EXPANDED PROJECT NOTIFICATION FORM

500 Boylston Street

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

Submitted by:
500 Boylston West Venture
100 Summer Street, 9th Floor
Boston, MA 02111

Prepared by:
Epsilon Associates, Inc.
3 Clock Tower Place, Suite 250
Maynard, MA 01754

In Association with:
CBT Architects
Goulston & Storrs
Howard/Stein Hudson Associates, Inc.
BSC Group
RDK Engineers
Haley & Aldrich, Inc.
RWDI

June 3, 2015

Epsilon
ASSOCIATES INC.

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Chapter 1.0

Introduction/ Project Description

1.0 INTRODUCTION/ PROJECT DESCRIPTION

1.1 Introduction

Five Hundred Boylston West Venture, an affiliate of Equity Office Properties (the Proponent), proposes to develop the courtyard space of the existing building located at 500 Boylston Street (the Project site) in the Back Bay neighborhood of Boston. The courtyard space of the site will be developed into a six-story, approximately 79,300 square foot (sf) building with up to three floors of retail and office space above, and up to 50,000 sf of office space in the existing building at 500 Boylston Street is anticipated to be converted to retail space (the Project). In connection with the Project, the entrance at 222 Berkeley Street, which is owned by another Proponent affiliate (Two Twenty Two Berkeley Venture), will also be improved with two new vestibules totaling approximately 700 sf of gross floor area. One vestibule will provide access to approximately 8,350 sf of second floor office space that will be converted to a restaurant, and the other will expand the existing first and second floor Bank of America space.

The Project will improve the pedestrian experience along Boylston Street by filling in an underused courtyard with ground floor retail space that will activate the sidewalks and street edge on Boylston Street, and will improve the retail experience by creating an improved pedestrian connection between Berkeley and Clarendon Streets, through 500 Boylston Street and 222 Berkeley Street. The Project will re-orient the 500 Boylston Street main lobby entrance currently on Boylston Street to Clarendon Street. This new Clarendon Street entrance will create a welcoming lobby with generous seating. In addition, there will be a new retail entrance on Boylston Street as part of the new activated streetwall. The Project will also provide construction and permanent jobs, and improved tax revenues for the City as well as numerous benefits to the public realm.

The proposed Project exceeds 50,000 square feet of gross floor area, and the Project is therefore subject to the requirements of Large Project Review pursuant to Article 80 of the Boston Zoning Code (the Code). This Expanded Project Notification Form (PNF) is being submitted to the Boston Redevelopment Authority (BRA) to initiate review of the Project under Article 80B, Large Project Review, of the Boston Zoning Code.

1.2 Project Identification

Address/Location: 500 Boylston Street/222 Berkeley Street

Developer:	Five Hundred Boylston West Venture 100 Summer Street, 9th Floor Boston, MA 02111 (617) 425-7500 John Conley Paul Filtzer
Architect:	CBT Architects 110 Canal Street Boston, MA 02114 (617) 262-4354 Haril Pandya William Mudge Robin Abraham
Legal Counsel:	Goulston & Storrs 400 Atlantic Avenue Boston, MA 02110 (617) 482-1776 Kevin Renna Brian Judge
Permitting Consultants:	Epsilon Associates, Inc. 3 Clock Tower Place, Suite 250 Maynard, MA 01754 (978) 897-7100 Cindy Schlessinger Talya Moked
Transportation and Parking Consultant	Howard/Stein-Hudson Associates, Inc 11 Beacon Street, Suite 1010 Boston, MA 02108 (617) 482-7080 Elizabeth Peart
Civil Engineer	BSC Group 15 Elkins Street Boston, MA 02127 (617) 896-4300 David Biancavilla

MEP Engineer	RDK Engineers Seaport Center 70 Fargo Street, Suite 800 Boston, MA 02210 (617) 345-9885 Richard Seiden
Geotechnical Consultant:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Boston, MA 02129 (617) 886-7400 Mark Haley

1.3 Project Description

1.3.1 Project Site

The Project site, located in the Back Bay neighborhood of Boston, is bounded by Boylston Street to the north, St. James Avenue to the south, Clarendon Street to the west and 222 Berkeley Street to the east. Currently on the site is the existing 500 Boylston Street building, which consists of a 19-story office tower sitting on a six-story podium occupied by retail and office tenants. The building has an indoor connection to 222 Berkeley Street. The podium partially surrounds an underutilized grade level courtyard facing Boylston Street which is the site of the proposed Project. See Figure 1-1 for an aerial locus of the Project site.

1.3.2 Area Context

The Project site is located in a vibrant pedestrian retail area with wide sidewalks, shops, restaurants, and hotels. Boylston Street is anchored on the west end by the Hynes Convention Center and the Prudential shopping mall and residences and on the east side by the Public Garden and Boston Common; directly parallel to Newbury Street.

1.3.3 Proposed Project

The Project, as shown in Table 1-1, includes an approximately 79,300 sf, six-story infill building at 500 Boylston Street that is anticipated to consist of retail space on the first two or three floors and office space above. The sixth floor of the building will fill in the "ears" of the courtyard space, with a roof deck occupying the remainder of the space. The infill building will create between 32,500 sf and 47,600 sf of new retail space, and between 31,700 sf and 46,800 sf of new office space for a combined total of 79,300 sf. In addition, up to 50,000 sf of office space in the existing 500 Boylston Street building is anticipated to be converted to retail space. The Project will utilize the existing below-grade parking garage and will not increase the number of parking spaces beyond those already allowed. See Appendix A for floor plans of the infill building.

Data Source: Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, Information Technology Division - Data Obtained October 2014

500 Boylston Street Boston, Massachusetts

Epsilon ASSOCIATES INC.

Figure 1-1
Aerial Locus Map

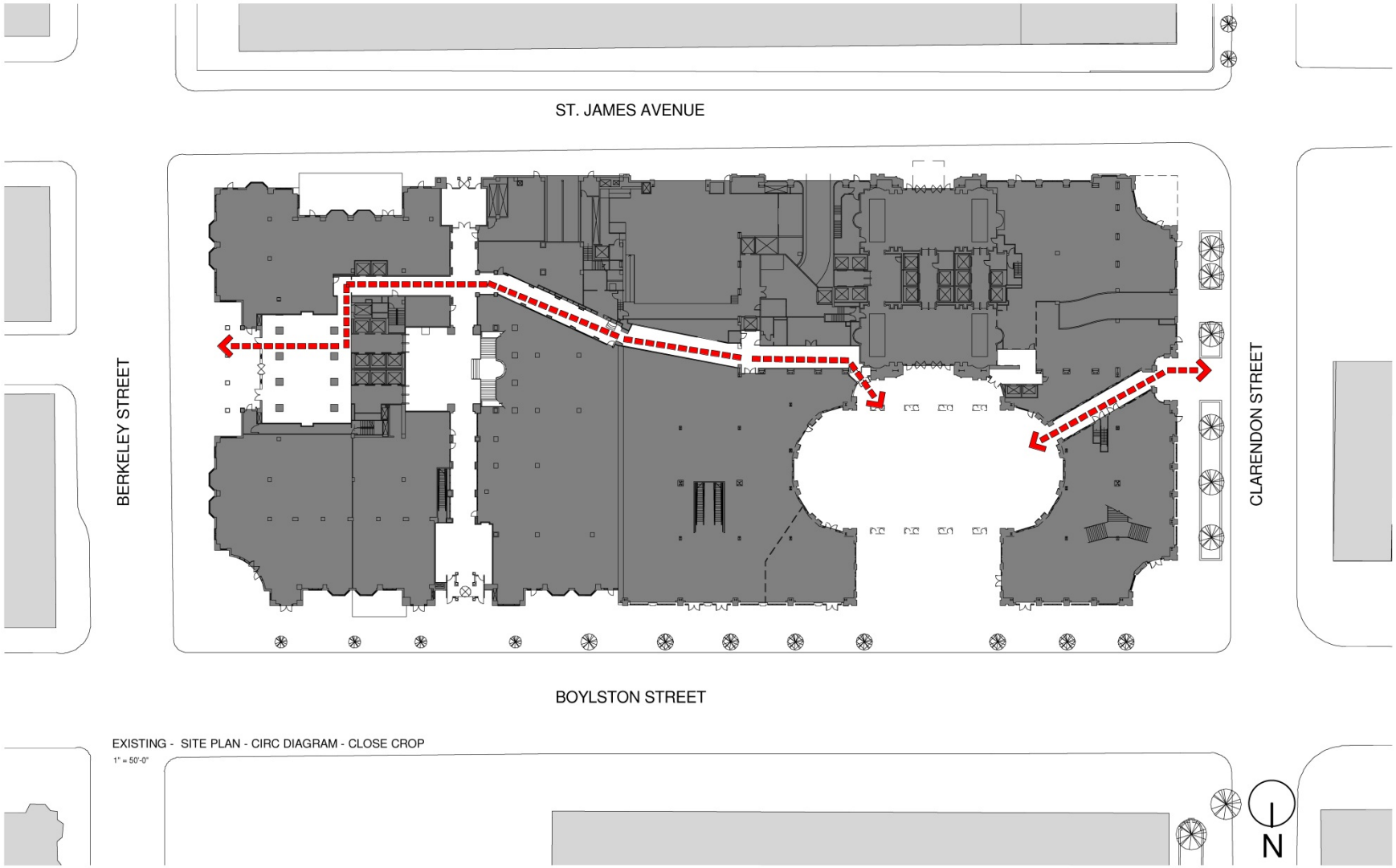
As described above, in connection with the Project, the entrance at 222 Berkeley Street will also be improved with two new vestibules totaling approximately 700 sf of gross floor area. One vestibule will provide access to approximately 8,350 sf of second floor office space that will be converted to a restaurant, and the other will expand the existing first and second floor Bank of America space.

In order to provide a conservative analysis of environmental impacts, the analyses in this PNF incorporate these changes to 222 Berkeley Street, and also use the Project program with the largest impacts as noted later in the specific studies.

Table 1-1 Project Program

Project Component	Approximate Dimension	Change in Use
500 Boylston Street		
Retail	32,500-47,600 sf	+50,000 sf
Office	31,700-46,800 sf	-50,000 sf
Project Total	**79,300 sf**	
222 Berkeley Street		
Retail	350 sf	0
Restaurant	350 sf	+8,350 sf
Office	0	-8,350 sf
Combined Total	**80,000 sf**	
Parking	No new spaces are provided	

The Boylston Street infill façade will be primarily highly transparent glass and will include one or more new retail entrances. The 500 Boylston Street building's main entrance to the tower will be re-oriented from Boylston Street to Clarendon Street and will include a new tower lobby and publicly accessible through way. See Figure 1-2 for the existing circulation and Figure 1-3 for the proposed circulation. This will create more of a presence on Copley Square and shorten the walk from the Copley T station and Back Bay Station (see Figure 1-4). The new Clarendon Street lobby will have a two story glass and steel vestibule that will have a similar look and feel to the Boylston façade (see Figure 1-5). The new lobby itself will provide generous seating areas as well as a direct indoor route to 222 Berkeley Street, allowing commuters to travel the entire length of the block indoors.

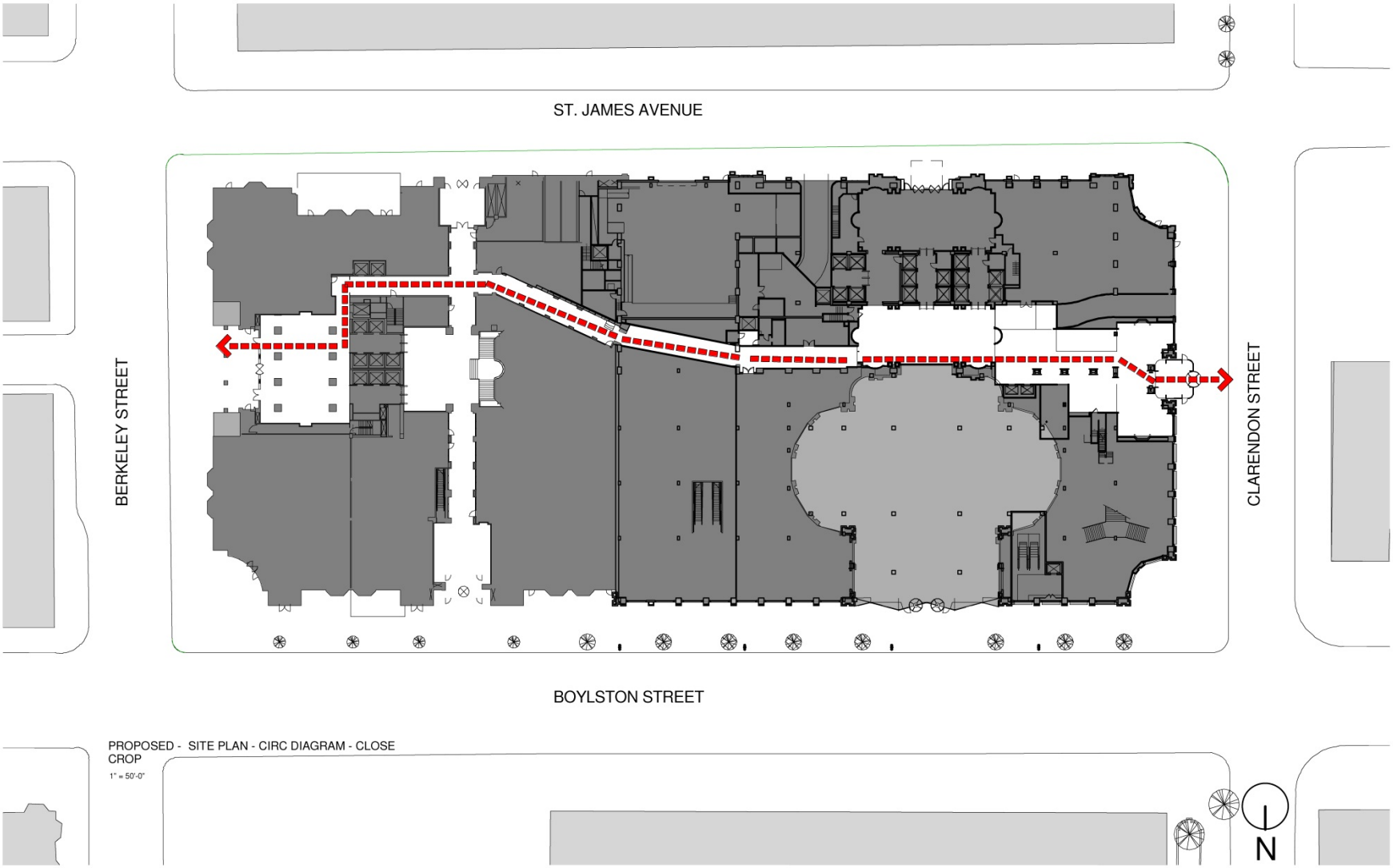


500 Boylston Street Boston, Massachusetts

cbt

Figure 1-2

Existing Circulation

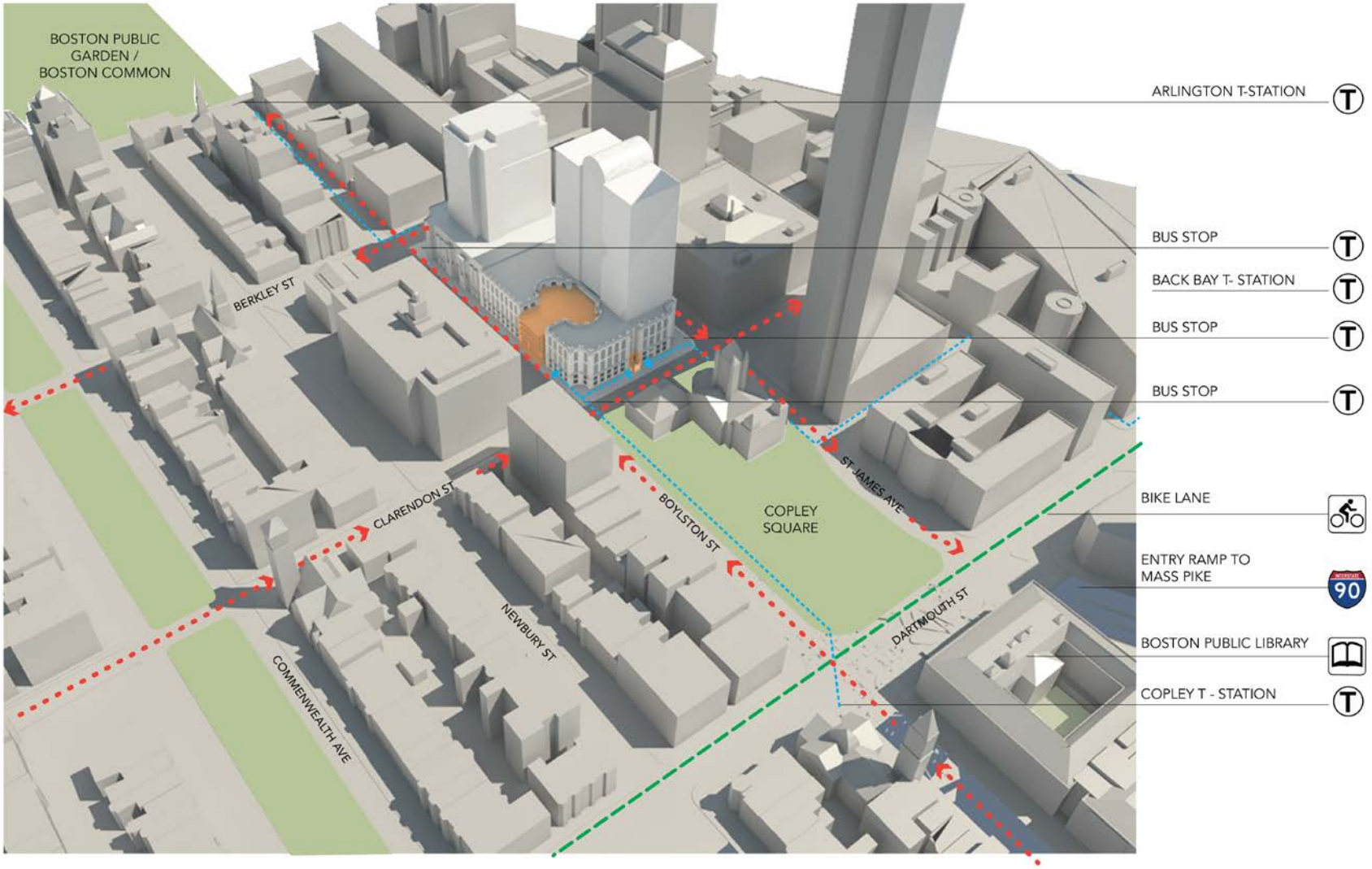


500 Boylston Street Boston, Massachusetts

cbt

Figure 1-3

Proposed Circulation

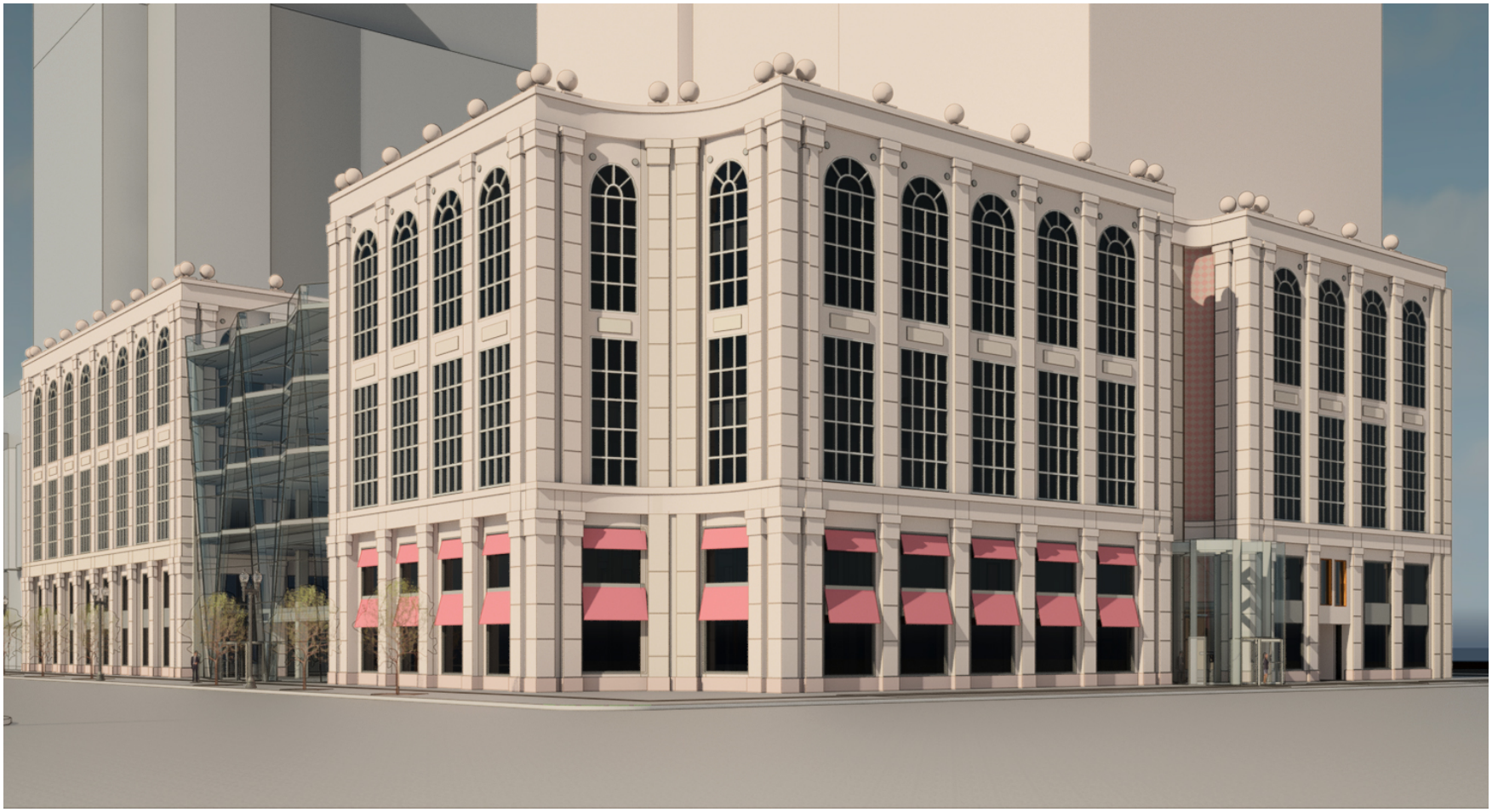


500 Boylston Street Boston, Massachusetts

cbt

Figure 1-4

Urban Circulation



500 Boylston Street Boston, Massachusetts

cbt

Figure 1-5

View from the Corner of Boylston and Clarendon Streets

1.4 Public Benefits

The Project will include numerous benefits to the neighborhood and the City of Boston, including but not limited to:

- Provision of new ground floor retail space along Boylston Street that will bring life to the sidewalks in the vicinity of the Project site and replace the underused and unwelcoming exterior courtyard located at 500 Boylston Street;
- Compliance of the infill building with Article 37 of the Boston Zoning Code by being Leadership in Energy and Environmental Design (LEED) certifiable anticipated at the Silver level;
- Improvement of the existing indoor connection from Berkeley Street to Clarendon Street;
- Creation of a welcoming lobby at the new Clarendon Street entrance with amenities such as a fireplace, sofa seating, café, Wi-Fi and views of the Trinity Church ;
- Creation of approximately 125 construction jobs and 228 permanent full- and part-time jobs; and
- Provision of property tax revenues to the City of Boston by increasing the assessed value of the Property.

1.5 City of Boston Zoning

Large Project Review

The Project involves the enlargement and extension of the existing building so as to increase its Gross Floor Area in excess of 50,000 square feet and is therefore subject to Large Project Review. Under the Mayor's Executive Order dated October 10, 2000, and amended on April 3, 2001, regarding mitigation for development projects, the Mayor may appoint an Impact Advisory Group to advise the BRA on mitigation measures for projects undergoing Large Project Review. In connection with the Project's Large Project Review, the Project will also undergo review pursuant to the green building requirements of Article 37 of the Code and may also be reviewed by the Boston Civic Design Commission under Article 28 of the Code. The Project will not result in the establishment of more than 100,000 square feet of Gross Floor Area of Development Impact Uses, as defined under Section 80B-7 of the Code. Accordingly, the Development Impact Project Exactions under Section 80B-7 of the Code do not apply to the Project.

Based on a comprehensive approach to addressing potential impacts and mitigation similar to the level of information normally presented in a Draft Project Impact Report, it is the desire of the Proponent that the Boston Redevelopment Authority (the Authority), after

reviewing public and agency comments on this expanded PNF and any further responses to comments made by the Proponent, may issue a Scoping Determination Waiving Further Review pursuant to the Article 80B process.

Zoning District

According to Map 1 (Boston Proper) of the Code, the Project site is located within the B-8 Business District, the Groundwater Conservation Overlay District (the GCOD) and the Restricted Parking Overlay District (together, Underlying Zoning). The Project site was originally constructed pursuant to that certain Amended and Restated Development Plan and Development Impact Project Plan for Planned Development Area No. 17 approved by the Authority on April 21, 1988, the Boston Zoning Commission (Zoning Commission) on May 11, 1988 and effective May 31, 1988 (the PDA Development Plan). The PDA Development Plan, not Underlying Zoning, sets forth the zoning regulations applicable to the Property to the extent such regulations are addressed in the PDA Development Plan. No provisions of the underlying B-8 Business District establish use, dimensional, design or other requirements applicable to projects located within a Planned Development Area. Therefore, the Project need only comply with the PDA Development Plan, as the same may be amended in connection with the Project.

The Proponent intends to seek approval for an amendment to the PDA Development Plan (the PDA Amendment) for the Project, as currently allowed under Section 3.1A.a. of the Code. The PDA Development Plan, as amended by the PDA Amendment, will set forth the use, bulk, dimensional, parking, loading and design requirements applicable to the Project and will, if approved, supersede underlying zoning requirements for the Project site.

Uses

The Project's office, restaurant, retail, parking garage, accessory parking, and other accessory uses are all allowed under the PDA Development Plan.

Building Dimensions

The PDA Development Plan currently sets forth the following bulk and dimensional requirements for the Project Site:

Bulk or Dimensional Requirement	Permitted per PDA Development Plan	500 Boylston Street 222 Berkeley Street
Maximum Floor Area Ratio	**8.65** (500 Boylston Street) **9.0** (222 Berkeley Street) **8.75** (500 Boylston Street and 222 Berkeley Street combined)	**9.65** (500 Boylston Street) **9.0** (222 Berkeley Street) **9.4** (500 Boylston Street and 222 Berkeley Street combined)
Maximum Building Height[1]	**330 feet** (500 Boylston Street) **310 feet** (222 Berkeley Street)	**<330 feet** (500 Boylston Street) **< 310 feet** (222 Berkeley Street)
Maximum Height of Low-Rise Base Structure[2]	**90 feet** (500 Boylston Street) **90 feet** (222 Berkeley Street)	**< 90 feet** (500 Boylston Street) **< 90 feet** (222 Berkeley Street)

1. Measured to the top of the parapet (except for certain decorative features and a rounded mechanical penthouse).
2. Measured to the top of the parapet (except for certain decorative features and the skylight roof of the winter garden).

As set forth in the chart above, the PDA Development Plan establishes a maximum Floor Area Ratio of 8.65 for 500 Boylston Street, a maximum Floor Area Ratio of 9.0 for 222 Berkeley Street, and a maximum Floor Area Ratio of 8.75 for 500 Boylston Street and 222 Berkeley Street combined. The Project is anticipated to result in a maximum Floor Area Ratio of 9.65 for 500 Boylston Street, a maximum Floor Area Ratio of 9.0 for 222 Berkeley Street, and a maximum Floor Area Ratio of 9.4 for 500 Boylston Street and 222 Berkeley Street combined. Accordingly, the Project will require an amendment to the PDA Development Plan to permit the maximum Floor Area Ratios.

As set forth in the chart above, the PDA Development Plan also establishes a maximum Building Height of 330 feet for 500 Boylston Street and a maximum Building Height of 310 feet for 222 Berkeley Street. The Project will not increase the Building Height of either 500 Boylston Street or 222 Berkeley Street. Accordingly, the PDA Amendment will not increase the maximum Building Height of 500 Boylston Street or 222 Berkeley Street.

As set forth in the chart above, the PDA Development Plan also establishes a maximum height of the low-rise base structure of each of 500 Boylston Street and 222 Berkeley Street of 90 feet. The Project will not increase the height of the low-rise base structure of either 500 Boylston Street or 222 Berkeley Street above 90 feet. Accordingly, although the PDA

Amendment will allow the roof deck referenced above, the PDA Amendment will not increase the maximum height of the low-rise base structure of 500 Boylston Street or 222 Berkeley Street.

Off-Street Parking and Loading

The Project Site currently contains approximately 1,000 parking spaces and six loading bays located along St. James Avenue. No additional off-street parking and loading is proposed in connection with the Project.

Other Requirements

The provisions applicable within the GCOD apply to the Project and will be addressed in the PDA Amendment. The Project will also be subject to design review and to certain signage requirements of the Code.

1.6 Legal Information

1.6.1 Legal Judgments Adverse to the Proposed Project

The Proponent is not aware of any legal judgments or legal actions pending that concern the Project.

1.6.2 History of Tax Arrears on Property

The Proponent is not in tax arrears in connection with any property owned by them within the City of Boston.

1.6.3 Site Control/ Public Easements

By deed dated May 29, 1986, recorded with the Suffolk County Registry of Deeds in Book 12524, Page 230, Five Hundred Boylston West Venture acquired title to 500 Boylston Street from New England Mutual Life Insurance Company. By deed dated April 13, 1989, recorded with the Suffolk County Registry of Deeds in Book 15497, Page 132, Two Twenty Two Berkeley Venture acquired title to 222 Berkeley Street from New England Mutual Life Insurance Company.

Based on the completed survey of the Project Site, there are no public easements into, through, or surrounding the Project site. See Appendix B for the site survey.

1.7 Anticipated Permits

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

Table 1-2 Anticipated Permits and Approvals

Agency	Approval
Boston	
Boston Redevelopment Authority	Article 80B Large Project Review and applicable Article 80 agreements Article 80C Planned Development Area Review
Boston Zoning Commission	Article 80C Planned Development Area Review
Boston Civic Design Commission	Design Review (if required)
Boston Water and Sewer Commission	Site Plan Review/General Service Application/Water and Sewer Connection Permits
Public Improvement Commission	Specific Repairs/Discontinuance/Earth Retention (if required)
Boston Transportation Department	Construction Management Plan/Transportation Access Plan Agreement
Boston Parks & Recreation Commission	Permit to alter a building within 100' of a park (if required)
Boston Air Pollution Control Commission	Amendment to Parking Freeze Permit/Exemption (if required)
Boston Inspectional Services Department	Building Permits and other construction-related permits

1.8 Public Participation

As part of its planning efforts, the Proponent will reach out to nearby residents and representatives of numerous neighborhood groups including City Councilor Josh Zakim, the Mayor's Office of Neighborhood Services, the Back Bay Association, the Neighborhood Association of the Back Bay, Friends of Copley Square and the Trinity Church.

The Proponent continues to be committed to a comprehensive and effective community outreach and will continue to engage the community to ensure public input on the Project. The Proponent looks forward to working with the BRA and city agencies, local officials, neighbors, and others as the design and review processes move forward.

1.9 Schedule

Construction is anticipated to begin in the first quarter of 2016 and will occur over approximately 15 months.

Chapter 2.0

Transportation Component

2.0 TRANSPORTATION COMPONENT

2.1 Introduction

In accordance with the City of Boston's Transportation Access Plan Guidelines, the Transportation Component describes conditions related to roadway, parking, transit, pedestrian, bicycle, and loading and the transportation demand management measures for the Project. The study includes an evaluation of Existing, No-Build, and Build conditions with and without the Project. The intersections studied will continue to operate at the same overall Level of Service (LOS) as under the No-Build conditions during both the a.m. and p.m. peak hours. The Project will have minimal impact on the study area intersections or on public transportation or pedestrian facilities in the area.

2.1.1 Project Description

The Project site, located in the Back Bay neighborhood of Boston, is bounded by Boylston Street to the north, St. James Avenue to the south, Clarendon Street to the west and 222 Berkeley Street to the east. Currently on the site is the existing 500 Boylston Street building, which consists of a 19-story office tower sitting on a six-story podium occupied by retail and small office tenants. Surrounding land uses include other mixed-use office buildings, including the adjacent building at 222 Berkeley Street, and Trinity Church at Copley Square to the west.

The Project includes an approximately 79,300 sf, six-story infill building at 500 Boylston Street that is anticipated to consist of retail space on the first two or three floors and office space above. The infill building will have between 32,500 sf and 47,600 sf of retail space, and between 31,700 sf and 46,800 sf of office space for a combined total of 79,300 sf. In addition, up to 50,000 sf of office space in the existing 500 Boylston Street building is anticipated to be converted to retail space. In connection with the Project, the entrance to 222 Berkeley Street will be improved with two new vestibules totaling approximately 700 sf. One vestibule will provide access to an existing 8,350 sf office space that will be converted to a restaurant, and the other vestibule will expand the existing first and second floor Bank of America space.

As noted in Section 1.3.3., a specific mix of land uses within these square foot parameters was identified for each environmental discipline to maximize the resulting impacts. For traffic analysis purposes, the land use program shown in the last column of Table 2-1, which utilizes the program with the highest square footage of retail space, was adopted to maximize the number of new Project trips, and, therefore, the greatest forecasted transportation impacts.

Table 2-1 Project Program

Land Use Component		Approximate Size	Adopted for Transportation Analysis
Retail	Infill		+97,950 sf
	500 Boylston Street	+32,500 – 47,600 sf	
	222 Berkeley Street	+350 sf	
	Change in Use		
	500 Boylston Street	+50,000 sf	
	222 Berkeley Street	0 sf	
Office	Infill		-26,650 sf
	500 Boylston Street	+31,700 – 46,800 sf	
	222 Berkeley Street	0 sf	
	Change in Use		
	500 Boylston Street	- 50,000 sf	
	222 Berkeley Street	- 8,350 sf	
Restaurant	Infill		+8,700 sf
	500 Boylston Street	0 sf	
	222 Berkeley Street	+350 sf	
	Change in Use		
	500 Boylston Street	0 sf	
	222 Berkeley Street	+8,350 sf	
Combined Total		+80,000	+80,000 sf

2.1.2 Methodology

In accordance with Boston Transportation Department Transportation Access Plan Guidelines (2001), the study team conducted a transportation analysis for the proposed Project. The analysis is summarized in the following sections:

- Section 2.2 (Existing Conditions) includes an inventory of existing transportation conditions, including intersection operation, parking, public transit, car sharing, and pedestrian and bicycle conditions.
- Section 2.3 (No-Build Conditions) includes general background growth and volumes from specific projects that are planned in the vicinity of the Project site and are expected to be complete by the design year with evaluations of intersection operations.
- Section 2.4 (Build Conditions) includes descriptions of site access and circulation, new Project trips, traffic operations, pedestrian conditions, and service and loading activity upon completion of the Project.
- Sections 2.5 through 2.7 address Transportation Demand Management measures, the Transportation Access Plan Agreement (TAPA) with the City, and short-term construction impacts.

2.1.3 Study Area

The study area includes the follow intersections, also shown in Figure 2-1. It includes the four intersections adjacent to the Project site and three driveways serving the underground garage:

- Boylston Street/Clarendon Street;
- Boylston Street/Berkeley Street;
- St. James Avenue/Berkeley Street;
- St. James Avenue/Clarendon Street;
- St. James Avenue/Garage Entrance and Exit;
- St. James Avenue/Garage Exit ; and
- Clarendon Street/Garage Entrance

2.2 Existing Conditions

This section includes descriptions of existing study area roadway geometries, intersection traffic control, peak-hour vehicle volumes, on-street parking regulations, off-street parking, public transit services, pedestrian and bicycle conditions, and loading.

2.2.1 Existing Roadway Conditions

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

Boylston Street is an urban minor arterial that runs from Brookline Avenue in the Fens to Washington Street, where it becomes Essex Street, terminating at Atlantic Avenue. Boylston Street is one-way eastbound, with three travel lanes between Hereford Street and Arlington Street. It widens to four lanes between Arlington Street and Charles Street, with two lanes for vehicles continuing north on Charles Street, separated by a median from two lanes for those continuing through toward the downtown area. Within the study area, metered parking is generally located on each side of the street.

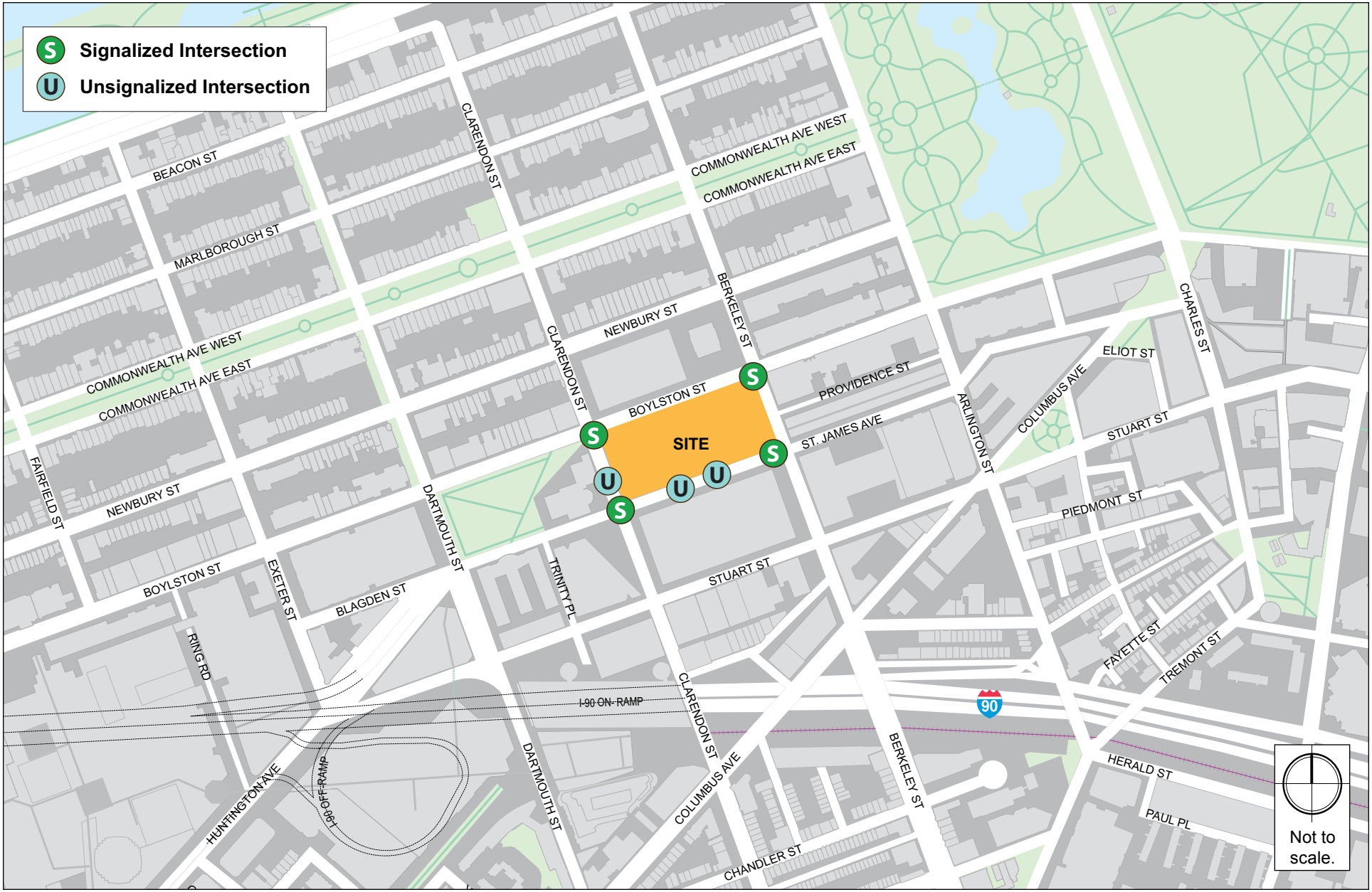


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Figure 2-1
Study Area Intersections

St. James Avenue is an urban principal arterial that runs from Arlington Street to Dartmouth Street. Between Arlington Street and Berkeley Street, St. James Avenue is two-way, with one eastbound lane and two westbound lanes. Between Berkeley Street and Dartmouth Street, it runs one-way westbound, providing three travel lanes. No parking is provided along St. James Avenue between Berkeley Street and Dartmouth Street, but metered parking is available on the north and south sides of St. James Avenue between Berkeley Street and Arlington Street.

Berkeley Street is an urban principal arterial that runs one-way north from East Berkeley Street in the South End through the Back Bay to Storrow Drive. Within the study area, Berkeley Street consists of three lanes. Metered parking is provided on both sides of the street.

Clarendon Street is an urban minor arterial that runs one-way southbound from the Back Bay to the South End. The roadway consists of two travel lanes within the study area. Metered parking is provided on both sides of the street, with the exception of the block between St. James Avenue and Stuart Street. Residential parking is provided on both sides of the street south of Columbus Avenue.

2.2.2 Existing Intersection Conditions

Boylston Street/Clarendon Street is a signalized, four-leg intersection. Due to the one-way circulation patterns, two roadway approaches are provided. The Boylston Street eastbound approach includes three travel lanes: two through lanes and a shared through/right-turn lane. The Clarendon Street southbound approach has a shared left-turn/through lane and a through lane. Curb use is allowed on both sides of Boylston Street and Clarendon Street. Crosswalks and wheelchair ramps are provided across all legs of the intersection.

Berkeley Street/Boylston Street is a four-way, signalized intersection with two approaches. Berkeley Street northbound has two through lanes and an exclusive right-turn lane. The Boylston Street eastbound approach consists of three travel lanes: two through lanes and one shared through/left-turn lane. Parking is allowed on both sides of Berkeley Street and Boylston Street. Crosswalks and wheelchair ramps are provided across all four sides of the intersection.

St. James Avenue/Berkeley Street is a four-way, signalized intersection with two approaches. Berkeley Street continues to operate one-way northbound with three travel lanes: one shared left-turn/through lane, one through lane, and one shared through/right-turn lane. St. James Avenue to the east of the intersection operates as two-way with two westbound lanes and one eastbound lane. To the west of the intersection, St. James Avenue is one-way westbound with three travel lanes. The westbound approach consists of a through lane and a shared through/right-turn lane. Parking is allowed on both sides of Berkeley Street and St. James Avenue. Crosswalks and wheelchair ramps are provided across all four sides of the intersection.

St. James Avenue/Clarendon Street is a four-way, signalized intersection with approaches from St. James Avenue westbound and Clarendon Street southbound. The St. James Avenue westbound approach comprises three travel lanes: two through lanes and one shared left-turn/through lane. Clarendon Street southbound consists of two travel lanes: one through lane and one shared through/right-turn lane, with time-restricted metered parking on the east and west sides of the approach. Crosswalks and wheelchair ramps are located across all four sides of the intersection.

2.2.3 Existing Traffic Volumes

While it is standard practice to collect new traffic counts for an Article 80 assessment, the accumulation of snow in January and February 2015, and the associated impacts to travel patterns and travel mode shares, prevented a reliable data collection effort. Instead, after consultation with the City, the BTD provided the study team with weekday turning movement counts previously collected (for another project) on September 30, 2014.

The weekday peak hours were identified as 8:00-9:00 a.m. and 5:00–6:00 p.m. The 2015 baseline volumes were estimated by applying a 0.5% growth factor to the 2014 counts. Count data are provided in Appendix C.

Figure 2-2 and Figure 2-3 show the Year 2015 intersection peak hour volumes for the a.m. peak hour and p.m. peak hour, respectively.

2.2.4 Existing Traffic Operations

Traffic operations are determined through a capacity analysis of intersections. Level of Service and delay at the intersections were analyzed using the Synchro software developed by Trafficware. Synchro 9 was used to evaluate the effects that closely spaced intersections may have on one another. Synchro is based on the traffic operational analysis methodology of the Transportation Research Board's 2000 Highway Capacity Manual (HCM); LOS and delay (in seconds) are determined based on intersection geometry and available traffic data for each intersection.

The study team performed field observations to establish intersection geometry (i.e., number of turning lanes, lane length, and lane width). Signal timing and phasing used in this analysis were obtained from BTD.

Table 2-2, derived from the HCM, shows LOS criteria for signalized and unsignalized intersections. LOS A defines the most favorable condition, with minimum traffic delay. LOS F represents the worst condition, with significant traffic delay.

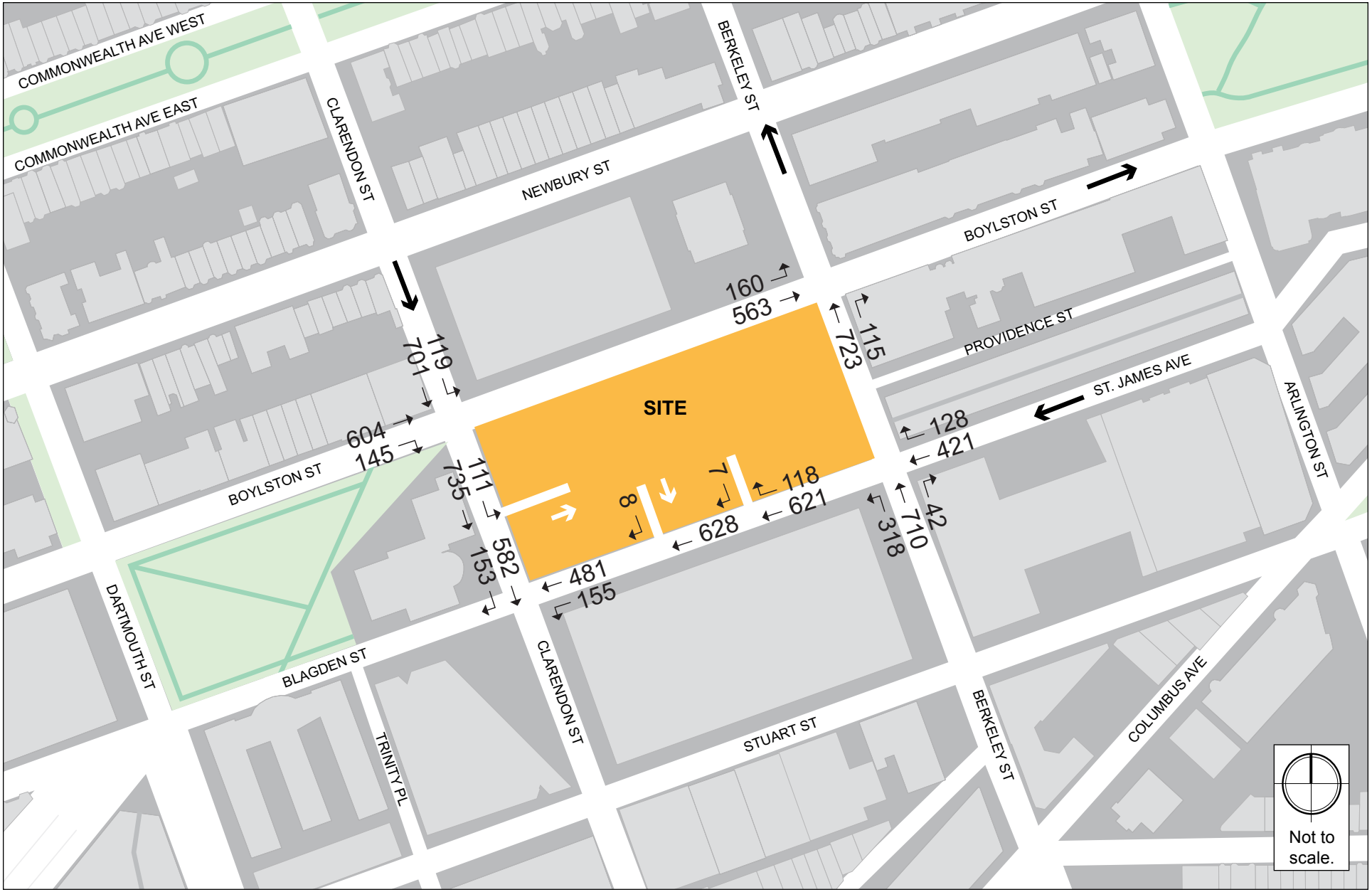

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Figure 2-2

Existing Condition (2015) Turning Movement Counts, a.m. Peak Hour

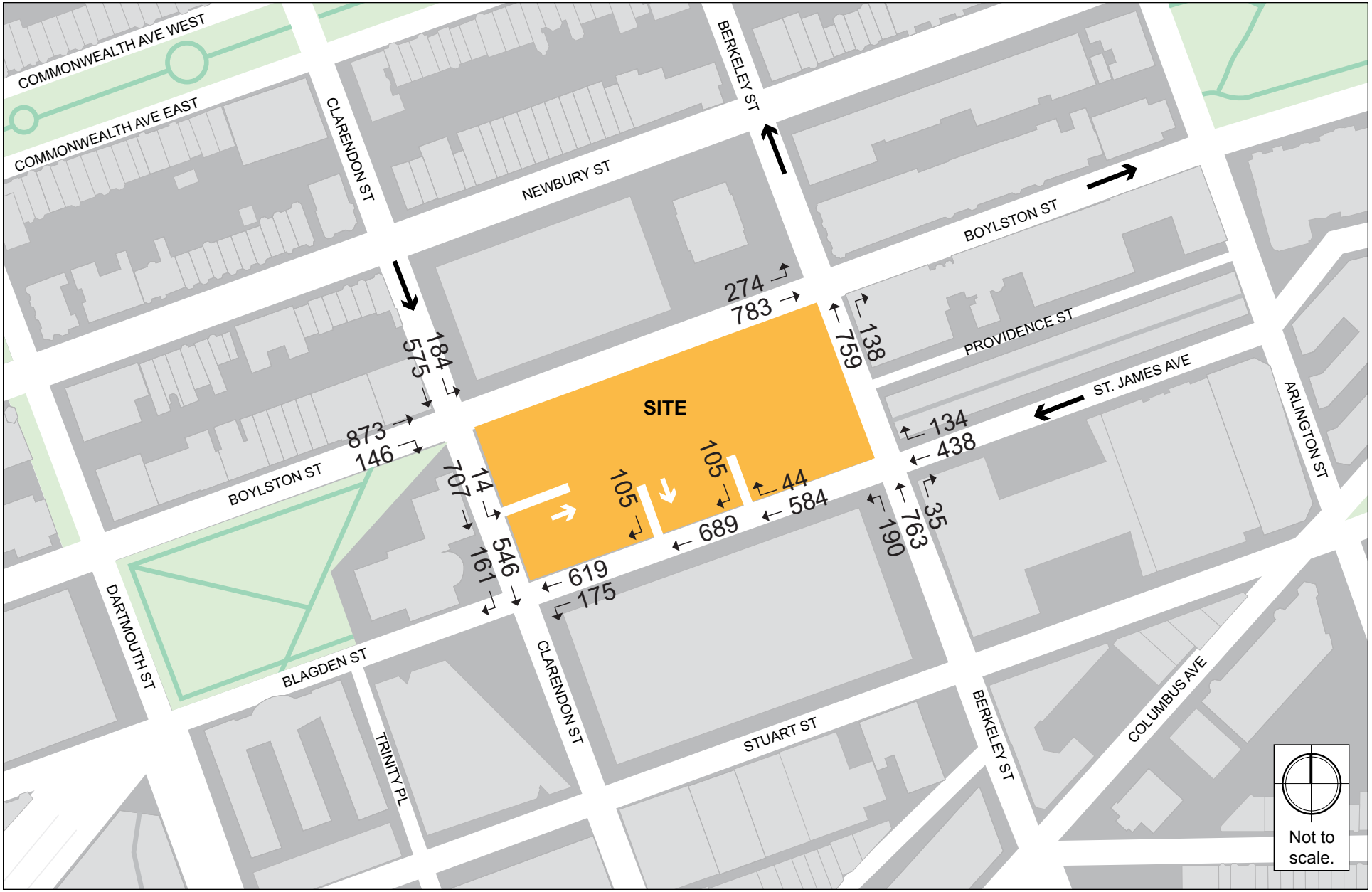

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Figure 2-3

Existing Condition (2015) Turning Movement Counts, p.m. Peak Hour

Table 2-2 Level of Service Criteria

Level of Service	Average Stopped Delay (sec./veh.)	
	Signalized Intersections	Unsignalized Intersections
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.		

