

PROJECT NOTIFICATION FORM

# 533 WASHINGTON STREET



Submitted to:

**Boston Redevelopment Authority** One City Hall Square . Boston, MA 02201

Submitted by:

**Rafi Properties, LLC.**

7 Avenue De Lafayette . Boston, MA 02112

Prepared by:

**Epsilon Associates, Inc.** 3 Clock Tower Place, Suite 250 . Maynard, MA 01754

In Association with:

**Stantec Architecture**

**Howard Stein Hudson**

MARCH 31, 2016

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## Chapter 1.0

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### General Information

## 1.0 GENERAL INFORMATION / PROJECT DESCRIPTION

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Rafi Properties, LLC (the Proponent) proposes to develop an approximately 3,648 square-foot site at 533 Washington Street in downtown Boston (the Project site). The proposed development includes the construction of a 30-story building having restaurant and office space on the lower floors, and residential units above (the Project).

The Project will add to the significant ongoing transformation of Downtown Crossing from a predominantly commercial district to a mixed-use district with a growing resident population. The Project will enliven and re-energize the now vacant site between the Boson Opera House and the Modern Theater with a high quality food and beverage establishment, collaboration space, and apartments. The Project will provide housing proximate to public transportation and within walking and biking distance of numerous jobs and amenities.

This 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.

### 1.1 Project Identification and Team

Name/Address/Location:	533 Washington Street Boston, MA 02112
Proponent:	Rafi Properties, LLC. 7 Avenue De Lafayette Boston, MA 02112 (617) 974-1138 Collin Yip
Architect:	Stantec Architecture 311 Summer Street Boston, MA 02210 (617) 234-3100 James Gray Eric Weyant
Legal Counsel:	Dain, Torpy, Le Ray, Wiest & Garner, P.C. 745 Atlantic Avenue, 5 <sup>th</sup> Floor Boston, MA 02111 (614) 542-4800 Donald Wiest

Article 80 and Historic  
Resources Consultant: Epsilon Associates, Inc.  
3 Clock Tower Place, Suite 250  
Maynard, MA 01754  
(978) 897-7100  
David Hewett

Transportation and Parking  
Consultant / Civil Engineer: Howard Stein Hudson  
11 Beacon Street, Suite 1010  
Boston, MA 02108  
(617) 482-7080  
Brian Beisel

## 1.2 Project Description

### 1.2.1 *Project Site*

The Project site is an approximately 3,648 square-foot lot located in the Downtown Crossing neighborhood of Boston, and is bound by Washington Street to the east, the Boston Opera House to the south and west, and an approximately 10-foot-wide passageway formerly known as Harlem Place to the north (see Figure 1-1 included at the end of this chapter). The site includes a building constructed circa 1866 historically known as the Weed Sewing Machine Company (see Section 2.2.18 for more information about the existing building).

The Project site is proximate to a significant number of jobs and amenities, and is just a short walk from several Massachusetts Bay Transportation Authority (MBTA) stations, including Chinatown Station with service on the Orange Line and Downtown Crossing with service on the Red and Orange Lines. Several bus routes, including the Silver Line, are also nearby. See Section 2.7 for a description of nearby public transportation.

### 1.2.2 *Area Context*

The Project site is located in the rapidly changing mixed-use/cultural neighborhood of Downtown Crossing. Immediately to the south of the site are the Boston Opera House and the Paramount Theater, and immediately to the north is the Modern Theater. In addition to the cultural attractions, the area has a mix of uses including education (primarily Suffolk University and Emerson College), retail, hotel, and office. In recent years, the area has seen a number of new nearby residential projects that have increased the neighborhood population, including Millennium Tower, Kensington Place, and 45 Stuart Street. .

### 1.2.3 *Proposed Development*

The Project includes the demolition of the existing building on the site, with the exception of its façade which will be incorporated into the design of the new building. The proposed 30-story building will total approximately 105,000 square feet, containing approximately

94 residential units, an approximately 4,500 square-foot restaurant on the ground and second floor, and approximately 4,000 square feet of non-profit incubator office space on floors three and four. The residential units will contain a mix of studios, one and two bedroom apartments. The building will not include parking. It is anticipated that parking will be obtained in nearby parking facilities (see Section 2.8.1). Covered, secure storage for bicycles will be provided on site for the residential units. Loading, deliveries and trash collection will occur curb side (see Section 2.8.2). Table 1-1 summarizes the Project program.

**Table 1-1 Project Program**

<i>Project Element</i>	<i>Approximate Dimension</i>
Residential	96,500 sf / 94 units
Restaurant (square feet)	4,500
Office (square feet)	4,000
<b>Total Square Footage</b>	<b>105,000</b>
Height/Stories	302 feet (top of highest occupiable floor)/30 stories
Parking	None provided. Off-site garages will be used. Demand is expected to be less than 100 vehicles.
Parcel Area (square feet)	3,648 sf

Because the Project will retain the existing building façade, the frontage on Washington Street will remain similar to existing conditions. The alley on the north side of the site will remain unchanged.

Figures 1-2 through 1-7 present preliminary floor plans; Figures 1-8 through 1-10 present several views of the proposed building. Figures are included at the end of this chapter.

### 1.3 Public Benefits

The Project will replace a shut-down, unwanted, and unused nightclub and re-energize the space with a new, two-story restaurant space that will further enliven Washington Street. The Project will also:

- ◆ Create approximately 94 new residential units proximate to public transportation;
- ◆ Provide collaborative incubator space that can also be used as community event space;
- ◆ Comply with the BRA’s Inclusionary Development Policy;
- ◆ Create approximately 350 construction jobs as well as new permanent full- and part-time jobs at the restaurant and office space;

- ◆ Provide property tax revenues to the City of Boston by significantly increasing the assessed value of the property;

The proposed Project will provide a variety of urban design benefits to the surrounding neighborhood, including:

- ◆ Provide an improved streetscape that will be activated with new retail space;
- ◆ Provide approximately 4,500 square feet of ground and second floor restaurant, which will both create pedestrian activity at the site and provide amenities to the neighbors and building residents;
- ◆ Provide approximately 4,000 square feet of new collaborative incubator space for innovative start-up companies;
- ◆ Improve the urban design characteristics and aesthetic character of the Project surroundings through the introduction of high-quality architecture to the site; and
- ◆ Create green, sustainable, climate adapted architecture.

## 1.4 Zoning and Regulatory Controls

### 1.4.1 *Zoning Context*

Land use at the project site is governed by Article 38 of the Boston Zoning Code (the “Code”), the Midtown Cultural District Article. Boston Zoning Map 1A indicates that the site is located within Area 4 of the district, the so-called “Ladder Blocks and Washington Street Theatre Protection Area.” The site is further located within the Restricted Parking Overlay District.

### 1.4.2 *Use*

The proponent anticipates that the project will comply with the Code’s use provisions. Per Section 38-18.5, multifamily dwellings are allowed as of right at the site. So are most office uses, including “general office,” as well as a number of restaurant and entertainment uses. Section 38-18.1 requires that street level real estate be dedicated to Ground Level Uses and Cultural Uses (which are listed in Appendix B to Article 38). These categories encompass a broad range of retail, food, and arts-related uses.

### 1.4.3 *Dimensional Regulations:*

Code Section 38-7 establishes that development at the site is allowed, as of right, to reach 125 feet high and have an FAR of 8.0. This section further provides that, if the project “is subject to or elects to comply with Large Project Review and has received a Certification of Compliance pursuant to Section 80B-6,” a project at the site “shall have an as-of-right



building height of one hundred fifty-five (155) feet and an as-of-right FAR of ten (10).” The proponent expects the project to require relief from the Code’s provisions governing building height, FAR, and setbacks.

#### **1.4.4        *Parking and Loading:***

Code Section 38-22 states that no off-street parking facilities are required at the site. Section 38-24, Off-Street Loading, provides that “The provision and design of off-street loading facilities for the use of any structure or land that is subject to Large Project Review shall be determined through such review.”

### **1.5    Legal Information**

#### **1.5.1        *Legal Judgments Adverse to the Proposed Project***

The Proponent is unaware of any legal judgments or actions pending that concern the Project.

#### **1.5.2        *History of Tax Arrears on Property***

The Proponent is not delinquent in connection with any property owned within the City of Boston.

#### **1.5.3        *Evidence of Site Control/Nature of Public Easements***

Two affiliates of the proponent, 533 Washington Holdings, LLC, and 533 Washington Holdings, LLC, own the site in fee simple as tenants in common.

### **1.6    Anticipated Permits and Approvals**

The proponent anticipates that the project will require a Certification of Compliance from the BRA, zoning relief from the City of Boston Board of Appeal, and review by the Boston Civic Design Commission.

### **1.7    Public Participation**

As part of its planning efforts, the Proponent has reached out to nearby residents and representatives of numerous neighborhood groups, elected officials and public agencies. The Proponent is 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. Table 1-2 presents a more detailed list of the persons and organizations that the Proponent has met with.

**Table 1-2 Public Outreach**

<b>Community Organization</b>	<b>Contact</b>
MPPNA	Mary Higgins, Chair
Midtown Cultural District Residents Association	Rishi Shukla George Coorssen
Downtown BID	Rosemarie Sansone
Emerson	Peggy Yings
Suffolk University	John Nucci
Paramount Theater	Don Law and owners
Mayor's Office of Neighborhood Services	Denny Ching
Boston City Council	Council President Bill Linehan
Office of Bill Linehan	James Chan, Chief of Staff
City Council	Councilor Michael Flaherty
City Council	Councilor Stephen Murphy
House of Representatives	Aaron Michlewitz
Tremont on the Common 151 Tremont Street	George Corsin
Millennium Partners	John Luciano Patrick Cutter Brian Clark

## **1.8 Schedule**

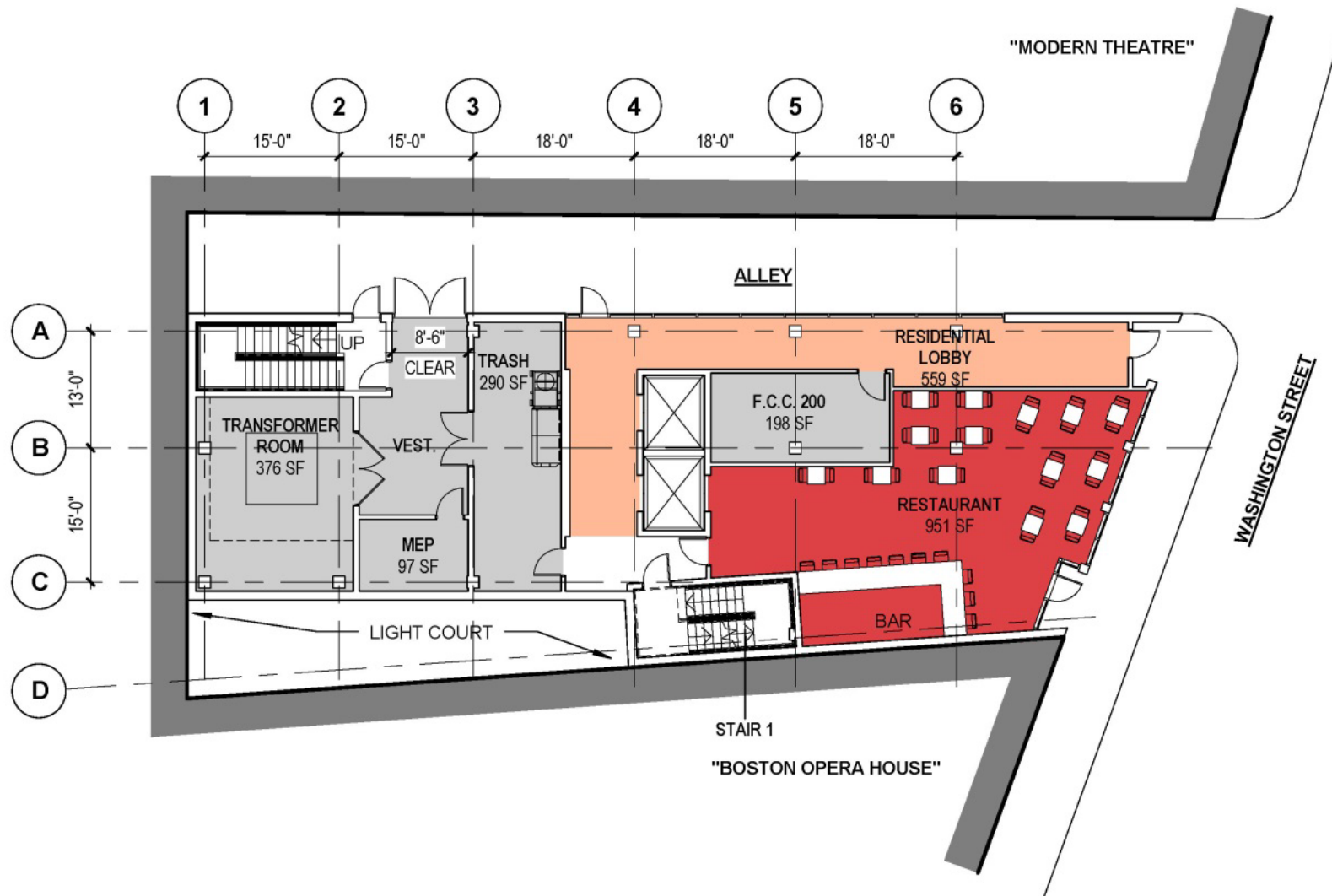
Construction is anticipated to begin in mid-2017 and will occur over approximately 14 months.



