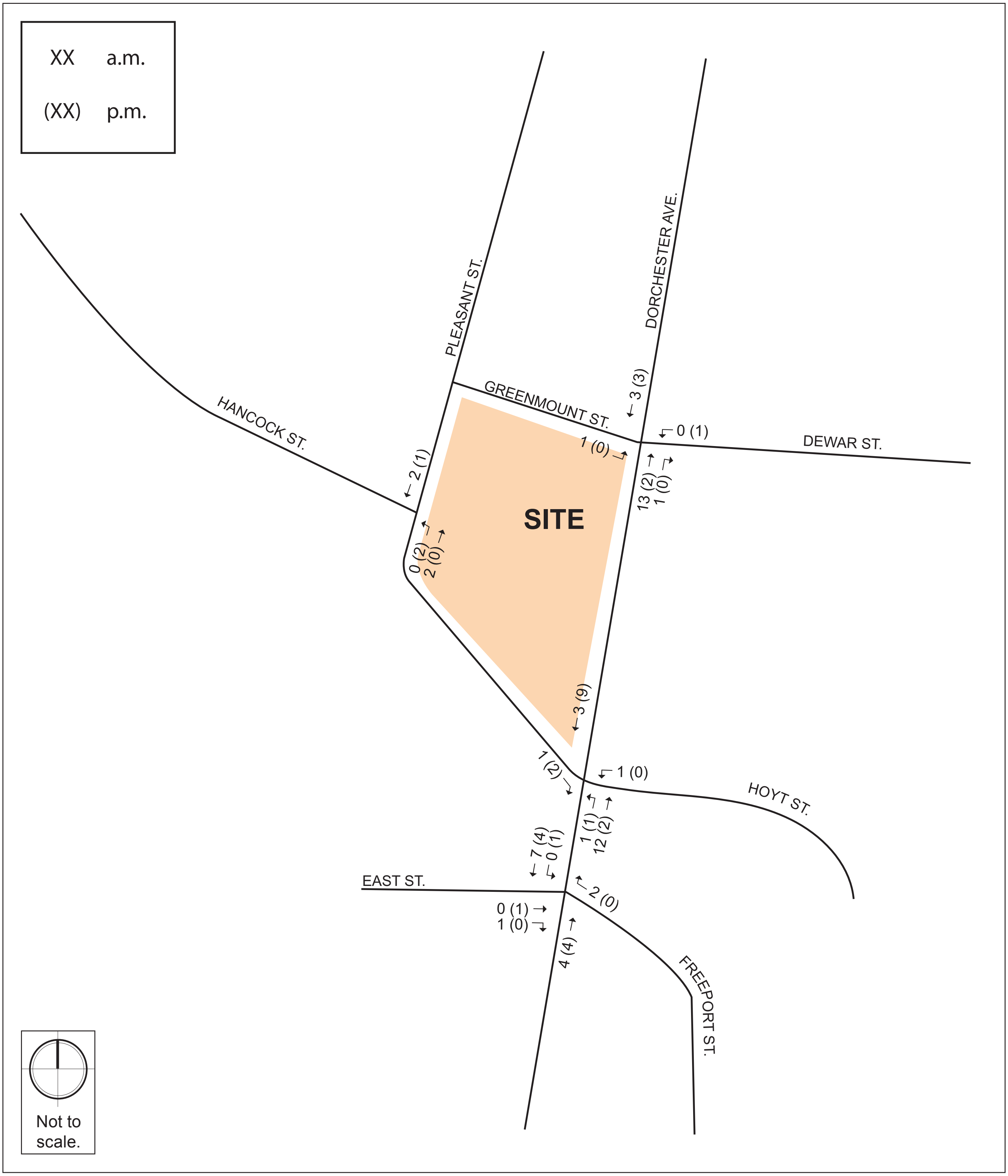


Figure 7-6.
Existing Condition (2015) Bicycle Traffic Volumes, a.m. and p.m. Peak Hours

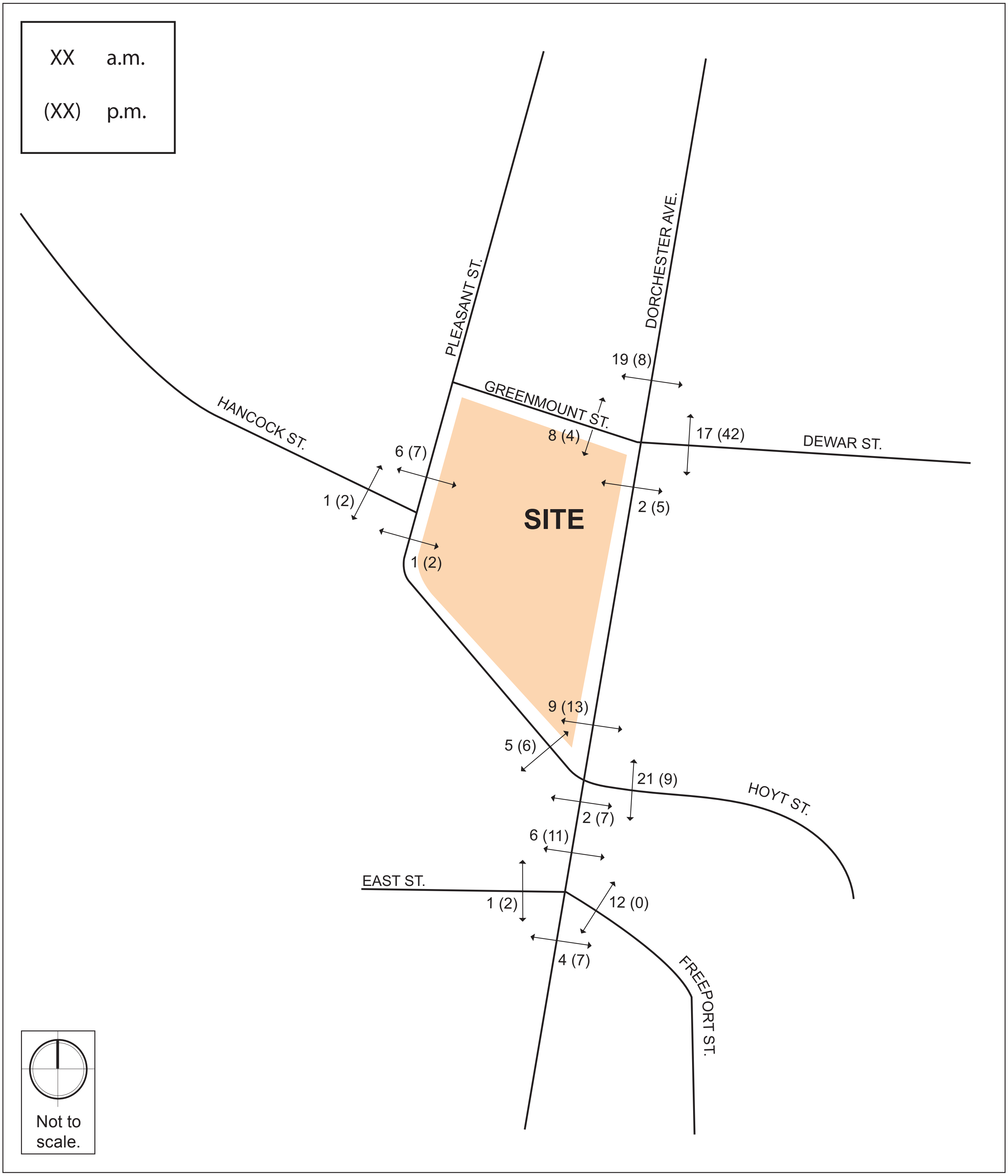


Figure 7-7.
Existing Condition (2015) Pedestrian Volumes, a.m. and p.m. Peak Hours

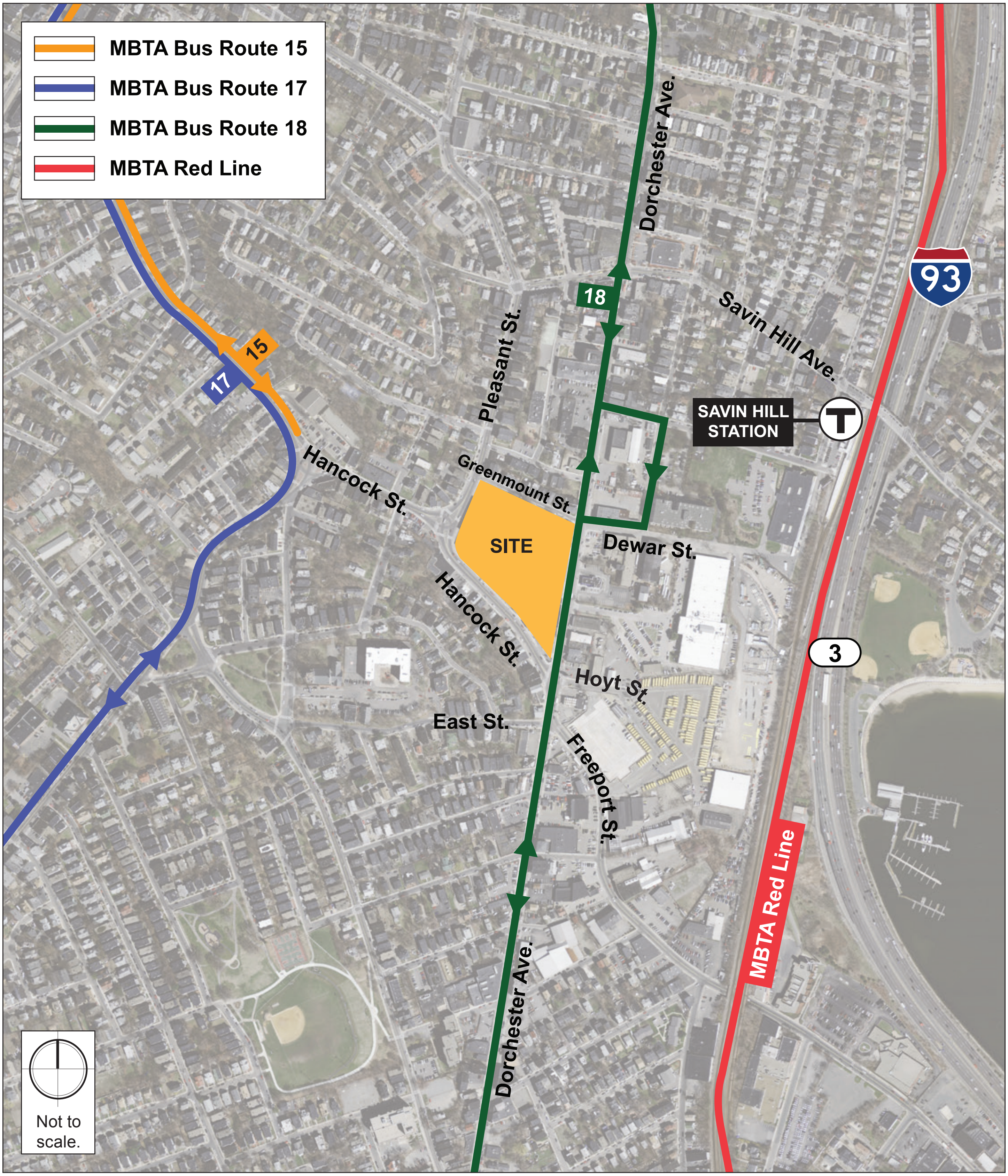


Figure 7-8.
Existing Transit Services

Table 7-1. Existing Transit Services

Route	Description	Peak-hour Headway (mins)*	Weekday Service Duration1	Saturday Service Duration1	Sunday Service Duration1
Local Rapid Transit					
Red Line	Alewife – Ashmont or Braintree	5	5:15 a.m. – 12:30 p.m.	5:15 a.m. – 2:15 a.m.	6:00 a.m. – 12:30 a.m.
Local Bus Routes					
15	Kane Square or Fields Corner Station – Ruggles Station via Uphams Corner	5-10	5:10 a.m. – 12:45 a.m.	4:55 a.m. – 2:55 a.m.	6:00 a.m. – 1:15 a.m.
17	Fields Corner Station – Andrew Station via Uphams Corner & Edward Everett Square	15-20	4:55 a.m. – 10:15 p.m.	5:05 a.m. – 10:05 p.m.	8:50 a.m. – 7:25 p.m.
18	Ashmont Station – Andrew Station via Fields Corner Station	30-40	6:05 a.m. – 6:50 p.m.	9:00 a.m. – 6:45 p.m.	No Service

* Source: MBTA.com, December 2014. Headway varies.

7.2.1 Existing Condition Traffic Operations Analysis

Trafficware's Synchro (version 9) software package was used to calculate average delay and associated LOS at the study area intersections. This software is based on the traffic operational analysis methodology of the Transportation Research Board's 2000 Highway Capacity Manual (HCM).

LOS designations are based on average delay per vehicle for all vehicles entering an intersection. **Table 7-2** displays the intersection LOS criteria. LOS A indicates the most favorable condition, with minimum traffic delay, while LOS F represents the worst condition, with significant traffic delay. LOS D or better is typically considered acceptable in an urban area. However, LOS E or F is often typical for a stop controlled minor street that intersects a major roadway.

Table 7-2. Vehicle Level of Service Criteria

Level of Service	Average Stopped Delay (sec/veh)	
	Signalized Intersection	Unsignalized Intersection
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Source: 2000 Highway Capacity Manual, Transportation Research Board.

In addition to delay and LOS, the operational capacity and vehicular queues are calculated and used to further quantify traffic operations at intersections. The following describes these other calculated measures.

The volume-to-capacity (v/c) ratio is a measure of congestion at an intersection approach. A v/c ratio below one indicates that the intersection approach has adequate capacity to process the arriving traffic volumes over the course of an hour. A v/c ratio of one or greater indicates that the traffic volume on the intersection approach exceeds capacity.

The 50th percentile queue length, measured in feet, represents the maximum queue length during a cycle of the traffic signal with typical (or median) entering traffic volumes.

The 95th percentile queue length, measured in feet, represents the farthest extent of the vehicle queue (to the last stopped vehicle) upstream from the stop line during five percent of all signal cycles. The 95th percentile queue will not be seen during each cycle. The queue would be this long only five percent of the time and would typically not occur during off-peak hours. Since volumes fluctuate throughout the hour, the 95th percentile queue represents what can be considered a “worst case” scenario. Queues at the intersection are generally below the 95th percentile queue throughout the course of the peak hour. It is also unlikely that the 95th percentile queues for each approach to the intersection will occur simultaneously.

Table 7-3 and **Table 7-4** summarize the 2015 Existing Condition vehicle operations analysis for the study area intersection during the a.m. and p.m. peak hours, respectively. The detailed analysis sheets are provided in **Appendix E**.

Table 7-3 Existing Condition (2015), Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentile Queue (ft)	95th Percentile Queue (ft)
Signalized Intersections					
Dorchester Ave at Hancock St	**C**	**28.1**	**-**	**-**	**-**
Hancock Street EB right | right	D	42.6	0.66	**121**	176
Hoyt Street WB left/thru/right	D	41.9	0.26	**28**	53
Dorchester Avenue NB left	D	40.5	0.81	**108**	m#431
Dorchester Avenue NB thru/right	A	9.1	0.53	**41**	m113
Dorchester Avenue SB left/thru | thru/right	C	25.3	0.42	**90**	204
Dorchester Ave at East St	**C**	**25.0**	**-**	**-**	**-**
East Street EB left/thru/right	E	72.3	0.86	**135**	#236
Freeport Street WB right	C	24.4	0.75	**88**	200
Dorchester Avenue NB thru | thru/right	C	25.7	0.46	**115**	247
Dorchester Avenue SB left	C	21.6	0.76	**42**	#312
Dorchester Avenue SB thru	A	3.6	0.42	**10**	35
Unsignalized Intersections					
Dorchester Ave at Greenmount St	**-**	**-**	**-**	**-**	**-**
Greenmount Street EB left/thru/right	C	23.3	0.31	**-**	32
Dewar Street WB left/thru/right	E	43.8	0.46	**-**	53
Dorchester Avenue NB thru/right	A	0.0	0.29	**-**	0
Dorchester Avenue SB left/thru	A	0.6	0.02	**-**	2
Hancock St at Pleasant St	**-**	**-**	**-**	**-**	**-**
Hancock Street EB left/right	D	32.5	0.82	**-**	-
Hancock Street NB left	C	15.2	0.41	**-**	-
Hancock Street NB thru	E	47.8	0.91	**-**	-
Pleasant Street SB thru/right	E	46.0	0.91	**-**	-

\# 95th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after two cycles.
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is the maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal. Grey indicates LOS E or F.

Table 7-4 Existing Condition (2015), Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentile Queue (ft)	95th Percentile Queue (ft)
Signalized Intersections					
Dorchester Ave at Hancock St	**C**	**31.8**	**-**	**-**	**-**
Hancock Street EB right | right	E	62.9	0.90	174	#277
Hoyt Street WB left/thru/right	D	42.5	0.35	53	93
Dorchester Avenue NB left	C	26.5	0.64	76	m#206
Dorchester Avenue NB thru/right	A	9.1	0.54	52	m95
Dorchester Avenue SB left/thru | thru/right	C	28.2	0.55	125	#304
Dorchester Ave at East St	**C**	**27.9**	**-**	**-**	**-**
East Street EB left/thru/right	F	94.3	0.96	140	#246
Freeport Street WB right	B	16.3	0.63	49	144
Dorchester Avenue NB thru | thru/right	C	24.7	0.39	93	206
Dorchester Avenue SB left	C	32.0	0.88	64	m#383
Dorchester Avenue SB thru	A	5.5	0.48	31	m53
Unsignalized Intersections					
Dorchester Ave at Greenmount St	**-**	**-**		**-**	**-**
Greenmount Street EB left/thru/right	D	25.4	0.30	-	31
Dewar Street WB left/thru/right	F	85.0	0.70	-	94
Dorchester Avenue NB thru/right	A	0.0	0.35	-	0
Dorchester Avenue SB left/thru	A	0.1	0.00	-	0
Hancock St at Pleasant St	**-**	**-**	**-**	**-**	**-**
Hancock Street EB left/right	C	16.6	0.54	-	-
Hancock Street NB left	C	15.3	0.49	-	-
Hancock Street NB thru	C	15.5	0.53	-	-
Pleasant Street SB thru/right	F	60.8	1.00	-	-

\# 95th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after two cycles.
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is the maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
Grey indicates LOS E or F.

The signalized intersection of Dorchester Avenue at Hancock Street currently operates at LOS C during both the weekday a.m. and p.m. peak hours. During the p.m. peak hour the Hancock Street eastbound approach operates at LOS E. The longest queues at the intersection occur in the

Dorchester Avenue northbound left-turn lane during the a.m. peak hour and in the northbound through/right lane during the p.m. peak hour.

The signalized intersection of Dorchester Avenue at East Street currently operates at LOS C during both the weekday a.m. and p.m. peak hours. During the a.m. peak hour the East Street eastbound lane operates at LOS E and during the p.m. peak hour the eastbound lane operates at LOS F. The longest queues at the intersection occur in the Dorchester Avenue southbound left-turn lane during both the a.m. and p.m. peak hours.

At the unsignalized intersection of Dorchester Avenue at Greenmount Street, the main Dorchester Avenue northbound and southbound approaches operate at LOS A during both the a.m. and p.m. peak hours. During the a.m. peak hour the Dewar Street westbound approach operates at LOS E and during the p.m. peak hour the westbound approach operates at LOS F but this is typical for a minor street under stop control intersecting a major roadway. The longest queues at the intersection occur at the Dewar Street westbound approach during both the a.m. and p.m. peak hours.

At the unsignalized intersection of Hancock Street at Pleasant Street the Hancock Street northbound through lane and the Pleasant Street southbound approach operate at LOS E during the a.m. peak hour. During the p.m. peak hour all approaches operate at LOS C except for the Pleasant Street southbound approach which operates at LOS F.

7.3 No-Build Condition

The No-Build Condition reflects a future scenario that incorporates anticipated traffic volume changes associated with background traffic growth independent of any specific project, traffic associated with other planned specific developments, and planned infrastructure improvements that will affect travel patterns throughout the study area. These infrastructure improvements include roadway, public transportation, pedestrian and bicycle improvements.

7.3.1 Background Traffic Growth

The methodology to account for generic future background traffic growth, independent of this Project, may be affected by changes in demographics, smaller scale development projects, or projects unforeseen at this time. Based on a review of recent and historic traffic data collected recently and to account for any additional unforeseen traffic growth, a one-half percent per year annual traffic growth rate was used.

7.3.2 Specific Development Traffic Growth

Traffic volumes associated with the larger or closer known development projects can affect traffic patterns throughout the study area within the future analysis time horizon. One such project was specifically accounted for in the traffic volumes for future scenarios:

St. Kevin's Redevelopment – This project is located approximately a half-mile from the Project site. Currently under construction, this development will include 80 units of affordable housing in three buildings.

7.3.3 Proposed Infrastructure Improvements

A review of planned improvements to roadway, transit, bicycle, and pedestrian facilities was conducted to determine if there are any nearby improvement projects in the vicinity of the study area. Based on this review, no planned infrastructure improvements in the area were found.

7.3.4 No-Build Traffic Volumes

The one-half percent per year annual growth rate was applied to the 2015 Existing Condition traffic volumes, then the traffic volumes associated with the background development project listed above was added to develop the 2020 No-Build Condition traffic volumes. The 2020 No-Build weekday morning and evening peak hour traffic volumes are shown on **Figure 7-9** and **Figure 7-10**, respectively.

7.3.5 No-Build Condition Traffic Operations Analysis

The 2020 No-Build Condition analysis uses the same methodology as the 2015 Existing Condition analysis. **Table 7-5** and **Table 7-6** present the 2020 No-Build Condition operations analysis for the a.m. and p.m. peak hours, respectively. The shaded cells in the tables indicate a worsening in LOS between the 2015 Existing Condition and the 2020 No-Build Condition. The detailed analysis sheets are provided in **Appendix E**.

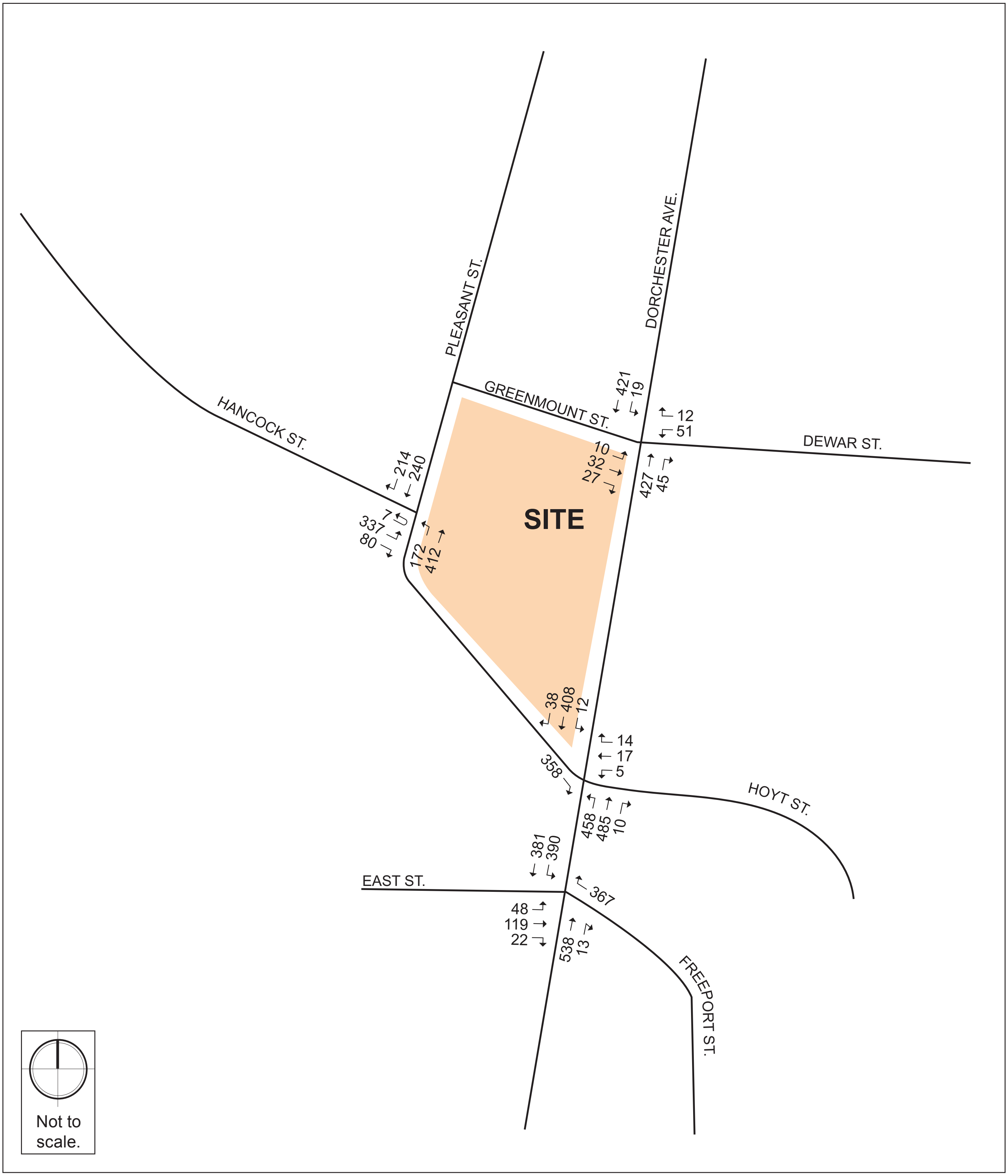


Figure 7-9.
No-Build Condition (2020) Vehicular Traffic Volumes, a.m. Peak Hour

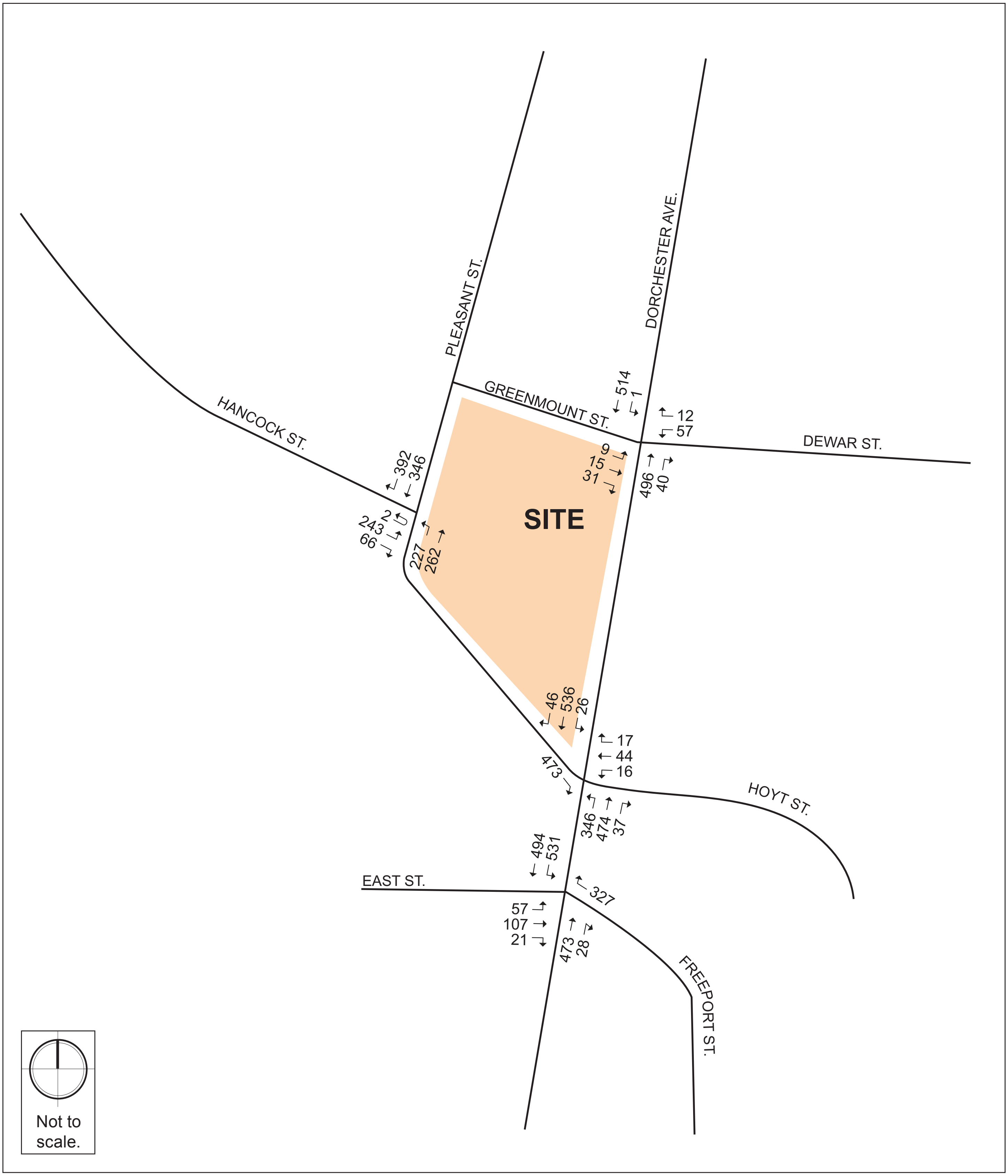


Figure 7-10.
No-Build Condition (2020) Vehicular Traffic Volumes, p.m. Peak Hour

Table 7-5 No-Build Condition (2020) Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentile Queue (ft)	95th Percentile Queue (ft)
Signalized Intersections					
Dorchester Ave at Hancock St	**C**	**28.8**	**-**	**-**	**-**
Hancock Street EB right | right	D	43.5	0.68	126	182
Hoyt Street WB left/thru/right	D	40.5	0.21	22	53
Dorchester Avenue NB left	D	42.7	0.82	111	m#438
Dorchester Avenue NB thru/right	A	8.1	0.53	40	m116
Dorchester Avenue SB left/thru | thru/right	C	25.4	0.43	93	209
Dorchester Ave at East St	**C**	**24.0**	**-**	**-**	**-**
East Street EB left/thru/right	E	68.2	0.82	128	#241
Freeport Street WB right	C	24.1	0.74	86	203
Dorchester Avenue NB thru | thru/right	C	25.6	0.46	114	248
Dorchester Avenue SB left	C	20.3	0.75	43	#315
Dorchester Avenue SB thru	A	3.5	0.41	8	37
Unsignalized Intersections					
Dorchester Ave at Greenmount St	**-**	**-**	**-**	**-**	**-**
Greenmount Street EB left/thru/right	C	22.5	0.27	-	26
Dewar Street WB left/thru/right	E	40.3	0.41	-	45
Dorchester Avenue NB thru/right	A	0.0	0.30	-	0
Dorchester Avenue SB left/thru	A	0.6	0.02	-	2
Hancock St at Pleasant St	**-**	**-**	**-**	**-**	**-**
Hancock Street EB left/right	D	33.9	0.83	-	-
Hancock Street NB left	C	15.3	0.41	-	-
Hancock Street NB thru	E	48.2	0.91	-	-
Pleasant Street SB thru/right	F	51.1	0.94	-	-

\# 95th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after two cycles.

~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is the maximum after two cycles.

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

Grey indicates a decrease to LOS E or F from existing conditions.

Table 7-6 No-Build Condition (2020) Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentile Queue (ft)	95th Percentile Queue (ft)
Signalized Intersections					
Dorchester Ave at Hancock St	**C**	**34.0**	**-**	**-**	**-**
Hancock Street EB right | right	E	69.5	0.93	181	#292
Hoyt Street WB left/thru/right	D	42.0	0.33	48	94
Dorchester Avenue NB left	C	28.7	0.67	79	m#254
Dorchester Avenue NB thru/right	A	9.5	0.55	51	m339
Dorchester Avenue SB left/thru | thru/right	C	28.5	0.56	130	#316
Dorchester Ave at East St	**C**	**27.9**	**-**	**-**	**-**
East Street EB left/thru/right	F	81.5	0.90	127	#257
Freeport Street WB right	B	17.6	0.65	56	156
Dorchester Avenue NB thru | thru/right	C	24.8	0.40	96	213
Dorchester Avenue SB left	D	38.7	0.91	76	m#400
Dorchester Avenue SB thru	A	5.6	0.49	36	m53
Unsignalized Intersections					
Dorchester Ave at Greenmount St	**-**	**-**	**-**	**-**	**-**
Greenmount Street EB left/thru/right	C	23.2	0.23	-	22
Dewar Street WB left/thru/right	F	65.2	0.58	-	72
Dorchester Avenue NB thru/right	A	0.0	0.34	-	0
Dorchester Avenue SB left/thru	A	0.1	0.00	-	0
Hancock St at Pleasant St	**-**	**-**	**-**	**-**	**-**
Hancock Street EB left/right	C	16.9	0.56	-	-
Hancock Street NB left	C	15.5	0.49	-	-
Hancock Street NB thru	C	15.4	0.52	-	-
Pleasant Street SB thru/right	F	61.0	1.00	-	-

\# 95th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after two cycles.

~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is the maximum after two cycles.

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

Grey indicates a decrease to LOS E or F from existing conditions.

The signalized intersection of Dorchester Avenue at Hancock Street will continue to operate at LOS C during both the weekday a.m. and p.m. peak hours. The Hancock Street eastbound right-turn lanes will continue to operate at LOS E during the p.m. peak hour. The longest queues at the intersection will continue to occur in the Dorchester Avenue northbound left-turn lane during the a.m. peak hour and in the northbound through/right lane during the p.m. peak hour.

The signalized intersection of Dorchester Avenue at East Street will continue to operate at LOS C during both the weekday a.m. and p.m. peak hours. During the a.m. peak hour the East Street eastbound approach will continue to operate at LOS E and during the p.m. peak hour the eastbound approach will continue to operate at LOS F. The longest queues at the intersection will continue to occur in the Dorchester Avenue southbound left-turn lane during both the a.m. and p.m. peak hours.

At the unsignalized intersection of Dorchester Avenue at Greenmount Street, the main Dorchester Avenue northbound and southbound approaches will continue to operate at LOS A during both the a.m. and p.m. peak hours. During the a.m. peak hour the Dewar Street westbound approach will continue to operate at LOS E and during the p.m. peak hour the westbound approach will continue to operate at LOS F but this is typical for a minor street under stop control intersecting a major roadway. The longest queues at the intersection will continue to occur at the Dewar Street westbound approach during both the a.m. and p.m. peak hours.

At the unsignalized intersection of Hancock Street at Pleasant Street the Hancock Street northbound through lane will continue to operate at LOS E and the Pleasant Street southbound approach will decrease to LOS F during the a.m. peak hour. During the p.m. peak hour all approaches will continue to operate at LOS C except for the Pleasant Street southbound approach which will continue to operate at LOS F.

7.4 Build Condition

The Project consists of demolishing the existing buildings that are on-site and constructing 355 to 360 residential apartment units, 64 residential condominium units, and 68,200 square feet of retail space (including a 33,100 square foot grocery store and a 12,300 square foot pharmacy). In order to analysis a worst case scenario from a traffic standpoint, this building program assumes control of the entire block including the northeast corner parcels. The 2020 Build conditions reflect a future scenario that adds anticipated Project-generated trips to the 2020 No-Build conditions traffic volumes.

7.4.1 Vehicle Site Access and Circulation

Vehicular access/egress will be provided via the intersection of Hancock Street/Pleasant Street. The site driveway will operate as the fourth leg approaching from the east to the existing three legged intersection, as shown in **Figure 7-11**. As part of the Project, the existing nonstandard intersection of Hancock Street/Pleasant Street will be reconstructed. The new four way standard intersection will be reconstructed as a modern roundabout. This intersection will be able to accommodate the vehicular traffic volume more efficiently and safer than the existing

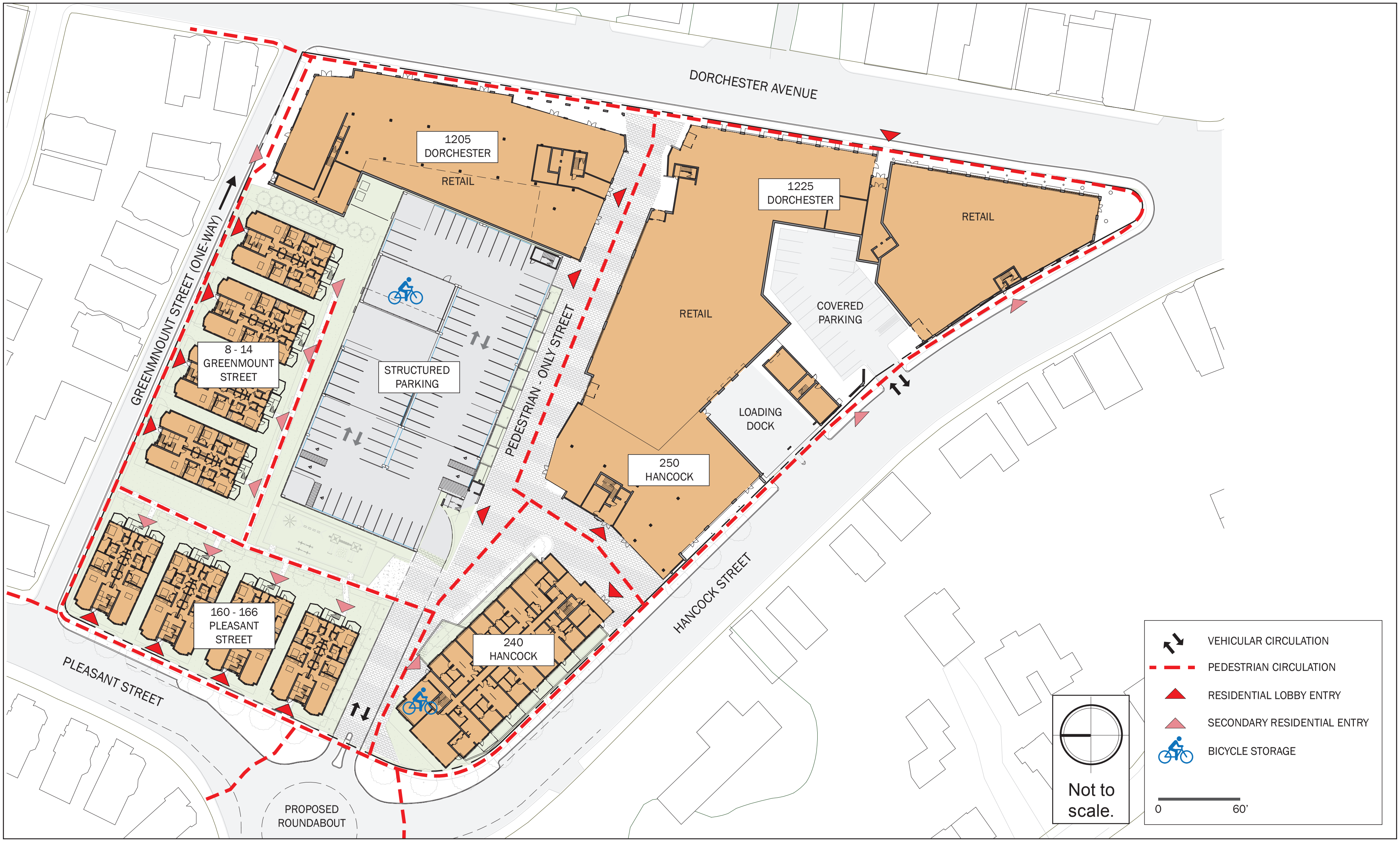


Figure 7-11.
Site Access Plan

intersection. In addition, pedestrians can safely be accommodated at the reconstructed intersection through increased pedestrian visibility and shorter crossing distances.

7.4.2 Parking

The Project will provide up to 472 parking spaces including 450 in an on-site above grade garage. An additional 22 parking spaces will be provided in a covered parking area with access via Hancock Street.

The maximum parking guidelines developed by the BTD for Dorchester are 0.75-1.25 parking spaces per residential unit/1,000 square feet of commercial space for developments near an MBTA station. The proposed project is consistent with the district-based parking goals by providing approximately one space per residential unit and 1.25 spaces per 1,000 square feet of retail space.

7.4.3 Loading and Service Accommodations

Loading and service operations will occur on-site within a designated loading area with access on Hancock Street. Residential move-in/move-out activity will take place the internal site driveway that provides access to the garage.

Truck trip estimates for both the residential and the storefront retail elements of the Project were based on data provided in the Truck Trip Generation Rates by Land Use in the Central Artery/Tunnel Project Study Area report[5]. Deliveries to the Project site will be limited to SU-36 trucks and smaller delivery vehicles.

Residential units primarily generate delivery trips related to small packages and prepared food. Based on the CTPS report, residential uses generate approximately 0.01 light truck trips per 1,000 square feet of gross floor area and 0.001 medium/heavy truck trips per 1,000 square feet of gross floor area.

Retail/Commercial uses depend on more frequent deliveries from smaller trucks. Based on the CTPS report, retail/commercial uses generate approximately 0.15 light truck trips per 1,000 square feet of floor area and 0.15 medium/heavy truck trips per 1,000 square feet of gross floor area. A summary of anticipated loading/service activity by land use is presented in **Table 7-7**.

[5] Truck Trip Generation Rates by Land Use in the Central Artery/Tunnel Project Study Area; Central Transportation Planning Staff; September 1993.

Table 7-7. Expected Delivery Activity

Land Use	Number of Deliveries	General Delivery Times
Residential	5	10% before 7:00 a.m. 70% between 7:00 a.m. and 1:00 p.m. 20% after 1:00 p.m.
Retail	20	
Total	25	

The Project is expected to generate approximately 25 deliveries per day. It is anticipated that the majority of these deliveries will occur between 7:00 a.m. and 1:00 p.m. These numbers do not include trash truck trips. The low number of anticipated deliveries will have minimal impact on the vehicular operations in the study area.

7.4.4 Trip Generation Methodology

Determining the future trip generation of the Project is a complex, multi-step process that produces an estimate of vehicle trips, transit trips, walk trips, and bicycle trips associated with a proposed development and a specific land use program. A project's location and proximity to different travel modes determines how people will travel to and from a project site.

To estimate the number of trips expected to be generated by the Project, data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*[6] were used. ITE provides data to estimate the total number of unadjusted vehicular trips associated with the Project. In an urban setting well-served by transit, adjustments are necessary to account for other travel mode shares such as walking, bicycling, and transit.

To estimate the unadjusted number of vehicular trips for the Project, the following ITE land use code (LUCs) was used:

Land Use Code 220 – Apartment. This land use code refers to dwelling units located within the same building with at least three other dwelling units. Calculation of the number of trips uses ITE's average rate per dwelling unit.

Land Use Code 230 – **Residential Condominium**. This land use code refers to units with single-family ownership that have at least one other single-family-owned unit within the same building structure. Calculation of the number of trips uses ITE's average rate per dwelling unit.

Land Use Code 820 – Shopping Center. This land use code refers to an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Calculation of the number of trips uses ITE's average rate per 1000 square feet gross leasable area.

6 Trip Generation Manual, 9th Edition; Institute of Transportation Engineers; Washington, D.C.; 2012.

Land Use Code 850 – Supermarket. This land use code refers to a free-standing retail store selling a complete assortment of food, food preparation and wrapping materials, and household cleaning items. Calculation of the number of trips uses ITE's average rate per dwelling unit.

7.4.5 Mode Share

The BTD provides vehicle, transit, and walking mode split rates for different areas of Boston. The Project is located in the southerly portion of designated Area 8, which also includes areas of Dorchester along the MBTA Red Line and Dorchester Avenue, south of the Project site. The unadjusted vehicular trips were converted to person trips by using vehicle occupancy rates published by the Federal Highway Administration (FHWA)[7]. The person trips were then distributed to different modes according to the mode shares shown in **Table 7-8**.

Table 7-8 Travel Mode Shares

Time Period		Vehicle Occupancy Rate a	Walk/Bike Share b	Transit Share b	Vehicle Share b
Residential	In	1.13	24%	23%	53%
	Out	1.13	24%	23%	53%
Commercial	In	1.78	29%	11%	60%
	Out	1.78	29%	11%	60%

a Based on Table 16 from "Summary of Travel Trends: 2009 National Household Travel Survey" (FHWA,2011).

b Based on rates published by the Boston Transportation Department for Area 8.

7.4.6 Project Trip Generation

The mode share percentages shown in **Table 7-8** were applied to the number of person trips to develop walk/bicycle, transit, and vehicle trip generation estimates. The existing uses on the Project site currently generate minimal vehicular traffic volumes and were not accounted for in the trip generation estimates. The trip generation for the Project by mode is shown in **Table 7-9**. The detailed trip generation information is provided in **Appendix E**.

[7] *Summary of Travel Trends: 2009 National Household Travel Survey*; FHWA; Washington, D.C.; June 2011.

Table 7-9 Trip Generation Summary

Time Period		Walk/Bicycle Trips	Transit Trips	Primary Vehicle Trips
Daily				
Condominium [a]	In	40	39	80
	Out	43	40	82
	Total	**83**	**79**	**162**
Apartment [b]	In	257	247	503
	Out	269	257	525
	Total	**526**	**504**	**1,028**
Retail [c]	In	1,147	395	1,016
	Out	1,122	387	994
	Total	**2,269**	**782**	**2,010**
Total	In	**1,444**	**681**	**1,599**
	Out	**1,434**	**684**	**1,601**
	Total	**2,878**	**1,365**	**3,200**
a.m. Peak Hour				
Condominium	In	1	2	2
	Out	8	7	10
	Total	**9**	**9**	**12**
Apartment	In	9	11	18
	Out	48	42	63
	Total	**57**	**53**	**81**
Retail	In	45	17	44
	Out	30	10	22
	Total	**75**	**27**	**66**
Total	In	**55**	**30**	**64**
	Out	**86**	**59**	**95**
	Total	**141**	**89**	**159**
p.m. Peak Hour				
Condominium	In	5	4	6
	Out	2	3	4
	Total	**7**	**7**	**10**
Apartment	In	32	27	41
	Out	15	19	28
	Total	**47**	**46**	**69**
Retail	In	110	38	91
	Out	83	32	71
	Total	**193**	**70**	**162**
Total	In	**147**	**69**	**138**
	Out	**100**	**54**	**103**
	Total	**247**	**123**	**241**

a Based on 64 units of ITE LUC 230 – Residential Condominiums.

b Based on 355 units of ITE LUC 220 – Apartment.

c. Based on 35,100 square feet of ITE LUC 820 – Shopping Center and 33,100 square feet of ITE LUC 850 – Supermarket.

7.4.7 Trip Distribution

The trip distribution identifies the various travel paths for vehicles arriving and leaving the Project site. Trip distribution patterns for the Project were based on BTD's origin-destination data for Area 8 and trip distribution patterns presented in traffic studies for nearby projects. The trip distribution patterns for the Project are illustrated in **Figure 7-12**.

7.4.8 Build Traffic Volumes

The vehicle trips were distributed through the study area. The project-generated trips for the a.m. and p.m. peak hours are shown in **Figure 7-13** and **Figure 7-14**, respectively. The trip assignments were added to the 2020 No-Build Condition vehicular traffic volumes to develop the 2020 Build Condition vehicular traffic volumes. The 2020 Build a.m. and p.m. peak hour traffic volumes are shown on **Figure 7-15** and **Figure 7-16**, respectively.

7.4.9 Bicycle Accommodations

BTD has established guidelines requiring projects subject to Transportation Access Plan Agreements to provide secure bicycle parking for residents and short-term bicycle racks for visitors. Based on BTD guidelines, the Project will supply a minimum of 400 secure bicycle parking/storage spaces within the parking garage.

7.4.10 Build Condition Traffic Operations Analysis

The 2020 Build Condition analysis uses the same methodology as the 2015 Existing Condition and 2020 No-Build Condition analysis. The new four-legged intersection of Hancock Street at Pleasant Street was modeled as a roundabout using Sidra Intersection software. **Table 7-10** and **Table 7-11** present the 2020 Build Condition operations analysis for the a.m. and p.m. peak hours, respectively. The shaded cells in the tables indicate a worsening in LOS between the 2020 No-Build Condition and the 2020 Build Condition. The detailed analysis sheets are provided in **Appendix E**.