Table 2-3 and Table 2-4 show the Existing Conditions capacity analysis summary for study area intersections during the a.m. peak hour and p.m. hour, respectively. The tables show LOS, average delay (seconds), volume to capacity ratio, and 95th percentile queue length (feet) for the overall intersection and each approach.

As shown in Table 2-3 and 2-4, the signalized intersections operate at an overall LOS C or better during both the Existing weekday a.m. and the p.m. peak hours. All movements at the unsignalized parking garage entrances and exits along St. James Avenue and Clarendon Street operate at LOS A or LOS B during both the weekday a.m. and p.m. peak hours.

Complete Synchro reports are provided in Appendix C.

Table 2-3 Existing Conditions (2015), Capacity Analysis Summary, a.m. Peak Hour

Intersection	LOS	Delay (seconds)	V/C Ratio	95% Queue Length (ft)
Signalized Intersections				
Boylston Street/Clarendon Street	**C**	**20.2**	**-**	**-**
Boylston EB thru | thru | thru	B	17.2	0.36	113
Boylston EB right	C	26.0	0.52	126
Clarendon SB left/thru | thru	C	21.3	0.68	269
Boylston Street/Berkeley Street	**B**	**17.4**	**-**	**-**
Boylston EB left/thru | thru | thru	C	26.8	0.55	190
Berkeley NB thru| thru	A	9.5	0.58	64
Berkeley NB right	A	7.6	0.21	m21
St. James Avenue/Berkeley Street	**C**	**25.6**	**-**	**-**
St. James WB thru | thru/right	C	23.3	0.58	178
Berkeley NB left/thru | thru | thru/right	C	26.7	0.76	240

Table 2-3 Existing Conditions (2015), Capacity Analysis Summary, a.m. Peak Hour (Continued)

Intersection	LOS	Delay (seconds)	V/C Ratio	95% Queue Length (ft)
Signalized Intersections				
St. James Avenue/Clarendon Street	**B**	**13.6**	-	-
St. James WB left/thru | thru | thru	C	21.5	0.40	124
Clarendon SB thru | thru/right	A	6.3	0.46	61
Unsignalized Intersections				
St. James Avenue/Garage Entrance and Exit	-	-	-	-
St. James WB thru | thru/right	A	0.0	0.26	0
Garage SB right	B	11.0	0.01	1
St. James Avenue/Garage Exit	-	-	-	-
St. James WB thru | thru | thru	A	0.0	0.13	0
Garage SB right	A	9.7	0.01	1
Clarendon Street/Garage Entrance	-	-	-	-
Clarendon SB left/thru | thru	A	2.8	0.08	6

# = 95th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after 2 cycles.
m = Volume for the 95th percentile queue is metered by the upstream signal.

Table 2-4 Existing Conditions (2015), Capacity Analysis Summary, p.m. Peak Hour

Intersection	LOS	Delay (seconds)	V/C Ratio	95% Queue Length (ft)
Signalized Intersections				
Boylston Street/Clarendon Street	**C**	**20.1**	-	-
Boylston EB thru | thru | thru	B	13.4	0.43	146
Boylston EB right	C	23.6	0.56	131
Clarendon SB left/thru | thru	C	27.4	0.74	264
Boylston Street/Berkeley Street	**C**	**22.7**	-	-
Boylston EB left/thru | thru | thru	C	34.9	0.61	261
Berkeley NB thru| thru	A	9.9	0.70	74
Berkeley NB right	A	8.2	0.28	m29
St. James Avenue/Berkeley Street	**C**	**30.3**	-	-
St. James WB thru | thru/right	C	26.7	0.65	199
Berkeley NB left/thru | thru | thru/right	C	32.2	0.81	246
St. James Avenue/Clarendon Street	**B**	**16.9**	-	-
St. James WB left/thru | thru | thru	C	24.5	0.45	208
Clarendon SB thru | thru/right	A	8.8	0.49	105
Unsignalized Intersections				
St. James Avenue/Garage Entrance and Exit	-	-	-	-
St. James WB thru | thru/right	A	0.0	0.25	0
Garage SB right	B	10.0	0.14	12

Table 2-4 Existing Conditions (2015), Capacity Analysis Summary, p.m. Peak Hour (Continued)

Intersection	LOS	Delay (seconds)	V/C Ratio	95% Queue Length (ft)
Unsignalized Intersections				
St. James Avenue/Garage Exit	-	-	-	-
St. James WB thru | thru | thru	A	0.0	0.15	0
Garage SB right	B	10.6	0.15	13
Clarendon Street/Garage Entrance	-	-	-	-
Clarendon SB left/thru | thru	A	0.5	0.30	1

# = 95th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after 2 cycles.
m = Volume for the 95th percentile queue is metered by the upstream signal.

The signalized intersection of Boylston Street/Clarendon Street currently operates at LOS C during the weekday a.m. and p.m. peak hours. All of the movements at the intersection currently operate at LOS C or better during both the a.m. and p.m. peak hours.

The signalized intersection of Boylston Street/Berkeley Street currently operates at LOS B during the weekday a.m. peak hour and LOS C during the weekday p.m. peak hour. All of the movements at the intersection currently operate at LOS C or better during both the a.m. and p.m. peak hours.

The signalized intersection of St. James Avenue/Berkeley Street currently operates at LOS C during the weekday a.m. and p.m. peak hours. All of the movements at the intersection currently operate at LOS C during both the a.m. and p.m. peak hours.

The signalized intersection of St. James Avenue/Clarendon Street currently operates at LOS B during the weekday a.m. and p.m. peak hours. All of the movements at the intersection currently operate at LOS C or better during both the a.m. and p.m. peak hours.

The movements for the unsignalized parking garage entrances and exits along St. James Avenue and Clarendon Street all operate at LOS A or LOS B during the weekday a.m. and p.m. peak hours.

2.2.5 Existing Parking

The Project site has an underground parking garage that serves both 500 Boylston Street and 222 Berkeley Street, and is permitted for up to 1,000 spaces. The garage has two entrances, one on Clarendon Street, and one on St. James Avenue, and two exits on St. James Avenue.

On-street curbside regulations adjacent to the Project site include a mix of metered parking, commercial loading, and handicapped spaces, as shown in Figure 2-4.

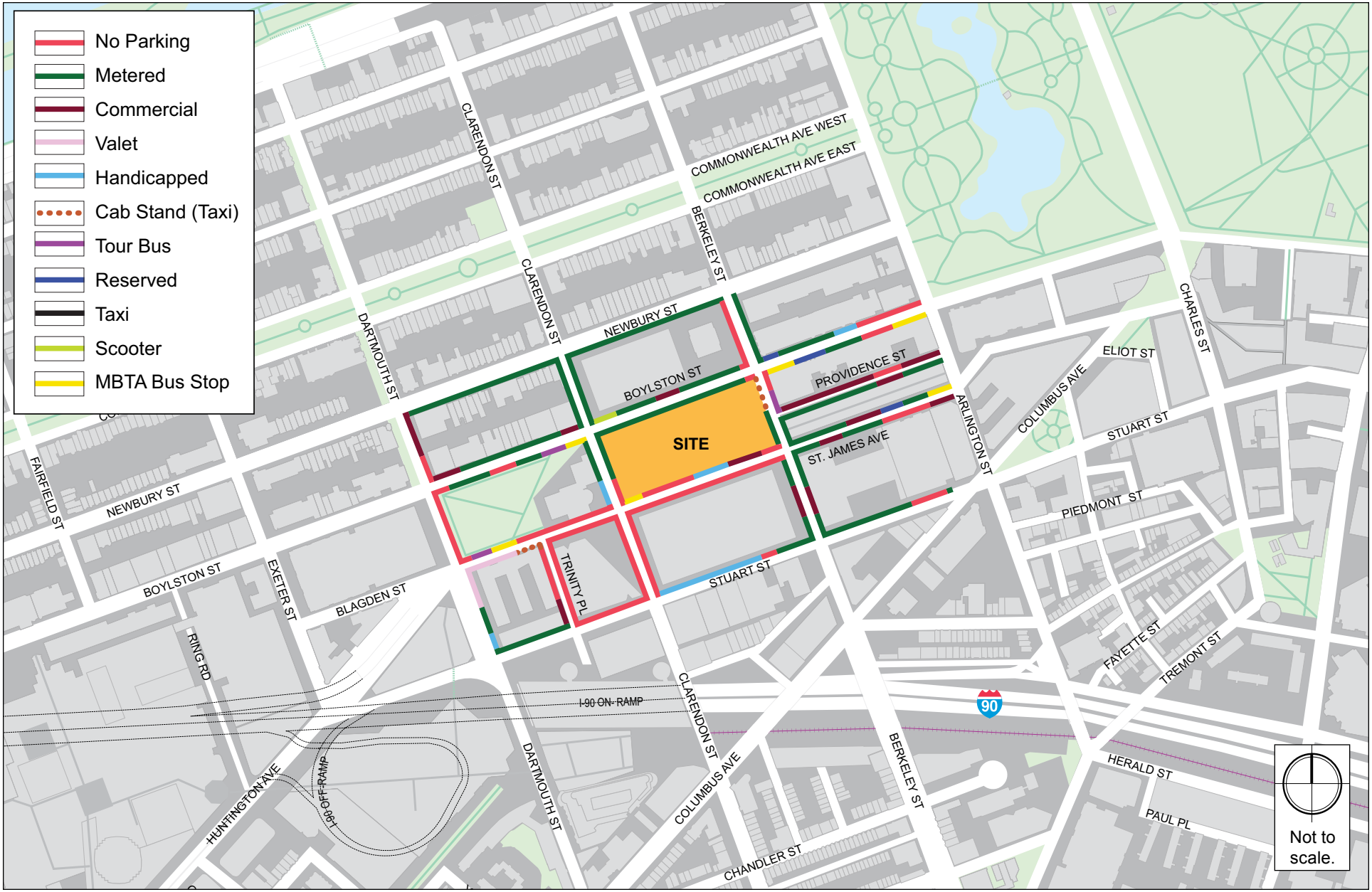

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Figure 2-4
Existing On-street Parking Regulations

Approximately 11,698 off-street parking spaces are provided in garages and lots within a quarter-mile radius of the Project site. Of these, approximately 7,021 are for private use and approximately 4,677 spaces are available for public use. These parking facilities and associated capacities are mapped in Figure 2-5 and identified in Table 2-5.

Table 2-5 Off-street Parking within a Quarter-mile of the Project Site

Map No.	Facility/Address	Capacity (spaces)	
		Private	Public
	Lots		
1	Dartmouth Street Lot *78-284 Dartmouth Street*	0	71
2	Restoration Hardware *60 Newbury Street*	64	0
3	Payette Lot *40 Isabella Street*	0	52
Subtotal		**64**	**123**
	Garages		
A	The 100 Clarendon Street Garage *100 Clarendon Street*	1,437	576
B	The Clarendon *400-406 Stuart Street*	300	93
C	131 Dartmouth Street Garage *131 Dartmouth Street*	630	100
D	Back Bay Garage (NE Life Building) *500 Boylston Street*	375	625
E	Prudential Center *800 Boylston Street*	2,067	1,854
F	10 St. James *10 St. James Avenue*	230	170
G	Westin Hotel Garage *10 Huntington Avenue*	275	0
H	Trinity Place Garage 15-41 Huntington Avenue	160	0
I	Copley Place Garage *110 Huntington Avenue*	572	860
J	Tent City Garage *128 Dartmouth Street*	422	276
K	The Newb'ry *501 Boylston Street*	80	0
L	Greater Boston Community Development *95 Berkeley Street*	36	0

Table 2-5 Off-street Parking within a Quarter-mile of the Project Site (Continued)

Map No.	Facility/Address	Capacity (spaces)	
		Private	Public
Garages			
M	John Hancock *200 Clarendon Street*	176	0
N	Liberty Mutual 157 Berkeley Street	197	0
Subtotal		**6,957**	**4,554**
Total Off-street Parking Spaces		**7,021**	**4,677**
		11,698	

2.2.6 Existing Car Sharing Locations

The increasingly popular car-sharing services provide easy access to vehicular transportation for urban residents who do not own cars and employees who commute by transit, but need short-term use of a vehicle. The local car-sharing provider, Zipcar, offers short-term rental service for members. Vehicles are rented on an hourly and per-mile 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. Enterprise car rental also has a similar hourly car rental service called Enterprise carshare. The nearby Zipcar and Enterprise services provide an important transportation option for area residents and employees, reducing the need for vehicle ownership. Figure 2-6 shows the nearby Zipcar and Enterprise locations with a total of 54 available cars.

2.2.7 Existing Public Transit

The study area is well-served by public transit, with many options within a five-minute walk (less than ¼ mile) from the Project site. The MBTA Green Line light rail service operates under Boylston Street with nearby stations at Copley Square and Arlington Street. At the MBTA's Back Bay Station, a major transportation hub, passengers can access Orange Line rapid transit service, commuter rail services to points west and south of Boston, Amtrak's Northeast Regional and Acela train services, and Megabus, an intercity bus carrier. Six local bus routes and three express routes have stops within ¼ mile of the site. MBTA services in the study area are summarized in Table 2-6 and shown in Figure 2-7.

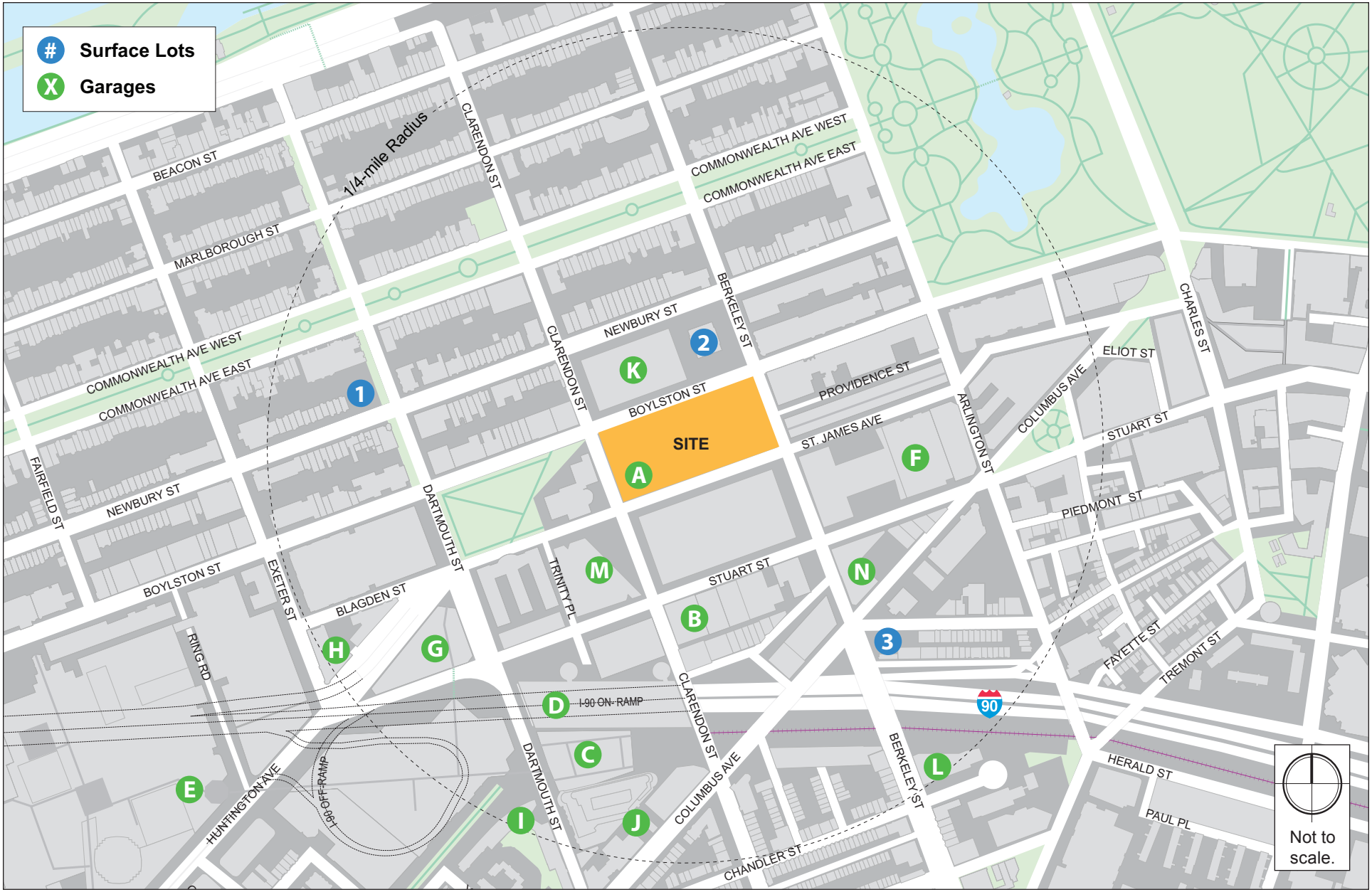

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Figure 2-5
Existing Off-street Parking

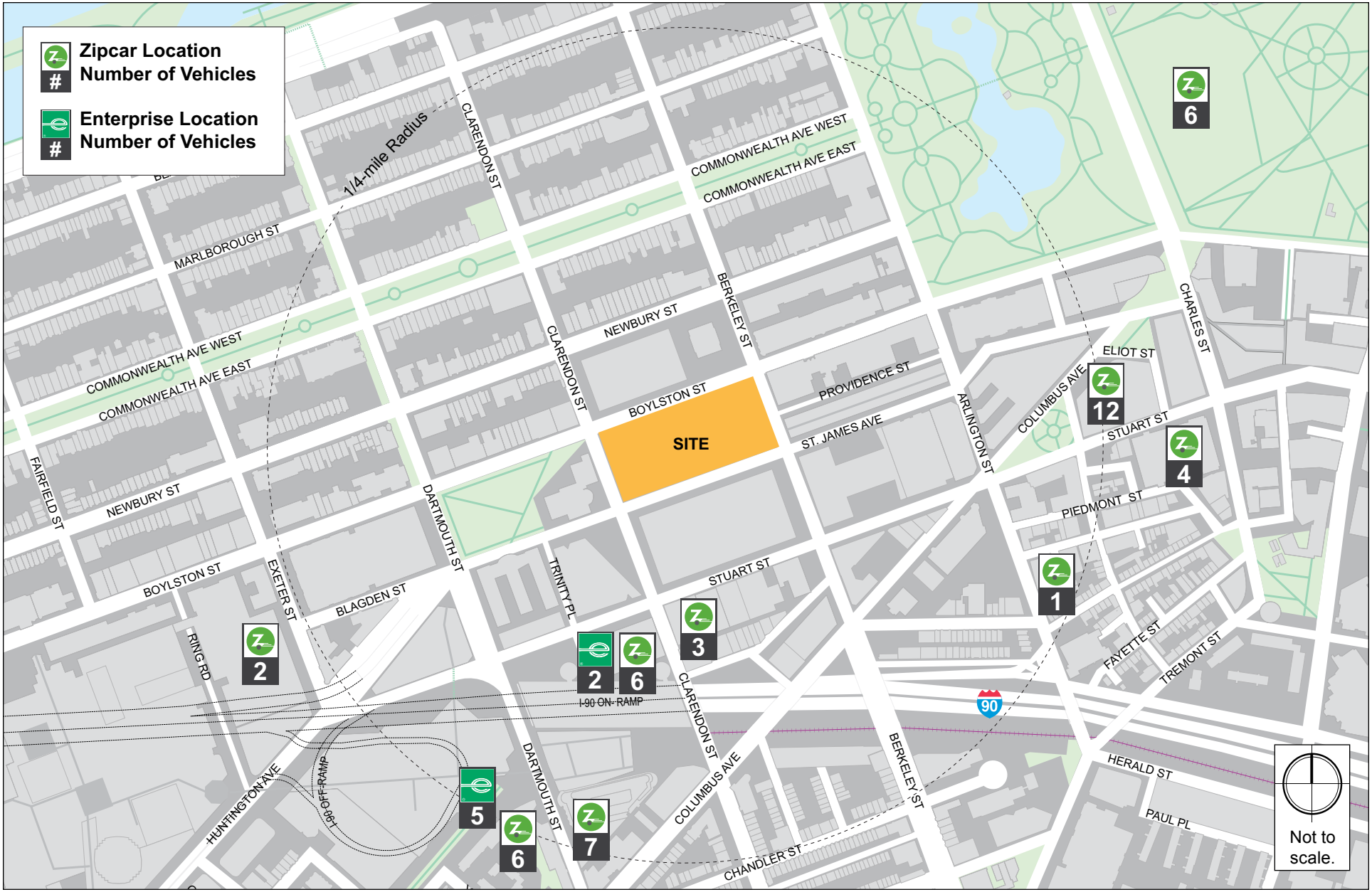

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Figure 2-6
Car Sharing Locations

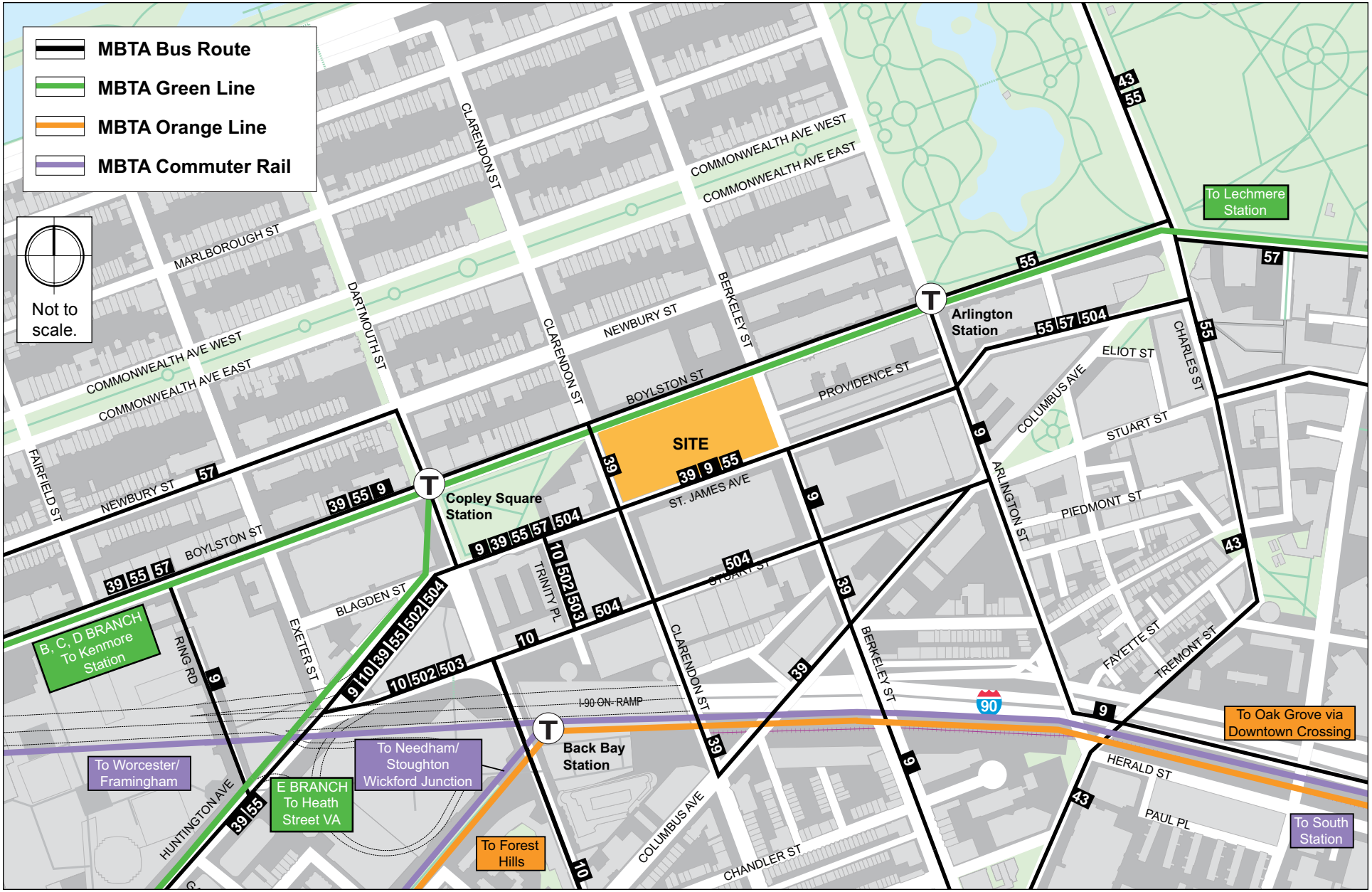

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Figure 2-7
Public Transit

Table 2-6 MBTA Service in the Study Area

Transit Service	Description	Peak-hour Headway (minutes) [1]
Rapid Transit Routes		
Orange Line	Forest Hills–Oak Grove	5
Green Line	Lechmere–Boston College, Cleveland Circle, Riverside, or Heath Street	6-7
Local Bus Routes		
Route 9	City Point–Copley Square via Broadway Station	5-9
Route 10	City Point–Copley Square via Andrew Station and B.U. Medical Center	20–24
Route 39	Forest Hills Station–Back Bay Station via Huntington Avenue	6
Route 43	Ruggles Station-Park and Tremont streets via Tremont Street	10-12
Route 55	Jersey and Queensberry Streets–Copley Square or Park and Tremont streets via Ipswich Street	16–30
Route 57	Watertown Yard - Kenmore Sta. via Newton Corner & Brighton Center	1 bus/day
Express Bus Routes		
Route 502	Watertown Yard–Copley Square via Newton Corner and Masspike	6–12
Route 503	Brighton Center–Copley Square via Oak Square and Masspike	15-20
Route 504	Watertown/Newton Corner–Downtown via Masspike	8–13
Commuter Rail Routes [2]		
	Framingham/Worcester–South Station	12–40
	Needham–South Station	28–45
	Franklin–South Station	16–39
	Providence/Stoughton/Wickford Junction–South Station	12–41

1) Headway is the time between trains or buses, as applicable.
2) Commuter rail routes have irregular headways; customers typically plan trips according to schedule rather than utilizing walk-up service.

2.2.8 Existing Pedestrian Conditions

Study Intersections

As is standard practice, pedestrian counts at the study area intersections were collected as part of the intersection counts described in Section 2.2.3. With numerous office buildings, institutions, residential buildings, restaurants, and transit stations, pedestrian activity is high throughout the day, although not unusual for a dense urban area such as the Back Bay. Additionally, the parking garage at 500 Boylston Street/222 Berkeley Street has approximately 1,000 parking spaces and generates many pedestrian trips along the Project's study area intersections between the garage and nearby destinations.

Overall, the intersection pedestrian volumes tend to be higher in the p.m. peak hour than during the a.m. peak hour. Sidewalks in the study area are generally in good condition and supply more than adequate capacity. Handicapped-accessible ramps and crosswalks are provided at the study area intersections.

The pedestrian data is included in Appendix C and incorporated into the intersection level of service analysis.

2.2.9 Existing Bicycle Conditions

Hubway, launched in July 2011, is a bicycle sharing system with more than 100 stations and 1,000 bicycles available throughout Boston, Brookline, Cambridge, and Somerville. As shown in Figure 2-8, four Hubway stations are located within ¼ mile of the Project site, including one adjacent to the site on Boylston Street at the corner of Berkeley Street. Bicycles are not available for rent during winter months.

Protected bicycle racks for up to 44 bicycles are available in the parking garage. On-street, adjacent to the Project site, there is one bicycle rack on Boylston Street, in front of the Marshall's store. Several other outdoor racks are available on nearby blocks.

Within the study area, on-road bicycle accommodations exist on Dartmouth Street and Commonwealth Avenue. An off-road bicycle path is part of the linear Southwest Corridor Park, which connects Forest Hills to Back Bay Station.

2.2.10 Existing Loading and Service

A shared service area for the contiguous 500 Boylston and 222 East Berkeley buildings is accessed from a driveway on St. James Avenue. This internal area serves vehicles associated with deliveries, building services, and trash removal. Additionally, an on-street commercial loading zone is located on St. James Avenue adjacent to the driveway.

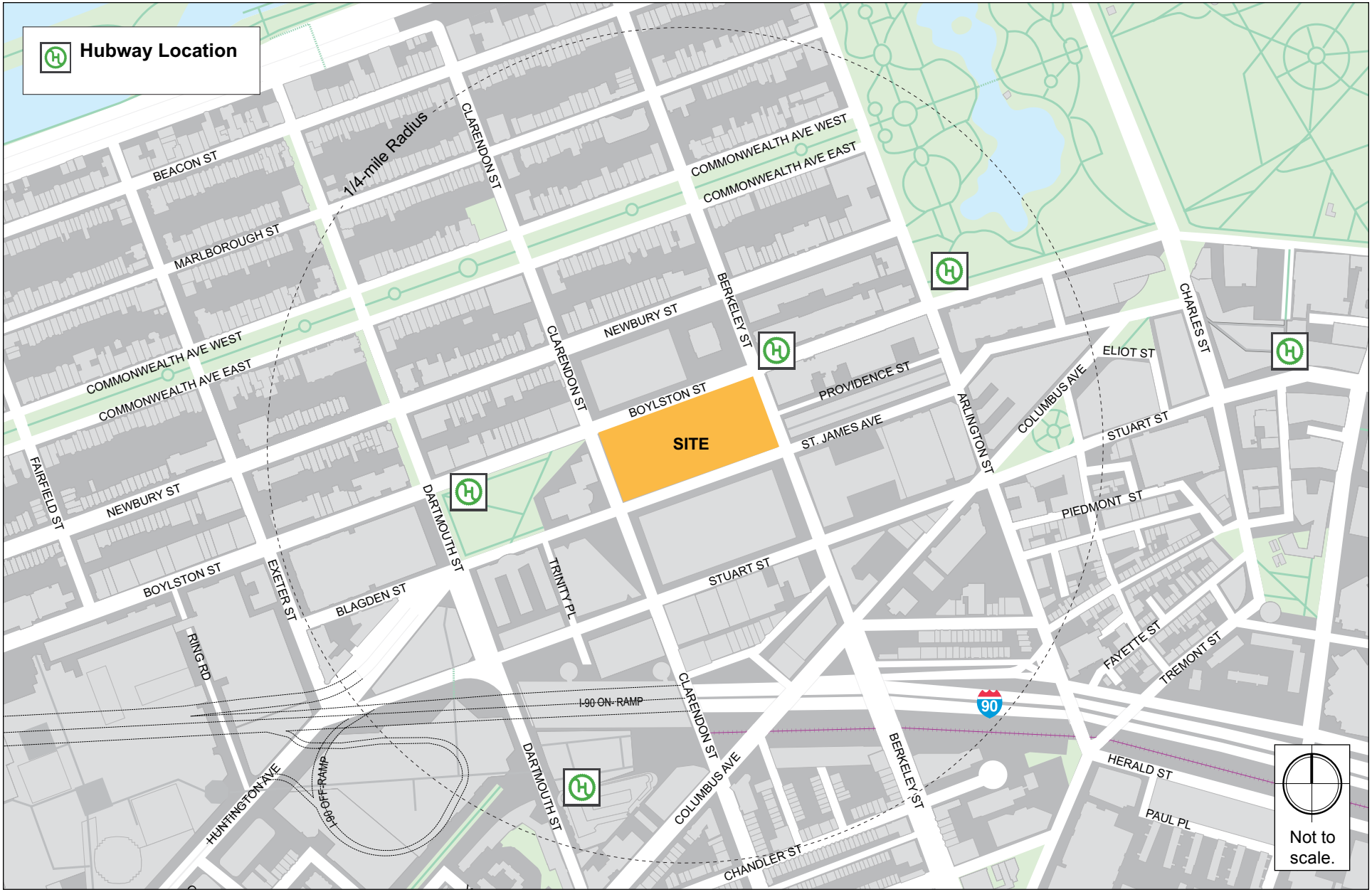

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Figure 2-8
Hubway Locations

2.3 Future Conditions

2.3.1 No-Build Conditions

It is standard practice to evaluate No-Build Conditions (without the project) and Build Conditions (with the project) and determine to what extent the traffic operations will be affected. Year 2020, five years from the existing condition, has been designated as the future design year. This section describes and evaluates the projected 2020 No-Build and 2020 Build Conditions.

2.3.1.1 Background Traffic Growth

No-Build traffic conditions are those that would occur independent of the Project and include existing traffic and new traffic resulting from both general background growth and any other future development projects in the area that have been permitted or are under review.

The general background growth rate accounts for anticipated changes in demographics, auto usage, and auto ownership and as well as traffic volumes due to new, smaller development projects or projects near, but outside, the immediate study area. Based on a review of historical and recent traffic counts, a 0.5% annual rate was applied to the existing intersection volumes to account for background growth.

Project 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. In addition to the growth rate, traffic volumes generated by the following new major developments, which are mapped in Figure 2-9, have been added to the No-Build conditions:

A. 350 Boylston Street. This BRA approved nine-story office building will include 221,230 sf of office space, with ground level retail and restaurant space, a health club, and 150 underground parking spaces.

B. Exeter Residences. One of the final projects in the redevelopment of Prudential Center, this 188-unit residential project has recently completed construction.

C. Copley Place Residential and Retail Expansion. This proposed expansion involves approximately 114,000 sf of new retail (54,000 sf expansion of Neiman Marcus and 60,000 sf of restaurant, shops, and a garden). In addition, the expansion will include approximately 280 new residential condominiums.

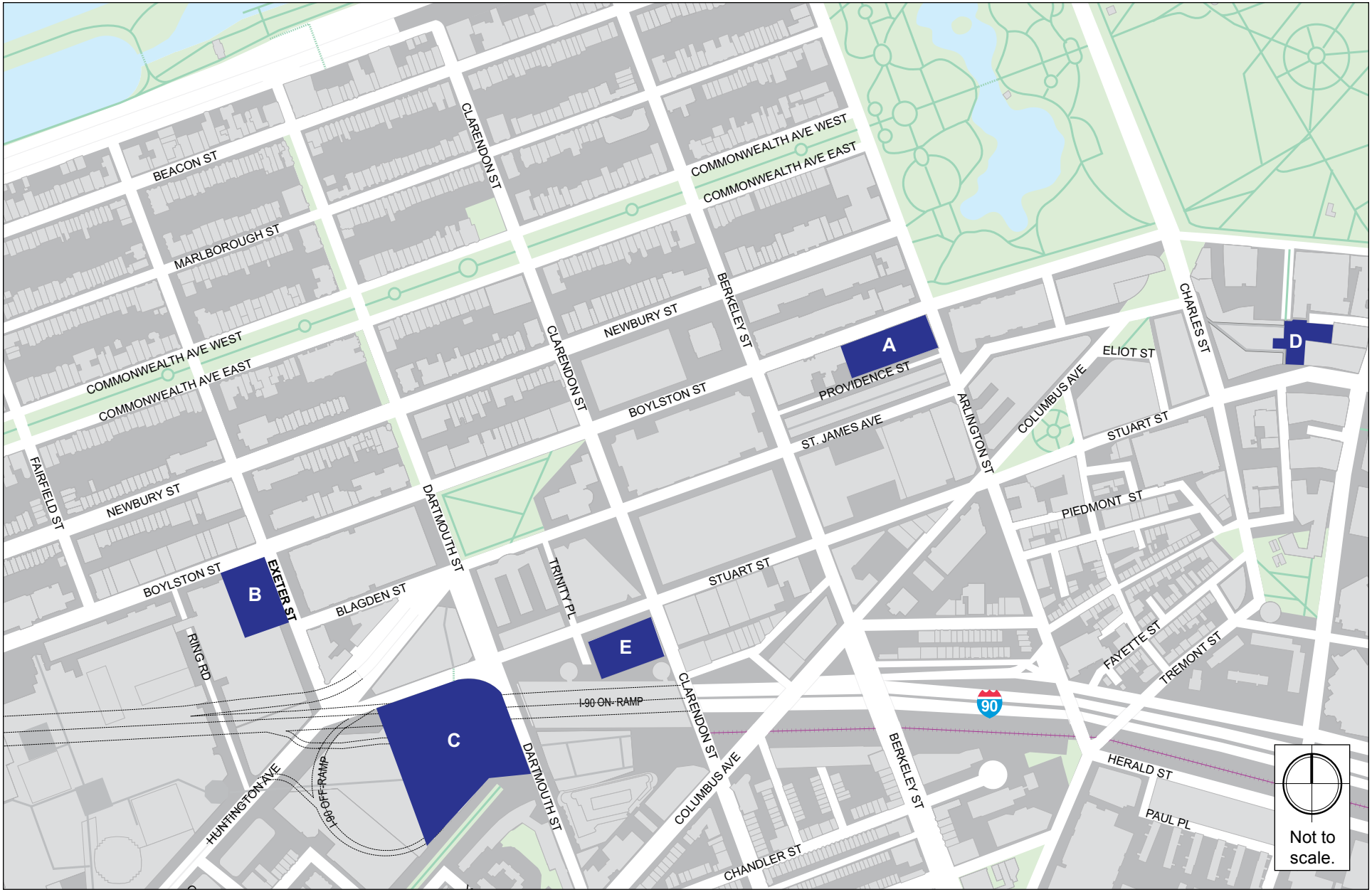

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Figure 2-9
Area Development Projects

D. 45 Stuart Street (Jacob Wirth Redevelopment). This mixed-use development is under construction and comprises approximately 250,000 sf of office space, approximately 2,000 sf of retail and café space on the ground floor and mezzanine level, and restoration of the historic Jacob Wirth building. In addition, a 174-space parking garage is proposed.

E. 40 Trinity. This approved project includes demolition of the existing building and construction of a new 33-story mixed-use building totaling approximately 380,000 sf of residential units, hotel, restaurants, and fitness center. The project also includes approximately 100 parking spaces.

2.3.1.2 Proposed Transportation Improvements and Planning Initiatives

The following studies have been integrated into the assessment of future year conditions:

- *BTD Traffic Signal Optimization (Back Bay).* BTD is currently in the process of updating traffic signals in the Back Bay area. Some of the improvements include adjusting signal offsets and splits, converting from exclusive to concurrent pedestrian crossings, and updating the vehicle clearance times at specific locations. All of these changes will be implemented in 2015 and are therefore included in the No-Build Conditions traffic model.

2.3.1.3 No Build Traffic Volumes

The one-half percent per year annual growth rate was applied to the 2015 Existing Conditions traffic volumes, then the traffic volumes associated with the background development project listed above were added to develop the 2020 No-Build Conditions traffic volumes. The 2020 No-Build weekday traffic volumes are shown on Figure 2-10 and Figure 2-11 for the a.m. and p.m. peak hour, respectively.

2.3.1.4 No-Build Conditions Traffic Operations

The 2020 No-Build analysis uses the methodology described under Existing Conditions. The resulting intersection capacity analysis summaries are shown in Table 2-7 and Table 2-8 for a.m. and p.m. peak hours, respectively. The tables show level of service, average delay, volume to capacity ratio, and 95th percentile queue length (feet) for the overall intersection and each approach.

Complete Synchro reports are provided in Appendix C.

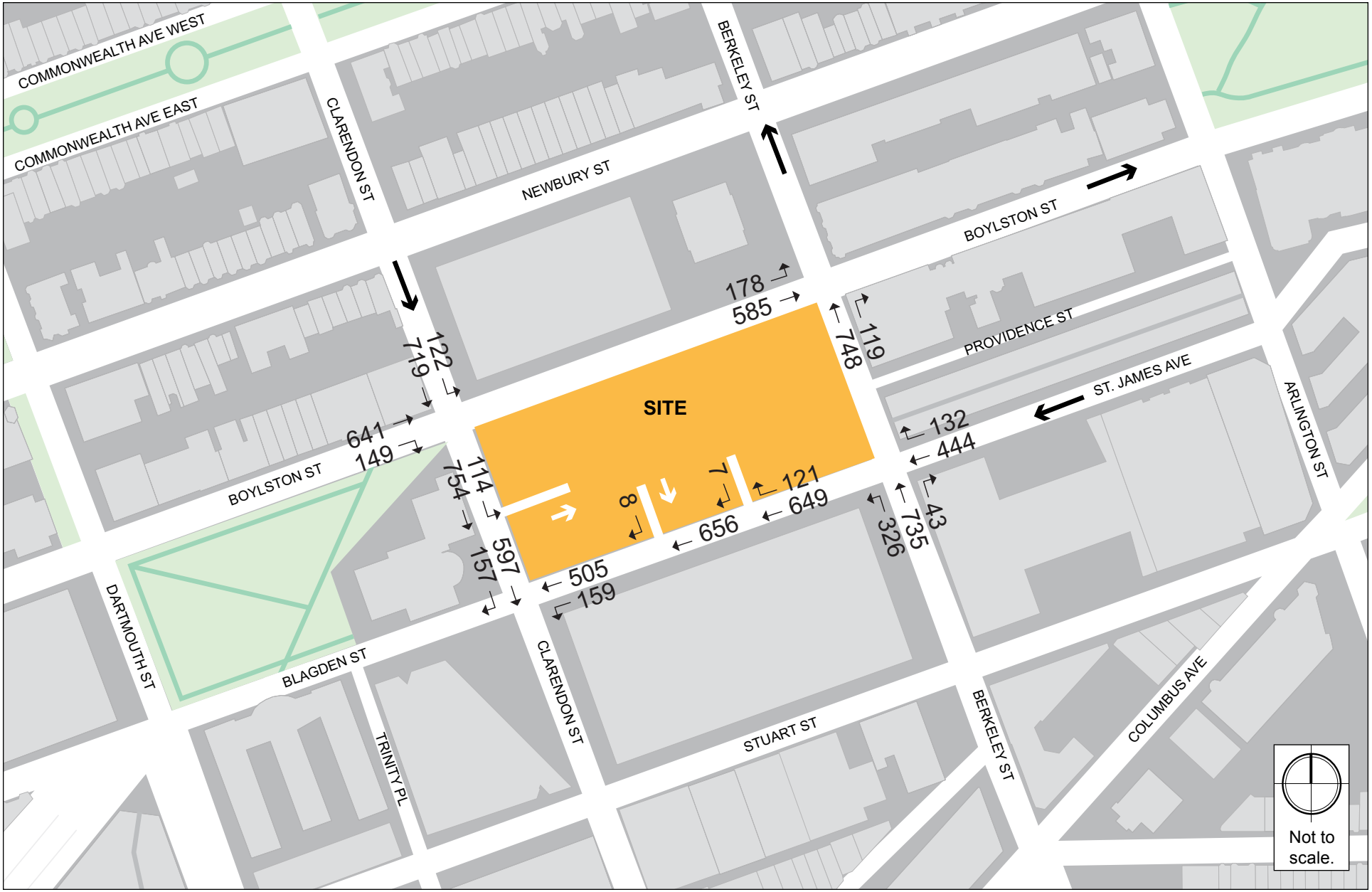

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Figure 2-10

No-Build Condition (2020) Intersection Volumes, a.m. Peak Hour

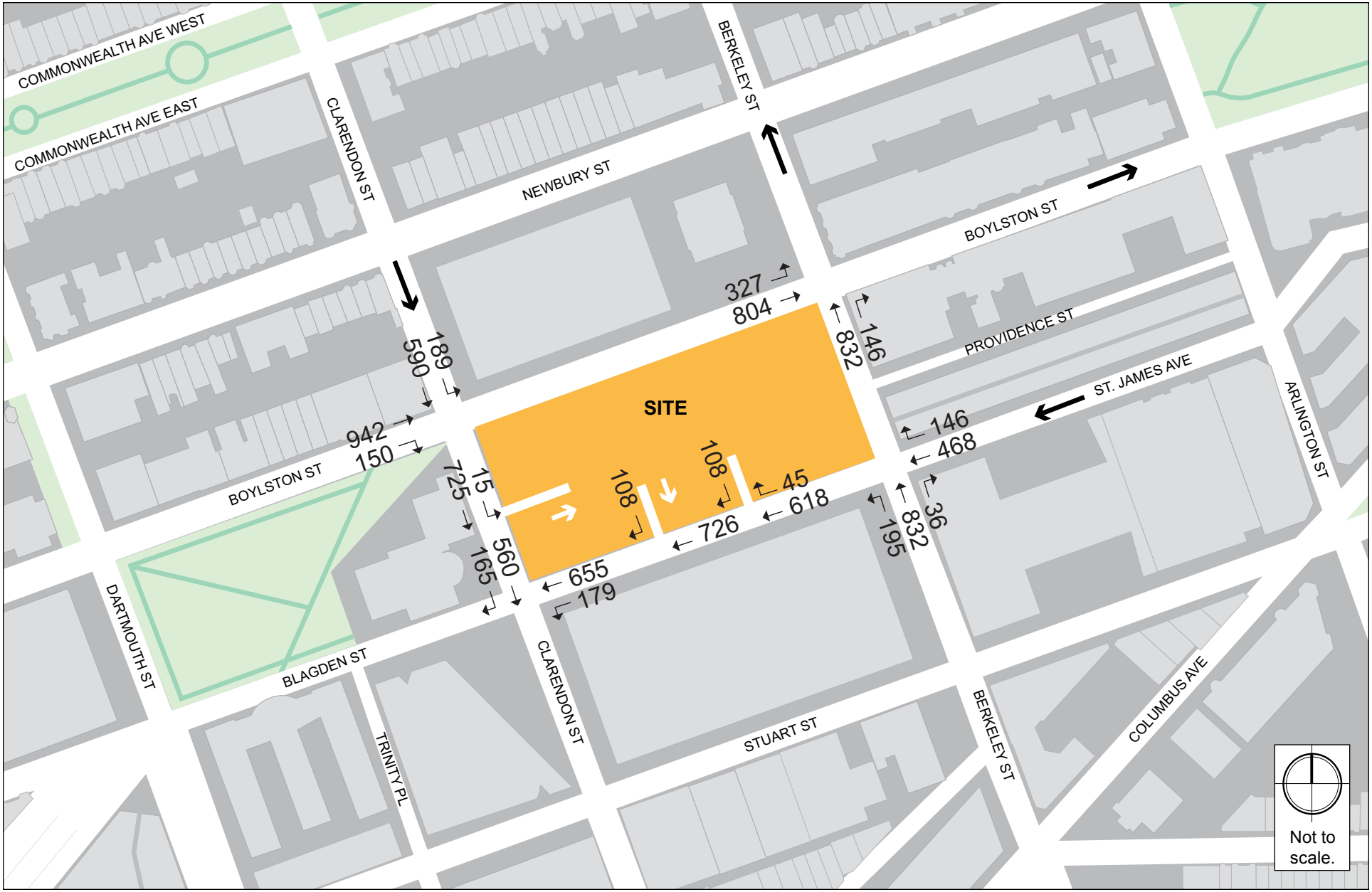

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Figure 2-11

No-Build Condition (2020) Intersection Volumes, p.m. Peak Hour

Table 2-7 No-Build Conditions (2020), Capacity Analysis Summary, a.m. Peak Hour

Intersection	LOS	Delay (seconds)	V/C Ratio	95% Queue Length (ft)
Signalized Intersections				
Boylston Street/Clarendon Street	**C**	**20.4**	**-**	**-**
Boylston EB thru | thru | thru	B	17.5	0.38	121
Boylston EB right	C	26.6	0.54	129
Clarendon SB left/thru | thru	C	21.4	0.68	270
Boylston Street/Berkeley Street	**B**	**17.5**	**-**	**-**
Boylston EB left/thru | thru | thru	C	27.2	0.57	198
Berkeley NB thru| thru	A	9.2	0.59	61
Berkeley NB right	A	7.3	0.21	m20
St. James Avenue/Berkeley Street	**C**	**26.4**	**-**	**-**
St. James WB thru | thru/right	C	24.0	0.61	190
Berkeley NB left/thru | thru | thru/right	C	27.6	0.78	251
St. James Avenue/Clarendon Street	**B**	**13.8**	**-**	**-**
St. James WB left/thru | thru | thru	C	22.0	0.41	130
Clarendon SB thru | thru/right	A	6.4	0.47	62
Unsignalized Intersections				
St. James Avenue/Garage Entrance and Exit	**-**	**-**	**-**	**-**
St. James WB thru | thru/right	A	0.0	0.28	0
Garage SB right	B	11.2	0.01	1
St. James Avenue/Garage Exit	**-**	**-**	**-**	**-**
St. James WB thru | thru | thru	A	0.0	0.14	0
Garage SB right	A	9.7	0.01	1
Clarendon Street/Garage Entrance	**-**	**-**	**-**	**-**
Clarendon SB left/thru | thru	A	2.8	0.32	6

# = 95th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after 2 cycles.
m = Volume for the 95th percentile queue is metered by the upstream signal.

Table 2-8 No-Build Conditions (2020), Capacity Analysis Summary, p.m. Peak Hour

Intersection	LOS	Delay (seconds)	V/C Ratio	95% Queue Length (ft)
Signalized Intersections				
Boylston Street/Clarendon Street	**C**	**20.5**	-	-
Boylston EB thru | thru | thru	B	13.7	0.45	156
Boylston EB right	C	23.7	0.57	132
Clarendon SB left/thru | thru	C	28.2	0.76	274
Boylston Street/Berkeley Street	**C**	**23.2**	-	-
Boylston EB left/thru | thru | thru	D	35.5	0.65	278
Berkeley NB thru| thru	A	9.5	0.71	77
Berkeley NB right	A	7.9	0.28	m26
St. James Avenue/Berkeley Street	**C**	**31.3**	-	-
St. James WB thru | thru/right	C	28.2	0.70	218
Berkeley NB left/thru | thru | thru/right	C	33.1	0.82	265
St. James Avenue/Clarendon Street	**B**	**17.1**	-	-
St. James WB left/thru | thru | thru	C	24.4	0.47	219
Clarendon SB thru | thru/right	A	8.7	0.48	108
Unsignalized Intersections				
St. James Avenue/Garage Entrance and Exit	-	-	-	-
St. James WB thru | thru/right	A	0.0	0.26	0
Garage SB right	B	11.9	0.18	17
St. James Avenue/Garage Exit	-	-	-	-
St. James WB thru | thru | thru	A	0.0	0.15	0
Garage SB right	B	10.8	0.16	14
Clarendon Street/Garage Entrance	-	-	-	-
Clarendon SB left/thru | thru	A	0.5	0.31	1

# = 95th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after 2 cycles.
m = Volume for the 95th percentile queue is metered by the upstream signal.

Under No-Build conditions, all intersections and approaches will continue to operate as under Existing Conditions, except the Boylston Street eastbound approach of the Boylston Street/Berkeley Street intersection. The operation of this approach would decrease from LOS C to LOS D during the p.m. peak hour with a minor increase in delay from 34.9 seconds to 35.5 seconds.

These No-Build Condition results indicate that the additional volume generated by background growth and other projects in the area will not impact operations at the study area intersections.

2.3.2 Build Conditions

2.3.2.1 Site Access and Circulation

Vehicular access to and egress from the Project's parking garage will continue to occur at the building's existing garage driveways on St. James Avenue and Clarendon Street. No changes to the garage driveway locations or garage operations are proposed with the Project.