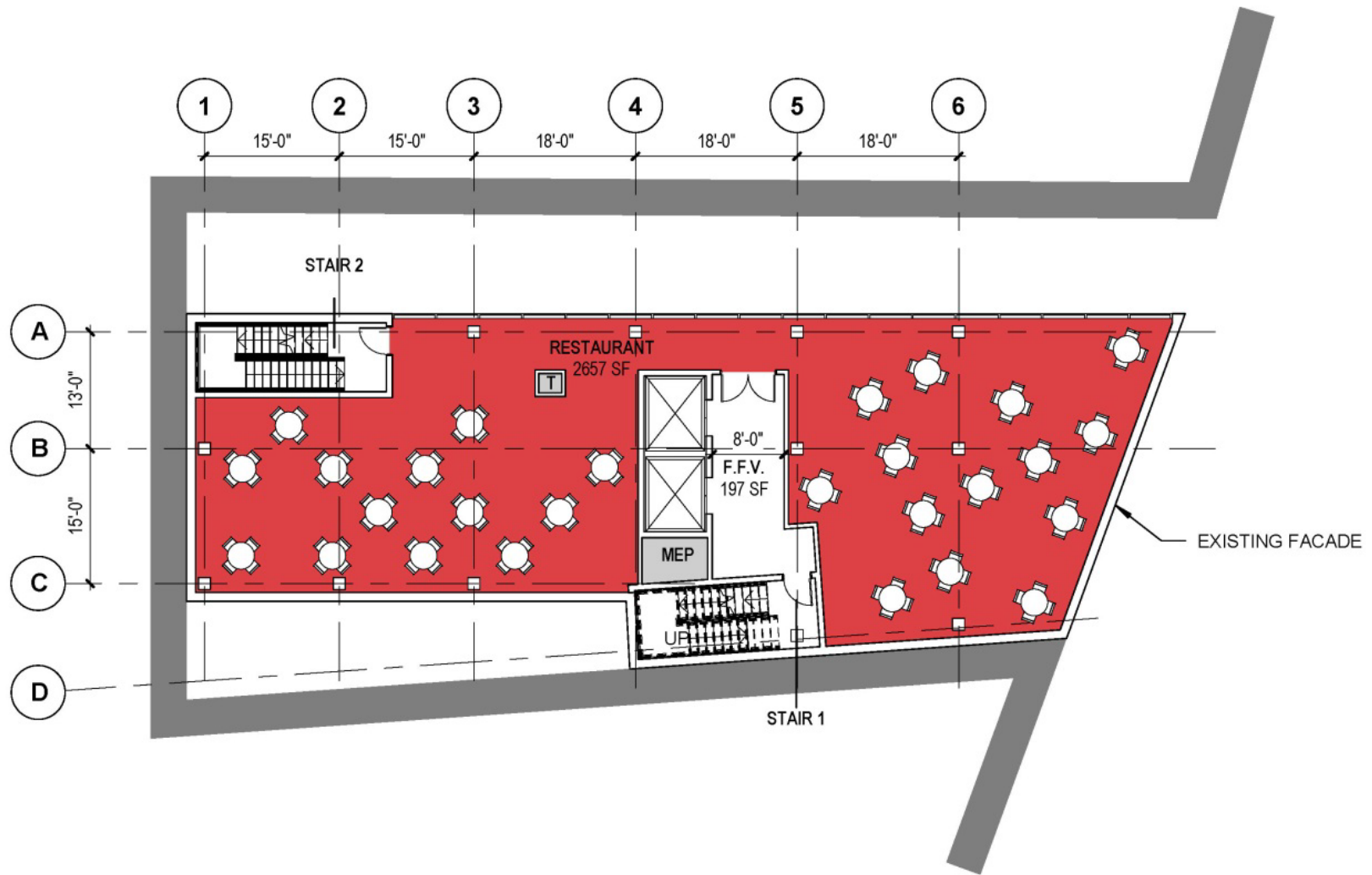


533 Washington Street Boston, Massachusetts

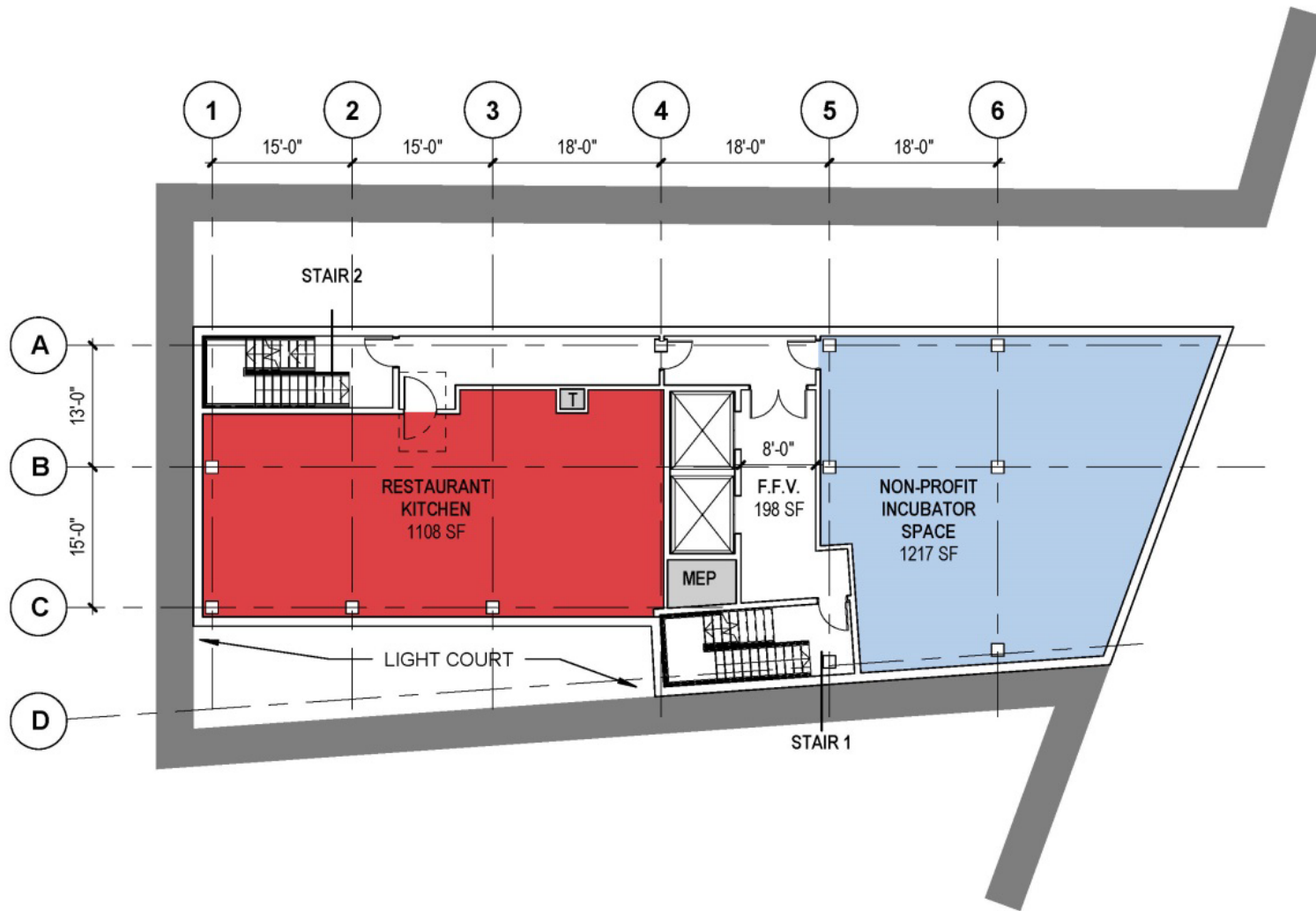




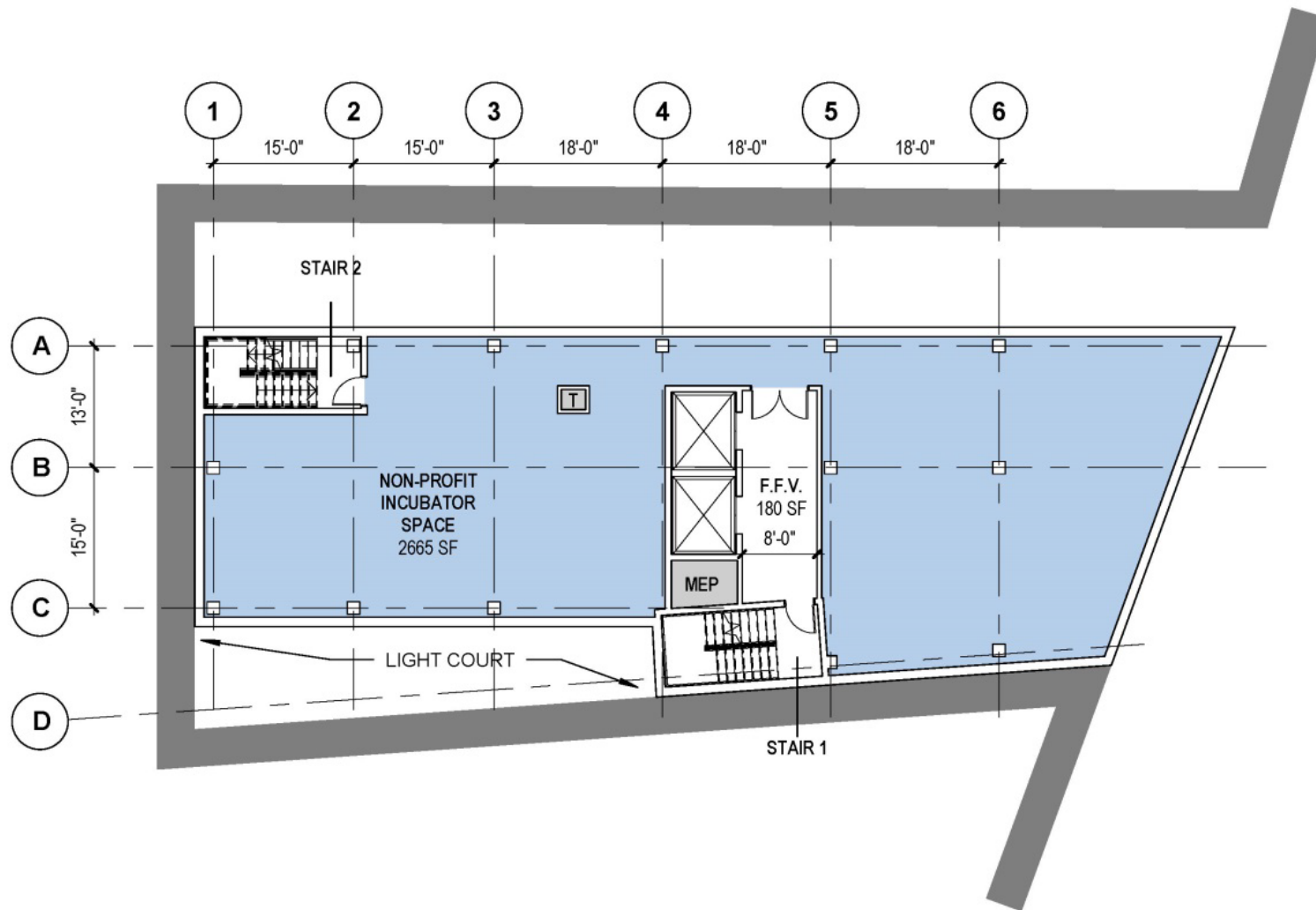
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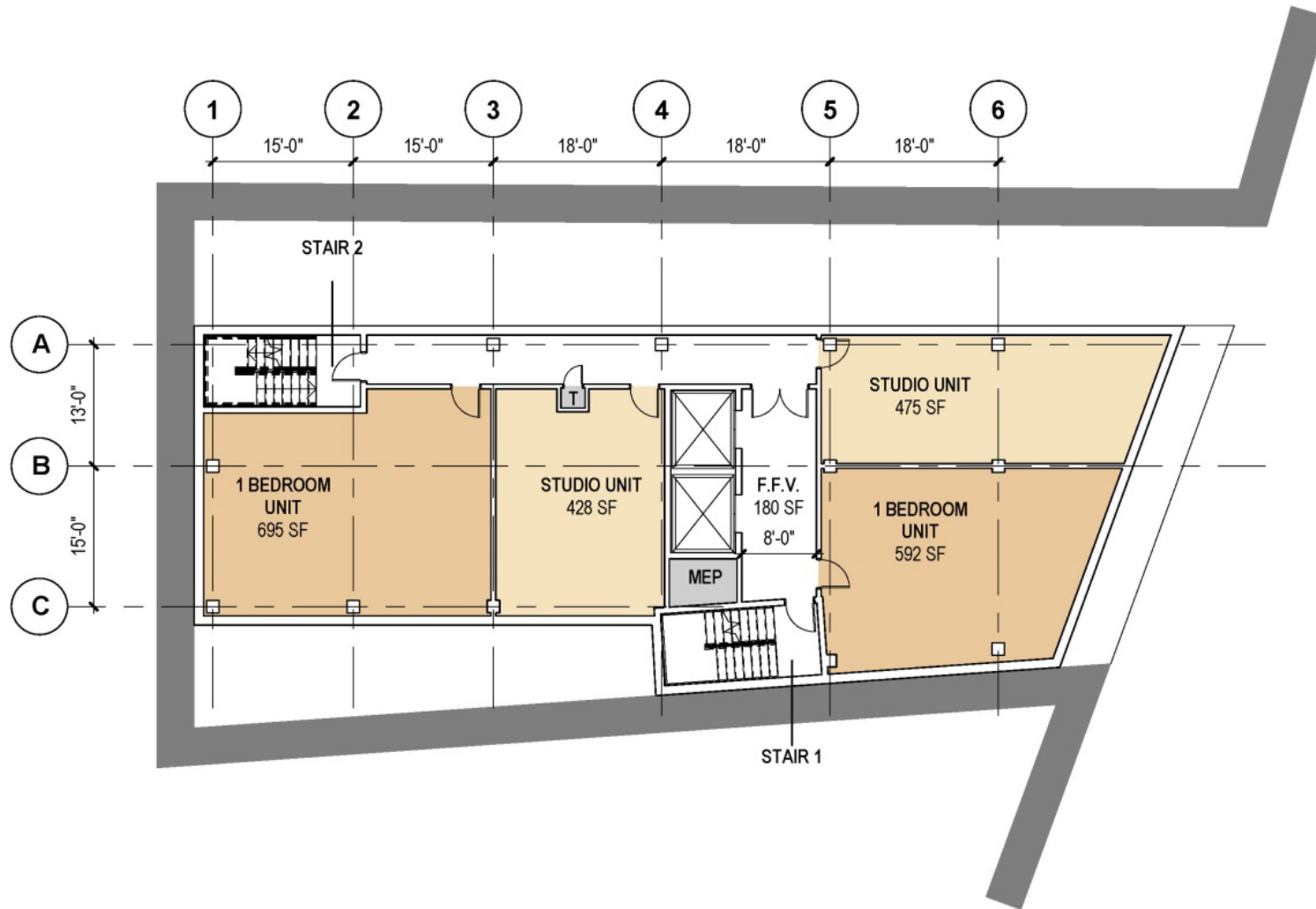
533 Washington Street Boston, Massachusetts