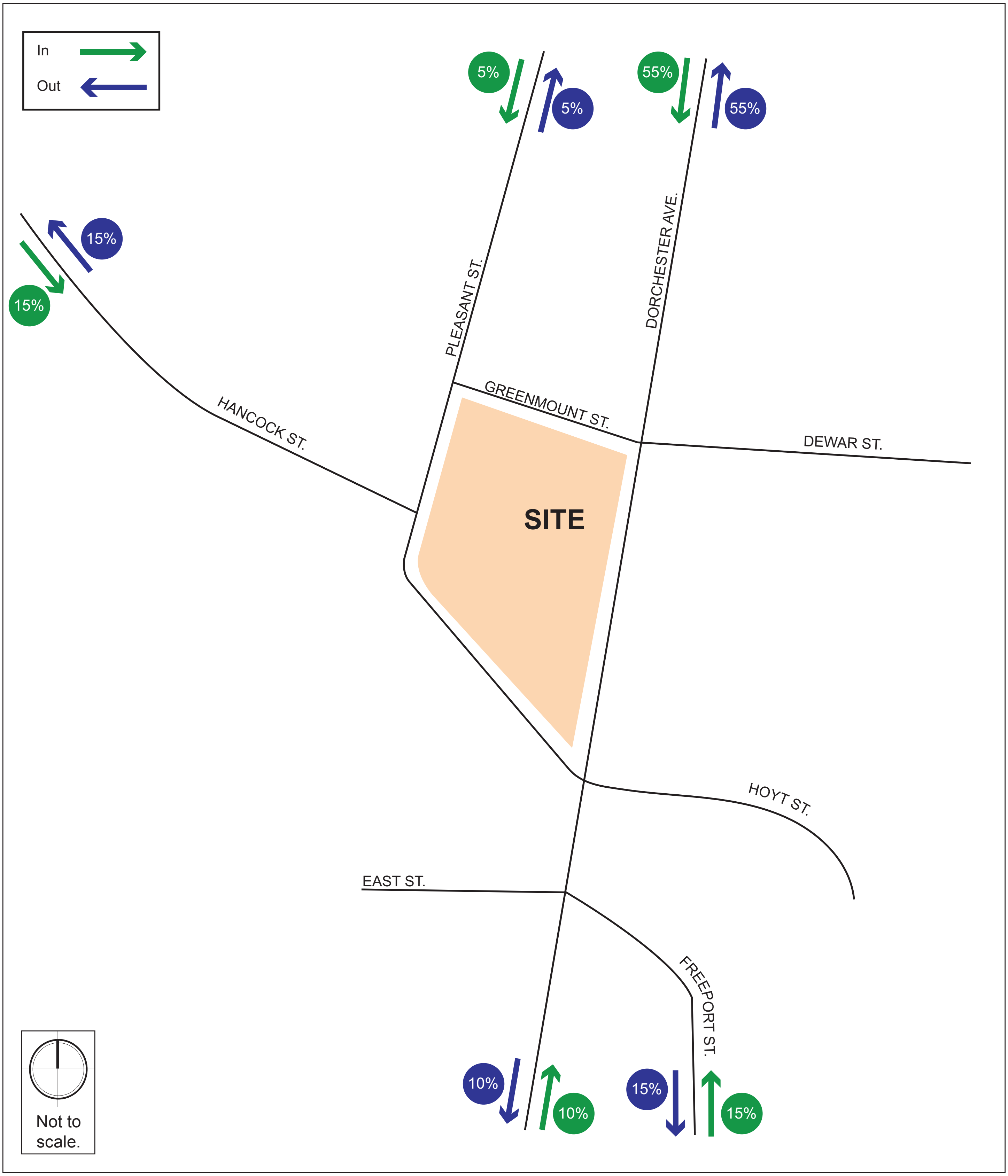


Figure 7-12.
Trip Distribution

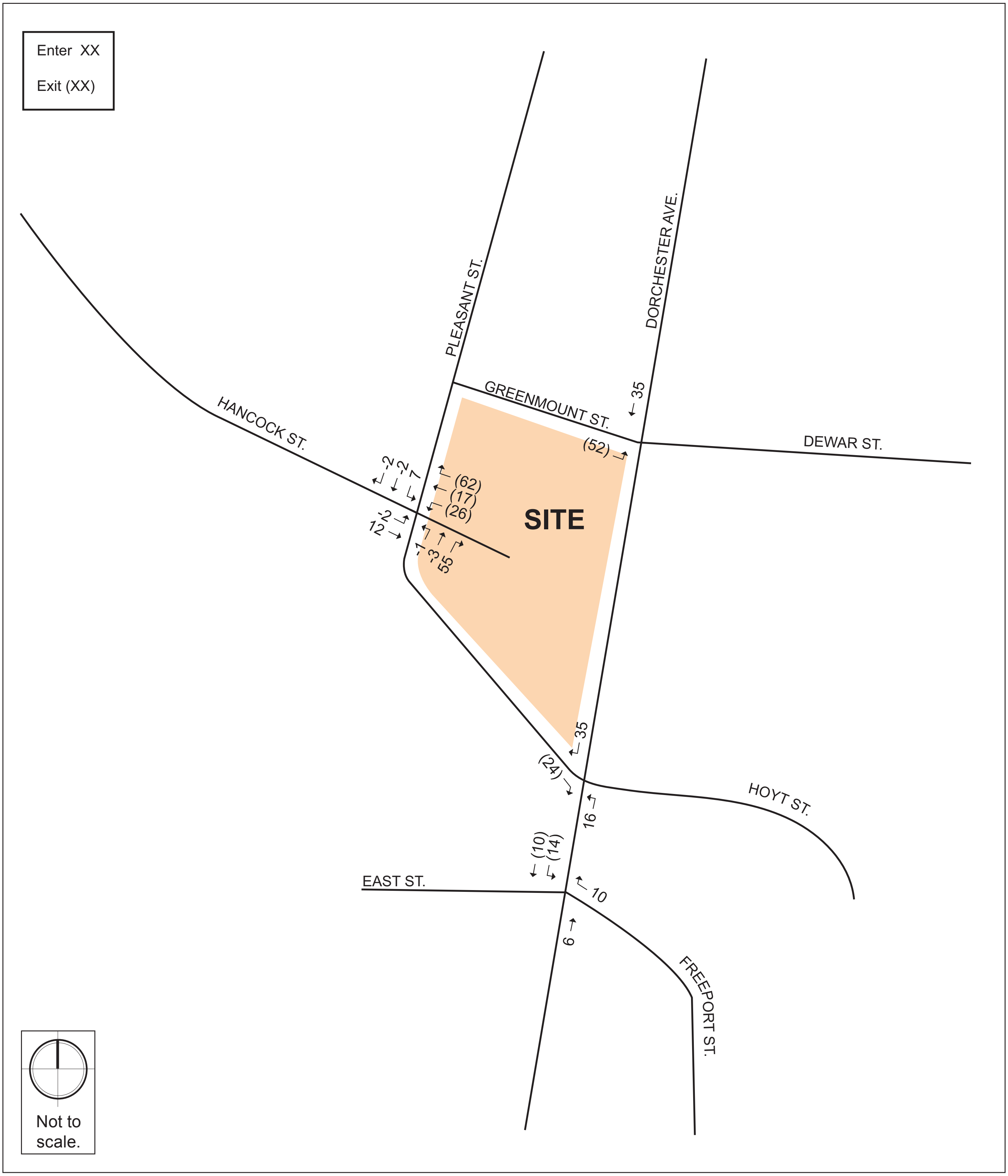


Figure 7-13.
Project-Generated Vehicle Trip Assignment, a.m. Peak Hour

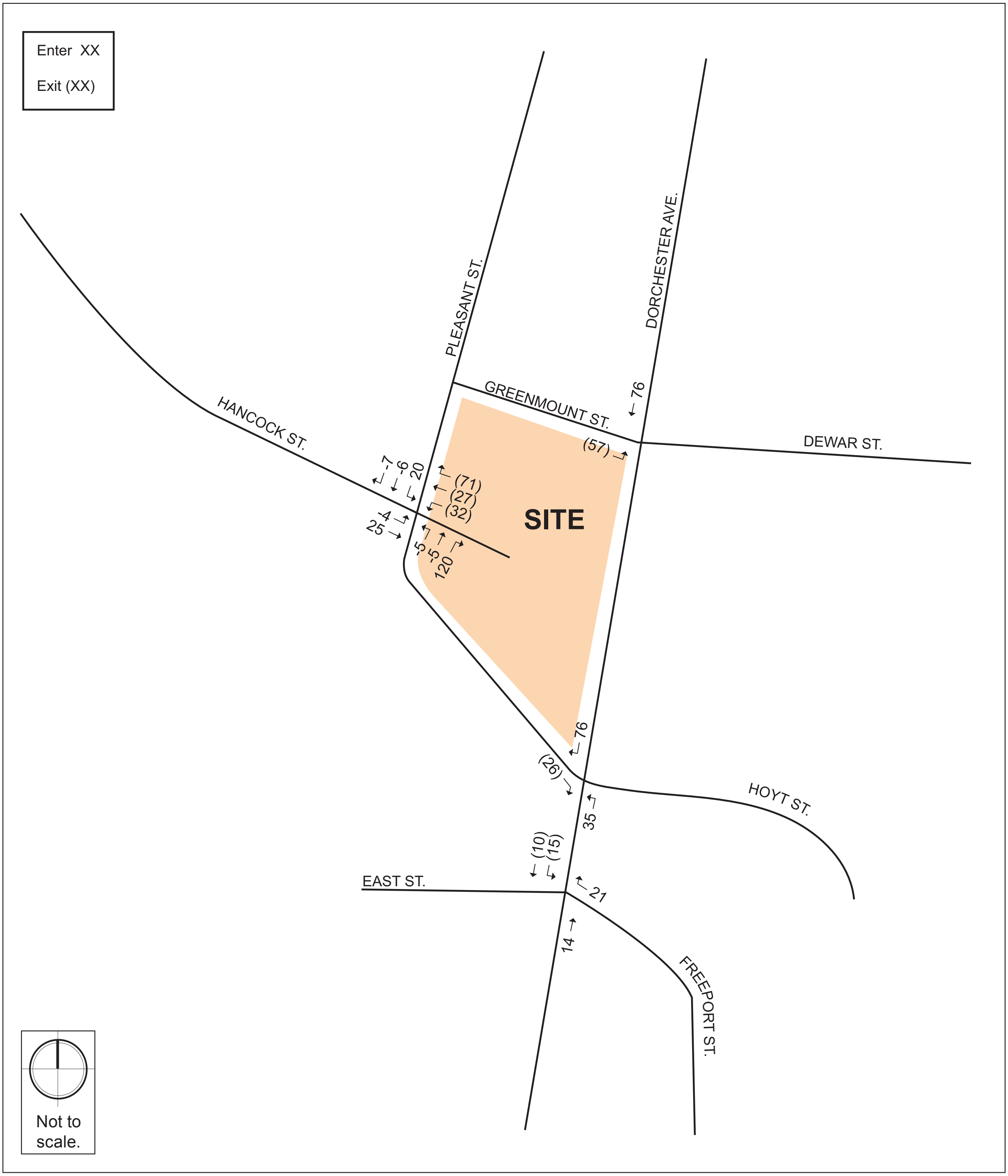


Figure 7-14.
Project-Generated Vehicle Trip Assignment, p.m. Peak Hour

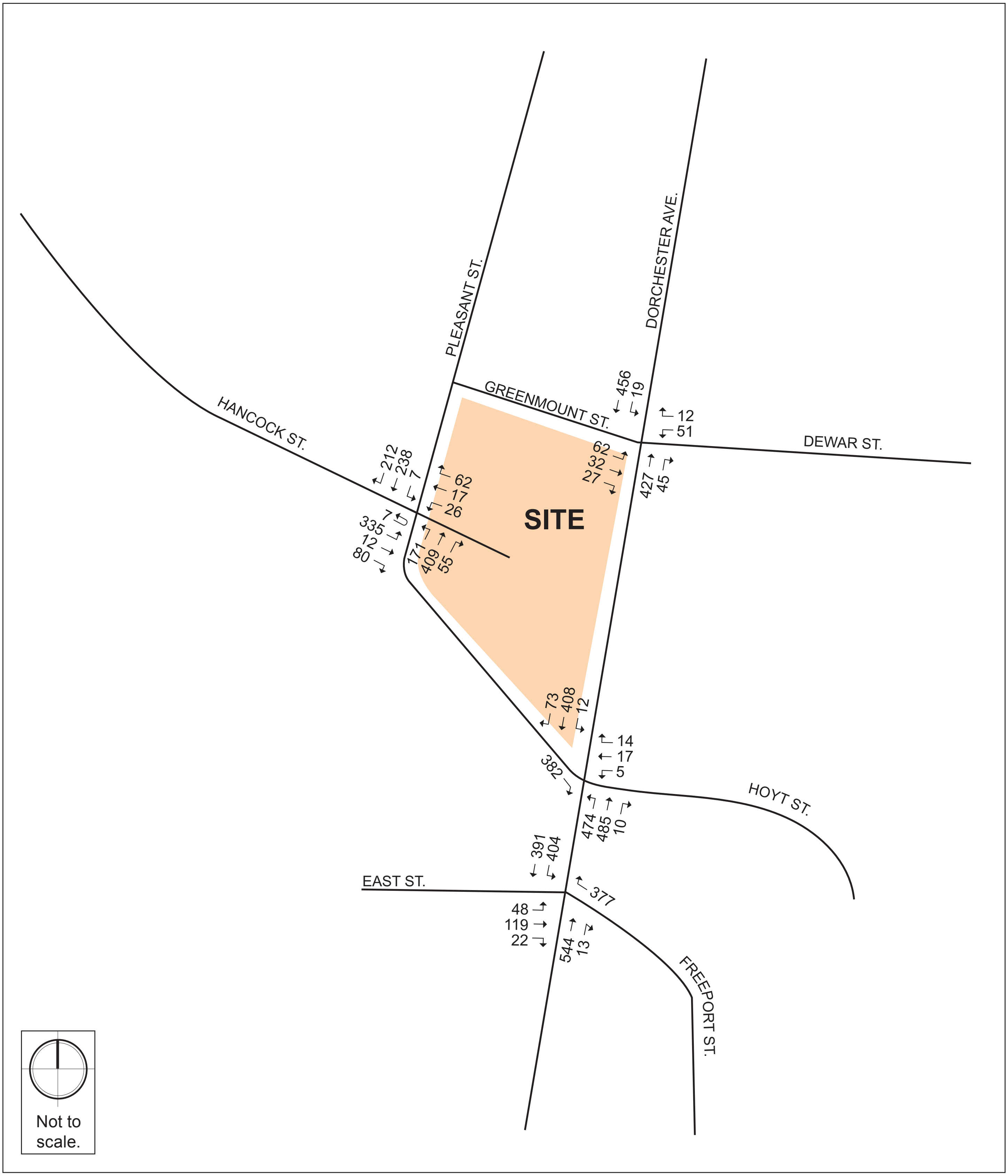


Figure 7-15.
Build Condition (2020) Vehicular Traffic Volumes, a.m. Peak Hour

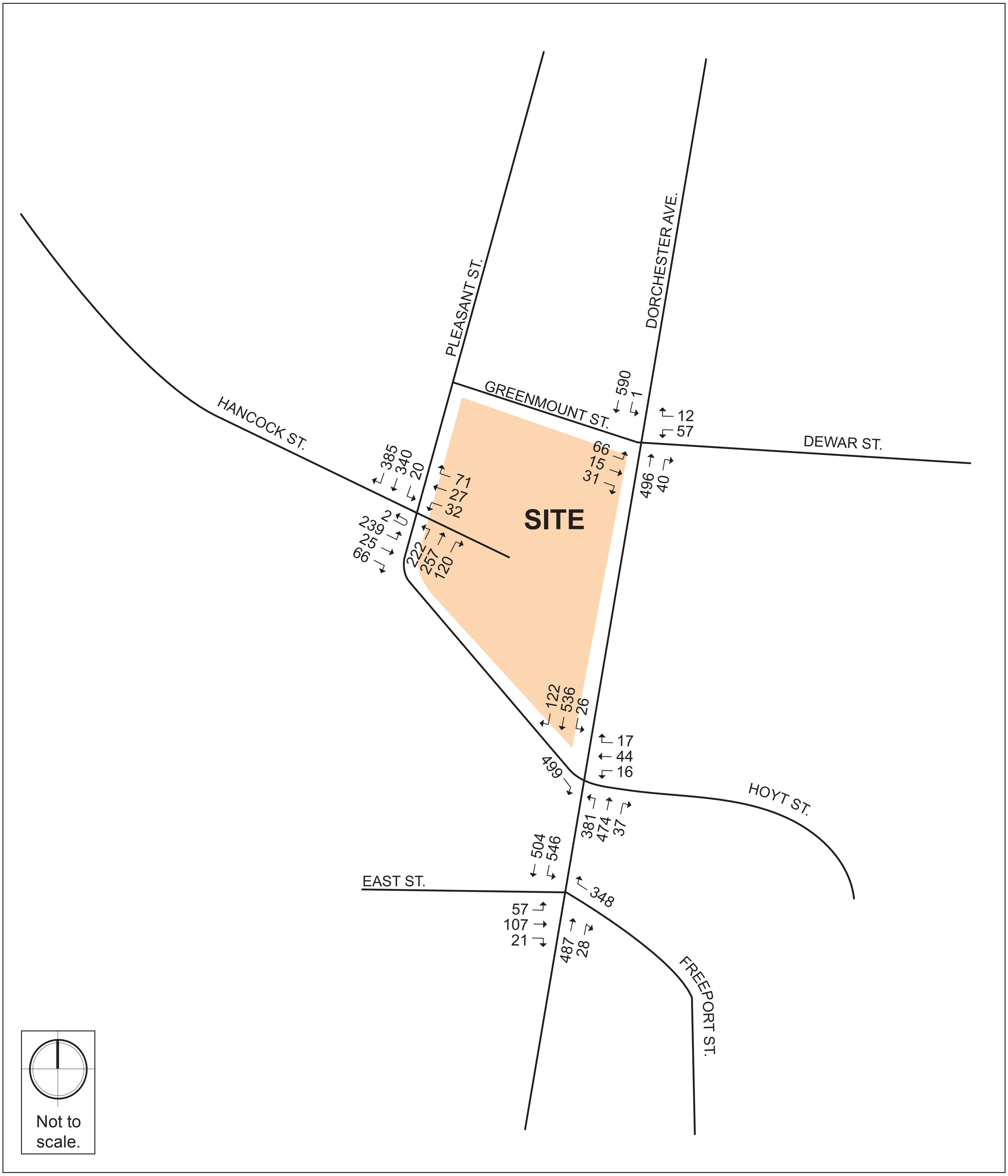


Figure 7-16.
Build Condition (2020) Vehicular Traffic Volumes, p.m. Peak Hour

Table 7-10 Build Condition (2020) Level of Service Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentile Queue (ft)	95th Percentile Queue (ft)
Signalized Intersections					
Dorchester Ave at Hancock St	**D**	**35.2**	**-**	**-**	**-**
Hancock Street EB right | right	D	45.6	0.73	135	195
Hoyt Street WB left/thru/right	D	40.5	0.21	22	53
Dorchester Avenue NB left	E	64.4	0.87	123	m#469
Dorchester Avenue NB thru/right	A	8.0	0.53	39	m114
Dorchester Avenue SB left/thru | thru/right	C	26.2	0.47	102	228
Dorchester Ave at East St	**C**	**24.7**	**-**	**-**	**-**
East Street EB left/thru/right	E	68.2	0.82	128	#241
Freeport Street WB right	C	26.0	0.76	95	#240
Dorchester Avenue NB thru | thru/right	C	25.7	0.46	115	251
Dorchester Avenue SB left	C	21.8	0.77	43	#341
Dorchester Avenue SB thru	A	4.1	0.42	8	46
Unsignalized Intersections					
Dorchester Ave at Greenmount St	**-**	**-**	**-**	**-**	**-**
Greenmount Street EB left/thru/right	E	43.1	0.60	-	85
Dewar Street WB left/thru/right	E	45.3	0.44	-	50
Dorchester Avenue NB thru/right	A	0.0	0.30	-	0
Dorchester Avenue SB left/thru	A	0.6	0.02	-	2
Hancock St at Pleasant St (roundabout)	**C**	**22.7**	**-**	**-**	**-**
Hancock Street EB	B	12.8	0.57	-	90
Site Driveway WB	B	14.0	0.29	-	25
Hancock Street NB	E	41.9	0.93	-	399
Pleasant Street SB	A	7.7	0.31	-	33

\# 95th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after two cycles.

~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is the maximum after two cycles.

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

Grey indicates a decrease to LOS E or F from No-Build conditions.

Table 7-11 Build Condition (2020) Level of Service Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentile Queue (ft)	95th Percentile Queue (ft)
Signalized Intersections					
Dorchester Ave at Hancock St	**D**	**42.5**	**-**	**-**	**-**
Hancock Street EB right | right	F	84.7	0.98	194	#315
Hoyt Street WB left/thru/right	D	42.0	0.33	48	94
Dorchester Avenue NB left	D	52.4	0.78	101	m#339
Dorchester Avenue NB thru/right	A	9.5	0.55	49	m344
Dorchester Avenue SB left/thru | thru/right	C	30.6	0.64	152	#380
Dorchester Ave at East St	**C**	**30.9**	**-**	**-**	**-**
East Street EB left/thru/right	F	91.5	0.90	127	#257
Freeport Street WB right	C	20.5	0.69	71	179
Dorchester Avenue NB thru | thru/right	C	25.0	0.41	99	219
Dorchester Avenue SB left	D	48.4	0.95	83	m#405
Dorchester Avenue SB thru	A	6.1	0.50	45	m54
Unsignalized Intersections					
Dorchester Ave at Greenmount St	**-**	**-**	**-**	**-**	**-**
Greenmount Street EB left/thru/right	F	78.6	0.77	-	121
Dewar Street WB left/thru/right	F	91.2	0.69	-	90
Dorchester Avenue NB thru/right	A	0.0	0.34	-	0
Dorchester Avenue SB left/thru	A	0.1	0.00	-	0
Hancock St at Pleasant St (roundabout)	**C**	**15.2**	**-**	**-**	**-**
Hancock Street EB	B	11.8	0.48	-	63
Site Driveway WB	B	11.2	0.28	-	25
Hancock Street NB	C	22.8	0.79	-	223
Pleasant Street SB	B	11.2	0.51	-	73

\# 95th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after two cycles.
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is the maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
Grey indicates a decrease to LOS E or F from No-Build conditions.

The signalized intersection of Dorchester Avenue at Hancock Street will operate at LOS D during both the weekday a.m. and p.m. peak hours under the Build Condition. The Hancock Street eastbound approach will decrease to LOS F during the p.m. peak hour. The Dorchester Avenue northbound left-turn lane will decrease to LOS E during the a.m. peak hour. The longest queues at the intersection will occur in the Dorchester Avenue northbound left-turn lane during the a.m. peak hour and in the southbound approach during the p.m. peak hour.

The signalized intersection of Dorchester Avenue at East Street will continue to operate at LOS C during both the weekday a.m. and p.m. peak hours under the Build Condition. The East Street eastbound approach will continue to operate at LOS E during the a.m. peak hour and LOS F during the p.m. peak hour. The longest queues at the intersection will continue to occur in the Dorchester Avenue southbound left-turn lane during both the a.m. and p.m. peak hours.

At the unsignalized intersection of Dorchester Avenue at Greenmount Street, the main Dorchester Avenue northbound and southbound approaches will continue to operate at LOS A during both the a.m. and p.m. peak hours under the Build Condition. During the a.m. peak hour the Dewar Street westbound approach will continue to operate at LOS E and during the p.m. peak hour the westbound approach will continue to operate at LOS F. During the a.m. peak hour the Greenmount Street eastbound approach will decrease to LOS E and during the p.m. peak hour it will decrease to LOS F, however this is typical for a minor stop-controlled street intersecting a major roadway. The longest queues at the intersection will occur at the Greenmount Street eastbound approach during both the a.m. and p.m. peak hours.

The intersection of Hancock Street at Pleasant Street will operate at LOS C during the weekday a.m. peak hour and weekday p.m. peak hour. This is a marked improvement compared to the No-Build operating conditions of the intersection as all approaches will operate with less delay under the roundabout design. The roundabout will also increase safety for vehicular and pedestrian activity through the intersection.

7.5 Transportation Demand Management

The Proponent is committed to implementing Transportation Demand Management (TDM) measures to minimize automobile usage and Project related traffic impacts. TDM will be facilitated by the nature of the Project (which does not generate significant peak hour trips) and its proximity to numerous public transit alternatives.

On-site management will keep a supply of transit information (schedules, maps, and fare information) to be made available to the residents and patrons of the site. The Proponent will work with the City to develop a TDM program appropriate to the Project and consistent with its level of impact.

The Proponent is prepared to take advantage of good transit access in marketing the site to future residents by working with them to implement the following TDM measures to encourage the use of non-vehicular modes of travel.

The TDM measures for the Project may include but are not limited to the following:

- Orientation Packets: The Proponent will provide orientation packets to new residents and tenants containing information on available transportation choices, including transit routes/schedules and nearby vehicle sharing and bicycle sharing locations. On-site management will work with residents and tenants as they move in to help facilitate transportation for new arrivals.
- Provide an annual (or more frequent) newsletter or bulletin summarizing transit, ridesharing, bicycling, alternative work schedules, and other travel options.
- Transportation Coordinator: The Proponent will designate a transportation coordinator to oversee transportation issues, including parking, service and loading, and deliveries, and will work with residents as they move in to raise awareness of public transportation, bicycling, and walking opportunities.
- Provide information on travel alternatives for employees and visitors via the Internet and in the building lobby.
- Electric Vehicle Charging: The Proponent will explore the feasibility of providing electric vehicle charging stations within the garage.
- Vehicle Sharing Program: The Proponent will explore the feasibility of providing spaces in the garage for a car sharing service.

7.6 Transportation Mitigation Measures

The Proponent will continue to work with the City of Boston to create a Project that efficiently serves vehicle trips, improves the pedestrian environment, and encourages transit and bicycle use. As part of the Project, the Proponent will bring all abutting sidewalks and pedestrian ramps to the City of Boston standards in accordance with the Boston Complete Streets design guidelines. This will include the reconstruction and widening of the sidewalks where possible, the installation of new, accessible ramps, improvements to street lighting where necessary, planting of street trees, and providing bicycle storage racks surrounding the site, where appropriate. The redesign and reconstruction of the Hancock Street/Pleasant Street intersection is a large undertaking which constitutes as offsite mitigation that will provide safety and operations improvements to all users of the intersection. This is an appropriate level of mitigation for the project, which could have slightly less traffic impact than what is stated in this section, as the traffic impacts associated with the northeast corner parcels have been included, but are not currently controlled by the Proponent.

The Proponent is responsible for preparation of the Transportation Access Plan Agreement (TAPA), a formal legal agreement between the Proponent and the BTD. The TAPA formalizes the findings of the transportation study, mitigation commitments, elements of access and physical design, travel demand management measures, and any other responsibilities that are agreed to by both the Proponent and the BTD. Because the TAPA must incorporate the results of the technical analysis, it must be executed after these other processes have been completed. The proposed measures listed above and any additional transportation improvements to be undertaken as part of this Project will be defined and documented in the TAPA.

8.0 Coordination with Governmental Agencies

8.1 Architectural Access Board Requirements

This Project will comply with the requirements of the Architectural Access Board. The Project will also be designed to comply with the Standards of the Americans with Disabilities Act.

8.2 Massachusetts Environmental Policy Act

Based on information currently available, development of the Proposed Project will not result in a state permit/state agency action and meet a review threshold that would require MEPA review by the MEPA Office of the Executive Office of Energy and Environmental Affairs.

8.3 Boston Civic Design Commission

The Project will exceed the 100,000 gross square feet size threshold requirement for review by the Boston Civic Design Commission. Therefore, the Proponent intends to review the Proposed Project with the Boston Civic Design Commission as a part of the Article 80 Large Project Review process.

9.0 PROJECT CERTIFICATION

This form has been circulated to the Boston Redevelopment Authority as required by Article 80 of the Boston Zoning Code.

DOT BLOCK LLC

6/2/15

Signature of Proponent

Date

Mitchell L. Fischman Consulting LLC

06/02/15

Signature of Preparer
Mitchell L. Fischman, AICP

Date

APPENDIX A – REVISED LETTER OF INTENT TO FILE PNF, MAY 21, 2015

MLF CONSULTING LLC

Mitchell L. Fischman Consulting LLC
41 Brush Hill Road
Newton, MA 02461

May 22, 2015

VIA HAND DELIVERY

Mr. Brian Golden, Director
Boston Redevelopment Authority
One City Hall Square, 9th Floor
Boston, MA 02201
Attn: Mr. Gary Uter, Project Assistant

RE: Revised Letter of Intent to File Project Notification Form
Article 80 - Large Project Review
DOT BLOCK Mixed-Use Residential / Retail Development

Dear Director Golden:

The purpose of this letter is to revise **DOT BLOCK LLC**'s (the "Proponent") Letter of Intent ("LOI") to file an Expanded Project Notification Form ("PNF") with the BRA pursuant to Article 80B, Large Project Review requirements of the Boston Zoning Code (the "Code") for a mixed-use residential / retail development in the Dorchester neighborhood on a Site generally bordered by Pleasant, Greenmount and Hancock Streets, and by Dorchester Avenue. An initial LOI was filed with the BRA on March 12, 2015, outlining a Proposed Project. Since that time, the Proponent has entered into an agreement to purchase adjacent parcels of land at the corner of Hancock Street and Dorchester Avenue, and therefore is submitting this revised Letter of Intent.

Article 80 - Large Project Review

The Proposed Project will exceed the 50,000 square foot total build-out size requirement for a project in a Boston neighborhood and therefore will require preparation of filing(s) under the Large Project Review regulations, pursuant to Article 80 of the Code. The Expanded PNF filing is expected to address many issues normally presented in a Draft Project Impact Report ("DPIR") including a transportation analysis, air and noise, shadow, infrastructure, historic resources, and other environmental evaluations that will help explain potential project impacts from the proposed uses, and any needed mitigation measures to reduce these impacts.

The Site

The Site comprises a total of approximately 206,849 square feet, and is predominantly located within the Dorchester Neighborhood Shopping zoning sub-district, with a small portion within a 3-Family sub-district. The Site is centrally located in Dorchester, Boston's largest neighborhood, and is bounded by the three distinct and vibrant urban residential neighborhood districts of Meeting House Hill to the south, Jones Hill to the east and Savin Hill to the north/northeast. The Site includes nine (9) existing buildings which are in fair to poor condition; a private way (Greenmount Place) off Greenmount Street; and a 15-foot City of Boston Sewer Easement that runs through a portion of the Site from Dorchester Avenue to Pleasant Street. The existing buildings will be demolished to enable the Proposed Project to be completed. Please see **Figure 1. Project Locus- DOT Block.**

Currently, this portion of Dorchester is under-utilized with an inconsistent collection of buildings of varying scales and massing. Existing businesses that surround the site are an eclectic collection of small restaurants, auto body shops, a carwash, gas station and other similar types of businesses. There is also no consistent architectural language or relationship of these businesses to each other or the abutting roadways.

Prior Proposed Project - Original Letter of Intent (03/12/15)

The original LOI involved the phased redevelopment of four existing parcels of land totaling approximately four (4) acres. Over the course of two phases, the prior Proposed Project intended to replace the existing site structures with a new mixed-use residential / retail development consisting of approximately 260 residential for-sale and rental units (within four, five and six-story buildings) plus approximately 40,000 square feet of anticipated ground level retail uses, approximately 7,000 square feet of ground level support and service space, and a 20,000 square foot landscaped deck, all ultimately served by up to 400 accessory central garage parking spaces in four-levels (the "Prior Proposed Project"). As part of the Proponent's proposal, a portion of the proposed total residential units would address the City of Boston's Inclusionary Zoning Policy. See details for the original land area in the Prior Proposed Project on the table on the following page.

COB Assessor's Parcel Number FOR PRIOR PROPOSED PROJECT	Address	Area (Square Feet)
1502595010	1207 Dorchester Avenue	157,684
1502583000	16 Greenmount Street	2,794
1502607000	256 Hancock Street	9,834
	Greenmount Place (Private Way)	1,708
	PRIOR PROJECT - TOTAL	**172,023**

Revised Proposed Project

The Proponent now proposes to expand the existing Site described in the original LOI to include the land at the corner of Hancock Street and Dorchester Avenue. The revised listing of the existing parcels of land within the expanded site totals approximately 4.75 acres (206,849 sf) and is presented in the table on the following page.

COB Assessor's Parcel Number FOR REVISED PROPOSED PROJECT	Address	Area (Square Feet)
1502595010	1207 Dorchester Avenue	157,684
1502583000	16 Greenmount Street	2,794
1502607000	256 Hancock Street	9,834
	Greenmount Place (Private Way)	1,708
1502599000	1221 Dorchester Avenue	6,369
1502600000	1225 Dorchester Avenue	13,649
1502604000	274 Hancock Street	5,293
1502602000	1245 Dorchester Avenue	7,685
1502603000	284 Hancock Street	1,833
	REVISED PROJECT - TOTAL	**206,849**

Revised Development Approach

The Proposed Development will proceed as a single project. However, components of the development will need to be sequenced for logistical reasons, and to satisfy lender requirements and allow for market absorption. Initial construction is expected to include the eastern and southern portions of the development along Dorchester Avenue and Hancock Street. These buildings will include eight, four-story, 8-unit buildings, a five-story, 50-unit building and several 5-6 story, mixed-use buildings with approximately 60,000 square feet of ground floor retail space and a total of 270 upper level residential units, approximately 7,200 square feet of ground level support and service space, and a 25,000 square foot landscaped roof deck. The buildings will be served by a five-level, 450 space central parking garage and by a separate 22 space covered lot dedicated to retail parking.

There is expected to be an *interim* condition to screen the completed garage from the adjoining residential areas across Pleasant and Greenmount Streets, as requested by the BRA, until the completion of the full build out (as described in the paragraph below).

Following completion or substantial completion of the construction described in the prior paragraph, a northern portion of the approximately 206,849 square foot site will be developed for residential and open space uses, including 64 for-sale or rental two-bedroom units in eight separate four-story structures along Pleasant and Greenmount Streets providing 88,760 gsf of floor area. In addition, there will be a single, five-story structure housing 50 for-sale or rental units providing 53,844 gsf of floor area.

As part of the Proponent's revised proposal, a portion of the proposed total residential units will also address the City of Boston's Inclusionary Zoning Policy.

Potential Future Acquisition Parcels:
Corner of Greenmount Street and Dorchester Avenue

The Proponent is seeking to acquire control of the 12,617 square feet at the corner of Dorchester Avenue and Greenmount Street. If the Proponent is successful in acquiring that land, then the Project Site will be increased by 12,617 square feet, and the Project will be increased to include approximately 40 new residences, and 10,000 square feet of additional retail uses. The impacts of this additional development and proposed massing will be fully presented and evaluated in the Project Notification Form.

The listing of the parcels within this future acquisition area is shown in the table on the following page.

COB Assessor's Parcel Number POTENTIAL FUTURE ACQUISITION PARCELS	Address	Area (Square Feet)
1502587000	2 Greenmount Street	7,773
1502588000	1189 Dorchester Avenue	1,070
1502589000	1191 Dorchester Avenue	663
1502590000	1193 Dorchester Avenue	649
1502591000	1195 Dorchester Avenue	664
1502592000	1197 Dorchester Avenue	684
1502593000	1199 Dorchester Avenue	664
	POTENTIAL FUTURE ACQUISITION PARCELS - TOTAL	**12,167**

Zoning Relief

The Project will include three principal uses: retail, office and multi-family/residential. A parking garage is also planned for the early stages of construction. The retail/office uses will include general office space, restaurant (general and take-out) and general retail. The multi-family residences are proposed to be constructed in three forms: (1) eight four-story, eight-unit buildings; (2) one five-story 50-unit building; and (3) mixed-use buildings with retail on the ground level and multiple stories of residential units above.

- ***Mixed-Use Buildings & Parking***

  The mixed-use buildings will all[1] be constructed in the NS sub-district and will have retail/office only on the ground floor and residential units on the upper floors. The NS sub-district requires a conditional use permit for general retail

[1] If the additional parcels acquisition is completed, a portion of the mixed-use building to be constructed up to the corner of Dorchester Avenue and Greenmount Street would be located in the 3F-D-3000 sub-district, and therefore may require additional relief under the regulations for that sub-district.

business, take-out restaurants and office space, and therefore such conditional use permits will also be sought for the Proposed Project.

- ***Residential Buildings***

  Three (and a small portion of a fourth) of the planned four-story, eight-family residential buildings will be developed in the 3F-D-3000 sub-district. The 3F-D-3000 sub-district prohibits multi-family developments of more than three-units, and the Proposed Project will therefore require a use variance for the proposed eight-family buildings.

  Another four (and the majority of a fifth), four-story, eight-family residential buildings are planned to be developed in the NS sub-district adjacent to a five-story 50-unit residential building and abutting to the south the parking garage and a large mixed-use building. The 50-unit residential building will include residential units on all five levels including the ground level as will the four eight-family buildings located within the NS sub-district, and a conditional use permit will be required for use of the first floor of this building for residential use.

Community Outreach

The Proponent will continue to conduct extensive community outreach with neighbors and abutters of the Site, including meetings and discussions with the Dorchester neighborhood and local elected and appointed officials for the neighborhood. Over the past several months, the Proponent and its team have met with the BRA project team being coordinated by Gary Uter, Project Assistant.

Thank you for your time and attention on this revised Proposed Project, and our team looks forward to working with you towards a successful outcome. Please contact me at your convenience if you have any questions regarding the revised Proposed Project.

Very truly yours,

MITCHELL L. FISCHMAN CONSULTING LLC
ON BEHALF OF DOT BLOCK LLC

Mitchell L. Fischman, AICP

Attachment: **Figure 1. Project Locus – DOT BLOCK**

cc: The Honorable Mayor Martin J. Walsh
City Councilor Frank Baker, District 3
State Senator Linda Dorcena Forry
State Representative Evandro C. Carvalho
State Representative Daniel Hunt
Ellen Boyle, CSHCA
Eileen Fenton, CSHCA Planning Committee
Alec Bonelli, Mayor's Office of Neighborhood Services
Flavio Daveiga, Mayors Office of Neighborhood Services
Sheila Dillon, Department of Neighborhood Development
Erico Lopez, Boston Redevelopment Authority
Gary Uter, Boston Redevelopment Authority
John Childs, Atlas Investments Group LLC
Demetrios Dasco, Atlas Investments Group LLC
Martin R. Healy, Esq., Goodwin Procter LLP
John Hession, EBI Consulting
Eric Robinson, RODE ARCHITECTS, Inc.

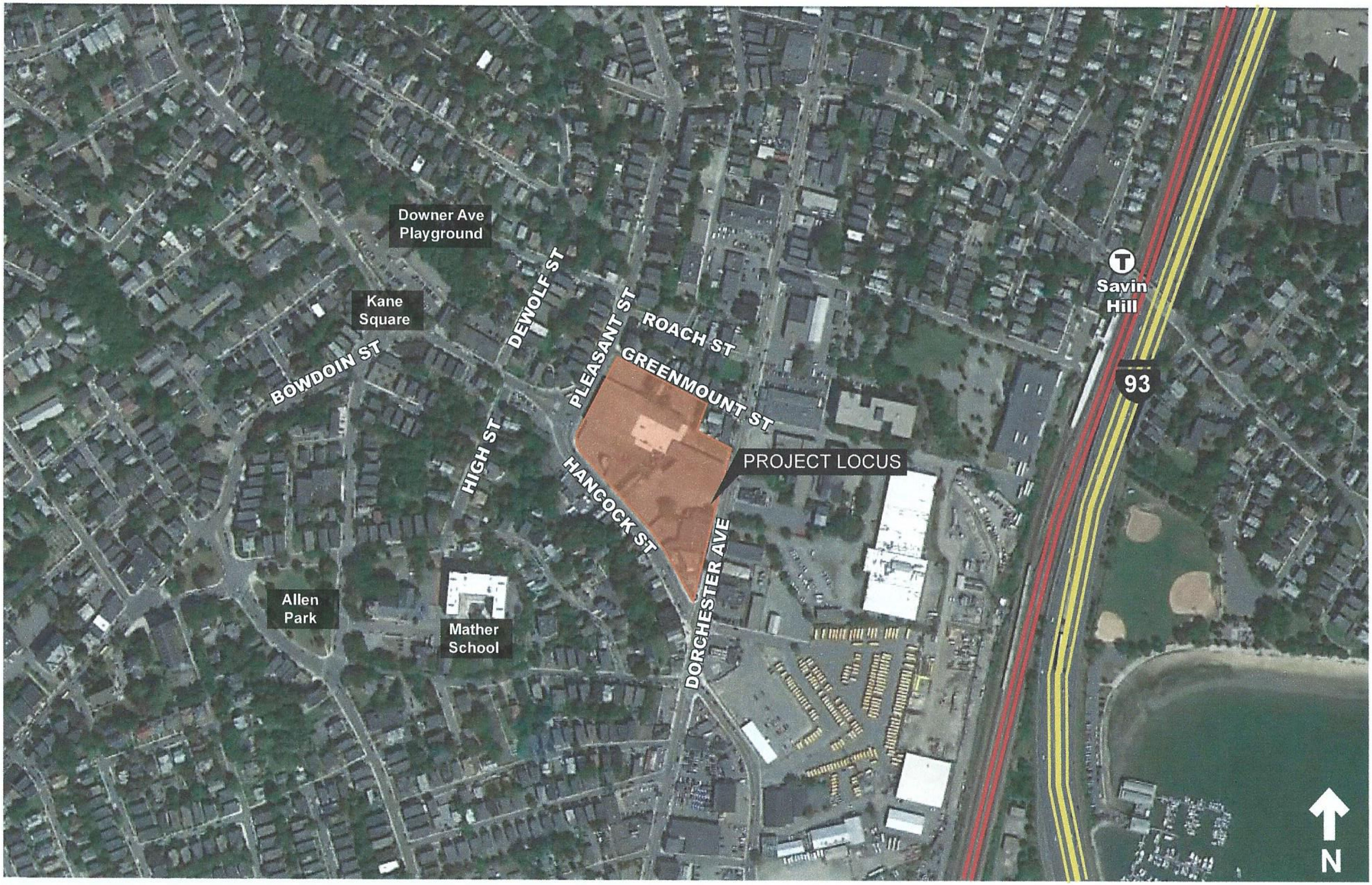


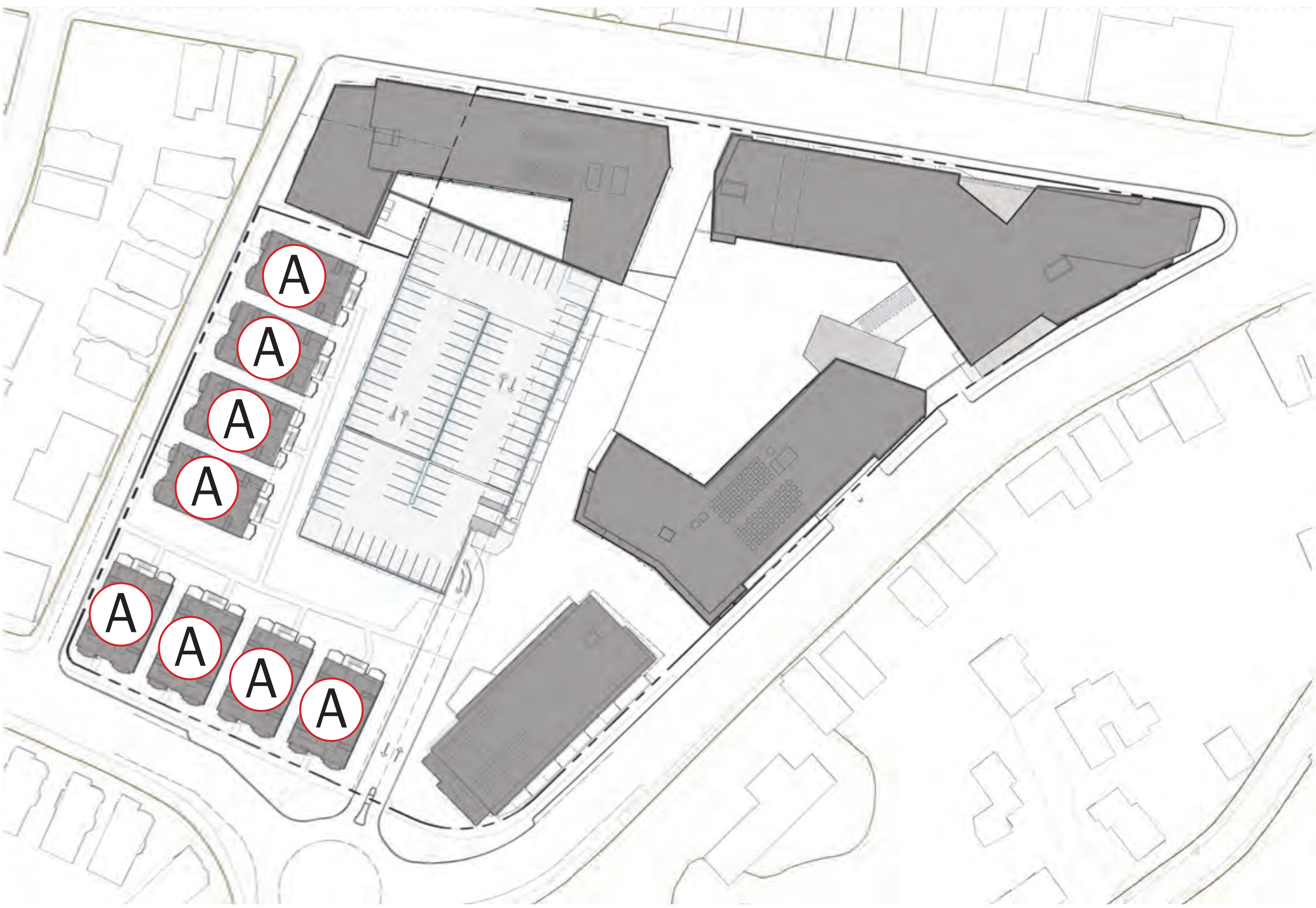
Figure 1
Project Locus

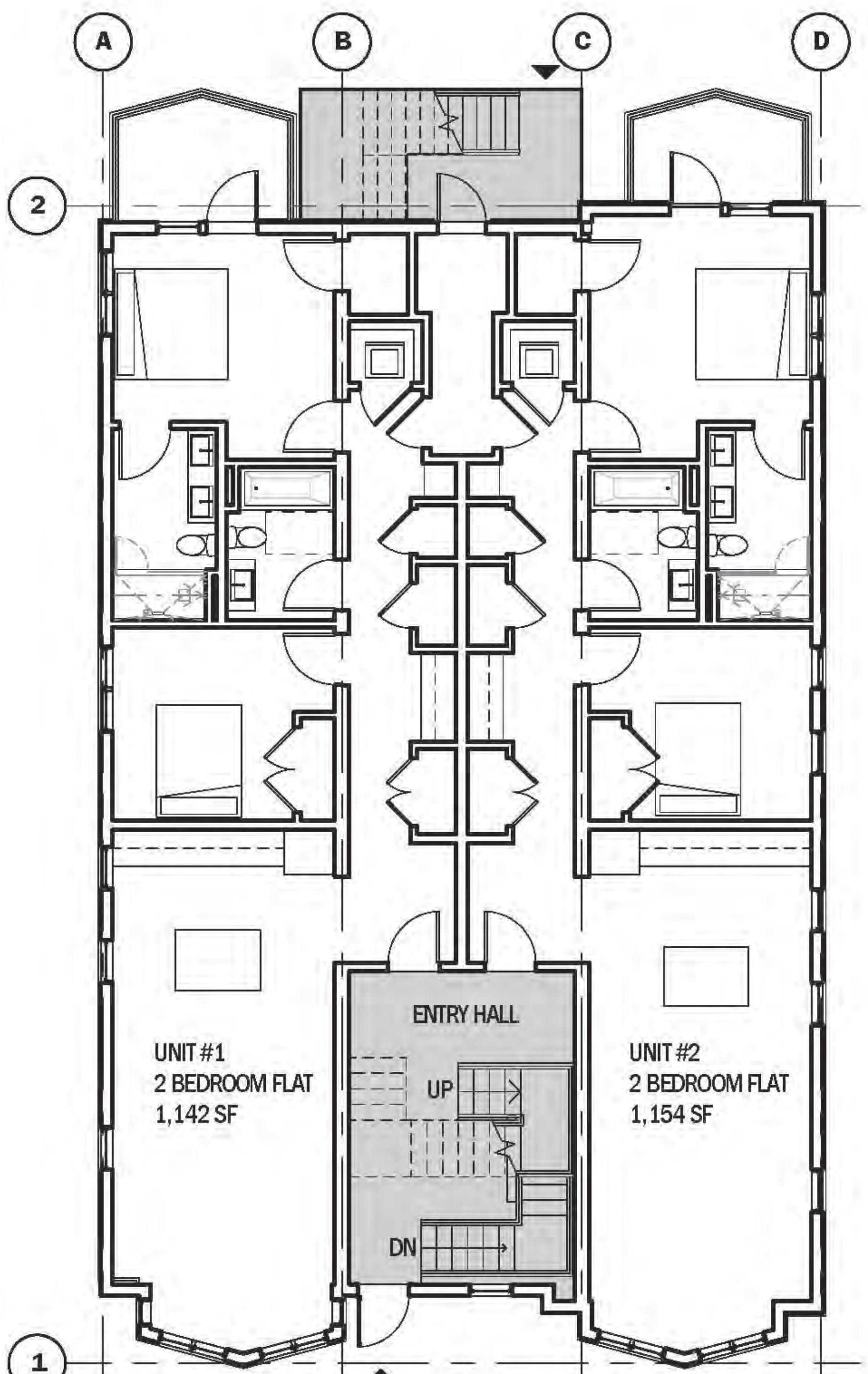
APPENDIX B – URBAN DESIGN FIGURES

The below urban design drawings, perspectives, and LEED Checklist are contained in **Appendix B**.

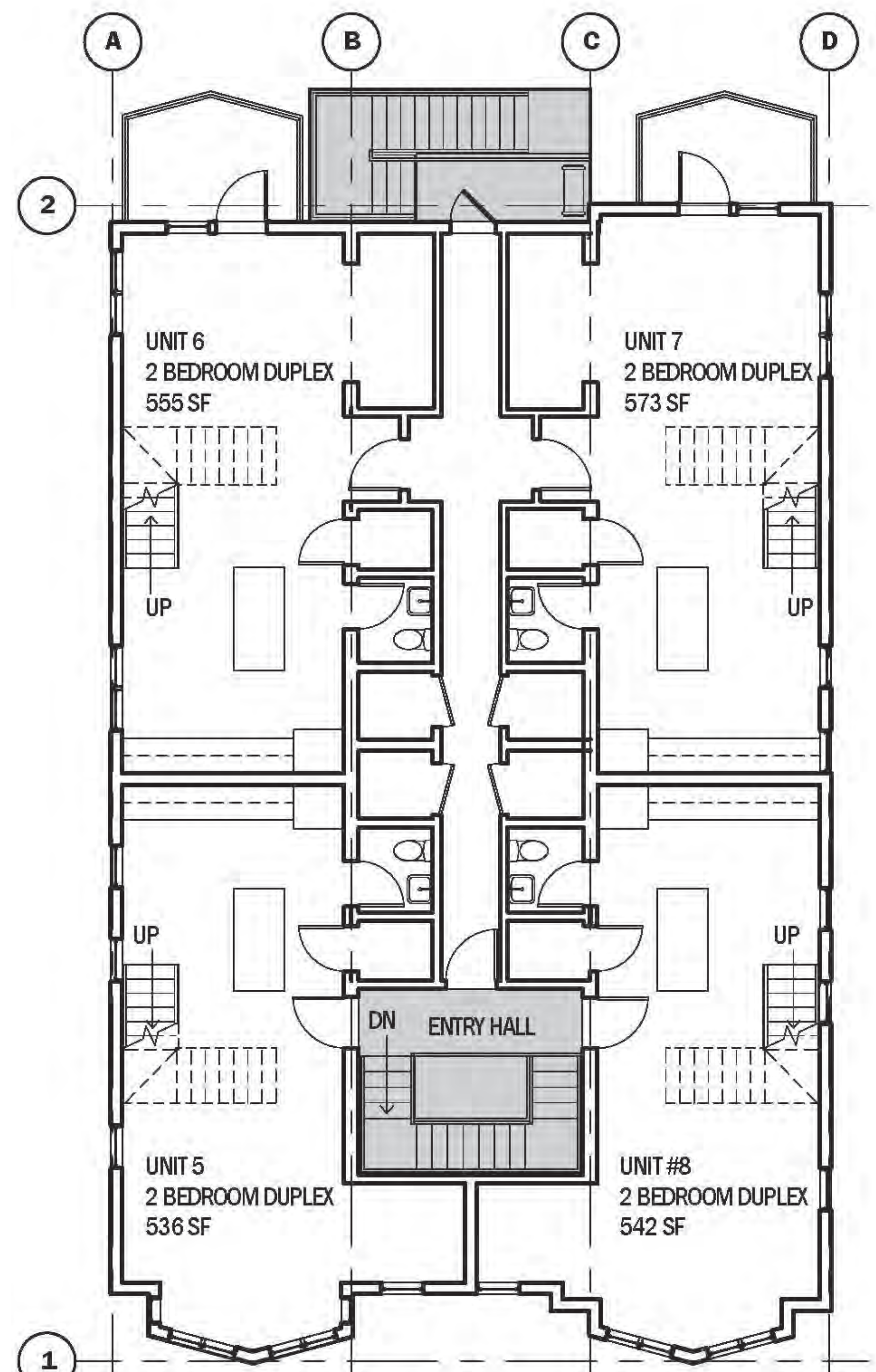
DOUBLE BOW FRONT BUILDING

DOT BLOCK
Residential Units

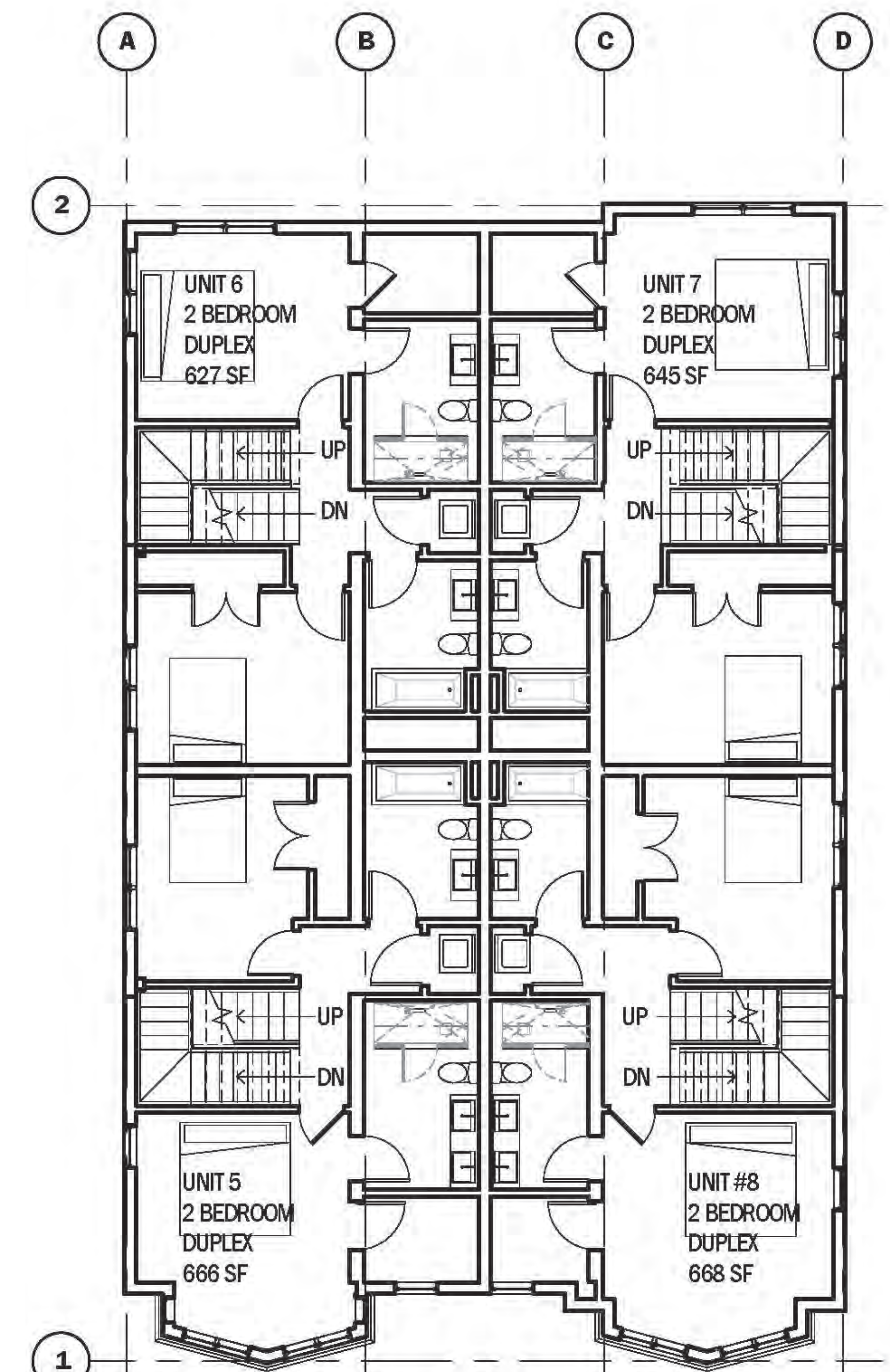




GROUND + SECOND FLOOR PLAN



THIRD FLOOR PLAN



FOURTH FLOOR PLAN

0' 25'