With the Project, the building's main entrance will be relocated to Clarendon Street. While an existing covered passageway already exists on Clarendon Street, a new vestibule and grander lobby will be created to accommodate the direct access into the building and relocated pedestrian activity. See Figure 2-12 for a site plan.

2.3.2.2 Trip Generation Methodology

Trip generation is a complex, multi-step process that produces an estimate of vehicle, transit, walk, and bicycle trips associated with a proposed development and a specific land use program. Following standard industry practice, and as required by the BTD, trip generation for the Project was derived from the Institute of Transportation Engineers' (ITE) Trip Generation (9th edition, 2012). The ITE rates produce vehicle trip estimates, which are converted to person trips based on vehicle occupancy rates (VOR). Using appropriate mode split information for this specific study area, the total person trips are then allocated to vehicle, transit, and walk/bicycle trips.

Trip generation estimates for the Project's new land uses are also based on rates derived from ITE's *Trip Generation* (9th edition, 2012) fitted curve equations and average trip rates. Trips associated with the new land uses on the site are based on the following land use codes (LUC):

Land Use Code 710 — Office. This land use code is defined as a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. The building or buildings may contain a mixture of tenants that sell a variety of professional services.

Land Use Code 820 – Shopping Center/Retail. A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. Of the ITE retail categories, this one best suits the retail component proposed within the Project.

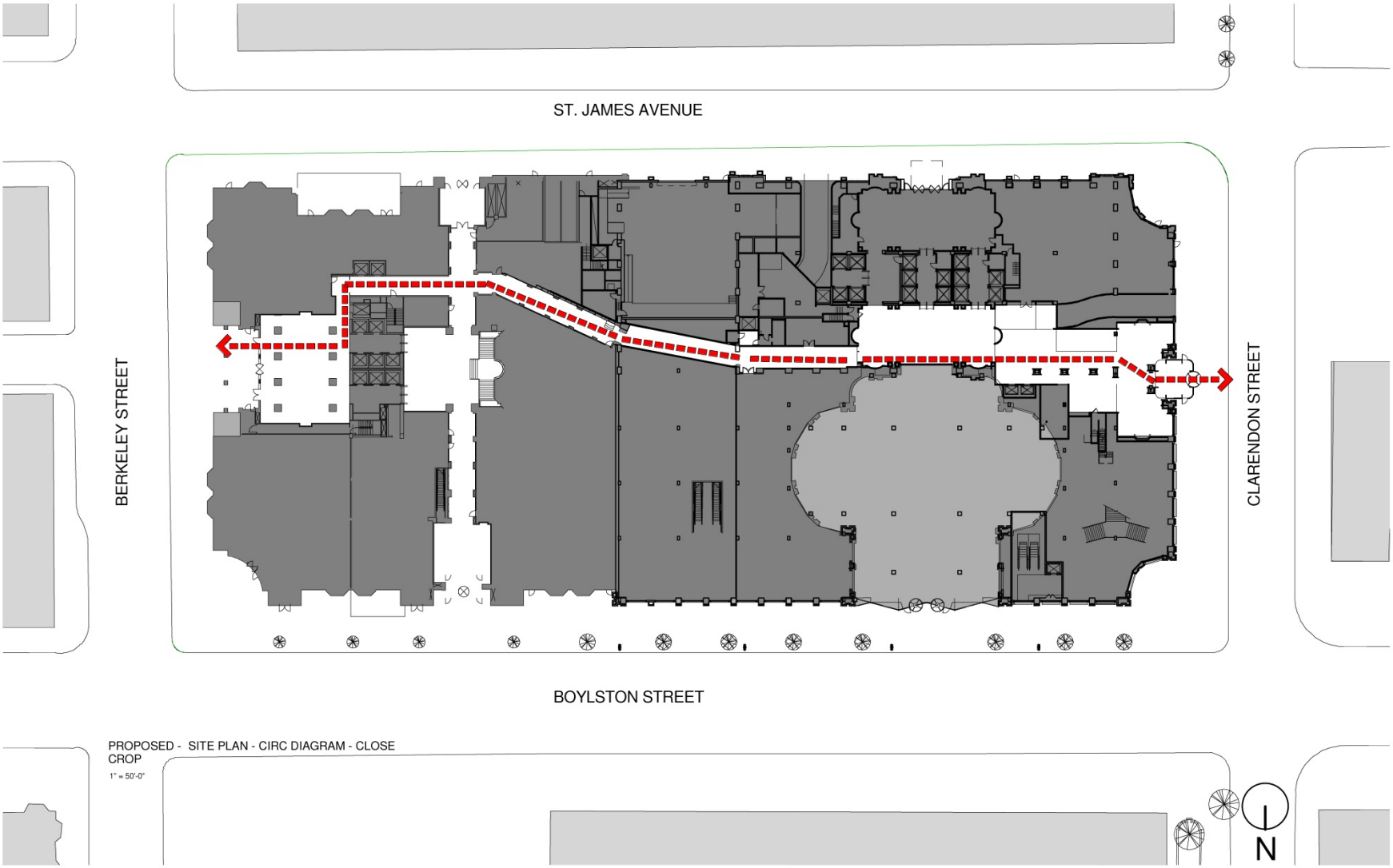

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Figure 2-12

Site Plan

LUC 831 - Quality Restaurant. This land use consists of eating establishments of high quality, with average turnover rates of at least one hour or longer. Generally, quality restaurants do not serve breakfast, some do not serve lunch, and all serve dinner.

2.3.2.3 Travel Mode Share

The BTD publishes vehicle, transit, and travel mode shares specific to each area of Boston. The Project site is located within BTD Area 4. As is standard practice, these specific neighborhood mode shares are used to estimate the number of new vehicle trips, transit trips, and walk/bicycle trips generated by the Project. BTD's travel mode share data for Area 4, are shown in Table 2-9.

Table 2-9 Travel Mode Shares

Land Use	Direction	Walk Share	Transit Share	Vehicle Share	Vehicle Occupancy Rate [1]
Daily					
Office	In	24%	32%	44%	1.1
	Out	24%	32%	44%	1.1
Retail	In	55%	16%	29%	1.8
	Out	55%	16%	29%	1.8
Restaurant	In	55%	16%	29%	2.2
	Out	55%	16%	29%	2.2
a.m. Peak Hour					
Office	In	25%	38%	37%	1.1
	Out	29%	28%	43%	1.1
Retail	In	57%	19%	24%	1.8
	Out	61%	13%	26%	1.8
Restaurant	In	57%	19%	24%	2.2
	Out	61%	13%	26%	2.2
p.m. Peak Hour					
Office	In	29%	28%	43%	1.1
	Out	25%	38%	37%	1.1
Retail	In	61%	13%	26%	1.8
	Out	57%	19%	24%	1.8
Restaurant	In	61%	13%	26%	2.2
	Out	57%	19%	24%	2.2

[1] persons per vehicle

2.3.2.4 Project Trip Generation

Table 2-10 shows the projected trip generation by land use and travel mode share for the proposed Project. (See Appendix C for detailed trip generation information). The net new Project generated traffic volumes were used to estimate Build Conditions in the traffic analysis.

Table 2-10 Trip Generation – Proposed Project

Land Use	Direction	Walk/Bicycle Trips	Transit Trips	Vehicle Trips
Daily				
Office	In	-24	-33	-41
	Out	-24	-33	-41
Retail	In	1,415	412	419
	Out	1,415	412	419
Restaurant	In	353	103	85
	Out	353	103	85
Total Daily	**In**	**1,744**	**482**	**463**
	Out	**1,744**	**482**	**463**
a.m. Peak Hour				
Office	In	-10	-15	-13
	Out	-2	-2	-2
Retail	In	44	15	10
	Out	25	5	6
Restaurant	In	3	1	1
	Out	2	0	0
Total a.m. Peak Hour	**In**	**37**	**1**	**-2**
	Out	**25**	**3**	**4**
p.m. Peak Hour				
Office	In	-1	-2	-3
	Out	-1	-2	-12
Retail	In	177	52	31
	Out	163	48	30
Restaurant	In	66	20	8
	Out	46	14	3
Total p.m. Peak Hour	**In**	**242**	**70**	**36**
	Out	**208**	**60**	**21**

As shown, the estimated net new daily vehicle trips generated by the Project will be 463 trips in and 463 trips out. In the a.m. peak hour, there will be a net increase of 4 vehicle trips (0 entering and 4 exiting). During the p.m. peak hour there will be a net increase of 57 trips (36 entering and 21 exiting). Activity related to the new retail and restaurant land uses will generally occur throughout the day, without a heavy concentration of trips during peak commuter travel periods.

2.3.2.5 Trip Distribution

A vehicular trip distribution pattern for the new vehicle trips was developed based on origin-destination data from BTD for Area 4 and knowledge of the local roadway network. The vehicle trip distribution is mapped in Figure 2-13.

2.3.2.6 Build Traffic Volumes

The Project-generated vehicle trips were distributed onto the roadway network. These trips are shown in Figure 2-14 and Figure 2-15, for the a.m. and p.m. peak hours, respectively. The trip assignments were added to the 2020 No-Build Conditions vehicular traffic volumes to develop the 2020 Build Conditions vehicular traffic volumes. The 2020 Build a.m. and p.m. peak hour traffic volumes are shown in Figure 2-16 and Figure 2-17, respectively.

2.3.2.7 Build Conditions Traffic Operations

The 2020 Build condition analysis was based on the same methodology as the 2015 Existing condition and 2020 No-Build condition analysis. The resulting intersection capacity analysis summaries for the Build conditions are shown in Table 2-11 and Table 2-12 for a.m. and p.m. peak hours, respectively. The tables show level of service, average delay, volume to capacity ratio, and 95th percentile queue length (feet) for the overall intersection and each approach.

Complete Synchro reports are provided in Appendix C.

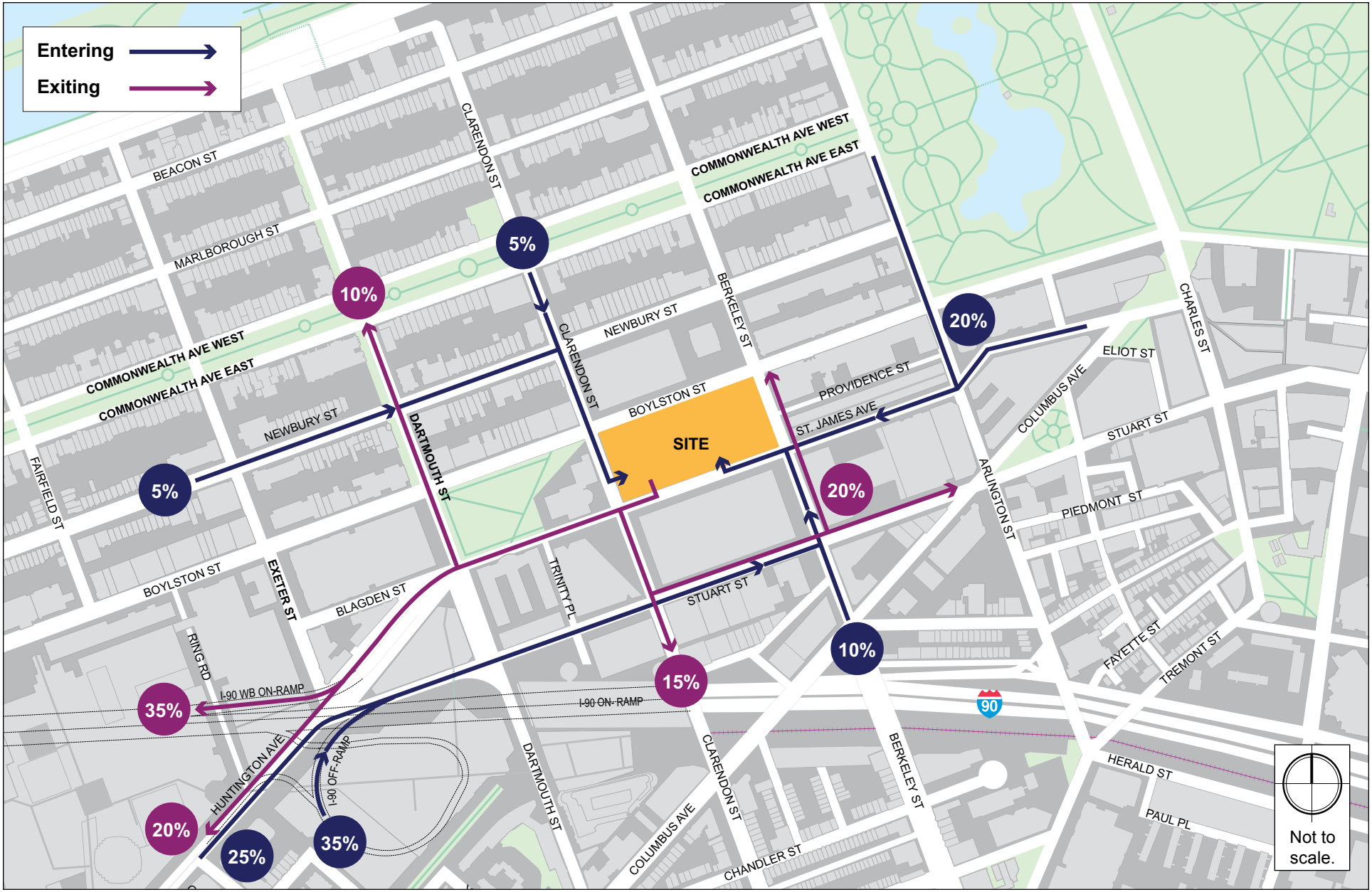

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Figure 2-13
Vehicle Trip Entering/Exiting Distribution

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Figure 2-14

Project-generated Vehicle Trips, a.m. Peak Hour

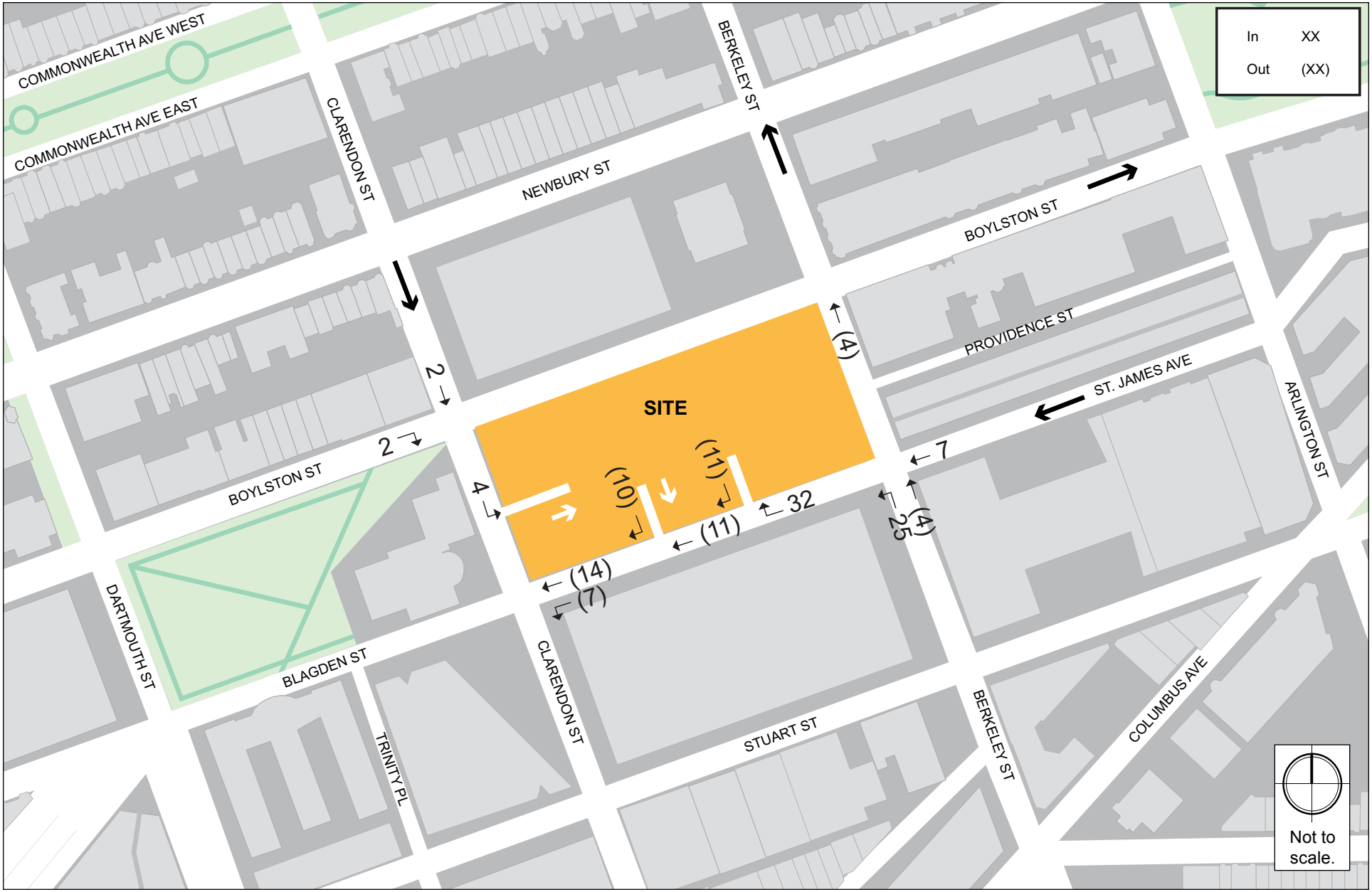

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Figure 2-15
Project-generated Vehicle Trips, p.m. Peak Hour

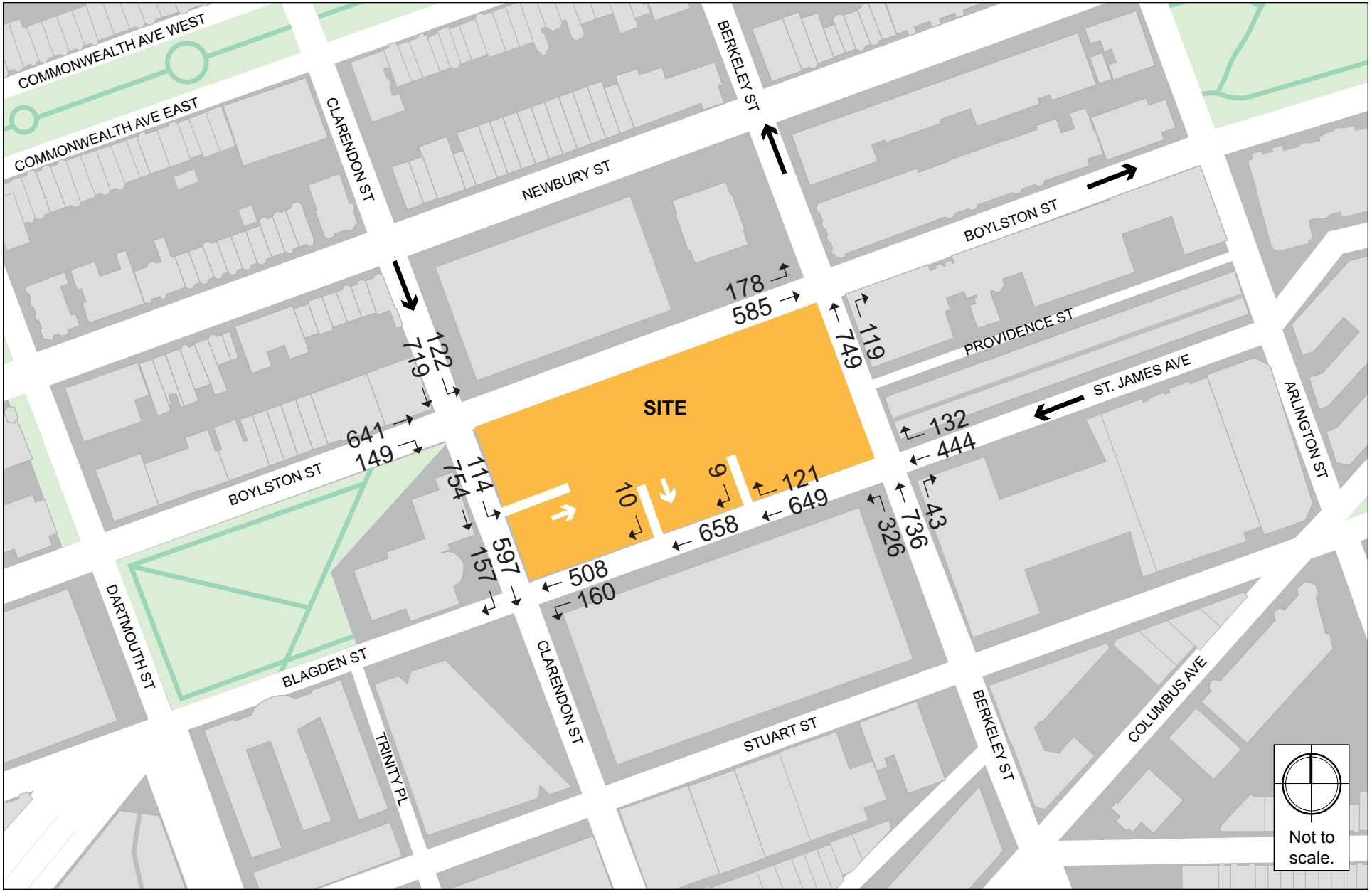

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Figure 2-16

Build Condition (2020) Intersection Volumes, a.m. Peak Hour

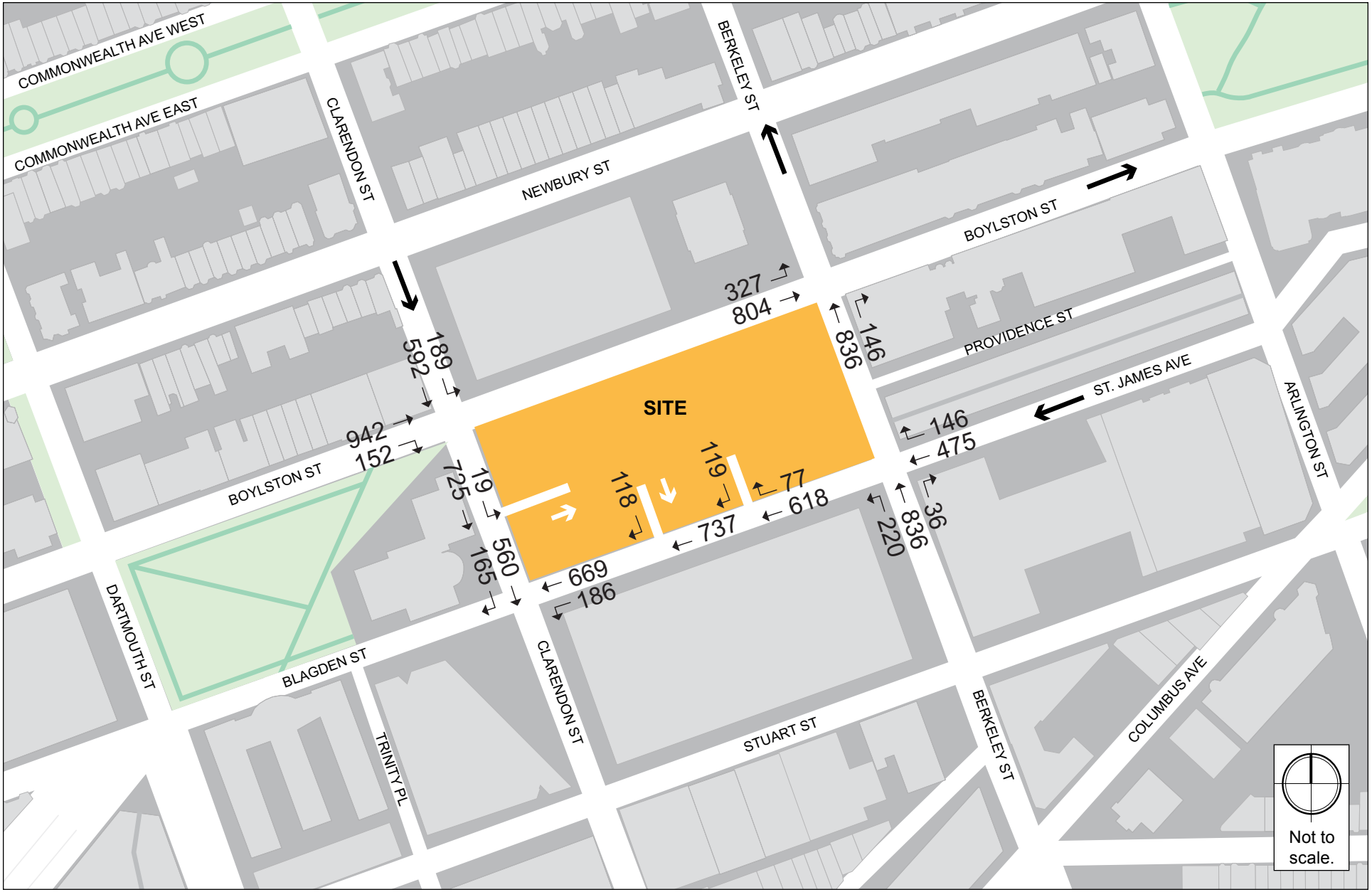

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Figure 2-17

Build Condition (2020) Intersection Volumes, p.m. Peak Hour

Table 2-11 Build Conditions (2020), Capacity Analysis Summary, a.m. Peak Hour

Intersection	LOS	Delay (seconds)	V/C Ratio	95% Queue Length (ft)
Signalized Intersections				
Boylston Street/Clarendon Street	**C**	**20.6**	**-**	**-**
Boylston EB thru | thru | thru	B	17.5	0.38	121
Boylston EB right	C	26.6	0.54	129
Clarendon SB left/thru | thru	C	21.8	0.70	278
Boylston Street/Berkeley Street	**B**	**17.8**	**-**	**-**
Boylston EB left/thru | thru | thru	C	27.4	0.58	202
Berkeley NB thru| thru	A	9.7	0.61	65
Berkeley NB right	A	7.4	0.22	m21
St. James Avenue/Berkeley Street	**C**	**26.4**	**-**	**-**
St. James WB thru | thru/right	C	24.0	0.61	190
Berkeley NB left/thru | thru | thru/right	C	27.6	0.78	252
St. James Avenue/Clarendon Street	**B**	**14.0**	**-**	**-**
St. James WB left/thru | thru | thru	C	22.2	0.43	133
Clarendon SB thru | thru/right	A	6.4	0.47	62
Unsignalized Intersections				
St. James Avenue/Garage Entrance and Exit	**-**	**-**	**-**	**-**
St. James WB thru | thru/right	A	0.0	0.28	0
Garage SB right	B	11.2	0.02	1
St. James Avenue/Garage Exit	**-**	**-**	**-**	**-**
St. James WB thru | thru | thru	A	0.0	0.14	0
Garage SB right	A	9.7	0.01	1
Clarendon Street/Garage Entrance	**-**	**-**	**-**	**-**
Clarendon SB left/thru | thru	A	2.8	0.32	6

# = 95th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after 2 cycles.
m = Volume for the 95th percentile queue is metered by the upstream signal.

Table 2-12 Build Conditions (2020), Capacity Analysis Summary, p.m. Peak Hour

Intersection	LOS	Delay (seconds)	V/C Ratio	95% Queue Length (ft)
Signalized Intersections				
Boylston Street/Clarendon Street	**C**	**20.6**	**-**	**-**
Boylston EB thru | thru | thru	B	13.8	0.46	161
Boylston EB right	C	24.7	0.59	140
Clarendon SB left/thru | thru	C	28.3	0.76	275
Boylston Street/Berkeley Street	**C**	**23.4**	**-**	**-**
Boylston EB left/thru | thru | thru	D	35.5	0.65	278
Berkeley NB thru| thru	B	11.2	0.78	m81
Berkeley NB right	A	8.2	0.30	m28
St. James Avenue/Berkeley Street	**C**	**34.2**	**-**	**-**
St. James WB thru | thru/right	C	28.4	0.71	221
Berkeley NB left/thru | thru | thru/right	D	37.3	0.89	#282
St. James Avenue/Clarendon Street	**B**	**17.5**	**-**	**-**
St. James WB left/thru | thru | thru	C	25.0	0.48	m219
Clarendon SB thru | thru/right	A	9.2	0.50	113
Unsignalized Intersections				
St. James Avenue/Garage Entrance and Exit	**-**	**-**	**-**	**-**
St. James WB thru | thru/right	A	0.0	0.26	0
Garage SB right	B	10.3	0.16	14
St. James Avenue/Garage Exit	**-**	**-**	**-**	**-**
St. James WB thru | thru | thru	A	0.0	0.16	0
Garage SB right	B	10.9	0.17	16
Clarendon Street/Garage Entrance	**-**	**-**	**-**	**-**
Clarendon SB left/thru | thru	A	0.6	0.31	1

# = 95th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after 2 cycles.
m = Volume for the 95th percentile queue is metered by the upstream signal.

There are no changes in overall LOS from the No-Build to Build conditions at any of the intersections studied. The St. James Avenue at Berkeley Street intersection will continue to operate at LOS C although the Berkeley Street northbound approach would decrease from LOS C to LOS D during the p.m. peak hour. The Boylston/ Berkeley Street intersection will also continue to operate at overall LOS C although the northbound/through/right LOS would decrease from LOS A to LOS B.

No study intersection will experience an overall change in level of service designation with the additional volume generated by the Project.

These results indicate that Project will not adversely affect traffic operations in the study area.

2.3.2.8 Build Parking Conditions

The additional parking activity generated by the net increase in retail and restaurant space will be accommodated at parking spaces in the on-site garage and other parking facilities in the area (as shown in Figure 2-5.) These land uses tend to generate trips during the afternoon and evening, after many of the daytime office parkers have exited.

2.3.2.9 Build Public Transit Conditions

As shown in Table 2-10, the Project will generate an estimated 964 public transportation trips daily, with 4 new trips during the a.m. peak hour and 130 new trips during the p.m. peak hour. Given the variety and frequency of transit services in the area, including the Green Line, Orange Line, buses, and commuter rail, the estimated increase in transit riders can adequately be served by existing transit options.

2.3.2.10 Build Bicycle Conditions

The League of American Bicyclists annually examines bicycle usage in the 70 largest cities in the country. In 2012, approximately two percent of all Boston area commuters rode their bicycles to work, compared to one percent in 2001. To further disaggregate the walk/bicycle shares shown in Table 2-9, this two percent factor was applied to all Project land uses to estimate the number of new bicycle trips. It is estimated that the Project will generate about two new bicycle trips during the a.m. peak hour and about ten new trips during the p.m. peak hour.

The existing bicycle facilities described under Section 2.2.9 can accommodate this new demand.

2.3.2.11 Build Conditions Loading and Service Activity

The net new loading and service activity generated by the additional uses will be accommodated by the existing on-site loading area located on St. James Avenue. Delivery trip estimates for the new land uses were developed based on Central Transportation Planning Staff[1] data for the identified land uses. Office deliveries are related primarily to office supplies and couriers, depending on the nature of the office tenants. Restaurant and retail deliveries include primarily linens, specialty foods, and retail merchandise suppliers.

A summary of anticipated the net new loading/service activity is presented in Table 2-13.

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

Table 2-13 Delivery Activity by Land Use

Land Use	Net New Daily Deliveries
Office	-2
Retail	+8
Restaurant	+5
Total	+11

The Project is expected to generate approximately 11 new deliveries per day. It is anticipated that the majority of these deliveries will occur between 7:00 a.m. and 1:00 p.m. The low number of net new deliveries will be accommodated within the building's existing loading area and have minimal impact on the vehicular operations in the study area.

2.4 Transportation Demand Management

The Proponent is a member of A Better City (ABC), the transportation management association for downtown Boston, including the Back Bay, and is committed to Transportation Demand Management (TDM) measures that discourage single-occupant vehicle travel. The Proponent currently provides the following commuter benefits to building employees:

- Guaranteed ride home;
- Carpool subsidies;
- Bus and boat subsidies;
- Vanpool subsidies;
- Protected bicycle racks in the parking garage;
- Walking and biking rewards; and
- Promotional events, such as the recent (April 2015) commuter fair where coffee and information on available commuter benefits were provided to building employees.

The Proponent will continue to provide these benefits to building employees, including new employees who will be hired as a result of this Project.

2.5 Transportation Access Plan Agreement

While the traffic impacts associated with the new trips are minimal, 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.

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 and any other responsibilities that are agreed to by both the Proponent and the BTD.

The Proponent will also produce a Construction Management Plan (CMP) for review and approval by BTD. The CMP will detail the schedule, staging, parking, delivery, and other associated impacts of the construction of the Project.

2.6 Evaluation of Short-term Construction Impacts

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.

The Construction Management Plan to be executed with the City prior to commencement of construction will document all committed measures.

Chapter 3.0

Environmental Review Component

3.0 ENVIRONMENTAL REVIEW COMPONENT

3.1 Wind

3.1.1 Introduction

Rowan Williams Davies & Irwin Inc. (RWDI) was retained by the Proponent to conduct a pedestrian wind assessment for the proposed Project. The objective of the assessment is to provide a qualitative evaluation of the potential wind impacts of the proposed infill building on the pedestrian wind comfort conditions on and around the Project site.

This qualitative assessment is based on the following:

- a review of regional long-term meteorological data for the area;
- design drawings;
- RWDI's engineering judgment and knowledge of wind flows around buildings;
- RWDI's experience with wind tunnel testing of various building projects[1][2][3], including many in Boston; and
- use of software developed by RWDI (Windestimator) for estimating the potential wind conditions around generalized building forms.

The qualitative approach provides a screening-level estimation of potential wind conditions. It is expected that the Project will not negatively affect the existing wind conditions along the sidewalks on Clarendon and Boylston streets. Wind conditions at the new entrances on the north and west facades are expected to be comfortable for the intended use.

---

1 C.J. Williams, H. Wu, W.F. Waechter and H.A. Baker (1999), "Experience with Remedial Solutions to Control Pedestrian Wind Problems", 1*0th International Conference on Wind Engineering, Copenhagen, Denmark.*

2 H. Wu, C.J. Williams, H.A. Baker and W.F. Waechter (2004), "Knowledge-based Desk-Top Analysis of Pedestrian Wind Conditions", *ASCE Structure Congress 2004*, Nashville, Tennessee.

3 H. Wu and F. Kriksic (2012). "Designing for Pedestrian Comfort in Response to Local Climate", *Journal of Wind Engineering and Industrial Aerodynamics*, vol.104-106, pp.397-407.

3.1.2 Building and Site Information

The existing building at 500 Boylston Street is bounded by Boylston Street to the north, St. James Avenue to the south, Clarendon Street to the west and 222 Berkeley Street so the east (see Figure 3.1-1). The site is surrounded by mid to high-rise buildings to the immediate north, east, south and southwest, and by a low-rise building to the west. High-rise buildings are surrounding the site on the south and southwest sides.

The existing building consists of a six-story podium on the northern portion of the site facing Boylston Street and a 19-story tower behind it. There is a courtyard in the middle of the podium on Boylston Street with a passageway to Clarendon Street (see Figure 3.1-2). The proposed Project will fill in this courtyard with a new structure, and will modify the north (Boylston Street) and west (Clarendon Street) facades and entrances of the building (see Figures 3.1-34 and 3.1-4). A roof deck is proposed above Level 5 of the infill building.

Pedestrian areas on and around the Project site which might potentially be affected by the Project are the entrances on the north and west facades, sidewalks on Boylston and Clarendon Streets, and the roof deck.

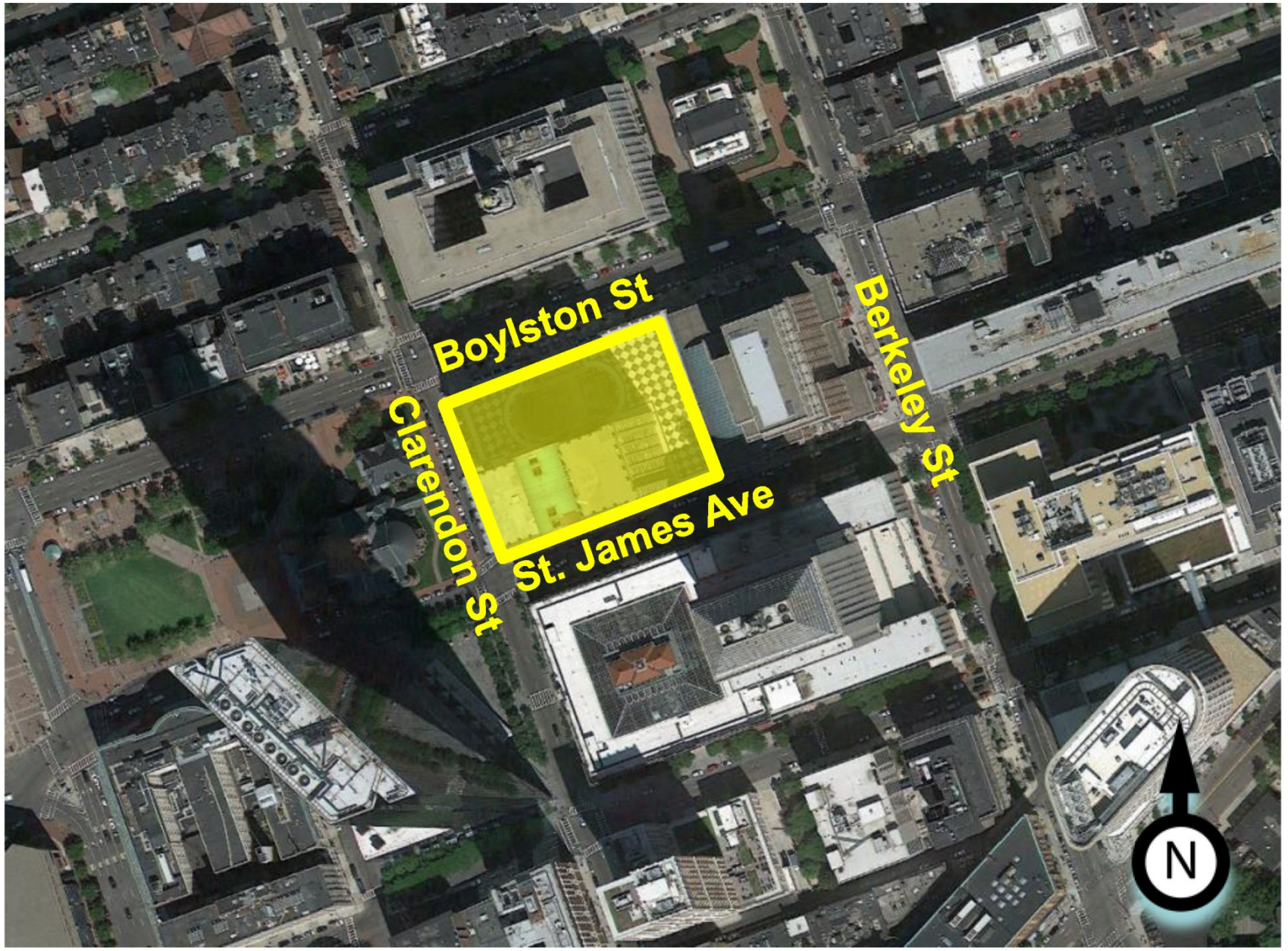
3.1.3 Meteorological Data

Wind statistics at Boston-Logan International Airport between 1973 and 2011, inclusive, were analyzed for the spring (March to May), summer (June to August), fall (September to November) and winter (December to February) seasons. Figure 3.1-5 graphically depicts the distributions of wind frequency and directionality for the four seasons and for the annual period. When all winds are considered (regardless of speed), winds from the northwest and southwest quadrants are predominant. The northeasterly winds are also frequent, especially in the spring.

Strong winds with mean speeds greater than 20 mph (red bands in the figures) are prevalently from the northwesterly directions throughout the year, while the southwesterly and northeasterly winds are also frequent.

Winds from the northwest, southwest and northeast directions are considered most relevant to the current study, although winds from other directions were also considered.

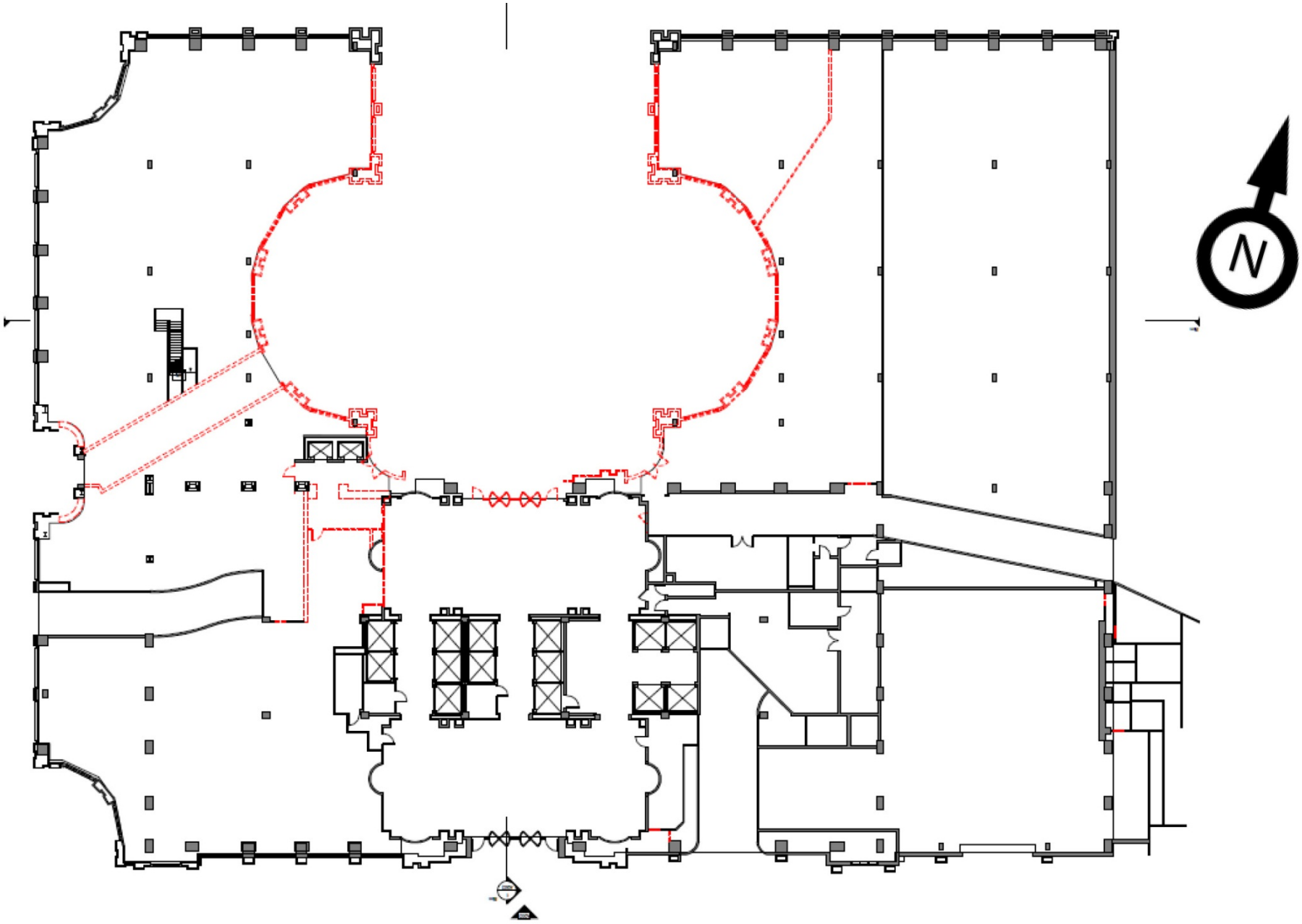
[4] The Boylston Street infill has been slightly revised since the original wind analysis and currently proposes to continue the rhythm of the existing bays of the Boylston Street façade. The evolution of the design is not anticipated to impact the results of the wind analysis.



500 Boylston Street Boston, Massachusetts

Figure 3.1-1

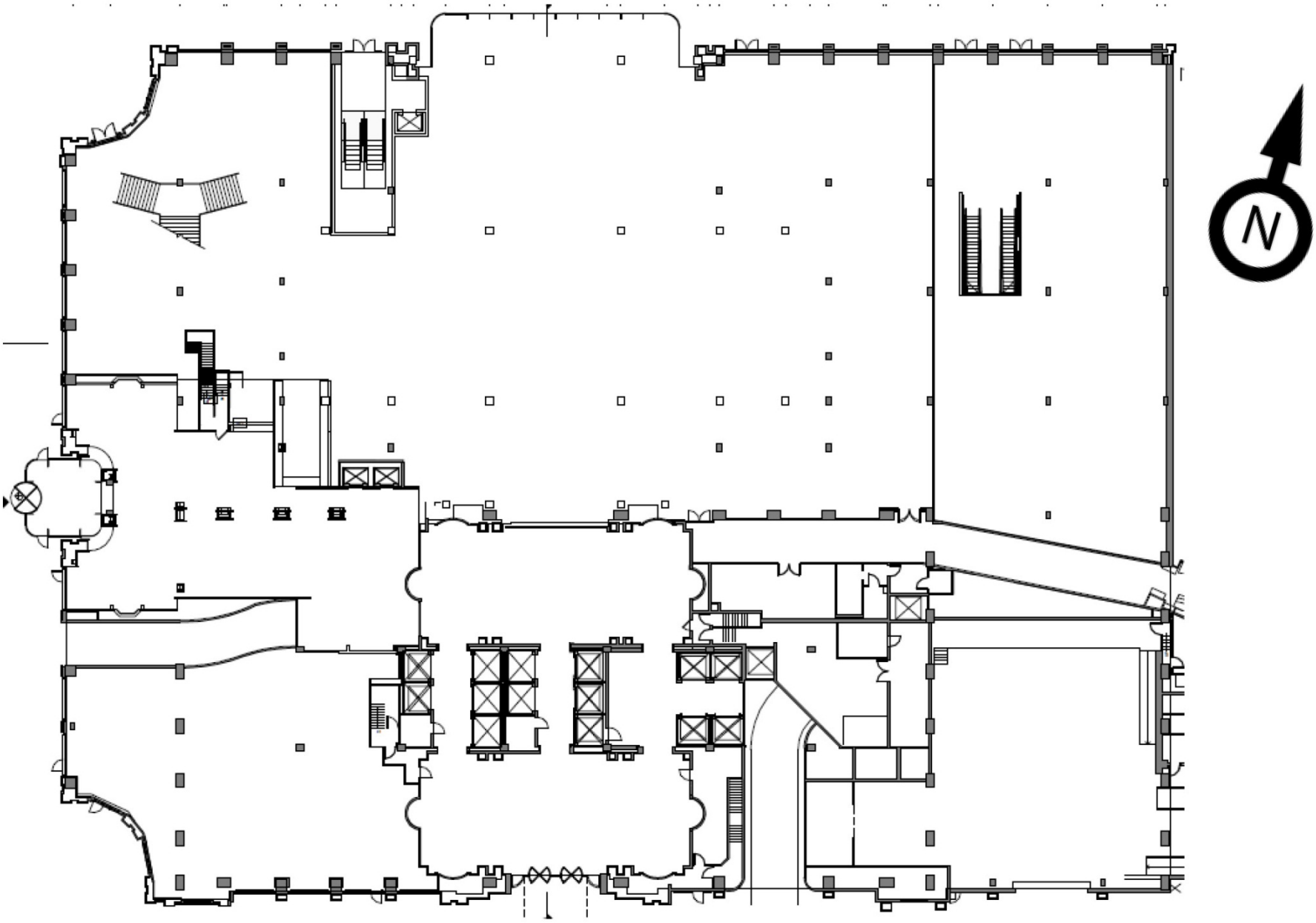
Aerial Photograph of Existing Project Site



500 Boylston Street Boston, Massachusetts

Figure 3.1-2

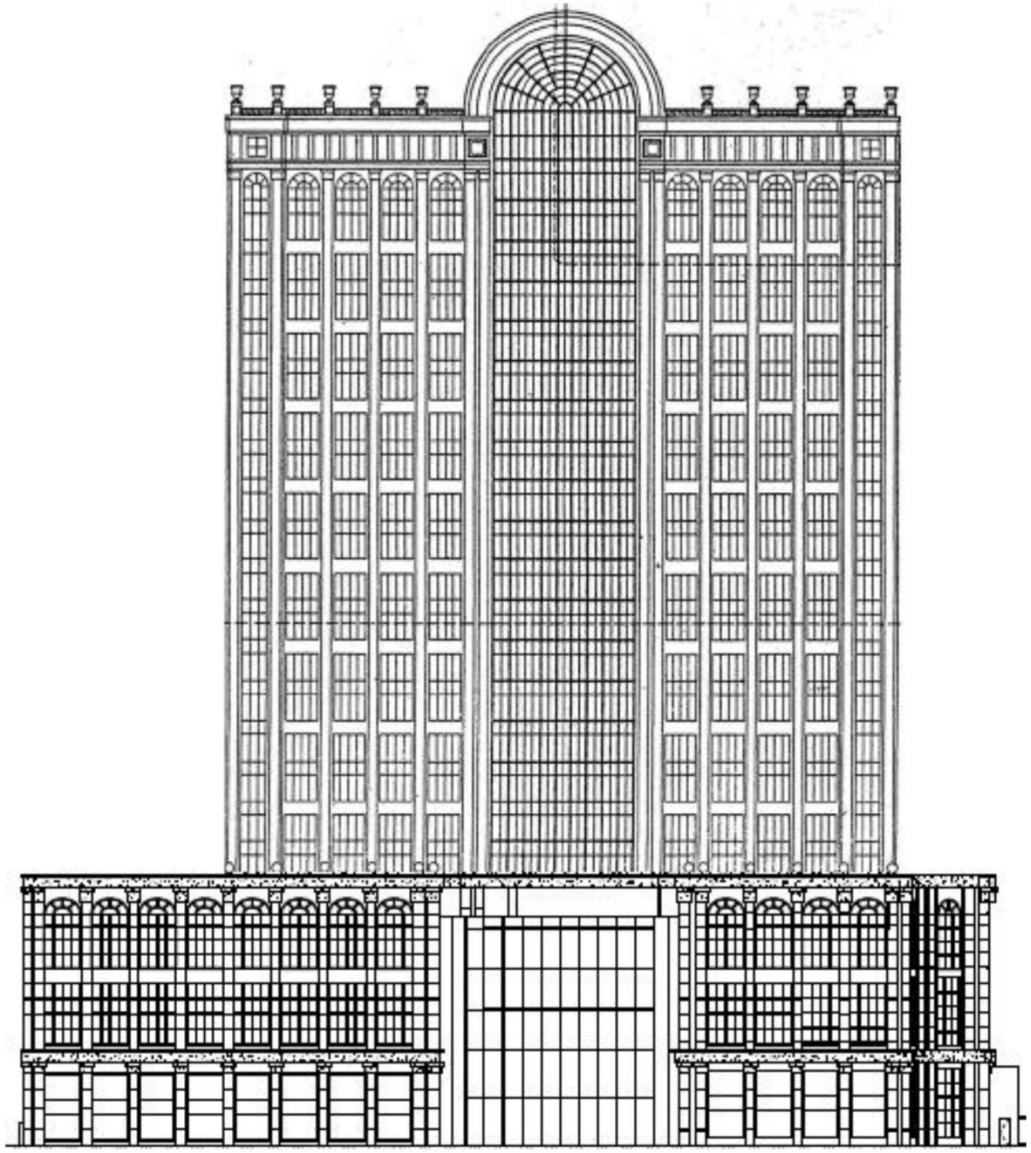
Existing Ground Floor Plan



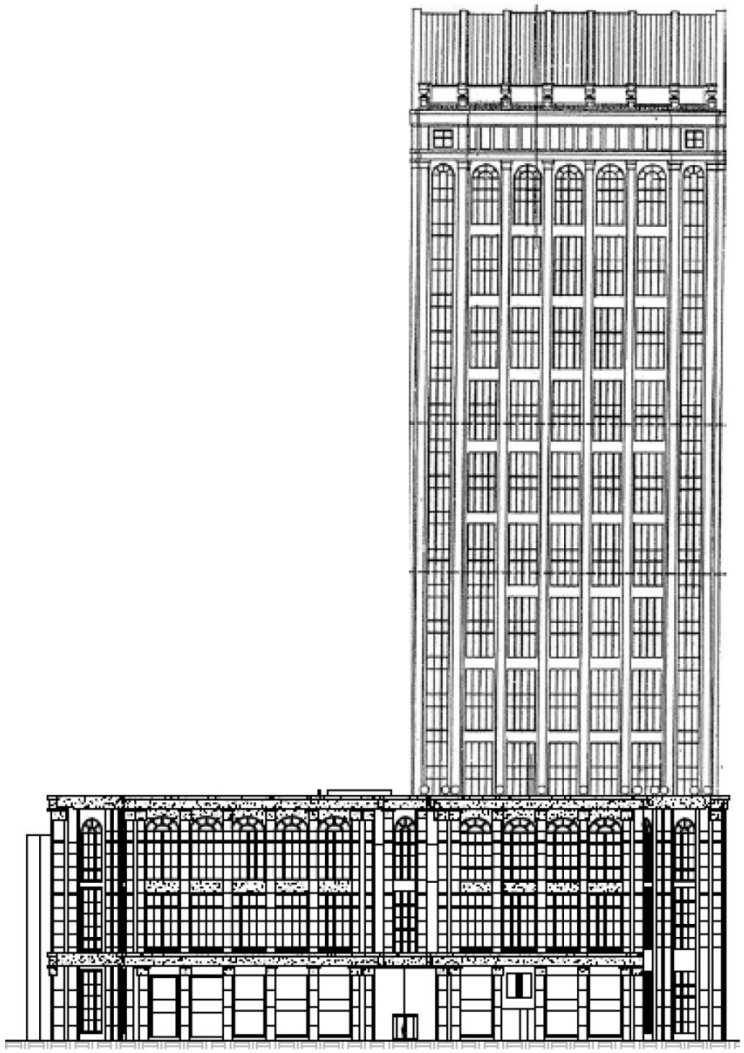
500 Boylston Street Boston, Massachusetts

Figure 3.1-3

Proposed Ground Floor Plan



Boylston St Elevation

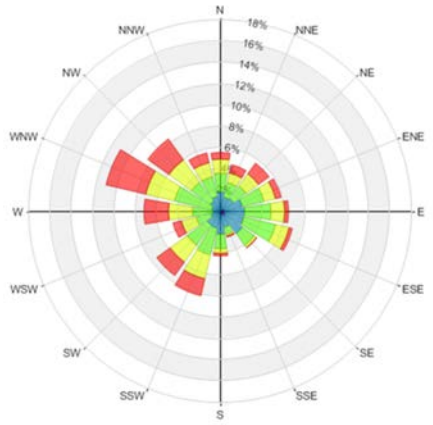


Clarendon St Elevation

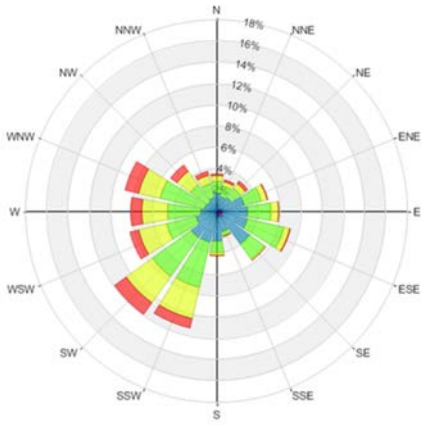
500 Boylston Street Boston, Massachusetts

Figure 3.1-4

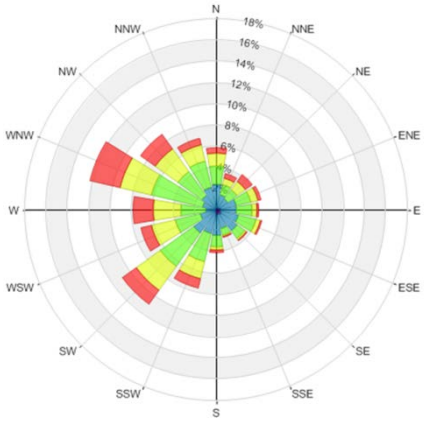
Proposed Building Elevations



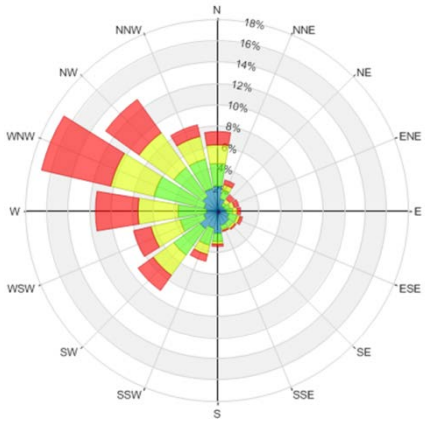
Spring (March to May)



Summer (June to August)



Fall (September to November)



Winter (December to February)

Wind Speed (mph)

Calm

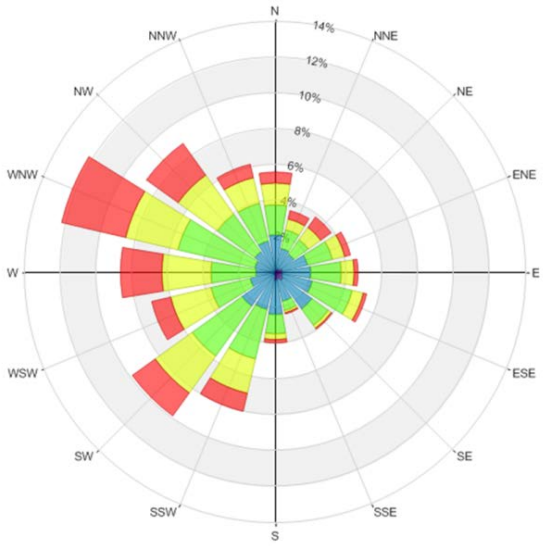
1-5

6-10

11-15

16-20

>20



Annual Winds

500 Boylston Street Boston, Massachusetts

Figure 3.1-5

Directional Distribution (%) of Winds (Blowing From) at Boston Logan International Airport (1981 to 2013)

3.1.4 Explanation of Pedestrian Wind Criteria

The BRA has adopted two standards for assessing the relative wind comfort of pedestrians. First, the BRA wind design guidance criterion states that an effective gust velocity (hourly mean wind speed +1.5 times the root mean square wind speed) of 31 mph should not be exceeded more than one percent of the time.