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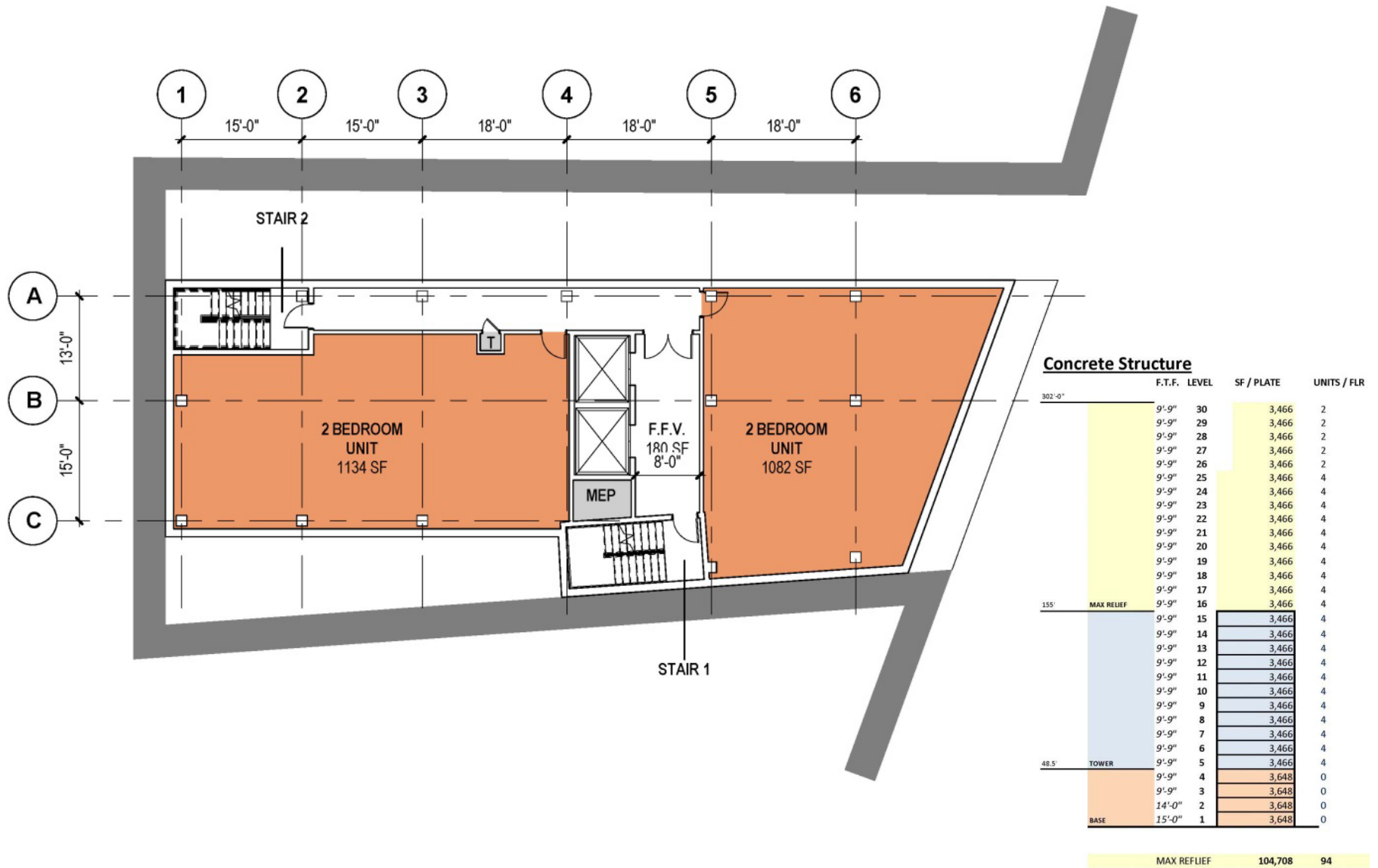


533 Washington Street Boston, Massachusetts



533 Washington Street Boston, Massachusetts





533 Washington Street Boston, Massachusetts



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533 Washington Street Boston, Massachusetts



533 Washington Street Boston, Massachusetts

## Chapter 2.0

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Transportation



## 2.0 TRANSPORTATION

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Howard Stein Hudson (HSH) has conducted a preliminary evaluation of the transportation impacts of the redevelopment of 533 Washington Street in the Downtown Crossing neighborhood of Boston, Massachusetts (the “Project” and/or the “site”). This chapter presents existing transportation conditions in the Project area, discusses preliminary Project trip generation figures, and preliminary transportation impacts. The Proponent will prepare a comprehensive analysis of transportation aspects of the Project, including pedestrian, transit, automobile traffic, parking, and loading activity that will be presented in a Draft Project Impact Report. The study will be developed in cooperation with the Boston Transportation Department (BTD), BRA, and the community.

### 2.1 Project Description

The Project site currently consists of a vacant five story building totaling approximately 17,000 square feet. The proposed Project consists of a new 30 story, approximately 105,000 gross square-foot building. The program proposes approximately 94 residential unit, ground and second floor restaurant space measuring approximately 4,500 square feet, and incubator office space on the third and fourth floor measuring approximately 4,000 square feet. Parking for the uses on site will be provided in existing parking garages in the Downtown Crossing neighborhood.

### 2.2 Site Access

Pedestrians will enter the building via Washington Street. The residential lobby will be located at the corner of Washington Street and the Alley Way on the north side of the site. The entrance to the restaurant will be located to the south of the residential lobby also along Washington Street. The Ground floor plan is shown in Figure 2-1. Since parking is not provided on site, the Site will not have any vehicular access.

### 2.3 Existing Roadway Conditions

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

**Washington Street** is a one-way northbound, 3-lane classified as an urban principal arterial roadway under BTD jurisdiction and runs in a predominately north-south direction between downtown Boston to the north and the outer neighborhoods to the south. To the north of Kneeland Street, Washington Street becomes one-way northbound with two to three travel lanes. Through the Downtown Crossing shopping area, Washington Street is a pedestrian only zone. In the vicinity of the site, there is commercial on-street parking provided on the west side of Washington Street, located north of Avenue de Lafayette, however, there is no general on-street parking allowed within the Project area. Sidewalks are provided on both sides of the roadway.

*Avenue De Lafayette* is a 2-way, 2-lane roadway located to the east of the Project site. Avenue De Lafayette is classified as a local street under BTD jurisdiction and runs in a predominately east-west direction between Washington Street Kingston Street. The roadway is a 2-way street with one lane in each direction between Washington Street and Chauncy Street. In the vicinity of the site, on-street parking and loading activity is provided along both sides of the roadway when possible. There are sidewalks on both sides of the street.

## 2.4 Existing Parking

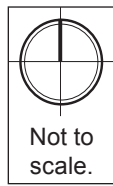
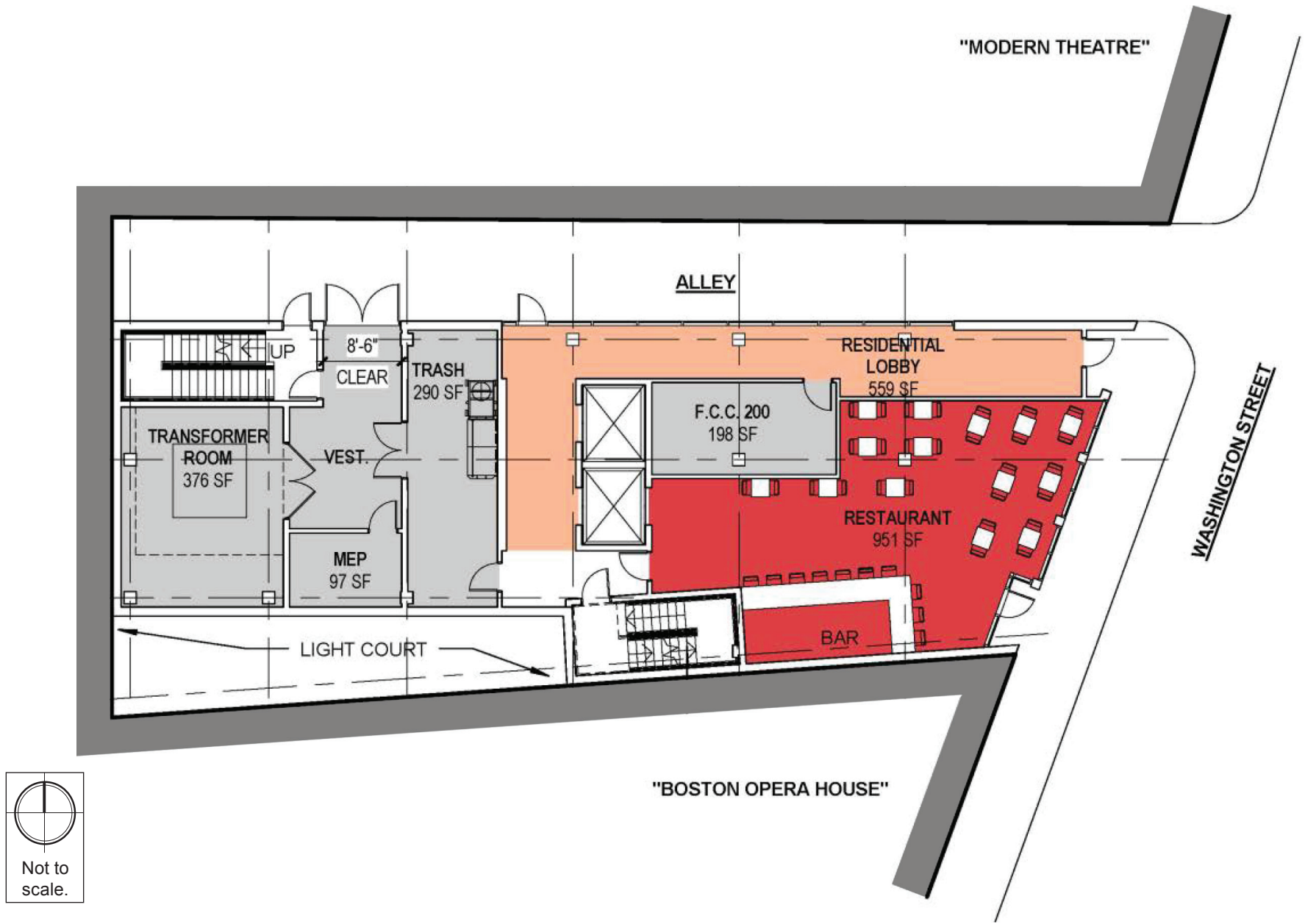
An inventory of both on-street and off-street parking in the vicinity of the Project was collected.

### *2.4.1 On-Street Parking and Curb Usage*

On-street parking surrounding the site consists of predominately commercial parking and no-parking or metered parking. The on-street parking regulations within the study area are shown in Figure 2-2.

### *2.4.2 Off-Street Parking*

There are more than 5,590 public parking spaces within one-quarter mile, or a five-minute walk, from the Project Site. Of these, approximately 325 are found in parking lots and 5,265 are in parking garages. Public surface lots and garages within a quarter-mile of the Project Site are shown in Figure 2-3. A detailed summary of all parking lots and garages are shown in Table 2-1.

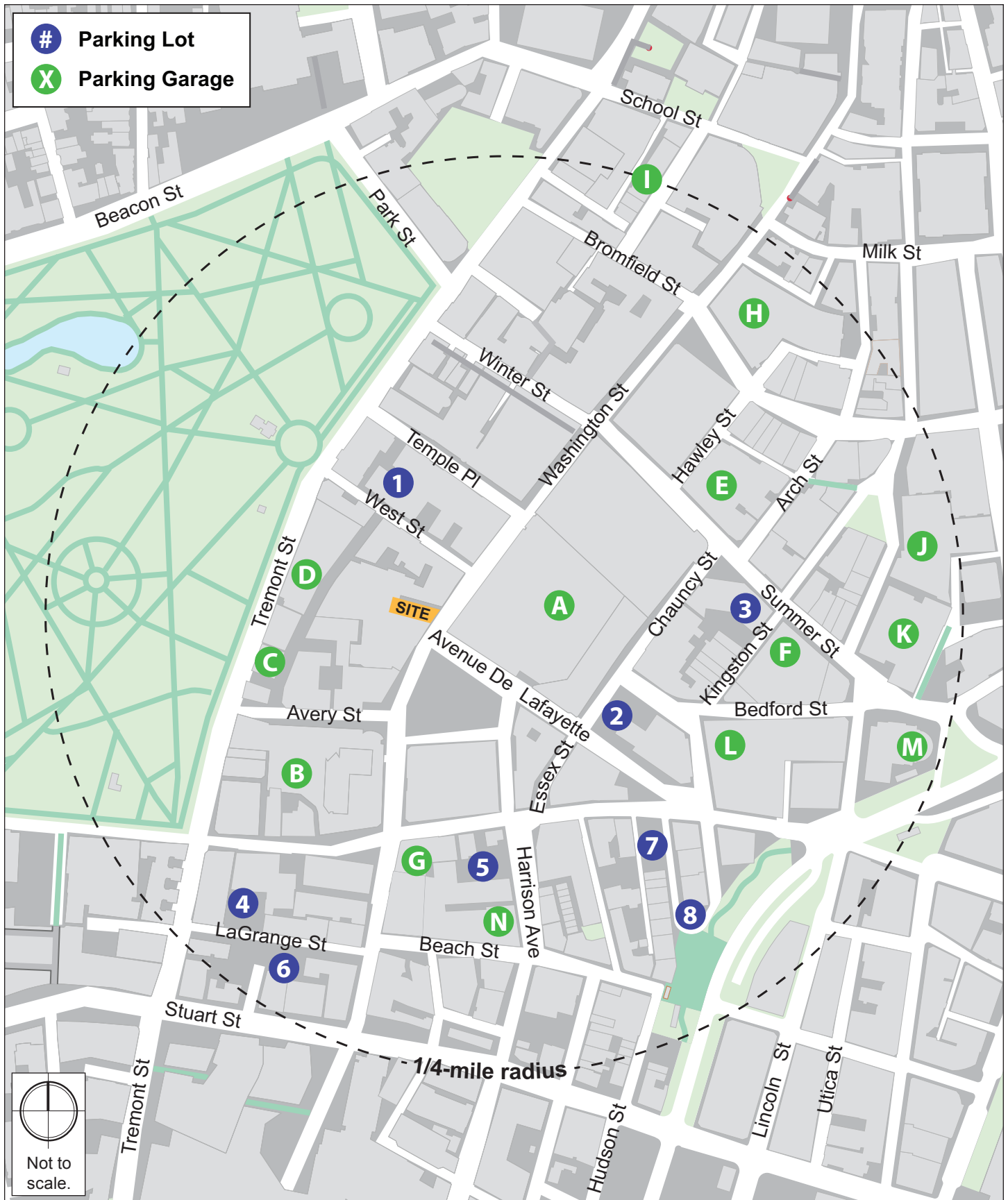


533 Washington Street Boston, Massachusetts





533 Washington Street Boston, Massachusetts



533 Washington Street Boston, Massachusetts

**Table 2-1 Off-street Parking Lots and Garages within a Quarter-Mile of the Site**

<i>Map ID</i>	<i>Facility</i>	<i>Capacity</i>	<i>Map ID</i>	<i>Facility</i>	<i>Capacity</i>
<b>Parking Garages</b>			<b>Parking Lots</b>		
A	Lafayette Place Garage	1,276	1	Allright Parking (West)	15
B	Millennium Place Garage	563	2	Bradford Lot	10
C	Park Side	0	3	23 Kingston Street	15
D	Tremont on Common	200	4	47-55 LaGrange Street	50
E	101 Arch Street	0	5	Stanhope Garage (Essex)	52
F	99 Summer Street	0	6	41-47 LaGrange Street	89
G	Archstone	177	7	P & J's Auto Park	50
H	33 Arch Street	900	8	22 Edinboro Street	19
I	45 Province Street	184	9	Allright Parking (Beacon)	24
J	Winthrop Square	1,125			
K	100 Summer Street	0			
L	One Lincoln	265			
M	125 Summer Street	75			
N	40 Beach Street	500			
<b>Parking Garages Subtotal</b>		<b>5,265</b>	<b>Parking Lots Subtotal</b>		<b>324</b>
<b>Total Public Parking Spaces</b>			<b>5,589</b>		