8 FAMILY SOUTH ELEVATION

8 FAMILY WEST ELEVATION

8 FAMILY NORTH ELEVATION

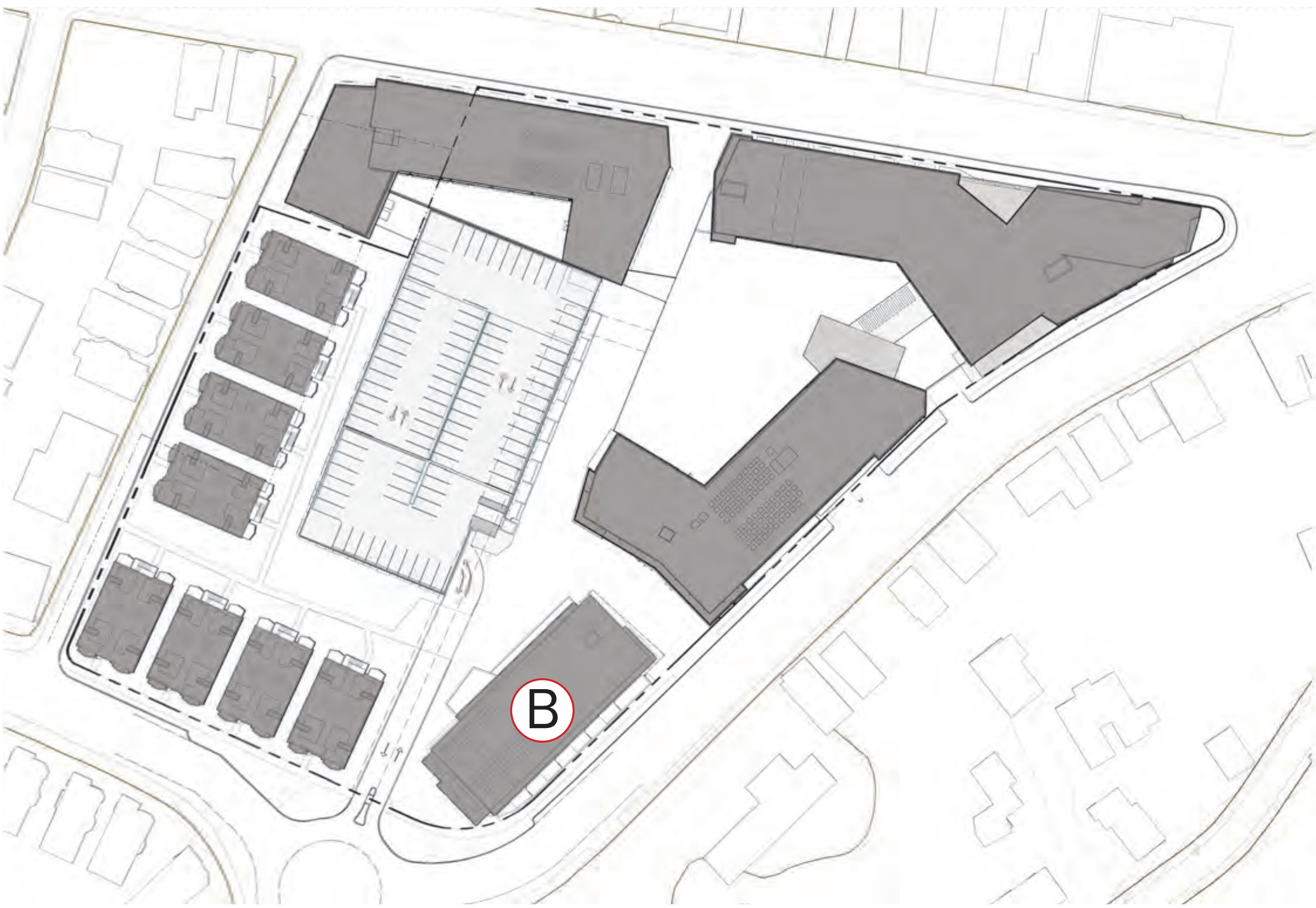
8 FAMILY EAST ELEVATION

RODE

8 FAMILY BUILDINGS FRONT RENDERING
DOT BLOCK

Fig 3.2-4

DOT BLOCK:
50 Residential Units



240 HANCOCK STREET ELEVATION

240 HANCOCK STREET INTERIOR ELEVATION

RODE

ELEVATIONS
DOT BLOCK

1/16" = 1'-0"

0' 12.5' 25' 50'

Fig 3.3-1

240 HANCOCK ENTRY ELEVATION

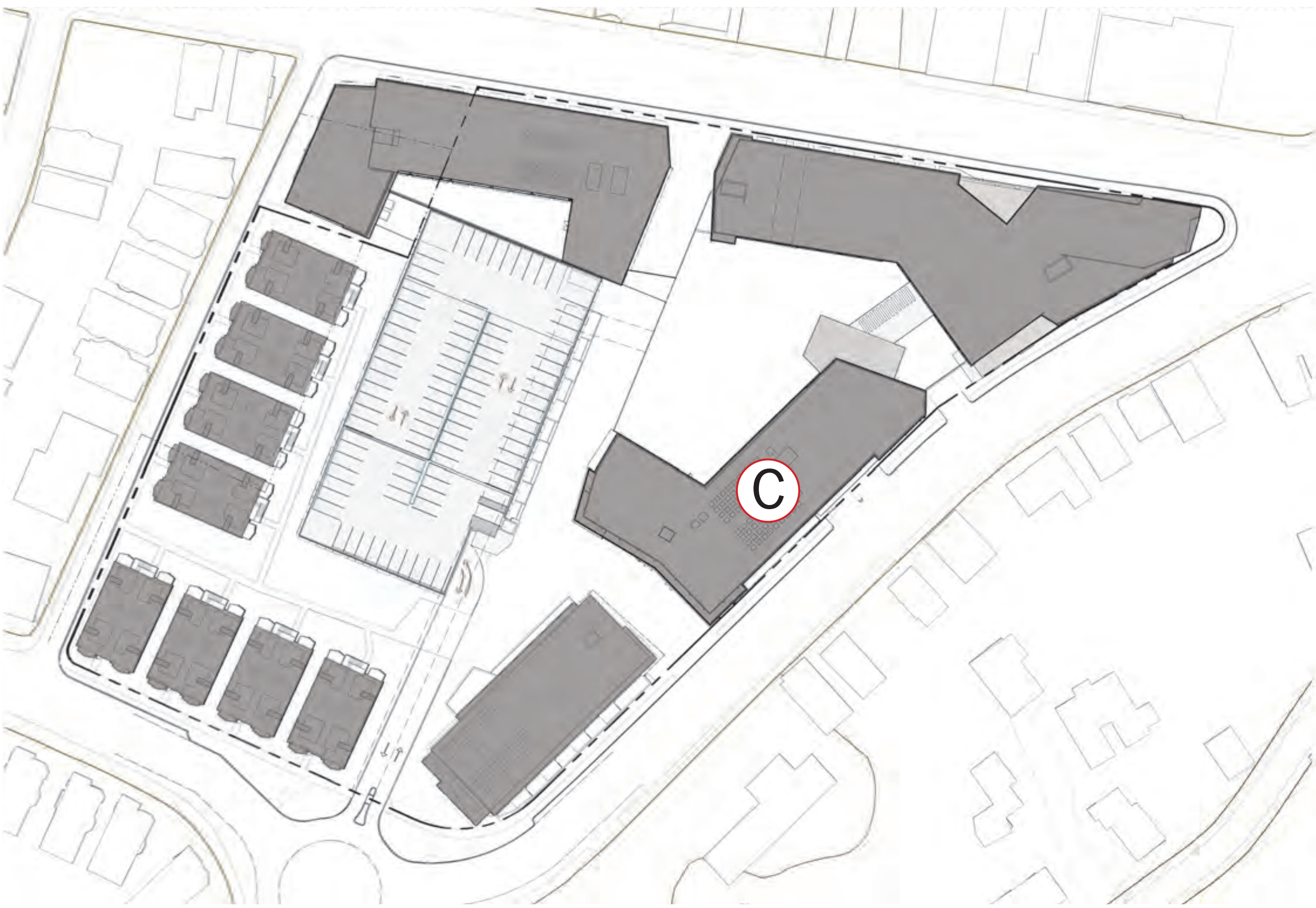
240 HANCOCK PLEASANT STREET ELEVATION

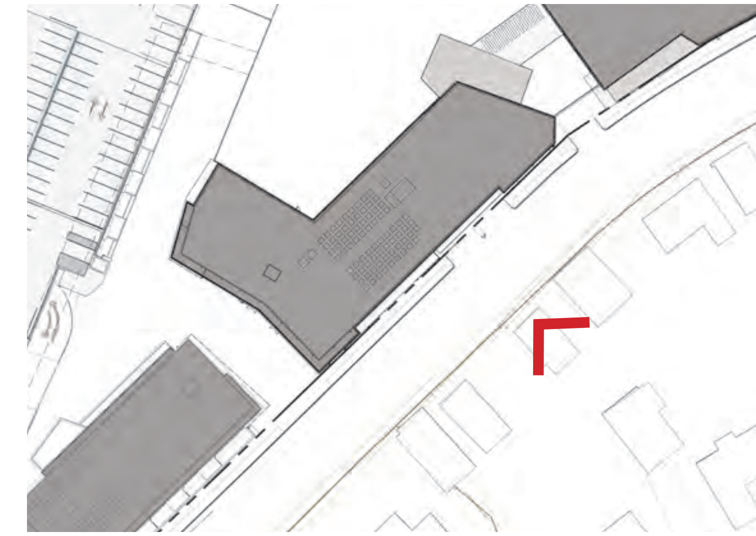
RODE

240 HANCOCK STREET
DOT BLOCK

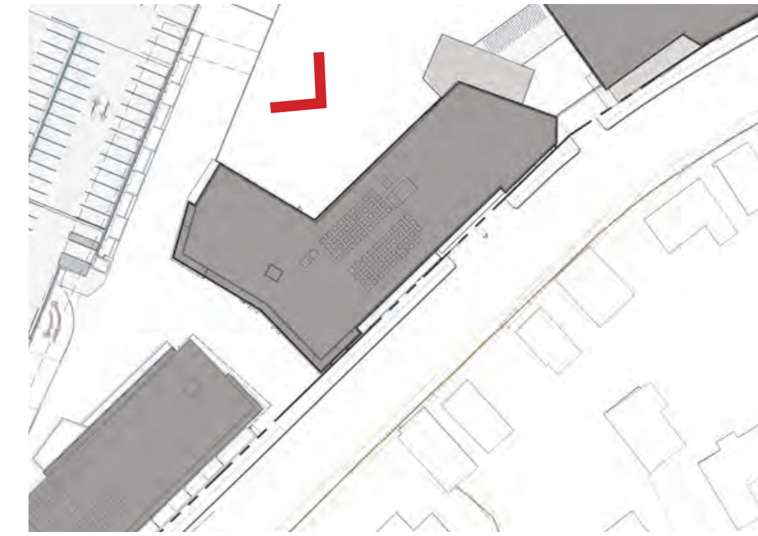
Fig 3.3-3

DOT BLOCK:
100 Residential Units/Mixed Use Retail

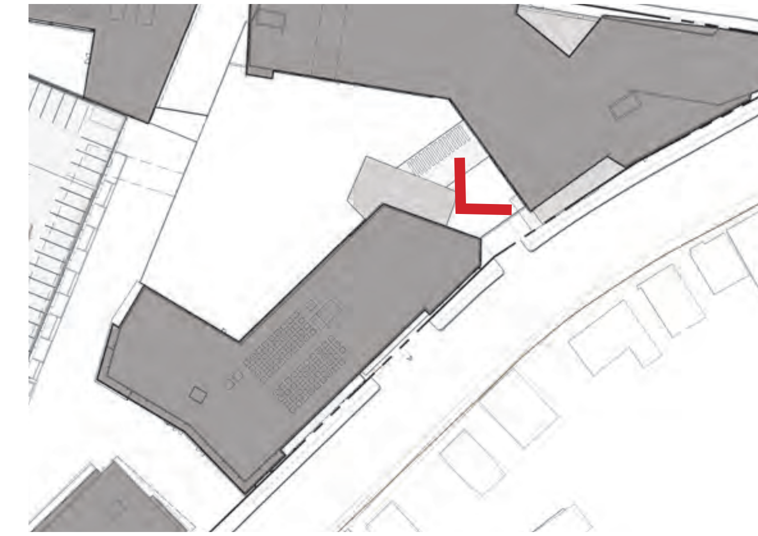




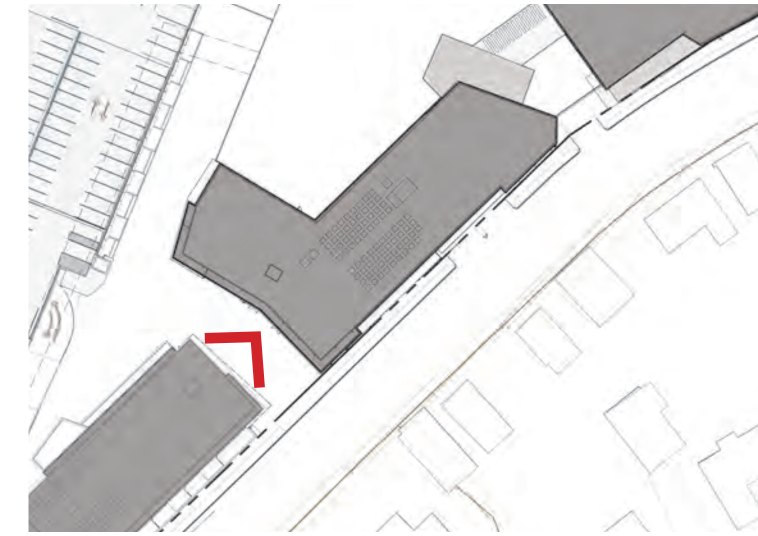
250 HANCOCK ELEVATION - HANCOCK STREET



250 HANCOCK ELEVATION - INTERIOR



250 HANCOCK ELEVATION - INTERIOR THROUGH GAP



250 HANCOCK ELEVATION - PEDESTRIAN PATH

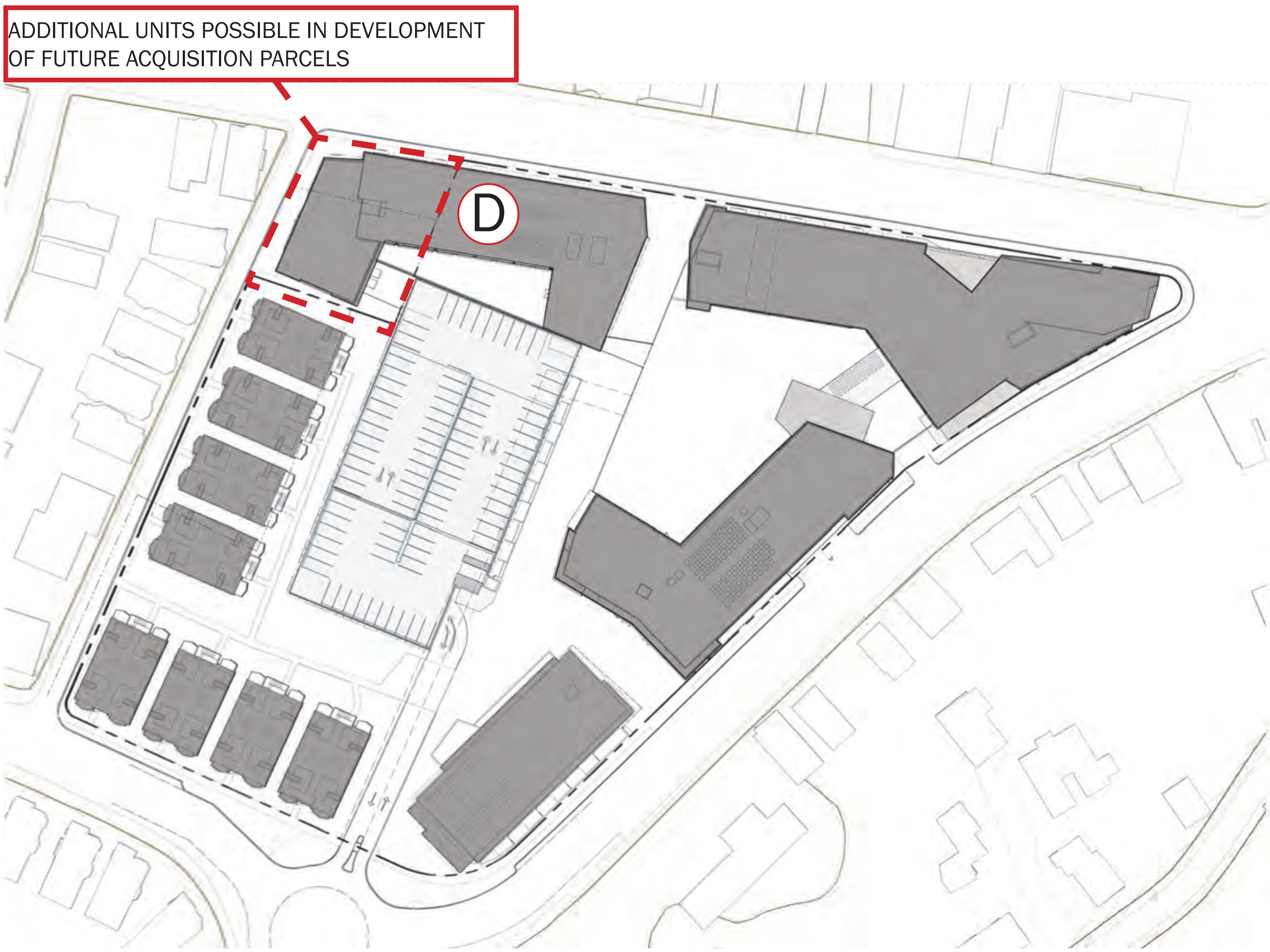
RODE

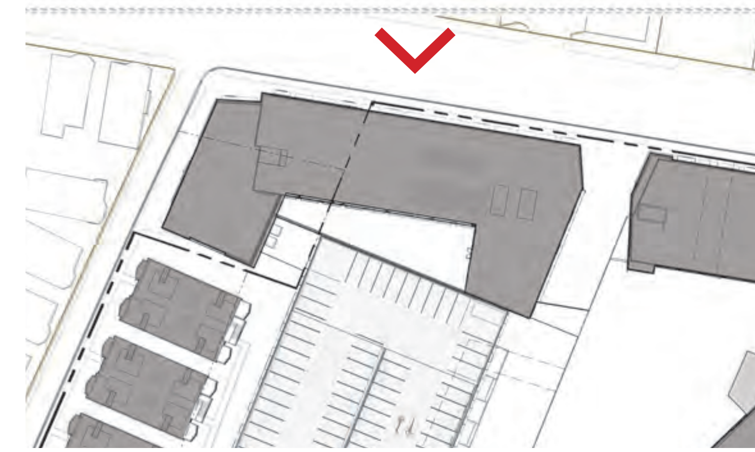
RENDERING 250 HANCOCK STREET
DOT BLOCK

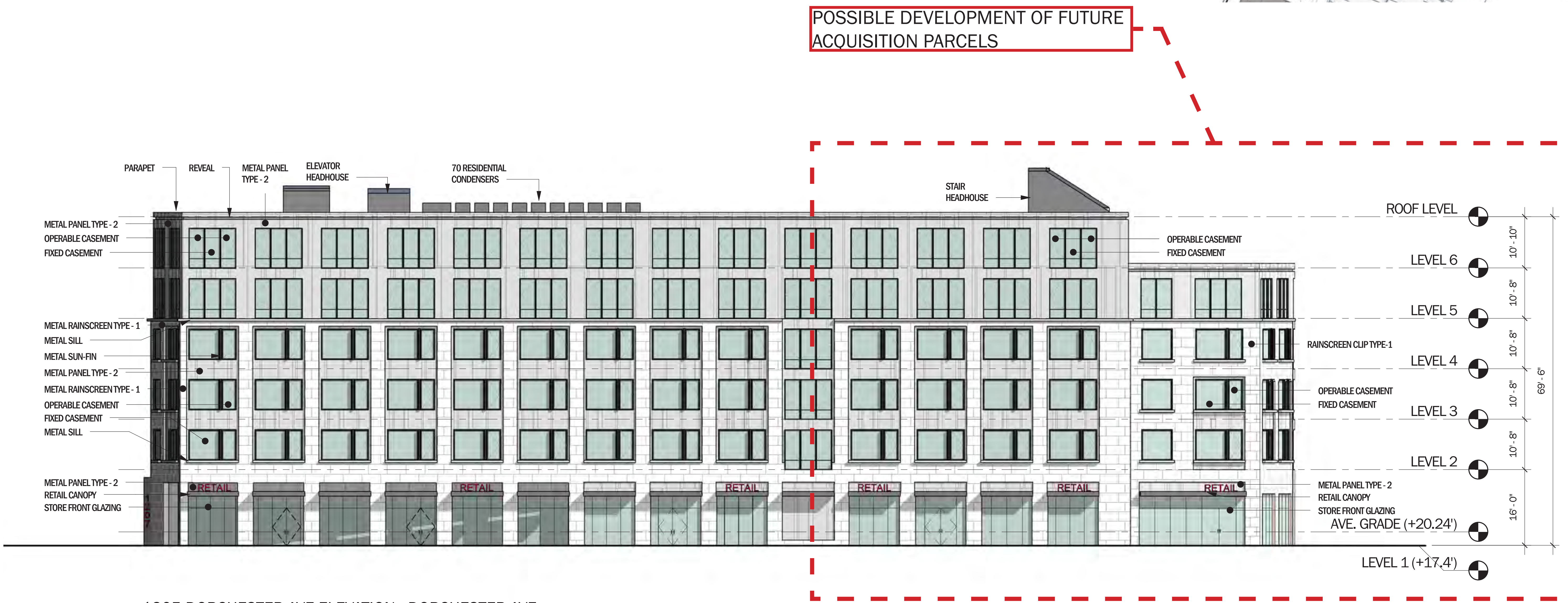
Fig 3.4-5

1205 DORCHESTER AVENUE

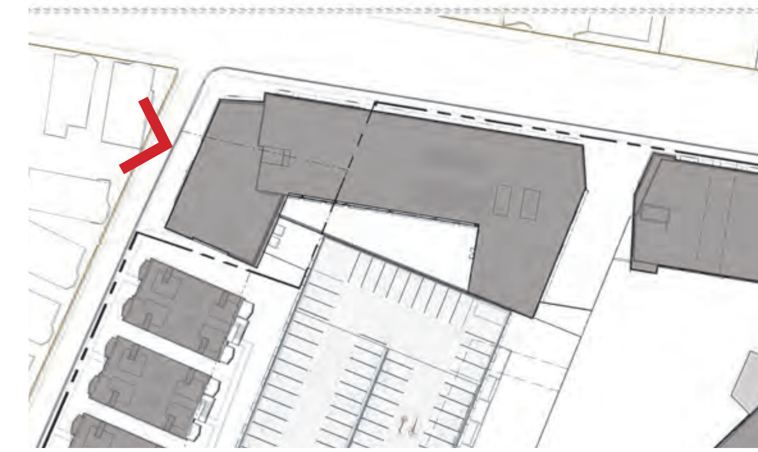
DOT BLOCK:
60 Residential Units/Mixed Use Retail

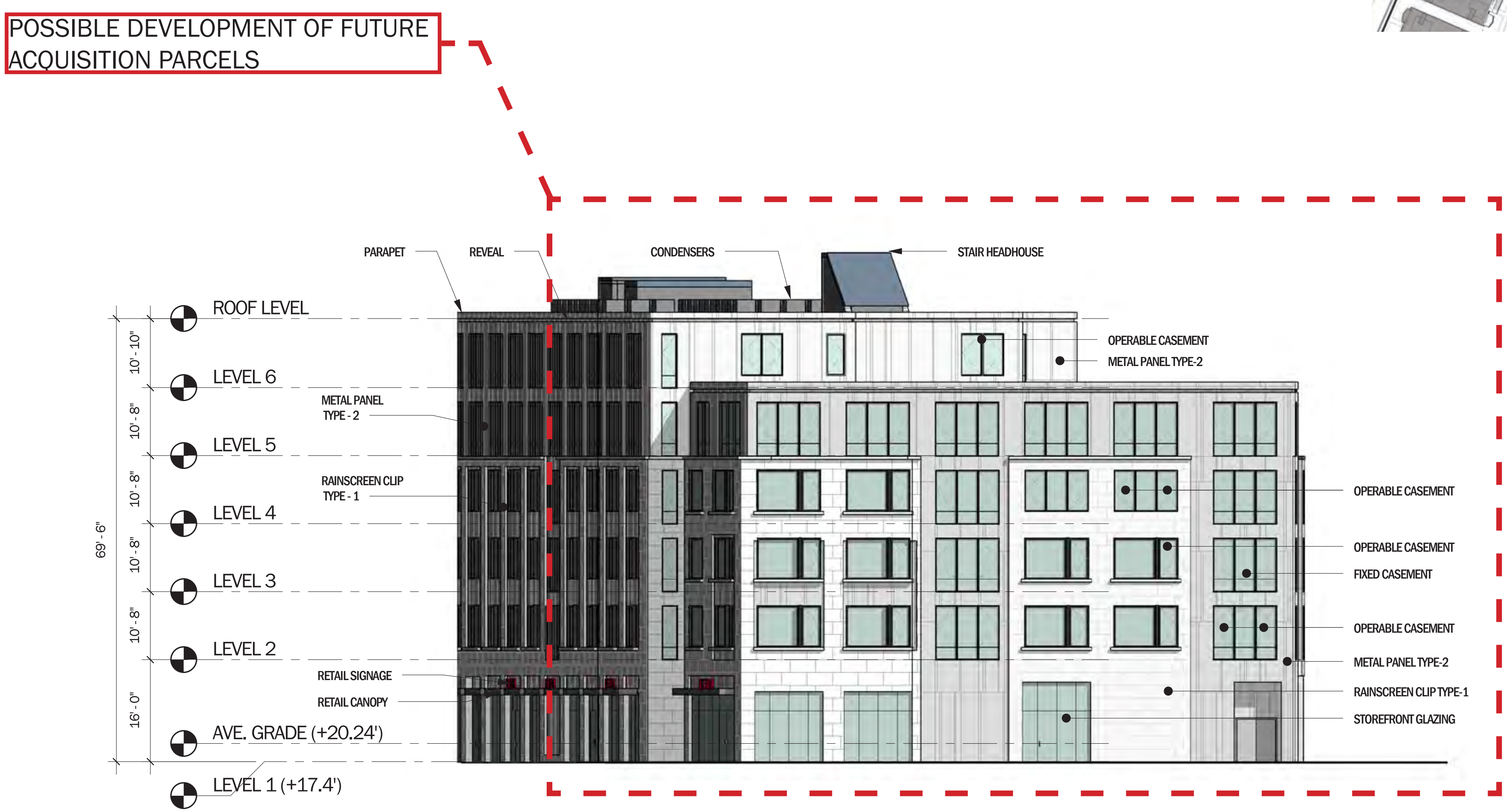




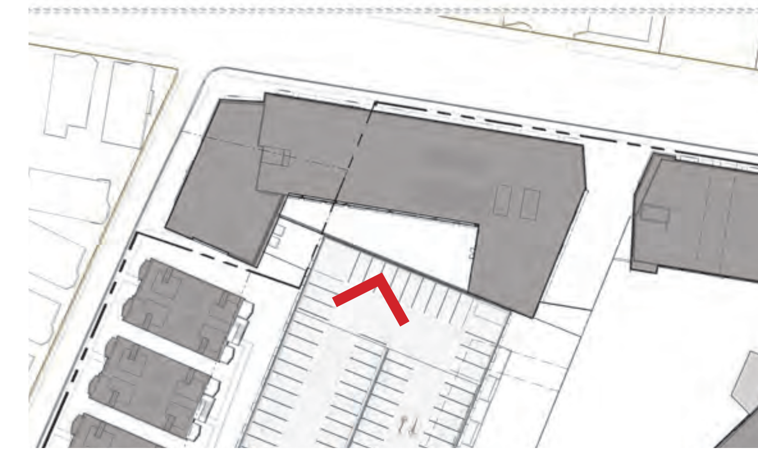


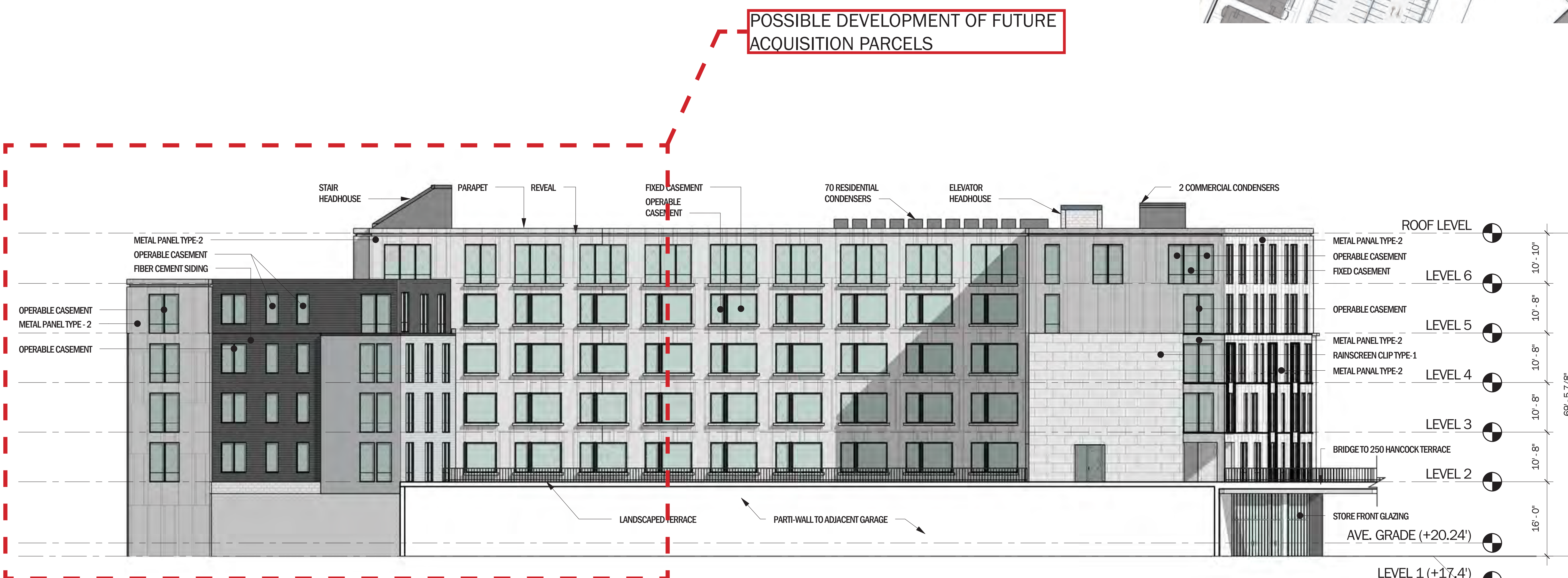
1205 DORCHESTER AVE ELEVATION - DORCHESTER AVE





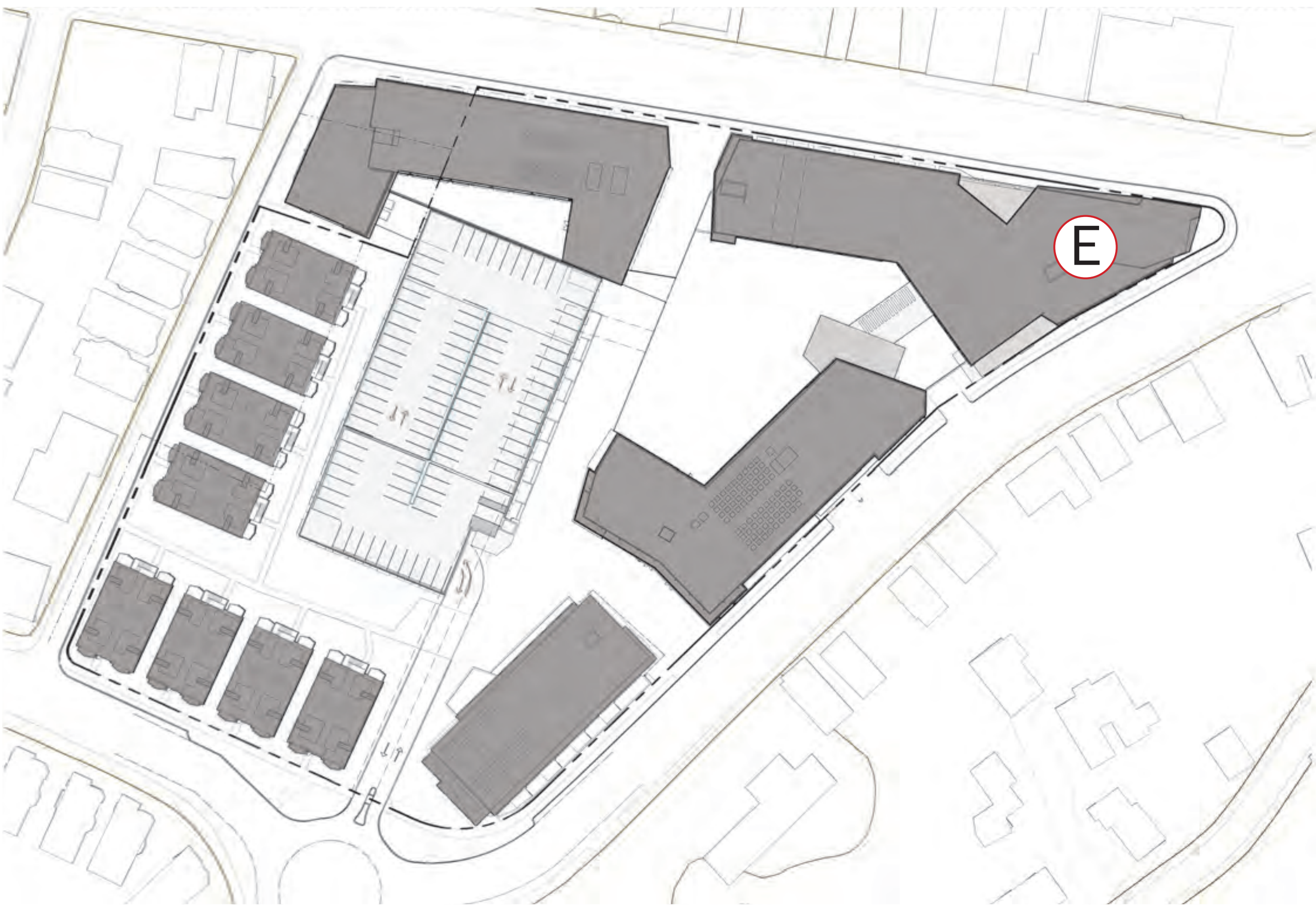
1205 DORCHESTER AVE ELEVATION - GREENMOUNT ST

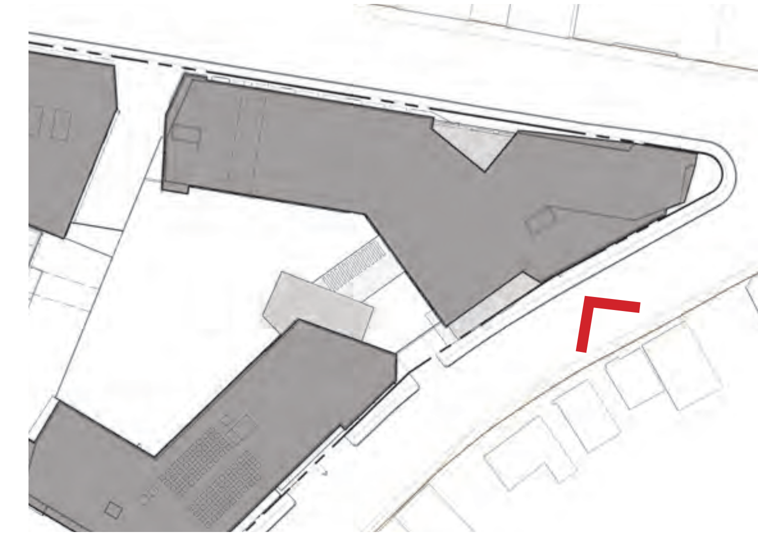




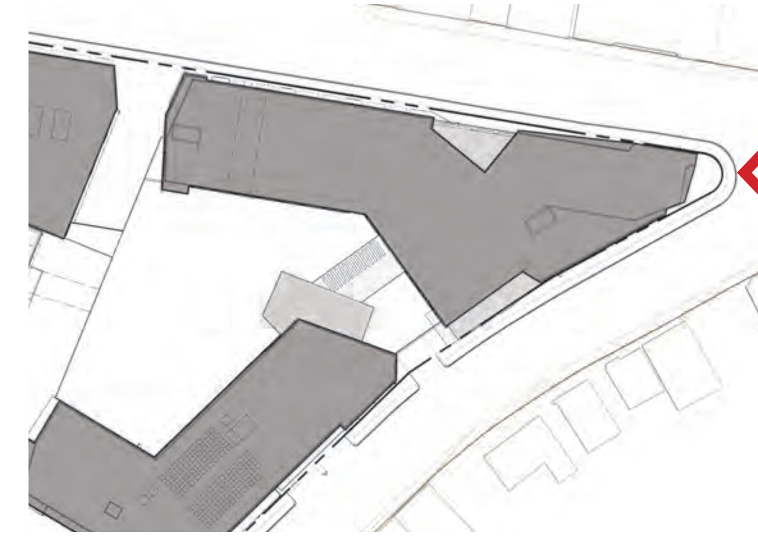
1205 DORCHESTER AVE ELEVATION - INTERIOR

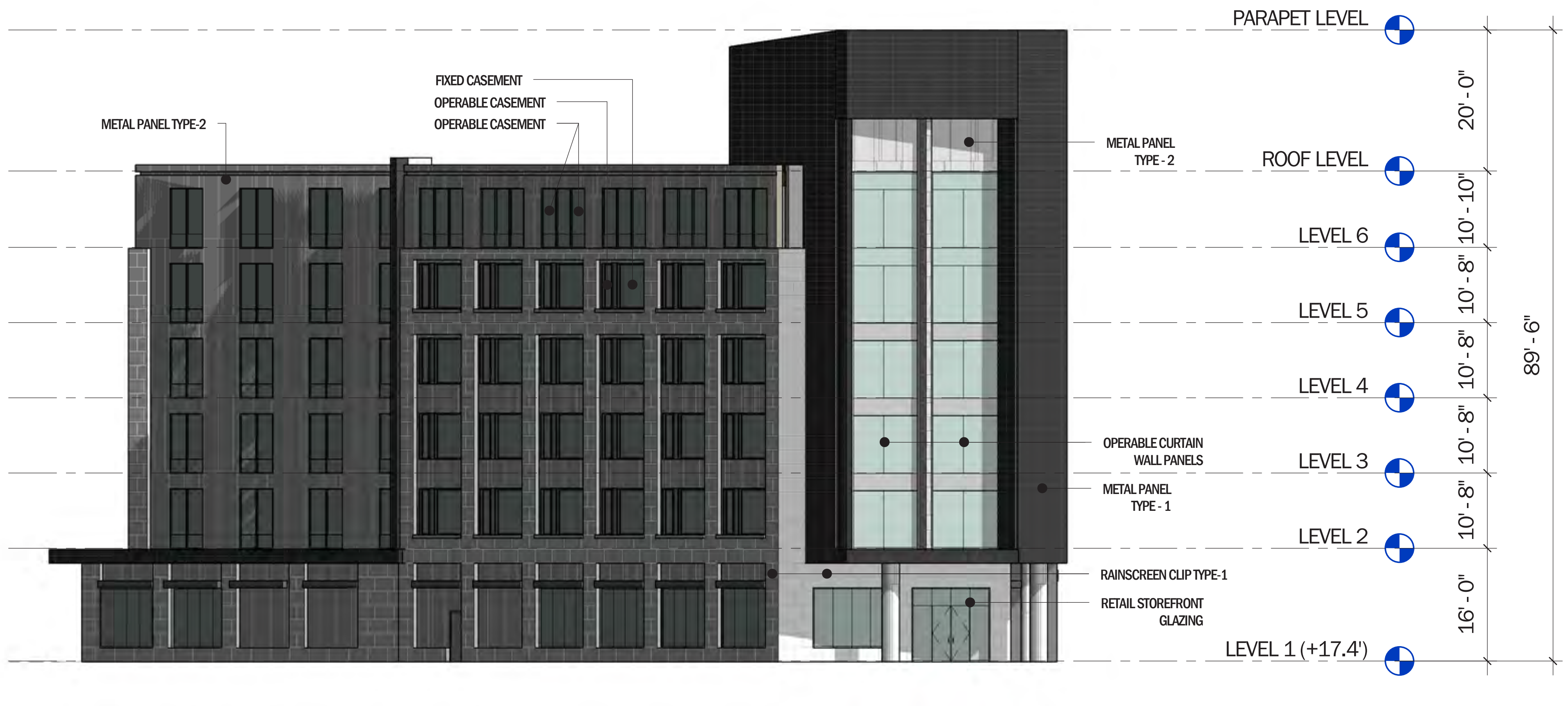
DOT BLOCK:
110 Residential Units/Mixed Use Retail



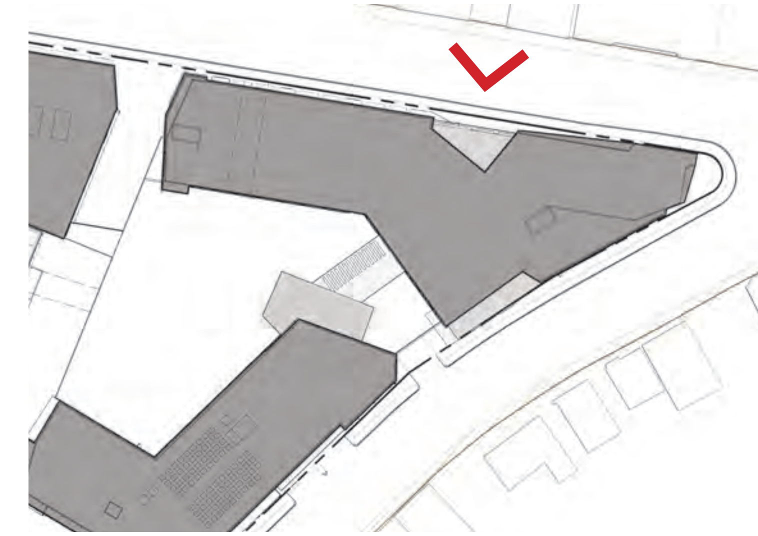


1225 DORCHESTER AVE ELEVATION - HANCOCK STREET





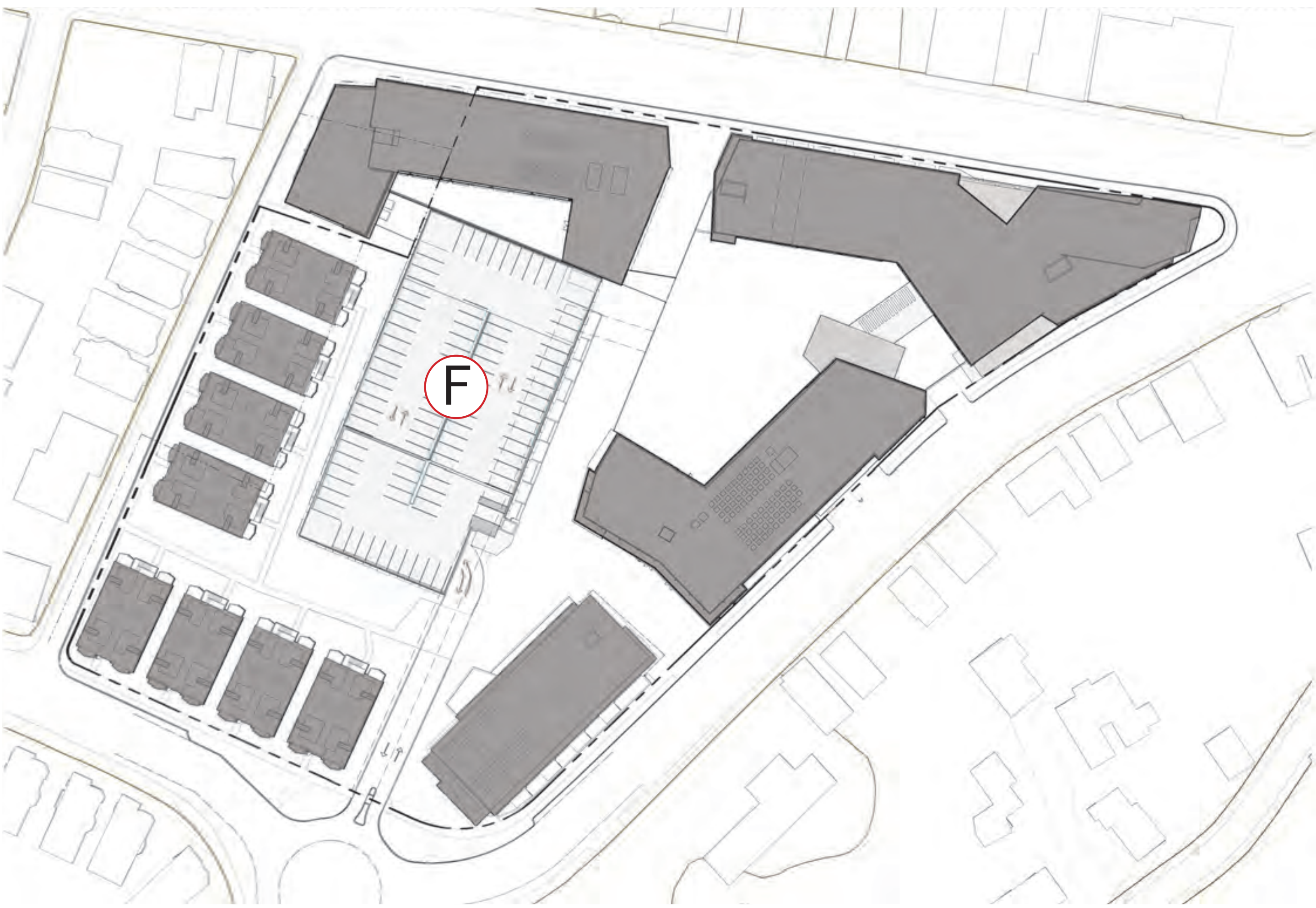
1225 DORCHESTER AVE ELEVATION - HANCOCK ST AND DORCHESTER AVE CORNER



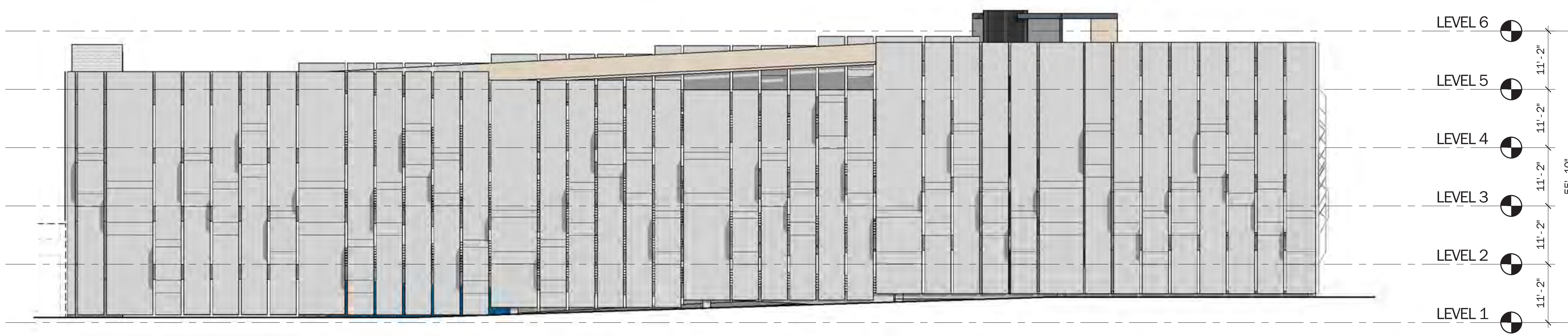
1225 DORCHESTER AVE ELEVATION - DORCHESTER AVE

PARKING STRUCTURE

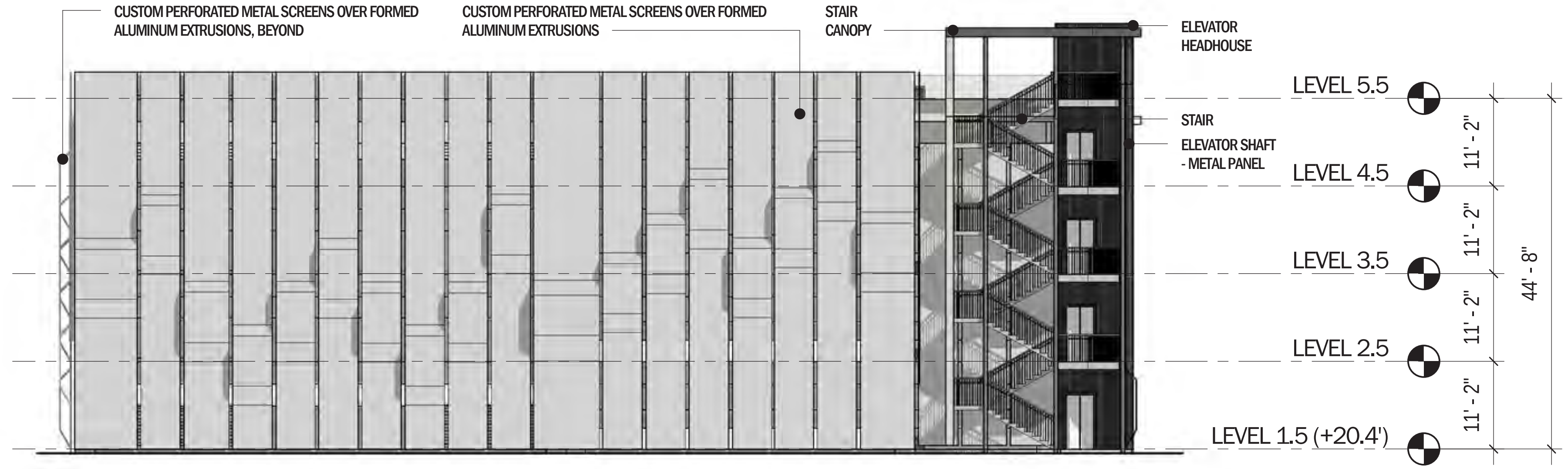
DOT BLOCK:
450 Parking Spaces



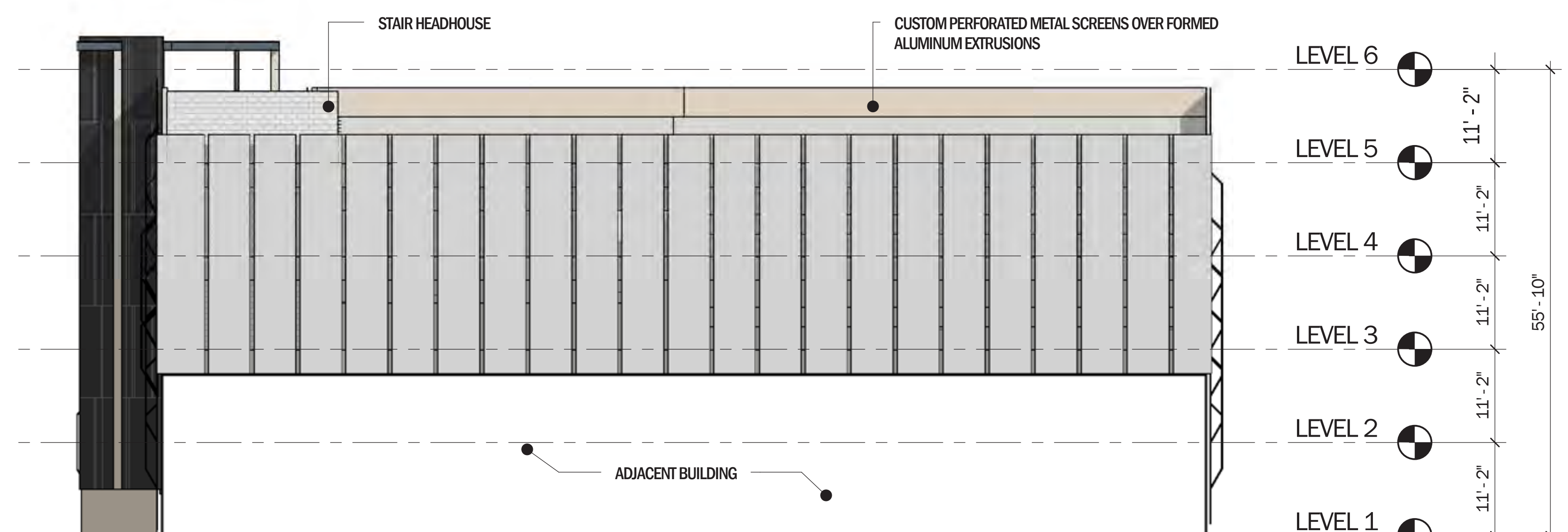
ELEVATION - PEDESTRIAN PATH



ELEVATION - RESIDENTIAL FACADE



ELEVATION - DRIVE AISLE



ELEVATION - ADJACENT BUILDING

APPENDIX C – AIR QUALITY APPENDIX

APPENDIX C
AIR QUALITY

DOT BLOCK
PROJECT NOTIFICATION FORM

<u>Pages</u> <u>Contents</u>

```
 **MODELOPTs:   NonDFAULT CONC      FLAT      NOCHKD    SCREEN    NODRYDPLT NOWETDPLT

                                      ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =      4389.8 ;  Urban Roughness Length =  1.000 m

 **Model Allows User-Specified Options:
         1. Stack-tip Downwash.
         2. Model Assumes Receptors on FLAT Terrain.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay.
         6. Urban Roughness Length of 1.0 Meter Used.

 **Other Options Specified:
         NOCHKD   - Suppresses checking of date sequence in meteorology files
         SCREEN   - Use screening option
 which forces calculation of centerline values

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  CO

 **Model Calculates  1 Short Term Average(s) of:   1-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and     454 Receptor(s)

 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date: 13350

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =     5.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          CO_052015.DTA
 **Output Print File:             CO_052015.LST

 **File for Summary of Results:   W:\Apps\aermod\3944\CO_052015.SUM
```