The second set of criteria used by the BRA to determine the acceptability of specific locations is based on the work of Melbourne[5]. This set of criteria is used to determine the relative level of pedestrian wind comfort for activities such as sitting, standing, or walking. The criteria are expressed in terms of benchmarks for the one-hour mean wind speed exceeded 1% of the time (i.e., the 99-percentile mean wind speed). They are as follows:

BRA Mean Wind Criteria*

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

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

Pedestrians on sidewalks will be active and wind speeds comfortable for walking are appropriate. Lower wind speeds comfortable for standing are desired for building entrances where people are apt to linger. For outdoor decks and terraces, low wind speeds comfortable for sitting are desired during the summer. In the winter, wind conditions in these areas may not be of a serious concern due to limited usage.

The wind climate found in a typical downtown location in Boston is generally comfortable for the pedestrian use of sidewalks and thoroughfares and meets the BRA effective gust velocity criterion of 31 mph. However, without any mitigation measures, this wind climate is likely to be frequently unsuitable for more passive activities such as sitting. In addition, elevated wind conditions are expected around the John Hancock Tower to the immediate southwest of the development site and these wind conditions will not be affected by the Project.

[5] Melbourne, W.H., 1978, "Criteria for Environmental Wind Conditions", *Journal of Industrial Aerodynamics*, 3 (1978) 241 - 249.

3.1.5 Pedestrian Wind Conditions

3.1.5.1 Background

Predicting wind speeds and occurrence frequencies is complicated. It involves building geometry, orientation, position and height of surrounding buildings, upstream terrain and the local wind climate. Over the years, RWDI has conducted more than 2,500 wind-tunnel model studies on pedestrian wind conditions around buildings, yielding a broad knowledge base. This knowledge has been incorporated into RWDI's proprietary software that allows, in many situations, for a qualitative, screening-level numerical estimation of pedestrian wind conditions without wind tunnel testing. Following is a description of expected wind conditions in various areas which might be affected by the Project.

3.1.5.2 Sidewalks and Building Corners

The existing wind conditions on sidewalks and building corners are expected to remain unchanged with the addition of the infill building at 500 Boylston Street and the new vestibules at 222 Berkeley Street.

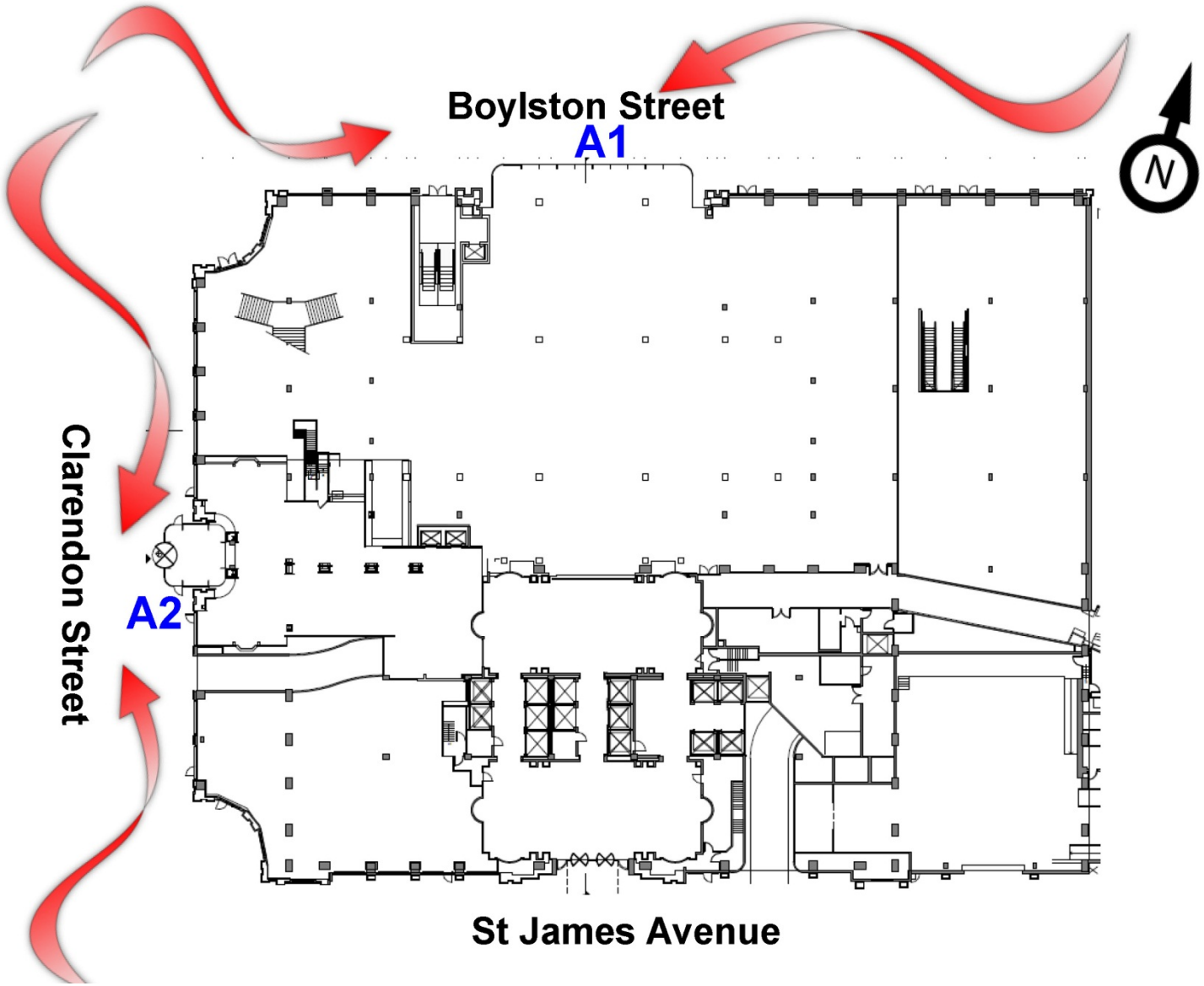
Approaching winds from the northwest, northeast and southwest are expected to be deflected down by the existing building along Clarendon Street and Boylston Street (see Figure 3.1-6), resulting in wind conditions along the sidewalks on these streets that are comfortable for standing or walking throughout the year, which is appropriate for the intended use. Similar to existing conditions, higher wind speeds with occasional uncomfortable conditions in the winter and spring are expected around the building corners, in particular at the intersection of Clarendon Street and St James Avenue.

3.1.5.3 Building Entrances

Addition of the Project to the existing building at 500 Boylston Street results in one or more new entrance locations on the north façade of the building on Boylston Street. Additionally, as part of the Project, a new entrance is added on the west façade of the building on Clarendon Street (Locations A1 and A2 in Figure 3.1-6). These entrances are located in the middle of the street block, away from building corners. Wind conditions at these locations are expected to be comfortable for sitting or standing throughout the year, which are appropriate for the intended use.

3.1.5.4 Roof Deck

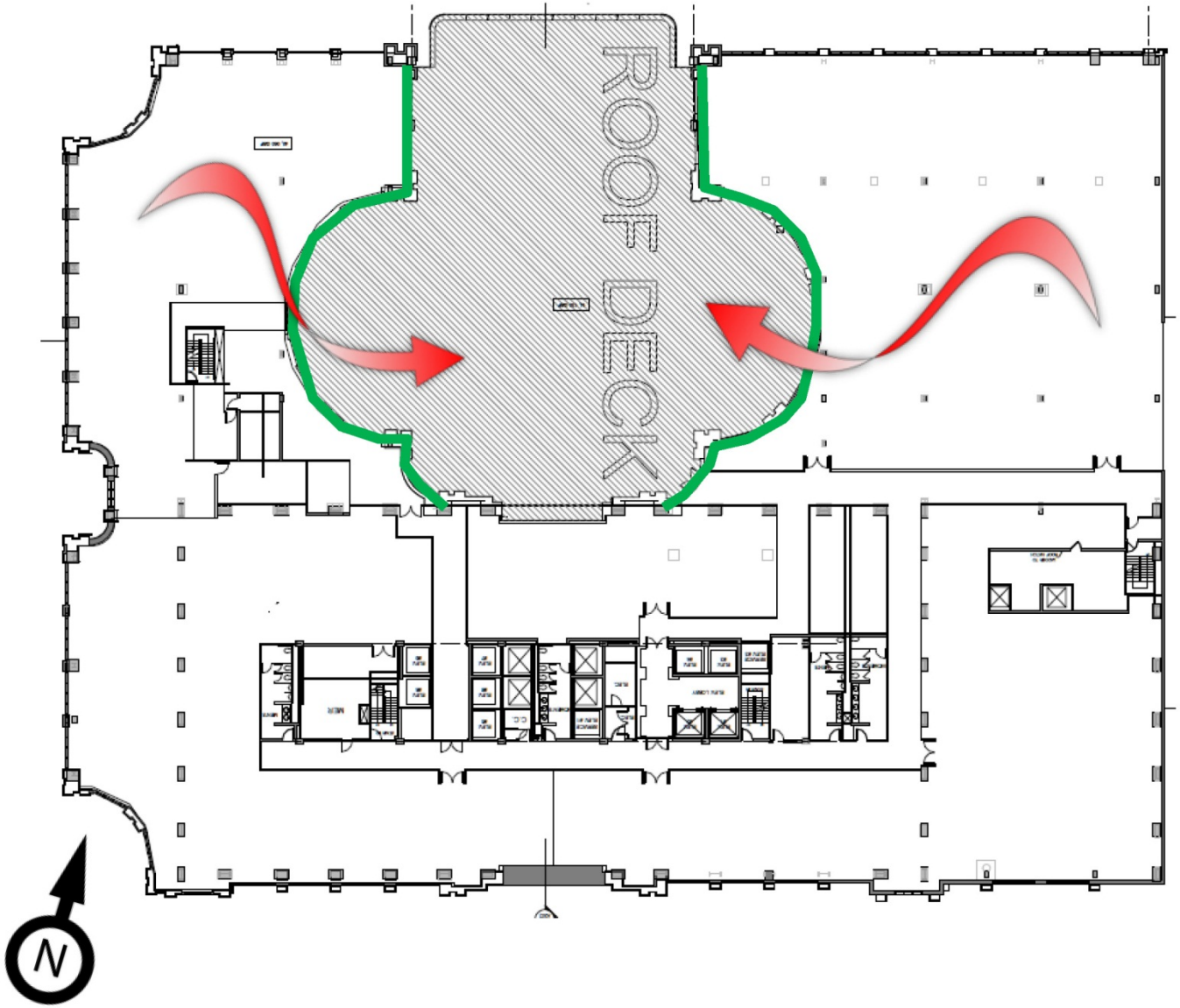
The Project includes a new roof deck above Level 5 of the new structure (see Figure 3.1-7). During summer, when this area will be used more frequently, approaching winds are from the southwest direction (see the wind roses in Figure 3.1-5) which will be largely blocked by the 25-story tower of the 500 Boylston Street building on the south side of the deck and other surrounding buildings to the southwest. As a result, wind conditions comfortable for sitting or standing are expected at this area during the summer. Throughout the rest of the



500 Boylston Street Boston, Massachusetts

Figure 3.1-6

Existing Wind Flow Pattern



500 Boylston Street Boston, Massachusetts

Figure 3.1-7

Proposed Roof Deck

year, winds from the northwest and northeast directions might horizontally approach the roof deck area. Additionally, the tall north building façade might intercept the approaching winds and redirect them down to the deck level, resulting in slightly higher wind speeds at this location (see Figures 3.1-7 and 3.1-8).

3.1.6 Summary

The existing building consists of a six-story podium on the northern portion of the site facing Boylston Street and a 19-story tower behind it. There is a courtyard on Boylston Street in the middle of the podium with a passageway to Clarendon. The proposed Project will fill in this courtyard with a new structure, and will modify the north (Boylston Street) and west (Clarendon Street) facades and entrances of the building. A roof deck is proposed above Level 5 of the infill building.

It is expected that the Project will not negatively affect the existing wind conditions along the sidewalks on Clarendon and Boylston Streets. Also, wind conditions at the new entrances on the north and west facades are expected to be comfortable for the intended use.

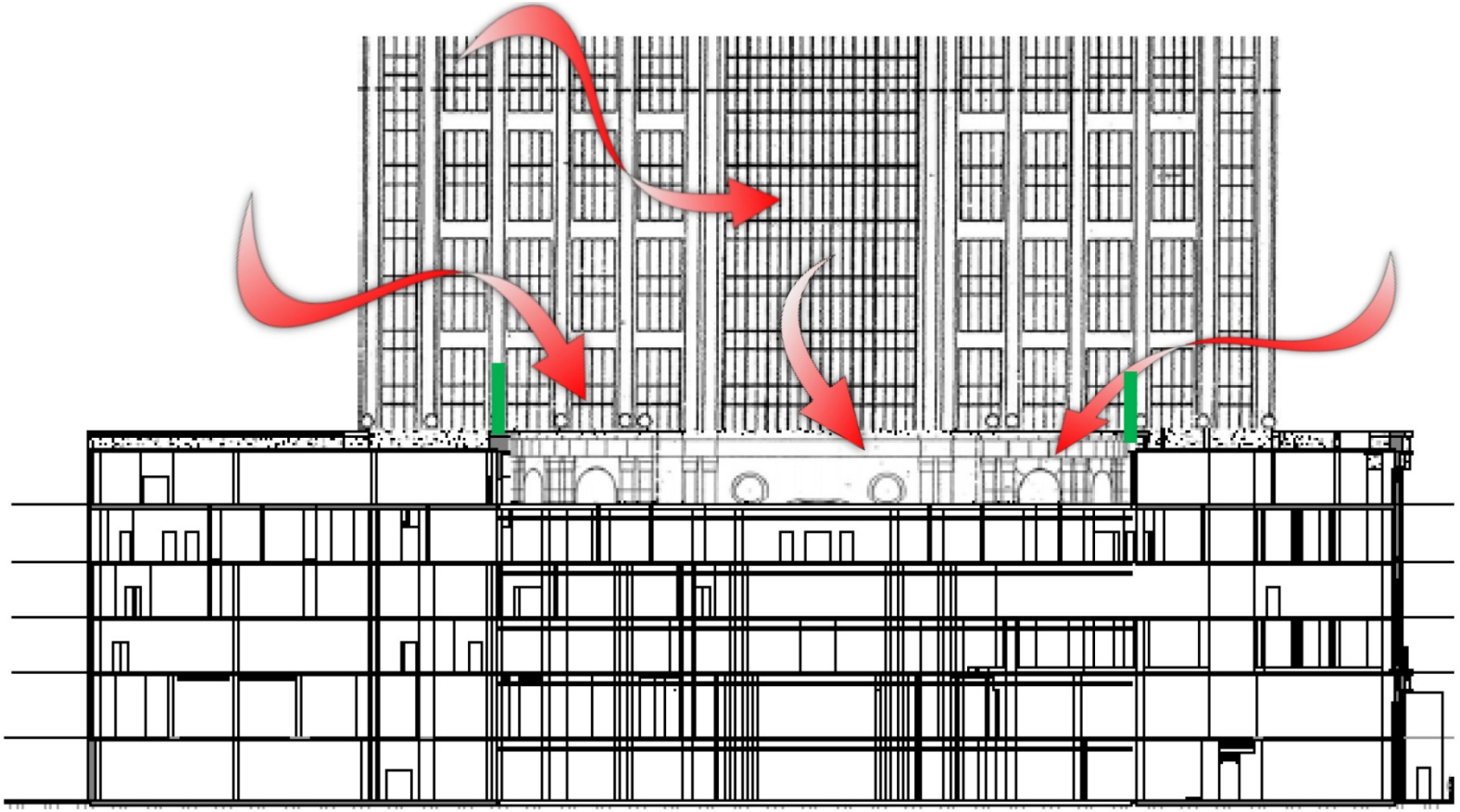
Wind conditions at the roof deck above Level 5 of the new addition are expected to be comfortable for the intended use during summer, when this area will be used more frequently. Slightly higher wind speeds are expected during other seasons.

3.2 Shadow

3.2.1 Introduction and Methodology

As typically required by the BRA, a shadow impact analysis was conducted to investigate shadow impacts from the Project during three time periods (9:00 a.m., 12:00 noon, and 3:00 p.m.) during the vernal equinox (March 21), summer solstice (June 21), autumnal equinox (September 21), and winter solstice (December 21). In addition, shadow studies were conducted for the 6:00 p.m. time period during the summer solstice and autumnal equinox.

The shadow analysis presents the existing shadow and new shadow that would be created by the proposed Project, illustrating the incremental impact of the Project. The analysis focuses on nearby open spaces, sidewalks and bus stops adjacent to and in the vicinity of the Project site. Shadows have been determined using the applicable Altitude and Azimuth data for Boston. Figures showing the net new shadow from the Project are provided in Figures 3.2-1 to 3.2-14 at the end of this section.



500 Boylston Street Boston, Massachusetts

Figure 3.1-8

East/West Building Section Looking North

The results of the analysis show that no new shadow will be cast onto any bus stops or public open space during the time periods studied as a result of the Project. In addition, during eight of the 14 time periods studies, the Project will not result in new shadow being cast onto nearby streets or sidewalks. During the other six time periods studied, shadow will be limited to Boylston Street and its sidewalks adjacent to the Project site.

3.2.2 Vernal Equinox (March 21)

No new shadow will be cast onto nearby bus stops or open spaces during the vernal equinox time periods studied.

At 9:00 a.m. during the vernal equinox, new shadow will be cast to the northwest onto a small portion of the northern sidewalk of Boylston Street. No new shadow will be cast onto nearby bus stops or open spaces during any of the time periods studied on the vernal equinox.

At 12:00 p.m., shadow will be cast to the north and no new shadow will be cast onto nearby streets, sidewalks, bus stops or open spaces.

At 3:00 p.m., new shadow will be cast to the northeast onto a small portion of Boylston Street and its southern sidewalk. No new shadow will be cast onto nearby bus stops or open spaces.

3.2.3 Summer Solstice (June 21)

No new shadow will be cast onto nearby bus stops or open spaces during the summer solstice time periods studied.

At 9:00 a.m. during the summer solstice, new shadow will be cast to the northwest onto a small portion of Boylston Street and its southern sidewalk. No new shadow will be cast onto nearby bus stops or open spaces.

At 12:00 p.m., shadow will be cast to the north and no new shadow will be cast onto nearby streets, sidewalks, bus stops or open spaces.

At 3:00 p.m., new shadow will be cast to the east onto a small portion of the southern sidewalk of Boylston Street. No new shadow will be cast onto nearby bus stops or open spaces.

At 6:00 p.m., most of the area is under existing shadow. No new shadow will be cast onto nearby streets, sidewalks, bus stops or open spaces.

3.2.4 Autumnal Equinox (September 21)

No new shadow will be cast onto nearby bus stops or open spaces during the autumnal equinox time periods studied.

At 9:00 a.m., during the autumnal equinox, new shadow will be cast to the northwest onto a small portion of Boylston Street and its northern sidewalk. No new shadow will be cast onto nearby bus stops or open spaces.

At 12:00 p.m., shadow will be cast to the north and no new shadow will be cast onto nearby streets, sidewalks, bus stops or open spaces.

At 3:00 p.m., new shadow will be cast to the northeast onto a small portion of Boylston Street and its southern sidewalk. No new shadow will be cast onto nearby bus stops or open spaces.

At 6:00 p.m., most of the area is under existing shadow. No new shadow will be cast onto nearby streets, sidewalks, bus stops or open spaces.

3.2.5 Winter Solstice (December 21)

The winter solstice creates the least favorable conditions for sunlight in New England. The sun angle during the winter is lower than in any other season, causing the shadows in urban areas to elongate and be cast onto large portions of the surrounding area. No new shadow will be cast onto nearby streets, sidewalks, bus stops or open spaces during the winter solstice time period studied.

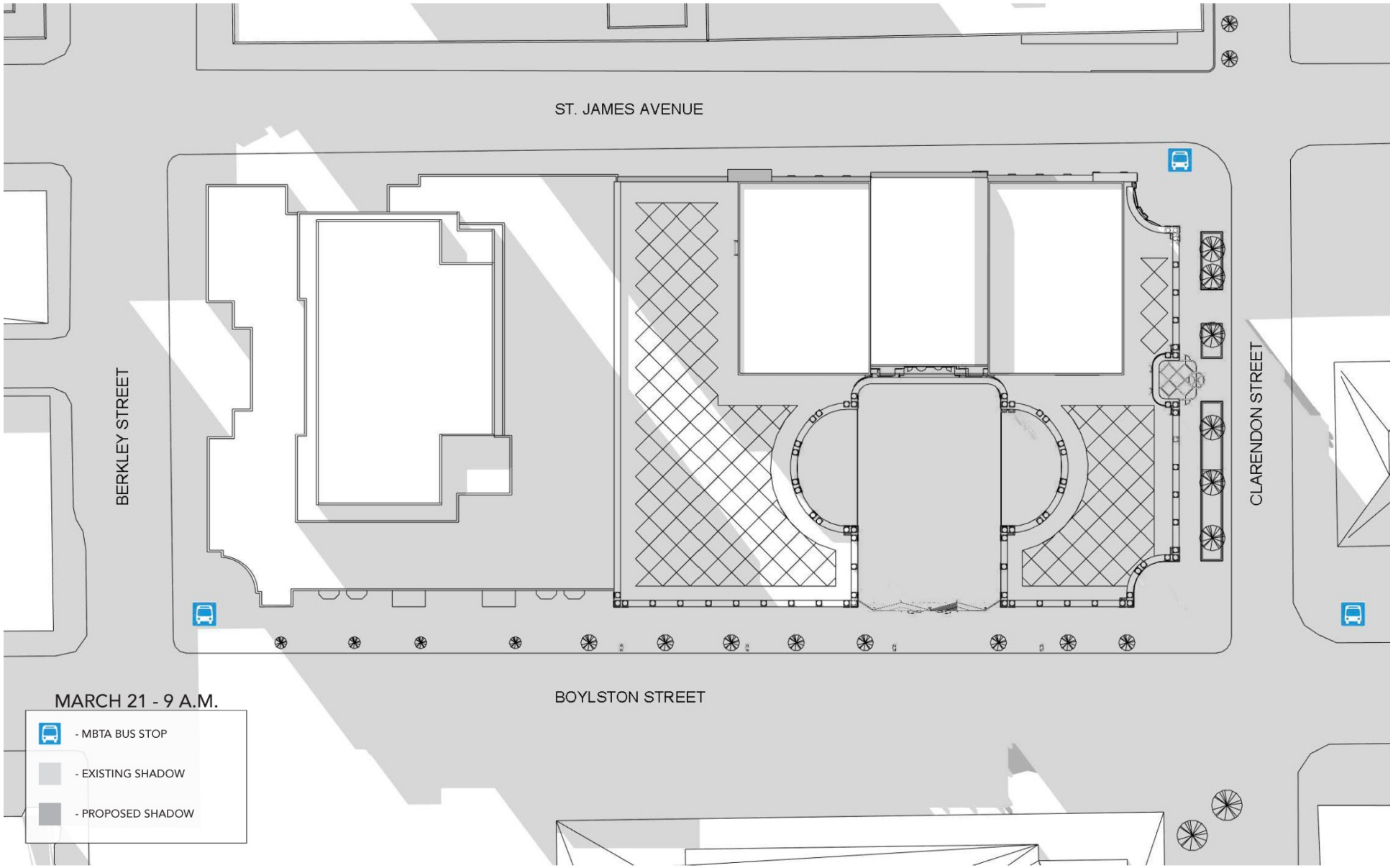
At 9:00 a.m., during the winter solstice, most of the area is under existing shadow. No new shadow will be cast onto nearby streets, sidewalks, bus stops or open spaces.

At 12:00 p.m., shadow will be cast to the north and no new shadow will be cast onto nearby streets, sidewalks, bus stops or open spaces.

At 3:00 p.m., shadow will be cast to the northeast. No new shadow will be cast onto nearby streets, sidewalks, bus stops or open spaces.

3.2.6 Conclusions

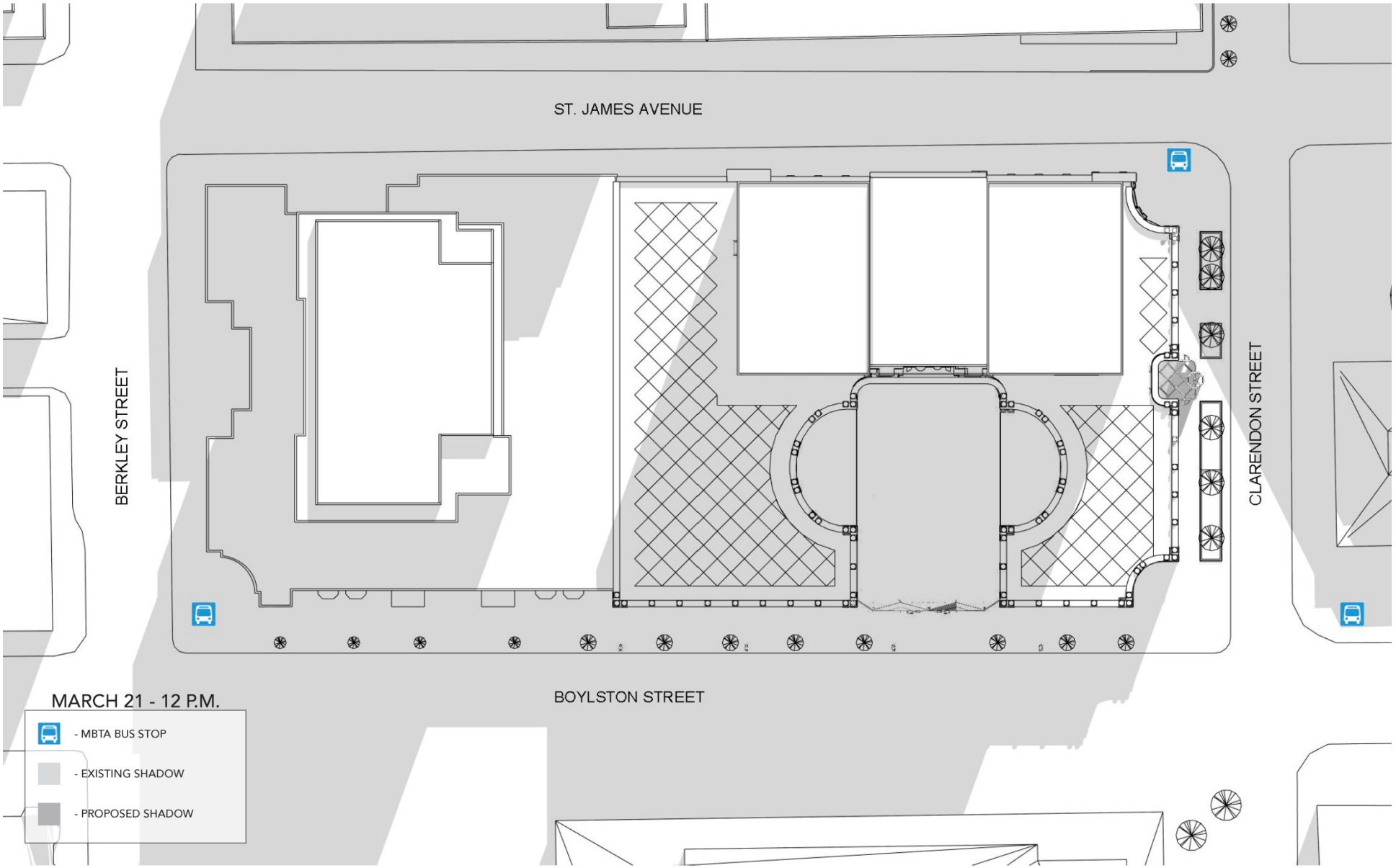
The results of the analysis show that no new shadow will be cast onto any bus stops or public open space during the time periods studied as a result of the Project. In addition, during eight of the 14 time periods studies, the Project will not result in new shadow being cast onto nearby streets or sidewalks,. During the other six time periods studied, shadow will be limited to Boylston Street and its sidewalks adjacent to the Project site.



500 Boylston Street Boston, Massachusetts

cbt

Figure 3.2-1
Shadow Study: March 21, 9:00 a.m.



500 Boylston Street Boston, Massachusetts

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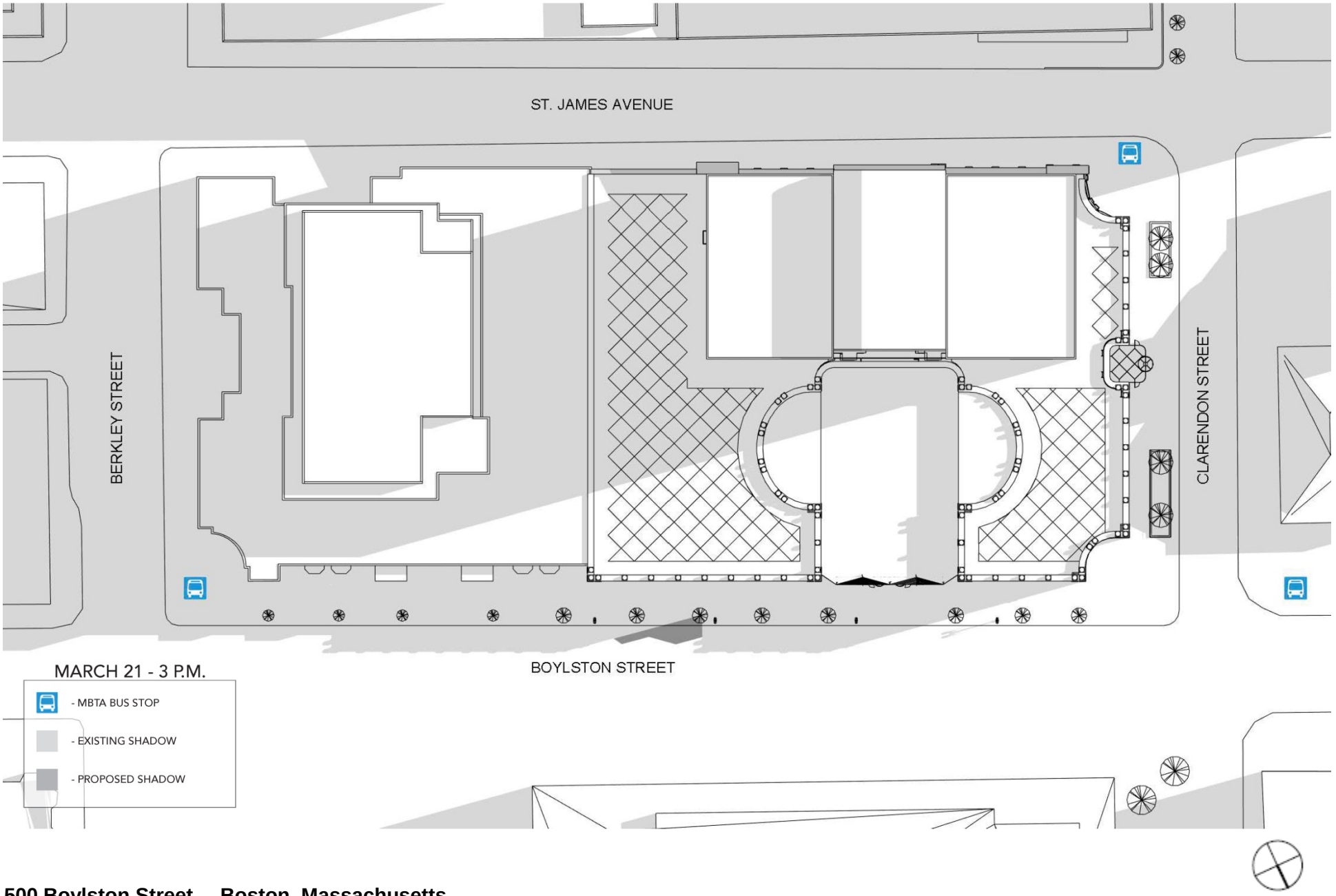
Figure 3.2-2

Shadow Study: March 21, 12:00 p.m.



500 Boylston Street Boston, Massachusetts

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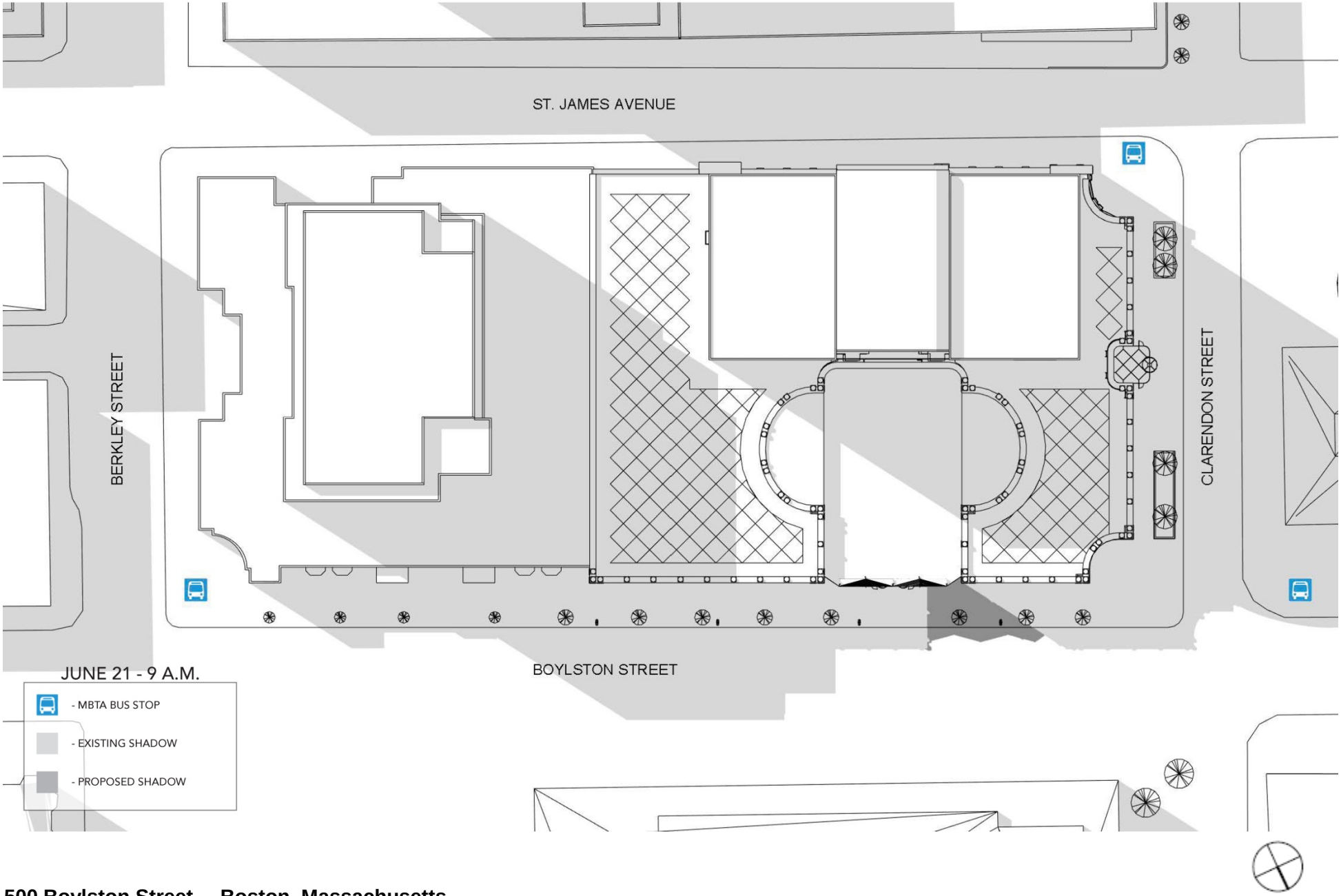
Figure 3.2-3

Shadow Study: March 21, 3:00 p.m.



500 Boylston Street Boston, Massachusetts

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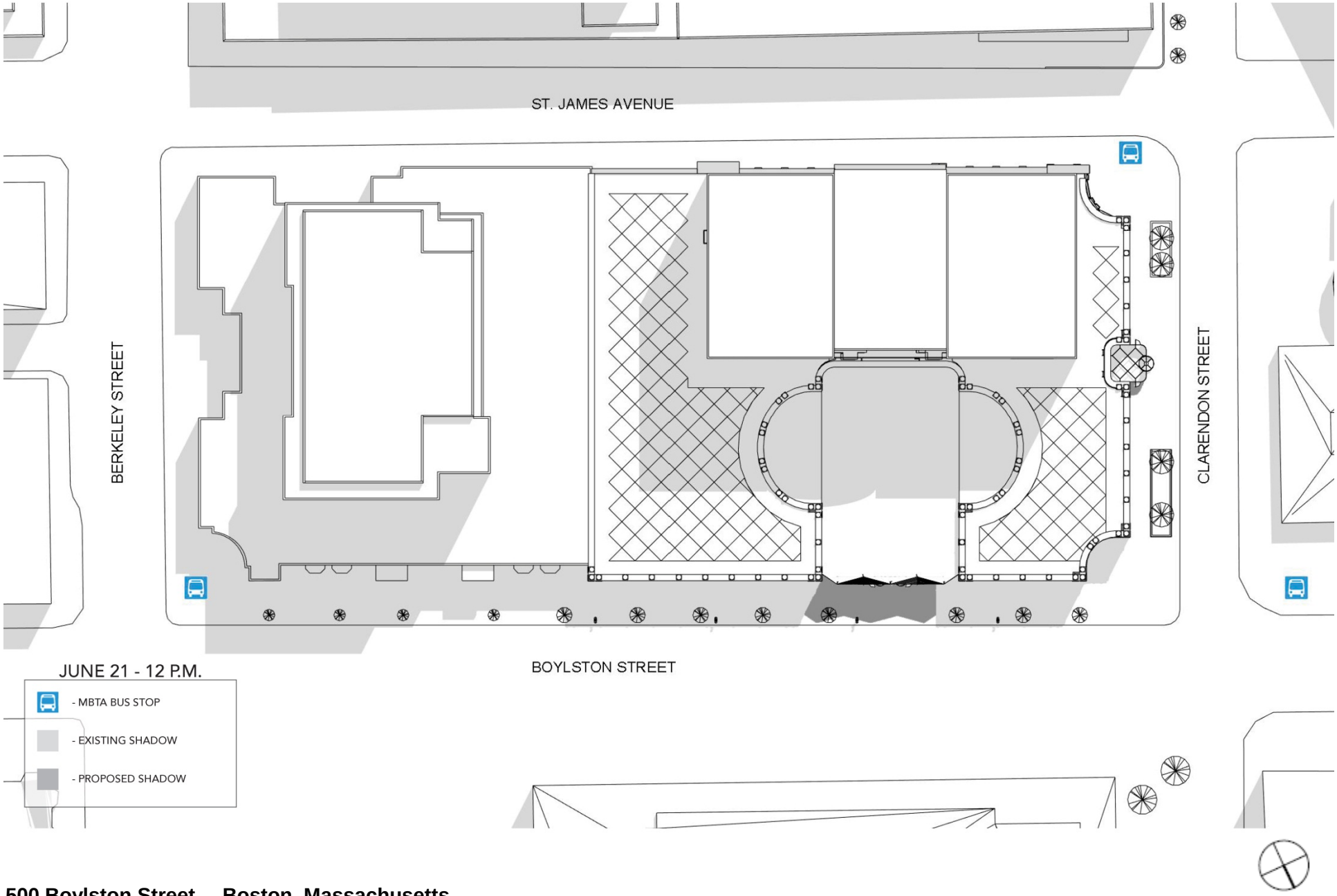
Figure 3.2-4
Shadow Study: June 21, 9:00 a.m.



500 Boylston Street Boston, Massachusetts

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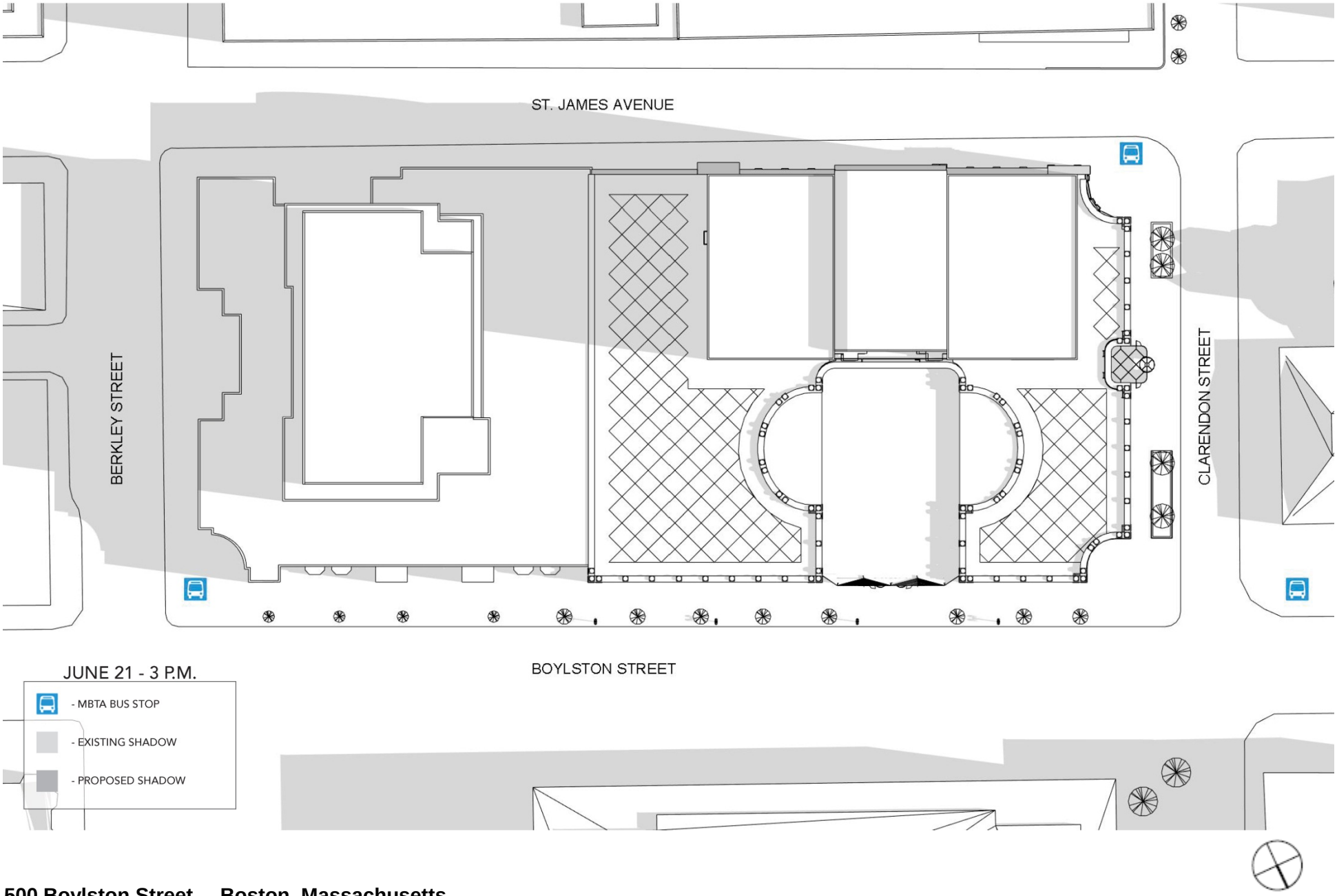
Figure 3.2-5

Shadow June: March 21, 12:00 p.m.