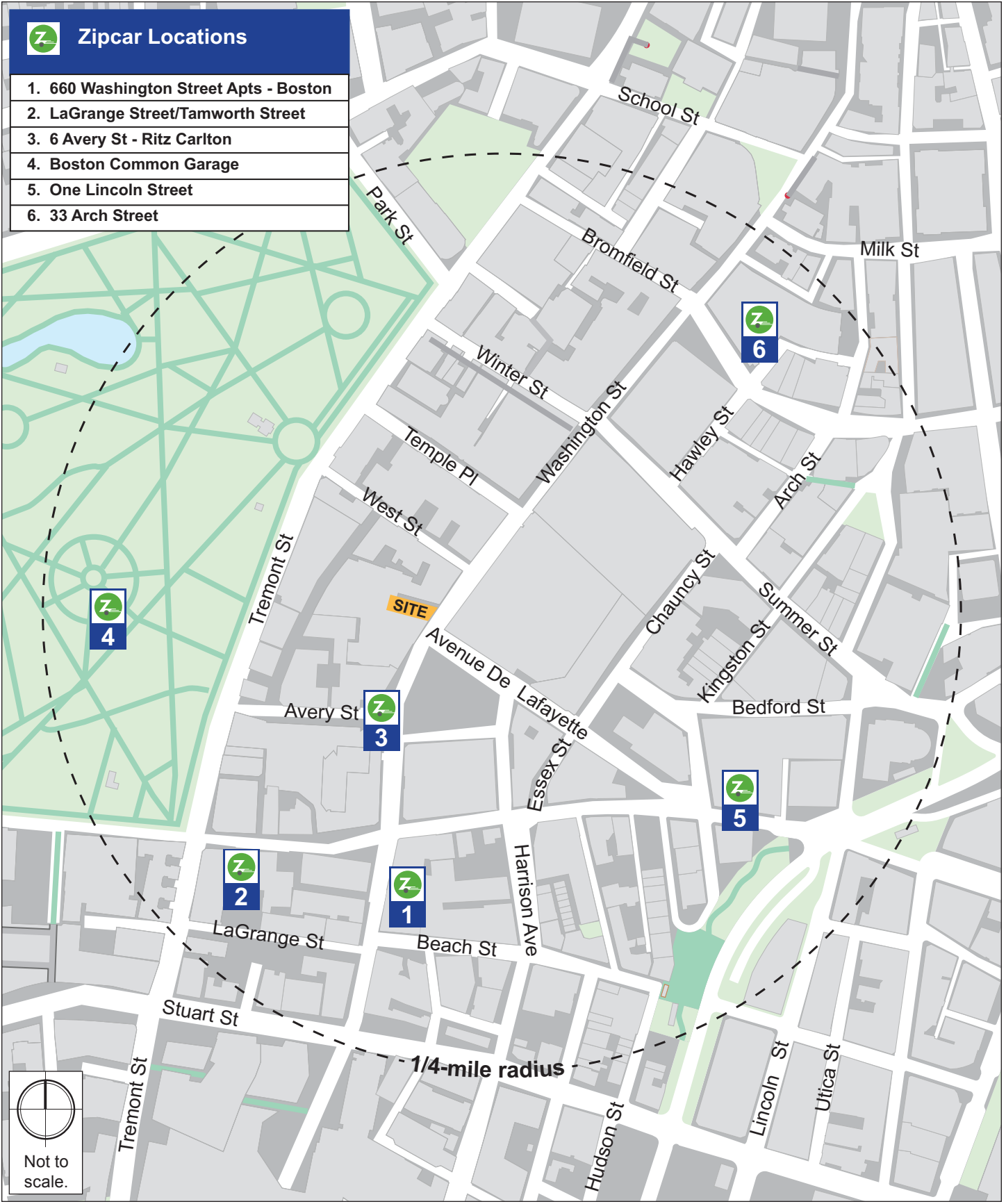
**2.4.2.1 Car Sharing Services**

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

Zipcar is the primary company in the Boston car sharing market. There are currently six Zipcar locations within a half-mile walk of the Site. The nearby car sharing locations are shown in Figure 2-4.

**2.5 Existing Bicycle Accommodations**

In recent years, bicycle use has increased dramatically throughout the City of Boston. The site is conveniently located in close proximity to several bicycle facilities. The City of Boston's "Bike Routes of Boston" map indicates that the Washington Street pedestrian zone is designated as a beginner route. Beginner routes are suitable for all riders including children, and people with no on-road experience. Washington Street and Essex Street are designated as intermediate routes. Intermediate routes are suitable for riders with some on-road experience. Tremont Street and Boylston Street are designated as advanced routes. Advanced routes are suitable for more traffic-confident cyclists.



533 Washington Street Boston, Massachusetts

### **2.5.1**      *Bicycle Sharing Services*

The site is located in proximity to a bicycle sharing station provided by Hubway. Hubway is the bicycle sharing system in the Boston area, which was launched in 2011 and consists of over 140 stations and 1,300 bicycles. The nearest Hubway station is located near the intersection of Washington Street and Boylston Street. Figure 2-5 shows the Hubway stations within a quarter-mile radius of the Project site.

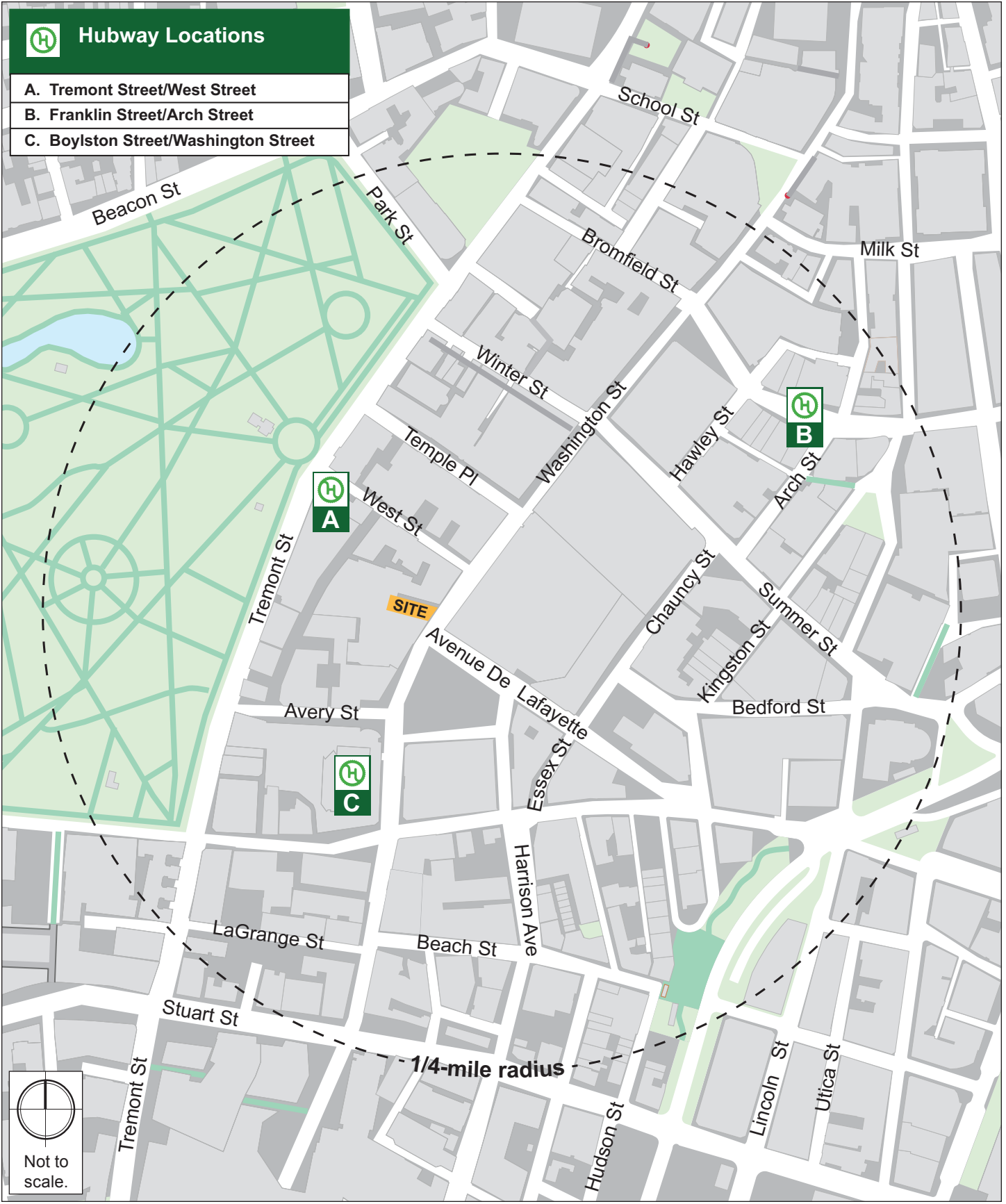
## **2.6**      **Existing Pedestrian Accommodations**

In general, sidewalks are provided along all roadways and are in good condition. Crosswalks are provided at all study area intersections. Pedestrian signal equipment is provided at the signalized intersections in the vicinity of the site.

## **2.7**      **Existing Public Transportation Services**

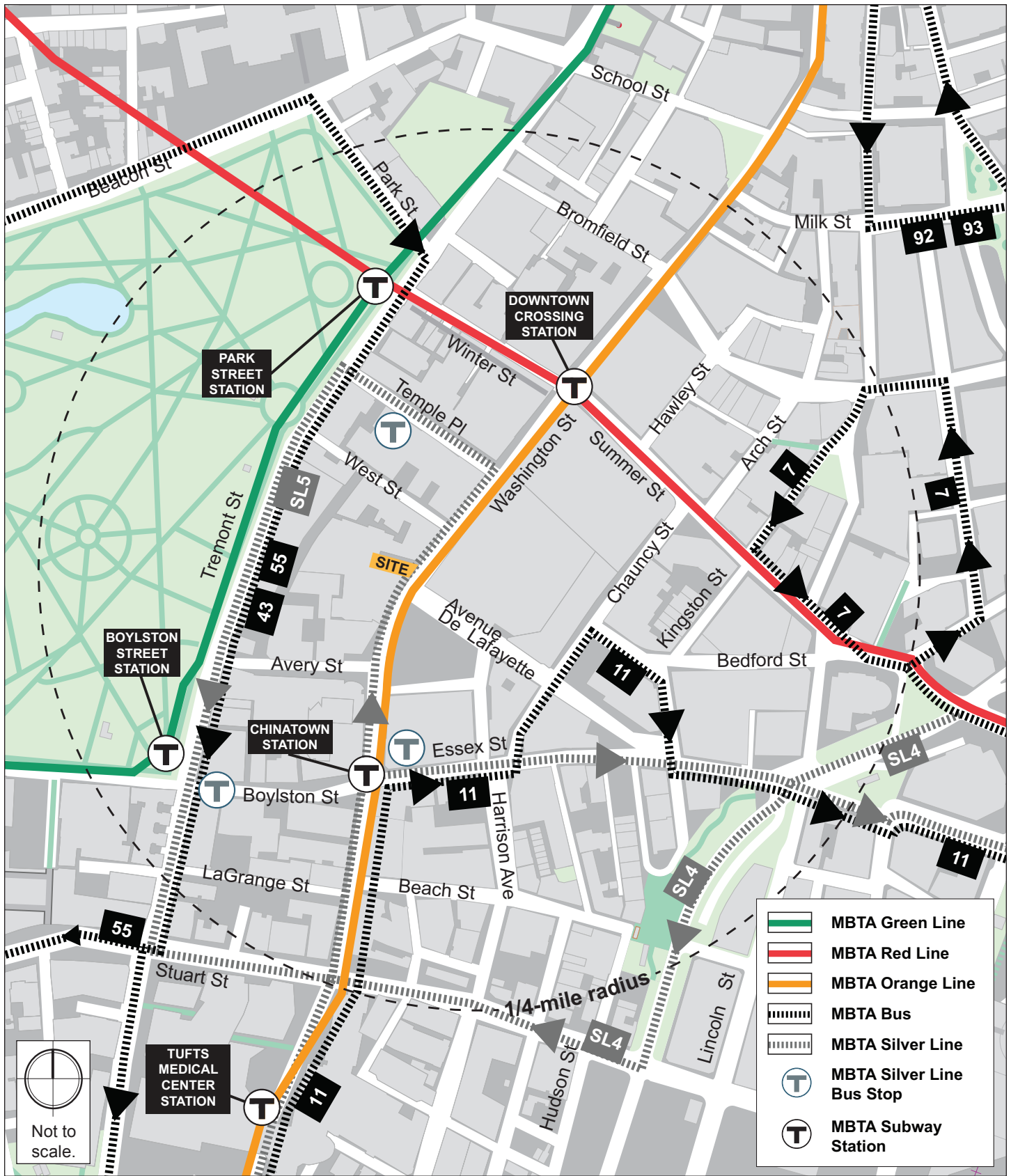
The site is located in downtown Boston with abundant public transportation opportunities. The site is between Chinatown Station of the Orange Line (approximately 600 feet away) Downtown Crossing Station of the Orange Line and the Red Line (approximately 750 feet away) and Boylston Station of the Green Line (approximately 850 feet away). State Street station with access to the Blue Line is less than one-half mile away.

Additionally, the MBTA operates five bus routes, including two Silver Line routes in close proximity to the Project. Figure 2-6 maps all of the public transportation service located in close proximity of the Site, and Table 2-2 provides a brief summary of all routes.



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533 Washington Street Boston, Massachusetts

**Table 2-2 Existing Public Transportation Service Summary**

Transit Service	Description	Rush-hour Headway (in minutes)*
<b>Subway</b>		
Orange Line	Oak Grove Station – Forrest Hills Station	6
Red Line	Alewife Station – Braintree Station	9
	Alewife Station – Ashmont Station	9
Green Line	“B” Branch – Boston College – Park Street Station	7
	“C” Branch – Cleveland Circle – North Station	6
	“D” Branch – Riverside – Park Street Station	7
	“E” Branch – Heath Street – Lechmere Station	6
Blue Line	Wonderland – Bowdoin Station	5
<b>Bus Routes</b>		
SL4	Dudley Station – South Station at Essex Street via Washington Street	8
SL5	Dudley Station – Downtown Crossing at Temple Place via Washington Street	8
11	City Point – Downtown BayView Route	6
43	Ruggles Station – Park & Tremont Streets	9-20
55	Jersey & Queensberry Streets – Copley Square or Park & Tremont Streets	15

\* Headway is the time between buses.