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*** AERMET - VERSION 13350  ***   *** CO Screening Modeling Analysis                                               ***        08:50:12
                                                                                                                              PAGE   2
**MODELOPTs:   NonDFAULT CONC      FLAT      NOCHKD    SCREEN    NODRYDPLT NOWETDPLT
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*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
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NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54,   3.09,   5.14,   8.23, 10.80,

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*** AERMET - VERSION 13350  ***   *** CO Screening Modeling Analysis                                               ***        08:50:12
                                                                                                                              PAGE   3
**MODELOPTs:   NonDFAULT CONC      FLAT      NOCHKD    SCREEN    NODRYDPLT NOWETDPLT
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*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

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  Profile file:   Urban.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:     11111               Upper air station no.:     22222
                 Name: UNKNOWN                                   Name: UNKNOWN
                 Year:   2010                                    Year:   2010
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First 24 hours of scalar data

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10	01	02	2	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	20.	10.0	255.2	2.0
10	01	03	3	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	30.	10.0	255.2	2.0
10	01	04	4	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	40.	10.0	255.2	2.0
10	01	05	5	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	50.	10.0	255.2	2.0
10	01	06	6	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	60.	10.0	255.2	2.0
10	01	07	7	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	70.	10.0	255.2	2.0
10	01	08	8	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	80.	10.0	255.2	2.0
10	01	09	9	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	90.	10.0	255.2	2.0
10	01	10	10	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	100.	10.0	255.2	2.0
10	01	11	11	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	110.	10.0	255.2	2.0
10	01	12	12	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	120.	10.0	255.2	2.0
10	01	13	13	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	130.	10.0	255.2	2.0
10	01	14	14	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	140.	10.0	255.2	2.0
10	01	15	15	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	150.	10.0	255.2	2.0
10	01	16	16	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	160.	10.0	255.2	2.0
10	01	17	17	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	170.	10.0	255.2	2.0
10	01	18	18	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	180.	10.0	255.2	2.0
10	01	19	19	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	190.	10.0	255.2	2.0
10	01	20	20	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	200.	10.0	255.2	2.0
10	01	21	21	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	210.	10.0	255.2	2.0
10	01	22	22	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	220.	10.0	255.2	2.0
10	01	23	23	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	230.	10.0	255.2	2.0
10	01	24	24	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	240.	10.0	255.2	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	10.0	1	10.	0.50	255.3	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

```
 *** AERMOD - VERSION  14134 ***   *** 166 Pleasant Street                                                      ***        05/20/15
 *** AERMET - VERSION 13350  ***   *** CO Screening Modeling Analysis                                           ***        08:50:12
                                                                                                                           PAGE   4
 **MODELOPTs:   NonDFAULT CONC      FLAT      NOCHKD    SCREEN    NODRYDPLT NOWETDPLT

                                                *** THE SUMMARY OF HIGHEST  1-HR RESULTS ***

                                    ** CONC OF CO       IN MICROGRAMS/M**3                           **

                                                         DATE                                                                  NETWORK
GROUP ID                          AVERAGE CONC      (YYMMDDHH)            RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS      73.35165  ON 10011206: AT (  330278.00,  4686169.50,     5.00,     5.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

```
 *** AERMOD - VERSION  14134 ***   *** 166 Pleasant Street                                                      ***        05/20/15
 *** AERMET - VERSION 13350  ***   *** CO Screening Modeling Analysis                                           ***        08:50:12
                                                                                                                           PAGE   5
 **MODELOPTs:   NonDFAULT CONC      FLAT      NOCHKD    SCREEN    NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           2 Warning Message(s)
 A Total of           0 Informational Message(s)