500 Boylston Street Boston, Massachusetts

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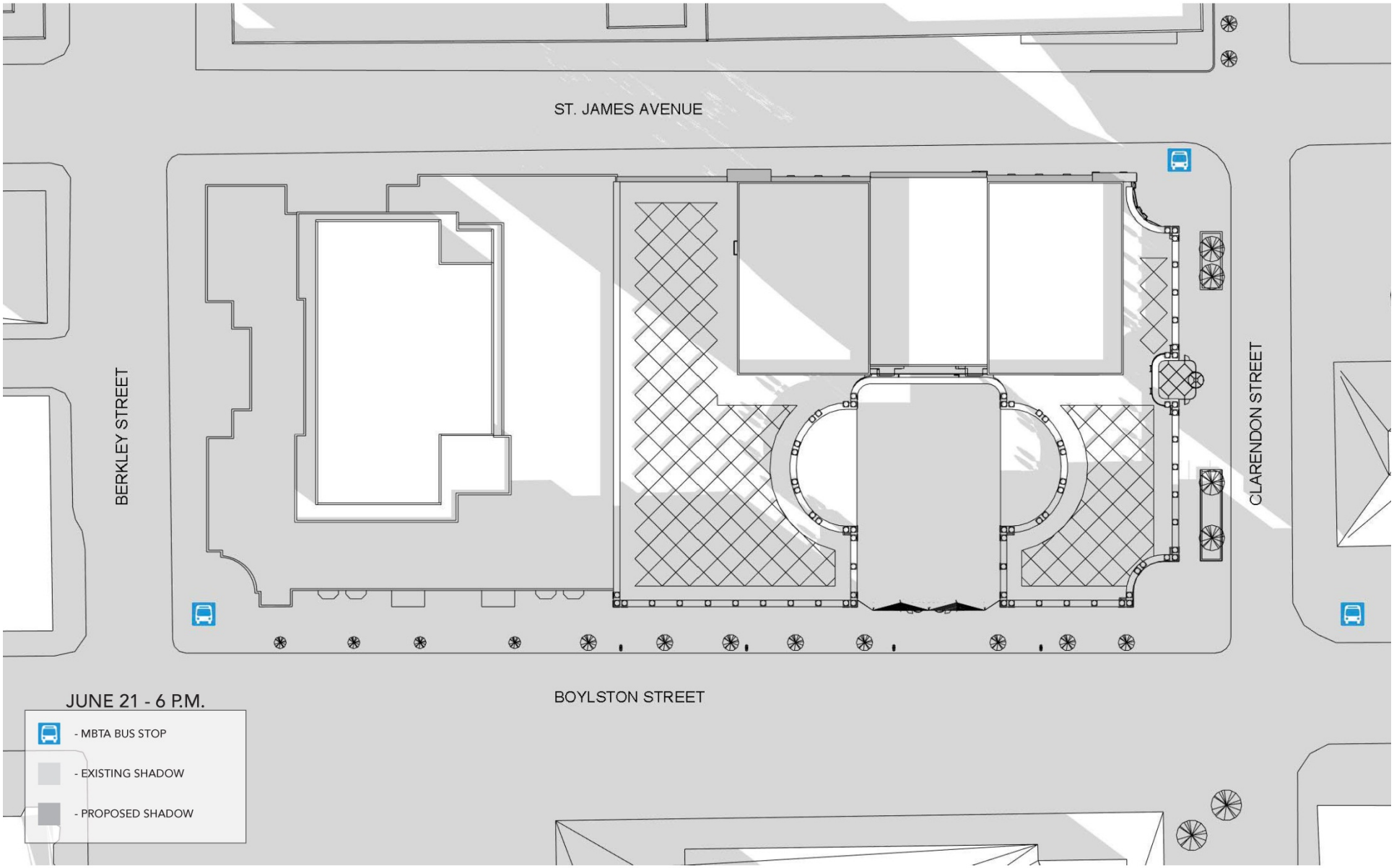
Figure 3.2-6

Shadow Study: June 21, 3:00 p.m.



500 Boylston Street Boston, Massachusetts

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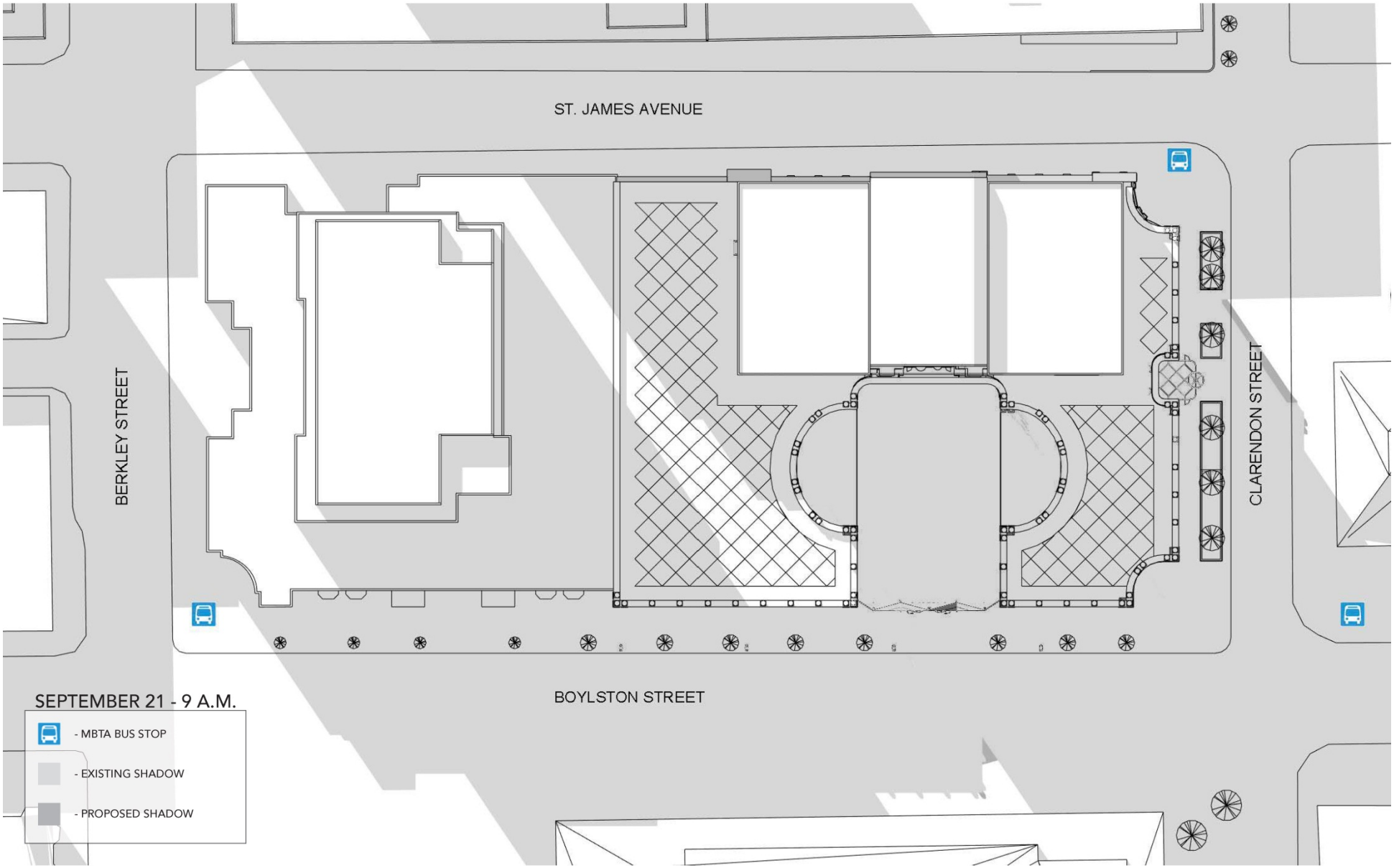
Figure 3.2-7
Shadow Study: June 21, 6:00 p.m.



500 Boylston Street Boston, Massachusetts

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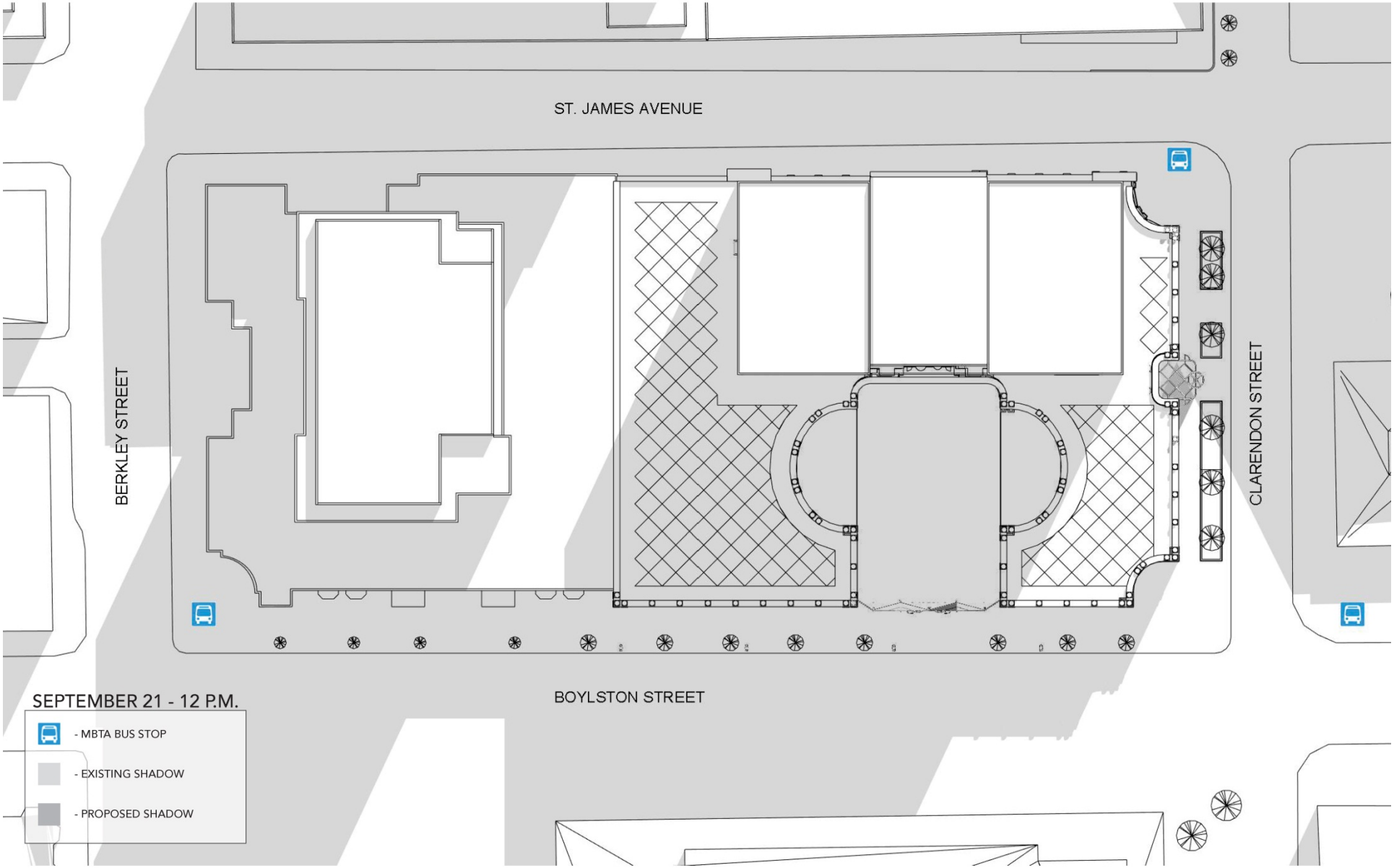
Figure 3.2-8
Shadow Study: September 21, 9:00 a.m.

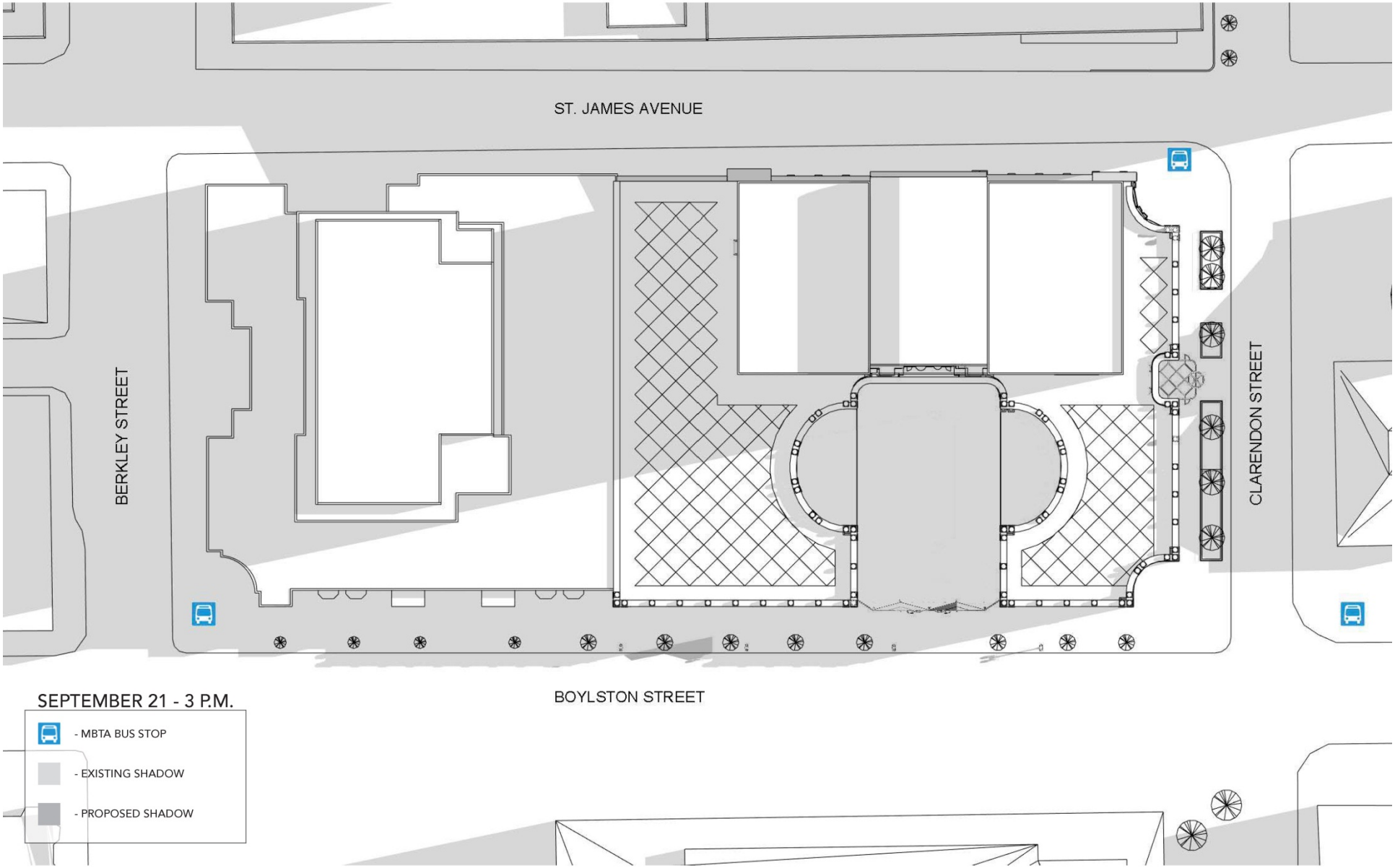


500 Boylston Street Boston, Massachusetts

cbt

Figure 3.2-9

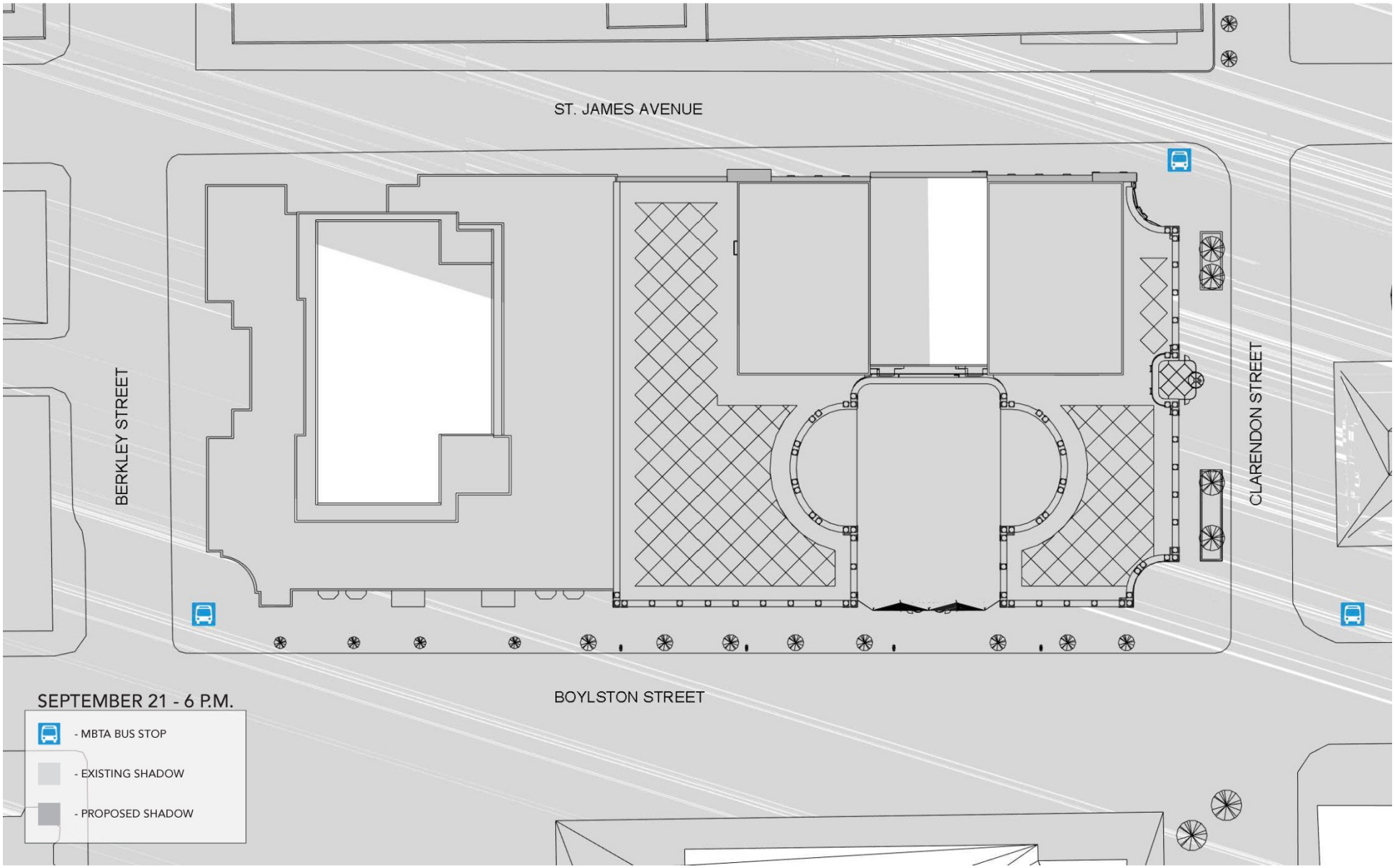
Shadow Study: September 21, 12:00 p.m.



500 Boylston Street Boston, Massachusetts

cbt

Figure 3.2-10
Shadow Study: September 21, 3:00 p.m.



500 Boylston Street Boston, Massachusetts

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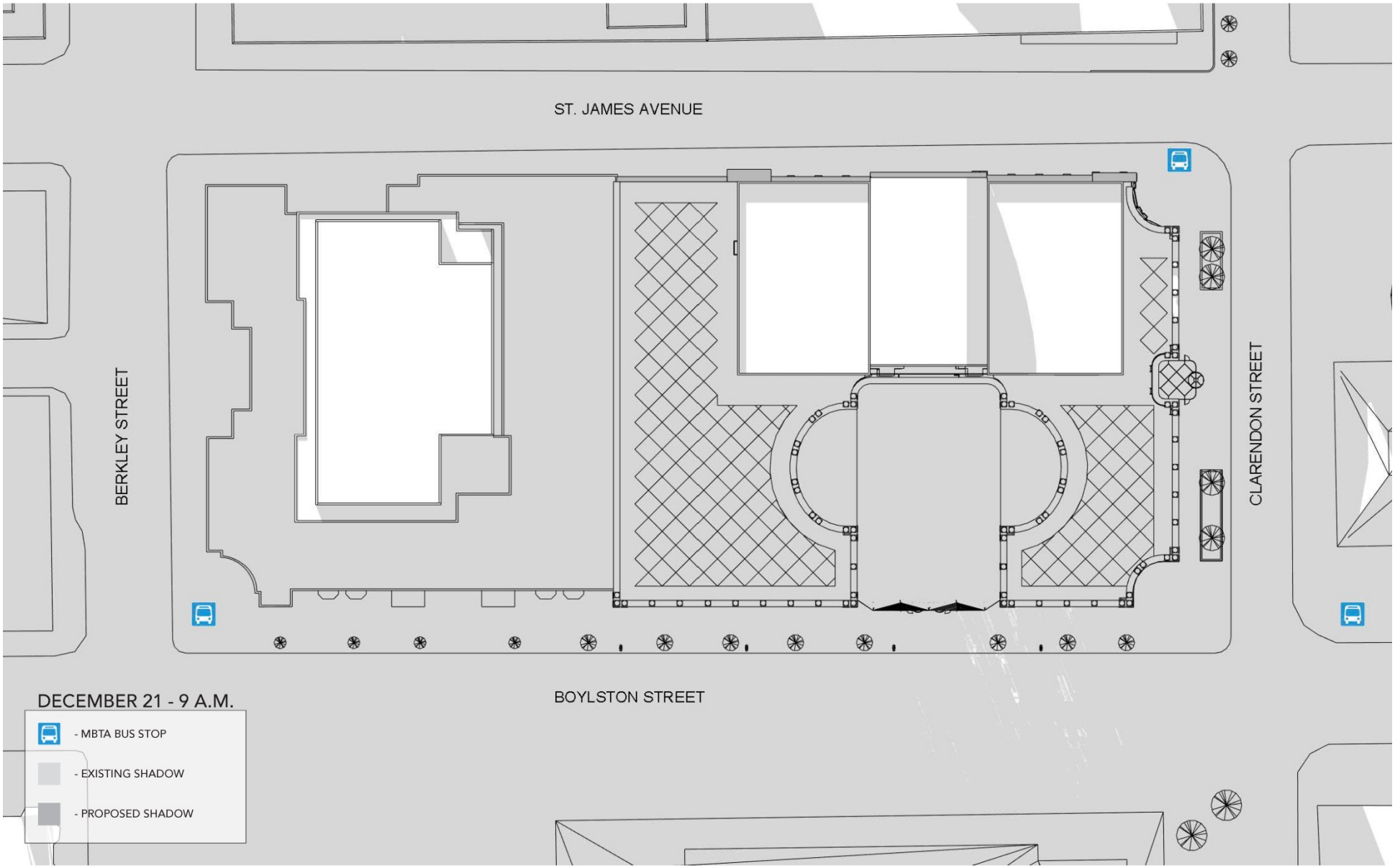
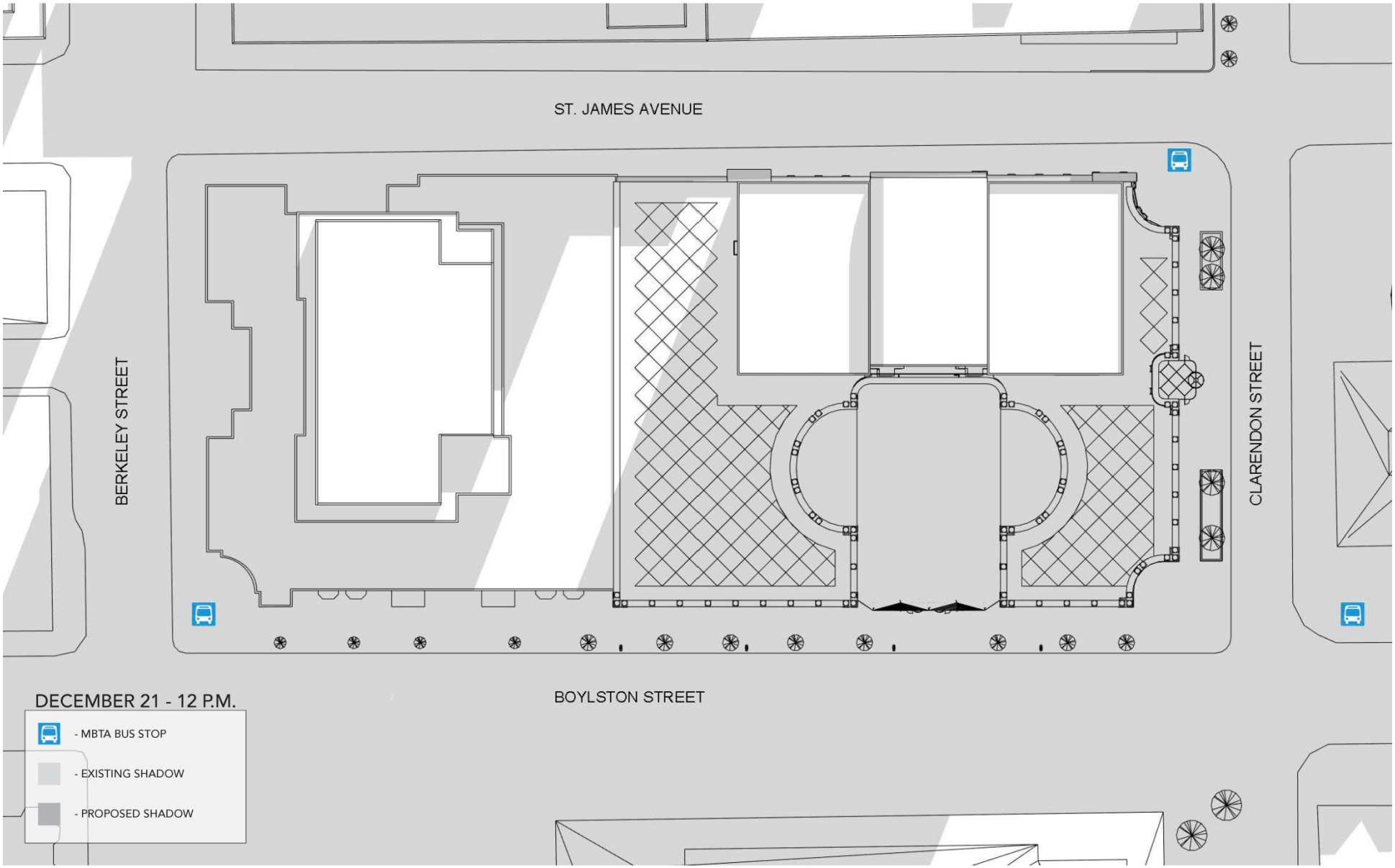
Figure 3.2-11
Shadow Study: September 21, 6:00 p.m.



500 Boylston Street Boston, Massachusetts

cbt

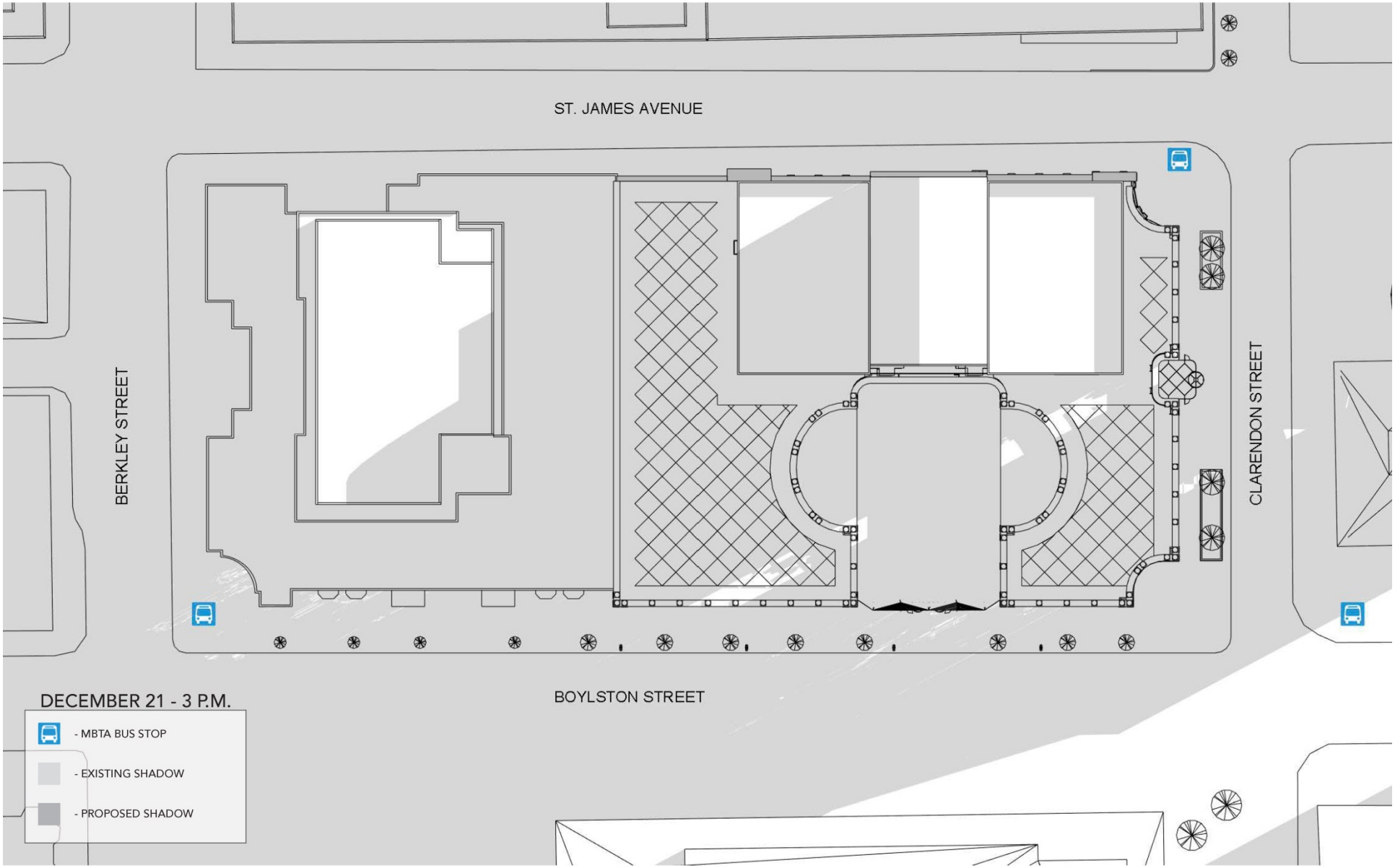
Figure 3.2-12
Shadow Study: December 21, 9:00 a.m.



500 Boylston Street Boston, Massachusetts

cbt

Figure 3.2-13
Shadow December: 21, 12:00 p.m.



500 Boylston Street Boston, Massachusetts

cbt

Figure 3.2-14
Shadow Study: December 21, 3:00 p.m.

3.3 Daylight Analysis

3.3.1 Introduction

The purpose of the daylight analysis is to estimate the extent to which a proposed project will affect the amount of daylight reaching the streets and the sidewalks in the immediate vicinity of a project site.

Because the Project consists of infilling the courtyard of an existing building, and the infill is directly in front of the tower portion of the existing building, the daylight obstruction value of the site at 500 Boylston Street will remain the same. The changes proposed for 222 Berkeley Street are minimal and not anticipated to impact daylight obstruction.

3.3.2 Methodology

The daylight analysis was performed using the Boston Redevelopment Authority Daylight Analysis (BRADA) computer program[6]. This program measures the percentage of sky-dome that is obstructed by a project and is a useful tool in evaluating the net change in obstruction from existing to build conditions at a specific site.

Using BRADA, a silhouette view of the building is taken at ground level from the middle of the adjacent city streets or pedestrian ways centered on the proposed building. The façade of the building facing the viewpoint, including heights, setbacks, corners and other features, is plotted onto a base map using lateral and elevation angles. The two-dimensional base map generated by BRADA represents a figure of the building in the "sky dome" from the viewpoint chosen. The BRADA program calculates the percentage of daylight that will be obstructed on a scale of 0 to 100 percent based on the width of the view, the distance between the viewpoint and the building, and the massing and setbacks incorporated into the design of the building; the lower the number, the lower the percentage of obstruction of daylight from any given viewpoint.

The analysis compares the proposed conditions to the existing conditions on the site from one viewpoint – Boylston Street facing southwest toward the Project site - the only viewpoint from which the Project will be visible.

3.3.3 Results

The daylight analysis compares the existing and proposed conditions from the center of Boylston Street looking directly southwest toward the Project site. The development of the proposed Project will have no impact on the daylight obstruction value, which remains at

[6] Method developed by Harvey Bryan and Susan Stuebing, computer program developed by Ronald Fergle, Massachusetts Institute of Technology, Cambridge, MA, September 1984.

64.5% under both conditions. This is because the proposed Project is shorter in height than the existing building at 500 Boylston Street. See Figure 3.3-1 for an illustration of the BRADA results.

3.4 Solar Glare

The Project materials are still being studied and glazing of the windows will be determined as the design progresses. Due to the type of potential glass and glazing used, solar glare impacts are not currently anticipated.

3.5 Air Quality Analysis

The Boston Redevelopment Authority requires that project-induced impacts to ambient air quality be addressed. A microscale analysis is used to determine the effect on air quality of the increase in traffic generated by the Project. This microscale analysis may be required for a project at intersections where 1) project traffic would impact intersections or roadway links currently operating at Level of Service (LOS) D, E, or F or would cause LOS to decline to D, E, or F; 2) project traffic would increase traffic volumes on nearby roadways by 10% or more (unless the increase in traffic volume is less than 100 vehicles per hour); or, 3) the project will generate 3,000 or more new average daily trips (ADT) on roadways providing access to a single location.

The proposed Project does not generate 3,000 ADT, nor does it increase traffic volumes by 10 percent or 100 vehicles per hour. As discussed in Chapter 2, all intersections studied will continue to operate at the same LOS as under the No Build conditions during both the a.m. and p.m. peak hours. Therefore, no quantitative analysis is required. Given the generally well-operating intersections, and the small increases in volume at the worst intersections, it is expected that there would be no violations of the NAAQS for CO at any intersections associated with Project-related traffic.

3.6 Stormwater/Water Quality

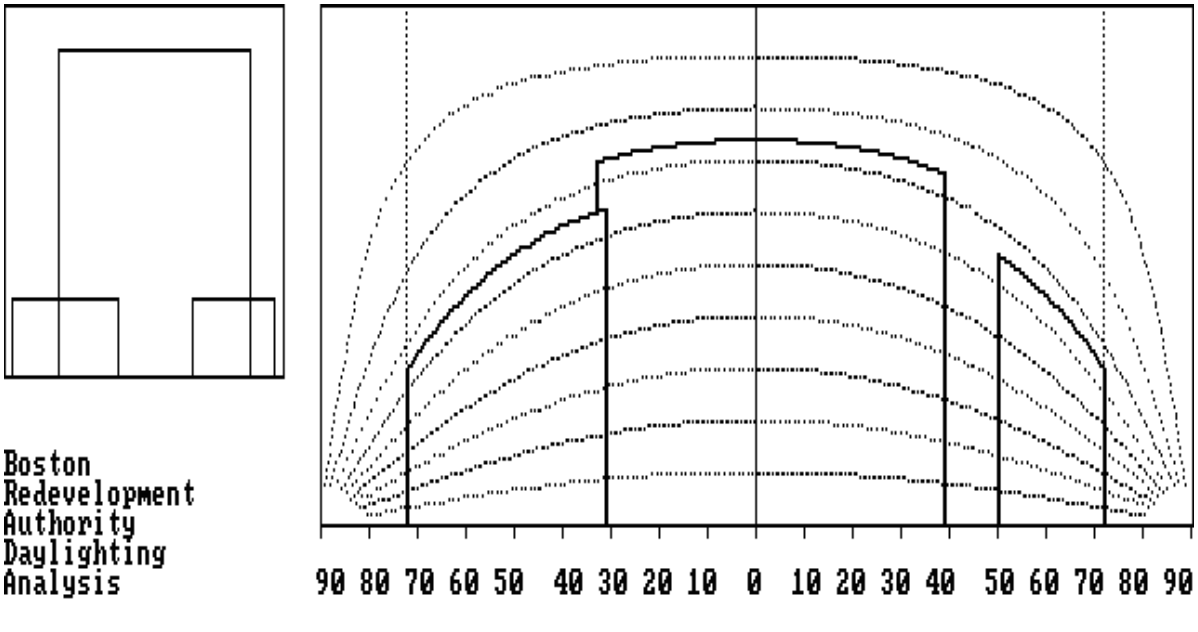
Please see Section 7.4 for a discussion of stormwater and water quality.

3.7 Flood Hazard Zones/ Wetlands

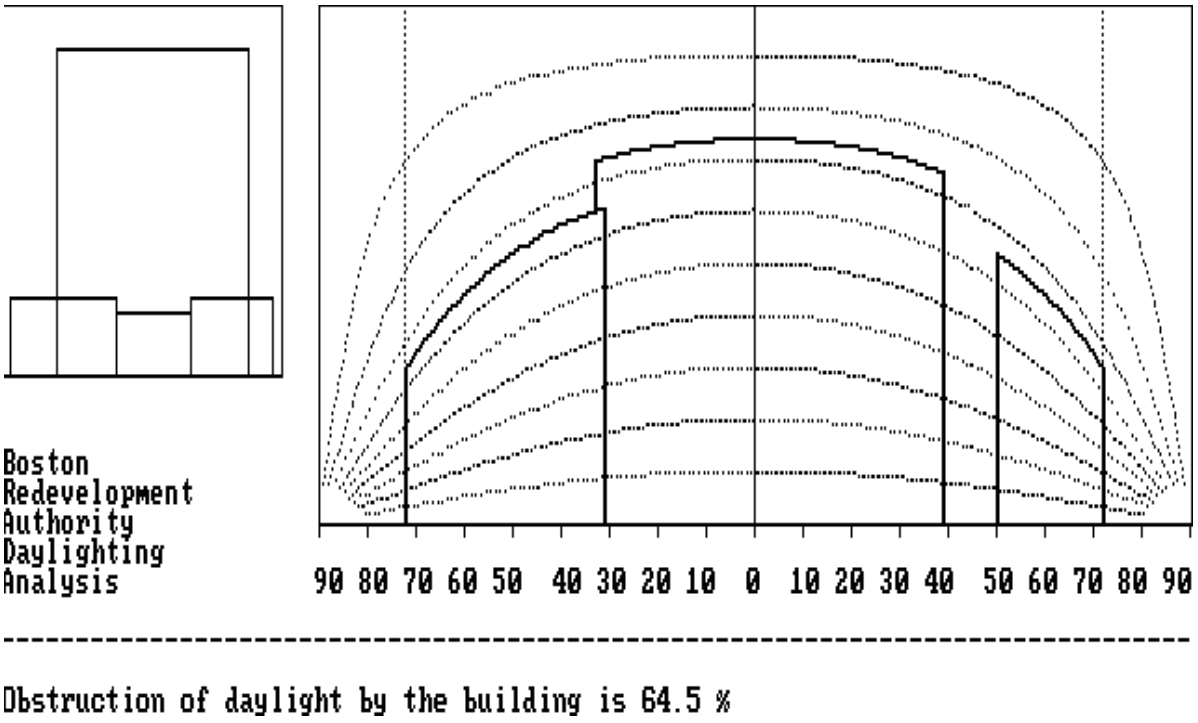
The existing Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the Project site indicates that it is located outside of a designated flood zone (FIRM, City of Boston, Community-Panel Number 25025C0077G, Effective Date September 25, 2009). Under the "preliminary" revised floodplain map for the site area, which was recently released by FEMA, shows the will continue to be outside of a designated flood zone (FIRM, Suffolk County, Massachusetts; Panel 0077J, Map Number 25025C0077J, Map Revised, Preliminary November 15, 2013).

The site does not contain wetlands.

Existing Conditions: View from Boylston Street facing southwest toward the Project site



Proposed Conditions: View from Boylston Street facing southwest toward the Project site



3.8 Geotechnical Impacts

3.8.1 Subsurface Conditions

Available subsurface data and geologic information for the site was gathered to define existing subsurface soil and groundwater conditions. In general, subsurface conditions anticipated are approximately 15 to 28 feet of fill, 7 to 20 feet of organic soils, and up to one foot of outwash sand overlying 83 to 109 feet of silty clay and 5 to 21 feet of glacial till. Bedrock is anticipated to be at a depth of approximately 131 to 149 feet.

Groundwater levels in the Project area measured during the exploration phase of the previous development range from about El. 4 to El. 7 Boston City Base (BCB) datum; groundwater levels measured during approximately the past year from observation wells monitored and published by the Boston Groundwater Trust (BGwT) range from about El. 4 to El. 12, with most readings between El. 5 and El. 8.

3.8.2 Existing Site Conditions

The Project site is bounded by Boylston Street to the north, St. James Avenue to the south, Clarendon Street to the west and 222 Berkeley Street to the east. Site grades are relatively level around the property, ranging from El. 14 to El. 18 BCB. The existing development consists of two 25-story structural steel towers and several six-story steel-framed structures and plaza areas, and is underlain site-wide by a structural steel-framed three-level below grade parking garage with cast in place concrete exterior walls.

3.8.3 Groundwater

The Project is located in the Groundwater Conservation Overlay District (GCOD) and will be designed and constructed to comply with the requirements of Article 32 of the City of Boston Zoning Code. The lowest floor level for the existing building (which will not be modified by the proposed structure) is at El. -15 BCB, about 20 feet below normal groundwater levels and 25 feet below the existing building's maximum design groundwater level of El. 10.

The Project has initiated meetings with the BGwT to discuss the infiltration system as required.

3.8.4 Proposed Foundation Construction Methodology and Potential Impacts

The proposed site development includes construction of a 79,300 square foot six-story retail and office building above the existing central plaza.

Because the existing structure is supported on a mat foundation (extending below the footprint of the proposed structure) bearing on natural clay and structural fill with an allowable bearing pressure of 8 kips per square foot (ksf), the existing foundation system will be sufficient to support the proposed loads. As a result, no additional excavation or foundation construction will be required for the project. Excavations may be limited to local areas for groundwater infiltration systems or modifications to utilities.

3.9 Solid and Hazardous Waste

3.9.1 Hazardous Waste

Recent characterization of the soil and groundwater at the site has not been conducted in association with the Project because there is no below-grade construction. If required, management of soil and groundwater will be in accordance with applicable local, state, and federal laws and regulations. Characterization of excess material, if generated, will be transported offsite in accordance with applicable regulations.

3.9.2 Operation Solid and Hazardous Waste Generation

The Project will generate solid waste typical of restaurant, retail and office uses. Solid waste is expected to include wastepaper, cardboard, glass bottles and food. Recyclable materials will be recycled through a program implemented by building management. The Project will generate approximately 552 tons of solid waste per year.

With the exception of household hazardous wastes typical of restaurant, retail and office developments (e.g., cleaning fluids and paint), the Project will not involve the generation, use, transportation, storage, release, or disposal of potentially hazardous materials.

3.9.3 Recycling

The Project will utilize the existing recycling program in place for 500 Boylston Street and 222 Berkeley Street. The program emphasizes continuous improvement in minimizing its ecological footprint. Cleaning and Property Management staff assists contractors and tenants in meeting Massachusetts Waste Ban mandates by encouraging waste reduction and recycled-content procurement, providing contacts for purchasing "environmentally preferable" products and vendors who responsibly dispose of materials. Building staff also seek to maximize waste prevention practices in the in-house maintenance and cleaning programs, such as by encouraging the purchase of products and cleaners that are eco-friendly (including but not limited to the use of refillable containers, eco-friendly light-fixtures, and the development and implementation of a Green Cleaning Program).

The building collects white paper, newspaper, mixed paper, magazines, plastic, glass, aluminum, scrap metal and copper wiring, office furniture, computer equipment, cell phones, toner and printer cartridges, light bulbs, cardboard, and more. In addition, the property has mandated that 75% of construction debris be recycled with proper

documentation required. The cleaning staff assists in various ways, including making sure there are adequate numbers of clearly labeled recycling bins near copiers, shipping and receiving areas, and in employee work spaces and eating areas. Nightly inspections have served as an effective means of identifying tenant areas capable of improvement and by posting bright yellow post-it notes as a "thank you" for compliance, or as a reminder of proper disposal practices.

3.10 Noise Impacts

New noise associated with development projects are most commonly due to mechanical equipment required for the operation of the buildings. Minimal noise impacts are anticipated as existing equipment will be used, if possible, and new equipment would be anticipated to have a similar or less impact. The Project will include appropriate measures to ensure compliance with the City of Boston Zoning District Noise Standards and the MassDEP Noise Policy.

Construction period noise impacts and mitigation are discussed below in Section 3.11.9.

3.11 Construction Impacts

3.11.1 Introduction

A Construction Management Plan (CMP) in compliance with the City's Construction Management Program will be submitted to the Boston Transportation Department (BTD) once final plans are developed and the construction schedule is fixed. The construction contractor will be required to comply with the details and conditions of the approved CMP.

Proper pre-planning with the City and neighborhood will be essential to the successful construction of the Project. Construction methodologies, which ensure public safety and protect nearby residences and businesses, will be employed. Techniques such as barricades, walkways and signage will be used. The CMP will include routing plans for trucking and deliveries, plans for the protection of existing utilities, and control of noise and dust.

During the construction phase of the Project, the Proponent will provide the name, telephone number and address of a contact person to communicate with on issues related to the construction.

The Proponent intends to follow the guidelines of the City of Boston and the MassDEP, which direct the evaluation and mitigation of construction impacts.

3.11.2 Construction Methodology/Public Safety

Construction methodologies that ensure public safety and protect nearby tenants will be employed. Techniques such as barricades and signage will be used. Construction management and scheduling will minimize impacts on the surrounding environment and will include plans for construction worker commuting and parking, routing plans for trucking and deliveries, and the control of noise and dust.

As the design of the Project progresses, the Proponent will meet with BTD to discuss the specific location of barricades, the need for lane closures, pedestrian walkways, and truck queuing areas. Secure fencing, signage, and covered walkways may be employed to ensure the safety and efficiency of all pedestrian and vehicular traffic flows. In addition, sidewalk areas and walkways near construction activities will be well marked and lighted to protect pedestrians and ensure their safety. Public safety for pedestrians on abutting sidewalks will also include covered pedestrian walkways when appropriate. If required by BTD and the Boston Police Department, police details will be provided to facilitate traffic flow. These measures will be incorporated into the CMP which will be submitted to BTD for approval prior to the commencement of construction work.

3.11.3 Construction Schedule

The Proponent anticipates that the Project will commence construction in the first quarter of 2016 and last for approximately 15 months.

Typical construction hours will be from 7:00 am to 6:00 pm, Monday through Friday, with most shifts ordinarily ending at 3:30 pm. No substantial sound-generating activity will occur before 7:00 am. If longer hours, additional shifts, or Saturday work is required, the construction manager will place a work permit request to the Boston Air Pollution Control Commission and BTD in advance. Notification should occur during normal business hours, Monday through Friday. It is noted that some activities such as finishing activities could run beyond 6:00 pm to ensure the structural integrity of the finished product; certain components must be completed in a single pour, and placement of concrete cannot be interrupted.

3.11.4 Construction Staging/Access

Access to the site and construction staging areas will be provided in the CMP.

Although specific construction and staging details have not been finalized, the Proponent and its construction management consultant will work to ensure that staging areas will be located to minimize impacts to pedestrian and vehicular flow. Secure fencing and barricades will be used to isolate construction areas from pedestrian traffic adjacent to the site. Construction procedures will be designed to meet all Occupational Safety and Health Administration (OSHA) safety standards for specific site construction activities.

3.11.5 Construction Mitigation

The Proponent will follow City and MassDEP guidelines which will direct the evaluation and mitigation of construction impacts. As part of this process, the Proponent and construction team will evaluate the Commonwealth's Clean Air Construction Initiative.

A CMP will be submitted to BTD for review and approval prior to issuance of a Building Permit. The CMP will include detailed information on specific construction mitigation measures and construction methodologies to minimize impacts to abutters and the local community. The CMP will also define truck routes which will help in minimizing the impact of trucks on City and neighborhood streets.

"Don't Dump - Drains to Boston Harbor" plaques will be installed at storm drains that are replaced or installed as part of the Project.

3.11.6 Construction Employment and Worker Transportation

The number of workers required during the construction period will vary. It is anticipated that approximately 125 construction jobs will be created over the length of construction. The Proponent will make reasonable good-faith efforts to have at least 50% of the total employee work hours be for Boston residents, at least 25% of total employee work hours be for minorities and at least 10% of the total employee work hours be for women. The Proponent will enter into jobs agreements with the City of Boston.

To reduce vehicle trips to and from the construction site, minimal construction worker parking will be available at the site and all workers will be strongly encouraged to use public transportation and ridesharing options. The general contractors will work aggressively to ensure that construction workers are well informed of the public transportation options serving the area. Space on-site will be made available for workers' supplies and tools so they do not have to be brought to the site each day.

3.11.7 Construction Truck Routes and Deliveries

Truck traffic will vary throughout the construction period, depending on the activity. The construction team will manage deliveries to the site during morning and afternoon peak hours in a manner that minimizes disruption to traffic flow on adjacent streets. Construction truck routes to and from the site for contractor personnel, supplies, materials, and removal of excavations required for the development will be coordinated with BTD. Traffic logistics and routing will be planned to minimize community impacts. Truck access during construction will be determined by the BTD as part of the CMP. These routes will be mandated as a part of all subcontractors' contracts for the development. The construction team will provide subcontractors and vendors with Construction Vehicle & Delivery Truck Route Brochures in advance of construction activity.

"No Idling" signs will be included at the loading, delivery, pick-up and drop-off areas.

3.11.8 Construction Air Quality

Short-term air quality impacts from fugitive dust may be expected during demolition, excavation and the early phases of construction. Plans for controlling fugitive dust during demolition, excavation and construction include mechanical street sweeping, wetting portions of the site during periods of high wind, and careful removal of debris by covered trucks. The construction contract will provide for a number of strictly enforced measures to be used by contractors to reduce potential emissions and minimize impacts, pursuant to this Article 80 approval. These measures are expected to include:

- Using wetting agents on areas of exposed soil on a scheduled basis;
- Using covered trucks;
- Minimizing spoils on the construction site;
- Monitoring of actual construction practices to ensure that unnecessary transfers and mechanical disturbances of loose materials are minimized;
- Minimizing storage of debris on the site; and
- Periodic street and sidewalk cleaning with water to minimize dust accumulations.

3.11.9 Construction Noise

The Proponent is committed to mitigating noise impacts from the construction of the Project. Increased community sound levels, however, are an inherent consequence of construction activities. Construction work will comply with the requirements of the City of Boston Noise Ordinance. Every reasonable effort will be made to minimize the noise impact of construction activities.

Mitigation measures are expected to include:

- Instituting a proactive program to ensure compliance with the City of Boston noise limitation policy;
- Using appropriate mufflers on all equipment and ongoing maintenance of intake and exhaust mufflers;
- Muffling enclosures on continuously running equipment, such as air compressors and welding generators;
- Replacing specific construction operations and techniques by less noisy ones where feasible;
- Selecting the quietest of alternative items of equipment where feasible;

- Scheduling equipment operations to keep average noise levels low, to synchronize the noisiest operations with times of highest ambient levels, and to maintain relatively uniform noise levels;

- Turning off idling equipment; and

- Locating noisy equipment at locations that protect sensitive locations by shielding or distance.

3.11.10 Construction Vibration

All means and methods for performing work at the site will be evaluated for potential vibration impacts on adjoining property, utilities, and adjacent existing structures. Acceptable vibration criteria will be established prior to construction, and vibration will be monitored, if required, during construction to ensure compliance with the agreed-upon standard.

3.11.11 Construction Waste

The Proponent will take an active role with regard to the reprocessing and recycling of construction waste. The disposal contract will include specific requirements that will ensure that construction procedures allow for the necessary segregation, reprocessing, reuse and recycling of materials when possible. For those materials that cannot be recycled, solid waste will be transported in covered trucks to an approved solid waste facility, per MassDEP Regulations for Solid Waste Facilities, 310 CMR 16.00. This requirement will be specified in the disposal contract. Construction will be conducted so that materials that may be recycled are segregated from those materials not recyclable to enable disposal at an approved solid waste facility.

3.11.12 Protection of Utilities

Existing public and private infrastructure located within the public right-of-way will be protected during construction. The installation of proposed utilities within the public way will be in accordance with the MWRA, BWSC, Boston Public Works, Dig Safe, and the governing utility company requirements. All necessary permits will be obtained before the commencement of the specific utility installation. Specific methods for constructing proposed utilities where they are near to, or connect with, existing water, sewer and drain facilities will be reviewed by BWSC as part of its site plan review process.