## 2.8 Transportation Impact Overview

### 2.8.1 *Parking*

The project will not provide any on-site parking. Parking for residents, employees, restaurant patrons, and guests will rely on local area parking garages. Current trends indicate that parking demand in downtown Boston is decreasing across all land uses. This is due to a variety of reasons but primarily involves shifting demographics, cost of parking and auto ownership, access to improved transit service, aggressive implementation by the City of on-street bicycle facilities (bike lanes, cycle tracks), the advent of both car sharing (Zipcar) and bicycle sharing services (Hubway), rise in ride sharing services (Uber, Lyft), and the general social and environmental concerns of car ownership and use.

HSH conducted an unpublished survey (summer 2010) of the new, large residential developments in several downtown neighborhoods. The results show that the actual parking demand ratio for condominiums is about 0.70 vs. the BTS maximum guideline of 1.0 per unit.



As mentioned previously, there are over 5,500 parking spaces with a quarter-mile of the Site. The parking demand for the entire Project is expected to be less than 100 vehicles. Therefore, there is sufficient capacity at local garages to meet the parking demand of the Project.

### **2.8.2 Loading and Service Accommodations**

Residential units primarily generate delivery trips related to small packages and prepared food. Restaurants depend on more frequent food deliveries from smaller trucks. Deliveries to the Project Site will be limited to SU-36 trucks and smaller delivery vehicles.

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 anticipated deliveries will have minimal impact on the vehicular operations in the study area.

### **2.8.3 Trip Generation Methodology**

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

To estimate the number of trips expected to be generated by the Project, data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*<sup>1</sup> were used. ITE provides data to estimate the total number of unadjusted vehicular trips associated with the Project. In an urban setting well-served by transit, adjustments are necessary to account for other travel mode shares such as walking, bicycling, and transit.

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

**Land Use Code 232 – High Rise Residential Condominium/Townhouse.** High rise residential condominiums/townhouses are defined as units located in a building that has three or more floors with condominium residential units. Calculations of the number of trips use ITE's fitted curve equation per dwelling units.

**Land Use Code 710 – General Office.** General office is defined as an office building containing multiple tenants. An office building typically contains a mixture of professional services. Calculations of the number of trips use ITE's average rate per 1,000 sf.

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<sup>1</sup> Trip Generation Manual, 9th Edition; Institute of Transportation Engineers; Washington, D.C.; 2012.

**Land Use Code 931 – Quality Restaurant.** Quality restaurant is defined as a high quality, full-service eating establishment with typical duration of stay of at least one hour. Quality restaurants typically do not serve breakfast and some don't serve lunch. They all, however, serve dinner. This type of restaurant typically requires a reservation and is generally not part of a chain. Patrons typically wait to be seated, are served by a waiter, order from menus, and pay after they eat. Most quality restaurants include a lounge or bar facility with alcoholic beverages. Calculations of the number of trips use ITE's average rate per 1,000 square feet.

#### **2.8.4 Mode Share**

The BTM provides vehicle, transit, and walking mode split rates for different areas of Boston. The Project is located in the westerly portion of designated Area 2. The unadjusted vehicular trips were converted to person trips by using vehicle occupancy rates published by the Federal Highway Administration (FHWA)<sup>2</sup>. The person trips were then distributed to different modes according to the mode shares shown in Table 2-3.

**Table 2-3 Travel Mode Shares**

Land Use		Walk/Bicycle % Share	Transit % Share	Auto % Share	Vehicle Occupancy Rate
<b>Daily</b>					
Residential	In	42	30	28	1.13
	Out	42	30	28	1.13
Office	In	31	43	26	1.13
	Out	31	43	26	1.13
Restaurant	In	59	20	21	2.20
	Out	59	20	21	2.20
<b>AM Peak</b>					
Residential	In	7	52	41	1.13
	Out	51	18	31	1.13
Office	In	5	63	32	1.13
	Out	26	18	56	1.13
Restaurant	In	14	46	40	2.20
	Out	58	10	32	2.20

<sup>2</sup> Summary of Travel Trends: 2009 National Household Travel Survey; FHWA; Washington, D.C.; June 2011.

**Table 2-3 Travel Mode Shares (Continued)**

Land Use		Walk/Bicycle % Share	Transit % Share	Auto % Share	Vehicle Occupancy Rate
<b>PM Peak</b>					
Residential	In	51	18	31	1.13
	Out	7	52	41	1.13
Office	In	26	18	56	1.13
	Out	5	63	32	1.13
Restaurant	In	58	10	32	2.20
	Out	14	46	40	2.20

**2.8.5 Project Trip Generation**

The mode share percentages shown in Table 2-3 were applied to the number of person trips to develop walk/bicycle, transit, and vehicle trip generation estimates. The trip generation for the Project by mode is shown in Table 2-4. The detailed trip generation information is provided in Attachment C.

**Table 2-4 Project Trip Generation**

Land Use		Walk/Bicycle Trips	Transit Trips	Vehicle Trips
<b>Daily</b>				
Residential <sup>1</sup>	In	137	98	81
	Out	137	98	81
Office <sup>2</sup>	In	7	10	5
	Out	7	10	5
Restaurant <sup>3</sup>	In	275	93	45
	Out	275	93	45
Total	In	419	201	131
	Out	419	201	131
<b>a.m. Peak Hour</b>				
Residential <sup>1</sup>	In	1	6	5
	Out	26	9	14
Office <sup>2</sup>	In	0	4	2
	Out	0	0	1
Restaurant <sup>3</sup>	In	1	2	1
	Out	3	0	1
Total	In	2	12	8
	Out	29	9	16

**Table 2-4 Project Trip Generation (Continued)**

Land Use		Walk/Bicycle Trips	Transit Trips	Vehicle Trips
<b>p.m. Peak Hour</b>				
Residential <sup>1</sup>	In	17	6	9
	Out	1	11	7
Office <sup>2</sup>	In	0	0	1
	Out	0	4	2
Restaurant <sup>3</sup>	In	29	5	7
	Out	4	12	5
Total	In	46	11	17
	Out	5	29	14

As shown in Table 2-4, there is expected to be 838 pedestrian trips, 402 transit trips, and 262 vehicle trips throughout the day. During the a.m. peak hour there is expected to be 31 pedestrian trips (2 in and 29 out), 21 transit trips (12 in and 9 out), and 24 vehicle trips (8 in and 16 out). During the p.m. peak hour there is expected to be 51 pedestrian trips (46 in and 5 out), 40 transit trips (11 in and 29 out), and 31 vehicle trips (17 in and 14 out).

**2.8.6 Trip Distribution**

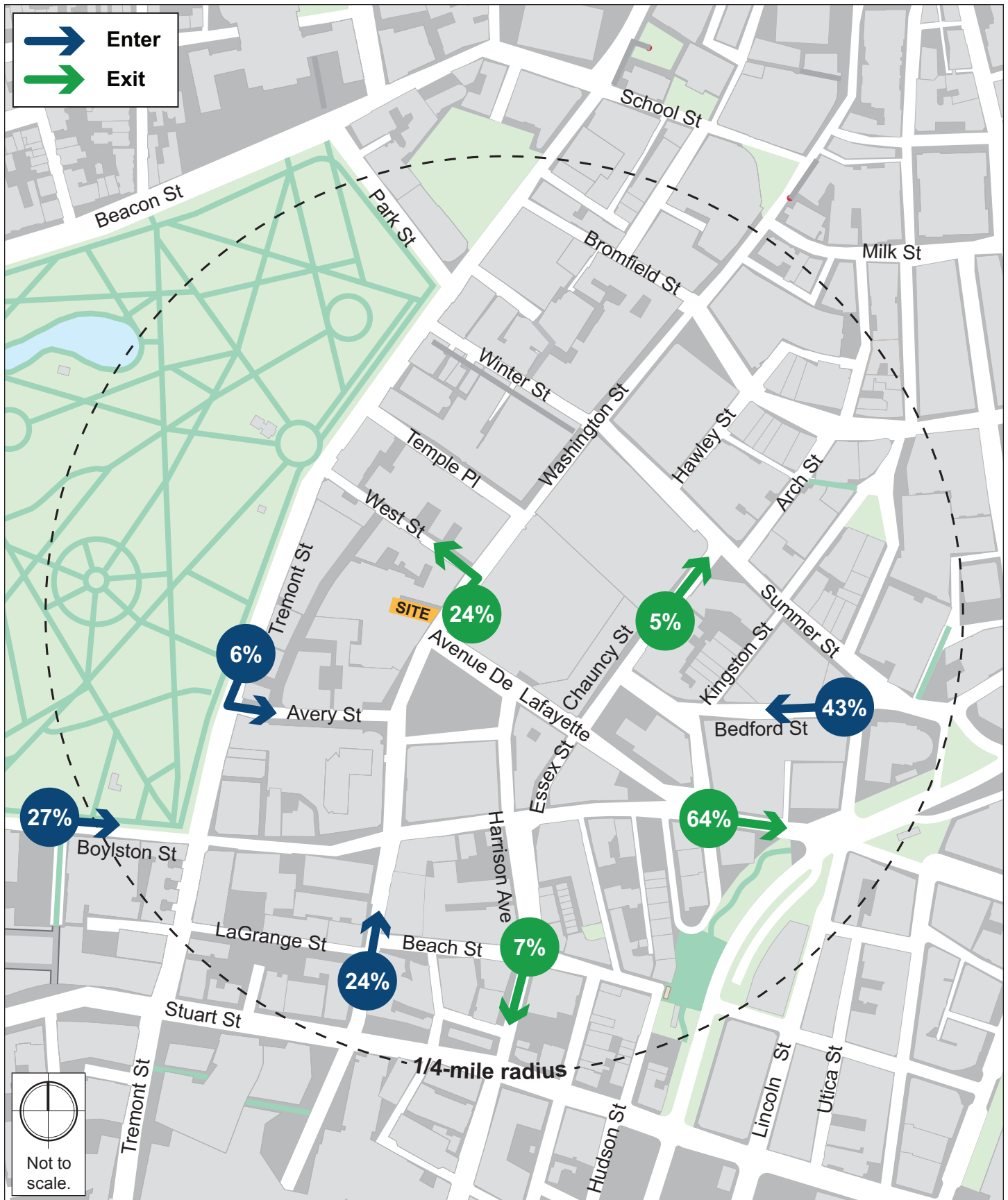
The trip distribution identifies the various travel paths for vehicles associated with the Project. Trip distribution patterns for the Project were based on BTB’s origin-destination data for Area 2 and trip distribution patterns presented in traffic studies for nearby projects. The trip distribution patterns for the Project are illustrated in Figure 2-7.

**2.8.7 Study Area**

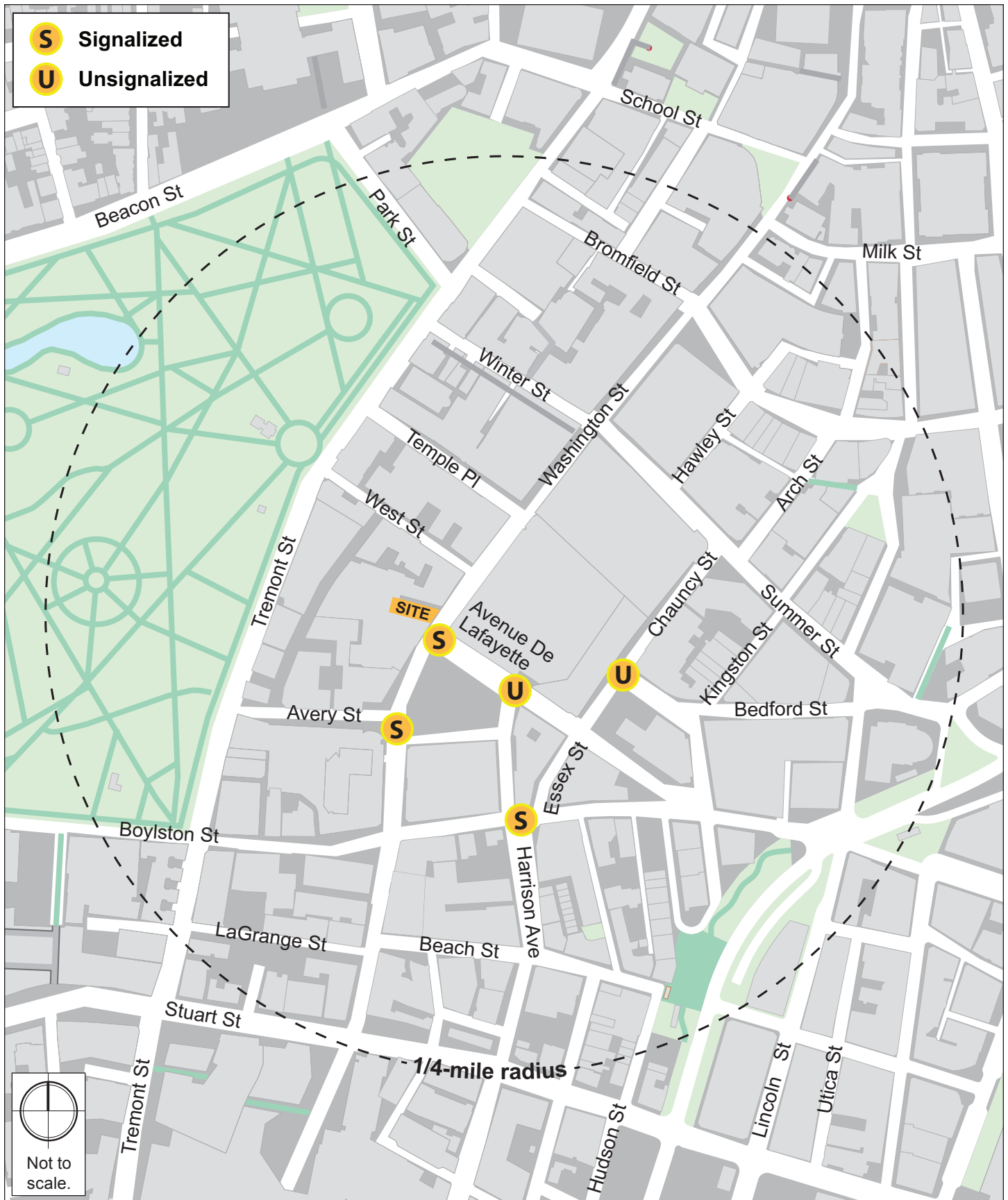
Detailed analysis of intersection operations and development of appropriate mitigation measures will be addressed by the Proponent. Any impacts that require mitigation will be carefully coordinated with BTB as well as with local neighbors.