 A Total of       18504 Hours Were Processed

 A Total of           0 Calm Hours Identified

 A Total of           0 Missing Hours Identified (  0.00 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***
```

APPENDIX D – NOISE APPENDIX

APPENDIX D
NOISE

DOT BLOCK
PROJECT NOTIFICATION FORM

Page **Contents**

Figure 1

Sound Monitoring and Modeling Receptors
DOT BLOCK

TECH environmental
FOCUSED KNOWLEDGE. REAL SOLUTIONS.

Sound Monitoring Results

Location #1

Project 041 - Pleasant Street.	
L_{eq}	55.5
L_{max}	72.9
L_{90}	44.3
L_{90} @ 16 Hz	50.4
L_{90} @ 31.5 Hz	51.3
L_{90} @ 63 Hz	48.7
L_{90} @ 125 Hz	45.4
L_{90} @ 250 Hz	42.0
L_{90} @ 500 Hz	40.8
L_{90} @ 1000 Hz	39.6
L_{90} @ 2000 Hz	35.8
L_{90} @ 4000 Hz	29.1
L_{90} @ 8000 Hz	21.2
L_{90} @ 16000 Hz	13.8

Sound Monitoring Results

Location #2

Project 042 - Hancock Street	
L_{eq}	61.0
L_{max}	82.7
L_{90}	43.5
L_{90} @ 16 Hz	50.9
L_{90} @ 31.5 Hz	51.9
L_{90} @ 63 Hz	51.7
L_{90} @ 125 Hz	47.9
L_{90} @ 250 Hz	43.3
L_{90} @ 500 Hz	41.4
L_{90} @ 1000 Hz	38.8
L_{90} @ 2000 Hz	32.4
L_{90} @ 4000 Hz	23.5
L_{90} @ 8000 Hz	16.6
L_{90} @ 16000 Hz	12.2

Sound Monitoring Results

Location #3

Project 043 - Greenmount Street	
L_{eq}	60.1
L_{max}	86.2
L_{90}	40.7
L_{90} @ 16 Hz	48.1
L_{90} @ 31.5 Hz	49.5
L_{90} @ 63 Hz	49.3
L_{90} @ 125 Hz	44.9
L_{90} @ 250 Hz	40.2
L_{90} @ 500 Hz	38.2
L_{90} @ 1000 Hz	36.6
L_{90} @ 2000 Hz	28.7
L_{90} @ 4000 Hz	17.9
L_{90} @ 8000 Hz	14.9
L_{90} @ 16000 Hz	12.2

Cadna Noise Modeling Results

Name		Octave Band Day								
	Night	31	63	125	250	500	1000	2000	4000	8000
	(dBA)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
259 Hancock Street	42.7	49.9	48.7	46.0	42.2	40.5	38.3	32.5	25.5	17.0
1 Greenmont Street	42.2	49.1	48.3	46.2	41.6	39.9	38.0	31.8	23.9	13.4
9 Greenmont Street	42.0	46.8	47.1	45.4	41.6	40.2	37.9	30.7	21.7	12.9
152 Pleasant Street	42.3	45.9	46.3	44.8	40.5	40.1	38.7	32.1	23.5	13.2
157 Pleasant Street	41.7	45.2	46.0	44.4	40.2	39.7	37.9	31.3	22.6	14.2

APPENDIX E – TRANSPORTATION APPENDIX

TRANSPORTATION TECHNICAL APPENDIX

- TRAFFIC COUNTS
- TRIP GENERATION CALCULATIONS
- INTERSECTION CAPACITY ANALYSIS WORKSHEETS
- SEASONAL ADJUSTMENT FACTORS

TRAFFIC COUNTS

Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Hoyt St / Hancock St
City/State : Boston, MA
Weather : Clear

File Name : 14121001
Site Code : 14121001
Start Date : 11/19/2014
Page No : 1

Groups Printed- Cars - Trucks

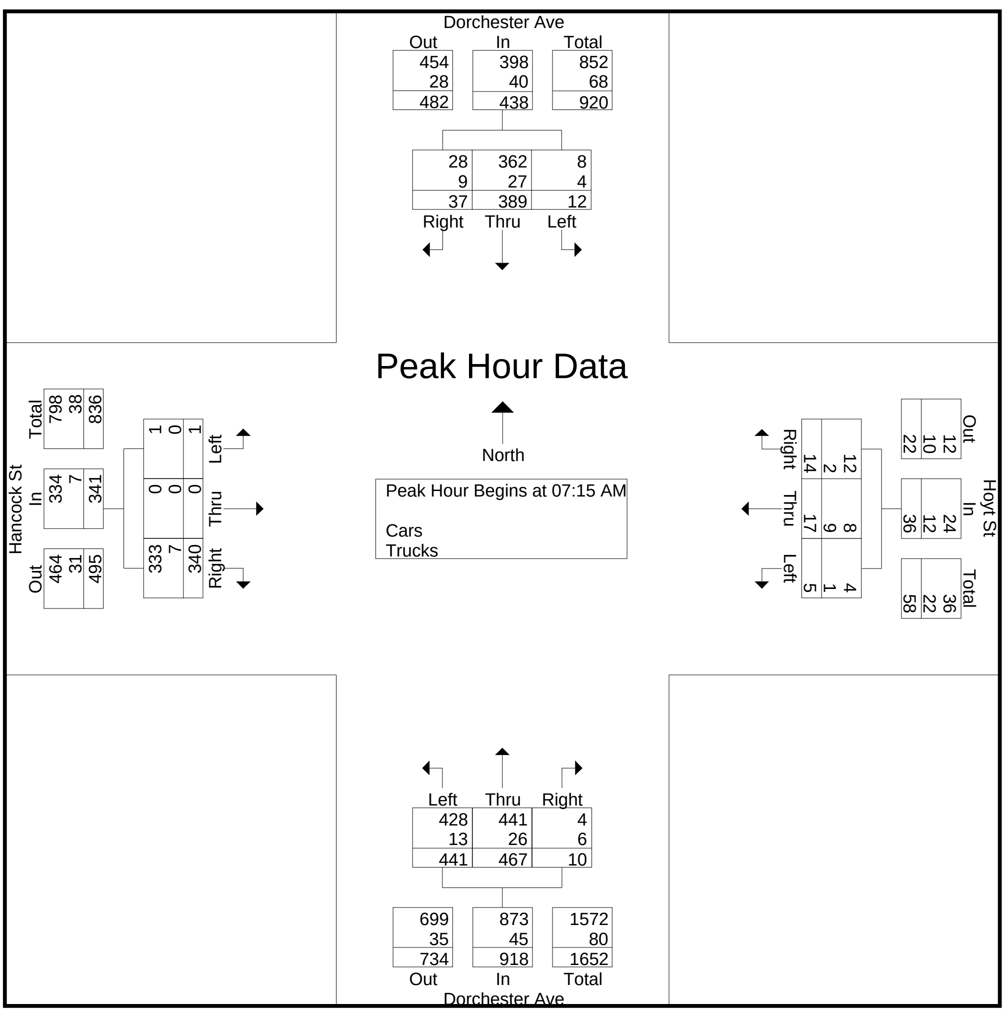
	Dorchester Ave From North			Hoyt St From East			Dorchester Ave From South			Hancock St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	76	9	5	3	5	118	108	1	0	1	71	397
07:15 AM	5	84	11	2	2	2	134	115	5	0	0	86	446
07:30 AM	1	96	6	0	6	3	116	106	2	0	0	77	413
07:45 AM	2	102	12	2	7	3	108	127	3	1	0	89	456
Total	8	358	38	9	18	13	476	456	11	1	1	323	1712
08:00 AM	4	107	8	1	2	6	83	119	0	0	0	88	418
08:15 AM	2	109	9	1	0	4	100	123	2	0	0	86	436
08:30 AM	6	85	10	2	8	4	88	136	5	1	1	70	416
08:45 AM	10	87	10	1	4	2	77	136	1	0	1	64	393
Total	22	388	37	5	14	16	348	514	8	1	2	308	1663
Grand Total	30	746	75	14	32	29	824	970	19	2	3	631	3375
Apprch %	3.5	87.7	8.8	18.7	42.7	38.7	45.4	53.5	1	0.3	0.5	99.2	
Total %	0.9	22.1	2.2	0.4	0.9	0.9	24.4	28.7	0.6	0.1	0.1	18.7	
Cars	13	699	65	8	20	25	800	899	7	2	2	615	3155
% Cars	43.3	93.7	86.7	57.1	62.5	86.2	97.1	92.7	36.8	100	66.7	97.5	93.5
Trucks	17	47	10	6	12	4	24	71	12	0	1	16	220
% Trucks	56.7	6.3	13.3	42.9	37.5	13.8	2.9	7.3	63.2	0	33.3	2.5	6.5

Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Hoyt St / Hancock St
City/State : Boston, MA
Weather : Clear

File Name : 14121001
Site Code : 14121001
Start Date : 11/19/2014
Page No : 2

	Dorchester Ave From North				Hoyt St From East				Dorchester Ave From South				Hancock St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**5**	84	11	100	**2**	2	2	6	**134**	115	**5**	**254**	0	0	86	86	446
07:30 AM	1	96	6	103	0	6	3	9	116	106	2	224	0	0	77	77	413
07:45 AM	2	102	**12**	116	2	**7**	3	**12**	108	**127**	3	238	**1**	0	**89**	**90**	**456**
08:00 AM	4	**107**	8	**119**	1	2	**6**	9	83	119	0	202	0	0	88	88	418
Total Volume	12	389	37	438	5	17	14	36	441	467	10	918	1	0	340	341	1733
% App. Total	2.7	88.8	8.4		13.9	47.2	38.9		48	50.9	1.1		0.3	0	99.7		
PHF	.600	.909	.771	.920	.625	.607	.583	.750	.823	.919	.500	.904	.250	.000	.955	.947	.950
Cars	8	362	28	398	4	8	12	24	428	441	4	873	1	0	333	334	1629
% Cars	66.7	93.1	75.7	90.9	80.0	47.1	85.7	66.7	97.1	94.4	40.0	95.1	100	0	97.9	97.9	94.0
Trucks	4	27	9	40	1	9	2	12	13	26	6	45	0	0	7	7	104
% Trucks	33.3	6.9	24.3	9.1	20.0	52.9	14.3	33.3	2.9	5.6	60.0	4.9	0	0	2.1	2.1	6.0



Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Hoyt St / Hancock St
City/State : Boston, MA
Weather : Clear

File Name : 14121001
Site Code : 14121001
Start Date : 11/19/2014
Page No : 10

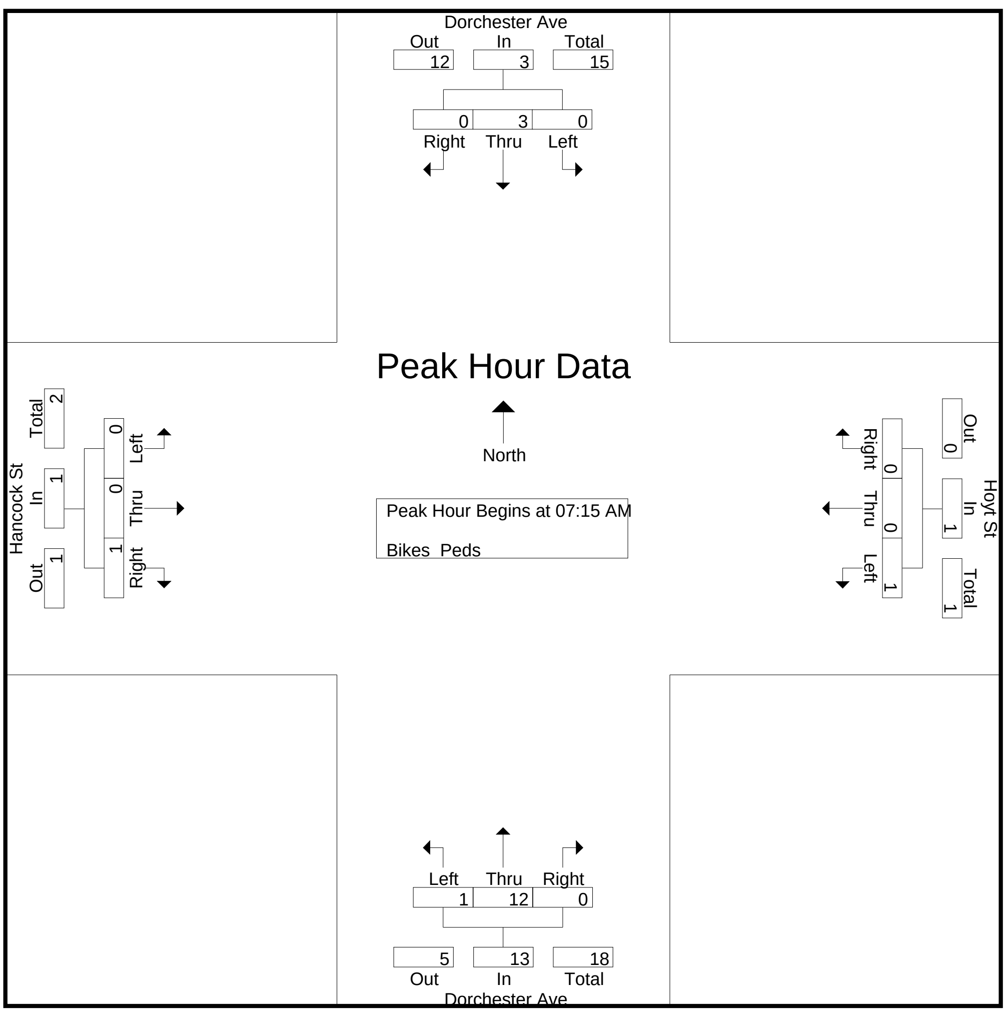
Groups Printed- Bikes Peds

	Dorchester Ave From North				Hoyt St From East				Dorchester Ave From South				Hancock St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	1	0	0	0	3	1	0	0	1	1	0	0	0	5	2	7
07:15 AM	0	1	0	3	0	0	0	4	0	4	0	5	0	0	1	1	13	6	19
07:30 AM	0	0	0	1	0	0	0	6	0	2	0	0	0	0	0	1	8	2	10
07:45 AM	0	1	0	1	1	0	0	6	0	3	0	1	0	0	0	0	8	5	13
Total	0	2	0	6	1	0	0	19	1	9	0	7	1	0	1	2	34	15	49
08:00 AM	0	1	0	0	0	0	0	3	1	3	0	0	0	0	0	0	3	5	8
08:15 AM	0	1	0	3	0	0	0	3	0	2	0	0	0	0	0	4	10	3	13
08:30 AM	0	1	0	3	0	0	0	5	0	1	0	1	0	0	0	1	10	2	12
08:45 AM	0	0	0	3	0	0	0	10	0	2	0	1	0	0	1	0	14	3	17
Total	0	3	0	9	0	0	0	21	1	8	0	2	0	0	1	5	37	13	50
Grand Total	0	5	0	15	1	0	0	40	2	17	0	9	1	0	2	7	71	28	99
Apprch %	0	100	0		100	0	0		10.5	89.5	0		33.3	0	66.7				
Total %	0	17.9	0		3.6	0	0		7.1	60.7	0		3.6	0	7.1		71.7	28.3	

N/S Street : Dorchester Avenue
E/W Street : Hoyt St / Hancock St
City/State : Boston, MA
Weather : Clear

File Name : 14121001
Site Code : 14121001
Start Date : 11/19/2014

	Dorchester Ave From North				Hoyt St From East				Dorchester Ave From South				Hancock St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**1**	0	**1**	0	0	0	0	0	**4**	0	**4**	0	0	**1**	**1**	**6**
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:45 AM	0	1	0	1	**1**	0	0	**1**	0	3	0	3	0	0	0	0	5
08:00 AM	0	1	0	1	0	0	0	0	**1**	3	0	4	0	0	0	0	5
Total Volume	0	3	0	3	1	0	0	1	1	12	0	13	0	0	1	1	18
% App. Total	0	100	0		100	0	0		7.7	92.3	0		0	0	100		
PHF	.000	.750	.000	.750	.250	.000	.000	.250	.250	.750	.000	.813	.000	.000	.250	.250	.750



Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Hoyt St / Hancock St
City/State : Boston, MA
Weather : Clear

File Name : 14121001
Site Code : 14121001
Start Date : 11/19/2014
Page No : 1

Groups Printed- Cars - Trucks

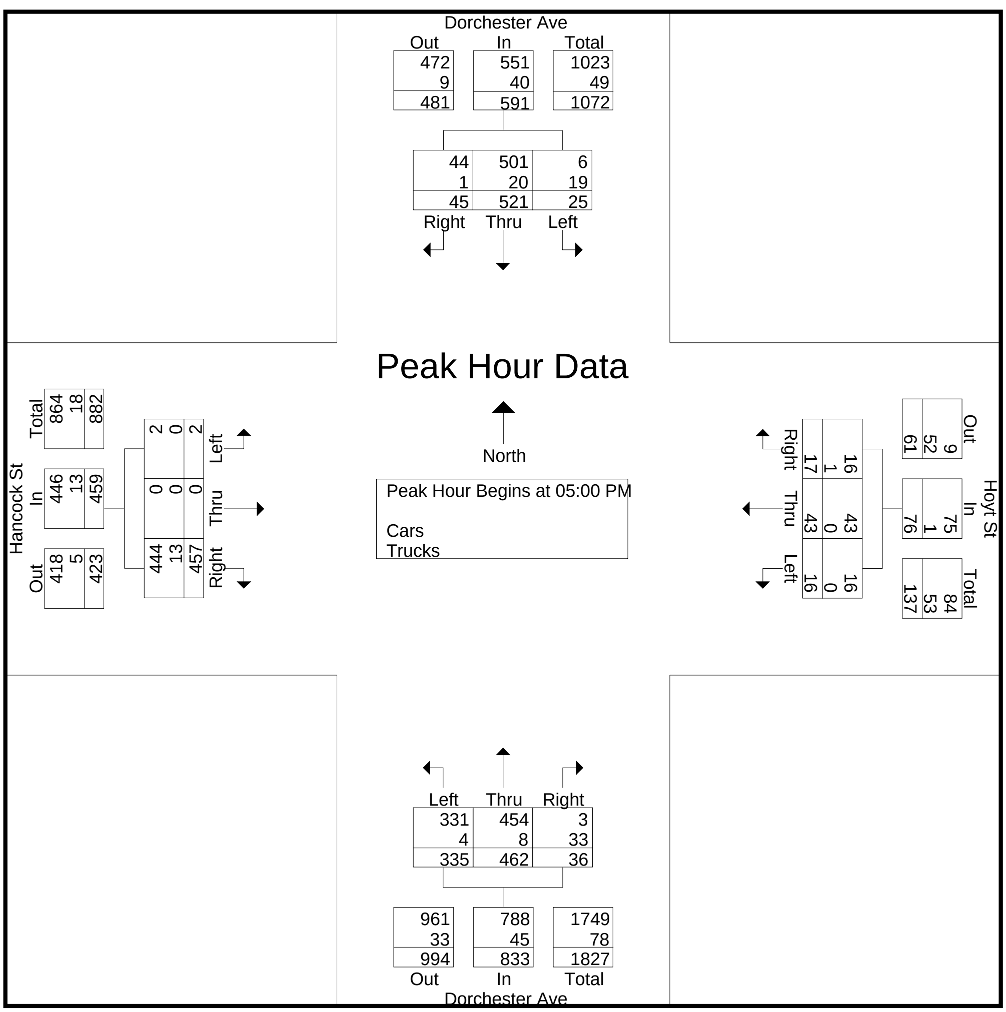
	Dorchester Ave From North			Hoyt St From East			Dorchester Ave From South			Hancock St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	2	134	7	3	4	7	80	125	4	1	2	112	481
04:15 PM	6	147	16	2	6	4	72	118	9	0	2	109	491
04:30 PM	9	106	10	7	8	7	83	110	9	0	1	112	462
04:45 PM	5	113	6	0	8	3	89	113	7	0	1	117	462
Total	22	500	39	12	26	21	324	466	29	1	6	450	1896
05:00 PM	3	145	10	6	11	6	90	124	7	0	0	109	511
05:15 PM	6	135	12	5	15	3	89	111	10	0	0	104	490
05:30 PM	8	118	5	2	11	4	87	114	10	1	0	122	482
05:45 PM	8	123	18	3	6	4	69	113	9	1	0	122	476
Total	25	521	45	16	43	17	335	462	36	2	0	457	1959
Grand Total	47	1021	84	28	69	38	659	928	65	3	6	907	3855
Apprch %	4.1	88.6	7.3	20.7	51.1	28.1	39.9	56.2	3.9	0.3	0.7	99	
Total %	1.2	26.5	2.2	0.7	1.8	1	17.1	24.1	1.7	0.1	0.2	23.5	
Cars	15	980	81	28	66	34	648	908	7	3	6	883	3659
% Cars	31.9	96	96.4	100	95.7	89.5	98.3	97.8	10.8	100	100	97.4	94.9
Trucks	32	41	3	0	3	4	11	20	58	0	0	24	196
% Trucks	68.1	4	3.6	0	4.3	10.5	1.7	2.2	89.2	0	0	2.6	5.1

Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Hoyt St / Hancock St
City/State : Boston, MA
Weather : Clear

File Name : 14121001
Site Code : 14121001
Start Date : 11/19/2014
Page No : 2

	Dorchester Ave From North				Hoyt St From East				Dorchester Ave From South				Hancock St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	3	**145**	10	**158**	**6**	11	**6**	**23**	**90**	**124**	7	**221**	0	0	109	109	**511**
05:15 PM	6	135	12	153	5	**15**	3	23	89	111	**10**	210	0	0	104	104	490
05:30 PM	**8**	118	5	131	2	11	4	17	87	114	10	211	**1**	0	**122**	**123**	482
05:45 PM	8	123	**18**	149	3	6	4	13	69	113	9	191	1	0	122	123	476
Total Volume	25	521	45	591	16	43	17	76	335	462	36	833	2	0	457	459	1959
% App. Total	4.2	88.2	7.6		21.1	56.6	22.4		40.2	55.5	4.3		0.4	0	99.6		
PHF	.781	.898	.625	.935	.667	.717	.708	.826	.931	.931	.900	.942	.500	.000	.936	.933	.958
Cars	6	501	44	551	16	43	16	75	331	454	3	788	2	0	444	446	1860
% Cars	24.0	96.2	97.8	93.2	100	100	94.1	98.7	98.8	98.3	8.3	94.6	100	0	97.2	97.2	94.9
Trucks	19	20	1	40	0	0	1	1	4	8	33	45	0	0	13	13	99
% Trucks	76.0	3.8	2.2	6.8	0	0	5.9	1.3	1.2	1.7	91.7	5.4	0	0	2.8	2.8	5.1



Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Hoyt St / Hancock St
City/State : Boston, MA
Weather : Clear

File Name : 14121001
Site Code : 14121001
Start Date : 11/19/2014
Page No : 10

Groups Printed- Bikes Peds

	Dorchester Ave From North				Hoyt St From East				Dorchester Ave From South				Hancock St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
04:15 PM	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2	1	3
04:30 PM	0	1	0	5	0	1	0	2	0	0	0	1	0	0	0	0	8	2	10
04:45 PM	0	1	1	5	0	0	0	4	1	0	0	1	0	0	1	1	11	4	15
Total	0	3	1	11	0	1	0	7	1	0	0	2	0	0	1	2	22	7	29
05:00 PM	0	0	0	0	0	0	0	2	0	1	0	1	0	0	1	0	3	2	5
05:15 PM	0	3	0	1	0	0	0	0	0	1	0	1	0	0	1	0	2	5	7
05:30 PM	0	1	0	7	0	0	0	3	1	0	0	4	0	0	0	5	19	2	21
05:45 PM	0	5	0	4	0	0	0	1	0	0	0	0	0	0	0	1	6	5	11
Total	0	9	0	12	0	0	0	6	1	2	0	6	0	0	2	6	30	14	44
Grand Total	0	12	1	23	0	1	0	13	2	2	0	8	0	0	3	8	52	21	73
Apprch %	0	92.3	7.7		0	100	0		50	50	0		0	0	100				
Total %	0	57.1	4.8		0	4.8	0		9.5	9.5	0		0	0	14.3		71.2	28.8	

Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Hoyt St / Hancock St
City/State : Boston, MA
Weather : Clear

File Name : 14121001
Site Code : 14121001
Start Date : 11/19/2014
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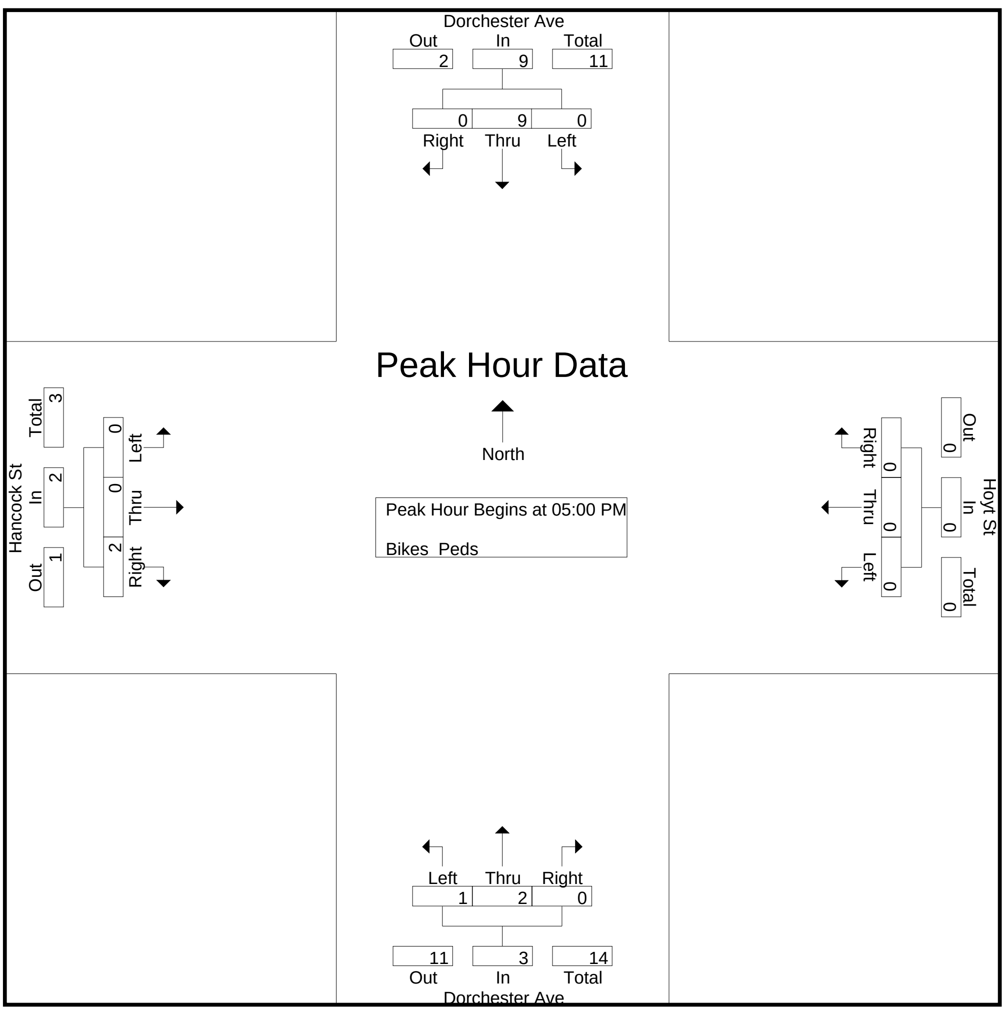
	Dorchester Ave From North				Hoyt St From East				Dorchester Ave From South				Hancock St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
05:15 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	1	1	5
05:30 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
05:45 PM	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Total Volume	0	9	0	9	0	0	0	0	1	2	0	3	0	0	2	2	14
% App. Total	0	100	0		0	0	0		33.3	66.7	0		0	0	100		
PHF	.000	.450	.000	.450	.000	.000	.000	.000	.250	.500	.000	.750	.000	.000	.500	.500	.700



Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Freeport St / East St
City/State : Boston, MA
Weather : Clear

File Name : 14121002
Site Code : 14121002
Start Date : 11/19/2014
Page No : 1

Groups Printed- Cars - Trucks

	Dorchester Ave From North			Freeport St From East			Dorchester Ave From South			East St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	68	84	0	0	0	91	0	113	1	8	18	1	384
07:15 AM	84	89	0	2	0	93	0	149	2	11	27	6	463
07:30 AM	94	85	0	0	0	101	0	119	3	17	26	5	450
07:45 AM	95	91	0	1	0	67	0	141	4	13	35	6	453
Total	341	349	0	3	0	352	0	522	10	49	106	18	1750
08:00 AM	105	107	0	0	0	96	0	116	4	6	28	4	466
08:15 AM	79	102	0	1	0	78	0	126	4	18	22	8	438
08:30 AM	79	88	0	2	0	81	0	121	3	15	24	3	416
08:45 AM	68	76	0	2	0	92	0	119	0	13	18	9	397
Total	331	373	0	5	0	347	0	482	11	52	92	24	1717
Grand Total	672	722	0	8	0	699	0	1004	21	101	198	42	3467
Apprch %	48.2	51.8	0	1.1	0	98.9	0	98	2	29.6	58.1	12.3	
Total %	19.4	20.8	0	0.2	0	20.2	0	29	0.6	2.9	5.7	1.2	
Cars	654	670	0	7	0	660	0	951	21	86	185	39	3273
% Cars	97.3	92.8	0	87.5	0	94.4	0	94.7	100	85.1	93.4	92.9	94.4
Trucks	18	52	0	1	0	39	0	53	0	15	13	3	194
% Trucks	2.7	7.2	0	12.5	0	5.6	0	5.3	0	14.9	6.6	7.1	5.6

Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Freeport St / East St
City/State : Boston, MA
Weather : Clear

File Name : 14121002
Site Code : 14121002
Start Date : 11/19/2014
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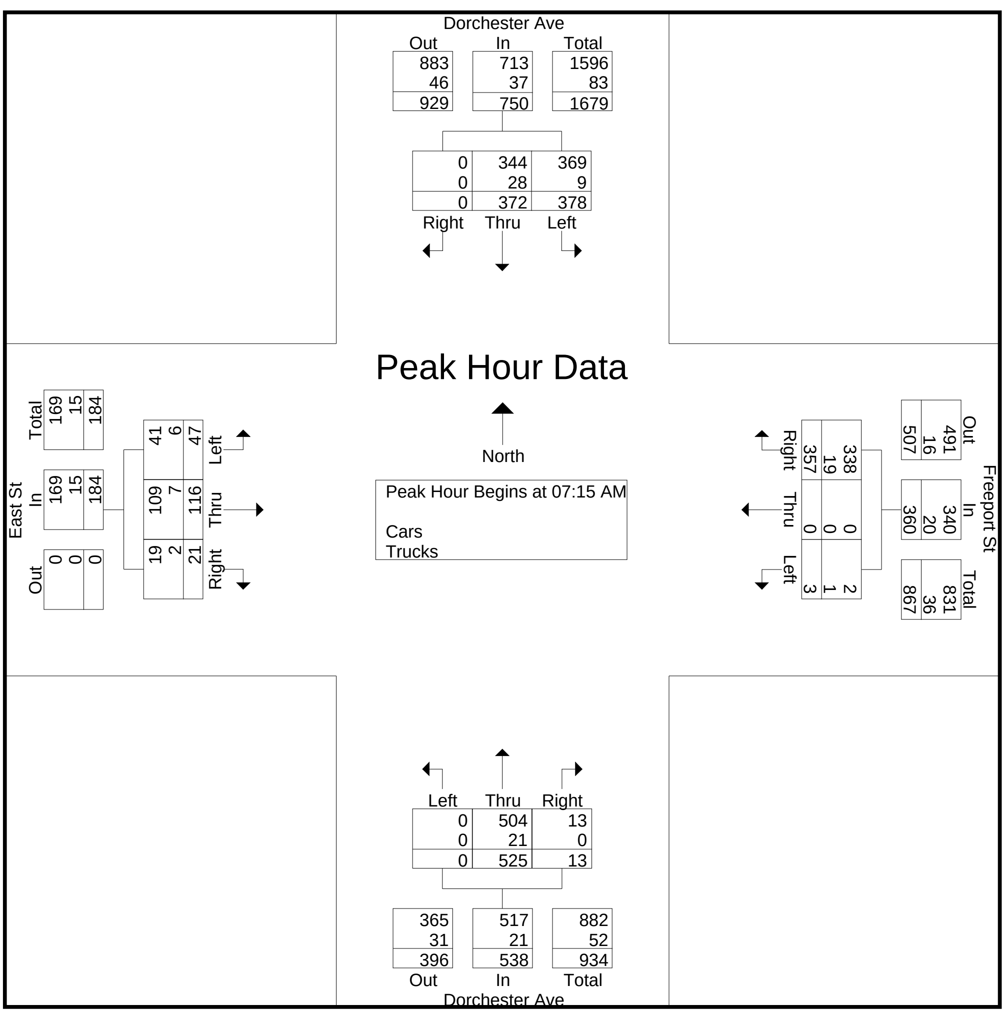
	Dorchester Ave From North				Freeport St From East				Dorchester Ave From South				East St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	84	89	0	173	**2**	0	93	95	0	**149**	2	**151**	11	27	**6**	44	463
07:30 AM	94	85	0	179	0	0	**101**	**101**	0	119	3	122	**17**	26	5	48	450
07:45 AM	95	91	0	186	1	0	67	68	0	141	**4**	145	13	**35**	6	**54**	453
08:00 AM	**105**	**107**	0	**212**	0	0	96	96	0	116	4	120	6	28	4	38	**466**
Total Volume	378	372	0	750	3	0	357	360	0	525	13	538	47	116	21	184	1832
% App. Total	50.4	49.6	0		0.8	0	99.2		0	97.6	2.4		25.5	63	11.4		
PHF	.900	.869	.000	.884	.375	.000	.884	.891	.000	.881	.813	.891	.691	.829	.875	.852	.983
Cars	369	344	0	713	2	0	338	340	0	504	13	517	41	109	19	169	1739
% Cars	97.6	92.5	0	95.1	66.7	0	94.7	94.4	0	96.0	100	96.1	87.2	94.0	90.5	91.8	94.9
Trucks	9	28	0	37	1	0	19	20	0	21	0	21	6	7	2	15	93
% Trucks	2.4	7.5	0	4.9	33.3	0	5.3	5.6	0	4.0	0	3.9	12.8	6.0	9.5	8.2	5.1



Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Freeport St / East St
City/State : Boston, MA
Weather : Clear

File Name : 14121002
Site Code : 14121002
Start Date : 11/19/2014
Page No : 10

Groups Printed- Bikes Peds

	Dorchester Ave From North				Freeport St From East				Dorchester Ave From South				East St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	2	1	0	1	0	0	0	0	0	0	1	3	4
07:15 AM	0	1	0	0	0	0	0	1	0	3	0	0	0	0	0	0	1	4	5
07:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
07:45 AM	0	1	0	1	0	0	0	4	0	1	0	1	1	0	0	0	6	3	9
Total	0	2	0	2	0	0	2	6	0	5	0	1	1	0	0	0	9	10	19
08:00 AM	0	1	0	1	0	0	0	7	0	4	0	0	0	0	1	0	8	6	14
08:15 AM	0	1	0	1	0	0	2	1	0	0	0	2	0	0	0	1	5	3	8
08:30 AM	0	1	0	3	0	0	0	0	0	0	0	1	0	0	0	0	4	1	5
08:45 AM	0	4	0	1	0	0	0	0	0	0	0	5	0	0	0	0	6	4	10
Total	0	7	0	6	0	0	2	8	0	4	0	8	0	0	1	1	23	14	37
Grand Total	0	9	0	8	0	0	4	14	0	9	0	9	1	0	1	1	32	24	56
Apprch %	0	100	0		0	0	100		0	100	0		50	0	50				
Total %	0	37.5	0		0	0	16.7		0	37.5	0		4.2	0	4.2		57.1	42.9	

Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Freeport St / East St
City/State : Boston, MA
Weather : Clear

File Name : 14121002
Site Code : 14121002
Start Date : 11/19/2014
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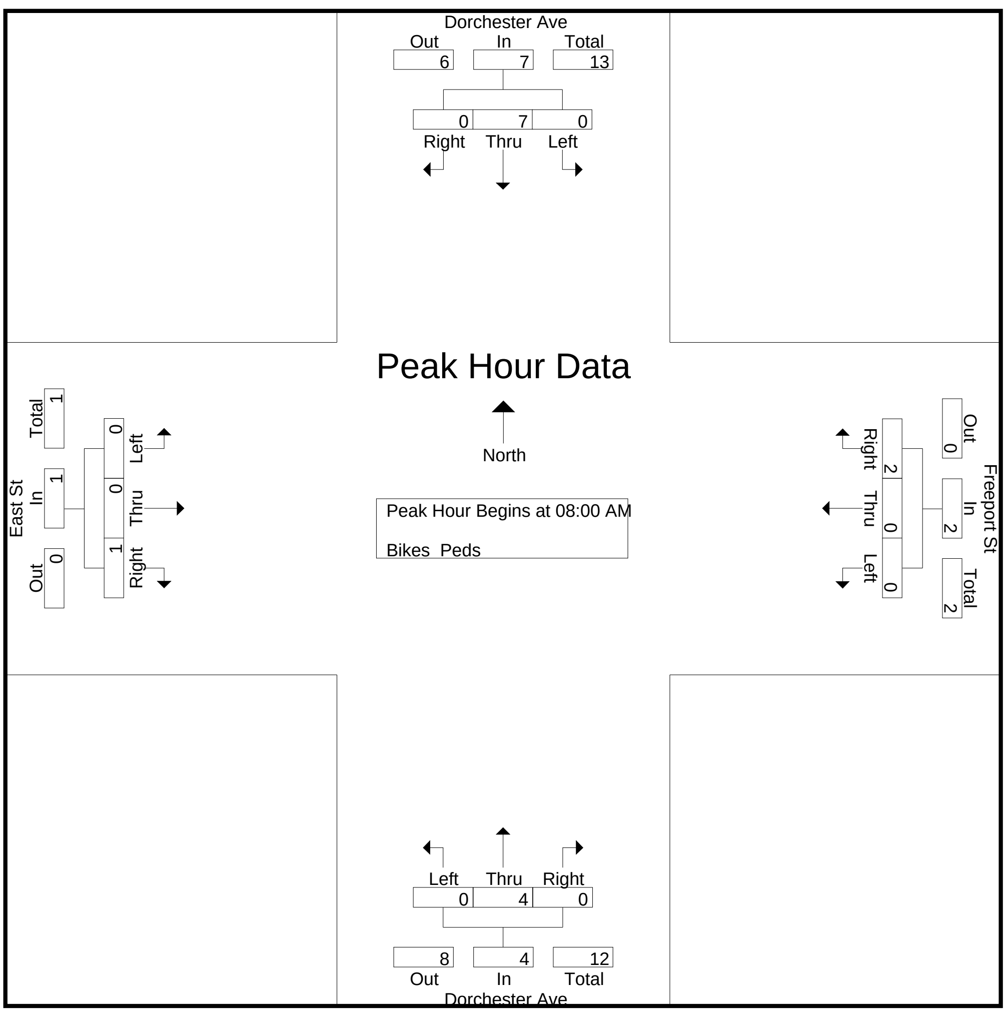
	Dorchester Ave From North				Freeport St From East				Dorchester Ave From South				East St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	1	0	1	0	0	0	0	0	**4**	0	**4**	0	0	**1**	**1**	**6**
08:15 AM	0	1	0	1	0	0	**2**	**2**	0	0	0	0	0	0	0	0	3
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	**4**	0	**4**	0	0	0	0	0	0	0	0	0	0	0	0	4
Total Volume	0	7	0	7	0	0	2	2	0	4	0	4	0	0	1	1	14
% App. Total	0	100	0		0	0	100		0	100	0		0	0	100		
PHF	.000	.438	.000	.438	.000	.000	.250	.250	.000	.250	.000	.250	.000	.000	.250	.250	.583



Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Freeport St / East St
City/State : Boston, MA
Weather : Clear

File Name : 14121002
Site Code : 14121002
Start Date : 11/19/2014
Page No : 1

Groups Printed- Cars - Trucks

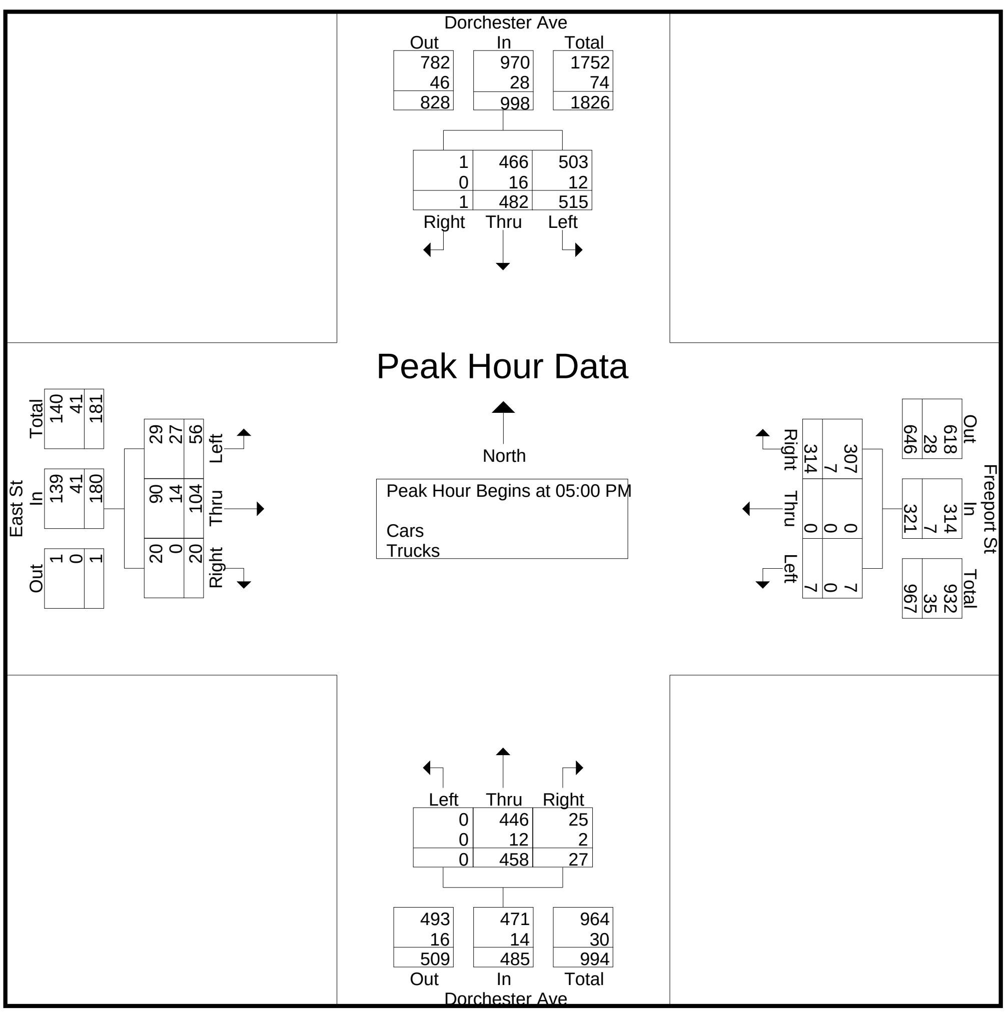
	Dorchester Ave From North			Freeport St From East			Dorchester Ave From South			East St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	133	118	0	1	0	85	0	113	1	3	16	3	473
04:15 PM	142	117	0	3	0	92	0	106	10	13	32	2	517
04:30 PM	119	102	0	2	0	79	0	113	5	8	29	4	461
04:45 PM	114	122	1	3	0	83	0	108	10	12	28	2	483
Total	508	459	1	9	0	339	0	440	26	36	105	11	1934
05:00 PM	137	121	0	1	0	84	0	120	7	14	25	3	512
05:15 PM	136	116	1	2	0	85	0	110	8	15	33	7	513
05:30 PM	119	114	0	2	0	73	0	121	6	16	19	4	474
05:45 PM	123	131	0	2	0	72	0	107	6	11	27	6	485
Total	515	482	1	7	0	314	0	458	27	56	104	20	1984
Grand Total	1023	941	2	16	0	653	0	898	53	92	209	31	3918
Apprch %	52	47.9	0.1	2.4	0	97.6	0	94.4	5.6	27.7	63	9.3	
Total %	26.1	24	0.1	0.4	0	16.7	0	22.9	1.4	2.3	5.3	0.8	
Cars	990	910	2	16	0	641	0	866	48	45	185	31	3734
% Cars	96.8	96.7	100	100	0	98.2	0	96.4	90.6	48.9	88.5	100	95.3
Trucks	33	31	0	0	0	12	0	32	5	47	24	0	184
% Trucks	3.2	3.3	0	0	0	1.8	0	3.6	9.4	51.1	11.5	0	4.7

Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Freeport St / East St
City/State : Boston, MA
Weather : Clear

File Name : 14121002
Site Code : 14121002
Start Date : 11/19/2014
Page No : 2

	Dorchester Ave From North				Freeport St From East				Dorchester Ave From South				East St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**137**	121	0	**258**	1	0	84	85	0	120	7	**127**	14	25	3	42	512
05:15 PM	136	116	**1**	253	**2**	0	**85**	**87**	0	110	**8**	118	15	**33**	**7**	**55**	**513**
05:30 PM	119	114	0	233	2	0	73	75	0	**121**	6	127	**16**	19	4	39	474
05:45 PM	123	**131**	0	254	2	0	72	74	0	107	6	113	11	27	6	44	485
Total Volume	515	482	1	998	7	0	314	321	0	458	27	485	56	104	20	180	1984
% App. Total	51.6	48.3	0.1		2.2	0	97.8		0	94.4	5.6		31.1	57.8	11.1		
PHF	.940	.920	.250	.967	.875	.000	.924	.922	.000	.946	.844	.955	.875	.788	.714	.818	.967
Cars	503	466	1	970	7	0	307	314	0	446	25	471	29	90	20	139	1894
% Cars	97.7	96.7	100	97.2	100	0	97.8	97.8	0	97.4	92.6	97.1	51.8	86.5	100	77.2	95.5
Trucks	12	16	0	28	0	0	7	7	0	12	2	14	27	14	0	41	90
% Trucks	2.3	3.3	0	2.8	0	0	2.2	2.2	0	2.6	7.4	2.9	48.2	13.5	0	22.8	4.5



Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Freeport St / East St
City/State : Boston, MA
Weather : Clear

File Name : 14121002
Site Code : 14121002
Start Date : 11/19/2014
Page No : 10

Groups Printed- Bikes Peds

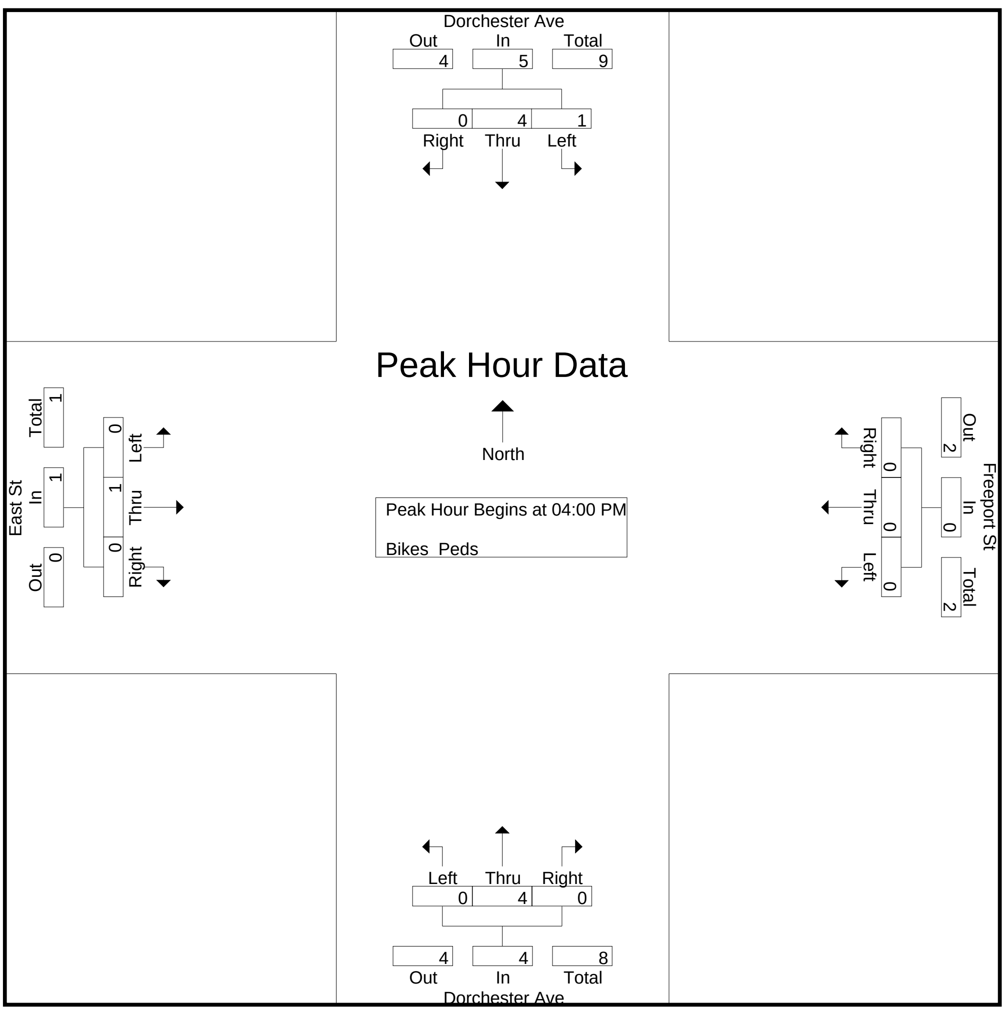
	Dorchester Ave From North				Freeport St From East				Dorchester Ave From South				East St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	1	3	4
04:15 PM	0	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	1	5
04:30 PM	0	1	0	0	0	0	0	2	0	0	0	4	0	1	0	0	6	2	8
04:45 PM	1	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	4
Total	1	4	0	0	0	0	0	3	0	4	0	8	0	1	0	0	11	10	21
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	1	3	1	4
05:15 PM	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	1	2	3	5
05:30 PM	0	1	0	8	0	0	0	0	0	0	0	3	0	0	0	0	11	1	12
05:45 PM	0	1	0	2	0	0	0	0	0	0	0	2	0	0	0	0	4	1	5
Total	0	5	0	11	0	0	0	0	0	1	0	7	0	0	0	2	20	6	26
Grand Total	1	9	0	11	0	0	0	3	0	5	0	15	0	1	0	2	31	16	47
Apprch %	10	90	0		0	0	0		0	100	0		0	100	0				
Total %	6.2	56.2	0		0	0	0		0	31.2	0		0	6.2	0		66	34	

Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Freeport St / East St
City/State : Boston, MA
Weather : Clear

File Name : 14121002
Site Code : 14121002
Start Date : 11/19/2014

	Dorchester Ave From North				Freeport St From East				Dorchester Ave From South				East St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	**3**	0	**3**	0	0	0	0	3
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	**1**	0	**1**	2
04:45 PM	**1**	**2**	0	**3**	0	0	0	0	0	1	0	1	0	0	0	0	**4**
Total Volume	1	4	0	5	0	0	0	0	0	4	0	4	0	1	0	1	10
% App. Total	20	80	0		0	0	0		0	100	0		0	100	0		
PHF	.250	.500	.000	.417	.000	.000	.000	.000	.000	.333	.000	.333	.000	.250	.000	.250	.625



Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Dewar St / Greenmount St
City/State : Boston, MA
Weather : Clear

File Name : 14121003
Site Code : 14121003
Start Date : 11/19/2014
Page No : 1

Groups Printed- Cars - Trucks

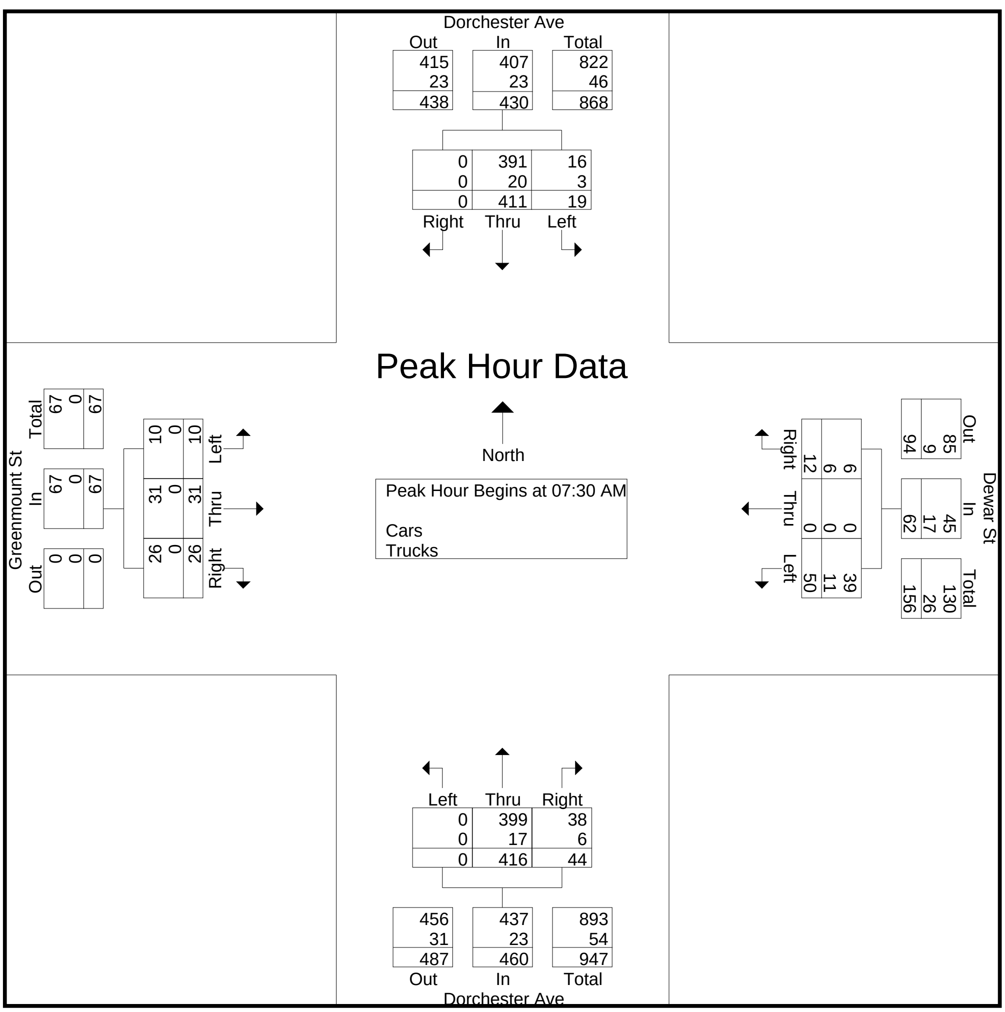
	Dorchester Ave From North			**Dewar St From East**			**Dorchester Ave From South**			**Greenmount St From West**			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	4	73	0	16	0	6	0	99	11	10	8	14	241
07:15 AM	1	85	0	15	0	11	0	102	9	7	6	3	239
07:30 AM	3	91	0	12	0	5	0	94	13	5	11	3	237
07:45 AM	6	99	0	13	0	3	0	98	11	3	9	10	252
Total	14	348	0	56	0	25	0	393	44	25	34	30	969
08:00 AM	2	109	0	16	0	3	0	115	8	1	6	6	266
08:15 AM	8	112	0	9	0	1	0	109	12	1	5	7	264
08:30 AM	3	87	0	9	1	2	0	111	9	1	1	5	229
08:45 AM	1	95	0	11	0	3	0	123	9	1	1	7	251
Total	14	403	0	45	1	9	0	458	38	4	13	25	1010
Grand Total	28	751	0	101	1	34	0	851	82	29	47	55	1979
Apprch %	3.6	96.4	0	74.3	0.7	25	0	91.2	8.8	22.1	35.9	42	
Total %	1.4	37.9	0	5.1	0.1	1.7	0	43	4.1	1.5	2.4	2.8	
Cars	23	700	0	74	1	13	0	801	63	29	46	55	1805
% Cars	82.1	93.2	0	73.3	100	38.2	0	94.1	76.8	100	97.9	100	91.2
Trucks	5	51	0	27	0	21	0	50	19	0	1	0	174
% Trucks	17.9	6.8	0	26.7	0	61.8	0	5.9	23.2	0	2.1	0	8.8

Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Dewar St / Greenmount St
City/State : Boston, MA
Weather : Clear

File Name : 14121003
Site Code : 14121003
Start Date : 11/19/2014
Page No : 2

	Dorchester Ave From North				Dewar St From East				Dorchester Ave From South				Greenmount St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	91	0	94	12	0	**5**	17	0	94	**13**	107	**5**	**11**	3	19	237
07:45 AM	6	99	0	105	13	0	3	16	0	98	11	109	3	9	**10**	**22**	252
08:00 AM	2	109	0	111	**16**	0	3	**19**	0	**115**	8	**123**	1	6	6	13	**266**
08:15 AM	**8**	**112**	0	**120**	9	0	1	10	0	109	12	121	1	5	7	13	264
Total Volume	19	411	0	430	50	0	12	62	0	416	44	460	10	31	26	67	1019
% App. Total	4.4	95.6	0		80.6	0	19.4		0	90.4	9.6		14.9	46.3	38.8		
PHF	.594	.917	.000	.896	.781	.000	.600	.816	.000	.904	.846	.935	.500	.705	.650	.761	.958
Cars	16	391	0	407	39	0	6	45	0	399	38	437	10	31	26	67	956
% Cars	84.2	95.1	0	94.7	78.0	0	50.0	72.6	0	95.9	86.4	95.0	100	100	100	100	93.8
Trucks	3	20	0	23	11	0	6	17	0	17	6	23	0	0	0	0	63
% Trucks	15.8	4.9	0	5.3	22.0	0	50.0	27.4	0	4.1	13.6	5.0	0	0	0	0	6.2



Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Dewar St / Greenmount St
City/State : Boston, MA
Weather : Clear

File Name : 14121003
Site Code : 14121003
Start Date : 11/19/2014
Page No : 10

Groups Printed- Bikes Peds

	Dorchester Ave From North				Dewar St From East				Dorchester Ave From South				Greenmount St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	2	0	0	0	4	0	2	0	2	0	0	0	0	8	2	10
07:15 AM	0	1	0	8	0	0	0	3	0	3	1	0	0	0	0	1	12	5	17
07:30 AM	0	0	0	6	0	0	0	2	0	2	0	0	0	0	0	2	10	2	12
07:45 AM	0	1	0	1	0	0	0	9	0	4	0	0	1	0	0	3	13	6	19
Total	0	2	0	17	0	0	0	18	0	11	1	2	1	0	0	6	43	15	58
08:00 AM	0	1	0	4	0	0	0	3	0	4	0	2	0	0	0	2	11	5	16
08:15 AM	0	1	0	0	0	0	0	3	0	4	0	0	0	0	0	5	8	5	13
08:30 AM	0	1	0	1	0	0	0	6	0	1	0	1	0	0	0	3	11	2	13
08:45 AM	0	0	0	1	0	0	0	9	0	4	0	1	0	0	0	3	14	4	18
Total	0	3	0	6	0	0	0	21	0	13	0	4	0	0	0	13	44	16	60
Grand Total	0	5	0	23	0	0	0	39	0	24	1	6	1	0	0	19	87	31	118
Apprch %	0	100	0		0	0	0		0	96	4		100	0	0				
Total %	0	16.1	0		0	0	0		0	77.4	3.2		3.2	0	0		73.7	26.3	

Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Dewar St / Greenmount St
City/State : Boston, MA
Weather : Clear

File Name : 14121003
Site Code : 14121003
Start Date : 11/19/2014
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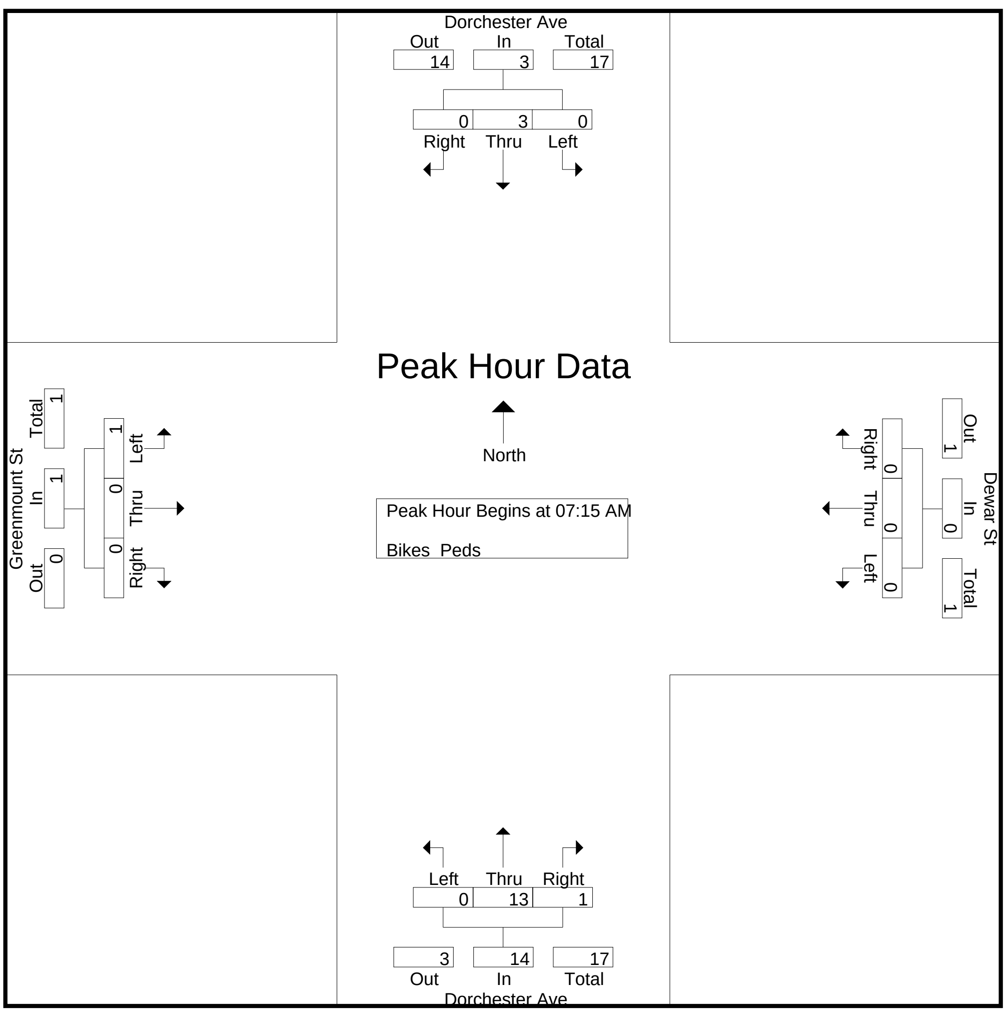
	Dorchester Ave From North				Dewar St From East				Dorchester Ave From South				Greenmount St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**1**	0	**1**	0	0	0	0	0	3	**1**	**4**	0	0	0	0	5
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:45 AM	0	1	0	1	0	0	0	0	0	**4**	0	4	**1**	0	0	**1**	**6**
08:00 AM	0	1	0	1	0	0	0	0	0	4	0	4	0	0	0	0	5
Total Volume	0	3	0	3	0	0	0	0	0	13	1	14	1	0	0	1	18
% App. Total	0	100	0		0	0	0		0	92.9	7.1		100	0	0		
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.000	.813	.250	.875	.250	.000	.000	.250	.750



Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Dewar St / Greenmount St
City/State : Boston, MA
Weather : Clear

File Name : 14121003
Site Code : 14121003
Start Date : 11/19/2014
Page No : 1

Groups Printed- Cars - Trucks

	Dorchester Ave From North			Dewar St From East			Dorchester Ave From South			Greenmount St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	4	115	0	15	0	6	0	121	14	2	6	6	289
04:15 PM	2	149	0	17	0	5	0	130	4	2	0	8	317
04:30 PM	1	93	0	15	0	7	0	115	9	0	6	2	248
04:45 PM	2	99	0	8	0	5	0	114	4	2	3	7	244
Total	9	456	0	55	0	23	0	480	31	6	15	23	1098
05:00 PM	0	133	0	10	0	1	0	137	12	1	5	13	312
05:15 PM	1	134	0	12	0	4	0	107	12	2	2	7	281
05:30 PM	0	94	0	15	0	6	0	130	9	3	3	6	266
05:45 PM	0	140	0	19	0	1	0	110	6	3	5	4	288
Total	1	501	0	56	0	12	0	484	39	9	15	30	1147
Grand Total	10	957	0	111	0	35	0	964	70	15	30	53	2245
Apprch %	1	99	0	76	0	24	0	93.2	6.8	15.3	30.6	54.1	
Total %	0.4	42.6	0	4.9	0	1.6	0	42.9	3.1	0.7	1.3	2.4	
Cars	4	896	0	99	0	30	0	936	67	13	29	50	2124
% Cars	40	93.6	0	89.2	0	85.7	0	97.1	95.7	86.7	96.7	94.3	94.6
Trucks	6	61	0	12	0	5	0	28	3	2	1	3	121
% Trucks	60	6.4	0	10.8	0	14.3	0	2.9	4.3	13.3	3.3	5.7	5.4

Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Dewar St / Greenmount St
City/State : Boston, MA
Weather : Clear

File Name : 14121003
Site Code : 14121003
Start Date : 11/19/2014
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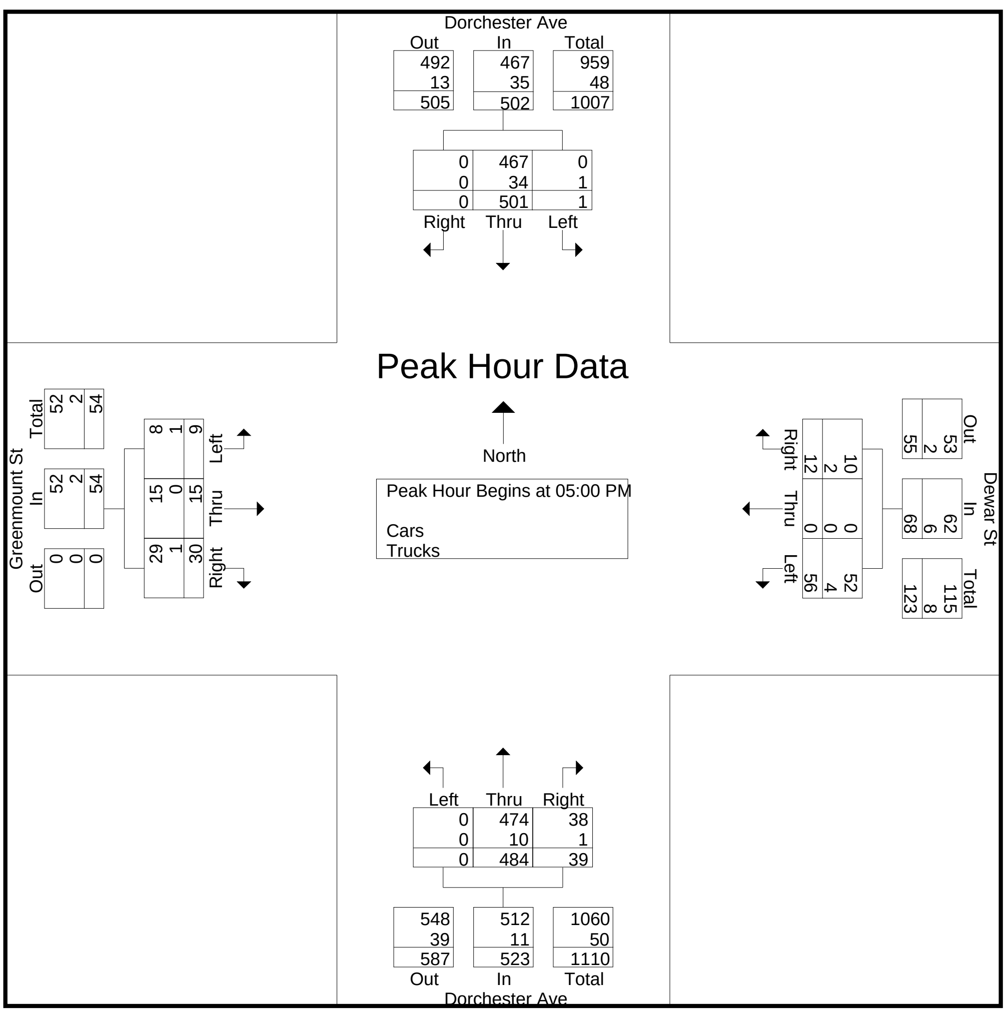
	Dorchester Ave From North				Dewar St From East				Dorchester Ave From South				Greenmount St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	133	0	133	10	0	1	11	0	**137**	**12**	**149**	1	**5**	**13**	**19**	**312**
05:15 PM	**1**	134	0	135	12	0	4	16	0	107	12	119	2	2	7	11	281
05:30 PM	0	94	0	94	15	0	**6**	**21**	0	130	9	139	**3**	3	6	12	266
05:45 PM	0	**140**	0	**140**	**19**	0	1	20	0	110	6	116	3	5	4	12	288
Total Volume	1	501	0	502	56	0	12	68	0	484	39	523	9	15	30	54	1147
% App. Total	0.2	99.8	0		82.4	0	17.6		0	92.5	7.5		16.7	27.8	55.6		
PHF	.250	.895	.000	.896	.737	.000	.500	.810	.000	.883	.813	.878	.750	.750	.577	.711	.919
Cars	0	467	0	467	52	0	10	62	0	474	38	512	8	15	29	52	1093
% Cars	0	93.2	0	93.0	92.9	0	83.3	91.2	0	97.9	97.4	97.9	88.9	100	96.7	96.3	95.3
Trucks	1	34	0	35	4	0	2	6	0	10	1	11	1	0	1	2	54
% Trucks	100	6.8	0	7.0	7.1	0	16.7	8.8	0	2.1	2.6	2.1	11.1	0	3.3	3.7	4.7



Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Dewar St / Greenmount St
City/State : Boston, MA
Weather : Clear

File Name : 14121003
Site Code : 14121003
Start Date : 11/19/2014
Page No : 10

Groups Printed- Bikes Peds

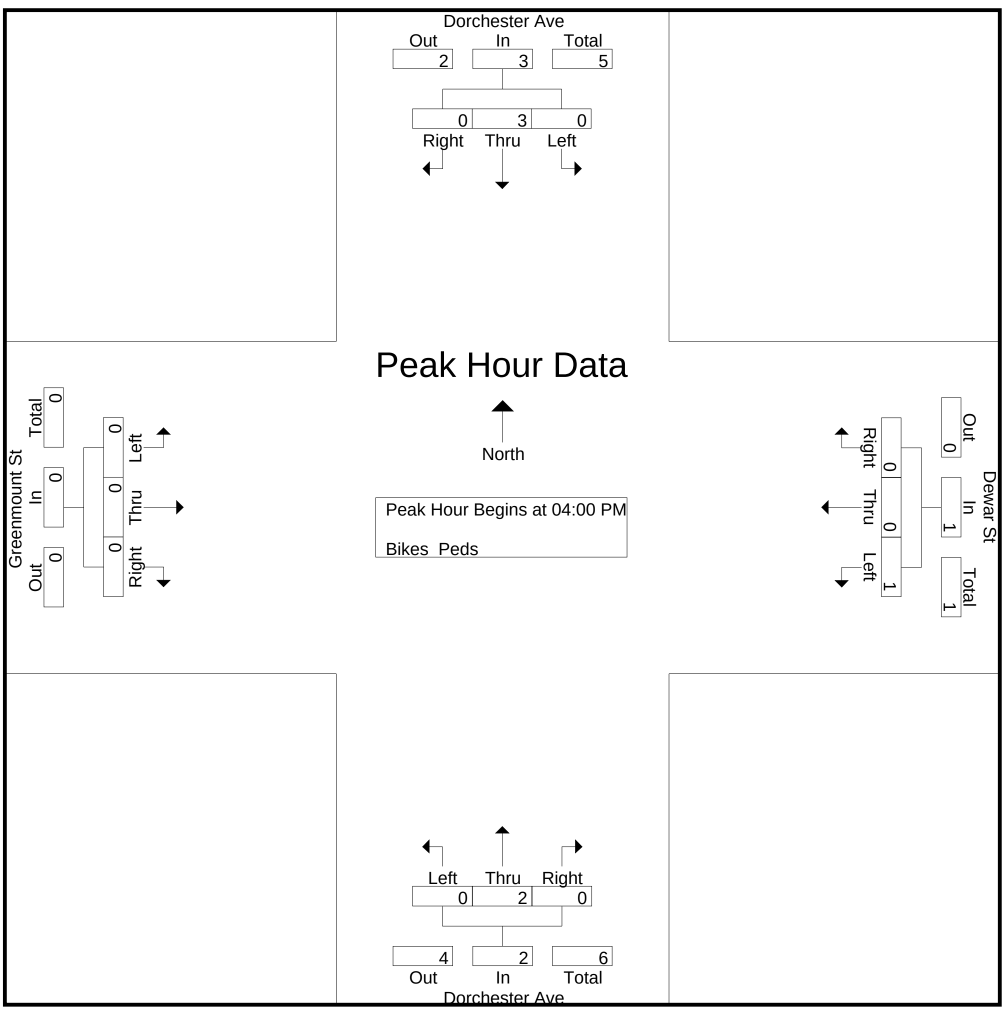
	Dorchester Ave From North				Dewar St From East				Dorchester Ave From South				Greenmount St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	1	0	0	10	0	1	0	0	0	0	0	0	10	2	12
04:15 PM	0	1	0	1	0	0	0	10	0	0	0	1	0	0	0	2	14	1	15
04:30 PM	0	2	0	3	0	0	0	8	0	1	0	0	0	0	0	0	11	3	14
04:45 PM	0	0	0	4	0	0	0	14	0	0	0	4	0	0	0	2	24	0	24
Total	0	3	0	8	1	0	0	42	0	2	0	5	0	0	0	4	59	6	65
05:00 PM	0	0	0	1	0	0	0	3	0	1	0	1	0	0	0	0	5	1	6
05:15 PM	0	0	0	6	0	0	0	6	0	1	0	0	0	0	0	0	12	1	13
05:30 PM	0	1	0	1	0	0	0	6	0	0	0	0	0	0	0	0	7	1	8
05:45 PM	0	2	0	1	0	0	0	5	0	1	0	3	0	0	0	0	9	3	12
Total	0	3	0	9	0	0	0	20	0	3	0	4	0	0	0	0	33	6	39
Grand Total	0	6	0	17	1	0	0	62	0	5	0	9	0	0	0	4	92	12	104
Apprch %	0	100	0		100	0	0		0	100	0		0	0	0				
Total %	0	50	0		8.3	0	0		0	41.7	0		0	0	0		88.5	11.5	

Accurate Counts
978-664-2565

N/S Street : Dorchester Avenue
E/W Street : Dewar St / Greenmount St
City/State : Boston, MA
Weather : Clear

File Name : 14121003
Site Code : 14121003
Start Date : 11/19/2014
Page No : 11

	Dorchester Ave From North				Dewar St From East				Dorchester Ave From South				Greenmount St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	**1**	0	0	**1**	0	**1**	0	**1**	0	0	0	0	2
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	**2**	0	**2**	0	0	0	0	0	1	0	1	0	0	0	0	**3**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	3	0	3	1	0	0	1	0	2	0	2	0	0	0	0	6
% App. Total	0	100	0		100	0	0		0	100	0		0	0	0		
PHF	.000	.375	.000	.375	.250	.000	.000	.250	.000	.500	.000	.500	.000	.000	.000	.000	.500



Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
Page No : 1

Groups Printed- Cars - Trucks

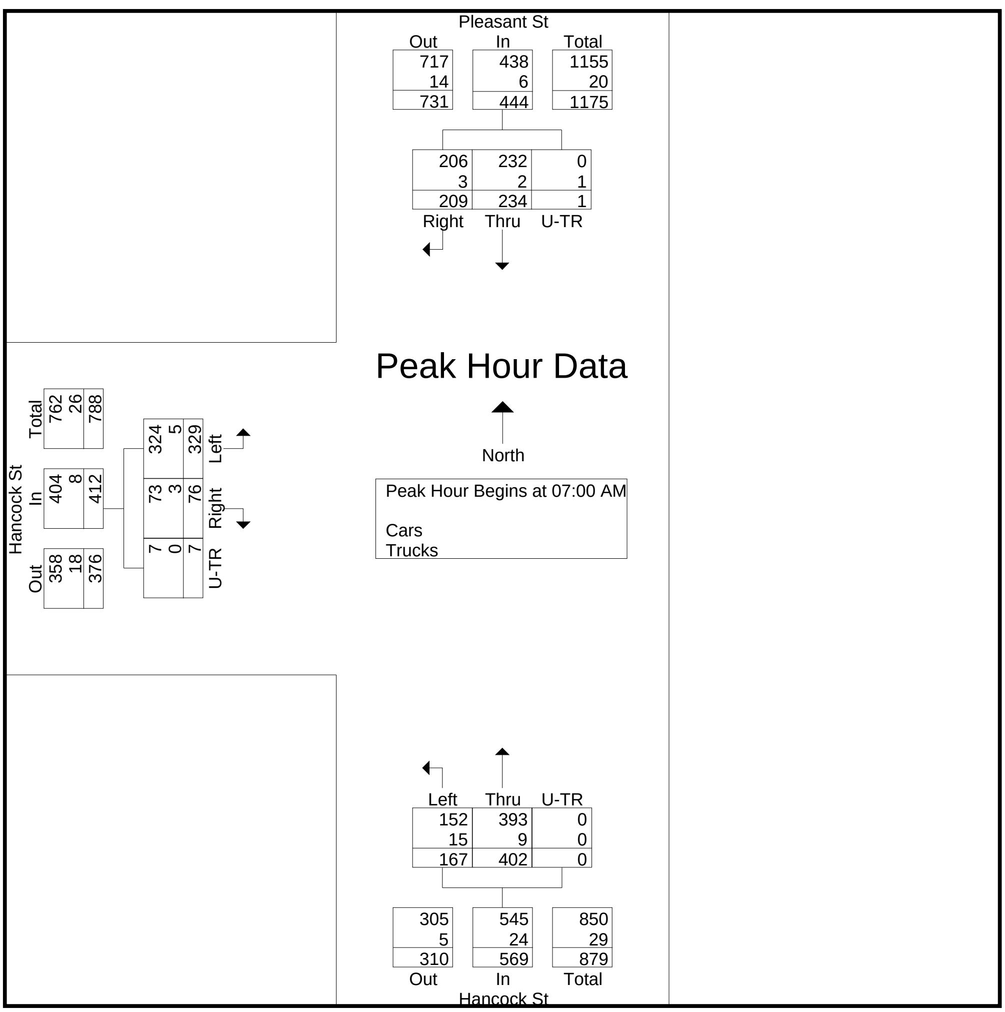
	Pleasant St From North			Hancock St From South			Hancock St From West			
Start Time	Thru	Right	U-TR	Left	Thru	U-TR	Left	Right	U-TR	Int. Total
07:00 AM	54	47	0	32	108	0	86	19	2	348
07:15 AM	59	58	0	47	113	0	85	20	3	385
07:30 AM	51	53	1	51	91	0	91	20	2	360
07:45 AM	70	51	0	37	90	0	67	17	0	332
Total	234	209	1	167	402	0	329	76	7	1425
08:00 AM	67	45	0	26	76	0	63	13	0	290
08:15 AM	61	53	0	31	82	0	63	15	0	305
08:30 AM	63	51	0	35	79	0	39	15	0	282
08:45 AM	39	50	0	27	63	0	62	26	0	267
Total	230	199	0	119	300	0	227	69	0	1144
Grand Total	464	408	1	286	702	0	556	145	7	2569
Apprch %	53.2	46.7	0.1	28.9	71.1	0	78.5	20.5	1	
Total %	18.1	15.9	0	11.1	27.3	0	21.6	5.6	0.3	
Cars	459	401	0	267	692	0	545	142	7	2513
% Cars	98.9	98.3	0	93.4	98.6	0	98	97.9	100	97.8
Trucks	5	7	1	19	10	0	11	3	0	56
% Trucks	1.1	1.7	100	6.6	1.4	0	2	2.1	0	2.2

Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
Page No : 2

	Pleasant St From North				Hancock St From South				Hancock St From West				
Start Time	Thru	Right	U-TR	App. Total	Left	Thru	U-TR	App. Total	Left	Right	U-TR	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	54	47	0	101	32	108	0	140	86	19	2	107	348
07:15 AM	59	**58**	0	117	47	**113**	0	**160**	85	**20**	**3**	108	**385**
07:30 AM	51	53	**1**	105	**51**	91	0	142	**91**	20	2	**113**	360
07:45 AM	**70**	51	0	**121**	37	90	0	127	67	17	0	84	332
Total Volume	234	209	1	444	167	402	0	569	329	76	7	412	1425
% App. Total	52.7	47.1	0.2		29.3	70.7	0		79.9	18.4	1.7		
PHF	.836	.901	.250	.917	.819	.889	.000	.889	.904	.950	.583	.912	.925
Cars	232	206	0	438	152	393	0	545	324	73	7	404	1387
% Cars	99.1	98.6	0	98.6	91.0	97.8	0	95.8	98.5	96.1	100	98.1	97.3
Trucks	2	3	1	6	15	9	0	24	5	3	0	8	38
% Trucks	0.9	1.4	100	1.4	9.0	2.2	0	4.2	1.5	3.9	0	1.9	2.7



Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
Page No : 1

Groups Printed- Cars

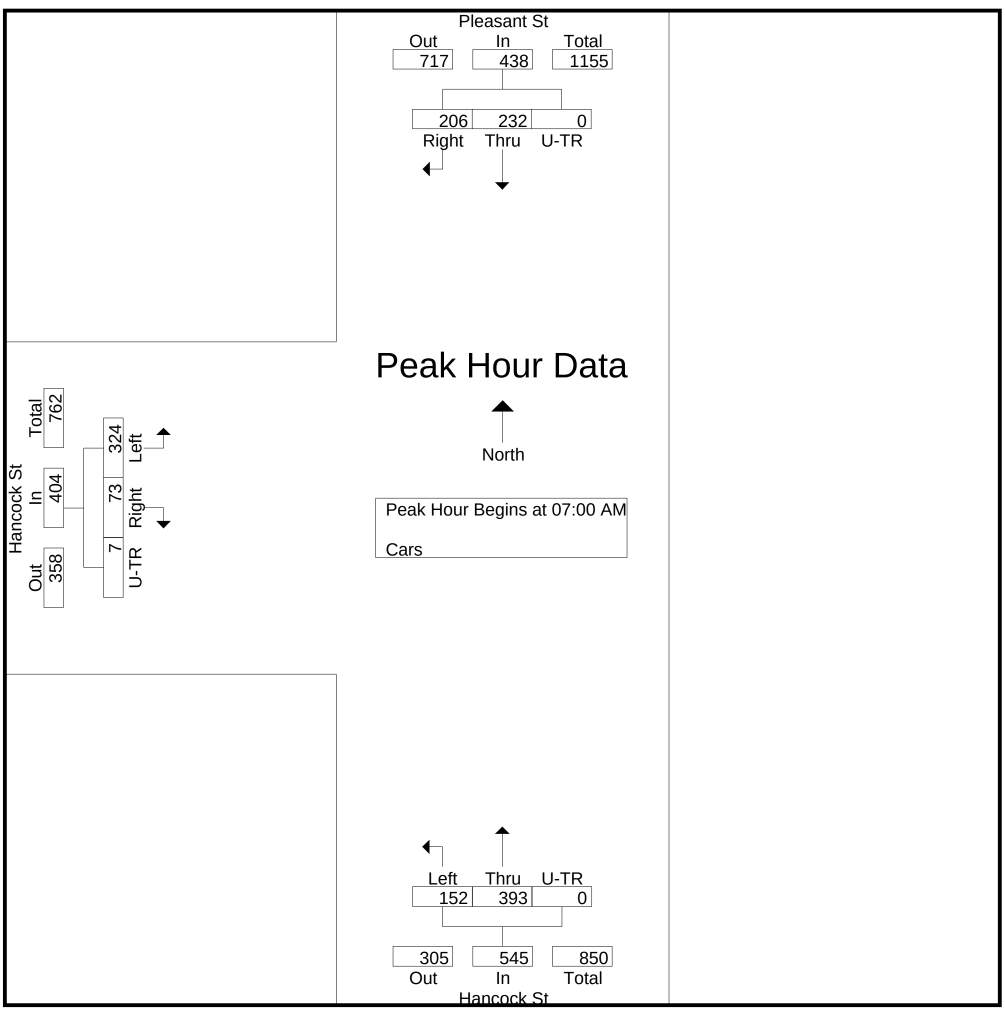
	Pleasant St From North			Hancock St From South			Hancock St From West			
Start Time	Thru	Right	U-TR	Left	Thru	U-TR	Left	Right	U-TR	Int. Total
07:00 AM	52	46	0	28	105	0	85	18	2	336
07:15 AM	59	57	0	45	110	0	83	20	3	377
07:30 AM	51	52	0	45	89	0	90	20	2	349
07:45 AM	70	51	0	34	89	0	66	15	0	325
Total	232	206	0	152	393	0	324	73	7	1387
08:00 AM	67	44	0	23	76	0	60	13	0	283
08:15 AM	60	53	0	30	82	0	61	15	0	301
08:30 AM	62	51	0	35	79	0	38	15	0	280
08:45 AM	38	47	0	27	62	0	62	26	0	262
Total	227	195	0	115	299	0	221	69	0	1126
Grand Total	459	401	0	267	692	0	545	142	7	2513
Apprch %	53.4	46.6	0	27.8	72.2	0	78.5	20.5	1	
Total %	18.3	16	0	10.6	27.5	0	21.7	5.7	0.3	

Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014

	Pleasant St From North				Hancock St From South				Hancock St From West				
Start Time	Thru	Right	U-TR	App. Total	Left	Thru	U-TR	App. Total	Left	Right	U-TR	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	52	46	0	98	28	105	0	133	85	18	2	105	336
07:15 AM	59	**57**	0	116	**45**	**110**	0	**155**	83	**20**	**3**	106	**377**
07:30 AM	51	52	0	103	45	89	0	134	**90**	20	2	**112**	349
07:45 AM	**70**	51	0	**121**	34	89	0	123	66	15	0	81	325
Total Volume	232	206	0	438	152	393	0	545	324	73	7	404	1387
% App. Total	53	47	0		27.9	72.1	0		80.2	18.1	1.7		
PHF	.829	.904	.000	.905	.844	.893	.000	.879	.900	.913	.583	.902	.920



Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
Page No : 1

Groups Printed- Trucks

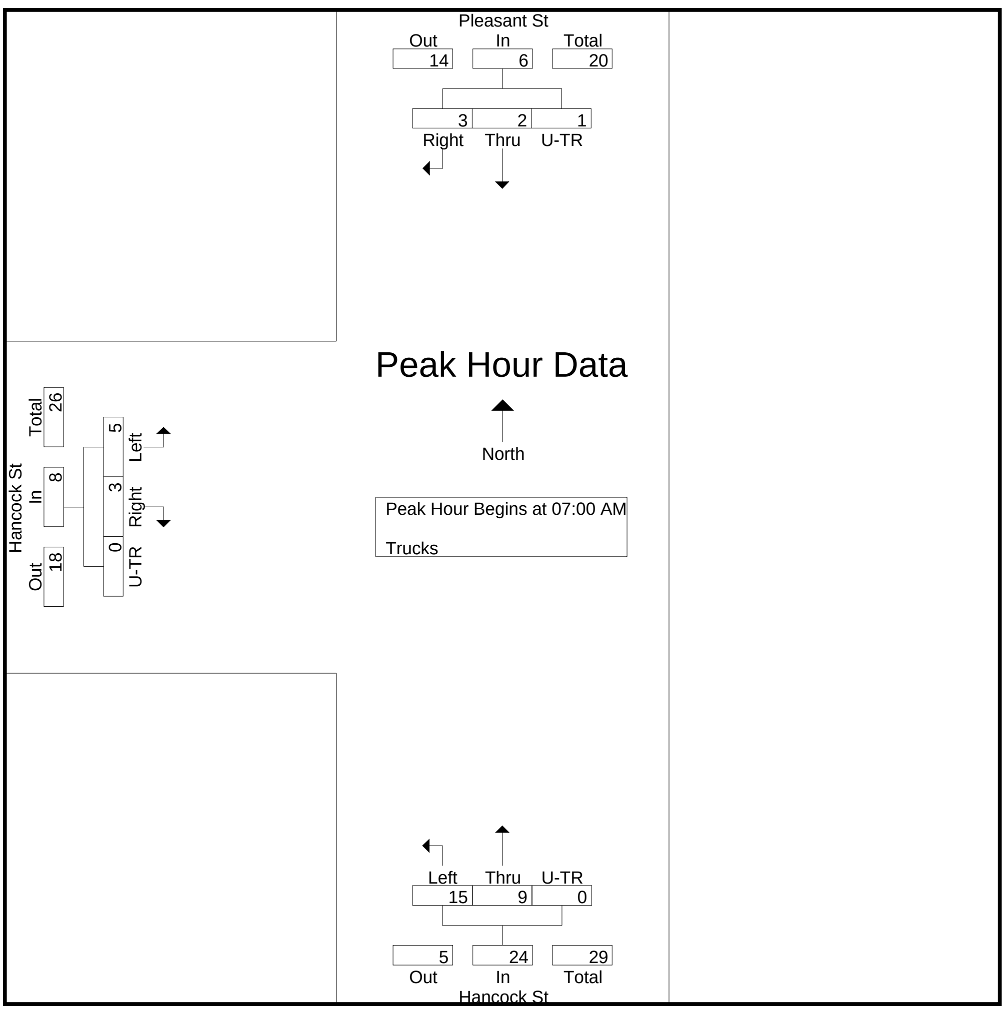
	Pleasant St From North			Hancock St From South			Hancock St From West			
Start Time	Thru	Right	U-TR	Left	Thru	U-TR	Left	Right	U-TR	Int. Total
07:00 AM	2	1	0	4	3	0	1	1	0	12
07:15 AM	0	1	0	2	3	0	2	0	0	8
07:30 AM	0	1	1	6	2	0	1	0	0	11
07:45 AM	0	0	0	3	1	0	1	2	0	7
Total	2	3	1	15	9	0	5	3	0	38
08:00 AM	0	1	0	3	0	0	3	0	0	7
08:15 AM	1	0	0	1	0	0	2	0	0	4
08:30 AM	1	0	0	0	0	0	1	0	0	2
08:45 AM	1	3	0	0	1	0	0	0	0	5
Total	3	4	0	4	1	0	6	0	0	18
Grand Total	5	7	1	19	10	0	11	3	0	56
Apprch %	38.5	53.8	7.7	65.5	34.5	0	78.6	21.4	0	
Total %	8.9	12.5	1.8	33.9	17.9	0	19.6	5.4	0	

Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
Page No : 2

	Pleasant St From North				Hancock St From South				Hancock St From West				
Start Time	Thru	Right	U-TR	App. Total	Left	Thru	U-TR	App. Total	Left	Right	U-TR	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	**2**	**1**	0	**3**	4	**3**	0	7	1	1	0	2	**12**
07:15 AM	0	1	0	1	2	3	0	5	**2**	0	0	2	8
07:30 AM	0	1	**1**	2	**6**	2	0	**8**	1	0	0	1	11
07:45 AM	0	0	0	0	3	1	0	4	1	**2**	0	**3**	7
Total Volume	2	3	1	6	15	9	0	24	5	3	0	8	38
% App. Total	33.3	50	16.7		62.5	37.5	0		62.5	37.5	0		
PHF	.250	.750	.250	.500	.625	.750	.000	.750	.625	.375	.000	.667	.792



Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
Page No : 1

Groups Printed- Bikes Peds

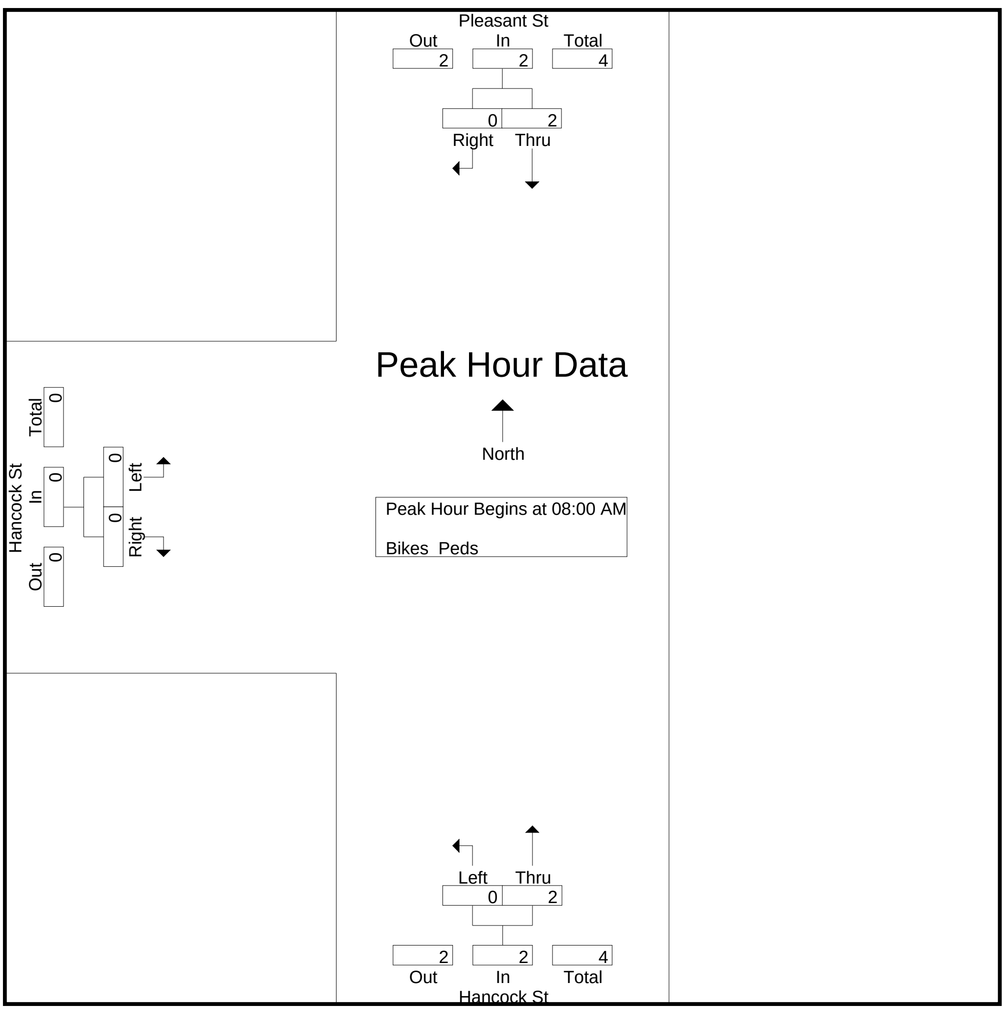
	Pleasant St From North			Hancock St From South			Hancock St From West					
Start Time	Thru	Right	Peds	Left	Thru	Peds	Left	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	1	0	1	0	0	0	1	2	1	3
07:15 AM	0	0	5	0	0	0	0	0	0	5	0	5
07:30 AM	0	0	0	0	0	1	0	0	0	1	0	1
07:45 AM	1	0	0	0	0	0	0	0	0	0	1	1
Total	1	0	6	0	1	1	0	0	1	8	2	10
08:00 AM	0	0	0	0	1	0	0	0	0	0	1	1
08:15 AM	0	0	0	0	1	0	0	0	0	0	1	1
08:30 AM	0	0	2	0	0	1	0	0	0	3	0	3
08:45 AM	2	0	2	0	0	0	0	0	0	2	2	4
Total	2	0	4	0	2	1	0	0	0	5	4	9
Grand Total	3	0	10	0	3	2	0	0	1	13	6	19
Apprch %	100	0		0	100		0	0				
Total %	50	0		0	50		0	0		68.4	31.6	

Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
Page No : 2

	Pleasant St From North			Hancock St From South			Hancock St From West			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	0	0	0	**1**	**1**	0	0	0	1
08:15 AM	0	0	0	0	1	1	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	**2**	0	**2**	0	0	0	0	0	0	**2**
Total Volume	2	0	2	0	2	2	0	0	0	4
% App. Total	100	0		0	100		0	0		
PHF	.250	.000	.250	.000	.500	.500	.000	.000	.000	.500



Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
Page No : 1

Groups Printed- Cars - Trucks

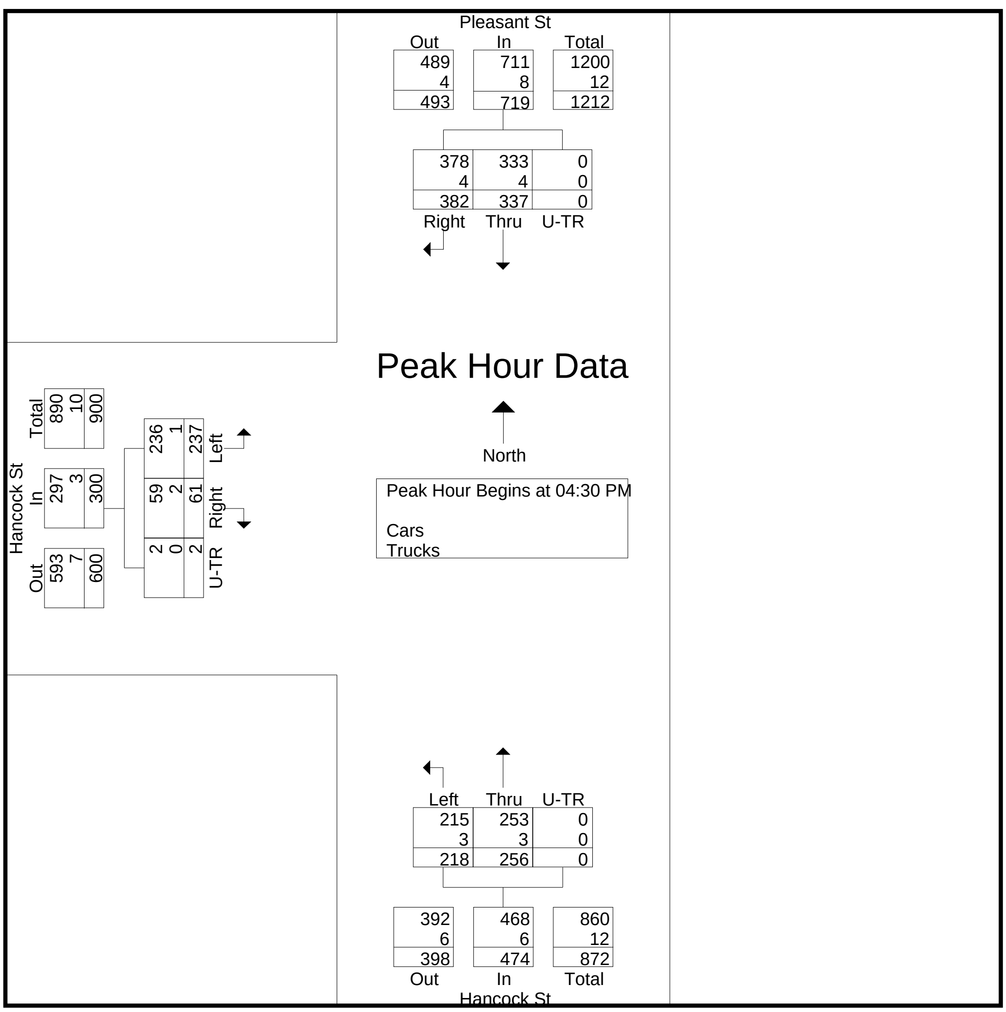
	Pleasant St From North			Hancock St From South			Hancock St From West			
Start Time	Thru	Right	U-TR	Left	Thru	U-TR	Left	Right	U-TR	Int. Total
04:00 PM	77	70	0	48	42	0	59	19	1	316
04:15 PM	84	92	0	49	59	0	54	21	0	359
04:30 PM	86	109	0	45	57	0	62	14	2	375
04:45 PM	103	98	0	44	71	0	60	19	0	395
Total	350	369	0	186	229	0	235	73	3	1445
05:00 PM	78	80	0	60	63	0	58	13	0	352
05:15 PM	70	95	0	69	65	0	57	15	0	371
05:30 PM	93	86	1	53	60	0	36	16	3	348
05:45 PM	81	71	0	46	50	0	46	15	1	310
Total	322	332	1	228	238	0	197	59	4	1381
Grand Total	672	701	1	414	467	0	432	132	7	2826
Apprch %	48.9	51	0.1	47	53	0	75.7	23.1	1.2	
Total %	23.8	24.8	0	14.6	16.5	0	15.3	4.7	0.2	
Cars	666	694	1	410	462	0	427	130	7	2797
% Cars	99.1	99	100	99	98.9	0	98.8	98.5	100	99
Trucks	6	7	0	4	5	0	5	2	0	29
% Trucks	0.9	1	0	1	1.1	0	1.2	1.5	0	1

Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014

	Pleasant St From North				Hancock St From South				Hancock St From West				
Start Time	Thru	Right	U-TR	App. Total	Left	Thru	U-TR	App. Total	Left	Right	U-TR	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	86	**109**	0	195	45	57	0	102	**62**	14	**2**	78	375
04:45 PM	**103**	98	0	**201**	44	**71**	0	115	60	**19**	0	**79**	**395**
05:00 PM	78	80	0	158	60	63	0	123	58	13	0	71	352
05:15 PM	70	95	0	165	**69**	65	0	**134**	57	15	0	72	371
Total Volume	337	382	0	719	218	256	0	474	237	61	2	300	1493
% App. Total	46.9	53.1	0		46	54	0		79	20.3	0.7		
PHF	.818	.876	.000	.894	.790	.901	.000	.884	.956	.803	.250	.949	.945
Cars	333	378	0	711	215	253	0	468	236	59	2	297	1476
% Cars	98.8	99.0	0	98.9	98.6	98.8	0	98.7	99.6	96.7	100	99.0	98.9
Trucks	4	4	0	8	3	3	0	6	1	2	0	3	17
% Trucks	1.2	1.0	0	1.1	1.4	1.2	0	1.3	0.4	3.3	0	1.0	1.1



Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
Page No : 1

Groups Printed- Cars

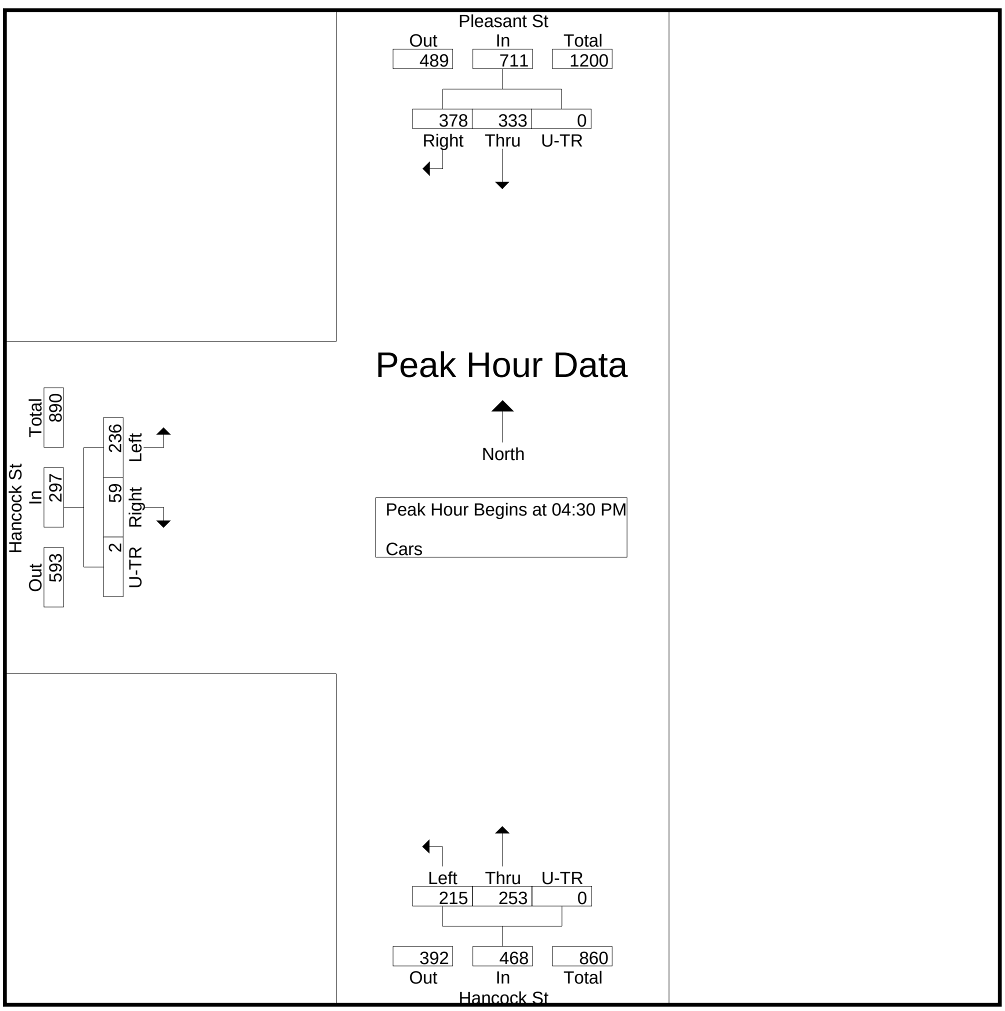
	Pleasant St From North			Hancock St From South			Hancock St From West			
Start Time	Thru	Right	U-TR	Left	Thru	U-TR	Left	Right	U-TR	Int. Total
04:00 PM	77	70	0	48	41	0	57	19	1	313
04:15 PM	83	91	0	48	58	0	53	21	0	354
04:30 PM	84	108	0	45	56	0	62	14	2	371
04:45 PM	103	97	0	44	70	0	60	19	0	393
Total	347	366	0	185	225	0	232	73	3	1431
05:00 PM	76	79	0	58	63	0	57	11	0	344
05:15 PM	70	94	0	68	64	0	57	15	0	368
05:30 PM	93	86	1	53	60	0	35	16	3	347
05:45 PM	80	69	0	46	50	0	46	15	1	307
Total	319	328	1	225	237	0	195	57	4	1366
Grand Total	666	694	1	410	462	0	427	130	7	2797
Apprch %	48.9	51	0.1	47	53	0	75.7	23	1.2	
Total %	23.8	24.8	0	14.7	16.5	0	15.3	4.6	0.3	

Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
Page No : 2

	Pleasant St From North				Hancock St From South				Hancock St From West				
Start Time	Thru	Right	U-TR	App. Total	Left	Thru	U-TR	App. Total	Left	Right	U-TR	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	84	**108**	0	192	45	56	0	101	**62**	14	**2**	78	371
04:45 PM	**103**	97	0	**200**	44	**70**	0	114	60	**19**	0	**79**	**393**
05:00 PM	76	79	0	155	58	63	0	121	57	11	0	68	344
05:15 PM	70	94	0	164	**68**	64	0	**132**	57	15	0	72	368
Total Volume	333	378	0	711	215	253	0	468	236	59	2	297	1476
% App. Total	46.8	53.2	0		45.9	54.1	0		79.5	19.9	0.7		
PHF	.808	.875	.000	.889	.790	.904	.000	.886	.952	.776	.250	.940	.939



Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
Page No : 1

Groups Printed- Trucks

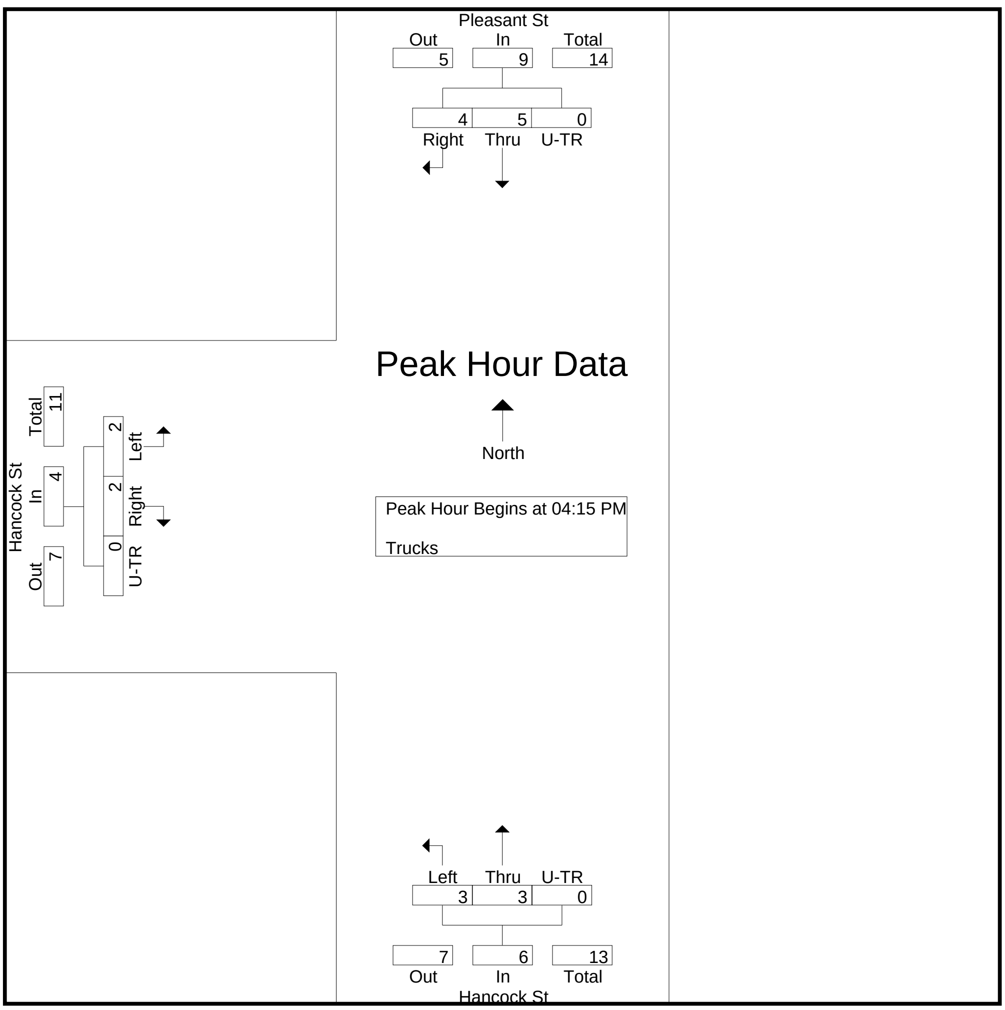
	Pleasant St From North			Hancock St From South			Hancock St From West			
Start Time	Thru	Right	U-TR	Left	Thru	U-TR	Left	Right	U-TR	Int. Total
04:00 PM	0	0	0	0	1	0	2	0	0	3
04:15 PM	1	1	0	1	1	0	1	0	0	5
04:30 PM	2	1	0	0	1	0	0	0	0	4
04:45 PM	0	1	0	0	1	0	0	0	0	2
Total	3	3	0	1	4	0	3	0	0	14
05:00 PM	2	1	0	2	0	0	1	2	0	8
05:15 PM	0	1	0	1	1	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	1	0	0	1
05:45 PM	1	2	0	0	0	0	0	0	0	3
Total	3	4	0	3	1	0	2	2	0	15
Grand Total	6	7	0	4	5	0	5	2	0	29
Apprch %	46.2	53.8	0	44.4	55.6	0	71.4	28.6	0	
Total %	20.7	24.1	0	13.8	17.2	0	17.2	6.9	0	

Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
Page No : 2

	Pleasant St From North				Hancock St From South				Hancock St From West				
Start Time	Thru	Right	U-TR	App. Total	Left	Thru	U-TR	App. Total	Left	Right	U-TR	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	1	**1**	0	2	1	**1**	0	**2**	**1**	0	0	1	5