3.11.13 Rodent Control

A rodent extermination certificate will be filed with the building permit application for the Project. Rodent inspection monitoring and treatment will be carried out before, during, and at the completion of all construction work for each phase of the Project, in compliance with the City's requirements.

3.11.14 Wildlife Habitat

The Project Site is in an established urban neighborhood. There are no wildlife habitats in or adjacent to the Project Site.

Chapter 4.0

Sustainable Design and Climate Change

4.0 SUSTAINABLE DESIGN AND CLIMATE CHANGE PREPAREDNESS

4.1 Sustainable Practices

The Proponent has an extraordinary track record when it comes to operating their buildings sustainably, and the existing buildings at 500 Boylston Street and 222 Berkeley Street have been recognized with numerous awards including the Boston Green Business Award in 2008 and the BOMA TOBY Office Building of the Year in 2009. The building at 222 Berkeley Street is LEED Certified at the Gold Level under the LEED Building Operations and Management (O+M) rating system.

The extensive recycling program encourages tenant participation through programs such as the Recycling Recognition Program, which identifies tenant floors with the highest percentage of employee compliance, and fosters a healthy competitive spirit that encourages greater participation and awareness. The Tenant "Green Warden" Program, which was initiated in 2008, holds meetings quarterly with volunteer tenant contacts to discuss current trends, review individual firm and building wide statistics, share ideas and collectively improve the sustainable efforts at the site and help promote "Green" ideas and initiatives. The program puts "troops" in the field to assist in educating the larger building population. From October 2014 to February 2015, recycling efforts resulted in over 137 tons of recycled material, saving 1,647 trees and 480 cubic yards of landfill space, conserving nearly one million gallons of water and 16,800 gallons of oil, and reducing greenhouse gases by 437 metric tons.

Cleaning and Property Management staff assists contractors and tenants in meeting Massachusetts Waste Ban mandates by encouraging waste reduction and recycled-content procurement, providing contacts for purchasing "environmentally preferable" products and vendors who responsibly dispose of materials. Building staff also seek to maximize waste prevention practices of the in-house maintenance and cleaning practices at the site, such as encouraging the purchase of products and cleaners that are eco-friendly, including but not limited to the use of refillable containers, eco-friendly light-fixtures, and the development and implementation of a Green Cleaning Program.

4.2 Sustainable Design

To comply with Article 37, the Proponent intends to measure the results of their sustainability initiatives using the framework of the Leadership in Energy and Environmental Design (LEED) rating system. The Project will use the LEED for Core and Shell v2009 as the rating system to show compliance with Article 37. The LEED rating system tracks the sustainable features of a project by achieving points in the following categories: Sustainable Sites; Water Efficiency; Energy and Atmosphere; Materials and Resources; Indoor Environmental Quality; and Innovation in Design.

A LEED checklist is included at the end of this section, and shows the credits the Project anticipates achieving. The checklist will be updated regularly as the design develops and engineering assumptions are substantiated. Presently the Proponent is striving to be certifiable at the Silver level with 52 points targeted, not including any of the potential Boston Zoning Code Article 37 points.

Sustainable Sites

Prerequisite 1: Construction Activity Pollution Prevention. The Project will create and implement an erosion and sedimentation control plan for all activities associated with the Project.

Credit 1: Site Selection. The Project site has been previously developed with a parking garage below, and does not meet the criteria outlined in the credit regarding areas not to be developed.

Credit 2: Development Density and Community Connectivity. The Project meets the Community Connectivity criteria by being located on a previously developed site, within ½ mile of a neighborhood that meets the density requirements and has at least ten basic services, and has pedestrian access between the building and the services.

Credit 4.1: Alternative Transportation – Public Transportation Access. The Project site is within a ½ mile walking distance of the Green Line stops at Copley Square and Arlington as well as Commuter and Regional Rail at Back Bay Station.

Credit 4.3: Alternative Transportation - Low Emission & Fuel Efficient Vehicles. The Project will provide preferred parking spaces for low-emitting and fuel-efficient vehicles for 5% of the total parking capacity. The low-e and fuel efficient vehicles must have a minimum green score of 40 from the ACEEE Annual Rating Guide or be a ZEV (zero emissions vehicle).

Credit 4.4: Alternative Transportation – Parking Capacity. The Project will not provide new parking.

Credit 5.2: Site Development—Maximize Open Space. The Project will have a roof deck that is 25% vegetated.

Credit 6.1: Stormwater Design—Quantity Control. The Project will implement a stormwater management plan that results in a 25% decrease in the volume of stormwater runoff from the 2-year 24-hour design storm.

Credit 7.1: Heat Island Effect—Non-roof. The Project will provide shade from the existing tree canopy for 50% of the site's hardscaping.

Credit 7.2: Heat Island Effect—Roof. The Project will use roofing materials that meet the criteria for this credit.

Credit 9: Tenant Design and Construction Guidelines. The owner will publish an illustrated document that provides tenants with design and construction information as required to achieve this credit.

Water Efficiency

Prerequisite 1: Water Use Reduction—20% Reduction. The Project will comply with the minimum potable water consumption reduction of 20% less water used when compared to a baseline case by using low-flow and efficient plumbing fixtures (not including irrigation).

Credit 1: Water Efficient Landscaping. The Project will reduce potable water consumption used for irrigation by using native or adapted plant species and an efficient irrigation system.

Credit 3: Water Use Reduction. Through the specification of low-flow and high efficiency plumbing fixtures, the Project will implement water use reduction strategies that will target an overall potable water use savings of 30% from the calculated baseline use.

Energy and Atmosphere

Prerequisite 1: Fundamental Commissioning of the Building Energy Systems. The Project will engage a commission agent for the commissioning process and to verify that the building's related systems are installed and performed as intended.

Prerequisite 2: Minimum Energy Performance. Architectural and engineering systems will be designed to meet the mandatory requirements of ASHRAE 90.1-2004 and to achieve approximately 20-22% energy performance improvement beyond that defined by ASHRAE 90.1-2004 Appendix G. Energy use will be demonstrated using a DoE 2 whole building energy simulation software package. Energy performance is highly dependent on ultimate system selection and operational parameters.

Prerequisite 3: Fundamental Refrigerant Management. The Project will use refrigerants that are chlorofluorocarbon (CFC) free in the HVAC&R system

Credit 1: Optimize Energy Performance. The Project will follow Option 3, Prescriptive Compliance Path: Advanced Buildings "Core Performance Guide". The Project will include the following performance strategies:

- Supply air reset - Supply air reset for air handlers will be employed via the building automation system.

- Heat recovery – Outdoor air will be preheated and precooled as appropriate via air to air sensible heat recovery units that are a minimum 50% efficient.

- Night venting – Circulation of cool outdoor air at night to pre-cool the building prior to daily occupancy during the cooling season shall be via a bypass around the heat recovery units that pre-cool the outdoor air when the temperature of the outdoor air is lower than that of the exhaust air at night during the cooling season. This will be accomplished via the building automation system.

- Premium economizer performance – Control and verification features to the economizer system as per Section 3.9 of the Core Performance Guide as applicable to the design shall be implemented

- Variable speed control – All pumps and fans shall be selected with variable frequency drives.

- Additional commissioning strategies – A third party commission agent shall provide commissioning services for the project. The commissioning agent shall also be involved in peer review.

Credit 5.1: Measurement and Verification. The Project will incorporate additional kW/kWH metering equipment and power consumption/trending software to be installed on-site.

Credit 6: Green Power. The owner will engage in at least a two-year renewable energy contract to provide at least 35% of the Project's electricity from renewable sources.

Materials and Resources

Prerequisite 1: Storage and Collection of Recyclables. The Project will provide an easily-accessible dedicated area for the collection and storage of materials for the entire building.

Credit 2: Construction Waste Management. The construction management team will develop and implement a Construction Waste Management plan for waste generation on site. The construction manager will endeavor to divert as much demolition debris and construction waste from area landfills as possible, with a goal to achieve 50% diversion.

Credit 4: Recycled Content. The Project will specify materials to require a minimum of 10% recycled content materials (combination of pre-consumer and post-consumer recycled content) based on the calculation of cost against total value of materials.

Credit 5: Regional Materials. The Project will specify that 10% of materials be sourced (with respect to extraction, harvesting, recovery and manufacture) within a 500 mile radius of the Project site.

Credit 6: Certified Wood. The Project will use a minimum of 50% of wood-based materials and products that are FSC certified.

Indoor Environmental Quality

Prerequisite 1: Minimum IAQ Performance. The building mechanical systems will be designed to meet or exceed the requirements of ASHRAE Standard 62.1-2007 sections 4 through 7 and/or applicable building codes. Any naturally ventilated spaces will comply with the applicable portions of ASHRAE 62.1 as well.

Prerequisite 2: Environmental Tobacco Smoke (ETS) Control. The Project will prohibit smoking in the building and prohibit on-property smoking within 25 feet of entries, outdoor air intakes and operable windows.

Credit 2: Increased Ventilation. The Project will increase breathing zone outdoor air ventilation rates to all occupied spaces by at least 30% above the minimum rates required by ASHRAE Standard 62.1-2007.

Credit 4.1: Low-Emitting Materials—Adhesives and Sealants. The Project will specify adhesives and sealants with low Volatile Organic Compounds (VOC) content to reduce the quantity of indoor air contaminants.

Credit 4.2: Low-Emitting Materials—Paints and Coatings. The Project will specify paints and coatings with low VOC content to reduce the quantity of indoor air contaminants.

Credit 6: Controllability of Systems—Thermal Comfort. The Project will provide comfort system controls for all shared multi-occupant spaces to enable adjustments that meet group needs and preferences as described in ASHRAE Standard 55-2004.

Credit 7: Thermal Comfort—Design. The Project's HVAC systems and the building envelope will be designed to meet the ASHRAE Standard 55-2004.

Innovation and Design

The team has identified several possible ID credits listed below, (limited to five ID credits total):

Exemplary Performance for SSc4.1. The Project site is located on several bus routes and rail lines with a frequency of service that includes over 200 transit rides per day.

AE 2 Education of the Building Manager: An operations and training manual will be created and provided to the building manager. A one hour walk through will be conducted with the building manager.

Green Cleaning: At least 30% of the total annual purchases of these products (by cost) will meet at least 1 of the sustainable criteria required to meet this standard.

Credit 2 LEED Accredited Professional. A LEED AP is part of the Project team.

Regional Priority Credits

Regional Priority Credits, (RPC) are established LEED credits designated by the USGBC to have priority for a particular area of the country. When a Project team achieves one of the designated RPCs, an additional credit is awarded to the Project. RPCs applicable to the site include: SSc3, SSc6.1, SSc7.1, SSc7.2, EAc2(1%) and MRc1.1(75%). This Project anticipates three RPCs for: SSc6.1 Stormwater Design, Quality Control; SSc7.1 Heat Island Effect, Non-roof; and SSc7.2 Heat Island Effect, Roof.

4.3 Climate Change Preparedness

4.3.1 Introduction

The Project team examined two areas of concern related to climate change: drought conditions and increased number of high-heat days. Due to the Project's location, elevation and topography, sea level rise will not impact the Project site, and impacts from heavy rain events are anticipated to be minimal. A copy of the preliminary Climate Change Checklist is included in Appendix D.

4.3.2 Drought Conditions

Under a global high emissions scenario that would increase the potential climate change impacts, the occurrence of droughts lasting one to three months could go up by as much as 75% over existing conditions by the end of the century. To minimize the Project's susceptibility to drought conditions, the landscape design on the roof deck is anticipated to incorporate native and adaptive plant materials which require low or no irrigation and are known for their ability to withstand adverse conditions. Plumbing fixtures will be specified to achieve a reduction in water use through low-flow water-closets, low-flow showers, and low-flow sinks.

4.3.3 High Heat Days

The Intergovernmental Panel on Climate Change (IPCC) has predicted that in Massachusetts the number of days with temperatures greater than 90°F will increase from the current five-to-twenty days annually, to thirty-to-sixty days annually[1].

[1] IPCC (Intergovernmental Panel on Climate Change), 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Avery, M. Tignor, and H. L. Miller (eds.)]. Cambridge University Press, Cambridge, UK, and New York, 996 pp.

Energy modeling for the Project has not yet been completed; however, the Project includes improvements to the existing structure and mechanical improvements that will improve the energy efficiency of the building. Any new roofs will make use of high albedo materials in order to minimize the heat island effect.

LEED 2009 for Core and Shell Development

Project Checklist

Project Name

Date

Sustainable Sites — Possible Points: 28

Y	?	N			
Y			Prereq 1	Construction Activity Pollution Prevention	
1			Credit 1	Site Selection	1
5			Credit 2	Development Density and Community Connectivity	5
		1	Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
		2	Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	2
3			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
2			Credit 4.4	Alternative Transportation—Parking Capacity	2
		1	Credit 5.1	Site Development—Protect or Restore Habitat	1
1			Credit 5.2	Site Development—Maximize Open Space	1
1			Credit 6.1	Stormwater Design—Quantity Control	1
		1	Credit 6.2	Stormwater Design—Quality Control	1
1			Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
		1	Credit 8	Light Pollution Reduction	1
1			Credit 9	Tenant Design and Construction Guidelines	1

Water Efficiency — Possible Points: 10

Y			Prereq 1	Water Use Reduction—20% Reduction	
2			Credit 1	Water Efficient Landscaping	2 to 4
		2	Credit 2	Innovative Wastewater Technologies	2
2		2	Credit 3	Water Use Reduction	2 to 4

Energy and Atmosphere — Possible Points: 37

Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
5			Credit 1	Optimize Energy Performance	3 to 21
		4	Credit 2	On-Site Renewable Energy	4
	2		Credit 3	Enhanced Commissioning	2
	2		Credit 4	Enhanced Refrigerant Management	2
3			Credit 5.1	Measurement and Verification—Base Building	3
		3	Credit 5.2	Measurement and Verification—Tenant Submetering	3
2			Credit 6	Green Power	2

Materials and Resources — Possible Points: 13

Y	?	N			
Y			Prereq 1	Storage and Collection of Recyclables	
		5	Credit 1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 5
1			Credit 2	Construction Waste Management	1 to 2
	1		Credit 3	Materials Reuse	1
1			Credit 4	Recycled Content	1 to 2
1			Credit 5	Regional Materials	1 to 2
1			Credit 6	Certified Wood	1

Indoor Environmental Quality — Possible Points: 12

Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
		1	Credit 1	Outdoor Air Delivery Monitoring	1
1			Credit 2	Increased Ventilation	1
		1	Credit 3	Construction IAQ Management Plan—During Construction	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
	1		Credit 4.3	Low-Emitting Materials—Flooring Systems	1
	1		Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
		1	Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6	Controllability of Systems—Thermal Comfort	1
1			Credit 7	Thermal Comfort—Design	1
		1	Credit 8.1	Daylight and Views—Daylight	1
		1	Credit 8.2	Daylight and Views—Views	1

Innovation and Design Process — Possible Points: 6

1			Credit 1.1	Innovation in Design: SSc4.1 Alternative Transportation—Public Trans	1
1			Credit 1.2	Innovation in Design: AEc2 Education of the Building Manager	1
1			Credit 1.3	Innovation in Design: Green Cleaning	1
			Credit 1.4	Innovation in Design: Specific Title	1
			Credit 1.5	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1

Regional Priority Credits — Possible Points: 4

1			Credit 1.1	SSc6.1-Stormwater Design-Quality Control	1
1			Credit 1.2	SSc7.1-Heat Island Effect-Non-roof	1
1			Credit 1.3	SSc7.2-Heat Island Effect-Roof	1
			Credit 1.4		1

Total — Possible Points: 110

52	7	27	Total

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

Chapter 5.0

Urban Design

5.0 URBAN DESIGN

The Project site, located in the Back Bay neighborhood of Boston, is bounded by Boylston Street to the north, St. James Avenue to the south, Clarendon Street to the west and 222 Berkeley Street to the east. The existing 500 Boylston Street building on the site consists of a 19-story office tower sitting on a six story podium with a courtyard facing Boylston Street and a three story underground parking garage. The majority of the first two levels are occupied by retail and restaurant tenants, with a portion of the second floor facing Clarendon Street and St. James Avenue occupied by an office tenant. The remaining space in the podium and tower are rented as office space. Many of the surrounding buildings share this mix of retail, restaurant and office space.

The intentions of the Project are to infill the current, under-utilized, courtyard with new retail and office space, as well as to re-orient the entrance of the 500 Boylston Street tower to Clarendon Street. Due to its location on the north side of the site and the shadows cast by both the tower and the Hancock building, the existing courtyard receives almost no direct sunlight. This fact, coupled with the proximity of open green space at Copley Square causes the courtyard to remain dark and empty a majority of the time. The new infill will increase the performance of the building by greatly reducing the building's exterior envelope. The design of the Project has evolved through consultation with the BRA design staff. The existing courtyard also creates a gap in the street wall, creating a less defined urban space on Boylston Street. The new infill will introduce a continuous street wall to Boylston Street, with retail space activating the first two to three levels, greatly improving the urban experience of Boylston Street. Figure 5-1 presents the existing street wall on Boylston Street, and Figure 5-2 presents the proposed street wall.

The infill façade will be primarily highly transparent glass. The form of the infill continues the rhythm of the existing bays of the Boylston Street façade while also referencing the diamond motif that runs throughout the building (see Figure 5-3). The 500 Boylston Street building main entrance to the tower will be re-oriented from Boylston Street to Clarendon Street and will include a new tower lobby and publicly accessible through way. The new Clarendon Street lobby will have a two story glass and steel vestibule that will have a similar look and feel to the Boylston Street façade (see Figure 5-4). Figure 5-5 presents sections of the existing sidewalks, and Figure 5-6 presents sections of the proposed sidewalks. The new lobby itself will provide generous seating areas as well as a direct indoor route to 222 Berkeley Street, allowing commuters to travel the entire length of the block indoors. In addition, there will be one or more new retail entrances on Boylston Street as part of the new activated streetwall.

The design team engaged and evolved Philip Johnson's original design by using the extensive diamond shapes and curved edges, creating a contemporary vernacular and language for the 500 Boylston Street addition that is strongly rooted in the original design.

This was accomplished by the seamless insertion of the transparent addition into the solidity of the retail façade of Boylston Street and Clarendon Street. The glass will support the retail component and will also create a visible and welcoming entry to the building.

In connection with the Project, the entrance to the adjacent building at 222 Berkeley Street will be improved with two new ground floor vestibules of approximately 350 sf each. One vestibule will expand the existing tenant's space, and the second vestibule will provide stairs and a lift leading to an existing office space that will be converted to a restaurant. The façade of the new Berkeley Street vestibules will adopt the language of the existing building and will blend seamlessly with the original design (See Figures 5-7 and 5-8).

500 Boylston Street Boston, Massachusetts

cbt

Figure 5-1

Existing Street Wall

500 Boylston Street Boston, Massachusetts

cbt

Figure 5-2

Proposed Street Wall

500 Boylston Street Boston, Massachusetts

cbt

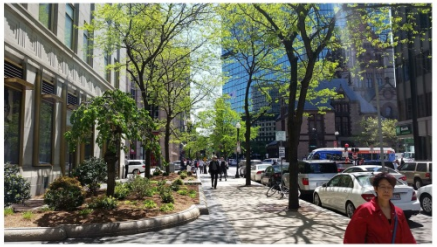
Figure 5-3

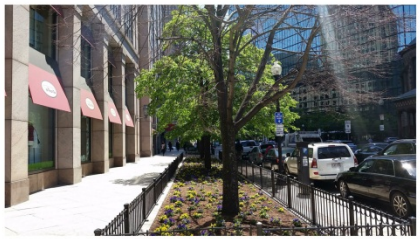
Boylston Street Façade

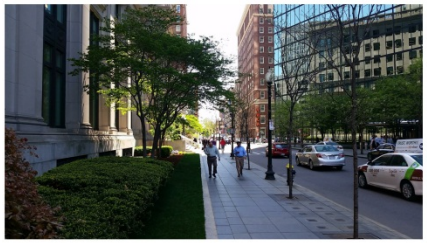
500 Boylston Street Boston, Massachusetts

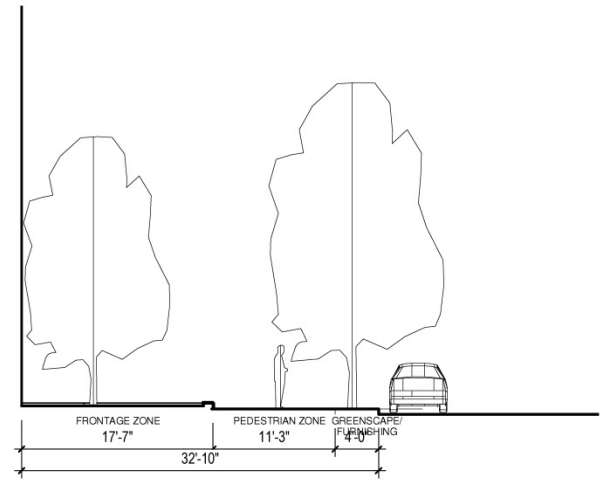
cbt

Figure 5-4
Proposed Clarendon Street Entrance



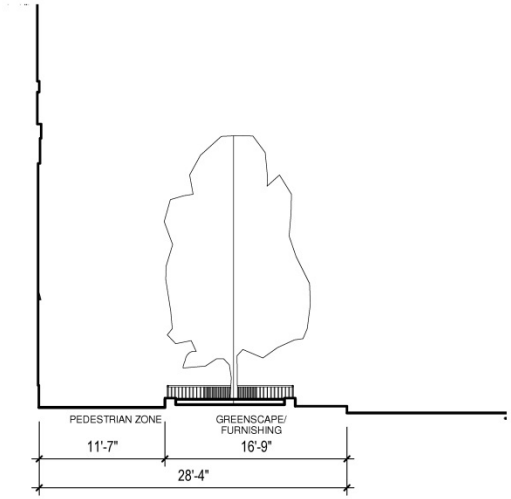






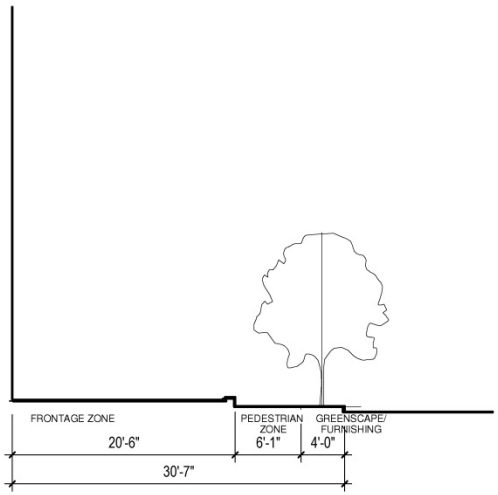
SIDEWALK SECTION BTWN BOYLSTON & NEWBURY - EXISITING

3/32" = 1'-0"



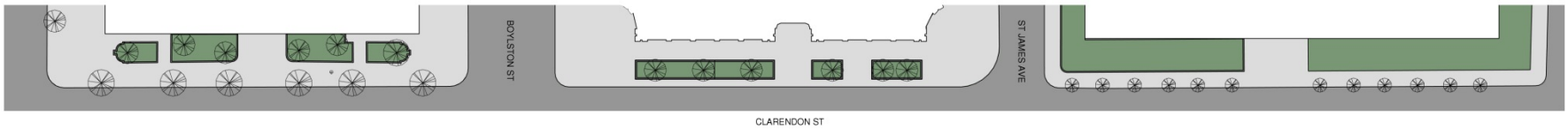
SIDEWALK SECTION BTWN BOYLSTON & ST JAMES - EXISTING

3/32" = 1'-0"



SIDEWALK SECTION BTWN ST JAMES & STUART- EXISTING

3/32" = 1'-0"

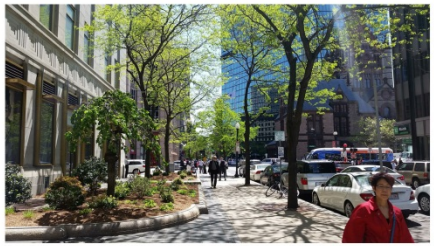


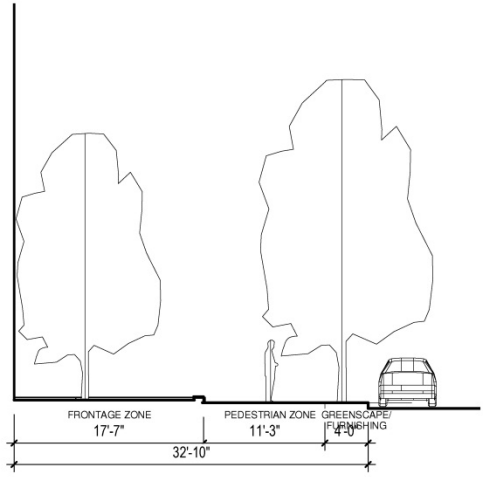
500 Boylston Street Boston, Massachusetts

cbt

Figure 5-5

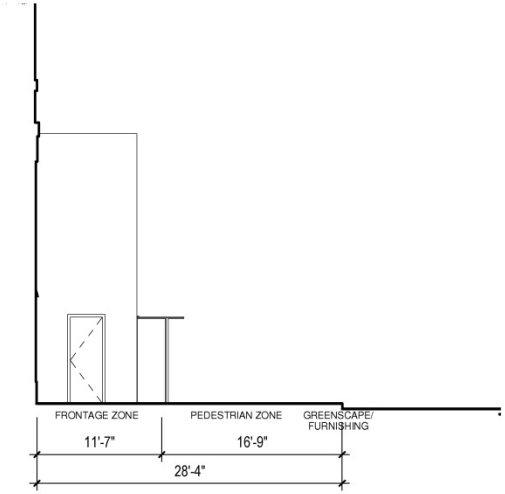
Existing Sidewalks





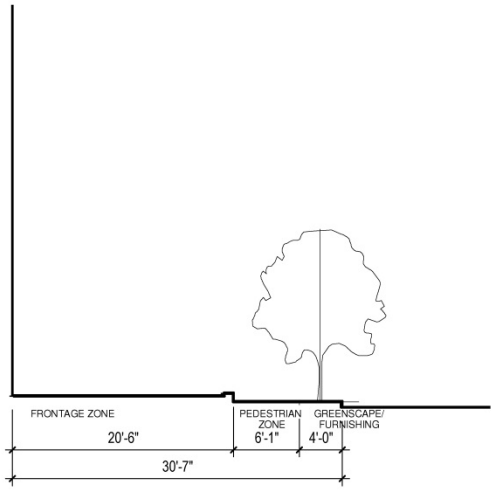
SIDEWALK SECTION BTWN BOYLSTON & NEWBURY - EXISTING TO REMAIN

3/32" = 1'-0"



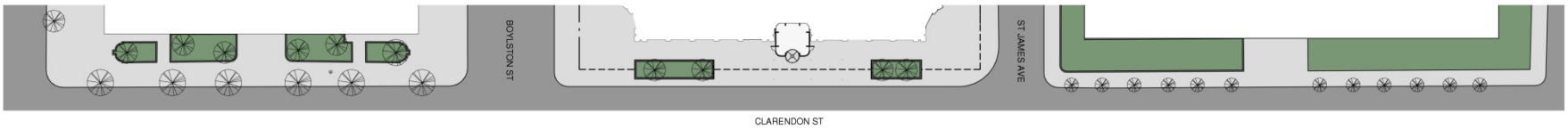
SIDEWALK SECTION BTWN BOYLSTON & ST JAMES - PROPOSED

3/32" = 1'-0"



SIDEWALK SECTION BTWN ST JAMES & STUART- EXISTING TO REMAIN

3/32" = 1'-0"



500 Boylston Street Boston, Massachusetts

cbt

Figure 5-6

Proposed Sidewalks

500 Boylston Street Boston, Massachusetts

cbt

Figure 5-7

Berkeley Street Vestibules

500 Boylston Street Boston, Massachusetts

cbt

Figure 5-8

Berkeley Street Vestibules

Chapter 6.0

Historic and Archaeological Resources

6.0 HISTORIC AND ARCHAEOLOGICAL RESOURCES

The Historic and Archaeological Resources section describes the historic and archaeological resources within and in the vicinity of the Project site.

6.1 Historic Resources Within the Project Site

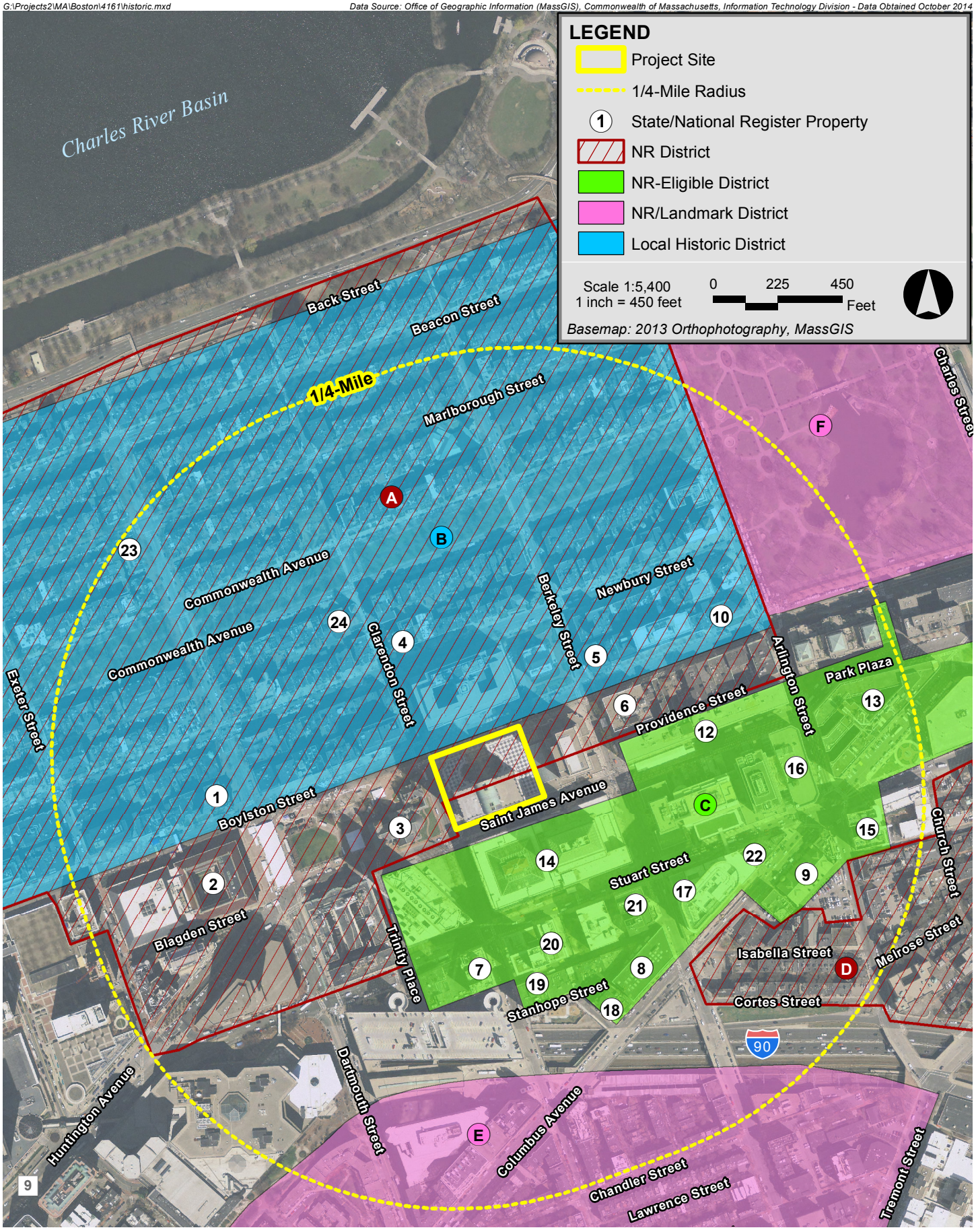
The Project site, located in the Back Bay neighborhood of Boston, is bounded by Boylston Street to the north, St. James Avenue to the south, Clarendon Street to the west and 222 Berkeley Street to the east. The Project site is an approximately 81,000 sf parcel of land including the 500 Boylston Street building, a 25-story commercial building consisting of offices, restaurant and retail spaces. Constructed in 1988, the building designed by architects John Burgee and Philip Johnson consists of two sections, the six-story base and the 19-story office tower. The base projects outward from the tower north toward Boylston Street with two six-story wings flanking a grade level center courtyard. The northern half of the building including the courtyard and the two six-story wings are within the boundary of the Back Bay National Register Historic District. The District was listed on the National Register in 1973 prior to the building's construction.

The Project site is located in an area predominantly of large multi-story steel frame and masonry buildings with first floor retail spaces and large storefront windows and upper stories serving as residences or offices. In addition to mixed-use buildings, there are institutional buildings such as Trinity Church and the Boston Public Library nearby. Dates of construction range from the late 19th-century through the late 20th-century. Brick, cast stone and stone along with metal panels and single pane and multi-light windows are common building materials in the area. The area is a commercial hub with wide sidewalks, shops, restaurants, and hotels.

6.2 Historic Resources Within the Vicinity of the Project Site

The Project site is located within and in the vicinity of several historic resources listed in the State and National Registers of Historic Places or included in the Inventory of Historic and Archaeological Assets of the Commonwealth. Table 6-1 identifies these resources and corresponds to resources depicted in Figure 6-1.

Data Source: Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, Information Technology Division - Data Obtained October 2014



500 Boylston Street Boston, Massachusetts

Epsilon Associates Inc.

Figure 6-1
Historic Resources

Table 6-1 Historic Resources in the Vicinity of the Project Site

No.	Historic Resource	Address	Designation*
A	Back Bay Architectural District	Roughly bounded by Back St., Embankment Rd. and Arlington St., Boylston St. and Charlesgate East	LHD
B	Back Bay Historic District	Roughly bounded by Arlington, Providence, St. James, Exeter, and Boylston Streets, Charlesgate East, and the Charles River	NRDIS
C	Park Square-Stuart Street Historic District	Roughly bound by Park Sq., Columbus Ave., Clarendon St., James Ave., Providence St., and Boylston St.	NRDIS Eligible
D	Bay Village Historic District	Roughly Bounded by Piedmont, Winchester, Melrose, Fayette, and Tremont Sts.	LHD
E	South End District/ South End Landmark District	Roughly bound by Yarmouth St. Columbus Ave., Mass. Tpke., Berkley St., Tremont St.	NRDIS, LHD
F	Boston Public Gardens	Bounded by Beacon, Charles, Arlington and Boylston Sts.	NRDIS, NHL, LL
1	New Old South Church	645 Boylston St.	NRIND, NRDIS, NHL, LHD
2	Boston Public Library	700 Boylston St.	NRIND, NRDIS, NHL, LL
3	Trinity Church	206 Clarendon St.	NRIND, NRDIS, NHL
4	Trinity Rectory	233 Clarendon St.	NRIND, NRDIS, LHD
5	Street Clock	439 Boylston St.	NRDIS, LHD, LL
6	Berkeley Building	416-426 Boylston St.	NRDIS, LL
7	YWCA	140 Clarendon St.	NRIND
8	Youth's Companion Building	140-144 Berkeley St and 195-215 Columbus Ave.	NRIND
9	Armory of the First Corps of Cadets	97-105 Arlington St. and 130 Columbus Ave.	NRIND, LL
10	Arlington Street Church	Corner of Arlington and Boylston Sts.	NRIND, NRDIS, LL
11	Charles Playhouse	74-78 Warrenton St.	NRIND
12	Park Square Office Building	1-59 St. James Ave.	NRDIS Eligible
13	Statler (Park Plaza) Hotel / Office Building	54-78 Arlington St.	NRDIS Eligible
14	John Hancock Building	190-200 Berkeley St.	NRDIS Eligible
15	Consolidated Building	100 Arlington St.	NRDIS Eligible

Table 6-1 Historic Resources in the Vicinity of the Project Site Continued…

No.	Historic Resource	Address	Designation*
16	Paine Furniture Company Building	75-81 Arlington St.	NRIND,NRDIS Eligible
17	Salada Tea Building	330 Stuart St.	NRDIS Eligible
18	Pope / Cahner's Building	219-223 Columbus Ave.	NRDIS Eligible
19	Publisher's Building	131 Clarendon St.	NRDIS Eligible
20	U.S. Post Office, Back Bay Branch	390 Stuart St.	NRDIS Eligible
21	Boston Police Headquarters	154 Berkley St.	NRDIS Eligible
22	Commercial Building	129-133 Columbus Ave. / 306-306 Stuart St.	NRDIS Eligible
23	Benjamin Crowninshield House	164 Marlborough St.	NRIND, NRDIS
24	First Baptist Church	110 Commonwealth Ave.	NRIND, NRDIS

*Designation Legend

NRIND	Individually listed on the National Register of Historic Places
NRDIS	National Register of Historic Places historic district
NRDOE	Determined eligible for inclusion in the National Register of Historic Places
NHL	National Historic Landmark
LHD	Local Historic District
LL	Local Landmark

6.3 Archaeological Resources Within the Project Site

Portions of the Project site are within the bounds of archaeological site 19-SU-16, a contributing resource to the Back Bay National Register Historic District. The archeological site was excavated in several phases, most recently in 1986-1987 by Timelines Inc. as mitigation for the construction of the existing building at 500 Boylston Street. As the proposed Project involves construction on areas of the Project site previously archaeologically excavated, disturbed and then developed, impacts to archaeological resources are not anticipated.

6.4 Potential Impacts to Historic Resources

6.4.1 Alteration of Existing Building and Site

The existing 25-story retail/office building was constructed in 1988. The Post-Modern style building was designed by architects John Burgee and Philip Johnson. The steel frame building features a cut stone block veneer. The building is dominated by large arched and rectangular multi-light windows separated horizontally by stone pilasters and vertically by raised stone panels. The roof of the 19-story tower features flat sections with a decorative parapet flanking a center arch. The building also features a flat roof on top of the six-story wings adorned with cast stone spheres centered above pilasters. At the first story, the building features large glazed storefronts, recessed entrances and garage entrances. Along the north elevation, between the six-story wings is the circular courtyard adorned with round stone columns.

On the north elevation, a proposed six-story addition will infill the courtyard sited between the existing six-story wings. The proposed Project will maintain a consistent streetwall along Boylston Street. Rather than mimicking the style and materials of the existing building, the Project will feature a metal frame with large glass panels retaining a sense of openness within the former courtyard space and allowing light to penetrate the interior of the building. A new pedestrian entrance will also be added along the north elevation at the first story.

Along the west elevation on Clarendon Street, a new two-story glass and steel entry vestibule will be constructed in front of a recessed entry. The new entry, which will serve as the main entrance to the building, is designed to occupy the semi-circular space in front of the existing entrance and will feature a revolving door, flat roof and glass panels. The proposed entry will utilize the same materials and style as the addition on the north elevation.

Along the east elevation of 222 Berkley Street, two new vestibules will be added that will adopt the language of the existing building and will blend seamlessly with the original design. .

As the existing building is a modern building, the removal of portions of the exterior masonry, and glass elevations will result in no impact to historic resources. The Project is in keeping with the massing of the existing building, maintains the existing streetwall along Boylston Street and will result in no impact on the character of the Back Bay National Register Historic District or the nearby National Register listed properties.

6.4.2 Visual Impacts to Historic Resources

The proposed Project is within the Back Bay National Register Historic District and in close proximity to Trinity Church located across Clarendon Street (individually listed on the National Register as well as within the Back Bay Historic District). Additionally, properties across Boylston Street to the north are also within the Back Bay Architectural District, a local historic district within the City of Boston. As the proposed Project involves an addition on the north elevation within the courtyard of the existing building and a new entry vestibule on the west elevation, both small in scope compared to the existing 25-story building and surrounding multi-story buildings, the Project will have minimal new visual impacts on resources within the neighborhood. The proposed cladding will consist of steel frame and large glass panels creating a sense of transparency and openness. The entry vestibule proposed on the west elevation will scale down the building to street level, while maintaining a sense of depth from the sidewalk. The proposed alterations are in keeping with the architectural character of the surrounding neighborhood.

The proposed alterations will upgrade the architectural character of the building from the present underutilized courtyard, creating a consistent streetwall. The Project will add to the architectural features seen in nearby buildings including steel frame, large windows, and entry vestibule. The Project will result in a building that will be consistent with the architectural character of the surrounding neighborhood.

6.4.3 Shadow Impacts to Historic Resources

Shadow impacts to the historic resources will be minimal. As illustrated in the shadow study diagrams (Figures 3.2-1 to 3.2-14), during isolated time periods the Project will cast minimal net new shadow on areas of Boylston Street and Clarendon Street within the Back Bay National Register Historic District.

New shadow on historic resources with the City of Boston is limited to new shadow at 9:00AM, 12:00PM and 3:00PM on March 21st, 9:00AM, 12:00PM and 3:00PM on June 21st, 9:00AM and 3:00PM on September 21st, within the boundaries of the Back Bay National Register Historic District. However, new shadow will be minimal and will not impact nearby historic buildings as the shadow will fall on sidewalks along Boylston Street and Clarendon Street as well as the travel lane on Boylston Street. Net new shadow created by the Project will have no significant impacts to historic resources.

6.4.4 Wind Impacts to Historic Resources

The Project entails a minimal expansion of the existing building. As such, wind impacts to historic resources are expected to be unchanged from the current condition.

6.5 Consistency with Other Historic Reviews

6.5.1 Article 85

The existing building on the site is under 50 years of age; therefore, the proposed alteration of the exterior of the building is not subject to review by the Boston Landmarks Commission under Article 85 of the Boston Zoning Code.

6.5.2 Massachusetts Historical Commission

At this time, no state or federal funding, licensing, permits and/or approvals requiring review by the Massachusetts Historical Commission (MHC) are anticipated. However, if a state or federal action is identified as required for the Project, a MHC Project Notification Form will be filed for the Project in compliance with State Register Review (950 CMR 71.00) and/or Section 106 of the National Historic Preservation Act (36 CFR 800).

Chapter 7.0

Infrastructure

7.0 INFRASTRUCTURE

7.1 Overview of Existing Utility Services

The Project site, located in the Back Bay neighborhood of Boston, is bounded by Boylston Street to the north, St. James Avenue to the south, Clarendon Street to the west and 222 Berkeley Street to the east. The existing building at 500 Boylston Street is a multi-use building with retail, restaurants, and office space. The Project includes a six-story infill in an existing courtyard which would provide more retail and office space. In connection with the Project, the entrance at 222 Berkeley Street will also be improved with two new vestibules totaling approximately 700 sf of gross floor area. One vestibule will provide access to approximately 8,350 sf of second floor office space that will be converted to a restaurant, and the other will expand the existing first and second floor Bank of America space.

The Project will rely on existing utility services that currently service the building and it is not anticipated that any new utility service connections will be required. As part of the Project, all engineering analyses will be performed to ensure that the Project is properly supported by the existing infrastructure.

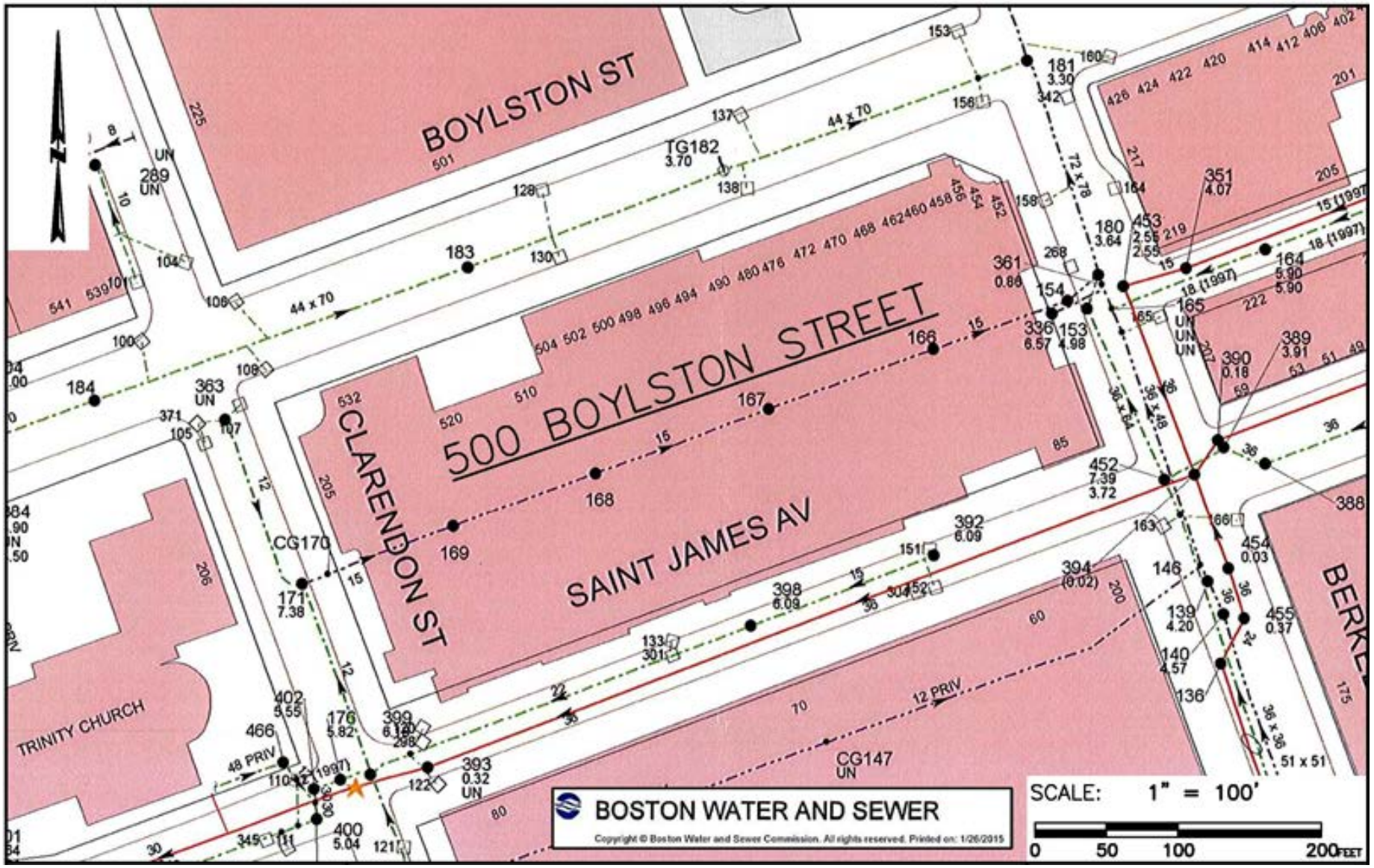
The existing infrastructure surrounding the site appears sufficient to handle the small increase in service needs from the proposed Project. The following sections describe the existing sewer, water, drainage systems and energy services surrounding the Project site and provide an explanation for how these systems will service the proposed Project.

The Project site is located with the City's Groundwater Conservation Overlay District (GCOD) which establishes the performance standards for the infiltration of site runoff for projects located in the District. The Project will work with the BRA, BWSC and the Boston Groundwater Trust (BGwT) to develop design strategies to address the GCOD requirements, and the Project will comply with the requirements of Article 32 of the Boston Zoning Code. Meetings with BGwT have been initiated.

7.2 Sanitary Sewer System

7.2.1 Existing Sanitary Sewer System

BWSC owns, operates, and maintains the sanitary and combined sewer mains on and in the vicinity of the Project site. The existing separated and combined sewer systems in the vicinity of the Project Site are shown on Figure 7-1. The separated and combined sewers ultimately flow to the Massachusetts Water Resources Authority's (MWRA's) Deer Island Wastewater Treatment Plant, where it is treated and discharged to Massachusetts Bay.



500 Boylston Street Boston, Massachusetts

BSC GROUP

Figure 7-1

Existing Sewer System

7.2.2 Proposed Sanitary Flow

The Massachusetts Department of Environmental Protection (MassDEP) establishes sewer generation rates for various types of establishments in a section of the State Environmental Code Title V (Title V), 310 CMR 15.203. Based on the Project's anticipated building program, Table 7-1 provides an estimate of the proposed sanitary sewer flows expected to be generated by the Project. In order to provide a conservative estimate of the anticipated sanitary sewer flows, the Project program with the maximum amount of office space is utilized, and the anticipated conversion of office space to retail space in the existing 500 Boylston Street building was not included, as this use generates the highest amount of sewer flows. The conversion of office space to a new restaurant at 222 Berkeley Street in included in the calculation of anticipated sanitary sewer flows because restaurants generate more sewer flows than office space. Based on these Title V sewer generation rates, the Project is expected to produce approximately 14,785 gallons/day of additional sewer flow.

Table 7-1 Net New Sewer Generation

Unit Type	Program	Sewer Generation Rate	Sewer Flow (gpd)
500 Boylston Street			
New Retail	32,500 sf	50 gallons/day/1,000 sf.	1,625
New Office	46,800 sf	75 gallons/day/1,000 sf	3,510
Total New Sewer Generation at 500 Boylston Street			**5,135**
222 Berkeley Street			
New Retail	350 sf	50 gallons/day/1,000 sf	200 gpd (the minimum for Title 5 design)
Restaurant	270 seats	35 gallons/day/seat	9,450
Total New Sewer Generation at 222 Berkeley Street			**9,650**
Total New Sewer Generation for 500 Boylston Street and 222 Berkley Street			**14,785**

Based on preliminary calculations, there are no anticipated sewer capacity concerns in the vicinity of the Project site due to the small increase in sewer flows generated from the Project. The Project's engineer will coordinate final, proposed sewer flows and available capacity with BWSC during Project design to ensure the Project needs are met without disruption of service to the surrounding area.

7.2.3 Proposed Sanitary Sewer Connections

There are no new sanitary sewer service connections to any BWSC sewer mains proposed as a part of the Project. Instead, the Project will connect to existing sewer services within the existing building. All sewer service connections will be kept separate from storm drain connections in accordance with BWSC requirements.

7.3 Water System

7.3.1 Existing Water Service

BWSC owns, operates, and maintains the water distribution systems in the vicinity of the Project site. According to available record plans from BWSC there are multiple existing water connections to the existing building. Seven water connections are located in Boylston Street, one service in Berkeley Street, and three in Saint James Avenue. The existing water distribution in the vicinity of the Project site is shown on Figure 7-2.

7.3.2 Proposed Water Demand

The estimated proposed water demand for the Project is based on the estimated sanitary sewer flow (see Table 7-1), with a factor of 1.1 applied to account for consumption and other loses. Based on this formula, the Project's estimated additional peak water demand for domestic uses is 16,264 gallons per day. The domestic water will be supplied by the BWSC water system.

There are no anticipated water capacity concerns in the vicinity of the Project site due to the small increase in demand from the Project.