To help evaluate both existing and future conditions, the study team proposes to study the following intersections (see Figure 2-8):

- ◆ Washington Street/Avery Street (signalized);
- ◆ Washington Street/Avenue de Lafayette (signalized);
- ◆ Essex Street/Harrison Avenue/Harrison Avenue Extension/Chauncy Street (signalized);
- ◆ Washington Street/Hayward Place (unsignalized);



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- ◆ Avenue de Lafayette/Lafayette Garage South Driveway/Harrison Avenue Extension (unsignalized); and
- ◆ Chauncy Street/Bedford Street/Lafayette Garage East Driveway (unsignalized).

## 2.9 Transportation Demand Management

The Proponent is committed to implementing Transportation Demand Management (TDM) measures to minimize automobile usage and Project-traffic impacts. The TDM program may include an on-site transportation coordinator, transit pass subsidies for residents and employees, secure bicycle parking areas, and distributions of transit maps and schedules to residents and employees. TDM measures will be described and evaluated in the DPIR and Transportation Access Plan Agreement (“TAPA”).

### *2.9.1 Alternative Mode Benefits/Tactics*

The primary alternative transportation modes to be encouraged will be public transportation, bicycling, and walking. A Transportation Coordinator will be appointed as part of the building management to encourage these alternative modes.

### *2.9.2 Public Transportation*

The goal of the following promotion and incentive measures are to increase public transit use to and from the site:

- ◆ Posting information about public transportation;
- ◆ Providing transit access information on the Project website;
- ◆ Providing one free annual MBTA subway pass per residential unit during the first year of operation;
- ◆ Encouraging commercial tenants to subsidize on-site full-time employees’ purchase of monthly transit passes;
- ◆ Promoting to commercial tenants that, as employers, they can save on payroll-related taxes and provide employee benefits when they offer transportation benefits such as subsidized public transportation;
- ◆ Providing information on bus and subway routes and schedules to all potential tenants; and
- ◆ Encouraging commercial tenants to provide “Guaranteed Ride Home” during hours in which public transit service is no longer available to employee’s home.

### **2.9.3**      *Ride-Sharing*

The goal of the following promotion and incentive measures are to increase ridesharing:

- ◆ Encouraging tenants to provide on-line registration for the RideSource ride-matching program through Caravan for Commuters;
- ◆ Providing access to information on area carpool and vanpool participants through MassRides; and
- ◆ Encouraging commercial tenants to provide “Guaranteed Ride Home.”

### **2.9.4**      *Bicycle/Pedestrian Trips*

Promotions and incentives to encourage bicycle and pedestrian trips include:

- ◆ Providing bike and pedestrian access information on the Project website; and
- ◆ Providing covered, secure bicycle storage for residential tenants.

## **2.10 Evaluation of Short-term Construction Impacts**

A Construction Management Plan (“CMP”) executed with BTM will describe the need to occupy lanes of surrounding streets during construction and discuss measures for minimizing negative impacts associated with trucking activity and construction worker parking, including demand management for construction workers.



**Chapter 3.0**

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Environmental Review Component

## **3.0 ENVIRONMENTAL REVIEW**

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This chapter provides an overview of the anticipated environmental impacts related to the Project. The Proponent expects that all impact categories will be studied in much greater detail in a future Draft Project Impact Report (DPIR) prepared in response to the BRA's Scoping Determination issued for this PNF.

### **3.1 Pedestrian Wind Levels**

When a building is significantly taller than other buildings in the, there is a potential for upper level winds to be deflected toward the ground. When there are many buildings of similar height in an area, they tend to shelter one another. The Project will be similar in height or shorter than the existing buildings in the area. Therefore, it is anticipated that the surrounding area will shield the building from upper level winds, minimizing the potential of the Project to direct the upper level winds to the pedestrian level. The DPIR will include a full pedestrian wind study based on a wind tunnel test of the proposed Project's massing.

### **3.2 Shadow Impacts**

The Project is located in a dense area with a number of buildings taller than the proposed Project. Much of the area is in shadow throughout the day. Significant new shadow from the Project is not anticipated. Preliminary shadow analysis indicates that the Project will fully comply with Article 38 of the Boston Zoning Code and Chapter 362 of the Acts of 1990, which limit the amount of shadow allowed on Boston Common. The DPIR will include a full shadow impact study.

### **3.3 Daylight**

The Project will be similar in height, or shorter than many of the existing buildings in the surrounding area. The daylight obstruction from streets in the Downtown Crossing area is generally high due to the tall buildings and narrow streets. It is anticipated that the daylight obstruction from the Project will be similar to that found in the nearby area. The DPIR will present a full daylight impact analysis done using the BRA's Daylight Analysis software.

### **3.4 Solar Glare**

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

### **3.5 Air Quality Analysis**

Potential long term air quality impacts will be limited to emissions from Project related mechanical equipment and pollutant emissions from vehicular traffic generated by the development of the Project. The Project will not include parking, and given its location and proposed program, it is not anticipated that air quality from vehicle trips related to the Project will have any significant impact on air quality.

Any new stationary sources will be reviewed by the Massachusetts Department of Environmental Protection (MassDEP) during permitting under the Environmental Results Program (ERP), as required.

### **3.6 Solid and Hazardous Waste**

#### ***3.6.1 Hazardous Waste***

The Proponent will complete an analysis of the existing building and soils to determine if hazardous wastes are present on the site. If hazardous materials are identified, they will be handled in accordance with local, state and federal regulations.

#### ***3.6.2 Operation Solid Waste Generation***

Solid waste is expected to include wastepaper, cardboard, glass bottles and food. Recyclable materials will be recycled through a program implemented by building management.

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

### **3.7 Noise Impacts**

The mechanical equipment for the Project will be similar to that used on similarly sized residential buildings. Rooftop equipment will be screened, and acoustic screening will be included if necessary to meet local noise standards. The Project team will ensure that the buildings' mechanical equipment will meet the City of Boston Noise Standards.

Construction period noise impacts and mitigation are discussed below in Section 2.11.2.

### **3.8 Stormwater/Water Quality**

Section 3.18 includes a discussion of stormwater and water quality.

### 3.9 Flood Hazard Zones/Wetlands

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the site - Community Panel Number 25025C0081J – effective, March 16, 2016 indicates the FEMA Flood Zone Designations for the site area. The FIRM shows that the Project is located in area determined to be outside the 0.2 percent annual chance floodplain.”

The site does not contain wetlands.

### 3.10 Geotechnical Impacts

The Proponent will conduct an analysis of the soils and groundwater prior to construction to determine the suitability of the soils and the groundwater level below the site.

The Project site is not located within the Groundwater Conservation Overlay District.

### 3.11 Construction Impacts

The proximity of city streets and abutting commercial properties to the site will require careful scheduling of material removal and delivery. Planning with the City and neighborhood will be essential to the successful development of the Project.

A Construction Management Plan (CMP) will be submitted to the BTB for review and approval prior to issuance of a building permit. The CMP will define truck routes which will help in minimizing the impact of trucks on local streets.

Construction methodologies that ensure public safety and protect nearby businesses will be employed. Techniques such as barricades, walkways, painted lines, and signage will be used as necessary. Construction management and scheduling, including plans for construction worker commuting and parking, routing plans and scheduling for trucking and deliveries, protection of existing utilities, maintenance of fire access, and control of noise and dust will minimize impacts on the surrounding environment.

Throughout Project construction, a secure perimeter will be maintained to protect the public from construction activities

#### **3.11.1 Construction Methodology**

The proposed Project sits on a site that is about 40 feet wide. As a result, the Proponent proposes to use a combination of concrete shear walls along with a concrete frame to make up the primary structure of the building. The shear walls will be strategically located and linked together near the top of the building so as to help control building translation, and to more efficiently resist overturning forces from wind and seismic requirements. The

foundations for this project are proposed as drilled shafts or Caissons. Caissons are suitable in this situation as they will efficiently resist gravity, lateral, and tension uplift forces imposed upon them by the building above.

During construction the use of caissons will minimize the impact to adjacent buildings since they are installed via drilling versus driving with an impact hammer. The use of a concrete frame will also help constructability considering the site constraints and adjacent buildings, in that there will be fewer hosting operations by the contractor versus a steel framed structure.

### **3.11.2 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. 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.

### **3.11.3 Construction Noise**

The Proponent is committed to mitigating noise impacts from the construction of the Project. Periodic 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, including:

- ◆ 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.

#### ***3.11.4 Construction Waste Management***

The Proponent will reuse or recycle demolition and construction materials to the greatest extent feasible. Construction procedures will allow for the segregation, reuse, and recycling of materials. Materials that cannot be reused or recycled will be transported in covered trucks by a contract hauler to a licensed facility.

#### ***3.11.5 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.

#### ***3.11.6 Rodent Control***

A rodent extermination certificate will be filed with each 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.

#### ***3.11.7 Wildlife Habitat***

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

## 3.12 Sustainable Design and Green Buildings

To comply with Article 37 of the Code, the Proponent intends to measure the results of their sustainability initiatives using the framework of the LEED rating system. The project team will use the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) Rating System as a model for incorporating sustainable design features into the project. A LEED NC 2009 checklist (Figure 3.12-1) is provided at the end of this section to identify the green design features for this project to date. The Proponent is aiming to reach a minimum level of LEED Silver. This is a preliminary evaluation of the LEED checklist, and applicable credits may change as the building design advances.

### 3.12.1 *Sustainable Sites*

Prerequisite 1: Construction Activity Pollution Prevention. The project will implement a full erosion and sedimentation control program. This program includes a Storm Water Pollution Prevention Plan (SWPPP) that describes how to protect the existing storm water collection system during construction.

Credit 1: Site Selection. The project meets all the criteria for site selection. The site is not prime farmland; it was previously developed, does not have any endangered species habitat, and is not within the setback distance of a wetland and was not a public park.

Credit 2: Development Density and Community Connectivity. The Project site is in a dense urban site located in Boston's Downtown Crossing neighborhood. The Project site is on Washington Street and is bordered by the Boston Opera House to the south and west and Suffolk University's Modern Theater to the north. The project's compliance path is Option 2, Community Connectivity. Within a 0.50 mile radius from the building's main entrance, there are several residential zones including the new and previously developed properties by Millennium Partners, the development at 600 Washington Street formerly known as Archstone Boston Common, Kensington Place and many others. There are also at least 10 basic services with pedestrian access inside the 0.50 mile radius. These basic services include banks, places of worship, convenience groceries, day cares, cleaners, theaters, hospital & dental offices, parks, pharmacies, post office, restaurants, and fitness centers.

Credit 4.1: Alternative Transportation, Public Transportation Access. The project site is located within 0.50 mile radius of public transportation. The MBTA subway stations within this 0.50 mile radius include the Park Street Station, Boylston Street Station, Downtown Crossing Station, and Chinatown Station. The proximity of the project to public transportation fulfills the LEED credit requirements and helps to prevent pollution from automobile usage.

Credit 4.2: Alternative Transportation, Bicycle Storage and Changing Rooms. As a residential project, the credit is available if the project provides covered storage facilities for securing bicycles for 15 percent or more of the building occupants. The Project's bedroom count is 104 bedrooms. Indoor secure storage facilities will be provided for project residents at a capacity of 47 bikes in racks.

Credit 4.4: Alternative Transportation, Parking Capacity. The Project will provide no new parking. The parking requirement for the Project will be arranged off-site at a nearby covered garage.

Credit 7.1: Heat Island Effect, Non-Roof. The Project has placed 100 percent of the parking spaces under underground, which exceeds the minimum requirements of placing 50 percent of the spaces under cover (defined as underground, under deck, under roof, or under a building).

Credit 7.2, Heat Island Effect, Roof. The Project will meet the credit requirements by having a cool roof with an SRI value of at least 78 over a minimum of 75 percent of the low-slope roof.

### ***3.12.2 Water Efficiency***

Prerequisite 1: Water Use Reduction, 20 percent Reduction: The Project will reduce potable water usage by at least 20 percent by using low-flow water closets, low-flow showers, low-flow lavatories, and low-flow kitchen sinks.

Credit 3: Water Use Reduction. The Project will reduce potable water usage from the design baseline 35 percent by using low-flow water closets, low-flow showers, low-flow lavatories, and low-flow kitchen sinks.

### ***3.12.3 Energy and Atmosphere***

Prerequisite 1: Fundamental Commissioning of the Building Energy Systems. Building systems will be commissioned in accordance with the USGBC LEED requirements. The commissioning services provided will include the Owner's Project Requirements (OPR) and Basis of Design (BOD) documents, development of a commissioning plan, incorporation of a commissioning specification section into the construction documents and verification through startup observation and functional testing that the installed systems are operating in accordance with the OPR, BOD, and construction documents. The previous services apply to the following commissioned systems: HVAC, lighting controls, and domestic hot water systems.

Prerequisite 2: Minimum Energy Performance. The Project will be designed to comply with the ASHRAE 90.1-2007 Energy Standards as per LEED 2009.



Prerequisite 3: Fundamental Refrigerant Management. The Project will specify equipment and systems with no chlorofluorocarbon (CFC) based refrigerants.

Credit 1: Optimize Energy Performance. The Project will be designed with the goal of exceeding the ASHRAE 90.1-2007 Energy Standard by 16.0 percent. This will be demonstrated with a whole building energy model.

Credit 3: Enhanced Commissioning. Building systems will be commissioned in accordance with the USGBC LEED requirements for Enhanced Commissioning.

Credit 4: Enhanced Refrigerant Monitoring. Design mechanical systems and select refrigerants in consideration of their ozone depletion and global warming potential. Cooling equipment that contains less than 0.5 pounds refrigerant are excluded from this credit. Fire suppression systems cannot contain CFCs, HCFCs or Halons. Packaged Heat Pumps will be specified that satisfy this requirement and building level mechanical equipment will satisfy the leakage rates and chemical restrictions.

#### **3.12.4 *Materials and Resources***

Prerequisite 1: Storage and Collection of Recyclables. The Project will provide recycling areas that serve the entire building for paper, corrugated cardboard, glass, plastics, and metals.

Credit 2: Construction Waste Management. The Project will implement a Construction Waste Management Plan as a means to ensure that a minimal amount of waste debris is disposed of in a landfill. The project will recycle and/or salvage at least 75 percent of the construction waste.

Credit 4: Recycled Content. The Project will specify materials and products with recycled content. For credit compliance, the goal will be to specify materials with recycled content such that the sum of postconsumer recycled content plus 1/2 of the pre-consumer content constitutes at least 10 percent, based on cost, of the total value of the materials in the project.