04:30 PM	**2**	1	0	**3**	0	1	0	1	0	0	0	0	4
04:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	2
05:00 PM	2	1	0	3	**2**	0	0	2	1	**2**	0	**3**	**8**
Total Volume	5	4	0	9	3	3	0	6	2	2	0	4	19
% App. Total	55.6	44.4	0		50	50	0		50	50	0		
PHF	.625	1.00	.000	.750	.375	.750	.000	.750	.500	.250	.000	.333	.594



Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
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Groups Printed- Bikes Peds

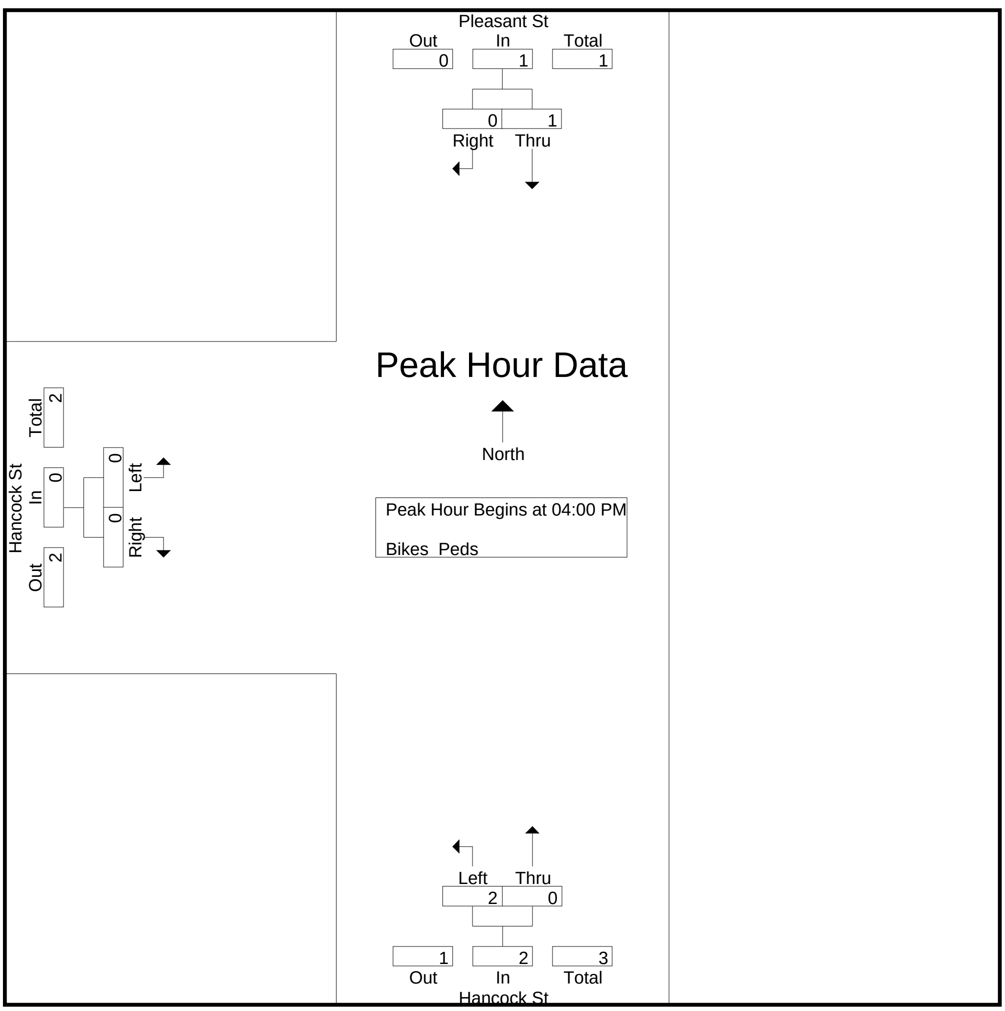
	Pleasant St From North			Hancock St From South			Hancock St From West					
Start Time	Thru	Right	Peds	Left	Thru	Peds	Left	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	1	0	0	0	0	2	2	1	3
04:15 PM	0	0	2	0	0	2	0	0	0	4	0	4
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	1	0	5	1	0	0	0	0	0	5	2	7
Total	1	0	7	2	0	2	0	0	2	11	3	14
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	1	1	0	1
05:30 PM	1	0	1	0	0	0	0	0	0	1	1	2
05:45 PM	0	0	1	0	0	1	0	0	3	5	0	5
Total	1	0	2	0	0	1	0	0	4	7	1	8
Grand Total	2	0	9	2	0	3	0	0	6	18	4	22
Apprch %	100	0		100	0		0	0				
Total %	50	0		50	0		0	0		81.8	18.2	

Accurate Counts
978-664-2565

N/S Street : Pleasant St / Hancock St
E/W Street : Hancock Street
City/State : Boston, MA
Weather : Clear

File Name : 14121004
Site Code : 14121004
Start Date : 11/19/2014
Page No : 2

	Pleasant St From North			Hancock St From South			Hancock St From West			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	**1**	0	**1**	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	**1**	0	**1**	1	0	1	0	0	0	**2**
Total Volume	1	0	1	2	0	2	0	0	0	3
% App. Total	100	0		100	0		0	0		
PHF	.250	.000	.250	.500	.000	.500	.000	.000	.000	.375



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 FUNCTIONAL CLASSIFICATION	AXLE CORRECTION FACTOR
RURAL	
1	0.95
2	0.97
3	0.98
0,5,6	0.98
URBAN	
1	0.96
2,3	0.98
5	0.98
0,6	0.99
I-84	0.90

ROUND OFF

0 - 999............10
> 1,000.........100

Apply I-84 factor to stations:

3290, 3921, 3929

TRIP GENERATION CALCULATIONS

DOT BLOCK

Trip Generation Assessment

HOWARD STEIN HUDSON

20-May-15

Land Use	Size	Category	Trip Rates (Trips/ksf or unit)	Unadjusted Vehicle Trips	Internal trips	Less capture trips	Assumed national vehicle occupancy rate[1]	Converted to Person trips	Transit Share[2]	Transit Trips	Walk/Bike/ Other Share[2]	Walk/ Bike/ Other Trips	Vehicle Share[2]	Total Vehicle Person Trips	Assumed local vehicle occupancy rate for autos[3]	Total Adjusted Auto Trips	Pass By Rate (%)	Pass By Trips	Primary Trips
Daily																			
Apartment[5]	355	Total	6.65	2,361	422	1,939	1.13	**2,191**		**504**		**526**		**1,161**	1.13	**1,028**	**0%**	**0**	**1,028**
	Units	In	3.33	1,180	232	948	1.13	**1,072**	23%	**247**	24%	**257**	53%	**568**	1.13	**503**	**0%**	**0**	**503**
		Out	3.33	1,180	190	991	1.13	**1,119**	23%	**257**	24%	**269**	53%	**593**	1.13	**525**	**0%**	**0**	**525**
Condominium[6]	64	Total	5.81	372	66	305	1.13	**345**		**79**		**83**		**183**	1.13	**162**	**0%**	**0**	**162**
	Units	In	2.91	186	37	149	1.13	**169**	23%	**39**	24%	**40**	53%	**90**	1.13	**80**	**0%**	**0**	**80**
		Out	2.91	186	30	156	1.13	**176**	23%	**40**	24%	**43**	53%	**93**	1.13	**82**	**0%**	**0**	**82**
Retail[7]	35.1	Total	42.70	1,499	151	1,348	1.78	**2,399**		**240**		**696**		**1,463**	1.78	**822**	**25%**	**206**	**616**
	KSF	In	21.35	749	68	681	1.78	**1,213**	10%	**121**	29%	**352**	61%	**740**	1.78	**416**	**25%**	**104**	**312**
		Out	21.35	749	83	666	1.78	**1,186**	10%	**119**	29%	**344**	61%	**723**	1.78	**406**	**25%**	**102**	**305**
Supermarket[8]	33.1	Total	102.24	3,384	338	3,046	1.78	**5,422**		**542**		**1,573**		**3,307**	1.78	**1,858**	**25%**	**465**	**1,394**
	KSF	In	51.12	1,692	152	1,540	1.78	**2,741**	10%	**274**	29%	**795**	61%	**1,672**	1.78	**939**	**25%**	**235**	**704**
		Out	51.12	1,692	186	1,506	1.78	**2,681**	10%	**268**	29%	**778**	61%	**1635**	1.78	**919**	**25%**	**230**	**689**
Totals		Total		7,616	978	6,638		10,357		1,365		2,878		6,114		3,870		671	3,200
		In		3,808	489	3,319		5,195		681		1,444		3,070		1,938		339	1,599
		Out		3,808	489	3,319		5,162		684		1,434		3,044		1,932		331	1,601
AM Peak Hour																			
Apartment	355	Total	0.51	181	3	178	1.13	**201**		**53**		**57**		**91**	1.13	**81**	**0%**	**0**	**81**
	Units	In	0.10	36	1	35	1.13	**40**	29%	**11**	22%	**9**	49%	**20**	1.13	**18**	**0%**	**0**	**18**
		Out	0.41	145	2	143	1.13	**161**	26%	**42**	30%	**48**	44%	**71**	1.13	**63**	**0%**	**0**	**63**
Condominium	64	Total	0.44	28	0	28	1.13	**31**		**9**		**9**		**13**	1.13	**12**	**0%**	**0**	**12**
	Units	In	0.07	5	0	5	1.13	**5**	29%	**2**	22%	**1**	49%	**2**	1.13	**2**	**0%**	**0**	**2**
		Out	0.37	23	0	23	1.13	**26**	26%	**7**	30%	**8**	44%	**11**	1.13	**10**	**0%**	**0**	**10**
Retail	35.1	Total	0.96	34	0	34	1.78	**60**		**8**		**18**		**34**	1.78	**19**	**25%**	**4**	**15**
	KSF	In	0.60	21	0	21	1.78	**37**	14%	**5**	27%	**10**	59%	**22**	1.78	**12**	**25%**	**2**	**10**
		Out	0.36	13	0	13	1.78	**23**	12%	**3**	36%	**8**	52%	**12**	1.78	**7**	**25%**	**2**	**5**
Supermarket	33.1	Total	3.40	113	3	110	1.78	**195**		**19**		**57**		**119**	1.78	**67**	**25%**	**16**	**51**
	KSF	In	2.11	70	2	68	1.78	**121**	10%	**12**	29%	**35**	61%	**74**	1.78	**42**	**25%**	**8**	**34**
		Out	1.29	43	1	42	1.78	**74**	10%	**7**	29%	**22**	61%	**45**	1.78	**25**	**25%**	**8**	**17**
Totals		Total		355	6	349		487		89		141		257		179		20	159
		In		132	3	129		203		30		55		118		74		10	64
		Out		224	3	221		284		59		86		139		105		10	95
PM Peak Hour																			
Apartment	355	Total	0.62	220	69	151	1.13	**171**		**46**		**47**		**78**	1.13	**69**	**0%**	**0**	**69**
	Units	In	0.40	143	50	93	1.13	**105**	26%	**27**	30%	**32**	44%	**46**	1.13	**41**	**0%**	**0**	**41**
		Out	0.22	77	19	58	1.13	**66**	29%	**19**	22%	**15**	49%	**32**	1.13	**28**	**0%**	**0**	**28**
Condominium	64	Total	0.52	33	11	22	1.13	**25**		**7**		**7**		**11**	1.13	**10**	**0%**	**0**	**10**
	Units	In	0.35	22	8	14	1.13	**16**	26%	**4**	30%	**5**	44%	**7**	1.13	**6**	**0%**	**0**	**6**
		Out	0.17	11	3	8	1.13	**9**	29%	**3**	22%	**2**	49%	**4**	1.13	**4**	**0%**	**0**	**4**
Retail	35.1	Total	3.71	130	24	106	1.78	**189**		**24**		**60**		**105**	1.78	**59**	**25%**	**14**	**45**
	KSF	In	1.78	63	6	57	1.78	**101**	12%	**12**	36%	**36**	52%	**53**	1.78	**30**	**25%**	**7**	**23**
		Out	1.93	68	18	50	1.78	**88**	14%	**12**	27%	**24**	59%	**52**	1.78	**29**	**25%**	**7**	**22**
Supermarket	33.1	Total	9.48	314	56	258	1.78	**458**		**46**		**133**		**279**	1.78	**157**	**25%**	**40**	**117**
	KSF	In	4.83	160	16	144	1.78	**256**	10%	**26**	29%	**74**	61%	**156**	1.78	**88**	**25%**	**20**	**68**
		Out	4.65	154	40	114	1.78	**202**	10%	**20**	29%	**59**	61%	**123**	1.78	**69**	**25%**	**20**	**49**
Totals		Total		697	160	537		843		123		247		473		295		54	241
		In		388	80	308		478		69		147		262		165		27	138
		Out		309	80	229		365		54		100		211		130		27	103

XX Hard Coded to Balance

1. 2009 National vehicle occupancy rates - 1.13:home to work; 1.84: family/personal business; 1.78: shopping; 2.2 social/recreational
2. Mode shares based on peak-hour BTD Data for Area 8
3. Local vehicle occupancy rates based on 2009 National vehicle occupancy rates.
4. For taxi cabs, 1.1 passengers per cab. (2.2 minus 1 driver equals 1.2)
5. ITE Trip Generation Rate, 9th Edition, LUC 230 (Residential Condominium/Townhouse), average rate
6. ITE Trip Generation Rate, 9th Edition, LUC 220 (Apartment), average rate
7. ITE Trip Generation Rate, 9th Edition, LUC 820 (Shopping Center), average rate
8. ITE Trip Generation Rate, 9th Edition, LUC 850 (Supermarket), average rate

INTERSECTION CAPACITY ANALYSIS WORKSHEETS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø2
Lane Configurations													
Volume (vph)	0	0	347	5	17	14	446	473	10	12	398	37	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	12	11	14	11	11	11	11	12	12	12	
Storage Length (ft)	0		0	0		0	0		0	0		100	
Storage Lanes	0		1	0		0	1		0	0		1	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	
Ped Bike Factor					0.99			1.00			1.00		
Frt			0.850		0.948			0.997			0.988		
Flt Protected					0.993		0.950				0.999		
Satd. Flow (prot)	0	0	2508	0	1278	0	1525	1538	0	0	2934	0	
Flt Permitted					0.993		0.401				0.937		
Satd. Flow (perm)	0	0	2508	0	1278	0	644	1538	0	0	2752	0	
Right Turn on Red			No			No			No			No	
Satd. Flow (RTOR)													
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		854			195			189			689		
Travel Time (s)		19.4			4.4			4.3			15.7		
Confl. Bikes (#/hr)						1			13			3	
Peak Hour Factor	0.95	0.95	0.95	0.75	0.75	0.75	0.90	0.90	0.90	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	0%	2%	20%	53%	14%	3%	6%	60%	33%	7%	24%	
Adj. Flow (vph)	0	0	365	7	23	19	496	526	11	13	433	40	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	0	365	0	49	0	496	537	0	0	486	0	
Turn Type			Over	Split	NA		D.P+P	NA		Perm	NA		
Protected Phases			5	6	6		5	1 5			1		2
Permitted Phases							1			1			
Detector Phase			5	6	6		5	1 5		1	1		
Switch Phase													
Minimum Initial (s)			8.0	10.0	10.0		8.0			8.0	8.0		4.0
Minimum Split (s)			13.0	15.0	15.0		13.0			13.0	13.0		26.0
Total Split (s)			25.0	19.0	19.0		25.0			30.0	30.0		26.0
Total Split (%)			25.0%	19.0%	19.0%		25.0%			30.0%	30.0%		26%
Maximum Green (s)			20.0	14.0	14.0		20.0			25.0	25.0		20.0
Yellow Time (s)			3.0	3.0	3.0		3.0			3.0	3.0		2.0
All-Red Time (s)			2.0	2.0	2.0		2.0			2.0	2.0		4.0
Lost Time Adjust (s)			-2.0		-1.0		-2.0				-1.0		
Total Lost Time (s)			3.0		4.0		3.0				4.0		
Lead/Lag			Lead	Lag	Lag		Lead			Lead	Lead		Lag
Lead-Lag Optimize?													
Vehicle Extension (s)			4.0	2.0	2.0		4.0			4.0	4.0		2.0
Recall Mode			None	None	None		None			C-Max	C-Max		None
Walk Time (s)													7.0
Flash Dont Walk (s)													13.0
Pedestrian Calls (#/hr)													20
Act Effct Green (s)			22.0		14.5		65.1	65.5			42.1		
Actuated g/C Ratio			0.22		0.14		0.65	0.66			0.42		
v/c Ratio			0.66		0.26		0.81	0.53			0.42		
Control Delay			42.3		41.9		28.6	7.2			25.3		
Queue Delay			0.3		0.0		11.9	0.9			0.0		
Total Delay			42.6		41.9		40.5	8.1			25.3		
LOS			D		D		D	A			C		
Approach Delay					41.9			23.7			25.3		
Approach LOS					D			C			C		
Stops (vph)			311		32		282	212			320		
Fuel Used(gal)			7		1		5	3			6		
CO Emissions (g/hr)			490		38		336	181			452		
NOx Emissions (g/hr)			95		7		65	35			88		
VOC Emissions (g/hr)			114		9		78	42			105		
Dilemma Vehicles (#)			0		0		0	0			0		
Queue Length 50th (ft)			121		28		108	41			90		
Queue Length 95th (ft)			176		53		m#431	m113			204		
Internal Link Dist (ft)		774			115			109			609		
Turn Bay Length (ft)													
Base Capacity (vph)			551		191		612	1007			1158		
Starvation Cap Reductn			0		0		100	226			0		
Spillback Cap Reductn			21		0		0	0			31		
Storage Cap Reductn			0		0		0	0			0		
Reduced v/c Ratio			0.69		0.26		0.97	0.69			0.43		

Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 28.1 Intersection LOS: C
Intersection Capacity Utilization 60.6% ICU Level of Service B
Analysis Period (min) 15
\# 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: 1: Dorchester Avenue & Hancock Street/Hoyt Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø2
Lane Configurations													
Volume (vph)	47	116	21	0	0	357	0	525	13	378	372	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	16	12	12	12	15	12	12	12	11	11	12	
Storage Length (ft)	0		0	0		0	0		100	0		0	
Storage Lanes	0		0	0		1	0		1	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor								1.00					
Frt		0.984				0.865		0.996					
Flt Protected		0.987								0.950			
Satd. Flow (prot)	0	1739	0	0	0	1550	0	3113	0	1540	1531	0	
Flt Permitted		0.987								0.324			
Satd. Flow (perm)	0	1739	0	0	0	1550	0	3113	0	525	1531	0	
Right Turn on Red			No			Yes			No			No	
Satd. Flow (RTOR)						*250							
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		315			326			2596			189		
Travel Time (s)		7.2			7.4			59.0			4.3		
Confl. Bikes (#/hr)									4			7	
Peak Hour Factor	0.85	0.85	0.85	0.89	0.89	0.89	0.89	0.89	0.89	0.88	0.88	0.88	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	13%	6%	10%	0%	0%	5%	0%	4%	0%	2%	8%	0%	
Adj. Flow (vph)	55	136	25	0	0	401	0	590	15	430	423	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	216	0	0	0	401	0	605	0	430	423	0	
Turn Type	Perm	NA				Over		NA		D.P+P	NA		
Protected Phases		6				5		1		5	1 5		2
Permitted Phases	6									1			
Detector Phase	6	6				5		1		5	1 5		
Switch Phase													
Minimum Initial (s)	10.0	10.0				8.0		8.0		8.0			4.0
Minimum Split (s)	15.0	15.0				13.0		13.0		13.0			26.0
Total Split (s)	19.0	19.0				25.0		30.0		25.0			26.0
Total Split (%)	19.0%	19.0%				25.0%		30.0%		25.0%			26%
Maximum Green (s)	14.0	14.0				20.0		25.0		20.0			20.0
Yellow Time (s)	3.0	3.0				3.0		3.0		3.0			2.0
All-Red Time (s)	2.0	2.0				2.0		2.0		2.0			4.0
Lost Time Adjust (s)		-1.0				-2.0		-1.0		-2.0			
Total Lost Time (s)		4.0				3.0		4.0		3.0			
Lead/Lag	Lag	Lag				Lead		Lead		Lead			Lag
Lead-Lag Optimize?													
Vehicle Extension (s)	2.0	2.0				4.0		4.0		4.0			2.0
Recall Mode	None	None				None		C-Max		None			None
Walk Time (s)													7.0
Flash Dont Walk (s)													13.0
Pedestrian Calls (#/hr)													20
Act Effct Green (s)		14.5				22.0		42.1		65.1	65.5		
Actuated g/C Ratio		0.14				0.22		0.42		0.65	0.66		
v/c Ratio		0.86				0.75		0.46		0.76	0.42		
Control Delay		72.3				23.3		25.6		20.5	2.8		
Queue Delay		0.0				1.2		0.1		1.1	0.8		
Total Delay		72.3				24.4		25.7		21.6	3.6		
LOS		E				C		C		C	A		
Approach Delay		72.3						25.7			12.7		
Approach LOS		E						C			B		
Stops (vph)		164				137		393		168	29		
Fuel Used(gal)		4				3		16		3	1		
CO Emissions (g/hr)		284				235		1109		214	64		
NOx Emissions (g/hr)		55				46		216		42	13		
VOC Emissions (g/hr)		66				54		257		50	15		
Dilemma Vehicles (#)		0				0		0		0	0		
Queue Length 50th (ft)		135				88		115		42	10		
Queue Length 95th (ft)		#236				200		247		#312	35		
Internal Link Dist (ft)		235			246			2516			109		
Turn Bay Length (ft)													
Base Capacity (vph)		260				536		1309		565	1002		
Starvation Cap Reductn		0				0		0		32	305		
Spillback Cap Reductn		0				34		103		0	0		
Storage Cap Reductn		0				0		0		0	0		
Reduced v/c Ratio		0.83				0.80		0.50		0.81	0.61		

Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 25.0 Intersection LOS: C
Intersection Capacity Utilization 62.2% ICU Level of Service B
Analysis Period (min) 15
* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Dorchester Avenue & East Street/Freeport Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	31	26	50	0	12	0	416	44	19	411	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.82	0.82	0.82	0.94	0.94	0.94	0.90	0.90	0.90
Hourly flow rate (vph)	13	41	34	61	0	15	0	443	47	21	457	0
Pedestrians		8			17			2			19	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								689				
pX, platoon unblocked	0.82	0.82		0.82	0.82	0.82				0.82		
vC, conflicting volume	1006	1013	467	1038	990	502	465			506		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	902	910	467	940	881	290	465			295		
tC, single (s)	7.1	6.5	6.2	7.3	6.5	6.7	4.1			4.3		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.0	3.8	2.2			2.3		
p0 queue free %	93	81	94	57	100	97	100			98		
cM capacity (veh/h)	198	219	595	142	227	519	1100			968		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	88	76	489	478
Volume Left	13	61	0	21
Volume Right	34	15	47	0
cSH	284	166	1700	968
Volume to Capacity	0.31	0.46	0.29	0.02
Queue Length 95th (ft)	32	53	0	2
Control Delay (s)	23.3	43.8	0.0	0.6
Lane LOS	C	E		A
Approach Delay (s)	23.3	43.8	0.0	0.6
Approach LOS	C	E		

Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBU	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations							
Sign Control		Yield			Yield	Yield	
Volume (vph)	7	329	76	167	402	234	209
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.92	0.92
Hourly flow rate (vph)	0	362	84	188	452	254	227

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	362	84	188	452	482
Volume Left (vph)	362	0	188	0	0
Volume Right (vph)	0	84	0	0	227
Hadj (s)	0.53	-0.63	0.65	0.03	-0.27
Departure Headway (s)	8.2	7.0	7.9	7.3	6.8
Degree Utilization, x	0.82	0.16	0.41	0.91	0.91
Capacity (veh/h)	431	501	446	480	514
Control Delay (s)	37.7	10.1	15.2	47.8	46.0
Approach Delay (s)	32.5		38.2		46.0
Approach LOS	D		E		E

Intersection Summary			
Delay	39.0		
Level of Service	E		
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø2
Lane Configurations													
Volume (vph)	0	0	458	16	43	17	335	462	36	25	523	45	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	12	11	14	11	11	11	11	12	12	12	
Storage Length (ft)	0		0	0		0	0		0	0		100	
Storage Lanes	0		1	0		0	1		0	0		1	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	
Ped Bike Factor								1.00			1.00		
Frt			0.850		0.970			0.989			0.989		
Flt Protected					0.990		0.950				0.998		
Satd. Flow (prot)	0	0	2484	0	1729	0	1555	1505	0	0	2992	0	
Flt Permitted					0.990		0.306				0.917		
Satd. Flow (perm)	0	0	2484	0	1729	0	501	1505	0	0	2749	0	
Right Turn on Red			No			No			No			No	
Satd. Flow (RTOR)													
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		854			195			189			689		
Travel Time (s)		19.4			4.4			4.3			15.7		
Confl. Bikes (#/hr)									3			9	
Peak Hour Factor	0.93	0.93	0.93	0.83	0.83	0.83	0.94	0.94	0.94	0.94	0.94	0.94	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	0%	3%	0%	0%	6%	1%	2%	92%	76%	4%	2%	
Adj. Flow (vph)	0	0	492	19	52	20	356	491	38	27	556	48	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	0	492	0	91	0	356	529	0	0	631	0	
Turn Type			Over	Perm	NA		D.P+P	NA		Perm	NA		
Protected Phases			5		6		5	1 5			1		2
Permitted Phases				6			1			1			
Detector Phase			5	6	6		5	1 5		1	1		
Switch Phase													
Minimum Initial (s)			8.0	10.0	10.0		8.0			8.0	8.0		4.0
Minimum Split (s)			14.0	15.0	15.0		14.0			13.0	13.0		26.0
Total Split (s)			25.0	19.0	19.0		25.0			30.0	30.0		26.0
Total Split (%)			25.0%	19.0%	19.0%		25.0%			30.0%	30.0%		26%
Maximum Green (s)			20.0	14.0	14.0		20.0			25.0	25.0		20.0
Yellow Time (s)			3.0	3.0	3.0		3.0			3.0	3.0		2.0
All-Red Time (s)			2.0	2.0	2.0		2.0			2.0	2.0		4.0
Lost Time Adjust (s)			-2.0		-1.0		-2.0				-1.0		
Total Lost Time (s)			3.0		4.0		3.0				4.0		
Lead/Lag			Lead	Lag	Lag		Lead			Lead	Lead		Lag
Lead-Lag Optimize?													
Vehicle Extension (s)			4.0	2.0	2.0		4.0			4.0	4.0		2.0
Recall Mode			None	None	None		None			C-Max	C-Max		None
Walk Time (s)													7.0
Flash Dont Walk (s)													13.0
Pedestrian Calls (#/hr)													17
Act Effct Green (s)			22.0		15.0		64.6	65.0			41.6		
Actuated g/C Ratio			0.22		0.15		0.65	0.65			0.42		
v/c Ratio			0.90		0.35		0.64	0.54			0.55		
Control Delay			59.5		42.5		23.1	8.3			28.1		
Queue Delay			3.3		0.0		3.3	0.8			0.1		
Total Delay			62.9		42.5		26.5	9.1			28.2		
LOS			E		D		C	A			C		
Approach Delay					42.5			16.1			28.2		
Approach LOS					D			B			C		
Queue Length 50th (ft)			174		53		76	52			125		
Queue Length 95th (ft)			#277		93		m#206	m95			#304		
Internal Link Dist (ft)		774			115			109			609		
Turn Bay Length (ft)													
Base Capacity (vph)			546		259		555	978			1143		
Starvation Cap Reductn			0		0		117	202			0		
Spillback Cap Reductn			21		0		0	0			37		
Storage Cap Reductn			0		0		0	0			0		
Reduced v/c Ratio			0.94		0.35		0.81	0.68			0.57		

Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 31.8 Intersection LOS: C
Intersection Capacity Utilization 66.2% ICU Level of Service C
Analysis Period (min) 15
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: 1: Dorchester Avenue & Hancock Street/Hoyt Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø2
Lane Configurations													
Volume (vph)	56	104	20	0	0	316	0	461	27	515	482	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	16	12	12	12	15	12	12	12	11	11	12	
Storage Length (ft)	0		0	0		0	0		100	0		0	
Storage Lanes	0		0	0		1	0		1	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor		1.00						1.00					
Frt		0.985				0.865		0.992					
Flt Protected		0.985								0.950			
Satd. Flow (prot)	0	1525	0	0	0	1595	0	3118	0	1540	1605	0	
Flt Permitted		0.985								0.384			
Satd. Flow (perm)	0	1525	0	0	0	1595	0	3118	0	622	1605	0	
Right Turn on Red			No			Yes			No			No	
Satd. Flow (RTOR)						*250							
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		315			326			2596			189		
Travel Time (s)		7.2			7.4			59.0			4.3		
Confl. Bikes (#/hr)			1						4			5	
Peak Hour Factor	0.82	0.82	0.82	0.92	0.92	0.92	0.96	0.96	0.96	0.97	0.97	0.97	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	48%	14%	0%	0%	0%	2%	0%	3%	7%	2%	3%	0%	
Adj. Flow (vph)	68	127	24	0	0	343	0	480	28	531	497	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	219	0	0	0	343	0	508	0	531	497	0	
Turn Type	Perm	NA				Over		NA		D.P+P	NA		
Protected Phases		6				5		1		5	1 5		2
Permitted Phases	6									1			
Detector Phase	6	6				5		1		5	1 5		
Switch Phase													
Minimum Initial (s)	10.0	10.0				8.0		8.0		8.0			4.0
Minimum Split (s)	15.0	15.0				14.0		13.0		14.0			26.0
Total Split (s)	19.0	19.0				25.0		30.0		25.0			26.0
Total Split (%)	19.0%	19.0%				25.0%		30.0%		25.0%			26%
Maximum Green (s)	14.0	14.0				20.0		25.0		20.0			20.0
Yellow Time (s)	3.0	3.0				3.0		3.0		3.0			2.0
All-Red Time (s)	2.0	2.0				2.0		2.0		2.0			4.0
Lost Time Adjust (s)		-1.0				-2.0		-1.0		-2.0			
Total Lost Time (s)		4.0				3.0		4.0		3.0			
Lead/Lag	Lag	Lag				Lead		Lead		Lead			Lag
Lead-Lag Optimize?													
Vehicle Extension (s)	2.0	2.0				4.0		4.0		4.0			2.0
Recall Mode	None	None				None		C-Max		None			None
Walk Time (s)													7.0
Flash Dont Walk (s)													13.0
Pedestrian Calls (#/hr)													17
Act Effct Green (s)		15.0				22.0		41.6		64.6	65.0		
Actuated g/C Ratio		0.15				0.22		0.42		0.65	0.65		
v/c Ratio		0.96				0.63		0.39		0.88	0.48		
Control Delay		94.3				15.9		24.7		27.2	4.3		
Queue Delay		0.0				0.4		0.0		4.8	1.2		
Total Delay		94.3				16.3		24.7		32.0	5.5		
LOS		F				B		C		C	A		
Approach Delay		94.3						24.7			19.2		
Approach LOS		F						C			B		
Queue Length 50th (ft)		140				49		93		64	31		
Queue Length 95th (ft)		#246				144		206		m#383	m53		
Internal Link Dist (ft)		235			246			2516			109		
Turn Bay Length (ft)													
Base Capacity (vph)		228				545		1297		603	1043		
Starvation Cap Reductn		0				0		0		38	328		
Spillback Cap Reductn		0				29		51		0	0		
Storage Cap Reductn		0				0		0		0	0		
Reduced v/c Ratio		0.96				0.66		0.41		0.94	0.70		

Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 27.9 — Intersection LOS: C
Intersection Capacity Utilization 67.7% — ICU Level of Service C
Analysis Period (min) 15
* User Entered Value
\# 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: 2: Dorchester Avenue & East Street/Freeport Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	15	30	56	0	12	0	484	39	1	501	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.71	0.71	0.71	0.81	0.81	0.81	0.88	0.88	0.88	0.90	0.90	0.90
Hourly flow rate (vph)	13	21	42	69	0	15	0	550	44	1	557	0
Pedestrians		4			42			5			8	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			4			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								689				
pX, platoon unblocked	0.81	0.81		0.81	0.81	0.81				0.81		
vC, conflicting volume	1158	1199	566	1231	1177	622	561			636		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1079	1130	566	1169	1103	420	561			437		
tC, single (s)	7.2	6.5	6.2	7.2	6.5	6.4	4.1			5.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.6	4.0	3.5	2.2			3.1		
p0 queue free %	91	87	92	34	100	97	100			100		
cM capacity (veh/h)	142	160	518	104	166	469	1017			588		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	76	84	594	558
Volume Left	13	69	0	1
Volume Right	42	15	44	0
cSH	251	121	1700	588
Volume to Capacity	0.30	0.70	0.35	0.00
Queue Length 95th (ft)	31	94	0	0
Control Delay (s)	25.4	85.0	0.0	0.1
Lane LOS	D	F		A
Approach Delay (s)	25.4	85.0	0.0	0.1
Approach LOS	D	F		

Intersection Summary				
Average Delay		6.9		
Intersection Capacity Utilization		49.5%	ICU Level of Service	A
Analysis Period (min)		15		

Movement	EBU	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations							
Sign Control		Yield			Yield	Yield	
Volume (vph)	2	237	61	218	256	337	382
Peak Hour Factor	0.95	0.95	0.95	0.88	0.88	0.89	0.89
Hourly flow rate (vph)	0	249	64	248	291	379	429

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	249	64	248	291	808
Volume Left (vph)	249	0	248	0	0
Volume Right (vph)	0	64	0	0	429
Hadj (s)	0.50	-0.65	0.52	0.02	-0.30
Departure Headway (s)	7.8	6.7	7.1	6.6	6.0
Degree Utilization, x	0.54	0.12	0.49	0.53	1.00
Capacity (veh/h)	451	524	502	540	808
Control Delay (s)	18.5	9.4	15.3	15.5	60.8
Approach Delay (s)	16.6		15.4		60.8
Approach LOS	C		C		F

Intersection Summary			
Delay	37.7		
Level of Service	E		
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø2
Lane Configurations													
Volume (vph)	0	0	358	5	17	14	458	485	10	12	408	38	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	12	11	14	11	11	11	11	12	12	12	
Storage Length (ft)	0		0	0		0	0		0	0		100	
Storage Lanes	0		1	0		0	1		0	0		1	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	
Ped Bike Factor					0.99			1.00			1.00		
Frt			0.850		0.947			0.997			0.988		
Flt Protected					0.993		0.950				0.999		
Satd. Flow (prot)	0	0	2508	0	1276	0	1525	1538	0	0	2934	0	
Flt Permitted					0.993		0.394				0.938		
Satd. Flow (perm)	0	0	2508	0	1276	0	632	1538	0	0	2755	0	
Right Turn on Red			No			No			No			No	
Satd. Flow (RTOR)													
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		854			195			189			689		
Travel Time (s)		19.4			4.4			4.3			15.7		
Confl. Bikes (#/hr)						1			13			3	
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	0%	2%	20%	53%	14%	3%	6%	60%	33%	7%	24%	
Adj. Flow (vph)	0	0	377	5	18	15	498	527	11	13	443	41	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	0	377	0	38	0	498	538	0	0	497	0	
Turn Type			Over	Perm	NA		D.P+P	NA		Perm	NA		
Protected Phases			5		6		5	1 5			1		2
Permitted Phases				6			1			1			
Detector Phase			5	6	6		5	1 5		1	1		
Switch Phase													
Minimum Initial (s)			8.0	10.0	10.0		8.0			8.0	8.0		4.0
Minimum Split (s)			13.0	15.0	15.0		13.0			13.0	13.0		26.0
Total Split (s)			25.0	19.0	19.0		25.0			30.0	30.0		26.0
Total Split (%)			25.0%	19.0%	19.0%		25.0%			30.0%	30.0%		26%
Maximum Green (s)			20.0	14.0	14.0		20.0			25.0	25.0		20.0
Yellow Time (s)			3.0	3.0	3.0		3.0			3.0	3.0		2.0
All-Red Time (s)			2.0	2.0	2.0		2.0			2.0	2.0		4.0
Lost Time Adjust (s)			-2.0		-1.0		-2.0				-1.0		
Total Lost Time (s)			3.0		4.0		3.0				4.0		
Lead/Lag			Lead	Lag	Lag		Lead			Lead	Lead		Lag
Lead-Lag Optimize?													
Vehicle Extension (s)			4.0	2.0	2.0		4.0			4.0	4.0		2.0
Recall Mode			None	None	None		None			C-Max	C-Max		None
Walk Time (s)													7.0
Flash Dont Walk (s)													13.0
Pedestrian Calls (#/hr)													20
Act Effct Green (s)			22.0		14.3		65.3	65.7			42.3		
Actuated g/C Ratio			0.22		0.14		0.65	0.66			0.42		
v/c Ratio			0.68		0.21		0.82	0.53			0.43		
Control Delay			43.1		40.5		29.6	7.2			25.3		
Queue Delay			0.4		0.0		13.1	0.9			0.0		
Total Delay			43.5		40.5		42.7	8.1			25.4		
LOS			D		D		D	A			C		
Approach Delay					40.5			24.7			25.4		
Approach LOS					D			C			C		
Queue Length 50th (ft)			126		22		111	40			93		
Queue Length 95th (ft)			182		53		m#438	m116			209		
Internal Link Dist (ft)		774			115			109			609		
Turn Bay Length (ft)													
Base Capacity (vph)			551		191		609	1009			1164		
Starvation Cap Reductn			0		0		99	223			0		
Spillback Cap Reductn			21		0		0	0			30		
Storage Cap Reductn			0		0		0	0			0		
Reduced v/c Ratio			0.71		0.20		0.98	0.68			0.44		

Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 28.8 Intersection LOS: C
Intersection Capacity Utilization 61.6% ICU Level of Service B
Analysis Period (min) 15
\# 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: 1: Dorchester Avenue & Hancock Street/Hoyt Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø2
Lane Configurations													
Volume (vph)	48	119	22	0	0	367	0	538	13	390	381	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	16	12	12	12	15	12	12	12	11	11	12	
Storage Length (ft)	0		0	0		0	0		100	0		0	
Storage Lanes	0		0	0		1	0		1	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor								1.00					
Frt		0.984				0.865		0.996					
Flt Protected		0.987								0.950			
Satd. Flow (prot)	0	1739	0	0	0	1550	0	3112	0	1540	1531	0	
Flt Permitted		0.987								0.329			
Satd. Flow (perm)	0	1739	0	0	0	1550	0	3112	0	533	1531	0	
Right Turn on Red			No			Yes			No			No	
Satd. Flow (RTOR)						*250							
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		315			326			2596			189		
Travel Time (s)		7.2			7.4			59.0			4.3		
Confl. Bikes (#/hr)									4			7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	13%	6%	10%	0%	0%	5%	0%	4%	0%	2%	8%	0%	
Adj. Flow (vph)	52	129	24	0	0	399	0	585	14	424	414	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	205	0	0	0	399	0	599	0	424	414	0	
Turn Type	Perm	NA				Over		NA		D.P+P	NA		
Protected Phases		6				5		1		5	1 5		2
Permitted Phases	6									1			
Detector Phase	6	6				5		1		5	1 5		
Switch Phase													
Minimum Initial (s)	10.0	10.0				8.0		8.0		8.0			4.0
Minimum Split (s)	15.0	15.0				13.0		13.0		13.0			26.0
Total Split (s)	19.0	19.0				25.0		30.0		25.0			26.0
Total Split (%)	19.0%	19.0%				25.0%		30.0%		25.0%			26%
Maximum Green (s)	14.0	14.0				20.0		25.0		20.0			20.0
Yellow Time (s)	3.0	3.0				3.0		3.0		3.0			2.0
All-Red Time (s)	2.0	2.0				2.0		2.0		2.0			4.0
Lost Time Adjust (s)		-1.0				-2.0		-1.0		-2.0			
Total Lost Time (s)		4.0				3.0		4.0		3.0			
Lead/Lag	Lag	Lag				Lead		Lead		Lead			Lag
Lead-Lag Optimize?													
Vehicle Extension (s)	2.0	2.0				4.0		4.0		4.0			2.0
Recall Mode	None	None				None		C-Max		None			None
Walk Time (s)													7.0
Flash Dont Walk (s)													13.0
Pedestrian Calls (#/hr)													20
Act Effct Green (s)		14.3				22.0		42.3		65.3	65.7		
Actuated g/C Ratio		0.14				0.22		0.42		0.65	0.66		
v/c Ratio		0.82				0.74		0.46		0.75	0.41		
Control Delay		68.2				23.0		25.5		19.3	2.7		
Queue Delay		0.0				1.1		0.1		1.0	0.8		
Total Delay		68.2				24.1		25.6		20.3	3.5		
LOS		E				C		C		C	A		
Approach Delay		68.2						25.6			12.0		
Approach LOS		E						C			B		
Queue Length 50th (ft)		128				86		114		43	8		
Queue Length 95th (ft)		#241				203		248		#315	37		
Internal Link Dist (ft)		235			246			2516			109		
Turn Bay Length (ft)													
Base Capacity (vph)		260				536		1315		569	1005		
Starvation Cap Reductn		0				0		0		34	311		
Spillback Cap Reductn		0				34		112		0	0		
Storage Cap Reductn		0				0		0		0	0		
Reduced v/c Ratio		0.79				0.79		0.50		0.79	0.60		

Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 24.0 Intersection LOS: C
Intersection Capacity Utilization 63.6% ICU Level of Service B
Analysis Period (min) 15
* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Dorchester Avenue & East Street/Freeport Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	32	27	51	0	12	0	427	45	19	421	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92
Hourly flow rate (vph)	11	35	29	55	0	13	0	454	48	21	458	0
Pedestrians		8			17			2			19	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								689				
pX, platoon unblocked	0.82	0.82		0.82	0.82	0.82				0.82		
vC, conflicting volume	1017	1026	468	1043	1002	514	466			519		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	910	921	468	941	892	295	466			301		
tC, single (s)	7.1	6.5	6.2	7.3	6.5	6.7	4.1			4.3		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.0	3.8	2.2			2.3		
p0 queue free %	94	84	95	62	100	97	100			98		
cM capacity (veh/h)	194	214	595	145	222	511	1099			955		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	75	68	502	478
Volume Left	11	55	0	21
Volume Right	29	13	48	0
cSH	280	168	1700	955
Volume to Capacity	0.27	0.41	0.30	0.02
Queue Length 95th (ft)	26	45	0	2
Control Delay (s)	22.5	40.3	0.0	0.6
Lane LOS	C	E		A
Approach Delay (s)	22.5	40.3	0.0	0.6
Approach LOS	C	E		

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBU	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations							
Sign Control		Yield			Yield	Yield	
Volume (vph)	7	337	80	172	412	240	214
Peak Hour Factor	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	366	87	187	448	261	233

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	366	87	187	448	493
Volume Left (vph)	366	0	187	0	0
Volume Right (vph)	0	87	0	0	233
Hadj (s)	0.53	-0.63	0.65	0.03	-0.27
Departure Headway (s)	8.2	7.0	8.0	7.4	6.8
Degree Utilization, x	0.83	0.17	0.41	0.91	0.94
Capacity (veh/h)	431	500	443	475	515
Control Delay (s)	39.5	10.2	15.3	48.2	51.1
Approach Delay (s)	33.9		38.5		51.1
Approach LOS	D		E		F

Intersection Summary			
Delay	41.1		
Level of Service	E		
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø2
Lane Configurations													
Volume (vph)	0	0	473	16	44	17	346	474	37	26	536	46	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	12	11	14	11	11	11	11	12	12	12	
Storage Length (ft)	0		0	0		0	0		0	0		100	
Storage Lanes	0		1	0		0	1		0	0		1	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	
Ped Bike Factor								1.00			1.00		
Frt			0.850		0.971			0.989			0.989		
Flt Protected					0.990		0.950				0.998		
Satd. Flow (prot)	0	0	2484	0	1731	0	1555	1505	0	0	2991	0	
Flt Permitted					0.990		0.298				0.915		
Satd. Flow (perm)	0	0	2484	0	1731	0	488	1505	0	0	2742	0	
Right Turn on Red			No			No			No			No	
Satd. Flow (RTOR)													
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		854			195			189			689		
Travel Time (s)		19.4			4.4			4.3			15.7		
Confl. Bikes (#/hr)									3			9	
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.94	0.94	0.94	0.94	0.94	0.94	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	0%	3%	0%	0%	6%	1%	2%	92%	76%	4%	2%	
Adj. Flow (vph)	0	0	509	17	48	18	368	504	39	28	570	49	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	0	509	0	83	0	368	543	0	0	647	0	
Turn Type			Over	Perm	NA		D.P+P	NA		Perm	NA		
Protected Phases			5		6		5	1 5			1		2
Permitted Phases				6			1			1			
Detector Phase			5	6	6		5	1 5		1	1		
Switch Phase													
Minimum Initial (s)			8.0	10.0	10.0		8.0			8.0	8.0		4.0
Minimum Split (s)			14.0	15.0	15.0		14.0			13.0	13.0		26.0
Total Split (s)			25.0	19.0	19.0		25.0			30.0	30.0		26.0
Total Split (%)			25.0%	19.0%	19.0%		25.0%			30.0%	30.0%		26%
Maximum Green (s)			20.0	14.0	14.0		20.0			25.0	25.0		20.0
Yellow Time (s)			3.0	3.0	3.0		3.0			3.0	3.0		2.0
All-Red Time (s)			2.0	2.0	2.0		2.0			2.0	2.0		4.0
Lost Time Adjust (s)			-2.0		-1.0		-2.0				-1.0		
Total Lost Time (s)			3.0		4.0		3.0				4.0		
Lead/Lag			Lead	Lag	Lag		Lead			Lead	Lead		Lag
Lead-Lag Optimize?													
Vehicle Extension (s)			4.0	2.0	2.0		4.0			4.0	4.0		2.0
Recall Mode			None	None	None		None			C-Max	C-Max		None
Walk Time (s)													7.0
Flash Dont Walk (s)													13.0
Pedestrian Calls (#/hr)													17
Act Effct Green (s)			22.0		14.8		64.8	65.2			41.8		
Actuated g/C Ratio			0.22		0.15		0.65	0.65			0.42		
v/c Ratio			0.93		0.33		0.67	0.55			0.56		
Control Delay			64.3		42.0		24.3	8.7			28.4		
Queue Delay			5.2		0.0		4.4	0.8			0.1		
Total Delay			69.5		42.0		28.7	9.5			28.5		
LOS			E		D		C	A			C		
Approach Delay					42.0			17.2			28.5		
Approach LOS					D			B			C		
Stops (vph)			418		67		292	290			434		
Fuel Used(gal)			12		1		4	3			9		
CO Emissions (g/hr)			815		79		268	227			642		
NOx Emissions (g/hr)			158		15		52	44			125		
VOC Emissions (g/hr)			189		18		62	53			149		
Dilemma Vehicles (#)			0		0		0	0			0		
Queue Length 50th (ft)			181		48		79	51			130		
Queue Length 95th (ft)			#292		94		m#254	m339			#316		
Internal Link Dist (ft)		774			115			109			609		
Turn Bay Length (ft)													
Base Capacity (vph)			546		259		550	981			1146		
Starvation Cap Reductn			0		0		116	191			0		
Spillback Cap Reductn			21		0		0	0			41		
Storage Cap Reductn			0		0		0	0			0		
Reduced v/c Ratio			0.97		0.32		0.85	0.69			0.59		

Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 34.0 — Intersection LOS: C
Intersection Capacity Utilization 67.5% — ICU Level of Service C
Analysis Period (min) 15
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: 1: Dorchester Avenue & Hancock Street/Hoyt Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø2
Lane Configurations													
Volume (vph)	57	107	21	0	0	327	0	473	28	531	494	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	16	12	12	12	15	12	12	12	11	11	12	
Storage Length (ft)	0		0	0		0	0		100	0		0	
Storage Lanes	0		0	0		1	0		1	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor		1.00						1.00					
Frt		0.985				0.865		0.992					
Flt Protected		0.985								0.950			
Satd. Flow (prot)	0	1526	0	0	0	1595	0	3118	0	1540	1605	0	
Flt Permitted		0.985								0.375			
Satd. Flow (perm)	0	1526	0	0	0	1595	0	3118	0	608	1605	0	
Right Turn on Red			No			Yes			No			No	
Satd. Flow (RTOR)						*250							
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		315			326			2596			189		
Travel Time (s)		7.2			7.4			59.0			4.3		
Confl. Bikes (#/hr)			1						4			5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.96	0.96	0.96	0.97	0.97	0.97	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	48%	14%	0%	0%	0%	2%	0%	3%	7%	2%	3%	0%	
Adj. Flow (vph)	62	116	23	0	0	355	0	493	29	547	509	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	201	0	0	0	355	0	522	0	547	509	0	
Turn Type	Perm	NA				Over		NA		D.P+P	NA		