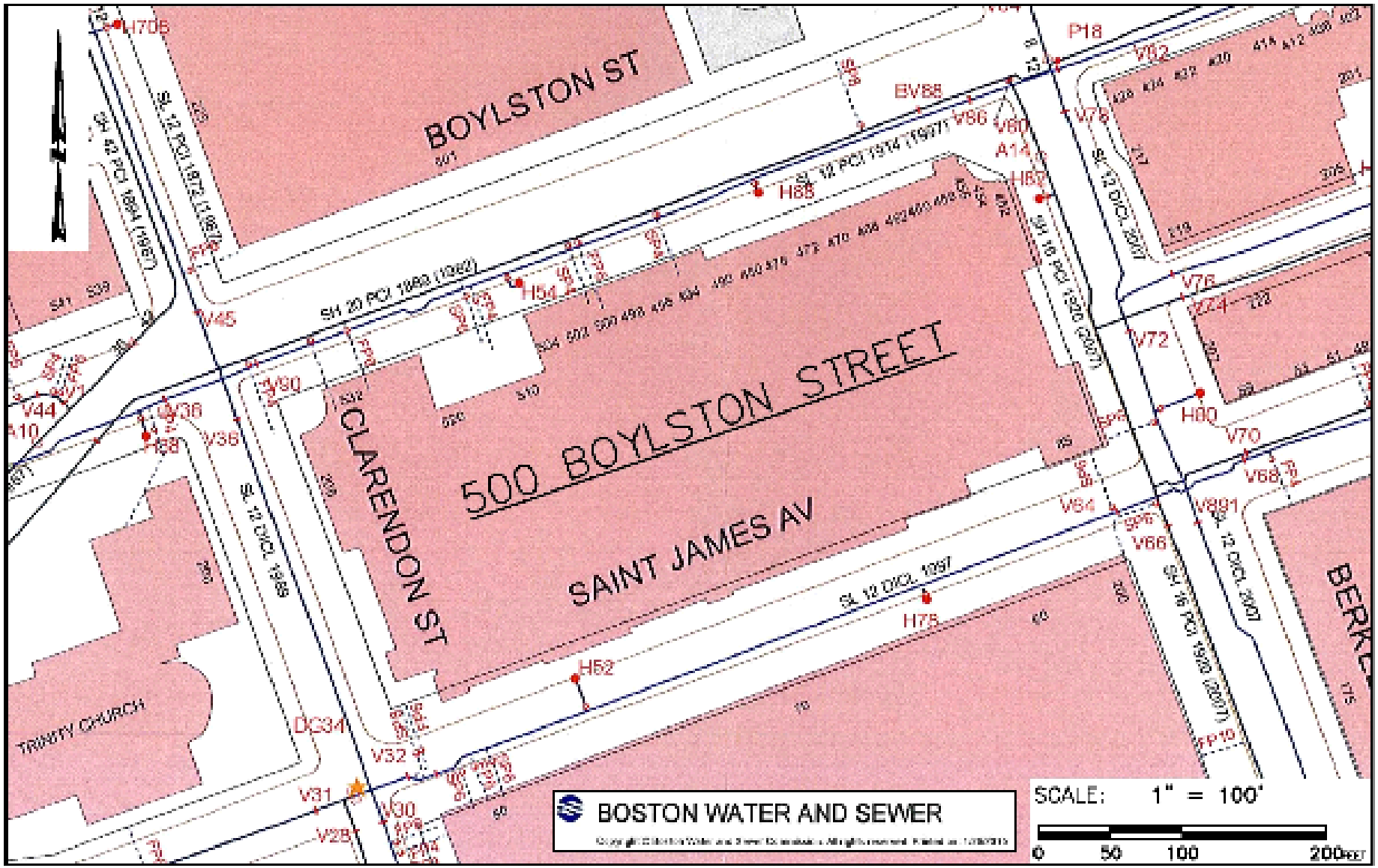
7.3.3 Proposed Water Service

There are no new water service connections to any BWSC water mains proposed as a part of the Project. Instead, the Project will connect to existing water services within the existing buildings in accordance with all BWSC and ISD requirements.

The Project is also expected extend the existing internal fire protection services to the new portions of the buildings. All services will be in accordance with BWSC and ISD requirements.

7.3.4 Water Supply Conservation and Mitigation

The Project will be LEED certifiable in accordance with the BRA's Article 37 Green Building program. As such, various water conservation measures such as low-flow toilets and urinals, restricted flow faucets, and sensor operated sinks, toilets, and urinals may be incorporated in order to meet the LEED water conservation requirements. Specific water conservation measures to be included in the Project will be more fully described as the building designs develop.



500 Boylston Street Boston, Massachusetts

BSC GROUP

Figure 7-2

Existing Water System

7.4 Storm Drainage System

7.4.1 Existing Storm Drainage System

The existing Project site consists of concrete sidewalks, a building, and a hardscape courtyard area. Runoff from the courtyard area of the Project site currently flows into catch basins that connect to the BWSC drainage system. Runoff from the roof of the existing building is directed directly to the BWSC drainage system in the surrounding streets. The Project is in the process of determining the exact locations of the connections.

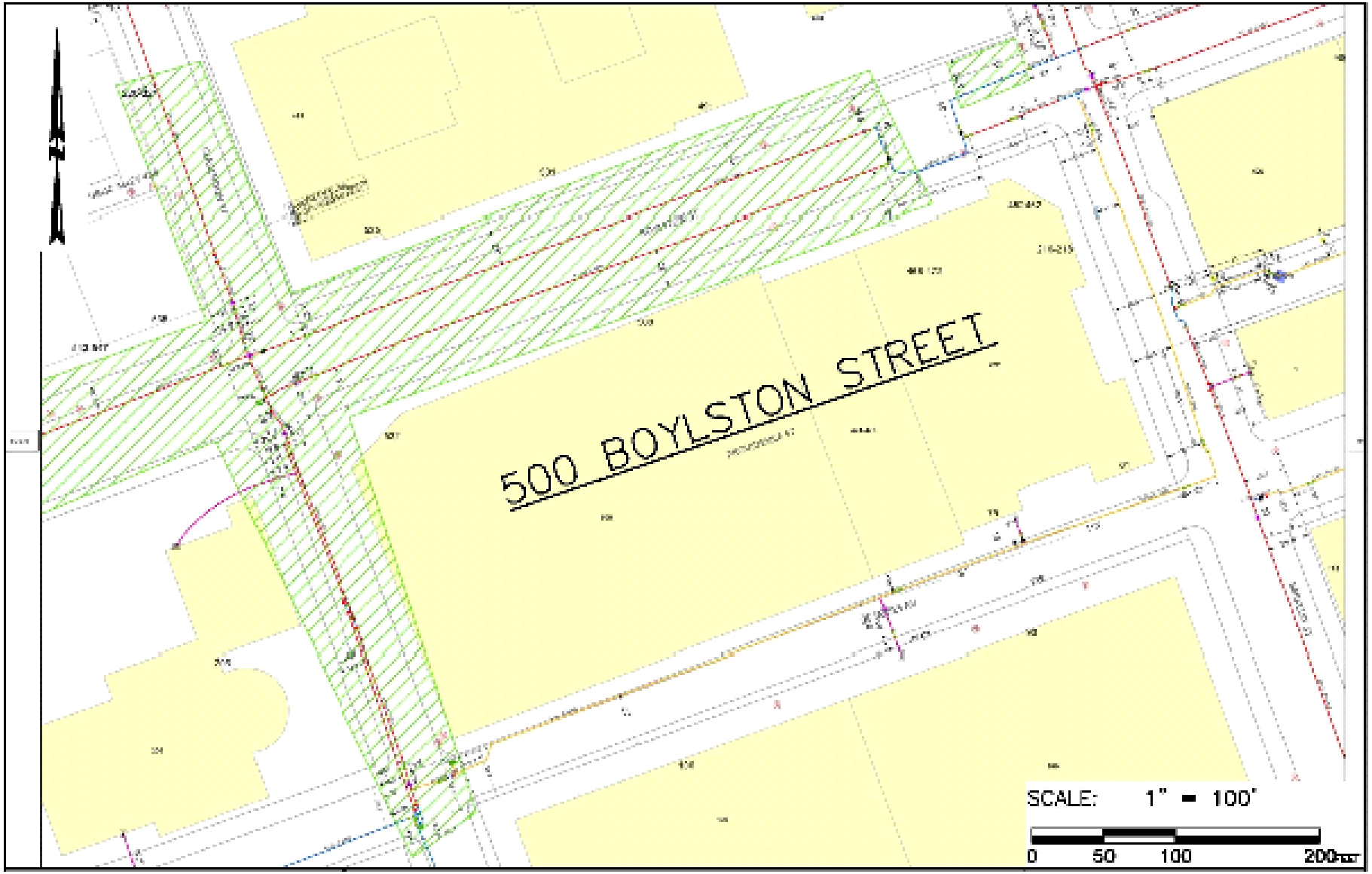
7.4.2 Proposed Storm Drainage System

No new storm drain connections are proposed to any BWSC stormwater management systems as a part of the Project. The new building areas will connect to the existing interior building drainage collection system. Additionally, there is no increase in impervious area proposed as a part of the Project, and infiltration on the site is infeasible due to the lack of space available for infiltration on the property. However, the Proponent is committed to working with the BGwT and BWSC to develop design strategies to address the GCOD requirements.

The Project will not disturb more than one acre of land, so construction will not require the submittal of a Notice of Intent (NOI) for coverage under the Construction General Permit (CGP) as part of the Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES). Appropriate erosion and sedimentation (E&S) controls will be installed to prevent sediment laden stormwater runoff from leaving the site and entering the BWSC drainage system during construction. E&S controls will be maintained as necessary until all disturbed areas have been stabilized through the placement of pavement and structures and will conform to the Water Quality section of the City of Boston Environment Department Guidelines for Construction.

7.5 Electrical and Gas Service

According to available record data from National Grid, there are existing natural gas mains and underground electric distribution lines adjacent to the Project in the surrounding streets that feed the existing buildings (see Figure 7-3). These mains are owned, operated, and maintained by National Grid. The Project anticipates using the existing building feeds, however, if a new gas service is required the Proponent will work with National Grid to confirm the system has adequate capacity.



500 Boylston Street Boston, Massachusetts

BSC GROUP

Figure 7-3

Existing Gas and Electric Systems

7.6 Telecommunication Systems

The Proponent will select private telecommunications companies to provide telephone, cable, and data services. There are several potential candidates with substantial downtown Boston networks capable of providing service. Upon selection of a provider or providers, the Proponent will coordinate service connection locations and obtain appropriate approvals.

7.7 Utility Protection During Construction

Existing public and private infrastructure located within nearby public rights-of-way will be protected during Project construction. The installation of proposed utility connections within public ways will be undertaken in accordance with BWSC, Boston Public Works Department, the Dig-Safe Program, and applicable utility company requirements. Specific methods for constructing proposed utilities where they are near to, or connect with, existing water, sewer, and drain facilities will be reviewed by the 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 the BWSC and the utility companies to ensure safe and coordinated utility operations in connection with the Project.

Chapter 8.0

Coordination with other Governmental Agencies

8.0 COORDINATION WITH OTHER GOVERNMENTAL AGENCIES

8.1 Architectural Access Board Requirements

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

8.2 Massachusetts Environmental Policy Act (MEPA)

The Proponent does not expect that the Project will require review by the Massachusetts Environmental Policy Act (MEPA) Office of the Massachusetts Executive Office of Energy and Environmental Affairs. Current plans do not call for the Project to receive any state permits, state funding or involve any state land transfers.

8.3 Massachusetts Historical Commission

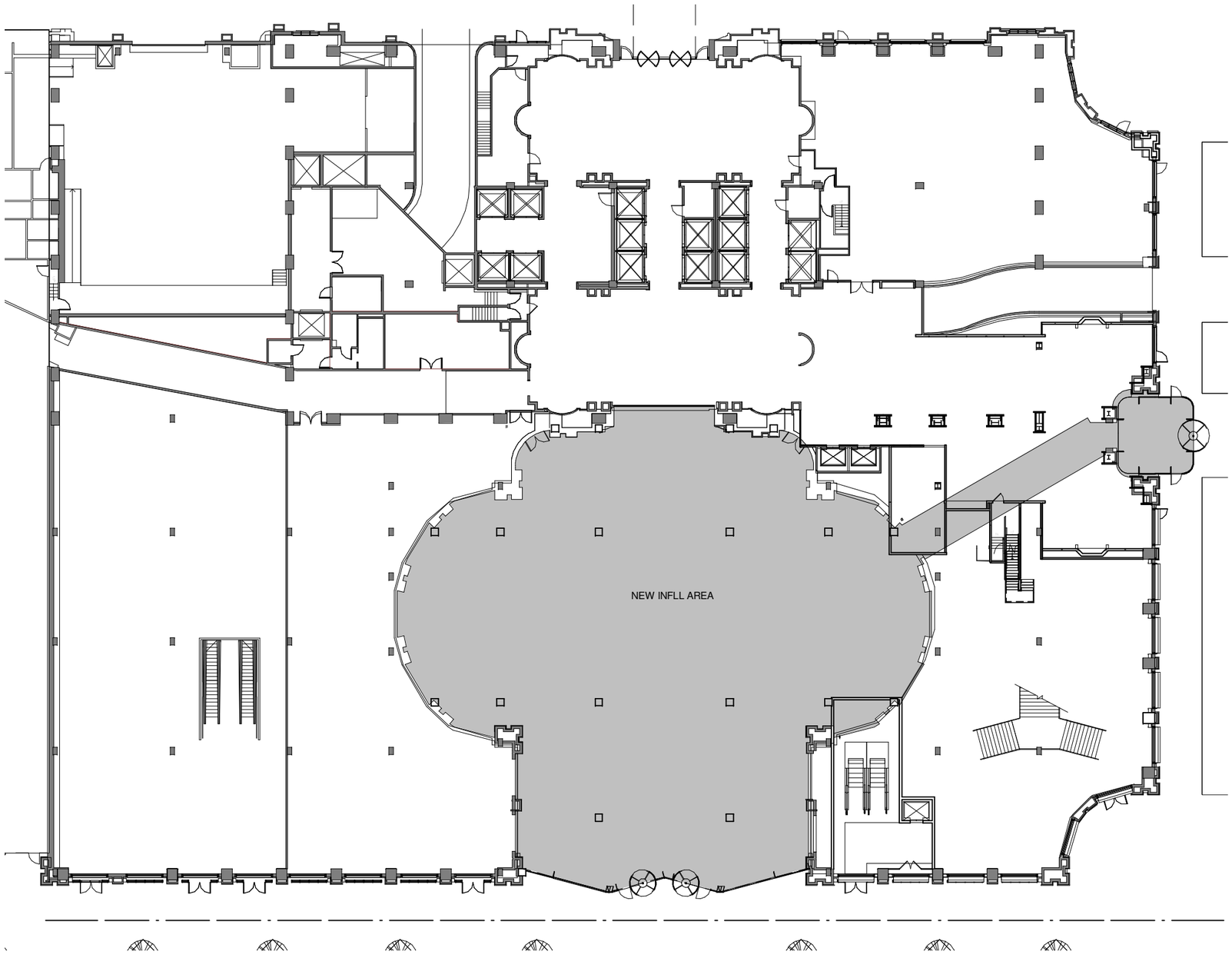
The Proponent does not anticipate that the Project will require any state or federal licenses, permits or approvals, and does not anticipate utilizing any state or federal funds. Therefore, review by the Massachusetts Historical Commission (MHC) is not anticipated at this time. In the event that state or federal licenses, permits, approvals or funding is involved, the Proponent will file an MHC Project Notification Form to initiate review of the Project.

8.4 Boston Civic Design Commission

The Project will comply with the provisions of Article 28 of the Boston Zoning Code. This PNF will be submitted to the Boston Civic Design Commission by the BRA as part of the Article 80 process.

Appendix A

Floor Plans



LEVEL 1 - Pricing

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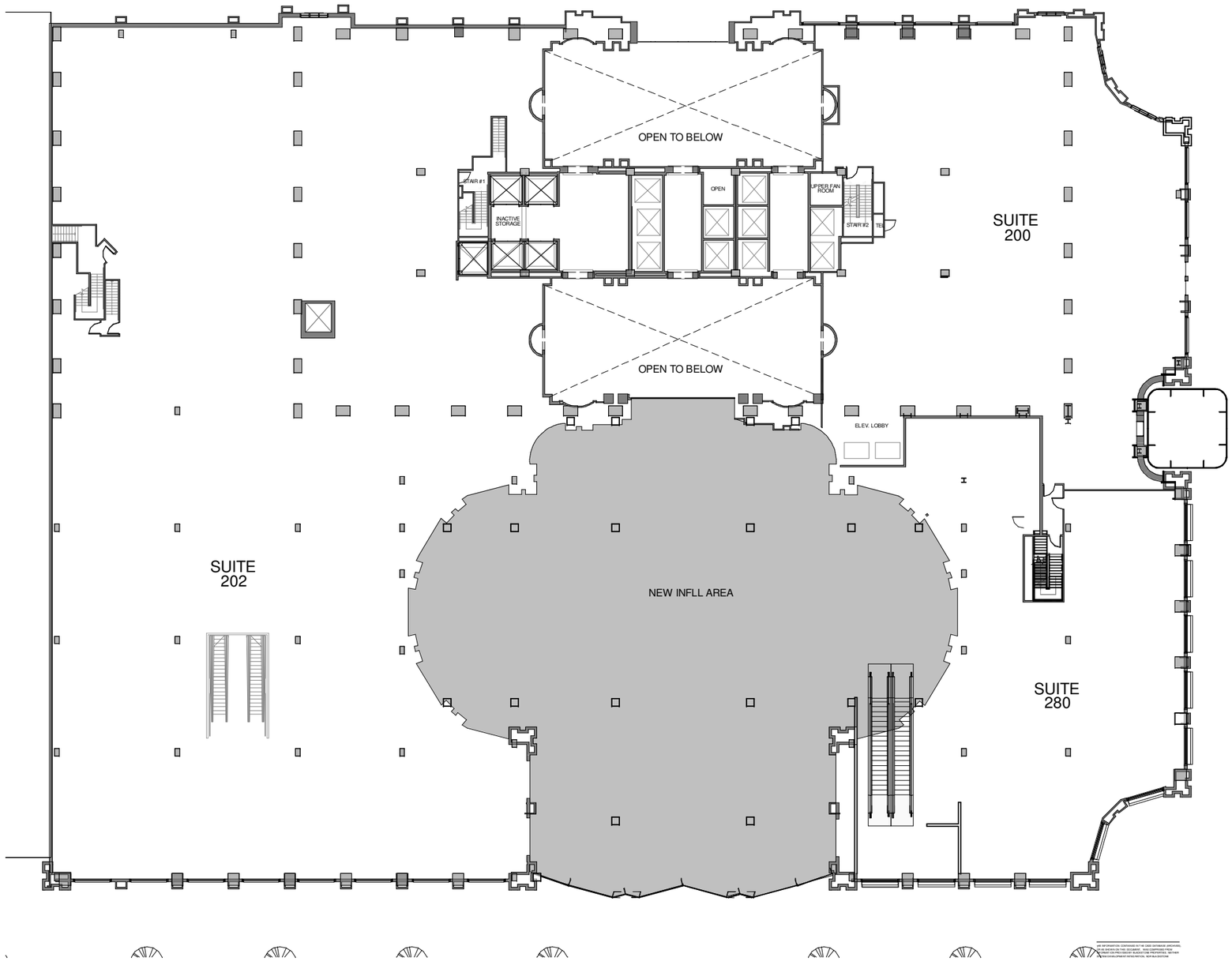
Equity Office

cbt



LEVEL 2 - Pricing

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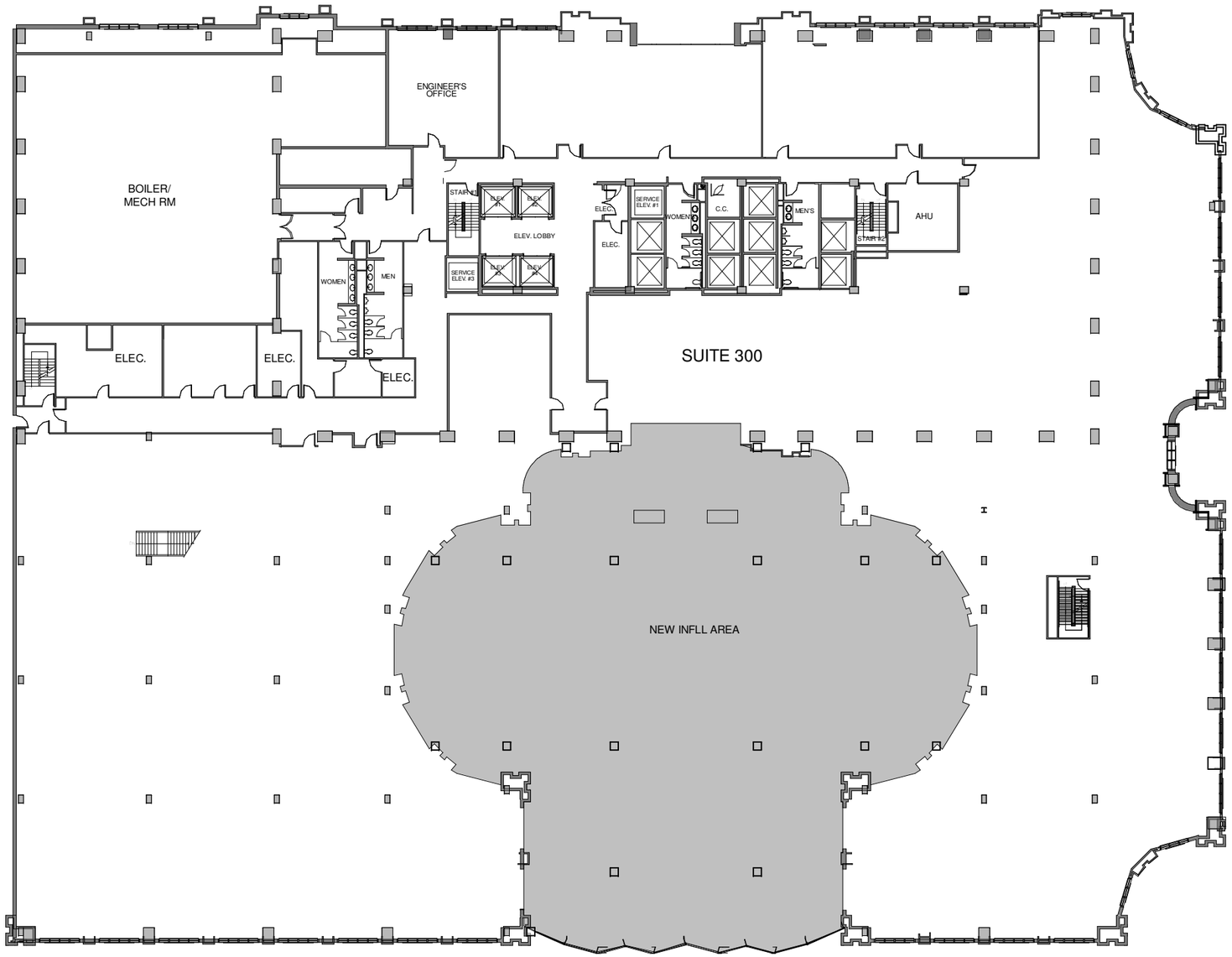

LEVEL 3 - Pricing

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Equity Office

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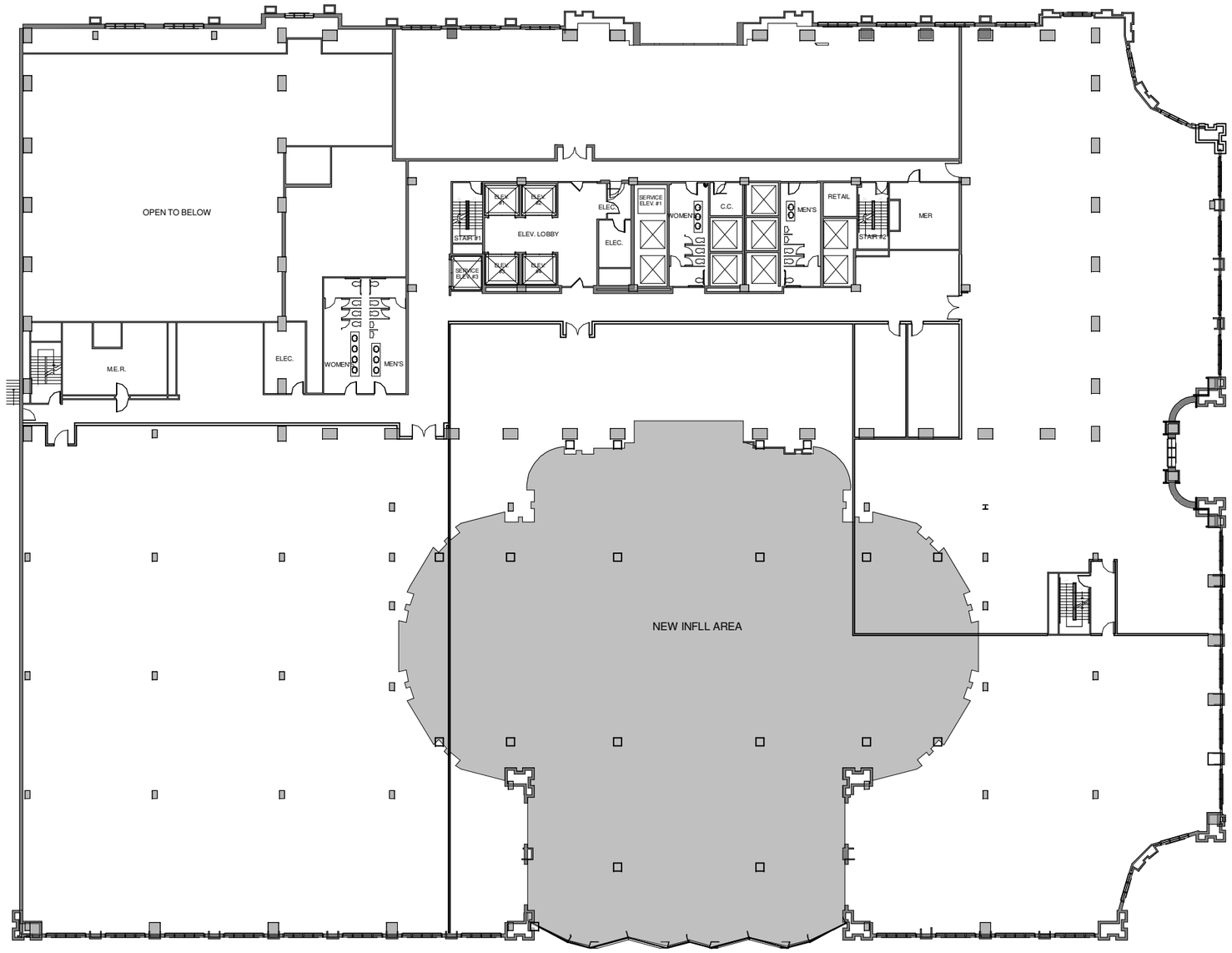

LEVEL 4 - Pricing

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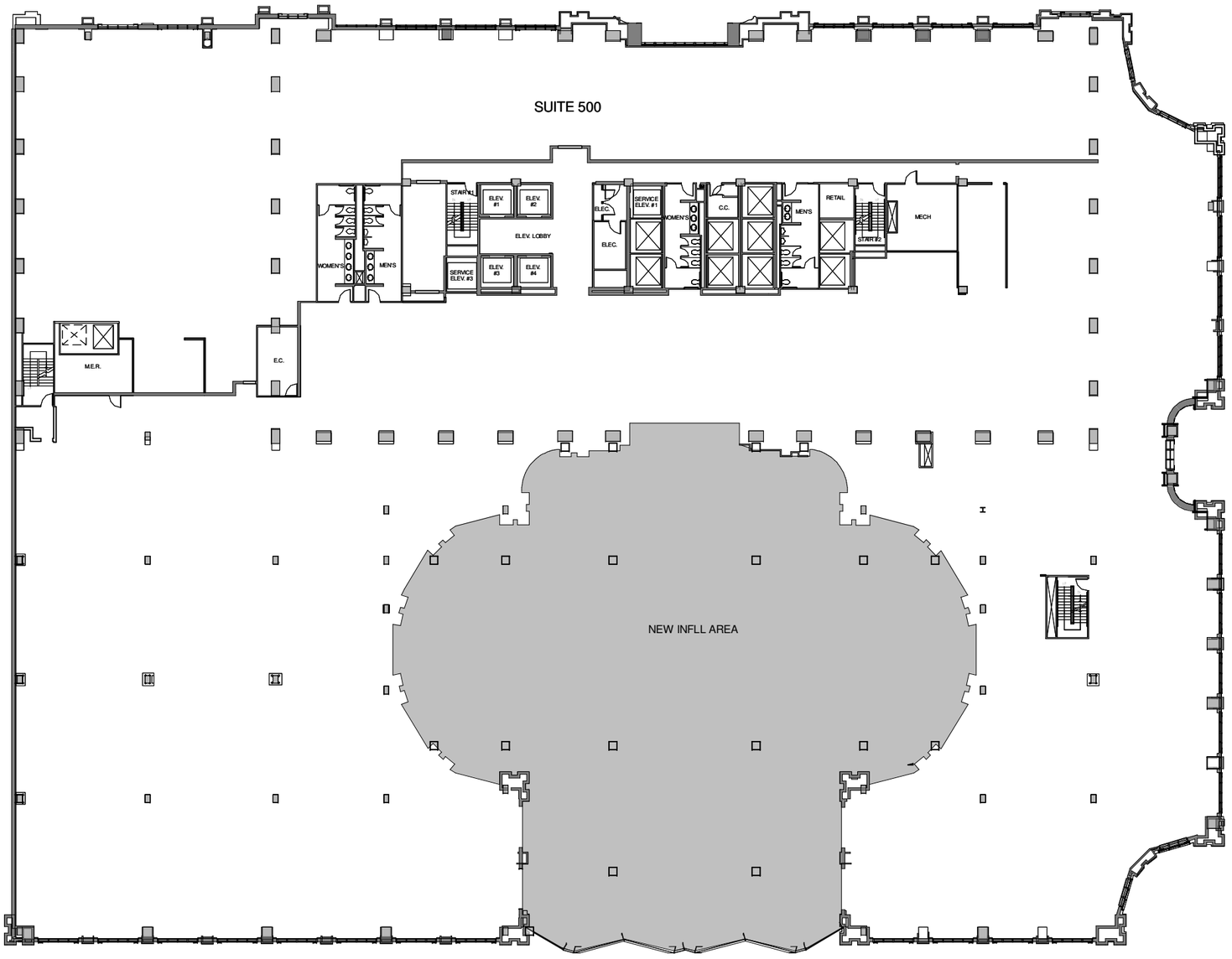

LEVEL 5 - Pricing

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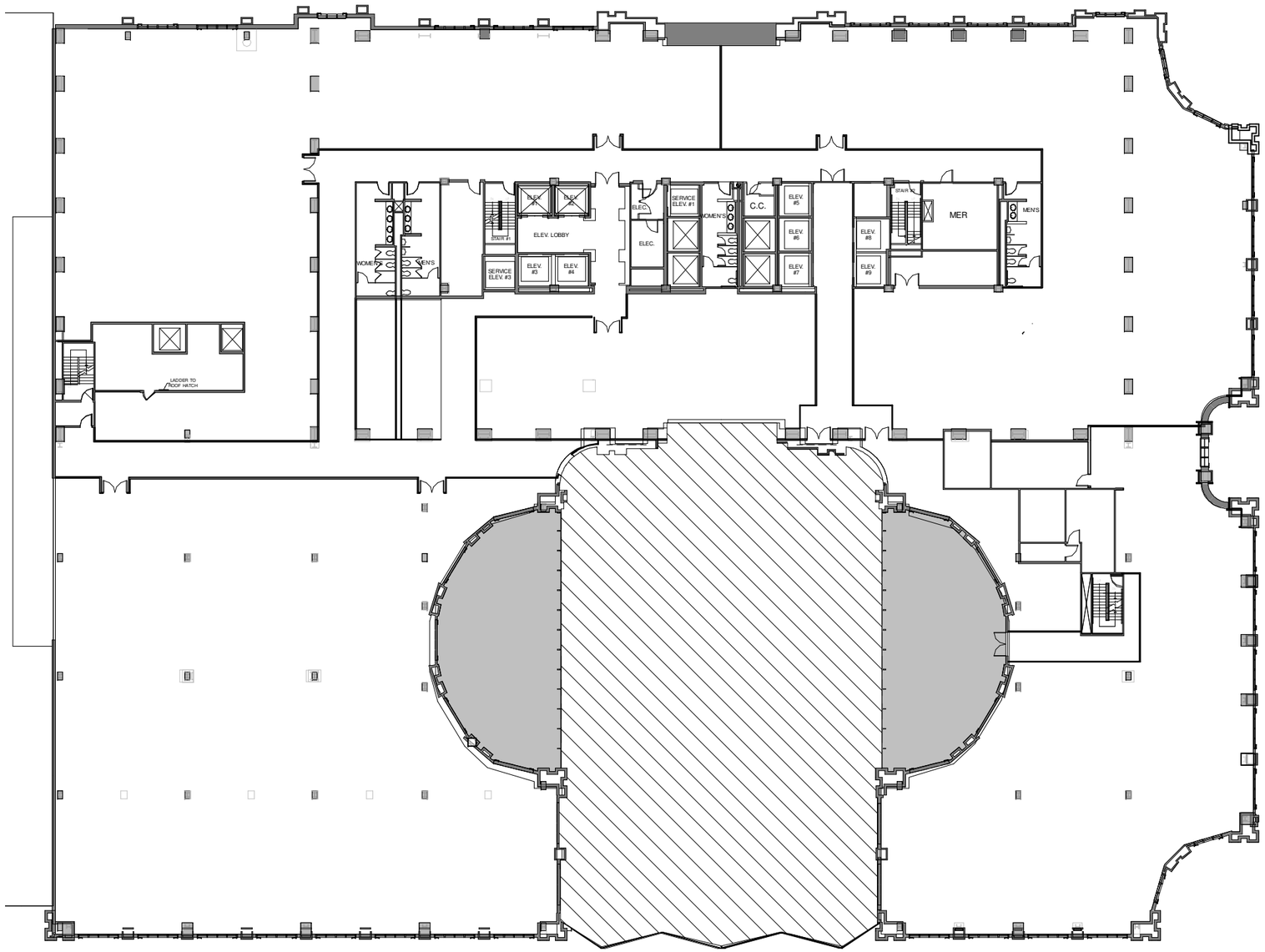

LEVEL 6 - Pricing

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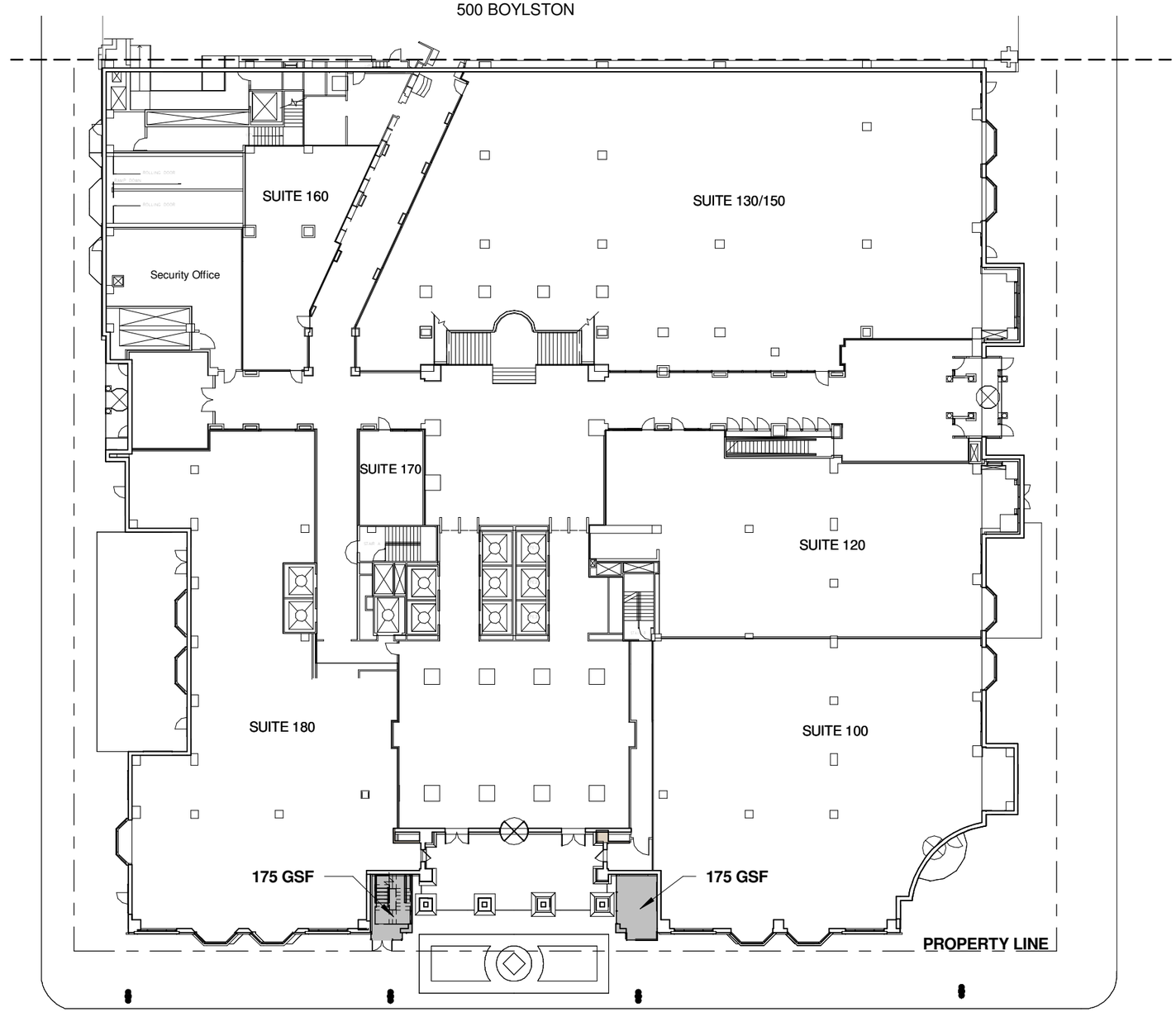

1 Level 1 - Program Diagram

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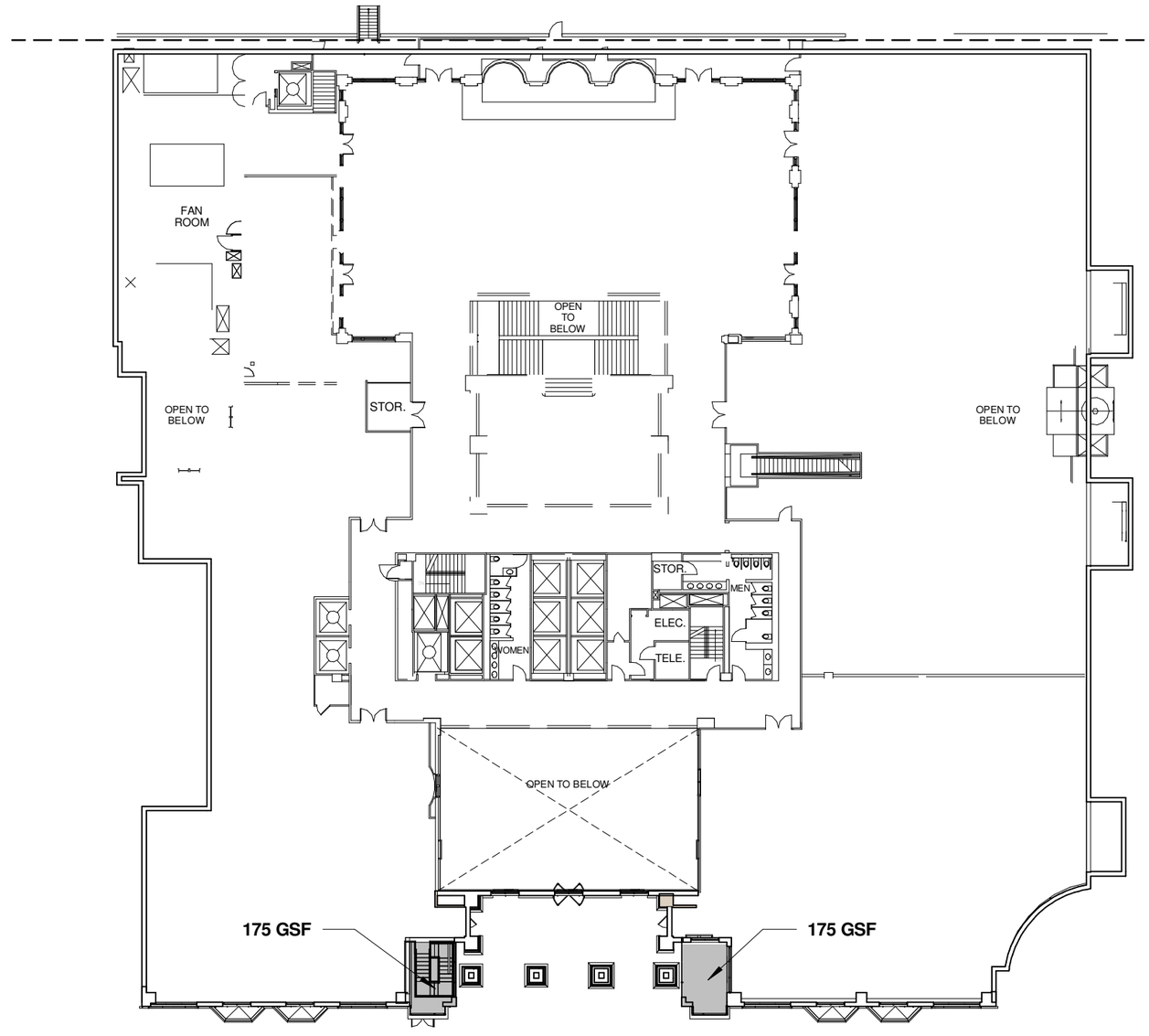
Equity Office

cbt

500 BOYLSTON



2 Level 2 - Program Diagram

1/32" = 1'-0"

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Equity Office

cbt

Appendix B

Site Survey

BOUNDARY DESCRIPTIONS PER COMMITMENT NO. NCS-648598-CHI2 ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, HAVING AN EFFECTIVE DATE OF MARCH 25, 2015 AT 9:39 A.M.

REAL PROPERTY IN THE CITY OF BOSTON, COUNTY OF SUFFOLK, COMMONWEALTH OF MASSACHUSETTS, DESCRIBED AS FOLLOWS:

THAT CERTAIN PARCEL OF LAND ON THE SOUTH OF BOYLSTON STREET, THE EAST SIDE OF CLARENDON STREET AND THE NORTH SIDE OF ST. JAMES AVENUE IN BOSTON, SUFFOLK COUNTY, MASSACHUSETTS, ALONG WITH ALL BUILDINGS AND OTHER IMPROVEMENTS THEREON, SHOWN AS LOT A ON A PLAN OF LAND ENTITLED "500 BOYLSTON STREET SUBDIVISION PLAN OF LAND IN BOSTON, MA, SUFFOLK COUNTY" DATED 21 JANUARY 1986, REVISED 27 FEBRUARY 1986, BY SURVEY ENGINEERS OF BOSTON AND RECORDED WITH SUFFOLK DEEDS AT THE END OF BOOK 12397, WHICH PARCEL IS BOUNDED AND DESCRIBED ACCORDING TO THE PLAN AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF THE PREMISES AT THE SOUTHEASTERLY CORNER OF THE INTERSECTION OF BOYLSTON AND CLARENDON STREETS; THENCE RUNNING

NORTH 69°45'00"W EAST BY BOYLSTON STREET, 322.37 FEET; THENCE

SOUTH 20°15'00" EAST BY LAND FORMERLY OF THE MILL DAM TRUST AND OF NEW ENGLAND MUTUAL LIFE INSURANCE COMPANY, 249.97 FEET TO ST. JAMES AVENUE; THENCE

SOUTH 69°44'51" WEST BY ST. JAMES AVENUE, 322.34 FEET TO THE NORTHEAST CORNER OF THE INTERSECTION OF ST. JAMES AVENUE AND CLARENDON STREET THENCE

NORTH 20°15'31" WEST BY CLARENDON STREET, 249.98 FEET TO THE POINT OF BEGINNING.

CONTAINING, ACCORDING TO THE PLAN 80,851 SQUARE FEET OF LAND, MORE OR LESS.

INCLUDED WITHIN THE ABOVE-DESCRIBED PARCEL ARE THREE PARCELS OF REGISTERED LAND BOUNDED AND DESCRIBED AS FOLLOWS:

FIRST REGISTERED PARCEL

THAT CERTAIN PARCEL OF LAND SITUATED IN SAID BOSTON, BOUNDED AND DESCRIBED AS FOLLOWS:

NORTHERLY BY THE SOUTHERLY LINE OF BOYLSTON STREET, 28.30 FEET;

EASTERLY BY LAND FORMERLY OF THE MILL DAM TRUST, 125 FEET;

SOUTHERLY BY LAND FORMERLY OF NEW ENGLAND MUTUAL LIFE INSURANCE COMPANY, 28.30 FEET AND

WESTERLY BY LAND FORMERLY OF NEW ENGLAND MUTUAL LIFE INSURANCE COMPANY, 126 FEET.

THIS FIRST REGISTERED PARCEL IS SHOWN ON A PLAN DRAWN BY SURVEY ENGINEERS OF BOSTON AND FILED WITH THE ENGINEERING OFFICE OF THE LAND COURT IN BOSTON, MASSACHUSETTS AS PLAN NO. 2025B, BEING A SUBDIVISION OF THE LAND DESCRIBED IN SUFFOLK REGISTRY DISTRICT CERTIFICATE OF TITLE NO. 94648 IN REGISTRATION BOOK 469, PAGE 48.

SECOND REGISTERED PARCEL

THAT CERTAIN PARCEL OF LAND SITUATED IN SAID BOSTON, BOUNDED AND DESCRIBED AS FOLLOWS:

NORTHWESTERLY BY THE SOUTHEASTERLY LINE OF BOYLSTON STREET, 24 FEET;

NORTHEASTERLY BY LAND NOW OR FORMERLY OF ANDREW D. MACLACHLAN, THE LINE RUNNING IN PART THROUGH THE MIDDLE OF A PARTY WALL, 125 FEET;

NORTHEASTERLY BY LAND NOW OR FORMERLY OF NEW ENGLAND MUTUAL LIFE INSURANCE COMPANY, 24 FEET; AND

SOUTHWESTERLY BY LAND NOW OR FORMERLY OF FREDERICK AYER, THE LINE RUNNING IN PART THROUGH A PARTY WALL, 125 FEET.

ALL OF SAID BOUNDARIES ARE DETERMINED BY THE COURT TO BE LOCATED AS SHOWN ON A PLAN DRAWN BY ASPINWALL & LINCOLN, CIVIL ENGINEERS, DATED MAY 13, 1912, AS APPROVED BY THE COURT, FILED IN THE LAND REGISTRATION OFFICE AS PLAN NO. 3811A, A COPY OF A PORTION OF WHICH IS FILED WITH CERTIFICATE OF TITLE NO. 4596.

THIRD REGISTERED PARCEL

THAT CERTAIN PARCEL OF LAND SITUATED IN SAID BOSTON, BOUNDED AND DESCRIBED AS FOLLOWS:

NORTHWESTERLY BY THE SOUTHEASTERLY LINE OF BOYLSTON STREET, 72.23 FEET;

NORTHEASTERLY BY LAND NOW OR FORMERLY OF JULIUS P. PASSETT, THE LINE IN PART RUNNING THROUGH THE MIDDLE OF A 12" BRICK PARTY WALL, 125 FEET;

SOUTHEASTERLY BY LAND OF NEW ENGLAND MUTUAL LIFE INSURANCE COMPANY, 72.23 FEET; AND

SOUTHWESTERLY BY LAND NOW OR FORMERLY OF ANDREW D. MACLACHLAN, THE LINE IN PART RUNNING THROUGH THE MIDDLE OF A 12" BRICK PARTY WALL, 125 FEET.

ALL OF SAID BOUNDARIES ARE DETERMINED BY THE COURT TO BE LOCATED AS SHOWN UPON PLAN NUMBERED 3226BA WHICH IS FILED WITH CERTIFICATE OF TITLE NO. 72280.

TOGETHER WITH THE BENEFIT OF A CERTAIN CONSTRUCTION, OPERATION AND RECIPROCAL EASEMENT AGREEMENT BETWEEN FIVE HUNDRED BOYLSTON WEST VENTURE AND NEW ENGLAND MUTUAL LIFE INSURANCE COMPANY RECORDED WITH SUFFOLK DEEDS AS INSTRUMENT NO. 35 OF MAY 29, 1986 AND FILED WITH SUFFOLK REGISTRY DISTRICT OF THE LAND COURT AS DOCUMENT NO. 405539.

LIST OF VISIBLE ENCROACHMENTS NO. 500 BOYLSTON STREET

CLARENDON STREET:

(1) GRANITE WALLS WITH WROUGHT IRON FENCE CROSS PROPERTY LINE

(2) SIGN CROSSES PROPERTY LINE

SAINT JAMES STREET:

(3) OVERHANG EXTENDS INTO STREET

REFERENCES

SUFFOLK COUNTY REGISTRY OF DEEDS

BOOK	PAGE
12524	230
15497	132
12397	END (PLAN)

MASSACHUSETTS LAND COURT

LCC 2025A
LCC 2025B
LCC 3811A
LCC 32268A

CERTIFICATE OF TITLE

99537
102968

CITY OF BOSTON ENGINEERING DEPARTMENT

FIELD BOOK	PAGE
398	140-147
416	144-147
453	60-63
468	93
482	88-91
514	148-149
571	137
588	110-111
618	150-151
663	149-151
704	38-47, 110-113
732	96-98
745	46-47, 146-147
783	82-83
856	48-49
872	69-74
989	94-95
1263	2-11
1264	40-41
1449	2-11

PLAN NO.