Credit 5: Regional Materials. The Project will be constructed using building materials and products manufactured and extracted regionally for 20 percent of total material cost. Regionally available materials include; Concrete, Precast Concrete, Concrete Reinforcing Steel, Precast Steel, Structural and Miscellaneous Steel, Lightweight Steel Framing, Gypsum board, and drywall and will provide a large amount of regional content.

#### **3.12.5 *Indoor Environmental Quality***

Prerequisite 2: Environmental Tobacco Smoke (ETS) Control. Smoking will be prohibited on the site and in the building, and signs will be posted indicating this restriction and prohibiting smoking within 25' of entrances and air intakes.

Credit 3.1: Construction, IAQ Management Plan, During Construction. The Project will implement a Construction Indoor Air Quality Management Plan (CIAQMP) per the USGBC requirements in order to improve the indoor air quality during construction.

Credit 4.1: Low-Emitting Materials, Adhesives and Sealants. Low VOC adhesives and sealants will be used for all interior finishes.

Credit 4.2: Low-Emitting Materials, Paints and Coatings. The Project will specify that all paints and coatings applied inside the building envelope will comply with the Green Seal Standard GS-11 for paints and primers; Green Seal Standard GS-03 for anti-corrosive paints; and the South Coast Air Quality Management District (SCAQMD) Rule #1113 for wood finishes, stains, and sealers.

Credit 4.3: Low-Emitting Materials, Flooring Systems. The Project will specify that all flooring systems must comply with the appropriate standard for carpet, carpet cushion, carpet adhesive, hard surface flooring, floor sealers, stains and finishes, and tile setting adhesives and grout.

Credit 4.4: Low-Emitting Materials, Composite Wood and Agrifiber Products. The Project will not specify composite wood and agrifiber products inside the building envelope that contain urea- formaldehyde resins.

Credit 5: Indoor Chemical and Pollutant Source Control. The Project will provide walk-off mat systems at entries, exhaust systems for control of hazardous fumes and chemicals at housekeeping areas and specify containment provisions for housekeeping chemicals disposal. Prior to occupancy, new filtration media of MERV 13 or higher will be provided at mechanical ventilation for regularly occupied areas. Filtration will be applied to process both return and outside air that is delivered as supply air.

Credit 6.1: Controllability of Systems, Lighting. The Project will provide individual lighting controls for 90 percent of the building occupants as well as lighting controls for shared multi-occupant spaces.

Credit 6.2: Controllability of Systems, Thermal Comfort. The Project will provide individual thermal comfort controls for at least 50 percent of the building occupants as well as thermal comfort controls for all shared multi-occupant spaces.

Credit 8.2: Daylight and Views, Views for 90 percent of Spaces. The Project will be designed such that building occupants in 90 percent of the regularly occupied areas will have a direct line of sight to the outdoors.

### **3.12.6 Innovation in Design**

The team has identified several possible Innovation in Design credits listed below:

Credit 1.1: Exemplary Performance, SSC4.1. The Project has located its site in a dense urban fabric that has access to several different subway stops, commuter rail lines, and bus stops. Following option 2 of the exemplary performance, the Project is located within 2 subway stops/commuter rail lines and 4 bus stops. The MBTA's frequency of service is at least 200 transit rides per day.

Credit 1.2: Energy Star Appliances. The Project will specify energy efficient equipment and appliances, as qualified by the EPA's ENERGYSTAR Program.

Credit 1.3: Exemplary Performance, SSC7.1. The Project achieves this credit by providing 100 percent of the parking spaces under cover.

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

### ***3.12.7 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: SSC7.1, SSC7.2.

## **3.13 Climate Change Preparedness**

### ***3.13.1 Introduction***

Climate change conditions considered by the Project team include sea level rise, higher maximum and mean temperatures, more frequent and longer extreme heat events, more frequent and longer droughts, more severe freezing rain and heavy rainfall events, and increased wind gusts.

The expected life of the Project is anticipated to be approximately 50 years. Therefore, the Proponent planned for climate-related conditions projected 50 years into the future. A copy of the completed Checklist is included in Appendix A. Given the preliminary level of design, the responses are also preliminary and may be updated as the Project design progresses.



# LEED 2009 for New Construction and Major Renovations

## Project Checklist

533 Washington Street Mixed-Use Project

### 17 6 1 Sustainable Sites Possible Points: 26

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
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
	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
			Credit 6.1	Stormwater Design—Quantity Control	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

### 3 2 5 Water Efficiency Possible Points: 10

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

### 7 28 Energy and Atmosphere Possible Points: 35

Y	?	N			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
3		16	Credit 1	Optimize Energy Performance	1 to 19
	7		Credit 2	On-Site Renewable Energy	1 to 7
2			Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
		3	Credit 5	Measurement and Verification	3
		2	Credit 6	Green Power	2

### 5 1 8 Materials and Resources Possible Points: 14

Y	?	N			
			Prereq 1	Storage and Collection of Recyclables	
		3	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
		1	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2
		2	Credit 3	Materials Reuse	1 to 2

### Materials and Resources, Continued

Y	?	N			
1		1	Credit 4	Recycled Content	1 to 2
2			Credit 5	Regional Materials	1 to 2
	1		Credit 6	Rapidly Renewable Materials	1
		1	Credit 7	Certified Wood	1

### 9 3 3 Indoor Environmental Quality Possible Points: 15

Y	?	N			
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 3.1	Construction IAQ Management Plan—During Construction	1
	1		Credit 3.2	Construction IAQ Management Plan—Before Occupancy	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 6.1	Controllability of Systems—Lighting	1
1			Credit 6.2	Controllability of Systems—Thermal Comfort	1
	1		Credit 7.1	Thermal Comfort—Design	1
		1	Credit 7.2	Thermal Comfort—Verification	1
	1		Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1

### 4 2 1 Innovation and Design Process Possible Points: 6

Y	?	N			
1			Credit 1.1	Innovation in Design: Sustainable Sites 4.1 Exemplary Performance - I	1
1			Credit 1.2	Innovation in Design: Energy Star Appliances	1
1			Credit 1.3	Innovation in Design: Sustainable Sites 7.1 Exemplary Performance - I	1
	1		Credit 1.4	Innovation in Design: Specific Title	1
	1		Credit 1.5	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1

### 2 1 1 Regional Priority Credits Possible Points: 4

Y	?	N			
1			Credit 1.1	Regional Priority: Sustainable Sites Credit 7.1: Heat Island Effect- No1	1
1			Credit 1.2	Regional Priority: Sustainable Sites Credit 7.2: Heat Island Effect- Ro1	1
	1		Credit 1.3	Regional Priority: Specific Credit	1
		1	Credit 1.4	Regional Priority: Specific Credit	1

### 47 15 46 Total Possible Points: 110

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

### **3.13.2      *Extreme Heat Events***

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.<sup>1</sup> The Project design will include measures to adapt to these conditions, including constructing a high performance building envelope and including operable windows where possible.

### **3.13.3      *Sea Level Rise***

Given the Project's location and elevation, approximately 32.0 BCB, the site is not susceptible to sea level rise.

### **3.13.4      *Rain Events***

As a result of climate change, the Northeast is expected to experience more frequent and intense storms. To mitigate this, the Proponent will take measures to minimize stormwater runoff and protect the Project's mechanical equipment. The Project will be designed to reduce the existing peak rates and volumes of stormwater runoff from the site, and promote runoff recharge to the greatest extent practicable.

### **3.13.5      *Drought Conditions***

To minimize the Project's susceptibility to drought conditions, water conservation fixtures will be included in the design, including aeration fixtures and appliances that will be chosen for water conservation qualities. Sensor operated faucets and toilets will be installed in all public areas.

## **3.14    *Urban Design***

The Project site is located along an active stretch of Washington Street with nearby retail, housing, entertainment, office, and hotel uses. Directly adjacent to the Boston Opera House, the 38-foot wide site lies nearly on axis with the approach from Avenue De Lafayette. The existing 4-story brick façade is composed largely of brick with stone detailing and a two-story pointed arch storefront motif.

The Project will retain the existing façade to reinforce the character and continuity of Washington Street through scale, materiality, and articulation. The existing façade recognizes the cultural importance of the Opera House and does not look to challenge its importance along Washington Street. The entrance to the new residential lobby will be

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<sup>1</sup> 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.

placed at the north corner of the existing façade, while the balance of street level facade will allow glimpses into a new 2-level restaurant. The existing alley-way elevation is currently brick with filled-in window openings. This façade will be removed and replaced with a new brick façade with windows on Levels two through four along with service and egress access on the ground floor.

The upper levels of the Project will treat the existing façade as a “base” and be setback from it along Washington Street. The materiality and presence of the tower will read within a contemporary architectural language and relate to nearby towers in height. At 30 stories, and within a 3,600 sf site, the Project is widely considered a “pencil tower” with dimensions not typically seen in residential towers. The tower is primarily visible from long distant views along Washington Street and axially from Avenue De Lafayette, and has been articulated with a shifting 4- and 2-story pattern of windows and accent piers. In response to the approach view heading south on Washington Street, the corner of the tower will be articulated with a stack of residential balconies. The Project is mainly obscured from view from the Boston Common by 151 Tremont at 26 stories. In addition the Project complies with legislation regarding allowable shadows on the Common.

### **3.15 Historic and Archaeological Resources**

The Project site is located at 533 Washington Street (also known as 531-535 Washington Street), immediately south of Harlem Place, a gated private way that functions as a service alley, in the Downtown Crossing retail district of central Boston. Situated immediately to the right of the present Opera House (originally, the B. F. Keith Memorial Theatre and an individually designated Boston landmark), the building is a contributing resource within the Washington Street Theatre National Register district. This cluster of seven adjacent buildings is located on the west side of Washington Street, south of West Street, and faces to the southeast. The nearest major cross street is Avenue de Lafayette, which is to the southeast.

The building encompasses approximately 14,208 square feet on its 3,685 square-foot lot. Most recently occupied by a billiard-parlor themed nightclub called Felt, the principal tenant for many years was the New Adams House restaurant, which opened ca. 1932 following the demolition of its former location (at 559 Washington Street) to make way for the Paramount Theater. (The latter is among the contributing resources to the Washington Street Theatre National Register district, aforementioned, and is also an individually designed local landmark.) As originally completed in 1866 to the designs of an unrecorded architect, the building was occupied by the Weed Sewing Machine Company on the upper floors with various men’s clothing stores operating in the street-level storefront.

Unlike the former or active theatres and movie houses located within the seven-property Washington Street Theatre National Register District, 533 Washington Street has no direct historic associations with theatrical or cinematic presentations. Rather, the building’s extensive history with the restaurant and hospitality industry may be regarded as ancillary to such entertainment uses. Moreover, its original occupancy by a sewing-machine company

is comparable to the historic patterns of commercial use associated with two other properties in the district. These are the Bigelow-Kennard building at 511-513 Washington Street, formerly a jewelry store, and the George Robert White building at 515 Washington Street, an office building closely associated with its original owner, the industrialist and philanthropist for which it is named. Indeed, this diversity of historic uses within the district demonstrates the economic and cultural vitality of the area.

While dating from the second half of the nineteenth century, the building's historic façade has been previously altered by the removal of its original cast-iron storefront and slate-clad mansard roof. At the second floor, extensive window glazing with distinctive Gothic tracery has also replaced the original punched window openings, which were once similar to those surviving at the third and fourth stories. These modifications have now been in place for many years, attaining aesthetic significance in their own right. Thus the project will retain the existing, evolved façade to reinforce the building's historic architectural character and visual continuity of the Washington Street Theatre National Register District through its appreciable scale, materials and details.

In addition, the new façade acknowledges the visual primacy and cultural significance of the Opera House and subordinates itself to it at the street level. The new residential lobby entry will be positioned at the north corner of the existing façade, the remainder of which will afford views in to a new two-level restaurant. The alley-like expression of the Harlem Place elevation will be replaced with a new brick façade with window openings on the second, third and fourth stories, above service and egress doors at the ground floor.

The upper floors of the project will treat the historic façade as a base, from which it will be set back along the Washington Street view corridor. To the extent visible distantly along Washington Street and axially from Avenue de Lafayette, the volume and materials of the resulting tower will relate to those added to other buildings within the context, notably the immediately adjacent Modern Theatre. Its massing will be articulated by a variegated fenestration pattern and, at the south corner, by a stack of residential balconies. The project will not be significantly visible from the Common, from which it is largely obscured by the mass of 151 Tremont Street. It further complies with legislation regulating allowable shadows on the Common.

### ***3.15.1 Historical Resources on the Project Site***

#### ***Weed Sewing Machine Company Building, 531-535 Washington Street***

Four stories in height below its modillioned cornice, the building at 531-535 Washington Street is believed to date from 1866. Its original cast-iron storefront and mansard roof have been removed and its second floor has been altered by the introduction of continuous window glazing with its unusual Gothic tracery. Despite these losses, the façade's third and fourth floors remain substantially intact, retaining their brick wall fabric, sandstone trim, and arcaded tiers of punched window openings.



### **3.15.2 Historical Resources in the Vicinity of the Project**

The other six resources contributing to Washington Street Theatre Historic District are described below, listed in Table 3.15-1 and are identified on Figure 3.15-1.

#### ***Bigelow-Kennard Building, 511-513 Washington Street***

The Bigelow Kennard Building, located at 511-513 Washington Street (BOS.2322) is an early, nine-story skyscraper whose rich ornament reflects a Beaux-Arts Classicism that is perhaps less Parisian than Viennese in inspiration. Its details, which also extend along the building's longer West Street elevation, include heavily projecting cornices and belt courses, decorative iron balconies and a convex mansard roof of red slate with copper oculus dormers. Built in 1912 to the designs of Henry Ives Cobb, its original tenant was the fashionable jewelry store Bigelow-Kennard. While substantially intact at the upper floors, its original storefronts have been altered at both the Washington and West Street elevations.

#### ***George Robert White Building, 515 Washington Street***

Located at 515 Washington Street, the George Robert White Building (BOS.2323) is a seven-story skyscraper in the Modern Gothic style. Above a two-story storefront base that fills the site, its upper floors are configured as two pavilions of five stories enclosing a light well open to the street. Designed by Clarence Blackall and completed in 1917, it is similar to his much larger Little Building at 80 Boylston Street, which it resembles both in its Gothic ornament and its use of projecting pavilions to provide light to upper-floor office spaces. The building's original owner was the tycoon and philanthropist George Robert White (1847-1922).

#### ***Dobson Building/Modern Theatre, 523-527 Washington Street***

The façade of the Dobson Building/Modern Theatre, at 523-527 Washington Street (BOS.2324) unusually reflects two distinct styles that are both materially and stylistically dissimilar. While the upper floors retain the familiar polychromatic masonry and Ruskinian details of the High Victorian Gothic very much as initially completed in 1876 to the designs of Levi Newcomb & Son, its two lower floors were altered in 1913 to accommodate their adaptation as a cinema. The Classical triumphal-arch entry in white terra cotta designed by Clarence Blackall beckoned the public to the Modern Theatre. Lacking a stage, this was Boston's first purpose-built auditorium for the exhibition of motion pictures. Following the building's designation as a Boston landmark in 2002, its current owner, Suffolk University, completed a restoration of the building façade that also included the renovation of the interior and the addition of a 60,000 sq. ft. student residence tower. This effort, which was recognized with a Preservation Achievement Award by the Boston Preservation Alliance in 2011, is analogous to the proposed project.