Protected Phases		6				5		1		5	1 5		2
Permitted Phases	6									1			
Detector Phase	6	6				5		1		5	1 5		
Switch Phase													
Minimum Initial (s)	10.0	10.0				8.0		8.0		8.0			4.0
Minimum Split (s)	15.0	15.0				14.0		13.0		14.0			26.0
Total Split (s)	19.0	19.0				25.0		30.0		25.0			26.0
Total Split (%)	19.0%	19.0%				25.0%		30.0%		25.0%			26%
Maximum Green (s)	14.0	14.0				20.0		25.0		20.0			20.0
Yellow Time (s)	3.0	3.0				3.0		3.0		3.0			2.0
All-Red Time (s)	2.0	2.0				2.0		2.0		2.0			4.0
Lost Time Adjust (s)		-1.0				-2.0		-1.0		-2.0			
Total Lost Time (s)		4.0				3.0		4.0		3.0			
Lead/Lag	Lag	Lag				Lead		Lead		Lead			Lag
Lead-Lag Optimize?													
Vehicle Extension (s)	2.0	2.0				4.0		4.0		4.0			2.0
Recall Mode	None	None				None		C-Max		None			None
Walk Time (s)													7.0
Flash Dont Walk (s)													13.0
Pedestrian Calls (#/hr)													17
Act Effct Green (s)		14.8				22.0		41.8		64.8	65.2		
Actuated g/C Ratio		0.15				0.22		0.42		0.65	0.65		
v/c Ratio		0.90				0.65		0.40		0.91	0.49		
Control Delay		81.5				17.2		24.8		30.9	4.4		
Queue Delay		0.0				0.4		0.0		7.8	1.2		
Total Delay		81.5				17.6		24.8		38.7	5.6		
LOS		F				B		C		D	A		
Approach Delay		81.5						24.8			22.8		
Approach LOS		F						C			C		
Stops (vph)		160				102		355		212	80		
Fuel Used(gal)		4				3		15		5	2		
CO Emissions (g/hr)		308				177		1022		370	112		
NOx Emissions (g/hr)		60				35		199		72	22		
VOC Emissions (g/hr)		71				41		237		86	26		
Dilemma Vehicles (#)		0				0		0		0	0		
Queue Length 50th (ft)		127				56		96		76	36		
Queue Length 95th (ft)		#257				156		213		m#400	m53		
Internal Link Dist (ft)		235			246			2516			109		
Turn Bay Length (ft)													
Base Capacity (vph)		228				545		1304		599	1047		
Starvation Cap Reductn		0				0		0		38	321		
Spillback Cap Reductn		0				29		51		0	0		
Storage Cap Reductn		0				0		0		0	0		
Reduced v/c Ratio		0.88				0.69		0.42		0.98	0.70		

Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 27.9 — Intersection LOS: C
Intersection Capacity Utilization 69.4% — ICU Level of Service C
Analysis Period (min) 15
* User Entered Value
\# 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: 2: Dorchester Avenue & East Street/Freeport Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	15	31	57	0	12	0	496	40	1	514	0
Sign Control		Stop			Stop			Free			Free	
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	0.92
Hourly flow rate (vph)	10	16	34	62	0	13	0	539	43	1	559	0
Pedestrians		4			42			5			8	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			4			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								689				
pX, platoon unblocked	0.80	0.80		0.80	0.80	0.80				0.80		
vC, conflicting volume	1147	1189	568	1211	1168	611	563			625		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1061	1114	568	1140	1087	394	563			411		
tC, single (s)	7.2	6.5	6.2	7.2	6.5	6.4	4.1			5.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.6	4.0	3.5	2.2			3.1		
p0 queue free %	93	90	93	45	100	97	100			100		
cM capacity (veh/h)	146	162	517	113	168	480	1015			598		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	60	75	583	560
Volume Left	10	62	0	1
Volume Right	34	13	43	0
cSH	257	130	1700	598
Volume to Capacity	0.23	0.58	0.34	0.00
Queue Length 95th (ft)	22	72	0	0
Control Delay (s)	23.2	65.2	0.0	0.1
Lane LOS	C	F		A
Approach Delay (s)	23.2	65.2	0.0	0.1
Approach LOS	C	F		

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBU	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations							
Sign Control		Yield			Yield	Yield	
Volume (vph)	2	243	66	227	262	346	392
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	256	69	247	285	376	426

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	256	69	247	285	802
Volume Left (vph)	256	0	247	0	0
Volume Right (vph)	0	69	0	0	426
Hadj (s)	0.50	-0.65	0.52	0.02	-0.30
Departure Headway (s)	7.8	6.7	7.1	6.6	6.0
Degree Utilization, x	0.56	0.13	0.49	0.52	1.00
Capacity (veh/h)	452	525	499	537	802
Control Delay (s)	18.9	9.5	15.5	15.4	61.0
Approach Delay (s)	16.9		15.4		61.0
Approach LOS	C		C		F

Intersection Summary			
Delay	37.7		
Level of Service	E		
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø2
Lane Configurations													
Volume (vph)	0	0	382	5	17	14	474	485	10	12	408	73	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	12	11	14	11	11	11	11	12	12	12	
Storage Length (ft)	0		0	0		0	0		0	0		100	
Storage Lanes	0		1	0		0	1		0	0		1	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	
Ped Bike Factor					0.99			1.00			1.00		
Frt			0.850		0.947			0.997			0.978		
Flt Protected					0.993		0.950				0.999		
Satd. Flow (prot)	0	0	2508	0	1276	0	1525	1538	0	0	2872	0	
Flt Permitted					0.993		0.369				0.939		
Satd. Flow (perm)	0	0	2508	0	1276	0	592	1538	0	0	2699	0	
Right Turn on Red			No			No			No			No	
Satd. Flow (RTOR)													
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		854			195			189			689		
Travel Time (s)		19.4			4.4			4.3			15.7		
Confl. Bikes (#/hr)						1			13			3	
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	0%	2%	20%	53%	14%	3%	6%	60%	33%	7%	24%	
Adj. Flow (vph)	0	0	402	5	18	15	515	527	11	13	443	79	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	0	402	0	38	0	515	538	0	0	535	0	
Turn Type			Over	Perm	NA		D.P+P	NA		Perm	NA		
Protected Phases			5		6		5	1 5			1		2
Permitted Phases				6			1			1			
Detector Phase			5	6	6		5	1 5		1	1		
Switch Phase													
Minimum Initial (s)			8.0	10.0	10.0		8.0			8.0	8.0		4.0
Minimum Split (s)			13.0	15.0	15.0		13.0			13.0	13.0		26.0
Total Split (s)			25.0	19.0	19.0		25.0			30.0	30.0		26.0
Total Split (%)			25.0%	19.0%	19.0%		25.0%			30.0%	30.0%		26%
Maximum Green (s)			20.0	14.0	14.0		20.0			25.0	25.0		20.0
Yellow Time (s)			3.0	3.0	3.0		3.0			3.0	3.0		2.0
All-Red Time (s)			2.0	2.0	2.0		2.0			2.0	2.0		4.0
Lost Time Adjust (s)			-2.0		-1.0		-2.0				-1.0		
Total Lost Time (s)			3.0		4.0		3.0				4.0		
Lead/Lag			Lead	Lag	Lag		Lead			Lead	Lead		Lag
Lead-Lag Optimize?													
Vehicle Extension (s)			4.0	2.0	2.0		4.0			4.0	4.0		2.0
Recall Mode			None	None	None		None			C-Max	C-Max		None
Walk Time (s)													7.0
Flash Dont Walk (s)													13.0
Pedestrian Calls (#/hr)													20
Act Effct Green (s)			22.0		14.3		65.3	65.7			42.3		
Actuated g/C Ratio			0.22		0.14		0.65	0.66			0.42		
v/c Ratio			0.73		0.21		0.87	0.53			0.47		
Control Delay			45.0		40.5		35.2	7.1			26.2		
Queue Delay			0.5		0.0		29.2	0.9			0.0		
Total Delay			45.6		40.5		64.4	8.0			26.2		
LOS			D		D		E	A			C		
Approach Delay					40.5			35.5			26.2		
Approach LOS					D			D			C		
Stops (vph)			347		31		315	210			360		
Fuel Used(gal)			8		1		6	3			7		
CO Emissions (g/hr)			557		36		408	182			507		
NOx Emissions (g/hr)			108		7		79	35			99		
VOC Emissions (g/hr)			129		8		94	42			118		
Dilemma Vehicles (#)			0		0		0	0			0		
Queue Length 50th (ft)			135		22		123	39			102		
Queue Length 95th (ft)			195		53		m#469	m114			228		
Internal Link Dist (ft)		774			115			109			609		
Turn Bay Length (ft)													
Base Capacity (vph)			551		191		591	1009			1140		
Starvation Cap Reductn			0		0		98	228			0		
Spillback Cap Reductn			21		0		0	0			28		
Storage Cap Reductn			0		0		0	0			0		
Reduced v/c Ratio			0.76		0.20		1.04	0.69			0.48		

Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 35.2 Intersection LOS: D
Intersection Capacity Utilization 63.0% ICU Level of Service B
Analysis Period (min) 15
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: 1: Dorchester Avenue & Hancock Street/Hoyt Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø2
Lane Configurations													
Volume (vph)	48	119	22	0	0	377	0	544	13	404	391	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	16	12	12	12	15	12	12	12	11	11	12	
Storage Length (ft)	0		0	0		0	0		100	0		0	
Storage Lanes	0		0	0		1	0		1	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor								1.00					
Frt		0.984				0.865		0.997					
Flt Protected		0.987								0.950			
Satd. Flow (prot)	0	1739	0	0	0	1550	0	3116	0	1540	1531	0	
Flt Permitted		0.987								0.325			
Satd. Flow (perm)	0	1739	0	0	0	1550	0	3116	0	527	1531	0	
Right Turn on Red			No			Yes			No			No	
Satd. Flow (RTOR)						*250							
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		315			326			2596			189		
Travel Time (s)		7.2			7.4			59.0			4.3		
Confl. Bikes (#/hr)									4			7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	13%	6%	10%	0%	0%	5%	0%	4%	0%	2%	8%	0%	
Adj. Flow (vph)	52	129	24	0	0	410	0	591	14	439	425	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	205	0	0	0	410	0	605	0	439	425	0	
Turn Type	Perm	NA				Over		NA		D.P+P	NA		
Protected Phases		6				5		1		5	1 5		2
Permitted Phases	6									1			
Detector Phase	6	6				5		1		5	1 5		
Switch Phase													
Minimum Initial (s)	10.0	10.0				8.0		8.0		8.0			4.0
Minimum Split (s)	15.0	15.0				13.0		13.0		13.0			26.0
Total Split (s)	19.0	19.0				25.0		30.0		25.0			26.0
Total Split (%)	19.0%	19.0%				25.0%		30.0%		25.0%			26%
Maximum Green (s)	14.0	14.0				20.0		25.0		20.0			20.0
Yellow Time (s)	3.0	3.0				3.0		3.0		3.0			2.0
All-Red Time (s)	2.0	2.0				2.0		2.0		2.0			4.0
Lost Time Adjust (s)		-1.0				-2.0		-1.0		-2.0			
Total Lost Time (s)		4.0				3.0		4.0		3.0			
Lead/Lag	Lag	Lag				Lead		Lead		Lead			Lag
Lead-Lag Optimize?													
Vehicle Extension (s)	2.0	2.0				4.0		4.0		4.0			2.0
Recall Mode	None	None				None		C-Max		None			None
Walk Time (s)													7.0
Flash Dont Walk (s)													13.0
Pedestrian Calls (#/hr)													20
Act Effct Green (s)		14.3				22.0		42.3		65.3	65.7		
Actuated g/C Ratio		0.14				0.22		0.42		0.65	0.66		
v/c Ratio		0.82				0.76		0.46		0.77	0.42		
Control Delay		68.2				24.6		25.6		20.6	3.2		
Queue Delay		0.0				1.4		0.1		1.2	0.9		
Total Delay		68.2				26.0		25.7		21.8	4.1		
LOS		E				C		C		C	A		
Approach Delay		68.2						25.7			13.1		
Approach LOS		E						C			B		
Stops (vph)		170				148		406		168	36		
Fuel Used(gal)		4				4		16		3	1		
CO Emissions (g/hr)		281				256		1147		225	72		
NOx Emissions (g/hr)		55				50		223		44	14		
VOC Emissions (g/hr)		65				59		266		52	17		
Dilemma Vehicles (#)		0				0		0		0	0		
Queue Length 50th (ft)		128				95		115		43	8		
Queue Length 95th (ft)		#241				#240		251		#341	46		
Internal Link Dist (ft)		235			246			2516			109		
Turn Bay Length (ft)													
Base Capacity (vph)		260				536		1317		567	1005		
Starvation Cap Reductn		0				0		0		32	318		
Spillback Cap Reductn		0				35		124		0	0		
Storage Cap Reductn		0				0		0		0	0		
Reduced v/c Ratio		0.79				0.82		0.51		0.82	0.62		

Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 24.7 Intersection LOS: C
Intersection Capacity Utilization 64.5% ICU Level of Service C
Analysis Period (min) 15
* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Dorchester Avenue & East Street/Freeport Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	32	27	51	0	12	0	427	45	19	456	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92
Hourly flow rate (vph)	67	35	29	55	0	13	0	454	48	21	496	0
Pedestrians		8			17			2			19	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								689				
pX, platoon unblocked	0.82	0.82		0.82	0.82	0.82				0.82		
vC, conflicting volume	1055	1064	506	1081	1040	514	504			519		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	956	967	506	988	938	295	504			301		
tC, single (s)	7.1	6.5	6.2	7.3	6.5	6.7	4.1			4.3		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.0	3.8	2.2			2.3		
p0 queue free %	63	83	95	58	100	97	100			98		
cM capacity (veh/h)	181	201	566	133	209	511	1064			955		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	132	68	502	516
Volume Left	67	55	0	21
Volume Right	29	13	48	0
cSH	220	155	1700	955
Volume to Capacity	0.60	0.44	0.30	0.02
Queue Length 95th (ft)	85	50	0	2
Control Delay (s)	43.1	45.3	0.0	0.6
Lane LOS	E	E		A
Approach Delay (s)	43.1	45.3	0.0	0.6
Approach LOS	E	E		

Intersection Summary			
Average Delay	7.5		
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		

MOVEMENT SUMMARY

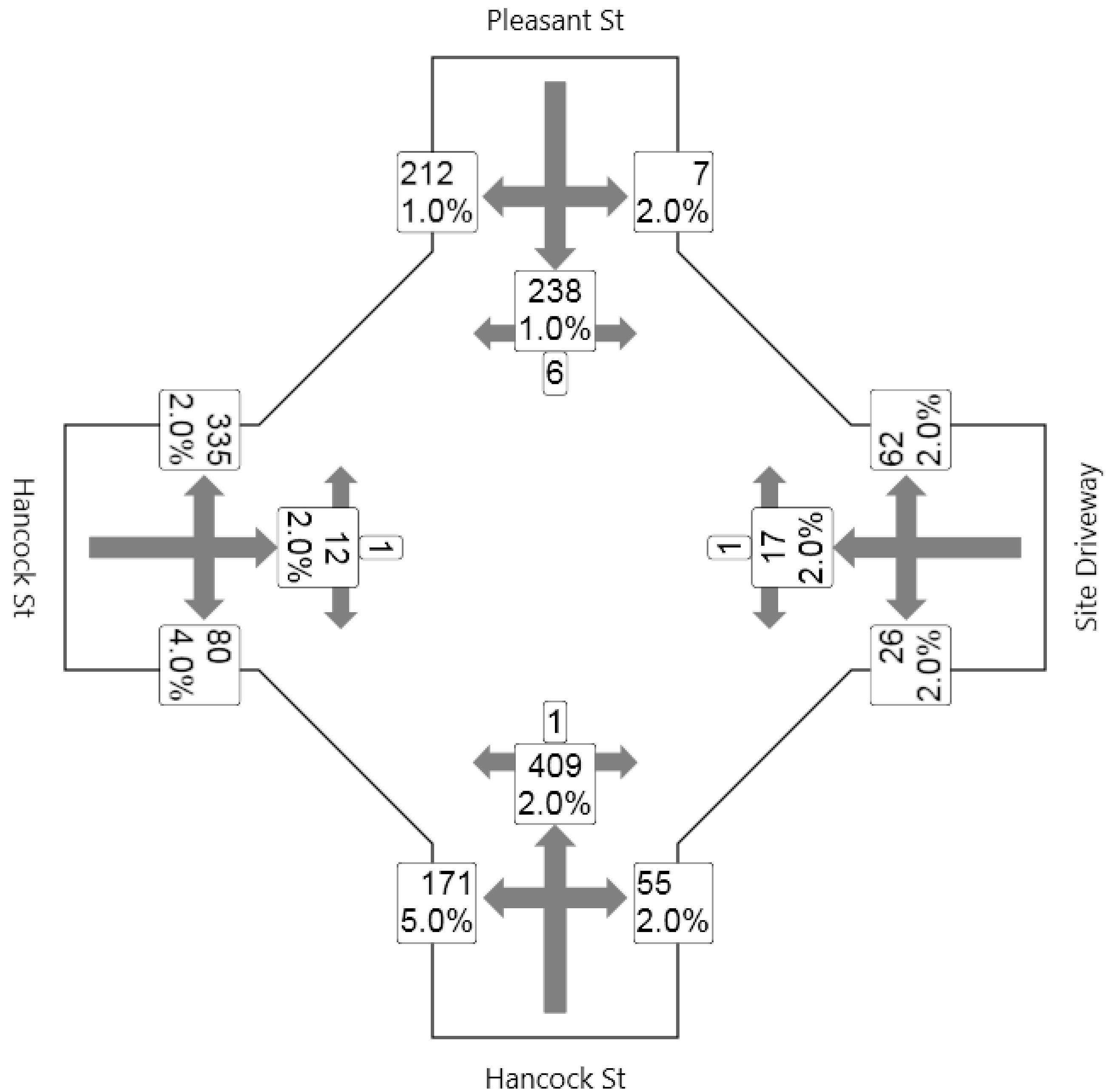
Site: AM Peak

Pleasant Street AM
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Hancock St											
3	L	186	5.0	0.932	41.9	LOS E	15.6	398.7	1.00	1.46	14.2
8	T	445	2.0	0.932	41.9	LOS E	15.6	398.7	1.00	1.46	14.4
18	R	61	2.0	0.932	41.9	LOS E	15.6	398.7	1.00	1.46	14.3
Approach		692	2.8	0.932	41.9	LOS E	15.6	398.7	1.00	1.46	14.3
East: Site Driveway											
1	L	28	2.0	0.288	14.0	LOS B	1.0	25.2	0.71	0.97	20.1
6	T	18	2.0	0.288	14.0	LOS B	1.0	25.2	0.71	0.81	21.0
16	R	68	2.0	0.288	14.0	LOS B	1.0	25.2	0.71	0.86	20.9
Approach		115	2.0	0.288	14.0	LOS B	1.0	25.2	0.71	0.88	20.7
North: Pleasant St											
7	L	8	2.0	0.306	7.5	LOS A	1.3	32.9	0.42	0.91	22.4
4	T	259	1.0	0.306	7.5	LOS A	1.3	32.9	0.42	0.52	24.0
14	R	230	1.0	0.264	6.9	LOS A	1.1	27.3	0.41	0.59	23.6
Approach		497	1.0	0.306	7.2	LOS A	1.3	32.9	0.42	0.56	23.8
West: Hancock St											
5	L	364	2.0	0.567	12.8	LOS B	3.5	90.1	0.61	0.86	20.3
2	T	13	2.0	0.567	12.8	LOS B	3.5	90.1	0.61	0.69	21.3
12	R	87	4.0	0.567	12.8	LOS B	3.5	90.1	0.61	0.75	21.1
Approach		464	2.4	0.567	12.8	LOS B	3.5	90.1	0.61	0.84	20.5
All Vehicles		1768	2.1	0.932	22.7	LOS C	15.6	398.7	0.72	1.01	18.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


Pleasant St
212
1.0%
7
2.0%
238
1.0%
6
335
2.0%
12
2.0%
1
Hancock St
80
4.0%
62
2.0%
17
2.0%
1
Site Driveway
26
2.0%
1
409
2.0%
171
5.0%
55
2.0%
Hancock St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø2
Lane Configurations													
Volume (vph)	0	0	499	16	44	17	381	474	37	26	536	122	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	12	11	14	11	11	11	11	12	12	12	
Storage Length (ft)	0		230	0		0	0		0	0		100	
Storage Lanes	0		1	0		0	1		0	0		1	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	
Ped Bike Factor								1.00			0.99		
Frt			0.850		0.971			0.989			0.973		
Flt Protected					0.990		0.950				0.998		
Satd. Flow (prot)	0	0	2484	0	1731	0	1555	1505	0	0	2947	0	
Flt Permitted					0.990		0.253				0.919		
Satd. Flow (perm)	0	0	2484	0	1731	0	414	1505	0	0	2714	0	
Right Turn on Red			No			No			No			No	
Satd. Flow (RTOR)													
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		854			195			189			689		
Travel Time (s)		19.4			4.4			4.3			15.7		
Confl. Bikes (#/hr)									3			9	
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.94	0.94	0.94	0.94	0.94	0.94	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	0%	3%	0%	0%	6%	1%	2%	92%	76%	4%	2%	
Adj. Flow (vph)	0	0	537	17	48	18	405	504	39	28	570	130	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	0	537	0	83	0	405	543	0	0	728	0	
Turn Type			Over	Perm	NA		D.P+P	NA		Perm	NA		
Protected Phases			5		6		5	1 5			1		2
Permitted Phases				6			1			1			
Detector Phase			5	6	6		5	1 5		1	1		
Switch Phase													
Minimum Initial (s)			8.0	10.0	10.0		8.0			8.0	8.0		4.0
Minimum Split (s)			14.0	15.0	15.0		14.0			13.0	13.0		26.0
Total Split (s)			25.0	19.0	19.0		25.0			30.0	30.0		26.0
Total Split (%)			25.0%	19.0%	19.0%		25.0%			30.0%	30.0%		26%
Maximum Green (s)			20.0	14.0	14.0		20.0			25.0	25.0		20.0
Yellow Time (s)			3.0	3.0	3.0		3.0			3.0	3.0		2.0
All-Red Time (s)			2.0	2.0	2.0		2.0			2.0	2.0		4.0
Lost Time Adjust (s)			-2.0		-1.0		-2.0				-1.0		
Total Lost Time (s)			3.0		4.0		3.0				4.0		
Lead/Lag			Lead	Lag	Lag		Lead			Lead	Lead		Lag
Lead-Lag Optimize?													
Vehicle Extension (s)			4.0	2.0	2.0		4.0			4.0	4.0		2.0
Recall Mode			None	None	None		None			C-Max	C-Max		None
Walk Time (s)													7.0
Flash Dont Walk (s)													13.0
Pedestrian Calls (#/hr)													17
Act Effct Green (s)			22.0		14.8		64.8	65.2			41.8		
Actuated g/C Ratio			0.22		0.15		0.65	0.65			0.42		
v/c Ratio			0.98		0.33		0.78	0.55			0.64		
Control Delay			74.7		42.0		33.3	8.6			30.4		
Queue Delay			10.0		0.0		19.1	0.9			0.1		
Total Delay			84.7		42.0		52.4	9.5			30.6		
LOS			F		D		D	A			C		
Approach Delay					42.0			27.8			30.6		
Approach LOS					D			C			C		
Queue Length 50th (ft)			194		48		101	49			152		
Queue Length 95th (ft)			#315		94		m#339	m344			#380		
Internal Link Dist (ft)		774			115			109			609		
Turn Bay Length (ft)			230										
Base Capacity (vph)			546		259		519	981			1135		
Starvation Cap Reductn			0		0		111	202			0		
Spillback Cap Reductn			21		0		0	0			43		
Storage Cap Reductn			0		0		0	0			0		
Reduced v/c Ratio			1.02		0.32		0.99	0.70			0.67		

Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 42.5 Intersection LOS: D
Intersection Capacity Utilization 70.2% ICU Level of Service C
Analysis Period (min) 15
\# 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: 1: Dorchester Avenue & Hancock Street/Hoyt Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø2
Lane Configurations													
Volume (vph)	57	107	21	0	0	348	0	487	28	546	504	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	16	12	12	12	15	12	12	12	11	11	12	
Storage Length (ft)	0		0	0		0	0		100	0		0	
Storage Lanes	0		0	0		1	0		1	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor		1.00						1.00					
Frt		0.985				0.865		0.992					
Flt Protected		0.985								0.950			
Satd. Flow (prot)	0	1526	0	0	0	1595	0	3118	0	1540	1605	0	
Flt Permitted		0.985								0.366			
Satd. Flow (perm)	0	1526	0	0	0	1595	0	3118	0	593	1605	0	
Right Turn on Red			No			Yes			No			No	
Satd. Flow (RTOR)						*250							
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		315			326			2596			189		
Travel Time (s)		7.2			7.4			59.0			4.3		
Confl. Bikes (#/hr)			1						4			5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.96	0.96	0.96	0.97	0.97	0.97	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	48%	14%	0%	0%	0%	2%	0%	3%	7%	2%	3%	0%	
Adj. Flow (vph)	62	116	23	0	0	378	0	507	29	563	520	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	201	0	0	0	378	0	536	0	563	520	0	
Turn Type	Perm	NA				Over		NA		D.P+P	NA		
Protected Phases		6				5		1		5	1 5		2
Permitted Phases	6									1			
Detector Phase	6	6				5		1		5	1 5		
Switch Phase													
Minimum Initial (s)	10.0	10.0				8.0		8.0		8.0			4.0
Minimum Split (s)	15.0	15.0				14.0		13.0		14.0			26.0
Total Split (s)	19.0	19.0				25.0		30.0		25.0			26.0
Total Split (%)	19.0%	19.0%				25.0%		30.0%		25.0%			26%
Maximum Green (s)	14.0	14.0				20.0		25.0		20.0			20.0
Yellow Time (s)	3.0	3.0				3.0		3.0		3.0			2.0
All-Red Time (s)	2.0	2.0				2.0		2.0		2.0			4.0
Lost Time Adjust (s)		-1.0				-2.0		-1.0		-2.0			
Total Lost Time (s)		4.0				3.0		4.0		3.0			
Lead/Lag	Lag	Lag				Lead		Lead		Lead			Lag
Lead-Lag Optimize?													
Vehicle Extension (s)	2.0	2.0				4.0		4.0		4.0			2.0
Recall Mode	None	None				None		C-Max		None			None
Walk Time (s)													7.0
Flash Dont Walk (s)													13.0
Pedestrian Calls (#/hr)													17
Act Effct Green (s)		14.8				22.0		41.8		64.8	65.2		
Actuated g/C Ratio		0.15				0.22		0.42		0.65	0.65		
v/c Ratio		0.90				0.69		0.41		0.95	0.50		
Control Delay		81.5				19.7		24.9		34.9	4.5		
Queue Delay		0.0				0.8		0.1		13.5	1.6		
Total Delay		81.5				20.5		25.0		48.4	6.1		
LOS		F				C		C		D	A		
Approach Delay		81.5						25.0			28.1		
Approach LOS		F						C			C		
Queue Length 50th (ft)		127				71		99		83	45		
Queue Length 95th (ft)		#257				179		219		m#405	m54		
Internal Link Dist (ft)		235			246			2516			109		
Turn Bay Length (ft)													
Base Capacity (vph)		228				545		1304		592	1047		
Starvation Cap Reductn		0				0		0		38	341		
Spillback Cap Reductn		0				38		128		0	0		
Storage Cap Reductn		0				0		0		0	0		
Reduced v/c Ratio		0.88				0.75		0.46		1.02	0.74		

Intersection Summary

Area Type: CBD
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 30.9 Intersection LOS: C
Intersection Capacity Utilization 70.7% ICU Level of Service C
Analysis Period (min) 15
* User Entered Value
# 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: 2: Dorchester Avenue & East Street/Freeport Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	15	31	57	0	12	0	496	40	1	590	0
Sign Control		Stop			Stop			Free			Free	
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	0.92
Hourly flow rate (vph)	72	16	34	62	0	13	0	539	43	1	641	0
Pedestrians		4			42			5			8	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			4			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								689				
pX, platoon unblocked	0.80	0.80		0.80	0.80	0.80				0.80		
vC, conflicting volume	1229	1272	650	1293	1250	611	645			625		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1163	1216	650	1243	1189	394	645			411		
tC, single (s)	7.2	6.5	6.2	7.2	6.5	6.4	4.1			5.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.6	4.0	3.5	2.2			3.1		
p0 queue free %	42	88	93	34	100	97	100			100		
cM capacity (veh/h)	124	141	464	94	146	480	946			598		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	122	75	583	642
Volume Left	72	62	0	1
Volume Right	34	13	43	0
cSH	158	109	1700	598
Volume to Capacity	0.77	0.69	0.34	0.00
Queue Length 95th (ft)	121	90	0	0
Control Delay (s)	78.6	91.2	0.0	0.1
Lane LOS	F	F		A
Approach Delay (s)	78.6	91.2	0.0	0.1
Approach LOS	F	F		

Intersection Summary			
Average Delay	11.6		
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

MOVEMENT SUMMARY

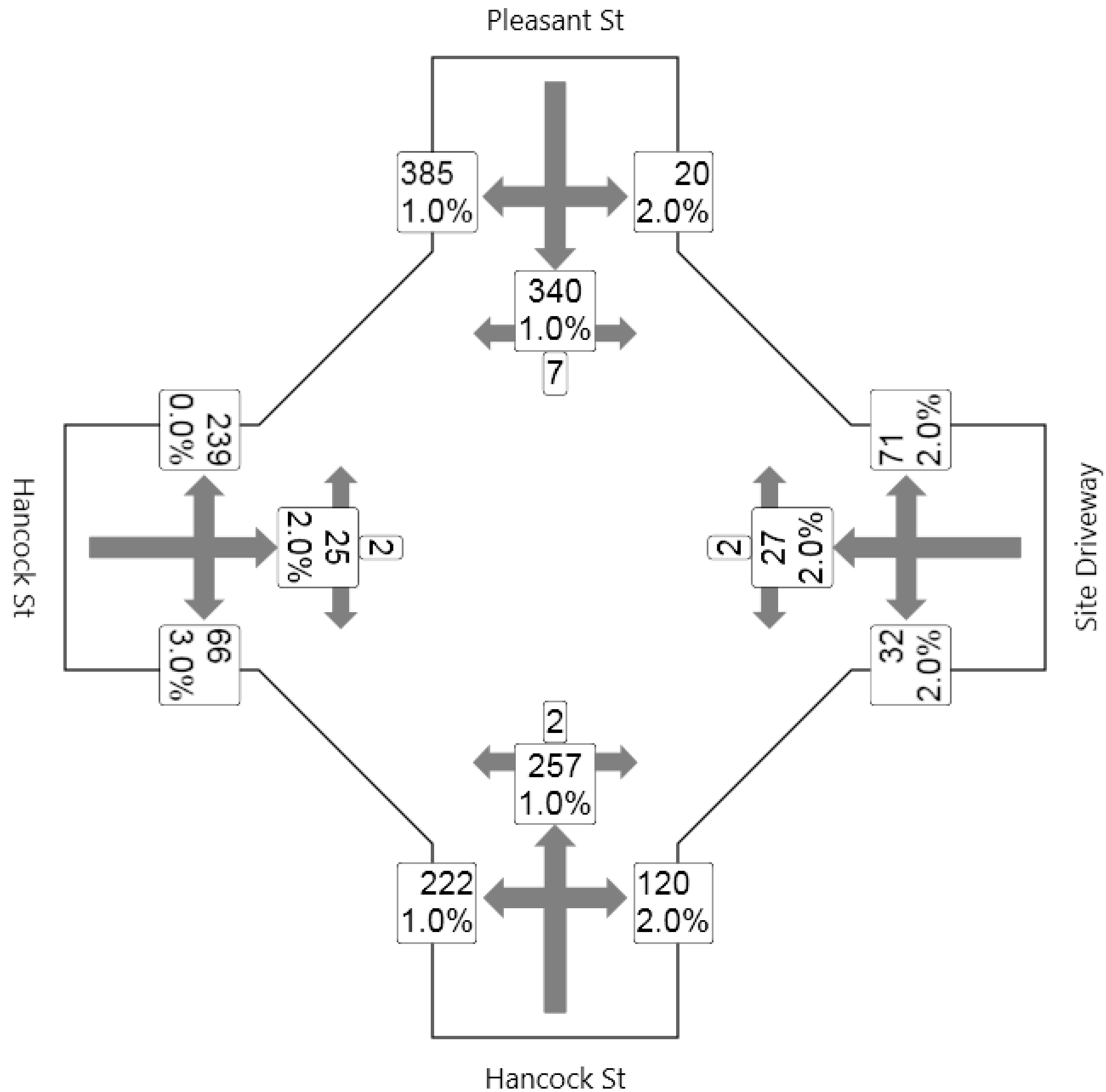
Site: PM Peak

Pleasant Street PM
Roundabout

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Hancock St											
3	L	241	1.0	0.793	22.8	LOS C	8.8	222.9	0.86	1.08	17.8
8	T	279	1.0	0.793	22.8	LOS C	8.8	222.9	0.86	1.00	18.3
18	R	133	2.0	0.793	22.8	LOS C	8.8	222.9	0.86	1.02	18.2
Approach		654	1.2	0.793	22.8	LOS C	8.8	222.9	0.86	1.03	18.1
East: Site Driveway											
1	L	35	2.0	0.278	11.2	LOS B	1.0	25.0	0.63	0.93	21.0
6	T	29	2.0	0.278	11.2	LOS B	1.0	25.0	0.63	0.74	22.1
16	R	77	2.0	0.278	11.2	LOS B	1.0	25.0	0.63	0.79	21.9
Approach		141	2.0	0.278	11.2	LOS B	1.0	25.0	0.63	0.82	21.7
North: Pleasant St											
7	L	22	2.0	0.481	10.8	LOS B	2.5	63.7	0.56	0.96	21.3
4	T	370	1.0	0.481	10.8	LOS B	2.5	63.7	0.56	0.66	22.6
14	R	418	1.0	0.513	11.5	LOS B	2.9	72.7	0.58	0.75	21.7
Approach		810	1.0	0.513	11.2	LOS B	2.9	72.7	0.57	0.71	22.1
West: Hancock St											
5	L	252	0.0	0.479	11.8	LOS B	2.5	62.8	0.62	0.93	20.6
2	T	28	2.0	0.479	11.8	LOS B	2.5	62.8	0.62	0.76	21.7
12	R	69	3.0	0.479	11.8	LOS B	2.5	62.8	0.62	0.81	21.5
Approach		349	0.8	0.479	11.8	LOS B	2.5	62.8	0.62	0.89	20.9
All Vehicles		1954	1.1	0.793	15.2	LOS C	8.8	222.9	0.68	0.86	20.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.

SIDRA INTERSECTION



Pleasant St
385
1.0%
20
2.0%
340
1.0%
7
Hancock St
239
0.0%
25
2.0%
2
66
3.0%
Site Driveway
71
2.0%
27
2.0%
2
32
2.0%
2
257
1.0%
222
1.0%
120
2.0%
Hancock St

APPENDIX F – RESPONSE TO CLIMATE CHANGE QUESTIONNAIRE

Climate Change Preparedness and Resiliency Checklist for New Construction

In November 2013, in conformance with the Mayor's 2011 Climate Action Leadership Committee's recommendations, the Boston Redevelopment Authority adopted policy for all development projects subject to Boston Zoning Article 80 Small and Large Project Review, including all Institutional Master Plan modifications and updates, are to complete the following checklist and provide any necessary responses regarding project resiliency, preparedness, and to mitigate any identified adverse impacts that might arise under future climate conditions.

For more information about the City of Boston's climate policies and practices, and the 2011 update of the climate action plan, *A Climate of Progress*, please see the City's climate action web pages at http://www.cityofboston.gov/climate

In advance we thank you for your time and assistance in advancing best practices in Boston.

Climate Change Analysis and Information Sources:

1. Northeast Climate Impacts Assessment (www.climatechoices.org/ne/)
2. USGCRP 2009 (http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/)
3. Army Corps of Engineers guidance on sea level rise (http://planning.usace.army.mil/toolbox/library/ECs/EC11652212Nov2011.pdf)
4. Proceeding of the National Academy of Science, "Global sea level rise linked to global temperature", Vermeer and Rahmstorf, 2009 (http://www.pnas.org/content/early/2009/12/04/0907765106.full.pdf)
5. "Hotspot of accelerated sea-level rise on the Atlantic coast of North America", Asbury H. Sallenger Jr*, Kara S. Doran and Peter A. Howd, 2012 (http://www.bostonredevelopmentauthority.org/planning/Hotspot of Accelerated Sea-level Rise 2012.pdf)
6. "Building Resilience in Boston": Best Practices for Climate Change Adaptation and Resilience for Existing Buildings, Linnean Solutions, The Built Environment Coalition, The Resilient Design Institute, 2103 (http://www.greenribboncommission.org/downloads/Building_Resilience_in_Boston_SML.pdf)

Checklist

Please respond to all of the checklist questions to the fullest extent possible. For projects that respond "Yes" to any of the D.1 – Sea-Level Rise and Storms, Location Description and Classification questions, please respond to all of the remaining Section D questions.

Checklist responses are due at the time of initial project filing or Notice of Project Change and final filings just prior seeking Final BRA Approval. A PDF of your response to the Checklist should be submitted to the Boston Redevelopment Authority via your project manager.

Please Note: When initiating a new project, please visit the BRA web site for the most current Climate Change Preparedness & Resiliency Checklist.

A.1 - Project Information

Project Name:	DOT BLOCK
Project Address Primary:	166 Pleasant Street, Dorchester, MA
Project Address Additional:	8 Greenmount Street 10 Greenmount Street 12 Greenmount Street 14 Greenmount Street 160 Pleasant Street 162 Pleasant Street 164 Pleasant Street 166 Pleasant Street 240 Hancock Street 1203-1211 Dorchester Avenue 1225 Dorchester Avenue (pending ISD confirmation) 250 Hancock Street (reserved for future use)
Project Contact (name / Title / Company / email / phone):	**Demetri Dasco / DOT BLOCK, LLC / 35 Fay Street, Boston, 02118** 617-482-3006

A.2 - Team Description

Owner / Developer:	DOT BLOCK, LLC
Architect:	RODE Architects, Inc.
Engineer (building systems):	TBD
Sustainability / LEED:	Price Sustainability
Permitting:	MLF Consulting LLC
Construction Management:	N / A
Climate Change Expert:	

A.3 - Project Permitting and Phase

At what phase is the project – most recent completed submission at the time of this response?

<u>PNF / Expanded PNF Submission</u>	Draft / Final Project Impact Report Submission	BRA Board Approved	Notice of Project Change
Planned Development Area	BRA Final Design Approved	Under Construction	Construction just completed:

A.4 - Building Classification and Description

List the principal Building Uses:	384 Residential units (including 64 Condo) Approx.. 60k GSF Commercial Retail space Approx. 472 off-street Parking spaces, including up to 450 in structured parking
List the First Floor Uses:	Residential, Residential Lobby and Amenity Space, Retail Space, Parking,

	Accessory mechanical/storage space

What is the principal Construction Type – select most appropriate type?

Wood Frame	Masonry	Steel Frame	Concrete

Describe the building?

Site Area:	*206,849 SF*	Building Area:	*Approx. 475,000 GSF*
Building Height:	Varies from +48'-0" to +69'-6" Above average grade	Number of Stories:	***4 / 5 / 6 Flrs.***
First Floor Elevation (reference Boston City Base):	Varying, +/- 17'4" to 26'-0" *Final Elevation to be confirmed during Construction Drawing phase*	Are there below grade spaces/levels, if yes how many:	*Yes / ☑No* ***0*** *Number of Levels*

A.5 - Green Building

Which LEED Rating System(s) and version has or will your project use (by area for multiple rating systems)?

Select by Primary Use:	**New Construction**	Core & Shell	Healthcare	Schools
	Retail	**Homes Midrise**	**Homes**	Other
Select LEED Outcome:	Certified	**Silver**	**Gold**	Platinum

Will the project be USGBC Registered and / or USGBC Certified?

Registered:	*Yes / **No***	Certified:	*Yes / **No***

A.6 - Building Energy—

The Proponent does not have a MEP on the team as of this date. We will follow up with an update as soon as possible.

What are the base and peak operating energy loads for the building?

Electric:	*(kW)*	Heating:	*(MMBtu/hr)*
What is the planned building Energy Use Intensity:	*(kbut/SF or kWh/SF)*	Cooling:	*(Tons/hr)*

What are the peak energy demands of your critical systems in the event of a service interruption?

Electric:	*(kW)*	Heating:	*(MMBtu/hr)*
		Cooling:	*(Tons/hr)*

What is nature and source of your back-up / emergency generators?

Electrical Generation:	*(kW)*	Fuel Source:	*Diesel*

System Type and Number of Units:	Combustion Engine	Gas Turbine	Combine Heat and Power	*(Units)*

B - Extreme Weather and Heat Events

Climate change will result in more extreme weather events including higher year round average temperatures, higher peak temperatures, and more periods of extended peak temperatures. The section explores how a project responds to higher temperatures and heat waves.

B.1 - Analysis

What is the full expected life of the project?

Select most appropriate:	10 Years	25 Years	**50 Years**	75 Years

What is the full expected operational life of key building systems (e.g. heating, cooling, ventilation)?

Select most appropriate:	10 Years	**25 Years**	50 Years	75 Years

What time span of future Climate Conditions was considered?

Select most appropriate:	10 Years	**25 Years**	50 Years	75 Years

Analysis Conditions - What range of temperatures will be used for project planning – Low/High?

12/88 *Deg.*

What Extreme Heat Event characteristics will be used for project planning – Peak High, Duration, and Frequency

88 *Deg.*	***3*** *Days*	***2*** *Events / yr.*

What Drought characteristics will be used for project planning – Duration and Frequency?

60 *Days*	***1*** *Events / yr.*

What Extreme Rain Event characteristics will be used for project planning – Seasonal Rain Fall, Peak Rain Fall, and Frequency of Events per year?

45 *Inches / yr.*	***3.26 / 4.90 / 8.84*** *Inches*	***2-yr / 10-yr / 100-yr*** */ frequency*

What Extreme Wind Storm Event characteristics will be used for project planning – Peak Wind Speed, Duration of Storm Event, and Frequency of Events per year?

105 *mph Peak Wind*	***0.1*** *Hours*	*Events / yr.*

B.2 - Mitigation Strategies

What will be the overall energy performance, based on use, of the project and how will performance be determined?

Building energy use below code:	***20%***
How is performance determined:	ASHRAE 90.1 Appendix G Energy Modelling Followed by performance testing of installed conditions

What specific measures will the project employ to reduce building energy consumption?

Select all appropriate:	**High performance building envelope**	**High performance lighting & controls**	**Building day lighting**	**EnergyStar equip. / appliances**
	High performance HVAC equipment	Energy recovery ventilation	No active cooling	No active heating
Describe any added measures:				

What are the insulation (R) values for building envelope elements?

Roof:	*R = 38*	Walls / Curtain Wall Assembly:	*R = 20.5*
Foundation:	*R = 10*	Basement / Slab:	*R =10*
Windows:	*U = 0.35*	Doors:	*U =0.37*

What specific measures will the project employ to reduce building energy demands on the utilities and infrastructure?

	On-site clean energy / CHP system(s)	Building-wide power dimming	Thermal energy storage systems	Ground source heat pump
	On-site Solar PV	On-site Solar Thermal	Wind power	**<u>None</u>**
Describe any added measures:				

Will the project employ Distributed Energy / Smart Grid Infrastructure and /or Systems?

Select all appropriate:	Connected to local distributed electrical	Building will be Smart Grid ready	Connected to distributed steam, hot, chilled water	Distributed thermal energy ready

Will the building remain operable without utility power for an extended period?

	Yes / ***No***	If yes, for how long:	
If Yes, is building "Islandable?	**No**		
If Yes, describe strategies:			

Describe any non-mechanical strategies that will support building functionality and use during an extended interruption(s) of utility services and infrastructure:

Select all appropriate:	Solar oriented – longer south walls	Prevailing winds oriented	**<u>External shading devices</u>**	Tuned glazing,
	Building cool zones	**<u>Operable windows</u>**	**<u>Natural ventilation</u>**	Building shading
	Potable water for drinking / food preparation	Potable water for sinks / sanitary systems	Waste water storage capacity	High Performance Building Envelope
Describe any added measures:				

What measures will the project employ to reduce urban heat-island effect?

<u>Select all appropriate:</u>	High reflective paving materials	**<u>Shade trees & shrubs</u>**	**<u>High reflective roof materials</u>**	**<u>Vegetated roofs</u>**
Describe other strategies:				

What measures will the project employ to accommodate rain events and more rain fall?

Select all appropriate:	<u>On-site retention systems & ponds</u>	<u>Infiltration galleries & areas</u>	vegetated water capture systems	<u>Vegetated roofs</u>
Describe other strategies:				

What measures will the project employ to accommodate extreme storm events and high winds?

Select all appropriate:	Hardened building structure & elements	Buried utilities & hardened infrastructure	Hazard removal & protective landscapes	<u>Soft & permeable surfaces (water infiltration)</u>
Describe other strategies:				

C - Sea-Level Rise and Storms

Rising Sea-Levels and more frequent Extreme Storms increase the probability of coastal and river flooding and enlarging the extent of the 100 Year Flood Plain. This section explores if a project is or might be subject to Sea-Level Rise and Storm impacts.

C.1 - Location Description and Classification:

Do you believe the building to susceptible to flooding now or during the full expected life of the building?

*Yes / **No***

Describe site conditions?

Site Elevation – Low/High Points:	*Boston City Base* ***(+17 to +25 Ft.)***
Building Proximity to Water:	***Approx. 1,400 Ft.***

Is the site or building located in any of the following?

Coastal Zone:	*Yes / **No***	Velocity Zone:	*Yes / **No***
Flood Zone:	*Yes / **No***	Area Prone to Flooding:	*Yes / **No***

Will the 2013 Preliminary FEMA Flood Insurance Rate Maps or future floodplain delineation updates due to Climate Change result in a change of the classification of the site or building location?

2013 FEMA Prelim. FIRMs:	*Yes / **No***	Future floodplain delineation updates:	*Yes / **No***

What is the project or building proximity to nearest Coastal, Velocity or Flood Zone or Area Prone to Flooding?

Approx. 1,400 Ft

If you answered YES to any of the above Location Description and Classification questions, please complete the following questions. Otherwise you have completed the questionnaire; thank you!

C - Sea-Level Rise and Storms

This section explores how a project responds to Sea-Level Rise and / or increase in storm frequency or severity.

C.2 - Analysis

How were impacts from higher sea levels and more frequent and extreme storm events analyzed:

Sea Level Rise:	*Ft.*	Frequency of storms:	*per year*

C.3 - Building Flood Proofing

Describe any strategies to limit storm and flood damage and to maintain functionality during an extended periods of disruption.

What will be the Building Flood Proof Elevation and First Floor Elevation:

Flood Proof Elevation:	*Boston City Base Elev.(Ft.)*	First Floor Elevation:	*Boston City Base Elev. (Ft.)*

Will the project employ temporary measures to prevent building flooding (e.g. barricades, flood gates):

	Yes / No	If Yes, to what elevation	*Boston City Base Elev. (Ft.)*
If Yes, describe:			

What measures will be taken to ensure the integrity of critical building systems during a flood or severe storm event:

Systems located above 1st Floor.	Water tight utility conduits	Waste water back flow prevention	Storm water back flow prevention

Were the differing effects of fresh water and salt water flooding considered:

Yes / No

Will the project site / building(s) be accessible during periods of inundation or limited access to transportation:

Yes / No	If yes, to what height above 100 Year Floodplain:	*Boston City Base Elev. (Ft.)*

Will the project employ hard and / or soft landscape elements as velocity barriers to reduce wind or wave impacts?

	Yes / No
If Yes, describe:	

Will the building remain occupiable without utility power during an extended period of inundation:

Yes / No	If Yes, for how long:	*days*

Describe any additional strategies to addressing sea level rise and or sever storm impacts:

C.4 - Building Resilience and Adaptability

Describe any strategies that would support rapid recovery after a weather event and accommodate future building changes that respond to climate change:

Will the building be able to withstand severe storm impacts and endure temporary inundation?

Select appropriate:	*Yes / No*	Hardened / Resilient Ground Floor Construction	Temporary shutters and or barricades	Resilient site design, materials and construction

Can the site and building be reasonably modified to increase Building Flood Proof Elevation?

Select appropriate:	*Yes / No*	Surrounding site elevation can be raised	Building ground floor can be raised	Construction been engineered
Describe additional strategies:				

Has the building been planned and designed to accommodate future resiliency enhancements?