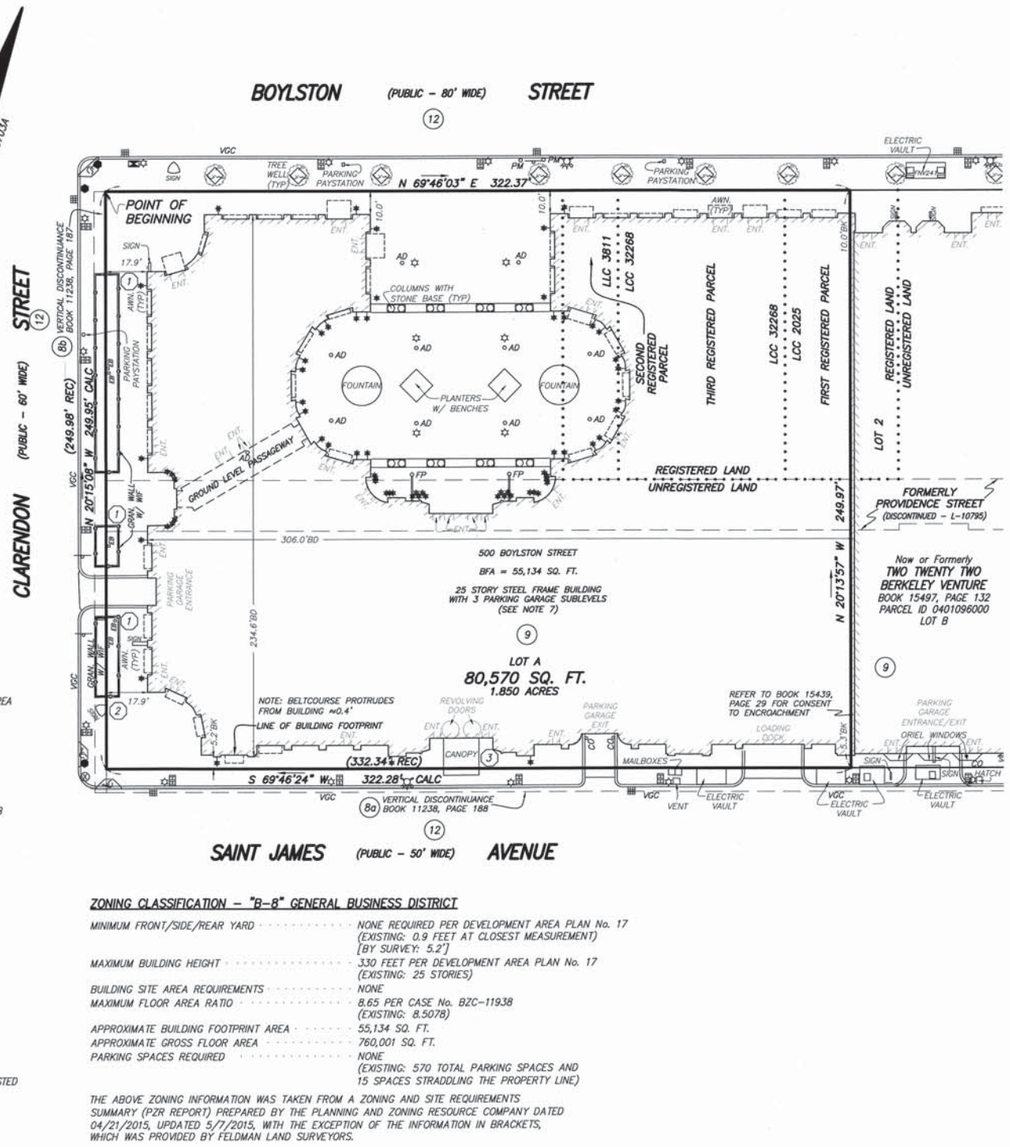
L-374, L-410, L-756, L-2375, L-3079, L-3301, L-3342, L-4234, L-4236, L-4732, L-5194, L-5489, L-5643, L-9043, L-9799, L-9899, L-9941B, L-10034, L-10292, L-10685, L-10795, L-10796, L-10797, L-11001, L-11064, L-11070, L-11091, L-11141

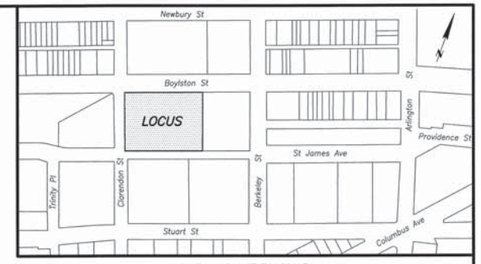
LEGEND

AWN.	AWNING
BD	BUILDING DIMENSION
BFA	BUILDING FOOTPRINT AREA
BIT	BITUMINOUS
BK	BACK
CALC	CALCULATED
LCC	LAND COURT CASE
REC	RECORD
SQ. FT.	SQUARE FEET
TYP	TYPICAL
VGC	VERTICAL GRANITE CURB
WIF	WROUGHT IRON FENCE
(E)	ELECTRIC MANHOLE
(S)	STEAM MANHOLE
	HYDRANT
	CATCH BASIN
	TRAFFIC CONTROL BOX
	TRAFFIC SIGNAL
	LIGHT POLE
	LAMP
	ELECTRIC HANDHOLE
	SIGN
AD	AREA DRAIN
PM	PARKING METER
FP	FLAG POLE
CO	CLEAN OUT
TR	TRASH RECEPTACLE
	DECIDUOUS TREE
(X)	EXCEPTION NUMBER LISTED IN TITLE COMMITMENT
	HANDICAP RAMP

PARKING SUMMARY

	PARKING SPACES		SPACES STRADDLING PROPERTY LINE
LEVEL P1	133	REGULAR SPACES	5 REGULAR SPACES
	28	RESERVED SPACES	0 RESERVED SPACES
	3	HANDICAP SPACES	0 HANDICAP SPACES
SUBTOTAL	164	TOTAL SPACES	5 TOTAL SPACES
LEVEL P2	190	REGULAR SPACES	10 REGULAR SPACES
	2	HANDICAP SPACES	0 HANDICAP SPACES
	2	HYBRID SPACES	0 HYBRID SPACES
SUBTOTAL	194	TOTAL SPACES	10 TOTAL SPACES
LEVEL P3	193	REGULAR SPACES	0 REGULAR SPACES
	16	RESERVED SPACES	0 RESERVED SPACES
	3	HANDICAP SPACES	0 HANDICAP SPACES
SUBTOTAL	212	TOTAL SPACES	0 TOTAL SPACES
	516	REGULAR SPACES	15 REGULAR SPACES
	44	RESERVED SPACES	0 RESERVED SPACES
	8	HANDICAP SPACES	0 HANDICAP SPACES
	2	HYBRID SPACES	0 HYBRID SPACES
TOTAL	570	TOTAL SPACES	15 TOTAL SPACES





VICINITY MAP NOT TO SCALE

ZONING CLASSIFICATION - "B-8" GENERAL BUSINESS DISTRICT

MINIMUM FRONT/SIDE/REAR YARD	NONE REQUIRED PER DEVELOPMENT AREA PLAN No. 17 (EXISTING: 0.9 FEET AT CLOSEST MEASUREMENT) [BY SURVEY: 5.2']
MAXIMUM BUILDING HEIGHT	330 FEET PER DEVELOPMENT AREA PLAN No. 17 (EXISTING: 25 STORIES)
BUILDING SITE AREA REQUIREMENTS	NONE
MAXIMUM FLOOR AREA RATIO	8.65 PER CASE No. BZC-11938 (EXISTING: 8.5078)
APPROXIMATE BUILDING FOOTPRINT AREA	55,134 SQ. FT.
APPROXIMATE GROSS FLOOR AREA	760,001 SQ. FT.
PARKING SPACES REQUIRED	NONE (EXISTING: 570 TOTAL PARKING SPACES AND 15 SPACES STRADDLING THE PROPERTY LINE)

THE ABOVE ZONING INFORMATION WAS TAKEN FROM A ZONING AND SITE REQUIREMENTS SUMMARY (PZR REPORT) PREPARED BY THE PLANNING AND ZONING RESOURCE COMPANY DATED 04/21/2015, UPDATED 5/7/2015, WITH THE EXCEPTION OF THE INFORMATION IN BRACKETS, WHICH WAS PROVIDED BY FELDMAN LAND SURVEYORS.

NOTES:

1) BY GRAPHIC PLOTTING ONLY, THE PARCEL SHOWN HEREON LIES WITHIN A ZONE "X" (UNSHADED), AN AREA OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD, AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A) FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR SUFFOLK COUNTY, MASSACHUSETTS, MAP NUMBER 25025C0077G, CITY OF BOSTON COMMUNITY NUMBER 250286, PANEL NUMBER 0077 G, HAVING AN EFFECTIVE DATE OF SEPTEMBER 25, 2009.

2) ZONING INFORMATION WAS PROVIDED BY THE TITLE INSURER AS REQUIRED BY ITEM 6(B) OF TABLE "A" IN THE 2011 ALTA SURVEY REQUIREMENTS.

3) THE PROPERTY SHOWN HEREON IS THE SAME PROPERTY DESCRIBED IN THE TITLE COMMITMENT.

4) AT THE TIME OF THE SURVEY NO EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WAS OBSERVED.

5) AT THE TIME OF THE SURVEY NO EVIDENCE OF SITE USE AS A SOLID WASTE DUMP, SUMP, OR SANITARY LANDFILL WAS OBSERVED.

6) THIS DOCUMENT IS AN INSTRUMENT OF SERVICE OF FELDMAN LAND SURVEYORS ISSUED TO OUR CLIENT FOR PURPOSES RELATED DIRECTLY AND SOLELY TO FELDMAN LAND SURVEYORS' SCOPE OF SERVICES UNDER CONTRACT TO OUR CLIENT FOR THIS PROJECT. ANY USE OR REUSE OF THIS DOCUMENT FOR ANY REASON BY ANY PARTY FOR PURPOSES UNRELATED DIRECTLY AND SOLELY TO SAID CONTRACT SHALL BE AT THE USER'S SOLE AND EXCLUSIVE RISK AND LIABILITY, INCLUDING LIABILITY FOR VIOLATION OF COPYRIGHT LAWS, UNLESS WRITTEN CONSENT IS PROVIDED BY FELDMAN LAND SURVEYORS

7) NUMBER OF STORIES IS SHOWN ACCORDING TO EQUITY OFFICE MANAGEMENT, LLC WEBSITE "www.equityofficeboston.com".

EXCEPTIONS FROM COVERAGE SCHEDULE B, SECTION TWO, LISTED IN TITLE COMMITMENT NO. NCS-648598-CHI2 ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, HAVING AN EFFECTIVE DATE OF MARCH 25, 2015 AT 9:39 A.M.

8. TITLE TO AND RIGHTS OF THE PUBLIC AND OTHERS ENTITLED THERETO IN AND TO THOSE PORTIONS OF THE INSURED PREMISES LYING WITHIN THE BOUNDS OF ADJACENT STREETS, ROADS AND MAPS.

   (a) A 10 FT. WIDE STRIP ALONG THE NORTHERLY BOUNDARY LINE OF ST. JAMES AVENUE EXTENDING FROM THE WESTERLY LINE OF BERKELEY STREET TO THE EASTERLY LINE OF CLARENDON STREET; (AS SHOWN) AND

   (b) A 5FT WIDE STRIP ALONG THE EASTERLY LINE OF CLARENDON STREET. (AS SHOWN)

9. CONSTRUCTION, OPERATION AND RECIPROCAL EASEMENT AGREEMENT, DATED MAY 29, 1986 AND RECORDED IN BOOK 12524, PAGE 236, AND FILED WITH THE SUFFOLK COUNTY REGISTRY DISTRICT OF THE LAND COURT AS DOCUMENT NO. 405539; AS FURTHER AMENDED AT BOOK 15881 PAGE 1, AND BY DOCUMENT NO. 457695. (AS SHOWN)

10. SALE AND CONSTRUCTION AGREEMENT AMONG CITY OF BOSTON AND OTHERS DATED JUNE 30, 1984, RECORDED AT BOOK 11692, PAGE 1, AS AMENDED BY INSTRUMENT DATED JUNE 28, 1985, RECORDED BOOK 11692, PAGE 199, AND AS FURTHER AMENDED BY AMENDED AND RESTATED SALE AND CONSTRUCTION AGREEMENT ("THE AGREEMENT") DATED APRIL 15, 1986, RECORDED IN BOOK 12515, PAGE 78 AND AS INSTRUMENT NO. 311; AS AFFECTED BY CERTIFICATE OF COMPLETION, RECORDED WITH SAID DEEDS, BOOK 22137, PAGE 239. (NOT PLOTTABLE)

11. ESTOPPEL LETTER BY BOSTON REDEVELOPMENT AUTHORITY AND CITY OF BOSTON DATED AS OF APRIL 16, 1986 AND RECORDED IN BOOK 12520, PAGE 43, RECORDED MAY 27, 1986 AS INSTRUMENT NO. 329. (NOT PLOTTABLE)

12. MAINTENANCE AND INDEMNIFICATION AGREEMENT BY AND BETWEEN THE CITY OF BOSTON AND FIVE HUNDRED BOYLSTON WEST VENTURE DATED SEPTEMBER 10, 1987 AND RECORDED WITH SAID DEEDS AT BOOK 14483, PAGE 5. (AS SHOWN)

13. TERMS AND PROVISIONS OF A LEASE MADE BY AND BETWEEN FIVE HUNDRED BOYLSTON WEST VENTURE AS LANDLORD AND NEW ENGLAND MUTUAL LIFE INSURANCE COMPANY AS TENANT, DATED MAY 29, 1986 AND RECORDED WITH SAID DEEDS AT BOOK 12525, PAGE 263 AND FILED WITH SAID LAND COURT AS DOCUMENT NUMBER 405546, AS AFFECTED BY A SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT AGREEMENT RECORDED WITH SAID DEEDS AT BOOK 12525, PAGE 82 AND FILED WITH SAID LAND COURT AS DOCUMENT NUMBER 405547. (NOT PLOTTABLE)

14. TERMS AND PROVISIONS OF A LEASE MADE BY AND BETWEEN FIVE HUNDRED BOYLSTON WEST VENTURE AS LANDLORD AND MASSACHUSETTS FINANCIAL SERVICES COMPANY AS TENANT, DATED SEPTEMBER 9, 1986 AND RECORDED WITH SAID DEEDS AT BOOK 14038, PAGE 272 AND FILED WITH SAID LAND COURT AS DOCUMENT NUMBER 428371, AS AFFECTED BY SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT AGREEMENT DATED SEPTEMBER 9, 1986 AND RECORDED WITH SAID DEEDS AT BOOK 14038, PAGE 281 AND FILED WITH SAID LAND COURT AS DOCUMENT NUMBER 428372. (NOT PLOTTABLE)

15. TERMS AND PROVISIONS OF A LEASE MADE BY AND BETWEEN FIVE HUNDRED BOYLSTON WEST VENTURE AND MASSACHUSETTS FINANCIAL SERVICES COMPANY RECORDED WITH SAID DEEDS AT BOOK 24701, PAGE 165 AND FILED WITH SAID LAND COURT AS DOCUMENT NUMBER 595994. (NOT PLOTTABLE)

16. NOTICES OF CONTRACT, STATEMENT OF ACCOUNTS AND STATEMENTS OF CLAIMS FILED AS DOCUMENT NOS. ; 441496; 443566; 443766; 444743; 444744; 445808; 446328; 446329; 447897; 448349; 452697; 455753; 456899 AND 472959. (NOT PLOTTABLE)

17. NOTICE OF CONTRACT BY AND BETWEEN FIVE HUNDRED BOYLSTON WEST VENTURE AND THE TRUSTEE OF THE PIPEFITTERS LOCAL UNION NUMBER 537 TRUST FUNDS RECORDED WITH SAID DEEDS AT BOOK 15097 PAGE 264 AND FILED WITH SAID LAND COURT AS DOCUMENT NUMBER 444137. (NOT PLOTTABLE)

18. NOTICE OF LEASE BY AND BETWEEN FIVE HUNDRED BOYLSTON WEST VENTURE, AS LANDLORD, AND SOWOOD CAPITAL MANAGEMENT LP, AS TENANT, DATED APRIL 27, 2004, RECORDED WITH SAID DEEDS, BOOK 34812, PAGE 132. THIS IS NOT FILED ON THE REGISTERED SIDE. (NOT PLOTTABLE)

19. NOTICE OF LEASE BY AND BETWEEN FIVE HUNDRED BOYLSTON WEST VENTURE, AS LANDLORD AND H.I.G. BOSTON, LLC, AS TENANT, DATED DECEMBER 10, 2010, RECORDED WITH SAID DEEDS, BOOK 47499, PAGE 108, AS AFFECTED BY AMENDED AND RESTATED NOTICE OF LEASE, DATED AUGUST 25, 2014, RECORDED WITH SAID DEEDS, BOOK 53703, PAGE 107; AS AFFECTED BY AMENDED AND RESTATED NOTICE OF LEASE BY FIVE HUNDRED BOYLSTON WEST VENTURE, AS LANDLORD, AND H.I.G. BOSTON, LLC, AS TENANT, DATED AUGUST 25, 2014, RECORDED WITH SAID DEEDS, BOOK 53703, PAGE 107. (NOT PLOTTABLE)

TO: FIRST AMERICAN TITLE INSURANCE COMPANY; AND FIVE HUNDRED BOYLSTON WEST VENTURE

THIS IS TO CERTIFY THAT THIS PLAN AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6(B), 7(A), 7(B)(1), 8, 9, 11(A), 13, 14, 16, 18, AND 21 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON APRIL 14, 2014.

FELDMAN LAND SURVEYORS

KARL A. MCCARTHY, PLS (NH# 38714)
kam@feldmansurveyors.com

05-11-2015
DATE

COMMONWEALTH OF MASSACHUSETTS — KARL A. McCARTHY NO. 38714 — REGISTERED PROFESSIONAL LAND SURVEYOR

05/11/2015	REVISED BASED ON UPDATED PZR
05/06/2015	REVISED PARKING COUNT BASED ON NEW HANDICAP SPACES
04/22/2015	REVISED PER CURRENT TITLE COMMITMENT, ADDED ZONING INFO
04/14/2015	UPDATED FIELD INSPECTION

ALTA/ACSM LAND TITLE SURVEY
500 BOYLSTON STREET
BOSTON, MASS.

FELDMAN LAND SURVEYORS
112 SHAWMUT AVENUE
BOSTON, MASS. 02118

JANUARY 16, 2014
PHONE: (617)357-9740
www.feldmansurveyors.com

FELDMAN LAND SURVEYORS

30 0 15 30 60 120

SCALE: 1"=30'

RESEARCH	FIELD CHIEF NB	PROJ MGR KAM	APPROVED	SHEET NO. 1 OF 1
CALC	CADD SCH	FIELD CHECKED	CRD FILE 14057	JOB NO. 14057A

FILENAME: S:\PROJECTS\14000s\14057\DWG\14057A-1.dwg

REFERENCES

SUFFOLK COUNTY REGISTRY OF DEEDS

BOOK	PAGE
12524	230
15497	132
12397	END (PLAN)

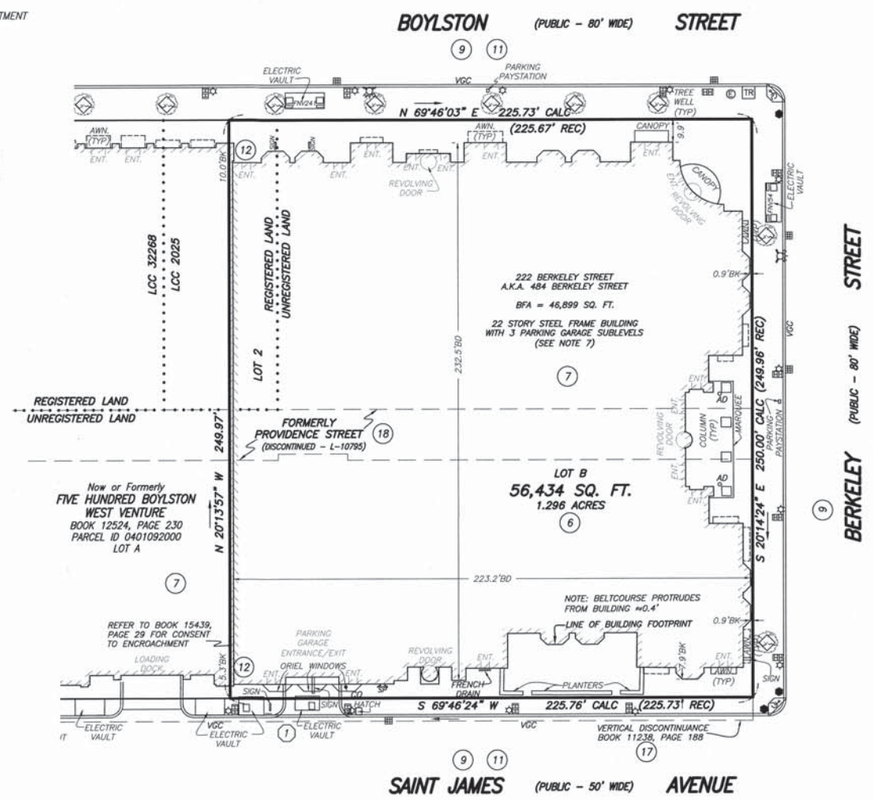
MASSACHUSETTS LAND COURT
LCC 2025A
LCC 2025B
LCC 3811A
LCC 32268A

CERTIFICATE OF TITLE
99537
102968

CITY OF BOSTON ENGINEERING DEPARTMENT

FIELD BOOK	PAGE
398	140–147
416	144–147
453	60–63
468	93
482	88–91
514	148–149
571	137
588	110–111
618	150–151
663	149–151
704	38–47, 110–113
732	96–98
745	46–47, 146–147
783	82–83
856	48–49
872	69–74
989	94–95
1263	2–11
1264	40–41
1449	2–11

PLAN NO.
L–374
L–410
L–756
L–2375
L–3079
L–3301
L–3342
L–4234
L–4236
L–4732
L–5194
L–5489
L–5643
L–9043
L–9799
L–9899
L–9941B
L–10034
L–10292
L–10685
L–10795
L–10796
L–10797
L–11001
L–11064
L–11070
L–11091
L–11141



LEGEND

AWN.	AWNING
BD	BUILDING DIMENSION
BFA	BUILDING FOOTPRINT AREA
BIT	BITUMINOUS
BK	BACK
CALC	CALCULATED
LCC	LAND COURT CASE
REC	RECORD
SQ. FT.	SQUARE FEET
TYP	TYPICAL
VGC	VERTICAL GRANITE CURB
WIF	WROUGHT IRON FENCE
	ELECTRIC MANHOLE
	STEAM MANHOLE
	HYDRANT
	CATCH BASIN
	TRAFFIC CONTROL BOX
	TRAFFIC SIGNAL
	LIGHT POLE
	LAMP
	ELECTRIC HANDHOLE
	SIGN
AD	AREA DRAIN
PM	PARKING METER
FP	FLAG POLE
CO	CLEAN OUT
TR	TRASH RECEPTACLE
	DECIDUOUS TREE
X	EXCEPTION NUMBER LISTED IN TITLE COMMITMENT
	HANDICAP RAMP

PARKING SUMMARY

	PARKING SPACES		SPACES STRADDLING PROPERTY LINE
LEVEL P1	76	REGULAR SPACES	5 REGULAR SPACES
	30	RESERVED SPACES	0 RESERVED SPACES
	4	HANDICAP SPACES	0 HANDICAP SPACES
SUBTOTAL	110	TOTAL SPACES	5 TOTAL SPACES
LEVEL P2	127	REGULAR SPACES	10 REGULAR SPACES
	4	HANDICAP SPACES	0 HANDICAP SPACES
SUBTOTAL	131	TOTAL SPACES	10 TOTAL SPACES
LEVEL P3	129	REGULAR SPACES	0 REGULAR SPACES
	4	HANDICAP SPACES	0 HANDICAP SPACES
SUBTOTAL	133	TOTAL SPACES	0 TOTAL SPACES
	332	REGULAR SPACES	15 REGULAR SPACES
	30	RESERVED SPACES	0 RESERVED SPACES
	12	HANDICAP SPACES	0 HANDICAP SPACES
TOTAL	374	TOTAL SPACES	15 TOTAL SPACES

LIST OF VISIBLE ENCROACHMENTS NO. 222 BERKELEY STREET

SAINT JAMES STREET:
(1) ELECTRIC VAULTS EXTEND OVER PROPERTY LINE

ZONING CLASSIFICATION – "B–8" GENERAL BUSINESS DISTRICT

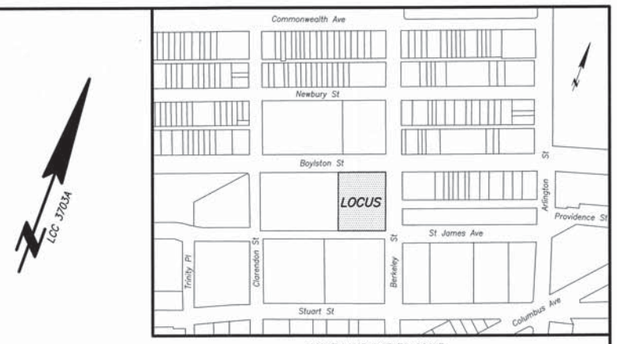
MINIMUM FRONT/SIDE/REAR YARD	NONE REQUIRED PER CASE No. BZC–11938 (EXISTING: 0.9 FEET AT CLOSEST MEASUREMENT)
MAXIMUM BUILDING HEIGHT	330 FEET PER DEVELOPMENT AREA PLAN No. 17 (EXISTING: 22 STORIES)
BUILDING SITE AREA REQUIREMENTS	NONE
MAXIMUM FLOOR AREA RATIO	9.0 PER CASE No. BZC–11938 (EXISTING: 8.7636)
APPROXIMATE BUILDING FOOTPRINT AREA	46,899 SQ. FT.
APPROXIMATE GROSS FLOOR AREA	551,775 SQ. FT.
PARKING SPACES REQUIRED	NONE (EXISTING: 374 TOTAL PARKING SPACES AND 15 SPACES STRADDLING THE PROPERTY LINE)

THE ABOVE ZONING INFORMATION WAS TAKEN FROM A ZONING AND SITE REQUIREMENTS SUMMARY (PZR REPORT) PREPARED BY THE PLANNING AND ZONING RESOURCE COMPANY DATED 04/21/2015, UPDATED 5/7/2015.

EXCEPTIONS FROM COVERAGE SCHEDULE B, SECTION TWO, LISTED IN TITLE COMMITMENT NO. NCS–648599–CHI2 ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, HAVING AN EFFECTIVE DATE OF MARCH 27, 2015 AT 5:00 PM

5. TITLE TO AND RIGHTS OF THE PUBLIC AND OTHERS ENTITLED THERETO IN AN TO THOSE PORTIONS OF THE INSURED PREMISES LYING WITHIN THE BOUNDS OF ADJACENT STREETS, ROADS AND WAYS.
6. THE EXACT ACREAGE OR SQUARE FOOTAGE BEING OTHER THAN AS STATED SCHEDULE A OR THE PLAN(S) THEREIN REFERRED TO. (SQUARE FOOTAGE BY SURVEY SHOWN HEREON)
7. CONSTRUCTION, OPERATION AND RECIPROCAL [EASEMENT] AGREEMENT, DATED MAY 29, 1986, RECORDED WITH THE SUFFOLK COUNTY REGISTRY OF DEEDS ON MAY 29, 1986 AT BOOK 12524, PAGE 236, AND [FILED] WITH THE SUFFOLK COUNTY REGISTRY DISTRICT OF THE LAND COURT AS DOCUMENT NO. 405539, AS AMENDED BY FIRST AMENDMENT TO CONSTRUCTION, OPERATION AND RECIPROCAL EASEMENT AGREEMENT DATED APRIL 13, 1989, RECORDED AT BOOK 15881, PAGE 1 AND FILED AS DOCUMENT NUMBER 457695. (AS SHOWN)
8. SALE AND CONSTRUCTION AGREEMENT AMONG CITY OF BOSTON AND OTHERS DATED JUNE 30, 1984, RECORDED AT BOOK 11692, PAGE 1, AS AMENDED BY INSTRUMENT DATED JUNE 28, 1985, RECORDED AT BOOK 11692, PAGE 199, AND AS FURTHER AMENDED BY AMENDED AND RESTATED SALE AND CONSTRUCTION AGREEMENT (THE "AGREEMENT"), DATED APRIL 15, 1986, RECORDED MAY 23, 1986 AT BOOK 12515, PAGE 78, AS AFFECTED BY ESTOPPEL LETTER FROM CITY OF BOSTON DATED APRIL 16, 1986 RECORDED AT BOOK 12520, PAGE 43, AND AS AFFECTED BY CERTIFICATE OF THE CITY OF BOSTON PUBLIC FACILITIES COMMISSION, RECORDED MAY 23, 1986 AT BOOK 12520, PAGE 41, AND AS FURTHER AFFECTED BY ESTOPPEL CERTIFICATE AND AGREEMENT FROM THE CITY OF BOSTON, RECORDED APRIL 18, 1989 AT BOOK 15497, PAGE 82, AS FURTHER AFFECTED BY CERTIFICATE OF COMPLETION RECORDED AT BOOK 22137, PAGE 239. (NOT PLOTTABLE)
9. MAINTENANCE AND INDEMNIFICATION AGREEMENT BY AND BETWEEN THE CITY OF BOSTON AND TWO TWENTY TWO BERKELEY VENTURE, DATED MARCH 8, 1991, RECORDED WITH SAID DEEDS, BOOK 16747, PAGE 83. (AS SHOWN)
10. NOTICE OF LEASE BY AND BETWEEN TWO TWENTY TWO BERKELEY VENTURE AS LANDLORD AND HOUGHTON MIFFLIN COMPANY, DATED DECEMBER 16, 1991, RECORDED WITH SAID DEEDS, BOOK 17249, PAGE 307 AND FILED WITH SAID REGISTRY DISTRICT AS DOCUMENT NO. 482539. (NOT PLOTTABLE)
11. MAINTENANCE AND INDEMNIFICATION AGREEMENT BY AND BETWEEN THE CITY OF BOSTON AND TWO TWENTY TWO BERKELEY VENTURE, RECORDED WITH SAID DEEDS, BOOK 18525, PAGE 211. (AS SHOWN)
12. CONSENT TO ENCROACHMENT BY NEW ENGLAND MUTUAL LIFE INSURANCE COMPANY, RECORDED AT BOOK 15439, PAGE 28, AND FILED AS DOCUMENT 449657. (AS SHOWN)
13. NOTICE OF LEASE BY AND BETWEEN TWO TWENTY TWO BERKELEY VENTURES, AS LANDLORD AND TYRINGHAM HOLDINGS, INC., D/B/A SHREVE, CRUMP & LOW, DATED JUNE 29, 2004, RECORDED WITH SAID DEEDS, BOOK 36031, PAGE 25. (NOT PLOTTABLE)
14. NOTICE OF LEASE BY AND BETWEEN TWO TWENTY TWO BERKELEY VENTURES, AS LANDLORD AND MARTINGALE ASSET MANAGEMENT, L.P., AS TENANT, RECORDED WITH SAID DEEDS, BOOK 40468, PAGE 4. (NOT PLOTTABLE)
15. THIS ITEM HAS BEEN INTENTIONALLY DELETED.
16. TERMINATION OF STEAM LINE EASEMENT FROM NEW ENGLAND MUTUAL LIFE INSURANCE COMPANY, HENRY H. THAYER AND BRIAN S. MEYER, TRUSTEES OF THE MILL DAM TRUST TO BOSTON EDISON COMPANY DATED FEBRUARY 10, 1985, RECORDED IN BOOK 12357, PAGE 188. (NOT PLOTTABLE)
17. DISCONTINUANCE OF ST. JAMES AVENUE ISSUED BY THE CITY OF BOSTON, PUBLIC IMPROVEMENT COMMISSION DATED JANUARY 12, 1984 RECORDED IN BOOK 11238, PAGE 188. (AS SHOWN)
18. DISCONTINUANCE OF PROVIDENCE STREET ISSUED BY THE CITY OF BOSTON, PUBLIC IMPROVEMENT COMMISSION DATED JANUARY 12, 1984 RECORDED IN BOOK 11238, PAGE 189 AND FILED AS DOCUMENT NO. 385039 (AS SHOWN)
19. LICENSE AGREEMENT BY AND BETWEEN THE CITY OF BOSTON, ACTING BY AND THROUGH ITS PUBLIC IMPROVEMENT COMMISSION AND NEW ENGLAND MUTUAL LIFE INSURANCE COMPANY DATED SEPTEMBER 25, 1986, RECORDED IN BOOK 12901, PAGE 293. (NOT PLOTTABLE)
20. ASSIGNMENT AND ASSUMPTION OF LEASE FROM GTP TOWERS I, LLC, TO GTP STRUCTURES II, LLC DATED JANUARY 1, 2014, RECORDED IN BOOK 52729, PAGE 263. (NOT PLOTTABLE)

NOTE: [ ] INDICATES A CORRECTION OF A SCRIVENER'S ERROR



VICINITY MAP NOT TO SCALE

BOUNDARY DESCRIPTIONS PER COMMITMENT NO. NCS–648599–CHI–2 ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, HAVING AN EFFECTIVE DATE OF MARCH 27, 2015 AT 5:00 PM

REAL PROPERTY IN THE CITY OF BOSTON, COUNTY OF SUFFOLK, COMMONWEALTH OF MASSACHUSETTS, DESCRIBED AS FOLLOWS:

THE LAND IN BOSTON, SUFFOLK COUNTY, MASSACHUSETTS, SITUATED AT BERKELEY STREET, AND BEING SHOWN AS LOT B ON A PLAN ENTITLED, "SUBDIVISION PLAN OF LAND IN BOSTON, MA," DATED JANUARY 21, 1986, PREPARED BY SURVEY ENGINEERS OF BOSTON, AND RECORDED WITH THE SUFFOLK COUNTY REGISTRY OF DEEDS IN PLAN BOOK 12397, PAGE END.

INCLUDED WITHIN SAID LOT B IS THE FOLLOWING DESCRIBED PARCEL OF REGISTERED LAND:

LOT 2 ON A PLAN ENTITLED "SUBDIVISION PLAN OF LAND IN BOSTON, MA" DATED JANUARY 13, 1986, PREPARED BY SURVEY ENGINEERS OF BOSTON AS APPROVED BY THE COURT, FILED WITH THE REGISTRATION OFFICE IN BOSTON AS PLAN 2025B, A COPY OF A PORTION OF WHICH IS FILED WITH CERTIFICATE OF TITLE 99356.

LOT B CONTAINS 1.38478+ ACRES, ACCORDING TO SAID PLAN

NOTES:

1) BY GRAPHIC PLOTTING ONLY, THE PARCEL SHOWN HEREON LIES WITHIN A ZONE "X" (UNSHADED), AN AREA OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD, AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A.) FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR SUFFOLK COUNTY, MASSACHUSETTS, MAP NUMBER 25025C0077G, CITY OF BOSTON COMMUNITY NUMBER 250286, PANEL NUMBER 0077 G, HAVING AN EFFECTIVE DATE OF SEPTEMBER 25, 2009.
2) ZONING INFORMATION WAS PROVIDED BY THE TITLE INSURER AS REQUIRED BY ITEM 6(B) OF TABLE "A" IN THE 2011 ALTA SURVEY REQUIREMENTS.
3) THE PROPERTY SHOWN HEREON IS THE SAME PROPERTY DESCRIBED IN THE TITLE COMMITMENT.
4) AT THE TIME OF THE SURVEY NO EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WAS OBSERVED.
5) AT THE TIME OF THE SURVEY NO EVIDENCE OF SITE USE AS A SOLID WASTE DUMP, SUMP, OR SANITARY LANDFILL WAS OBSERVED.
6) THIS DOCUMENT IS AN INSTRUMENT OF SERVICE OF FELDMAN LAND SURVEYORS ISSUED TO OUR CLIENT FOR PURPOSES RELATED DIRECTLY AND SOLELY TO FELDMAN LAND SURVEYORS' SCOPE OF SERVICES UNDER CONTRACT TO OUR CLIENT FOR THIS PROJECT. ANY USE OR REUSE OF THIS DOCUMENT FOR ANY REASON BY ANY PARTY FOR PURPOSES UNRELATED DIRECTLY AND SOLELY TO SAID CONTRACT SHALL BE AT THE USER'S SOLE AND EXCLUSIVE RISK AND LIABILITY, INCLUDING LIABILITY FOR VIOLATION OF COPYRIGHT LAWS, UNLESS WRITTEN CONSENT IS PROVIDED BY FELDMAN LAND SURVEYORS
7) NUMBER OF STORIES IS SHOWN ACCORDING TO EQUITY OFFICE MANAGEMENT, LLC WEBSITE "www.equityofficeboston.com".

TO: FIRST AMERICAN TITLE INSURANCE COMPANY; AND
TWO TWENTY TWO BERKELEY VENTURE

THIS IS TO CERTIFY THAT THIS PLAN AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6(B), 7(A), 7(B)(1), 8, 9, 11(A), 13, 14, 16, 18, AND 21 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON APRIL 14, 2014.

FELDMAN LAND SURVEYORS

COMMONWEALTH OF MASSACHUSETTS
KARL A. McCARTHY
NO. 38714
REGISTERED PROFESSIONAL LAND SURVEYOR

KARL A. MCCARTHY, PLS (MA# 38714)
kam@feldmansurveyors.com

05-26-2015
DATE

05/26/2015	REVISED PARKING COUNT BASED ON RESTRIPING OF SPACES
05/11/2015	REVISED BASED ON UPDATED PZR
05/06/2015	REVISED PARKING COUNT BASED ON NEW HANDICAP SPACES
04/22/2015	REVISED PER CURRENT TITLE COMMITMENT, ADDED ZONING INFO
04/14/2015	UPDATED FIELD INSPECTION

ALTA/ACSM LAND TITLE SURVEY
222 BERKELEY STREET
BOSTON, MASS.

FELDMAN LAND SURVEYORS
112 SHAWMUT AVENUE
BOSTON, MASS. 02118

JANUARY 16, 2014
PHONE: (617)357–9740
www.feldmansurveyors.com

FELDMAN LAND SURVEYORS

30 0 15 30 60 120
SCALE: 1"=30'

RESEARCH	FIELD CHIEF NB	PROJ MGR KAM	APPROVED	SHEET NO. 1 OF 1
CALC	CADD SCH	FIELD CHECKED	CRD FILE 14057	JOB NO. 14058F

FILENAME: S:\PROJECTS\14000s\14057\DWG\14057A–2_ALTA.dwg

Appendix C

Transportation

Available Upon Request

Appendix D

Climate Change Preparedness 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:	500 Boylston Street
Project Address Primary:	500 Boylston Street
Project Address Additional:	222 Berkeley Street
Project Contact (name / Title / Company / email / phone):	Paul Filtzer/Equity Office

A.2 - Team Description

Owner / Developer:	Equity Office
Architect:	CBT Architects
Engineer (building systems):	RDK Engineers
Sustainability / LEED:	
Permitting:	Epsilon Associates
Construction Management:	
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?

☑ PNF / Expanded PNF Submission	☐ 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:	Retail/Restaurant, Office
List the First Floor Uses:	*Retail/restaurant, lobby*

What is the principal Construction Type – select most appropriate type?

☐ Wood Frame	☐ Masonry	☑ Steel Frame	☐ Concrete

Describe the building?

Site Area:	*~81,000 SF*	Building Area:	*79,300 SF*
Building Height:	*72 Ft.*	Number of Stories:	*5 Flrs.*
First Floor Elevation (reference Boston City Base):	*18'3" Elev.*	Are there below grade spaces/levels, if yes how many:	*Yes / 3 Levels of existing garage*

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-

What are the base and peak operating energy loads for the building?

Electric:	*735 (kW)*	Heating:	*1,000 (MMBtu/hr)*
What is the planned building Energy Use Intensity:	*14 (kWh/SF)*	Cooling:	*365 (Tons/hr)*

What are the peak energy demands of your critical systems in the event of a service interruption?

Electric:	*35 (kW)*	Heating:	*1,000 (MMBtu/hr)*
		Cooling:	*365 (Tons/hr)*

What is nature and source of your back-up / emergency generators?

Electrical Generation:	*Existing 1,200 KW/1,500 KVA GEN SET (kW)*		Fuel Source:	
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?

8/91 Deg.	Based on ASHRAE Fundamentals 2013 99.6% heating; 0.4% cooling

What Extreme Heat Event characteristics will be used for project planning – Peak High, Duration, and Frequency?

95 Deg.	*5 Days*	*6 Events / yr.*

What Drought characteristics will be used for project planning – Duration and Frequency?

30-90 Days	*0.2 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.	*4 Inches*	*0.5 Events / yr.*

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?

130 Peak Wind	*10 Hours*	*0.25 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:	Energy Model

What specific measures will the project employ to reduce building energy consumption?

Select all appropriate:	☐ High performance building envelop	☑ 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 envelop elements?

Roof:	*R = 25*	Walls / Curtain Wall Assembly:	*R = 13BATTS + R8 continuous insulation*
Foundation:	*R = 15*	Basement / Slab:	*R =10*
Windows:	*R = / U =0.4*	Doors:	*R = / U =0.7*

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	☑ None

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:	*Days*
If Yes, is building "Islandable?			
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	☐ External shading devices	☐ Tuned glazing,
	☐ Building cool zones	☐ Operable windows	☐ Natural ventilation	☐ Building shading
	☐ Potable water for drinking / food preparation	☐ Potable water for sinks / sanitary systems	☐ Waste water storage capacity	☐ High Performance Building Envelop
Describe any added measures:				

What measures will the project employ to reduce urban heat-island effect?

Select all appropriate:	☐ High reflective paving materials	☐ Shade trees & shrubs	☑ High reflective roof materials	☐ Vegetated roofs
Describe other strategies:				

What measures will the project employ to accommodate rain events and more rain fall?

Select all appropriate:	☐ On-site retention systems & ponds	☐ Infiltration galleries & areas	☐ Vegetated water capture systems	☐ Vegetated roofs
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	☐ Soft & permeable surfaces (water infiltration)
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 Elev.(Ft.)*
Building Proximity to Water:	*1,700 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?

1,500 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:	*3 Ft.*	Frequency of storms:	*0.25 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 E

Accessibility Checklist

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/

Article 80 | ACCESSIBILTY CHECKLIST

Project Information

Project Name:	500 Boylston Street
Project Address Primary:	500 Boylston Street
Project Address Additional:	
Project Contact (name / Title / Company / email / phone):	Paul Filtzer Director – Asset Management Equity Office Properties 617-425-6064 paul_filtzer@equityoffice.com

Team Description

Owner / Developer:	Five Hundred Boylston West Venture, an affiliate of Equity Office Properties
Architect:	CBT Architects
Engineer (building systems):	RDK Engineers
Sustainability / LEED:	
Permitting:	Epsilon Associates
Construction Management:	

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

Article 80 | ACCESSIBILTY CHECKLIST

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)	*Retail, Restaurant, Lobby*		

What is the Construction Type – select most appropriate type?

Wood Frame	Masonry	☑Steel Frame	Concrete

Describe the building?

Site Area:	*~81,000 SF*	Building Area:	*~80,000 SF of net new GFA*
Building Height:	*72 Ft. (addition)*	Number of Stories:	*5 Flrs. (addition)*
First Floor Elevation:	*18' 3" Elev.*	Are there below grade spaces:	*Yes (existing spaces)*

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.	The Project site is located in a vibrant pedestrian retail area with wide sidewalks, shops, restaurants, and hotels. Boylston Street is anchored on the west end by the Hynes Convention Center and the Prudential shopping mall and residences and on the east side by the Public Garden and Boston Common; directly parallel to Newbury Street.
List the surrounding ADA compliant MBTA transit lines and the proximity to the development site: Commuter rail, subway, bus, etc.	Commuter Rail / Orange line: Back Bay Station. Green Line: Copley, Arlington. Bus: Boylston at Clarendon, Boylston at Berkeley, St. James at Clarendon

List the surrounding institutions: hospitals, public housing and elderly and disabled housing developments, educational facilities, etc.	N/A
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.	Boston Public Library; Copley Plaza

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 current sidewalk material is granite paving that is in good condition.
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.	Existing sidewalks and pedestrian ramps are anticipated to remain. Sidewalk cross slopes in excess of 2% have been identified on the sidewalks abutting the proposed 500 Boylston Street additions. Any modifications to those sidewalks will be made in accordance with applicable requirements.
Is the development site within a historic district? If yes, please identify.	Yes, a portion of the Project site is within the boundary of the Back Bay National Register 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 comfortable 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
If yes above, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, Boulevard.	Downtown Commercial (Boylston), Downtown Mixed – Use (Clarendon)
What is the total width of the proposed sidewalk? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone.	Boylston: 20' total. Frontage, 2', Pedestrian 12', Greenscape / Furnishing 8' Clarendon: 30' total. Frontage 12', Pedestrian 18'
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?	Granite Pavers
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?	A portion of the pedestrian right-of-way is on private property, but it is not anticipated that a pedestrian easement will be required.
Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way?	No
If yes above, what are the proposed dimensions of the sidewalk café or furnishings and what will the right-of-way clearance be?	

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?	1,000 (existing); no new parking spaces are proposed
What is the total number of accessible spaces provided at the development site?	20 (existing)
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?	No
Where is accessible visitor parking located?	Below grade garage (existing)
Has a drop-off area been identified? **If yes,** will it be accessible?	No alterations to the existing below grade garage are proposed.
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.	No alterations to the existing below grade garage are proposed.

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 attached
Describe accessibility at each entryway: Flush Condition, Stairs,	The new entryways at Boylston and Clarendon St will be Flush as is the existing to remain entry on St. James. Access from the below grade parking garage is via

Ramp Elevator.	Elevator.
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.	Yes, see attached
Has an accessible routes way-finding and signage package been developed? If yes, please describe.	No

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.

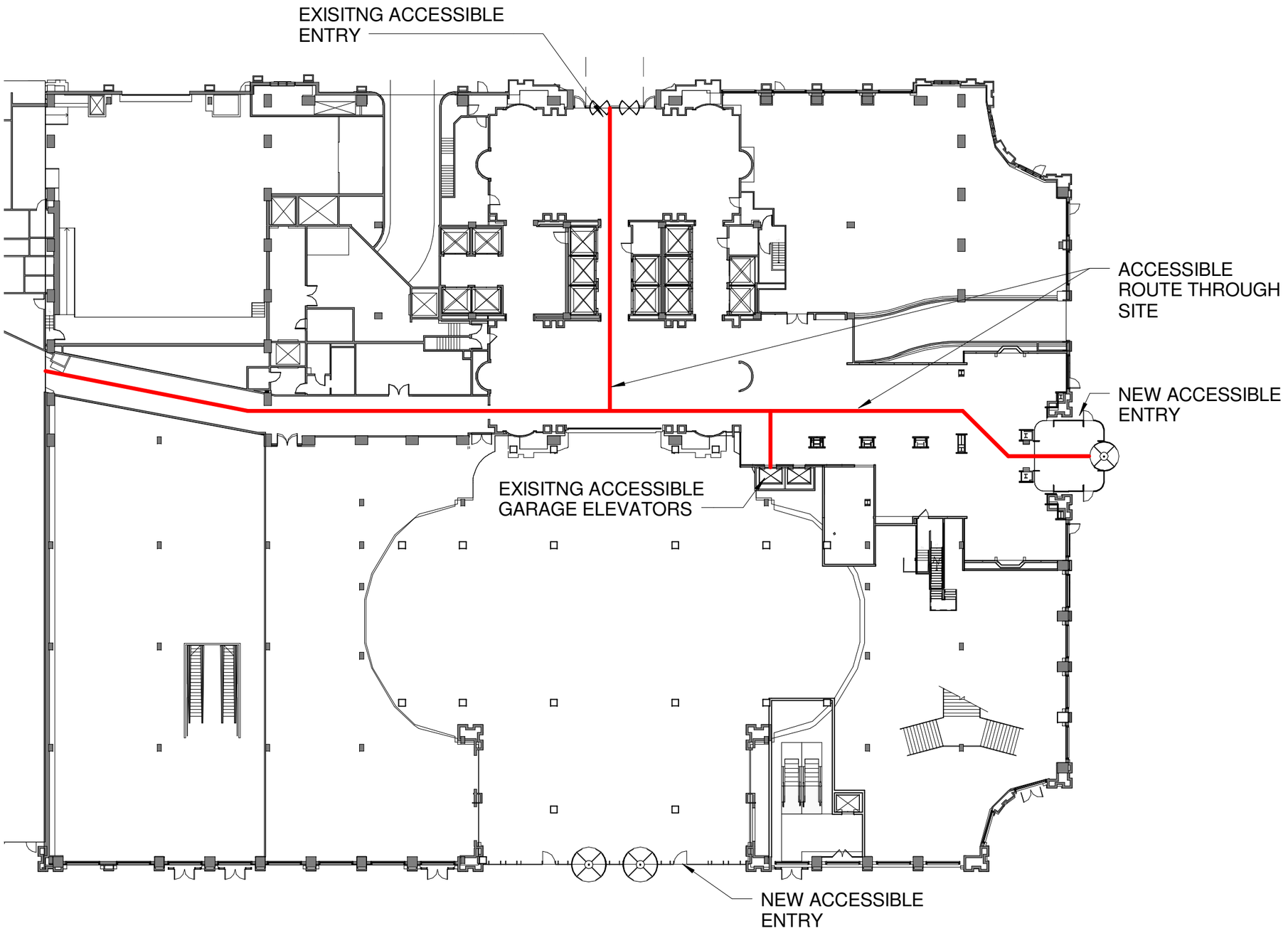
What is the total number of proposed units for the development?	N/A
How many units are for sale; how many are for rent? What is the market value vs. affordable breakdown?	N/A
How many accessible units are being proposed?	N/A
Please provide plan and diagram of the accessible units.	N/A
How many accessible units will also be affordable? If none, please describe reason.	N/A
Do standard units have architectural barriers that would prevent entry or use of common space for persons with mobility impairments? Example: stairs at	N/A

entry or step to balcony. **If yes,** 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?	
Did the Advisory Board vote to support this project? **If no,** what recommendations did the Advisory Board give to make this project more accessible?	

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



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Equity Office

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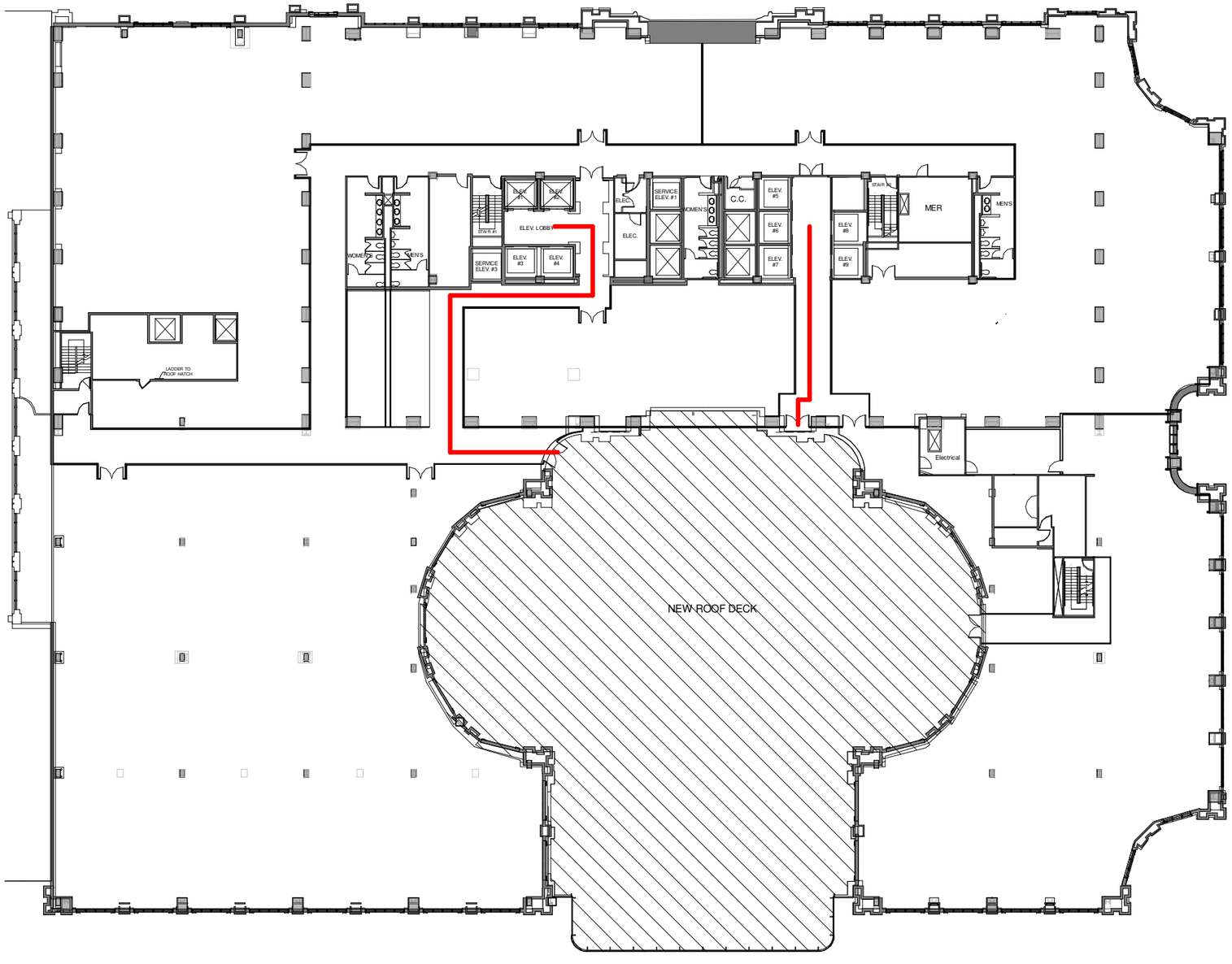
LEVEL 1 - Accessability

1/32" = 1'-0"

1ST FLOOR ACCESSIBILITY DIAGRAM



LEVEL 6 - Accessability

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ROOF DECK ACCESSIBILITY DIAGRAM