Select appropriate:	*Yes / No*	Solar PV	Solar Thermal	Clean Energy / CHP System(s)
		Potable water storage	Wastewater storage	Back up energy systems & fuel
Describe any specific or additional strategies:				

Thank you for completing the Boston Climate Change Resilience and Preparedness Checklist!

For questions or comments about this checklist or Climate Change Resiliency and Preparedness best practices, please contact: John.Dalzell.BRA@cityofboston.gov

APPENDIX G – RESPONSE TO COB ACCESS GUIDELINES

Accessibility Checklist

(to be added to the BRA Development Review Guidelines)

In 2009, a nine-member Advisory Board was appointed to the Commission for Persons with Disabilities in an effort to reduce architectural, procedural, attitudinal, and communication barriers affecting persons with disabilities in the City of Boston. These efforts were instituted to work toward creating universal access in the built environment.

In line with these priorities, the Accessibility Checklist aims to support the inclusion of people with disabilities. In order to complete the Checklist, you must provide specific detail, including descriptions, diagrams and data, of the universal access elements that will ensure all individuals have an equal experience that includes full participation in the built environment throughout the proposed buildings and open space.

In conformance with this directive, all development projects subject to Boston Zoning Article 80 Small and Large Project Review, including all Institutional Master Plan modifications and updates, are to complete the following checklist and provide any necessary responses regarding the following:

- improvements for pedestrian and vehicular circulation and access;
- encourage new buildings and public spaces to be designed to enhance and preserve Boston's system of parks, squares, walkways, and active shopping streets;
- ensure that persons with disabilities have full access to buildings open to the public;
- afford such persons the educational, employment, and recreational opportunities available to all citizens; and
- preserve and increase the supply of living space accessible to persons with disabilities.

We would like to thank you in advance for your time and effort in advancing best practices and progressive approaches to expand accessibility throughout Boston's built environment.

Accessibility Analysis Information Sources:

1. Americans with Disabilities Act – 2010 ADA Standards for Accessible Design
    a. http://www.ada.gov/2010ADAstandards_index.htm
2. Massachusetts Architectural Access Board 521 CMR
    a. http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/aab/aab-rules-and-regulations-pdf.html
3. Boston Complete Street Guidelines
    a. http://bostoncompletestreets.org/
4. City of Boston Mayors Commission for Persons with Disabilities Advisory Board
    a. http://www.cityofboston.gov/Disability
5. City of Boston – Public Works Sidewalk Reconstruction Policy
    a. http://www.cityofboston.gov/images_documents/sidewalk%20policy%200114_tcm3-41668.pdf
6. Massachusetts Office On Disability Accessible Parking Requirements
    a. www.mass.gov/anf/docs/mod/hp-parking-regulations-mod.doc
7. MBTA Fixed Route Accessible Transit Stations
    a. http://www.mbta.com/about_the_mbta/accessibility/

Project Information

Project Name:	DOT BLOCK
Project Address Primary:	166 Pleasant Street, Dorchester, MA
Project Address Additional:	8 Greenmount Street 10 Greenmount Street 12 Greenmount Street 14 Greenmount Street 160 Pleasant Street 162 Pleasant Street 164 Pleasant Street 166 Pleasant Street 240 Hancock Street 1203-1211 Dorchester Avenue 1225 Dorchester Avenue (pending ISD confirmation) 250 Hancock Street (reserved for future use)
Project Contact (name / Title / Company / email / phone):	**Demetri Dasco / DOT BLOCK, LLC / 35 Fay Street, Boston, 02118** 617-482-3006

Team Description

Owner / Developer:	DOT BLOCK, LLC
Architect:	RODE Architects, Inc
Engineer (building systems):	The Proponent does not have engineering on the team as of this date, but will follow up with an update as soon as possible.
Sustainability / LEED:	Price Sustainability
Permitting:	MLF Consulting LLC
Construction Management:	N/A

Project Permitting and Phase

At what phase is the project – at time of this questionnaire?

☑ PNF / Expanded PNF Submitted	Draft / Final Project Impact Report Submitted	BRA Board Approved
BRA Design Approved	Under Construction	Construction just completed:

Building Classification and Description

What are the principal Building Uses - select all appropriate uses?

Residential – One to Three Unit	☑ Residential - Multi-unit, Four +	Institutional	Education
Commercial	Office	☑ Retail	Assembly
Laboratory / Medical	Manufacturing / Industrial	Mercantile	☑ Storage, Utility and Other

First Floor Uses (List)	Residential Lobby and Amenity Space, Retail Space, Parking, Accessory mechanical/storage space

What is the Construction Type – select most appropriate type?

☑ Wood Frame	Masonry	Steel Frame	Concrete

Describe the building?

Site Area:	206,849 SF	Building Area:	Approx. 475,000 GSF
Building Height:	Varies from +48'-0" to +69'-6" Above average grade	Number of Stories:	4 / 5 / 6
First Floor Elevation:	Varying, +/- 17'4" to 26'-0" *Final Elevation to be confirmed during Construction Drawing phase*	Are there below grade spaces:	*Yes / ☑No*

Assessment of Existing Infrastructure for Accessibility:

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

Provide a description of the development neighborhood and identifying characteristics.	DOT BLOCK is located near the 'Glover's Corner' intersection along Dorchester Avenue, near the Savin Hill, Jones Hill and Meetinghouse Hill neighborhoods of Dorchester. The site and its immediate surroundings are predominantly light industrial, with retail presence along Dorchester Avenue. However, the neighborhood at large is more typically medium-density residential development, as represented by the abutting condition along Greenmount and Pleasant Streets. This residential grain is typified by single family, townhouses, triple-decker, and larger multi-family mid-rise apartment buildings. The site is surrounded by heavily-travelled arterials: Hancock Street connects to Uphams Corner and into Roxbury; Pleasant Street up into the Newmarket and South Bay service sector; Freeport to the Southeast Expressway and points south; and Dorchester Avenue, the main corridor for the Dorchester Neighborhood. Dorchester Avenue has connections to public transportation, roughly paralleled by the Ashmont branch service of the MBTA Red Line and local bus route 18. At a larger scale the Dorchester neighborhood of Boston is home to rich cultural and socio-economic diversity, with the Avenue itself traversing neighborhoods with different housing markets and income levels. Located mid-way along the Avenue, and straddling disparate zoning districts, the DOT BLOCK project is ideally situated to foster a new community with rich urban connections.
List the surrounding ADA compliant MBTA transit lines and the proximity to the development site: Commuter rail, subway, bus, etc.	• MBTA Subway – Red Line, Ashmont branch: Savin Hill Station. 0.4 miles away; one block north along Dorchester Ave and four blocks east on Bay St. • MBTA Bus lines: Route 18 runs north-south along Dorchester Avenue, directly adjacent to the site. Routes 15 and 17 operate through Kane Sq., two blocks west along Hancock St. (0.1 miles)
List the surrounding institutions: hospitals, public housing and elderly and disabled housing developments, educational facilities, etc.	**Affordable/Public Housing:** Pasciucco – 330 Bowdoin Street (Federal Elderly Disabled) 136-138 Pleasant Street – PBV Family 612-618 Columbia Street - PBV Eld/Dis Tuttle House – Rehab Eld/Dis **School:** Elementary – Mather, Everett; Henderson K-12 Inclusion; King K-8; Murphy K-8; UP Academy; Community Academy of Science and Health; TechBoston Academy; UMass Boston; and others. **Police:** Boston Police District C-11 **Fire:** District 7; Engine Co.'s 17 & 21 **Hospitals:** DotHouse Health, Uphams Corner Health Center; Carney Hospital, Boston Medical Center; Ambulance Districts 10 & 11

Is the proposed development on a priority accessible route to a key public use facility? List the surrounding: government buildings, libraries, community centers and recreational facilities and other related facilities.	**Recreation:** Paul Sullivan Community Garden, Deerstreet Park, and Melvinside Play Area at the Boys & Girls Club; Downer Avenue Playground; Allen Park and Meetinghouse Churchyard; McConnell Park and Dorchester Bay; Ronan Park **Public Library:** Boston Public Library Uphams Corner Branch – 0.7 miles Fields Corner Branch – 0.7 miles **Community Center:** Bird Street and Cleveland Community Centers Boys & Girls Club – 35 Deer St. **Transit:** Site is located (0.4 miles) to Savin Hill station connecting the site to major Boston public facilities.

Surrounding Site Conditions – Existing:

This section identifies the current condition of the sidewalks and pedestrian ramps around the development site.

Are there sidewalks and pedestrian ramps existing at the development site?	Yes
If yes above, list the existing sidewalk and pedestrian ramp materials and physical condition at the development site.	The existing sidewalk material is concrete with granite curbing. The physical condition of the existing concrete sidewalk and pedestrian ramps are good.
Are the sidewalks and pedestrian ramps existing-to-remain? If yes, have the sidewalks and pedestrian ramps been verified as compliant? If yes, please provide surveyors report.	Yes, sidewalks and pedestrian ramps to remain. Where curb cuts are new or to be removed, the final conditions will be No, the existing sidewalks and pedestrian ramps have not been verified as being in compliance at this time but will be verified during the project design.
Is the development site within a historic district? If yes, please identify.	The development team is not aware of the project site being located within an historic district.

Surrounding Site Conditions – Proposed

This section identifies the proposed condition of the walkways and pedestrian ramps in and around the development site. The width of the sidewalk contributes to the degree of comfort and enjoyment of 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. Typically, a five foot wide Pedestrian Zone supports two people walking side by side or two wheelchairs passing each other. An eight foot wide Pedestrian Zone allows two pairs of people to comfortably pass each other, and a ten foot or wider Pedestrian Zone can support high volumes of pedestrians.

Are the proposed sidewalks consistent with the Boston Complete Street Guidelines? See: www.bostoncompletestreets.org	Yes (pending confirmation of existing cross slopes and clearances).
If yes above, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, Boulevard.	Greenmount Street: Neighborhood Residential Pleasant Street: Neighborhood Connector Hancock Street: Neighborhood Connector Dorchester Avenue: Neighborhood Main
What is the total width of the proposed sidewalk? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone.	Greenmount Street: (@ 8-14 Greenmount): 13'-9" min overall width (to foremost projection of bay windows) Greenspace/Furnishing Zone + Curb: 2'-0" Pedestrian Zone: 5'-0" Frontage Zone: varies, from 6'-9" to 7'-9" (@ 1205 Dorchester, pending future acquisition of additional parcels): 14'-4" min overall width Greenspace/Furnishing Zone + Curb: 2'-0" Pedestrian Zone: 5'-0" Frontage Zone: varies, from 7'-7" to 9'-6" Pleasant Street: 20' overall width (to foremost projection of bay windows) Greenspace/Furnishing Zone + Curb: 4'-6" Pedestrian Zone: 6'-0" Frontage Zone: 9'-6" Hancock Street (@ 240 Hancock): 19'-6" overall width typical Greenspace/Furnishing Zone + Curb: 4'-6" Pedestrian Zone: 6'-0" Frontage Zone: 9'-0" typical (narrows to 2'-0" where Hancock bends toward Pleasant St.) (@ 250 Hancock): The foremost building face permits a width of 11'-0". Overall sidewalk at retail frontage increases to 16'-0". Greenspace/Furnishing Zone + Curb: 4'-6" Pedestrian Zone: 5'-0" Frontage Zone: 1'-6" min. at the foremost building face; increases at retail frontage to 6'-6" (@ 1225 Dorchester): The foremost building face permits a width of 11'-0". Greenspace/Furnishing Zone + Curb: 4'-6" Pedestrian Zone: 5'-0" Frontage Zone: 1'-6" min. at the foremost building face Dorchester Avenue: (@ 1205 Dorchester) The foremost and also most predominant building face provides a sidewalk of 12'-0". Overall sidewalk at retail frontage varies from 12'-0" to 27'-6" Greenspace/Furnishing Zone + Curb: 5'-0" min Pedestrian Zone: 6'-0" Frontage Zone: 1'-0" at predominant building face; increases at retail frontage to between 6'-0" and 16'-5" and greater (@ 1225 Dorchester) The foremost and also most predominant building faces

	provide a sidewalk width of 11'-9" on the north half of the building and 14'-0" on the south. Greenspace/Furnishing Zone + Curb: 5'-0" min Pedestrian Zone: 6'-0" Frontage Zone: 0'-0" at predominant building face, increases to 3'-0" at south portion of building
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?	Curb Zone: stone curbs, typical Greenscape Zone: landscaped tree beds alternating with poured-in-place scored concrete and/or permeable unit pavers. Street furniture, City of Boston signage, street lights, bicycle parking, etc. Pedestrian Zone: varies Typical: poured-in-place scored concrete Locations where internal Pedestrian Path meets sidewalk (Pleasant, Hancock, Dot Ave): permeable unit pavers and/or patterned concrete Frontage Zone: varies Greenmount / Pleasant: landscaped lawn and groundcover with occasional trees Hancock (@240 Hancock): poured-in-place raised concrete planter with exterior decks for first level units Hancock (@250 Hancock): poured-in-place scored concrete; permeable unit pavers and/or patterned concrete at the Pedestrian Path Dot Ave: poured-in-place scored concrete; permeable unit pavers and/or patterned concrete at the Pedestrian Path
If the pedestrian right-of-way is on private property, will the proponent seek a pedestrian easement with the City of Boston Public Improvement Commission?	*N/A*
Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way?	There are locations for potential outdoor seating but they are not within the pedestrian right-of-way. Other furnishings such as light poles and bicycle racks are in the greenspace/furnishings zone in the right of way but clear of the Pedestrian Zone.
If yes above, what are the proposed dimensions of the sidewalk café or furnishings and what will the right-of-way clearance be?	The seating area will be a minimum of 6' wide and will be completely on private property. A 5'-0" unobstructed pedestrian zone will be maintained.

Proposed Accessible Parking:

See Massachusetts Architectural Access Board Rules and Regulations 521 CMR Section 23.00 regarding accessible parking requirement counts and the Massachusetts Office of Disability Handicap Parking Regulations.

What is the total number of parking spaces provided at the development site parking lot or garage?	472 spaces total - 450 spaces in the parking structure - 22 spaces in a separate retail-dedicated parking area

What is the total number of accessible spaces provided at the development site?	14 total accessible spaces Parking Structure - 12 accessible spaces: - 4 of approx. 100 spaces on the ground level dedicated to Retail, including 1 accessible van space - 8 of approx. 350 spaces, on the first and second level, dedicated to Residential, including 1 accessible van space Separate covered parking area: 2 spaces
Will any on street accessible parking spaces be required? If yes, has the proponent contacted the Commission for Persons with Disabilities and City of Boston Transportation Department regarding this need?	All accessible parking requirements are met on site, in the parking structure and separate parking area
Where is accessible visitor parking located?	Accessible parking spaces are located on the entry level and second level of the parking structure, closest to the parking structure exits. These parking spaces can be designated for visitors as required. The two spaces in the separate retail parking area are closest to the retail entry, nearest the street.
Has a drop-off area been identified? If yes, will it be accessible?	While a drop-off area has not yet been identified, drop-off areas will be provided at the street(s). All provided drop-off areas will be accessible.
Include a diagram of the accessible routes to and from the accessible parking lot/garage and drop-off areas to the development entry locations. Please include route distances.	See attached figures A1 through A7

Circulation and Accessible Routes:

The primary objective in designing smooth and continuous paths of travel is to accommodate persons of all abilities that allow for universal access to entryways, common spaces and the visit-ability* of neighbors.

**Visit-ability – Neighbors ability to access and visit with neighbors without architectural barrier limitations*

Provide a diagram of the accessible route connections through the site.	See figures A1 & A2
Describe accessibility at each entryway: Flush Condition, Stairs, Ramp Elevator.	Main entries from Dorchester Ave, Greenmount St, Hancock Street, and Pleasant St. will be a Flush Condition.

Are the accessible entrance and the standard entrance integrated?	Yes
If no above, what is the reason?	-
Will there be a roof deck or outdoor courtyard space? If yes, include diagram of the accessible route.	Plaza and roof deck will be accessible. See A2 and A7
Has an accessible routes way-finding and signage package been developed? If yes, please describe.	Not yet but all future way finding signage will be developed to meet Building Code and Accessibility Board Requirements

Accessible Units: (If applicable)

In order to facilitate access to housing opportunities this section addresses the number of accessible units that are proposed for the development site that remove barriers to housing choice.

What is the total number of proposed units for the development?	384 Units, with an additional 40 units possible with the acquisition of additional parcels.
How many units are for sale; how many are for rent? What is the market value vs. affordable breakdown?	64 units for sale; 320 rental apartment units The development will include affordable units in compliance with the City of Boston's Inclusionary Housing Policy.
How many accessible units are being proposed?	A minimum of 5% of all rental units will be provided in full compliance with MAAB Group-2 regulations
Please provide plan and diagram of the accessible units.	See attached drawings, A1-A7
How many accessible units will also be affordable? If none, please describe reason.	Accessible units will include a mix of affordable and market rate units, in a proportion similar to the overall composition of units. Final breakdown to be determined.
Do standard units have architectural barriers that would prevent entry or use of common space for persons with mobility impairments? Example: stairs at entry or step to balcony. If yes,	No

please provide reason.	
Has the proponent reviewed or presented the proposed plan to the City of Boston Mayor's Commission for Persons with Disabilities Advisory Board?	No
Did the Advisory Board vote to support this project? If no, what recommendations did the Advisory Board give to make this project more accessible?	Decision Pending

Thank you for completing the Accessibility Checklist!
For questions or comments about this checklist or accessibility practices, please contact:

kathryn.quigley@boston.gov | Mayors Commission for Persons with Disabilities

Accessibility Checklist

(to be added to the BRA Development Review Guidelines)

In 2009, a nine-member Advisory Board was appointed to the Commission for Persons with Disabilities in an effort to reduce architectural, procedural, attitudinal, and communication barriers affecting persons with disabilities in the City of Boston. These efforts were instituted to work toward creating universal access in the built environment.

In line with these priorities, the Accessibility Checklist aims to support the inclusion of people with disabilities. In order to complete the Checklist, you must provide specific detail, including descriptions, diagrams and data, of the universal access elements that will ensure all individuals have an equal experience that includes full participation in the built environment throughout the proposed buildings and open space.

In conformance with this directive, all development projects subject to Boston Zoning Article 80 Small and Large Project Review, including all Institutional Master Plan modifications and updates, are to complete the following checklist and provide any necessary responses regarding the following:

- improvements for pedestrian and vehicular circulation and access;
- encourage new buildings and public spaces to be designed to enhance and preserve Boston's system of parks, squares, walkways, and active shopping streets;
- ensure that persons with disabilities have full access to buildings open to the public;
- afford such persons the educational, employment, and recreational opportunities available to all citizens; and
- preserve and increase the supply of living space accessible to persons with disabilities.

We would like to thank you in advance for your time and effort in advancing best practices and progressive approaches to expand accessibility throughout Boston's built environment.

Accessibility Analysis Information Sources:

1. Americans with Disabilities Act – 2010 ADA Standards for Accessible Design
   a. http://www.ada.gov/2010ADAstandards_index.htm
2. Massachusetts Architectural Access Board 521 CMR
   a. http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/aab/aab-rules-and-regulations-pdf.html
3. Boston Complete Street Guidelines
   a. http://bostoncompletestreets.org/
4. City of Boston Mayors Commission for Persons with Disabilities Advisory Board
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5. City of Boston – Public Works Sidewalk Reconstruction Policy
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Owner / Developer:	DOT BLOCK, LLC
Architect:	RODE Architects, Inc
Engineer (building systems):	The Proponent does not have engineering on the team as of this date, but will follow up with an update as soon as possible.
Sustainability / LEED:	Price Sustainability
Permitting:	MLF Consulting LLC
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At what phase is the project – at time of this questionnaire?

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Building Classification and Description

What are the principal Building Uses - select all appropriate uses?

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Commercial	Office	☑ Retail	Assembly
Laboratory / Medical	Manufacturing / Industrial	Mercantile	☑ Storage, Utility and Other
First Floor Uses (List)	Residential Lobby and Amenity Space, Retail Space, Parking, Accessory mechanical/storage space		

What is the Construction Type – select most appropriate type?

☑ Wood Frame	Masonry	Steel Frame	Concrete

Describe the building?

Site Area:	206,849 SF	Building Area:	Approx. 475,000 GSF
Building Height:	Varies from +48'-0" to +69'-6" Above average grade	Number of Stories:	4 / 5 / 6
First Floor Elevation:	Varying, +/- 17'4" to 26'-0" *Final Elevation to be confirmed during Construction Drawing phase*	Are there below grade spaces:	*Yes / ☑No*

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Provide a description of the development neighborhood and identifying characteristics.	DOT BLOCK is located near the 'Glover's Corner' intersection along Dorchester Avenue, near the Savin Hill, Jones Hill and Meetinghouse Hill neighborhoods of Dorchester. The site and its immediate surroundings are predominantly light industrial, with retail presence along Dorchester Avenue. However, the neighborhood at large is more typically medium-density residential development, as represented by the abutting condition along Greenmount and Pleasant Streets. This residential grain is typified by single family, townhouses, triple-decker, and larger multi-family mid-rise apartment buildings. The site is surrounded by heavily-travelled arterials: Hancock Street connects to Uphams Corner and into Roxbury; Pleasant Street up into the Newmarket and South Bay service sector; Freeport to the Southeast Expressway and points south; and Dorchester Avenue, the main corridor for the Dorchester Neighborhood. Dorchester Avenue has connections to public transportation, roughly paralleled by the Ashmont branch service of the MBTA Red Line and local bus route 18. At a larger scale the Dorchester neighborhood of Boston is home to rich cultural and socio-economic diversity, with the Avenue itself traversing neighborhoods with different housing markets and income levels. Located mid-way along the Avenue, and straddling disparate zoning districts, the DOT BLOCK project is ideally situated to foster a new community with rich urban connections.
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Is the proposed development on a priority accessible route to a key public use facility? List the surrounding: government buildings, libraries, community centers and recreational facilities and other related facilities.	**Recreation:** Paul Sullivan Community Garden, Deerstreet Park, and Melvinside Play Area at the Boys & Girls Club; Downer Avenue Playground; Allen Park and Meetinghouse Churchyard; McConnell Park and Dorchester Bay; Ronan Park **Public Library:** Boston Public Library Uphams Corner Branch – 0.7 miles Fields Corner Branch – 0.7 miles **Community Center:** Bird Street and Cleveland Community Centers Boys & Girls Club – 35 Deer St. **Transit:** Site is located (0.4 miles) to Savin Hill station connecting the site to major Boston public facilities.

Surrounding Site Conditions – Existing:

This section identifies the current condition of the sidewalks and pedestrian ramps around the development site.

Are there sidewalks and pedestrian ramps existing at the development site?	Yes
If yes above, list the existing sidewalk and pedestrian ramp materials and physical condition at the development site.	The existing sidewalk material is concrete with granite curbing. The physical condition of the existing concrete sidewalk and pedestrian ramps are good.
Are the sidewalks and pedestrian ramps existing-to-remain? If yes, have the sidewalks and pedestrian ramps been verified as compliant? If yes, please provide surveyors report.	Yes, sidewalks and pedestrian ramps to remain. Where curb cuts are new or to be removed, the final conditions will be No, the existing sidewalks and pedestrian ramps have not been verified as being in compliance at this time but will be verified during the project design.
Is the development site within a historic district? If yes, please identify.	The development team is not aware of the project site being located within an historic district.

Surrounding Site Conditions – Proposed

This section identifies the proposed condition of the walkways and pedestrian ramps in and around the development site. The width of the sidewalk contributes to the degree of comfort and enjoyment of 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. Typically, a five foot wide Pedestrian Zone supports two people walking side by side or two wheelchairs passing each other. An eight foot wide Pedestrian Zone allows two pairs of people to comfortably pass each other, and a ten foot or wider Pedestrian Zone can support high volumes of pedestrians.

Are the proposed sidewalks consistent with the Boston Complete Street Guidelines? See: www.bostoncompletestreets.org	Yes (pending confirmation of existing cross slopes and clearances).
If yes above, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, Boulevard.	Greenmount Street: Neighborhood Residential Pleasant Street: Neighborhood Connector Hancock Street: Neighborhood Connector Dorchester Avenue: Neighborhood Main
What is the total width of the proposed sidewalk? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone.	Greenmount Street: (@ 8-14 Greenmount): 13'-9" min overall width (to foremost projection of bay windows) Greenspace/Furnishing Zone + Curb: 2'-0" Pedestrian Zone: 5'-0" Frontage Zone: varies, from 6'-9" to 7'-9" (@ 1205 Dorchester, pending future acquisition of additional parcels): 14'-4" min overall width Greenspace/Furnishing Zone + Curb: 2'-0" Pedestrian Zone: 5'-0" Frontage Zone: varies, from 7'-7" to 9'-6" Pleasant Street: 20' overall width (to foremost projection of bay windows) Greenspace/Furnishing Zone + Curb: 4'-6" Pedestrian Zone: 6'-0" Frontage Zone: 9'-6" Hancock Street (@ 240 Hancock): 19'-6" overall width typical Greenspace/Furnishing Zone + Curb: 4'-6" Pedestrian Zone: 6'-0" Frontage Zone: 9'-0" typical (narrows to 2'-0" where Hancock bends toward Pleasant St.) (@ 250 Hancock): The foremost building face permits a width of 11'-0". Overall sidewalk at retail frontage increases to 16'-0". Greenspace/Furnishing Zone + Curb: 4'-6" Pedestrian Zone: 5'-0" Frontage Zone: 1'-6" min. at the foremost building face; increases at retail frontage to 6'-6" (@ 1225 Dorchester): The foremost building face permits a width of 11'-0". Greenspace/Furnishing Zone + Curb: 4'-6" Pedestrian Zone: 5'-0" Frontage Zone: 1'-6" min. at the foremost building face Dorchester Avenue: (@ 1205 Dorchester) The foremost and also most predominant building face provides a sidewalk of 12'-0". Overall sidewalk at retail frontage varies from 12'-0" to 27'-6" Greenspace/Furnishing Zone + Curb: 5'-0" min Pedestrian Zone: 6'-0" Frontage Zone: 1'-0" at predominant building face; increases at retail frontage to between 6'-0" and 16'-5" and greater (@ 1225 Dorchester) The foremost and also most predominant building faces

	provide a sidewalk width of 11'-9" on the north half of the building and 14'-0" on the south. Greenspace/Furnishing Zone + Curb: 5'-0" min Pedestrian Zone: 6'-0" Frontage Zone: 0'-0" at predominant building face, increases to 3'-0" at south portion of building
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If the pedestrian right-of-way is on private property, will the proponent seek a pedestrian easement with the City of Boston Public Improvement Commission?	*N/A*
Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way?	There are locations for potential outdoor seating but they are not within the pedestrian right-of-way. Other furnishings such as light poles and bicycle racks are in the greenspace/furnishings zone in the right of way but clear of the Pedestrian Zone.
If yes above, what are the proposed dimensions of the sidewalk café or furnishings and what will the right-of-way clearance be?	The seating area will be a minimum of 6' wide and will be completely on private property. A 5'-0" unobstructed pedestrian zone will be maintained.

Proposed Accessible Parking:

See Massachusetts Architectural Access Board Rules and Regulations 521 CMR Section 23.00 regarding accessible parking requirement counts and the Massachusetts Office of Disability Handicap Parking Regulations.

What is the total number of parking spaces provided at the development site parking lot or garage?	<u>472 spaces total</u> - 450 spaces in the parking structure - 22 spaces in a separate retail-dedicated parking area

What is the total number of accessible spaces provided at the development site?	14 total accessible spaces Parking Structure - 12 accessible spaces: - 4 of approx. 100 spaces on the ground level dedicated to Retail, including 1 accessible van space - 8 of approx. 350 spaces, on the first and second level, dedicated to Residential, including 1 accessible van space Separate covered parking area: 2 spaces
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Where is accessible visitor parking located?	Accessible parking spaces are located on the entry level and second level of the parking structure, closest to the parking structure exits. These parking spaces can be designated for visitors as required. The two spaces in the separate retail parking area are closest to the retail entry, nearest the street.
Has a drop-off area been identified? If yes, will it be accessible?	While a drop-off area has not yet been identified, drop-off areas will be provided at the street(s). All provided drop-off areas will be accessible.
Include a diagram of the accessible routes to and from the accessible parking lot/garage and drop-off areas to the development entry locations. Please include route distances.	See attached figures A1 through A7

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The primary objective in designing smooth and continuous paths of travel is to accommodate persons of all abilities that allow for universal access to entryways, common spaces and the visit-ability* of neighbors.

**Visit-ability – Neighbors ability to access and visit with neighbors without architectural barrier limitations*

Provide a diagram of the accessible route connections through the site.	See figures A1 & A2
Describe accessibility at each entryway: Flush Condition, Stairs, Ramp Elevator.	Main entries from Dorchester Ave, Greenmount St, Hancock Street, and Pleasant St. will be a Flush Condition.

Are the accessible entrance and the standard entrance integrated?	Yes
If no above, what is the reason?	-
Will there be a roof deck or outdoor courtyard space? If yes, include diagram of the accessible route.	Plaza and roof deck will be accessible. See A2 and A7
Has an accessible routes way-finding and signage package been developed? If yes, please describe.	Not yet but all future way finding signage will be developed to meet Building Code and Accessibility Board Requirements

Accessible Units: (If applicable)

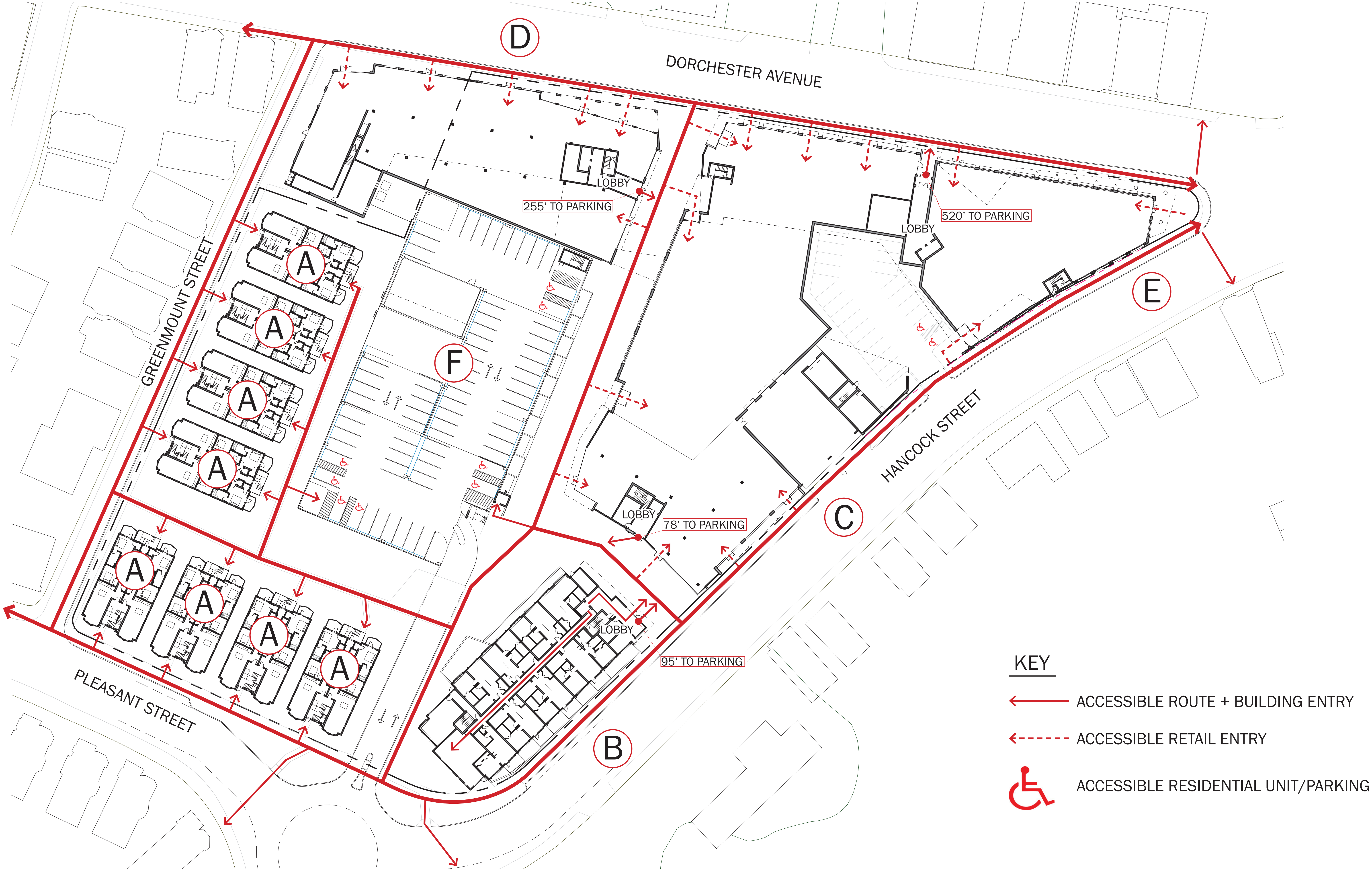
In order to facilitate access to housing opportunities this section addresses the number of accessible units that are proposed for the development site that remove barriers to housing choice.

What is the total number of proposed units for the development?	384 Units, with an additional 40 units possible with the acquisition of additional parcels.
How many units are for sale; how many are for rent? What is the market value vs. affordable breakdown?	64 units for sale; 320 rental apartment units The development will include affordable units in compliance with the City of Boston's Inclusionary Housing Policy.
How many accessible units are being proposed?	A minimum of 5% of all rental units will be provided in full compliance with MAAB Group-2 regulations
Please provide plan and diagram of the accessible units.	See attached drawings, A1-A7
How many accessible units will also be affordable? If none, please describe reason.	Accessible units will include a mix of affordable and market rate units, in a proportion similar to the overall composition of units. Final breakdown to be determined.
Do standard units have architectural barriers that would prevent entry or use of common space for persons with mobility impairments? Example: stairs at entry or step to balcony. If yes,	No

please provide reason.	
Has the proponent reviewed or presented the proposed plan to the City of Boston Mayor's Commission for Persons with Disabilities Advisory Board?	No
Did the Advisory Board vote to support this project? If no, what recommendations did the Advisory Board give to make this project more accessible?	Decision Pending

Thank you for completing the Accessibility Checklist!
For questions or comments about this checklist or accessibility practices, please contact:

kathryn.quigley@boston.gov | Mayors Commission for Persons with Disabilities



RODE

PROJECT SITE PLAN FIRST LEVEL
DOT BLOCK

1:60

Figure A1

RODE

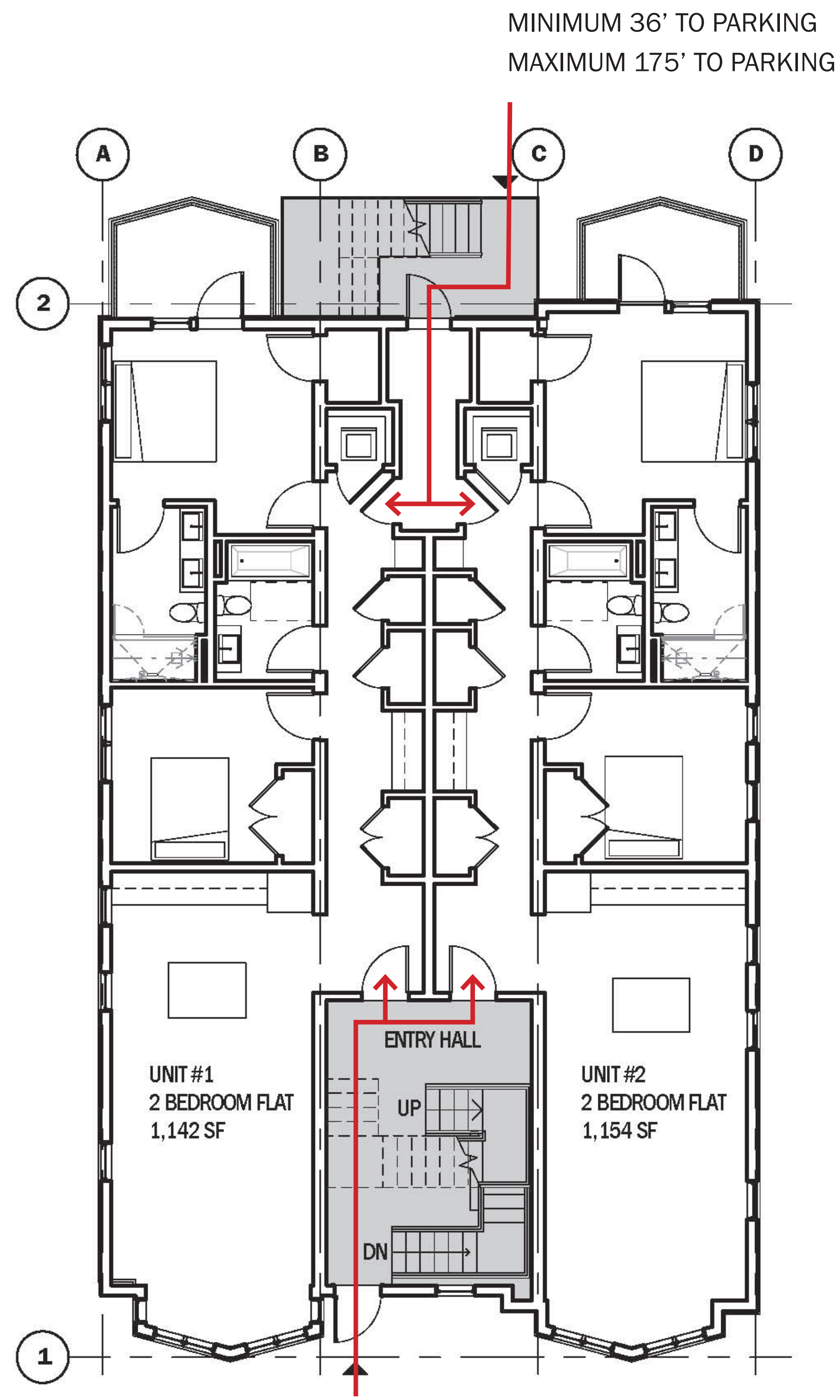
PROJECT SITE PLAN SECOND LEVEL
DOT BLOCK

Figure A2

RODE

PROJECT SITE PLAN TYPICAL UPPER LEVEL
DOT BLOCK

Figure A3



KEY

ACCESSIBLE ROUTE + BUILDING ENTRY

ACCESSIBLE RETAIL ENTRY

ACCESSIBLE RESIDENTIAL UNIT/PARKING

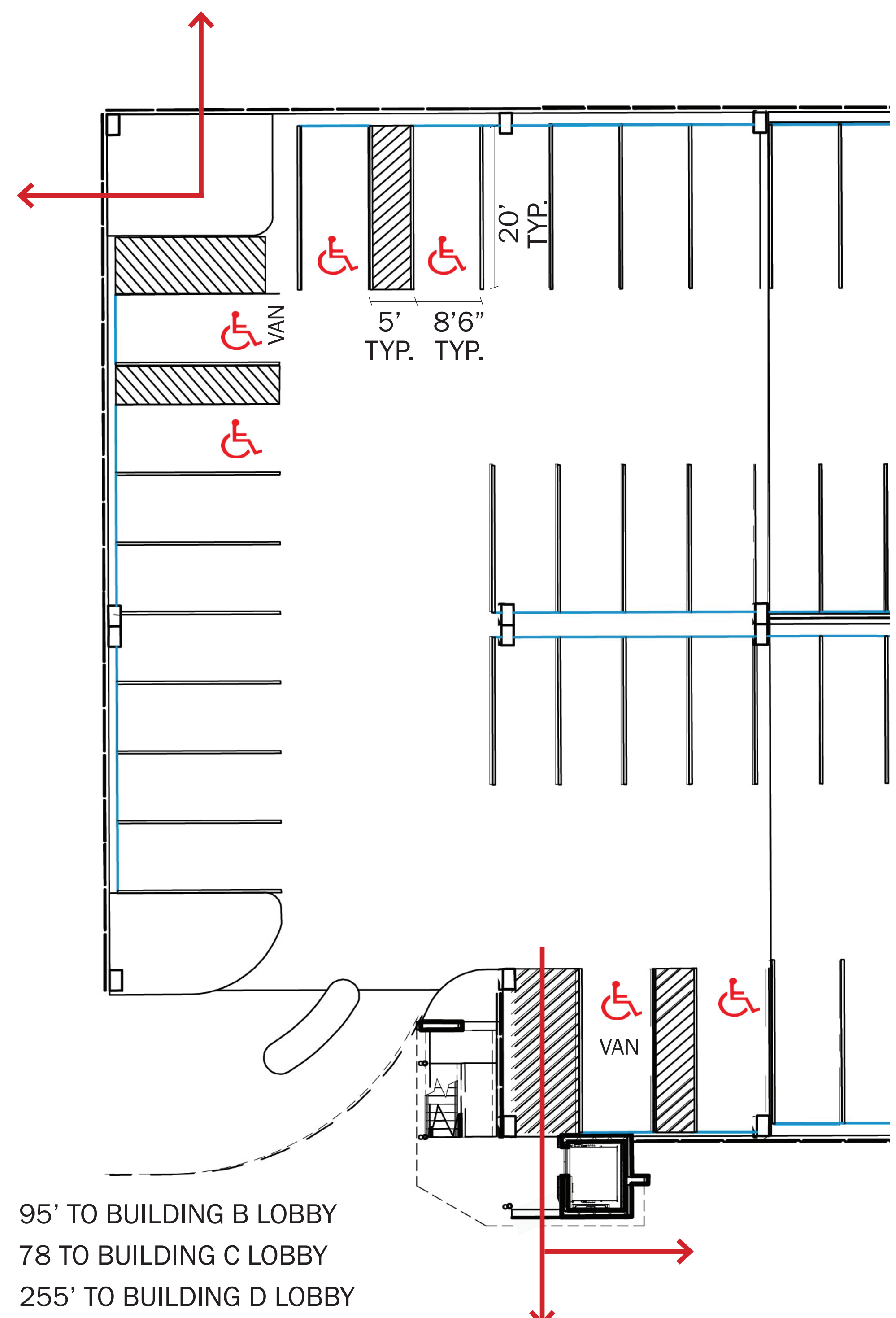
RODE

8 FAMILY GROUND FLOOR PLAN
DOT BLOCK

3/32" = 1'-0" 12.5' 25' 50'

Figure A4

MINIMUM 36' TO BUILDING A ENTRIES
MAXIMUM 175' TO BUILDING A ENTRIES



95' TO BUILDING B LOBBY
78 TO BUILDING C LOBBY
255' TO BUILDING D LOBBY
520' TO BUILDING E LOBBY

KEY

ACCESSIBLE ROUTE + BUILDING ENTRY

ACCESSIBLE RETAIL ENTRY

ACCESSIBLE RESIDENTIAL UNIT/PARKING

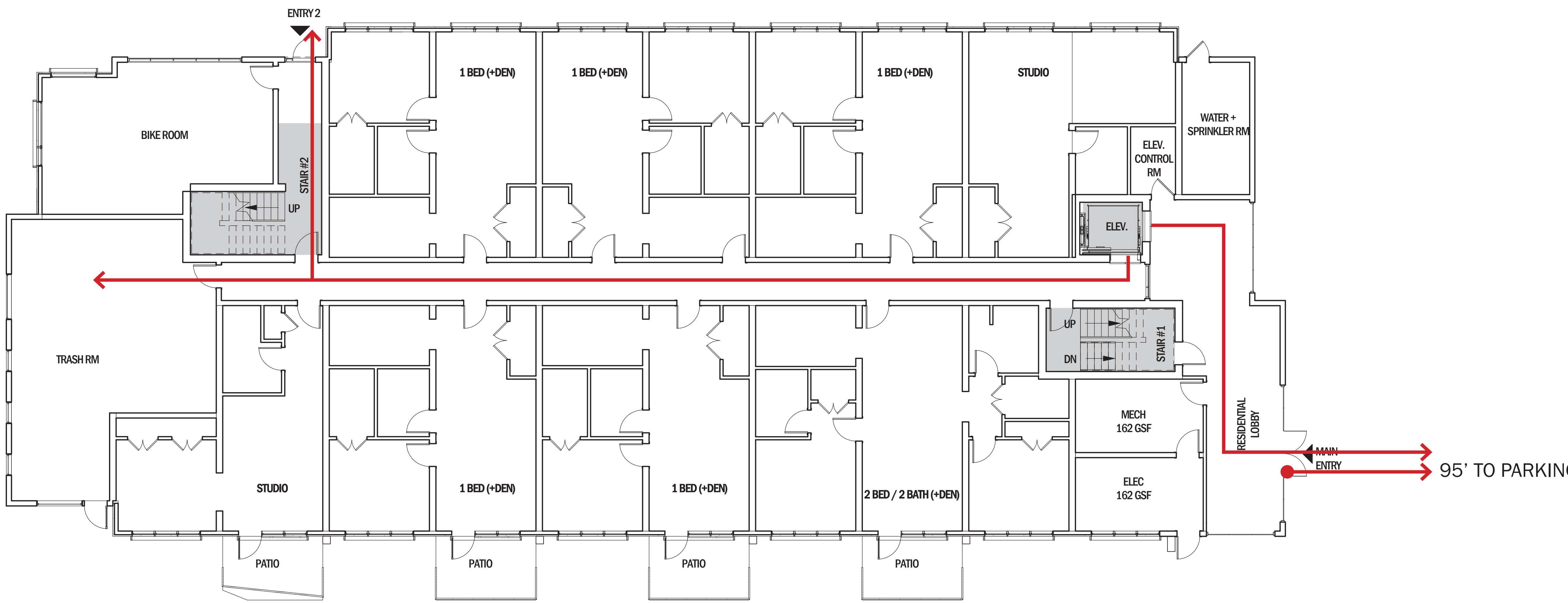
KEY

ACCESSIBLE ROUTE + BUILDING ENTRY

ACCESSIBLE RETAIL ENTRY

ACCESSIBLE UNIT

GROUND FLOOR PLAN



RODE

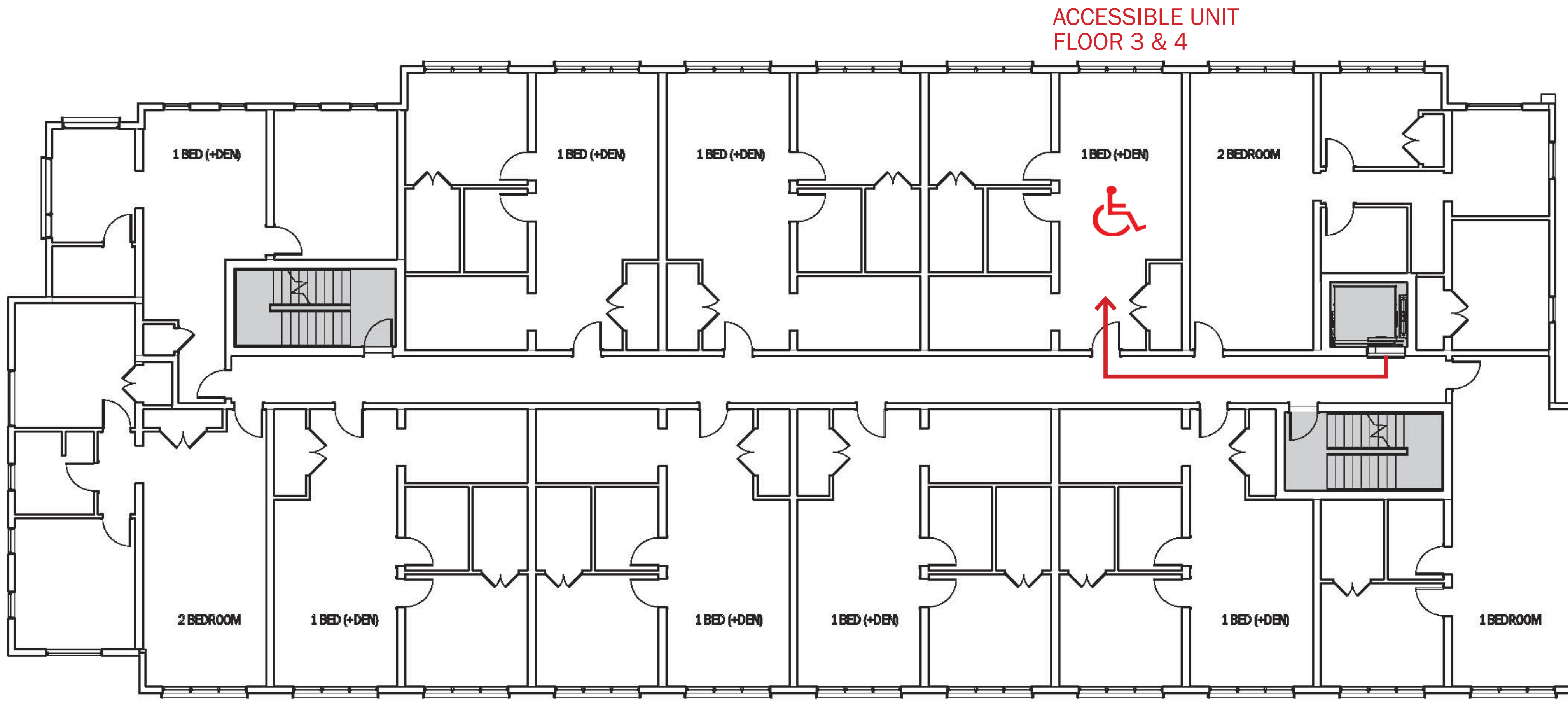
240 HANCOCK
DOT BLOCK

1/16" = 1'-0"

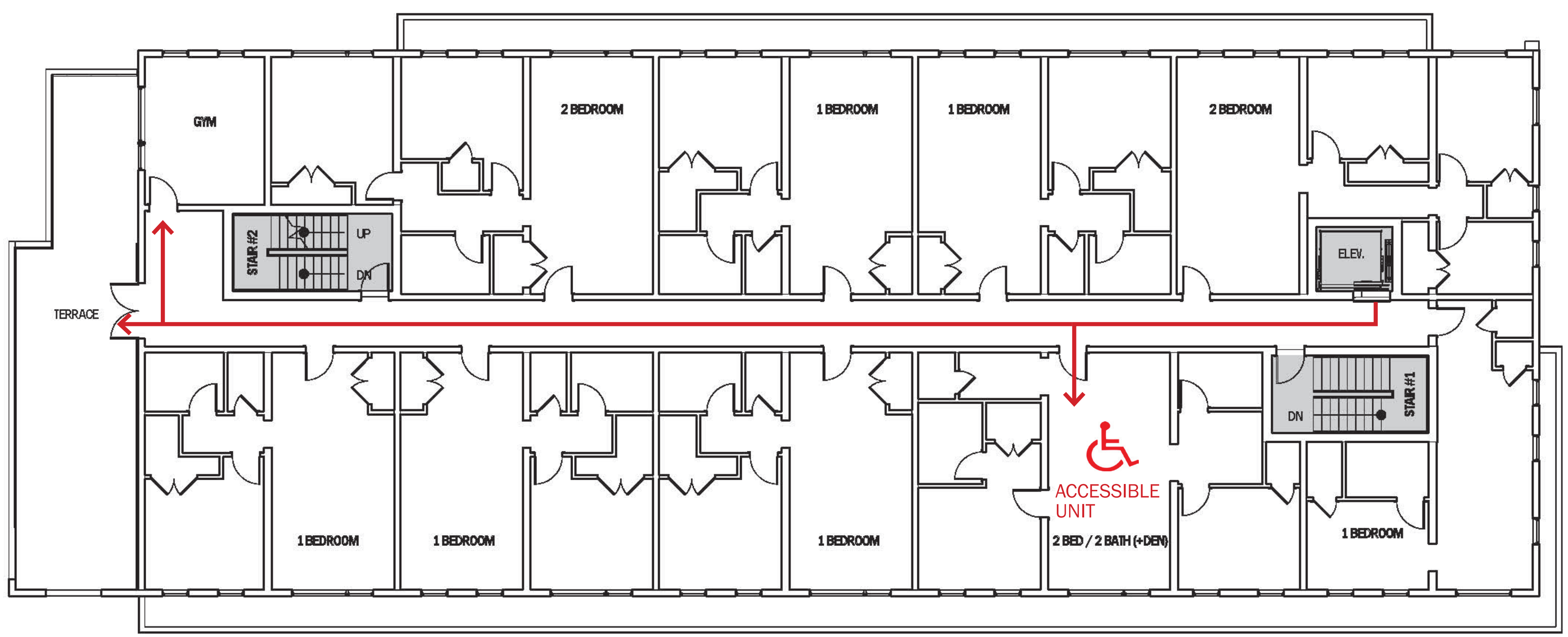
0' 12.5' 25' 50'

Figure A6

TYPICAL FLOOR PLAN



FIFTH FLOOR PLAN



KEY

ACCESSIBLE ROUTE + BUILDING ENTRY

ACCESSIBLE RETAIL ENTRY

ACCESSIBLE UNIT

RODE Architects Inc.

GOODWIN PROCTER

MLF CONSULTING LLC