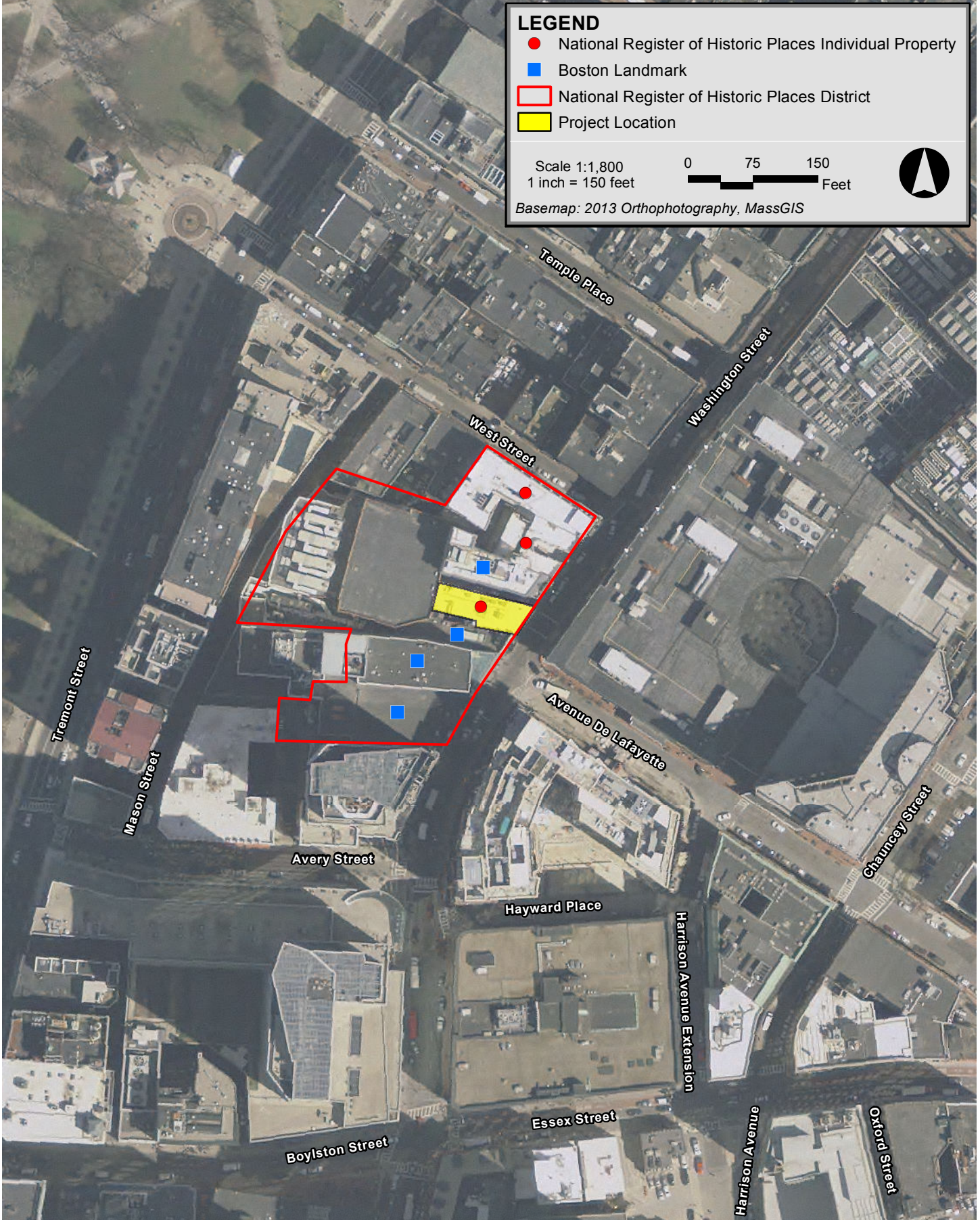
**LEGEND**

- National Register of Historic Places Individual Property
- Boston Landmark
- ▭ National Register of Historic Places District
- ▭ Project Location

Scale 1:1,800  
1 inch = 150 feet

0 75 150 Feet

Basemap: 2013 Orthophotography, MassGIS



533 Washington Street Boston, Massachusetts

### ***The Opera House, 537 Washington Street***

Another composition in white terra cotta, the façade of the Opera House, at 537 Washington Street (BOS.2326) is significantly more ornate than its neighbor. Encrusted with garlands, urns and cartouches, the design by famed theatre architect Thomas Lamb pursues an exotic Spanish Baroque idiom popular at the time of its construction in 1928. Originally known as the B. F. Keith Memorial Theatre, in honor of the New Hampshire-born theatrical impresario, this playhouse was intended to surpass all others in Boston in the lavishness of its décor and appointments. Entirely French Baroque in derivation, unlike the Spanish façade, the interior included marble columns, walnut paneling and crystal chandeliers rendered all but innumerable by their reflection in enough mirrors to rival Versailles.

Seating 2,900 and costing between \$5 million to \$6 million to build, the B. F. Keith Memorial was completed on the eve of the stock market crash of 1929. This economic calamity, coinciding with the introduction of talking pictures, inflicted a blow from which vaudeville never recovered. As a result, the sumptuous theatre was soon converted to a movie house, albeit one of the most palatial in existence. Many years of physical neglect followed, during which the theatre continued in use as a cinema (renamed The Savoy) and later as home to the Boston Opera Company. More recently, the property has received a complete exterior and interior restoration, including an ambitious expansion of its backstage to accommodate larger productions, and has been individually designated a Boston Landmark known as the Opera House.

### ***Bijou Theatre, 543-547 Washington Street***

Dating from the late 1850s, the Bijou Theatre, at 543-547 Washington Street (BOS.2327), is the oldest building within the National Register district. Designed by an unknown architect, its symmetrical brownstone façade is arranged with tiers of arched windows resting on continuous sills below a slate mansard supported by a heavily projecting cornice. Although entertainment was provided in this building from the beginning, it did not acquire the Bijou nomenclature until the early 1880s when refurbished by architect George Wetherell. Accommodating 900 spectators, the renovated theatre was the first in Boston to provide electric lighting. Specializing in what were called parlor operas, the Bijou was a favored venue for Gilbert & Sullivan productions.

### ***Paramount Theatre, 559 Washington Street***

Though built in 1932, a scant four years after the B. F. Keith (or the Opera House, as it is currently known), the Paramount Theatre, at 559 Washington Street (BOS.2328) represents an entirely different aesthetic. As designed by Arthur Bowditch (architect of the Old South Building at Washington and Milk Streets and of the Somerset Hotel at Commonwealth Avenue and Charlesgate East in the Back Bay), this idiom is drawn not from European architectural history but rather from contemporary, industrial-age modernism animated by



the syncopated rhythms of jazz. Whereas the Opera House is all curves and moldings, the Paramount is almost jagged in its angularity, from its façade's blade-like upright neon sign to its broad panels accented by shallow fluting. Built by arguably the most sophisticated Hollywood studio as its New England flagship cinema, the geometrically sleek interior could accommodate 1,500 patrons and was intended primarily for film presentations. Nevertheless, the inclusion of dressing rooms and rehearsal halls demonstrates that some live entertainment was also anticipated. A Wurlitzer organ could be raised or lowered to stage level as well. Reversing decades of decline, the Paramount was fully restored in the early 21st century by its current owner, Emerson College. Widely recognized as the finest Art Moderne theatre interior in the City, if not in all New England, it is an individually designated Boston Landmark.

**Table 3.15-1 Historic Resources in the Vicinity of the Project Site**

Map	State & National Register-listed Properties & Historic Districts	Address	Designation
1	Weed Sewing Machine Co. Building	531-535 Washington Street	National Register Historic District
2	Bigelow-Kennard Building	511-513 Washington Street	National Register Historic District
3	George Robert White Building	515 Washington Street	National Register Historic District
4	Dobson Building/Modern Theatre	523-527 Washington Street	National Register Historic District Boston Landmark
5	Savoy Theatre/Opera House	537 Washington Street	National Register Historic District, Boston Landmark
6	Bijou Theatre	543-547 Washington Street	National Register Historic District, Boston Landmark
7	Paramount Theatre	559 Washington Street	National Register Historic District, Boston Landmark

### **3.15.3 Archeological Resources on the Project Site**

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

## 3.16 Infrastructure Systems

### *3.16.1 Introduction*

The existing infrastructure surrounding the Project site has adequate capacity to service the needs of the Project. The following sections describe the existing sanitary sewer, water, and storm drain systems surrounding the site and explain how these systems will service the development. The analysis also discusses any anticipated Project-related impacts on the utilities and identifies mitigation measures to address these potential impacts.

The Project team will coordinate with the appropriate utilities to address the capacity of the area utilities to provide services for the new building. A Boston Water and Sewer Commission (BWSC) Site Plan and General Service Application is required for the proposed new water, sanitary sewer, and storm drain connections.

A Drainage Discharge Permit Application will be submitted to the BWSC for any required construction dewatering. The appropriate approvals from the Massachusetts Department of Environmental Protection (MassDEP) and the U.S. Environmental Protection Agency (EPA) will also be sought.

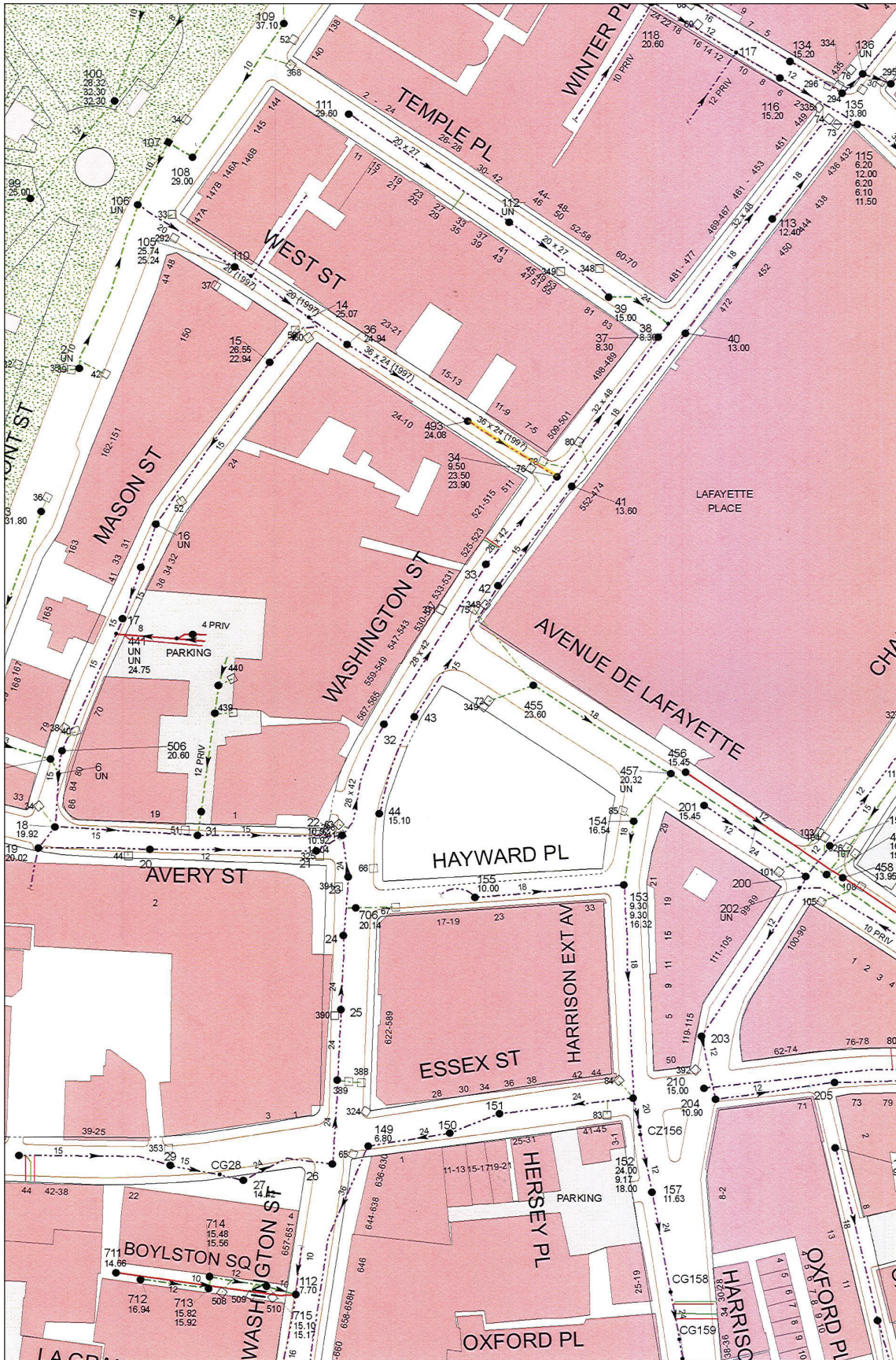
### *3.16.2 Wastewater*

#### *Existing Sanitary Sewer System*

The sanitary sewer system in the vicinity of the Project site is owned, operated, and maintained by BWSC. There is an existing 28-inch by 42-inch combined sewer culvert and a 15-inch combined sewer culvert located in Washington Street to the east of the Project site. See Figure 3.16-1.

The total sewer flow from the existing building is estimated at 4,276 gallons per day (gpd) based on the existing building uses and design sewer flows provided in 314 CMR 7.00- Sewer System Extension and Connection Permit Program as summarized in Table 3.16-1.





533 Washington Street Boston, Massachusetts



**Table 3.16-1 Existing Sanitary Sewer Flows**

<i>Use</i>	<i>Quantity</i>	<i>Unit Flow Rate</i>	<i>Estimated Maximum Daily Flow (gpd)</i>
Lounge, Tavern	200 seats	20 gpd/seat	4,000 gpd
Office Space	3,685 sf	75 gpd/1,000 sf	276 gpd
<b>Total</b>			<b>4,276 gpd</b>

***Project-Generated Sanitary Sewer Flow***

The Project will generate an estimated 16,850 gpd based on design sewer flows provided in 314 CMR 7.00-Sewer System Extension and Connection Permit Program as summarized in Table 3.16-2. This is a net increase of 12,574 gpd over the estimated flows from the existing buildings.

**Table 3.16-2 Projected Sanitary Sewer Flows**

<i>Use</i>	<i>Quantity</i>	<i>Unit Flow Rate</i>	<i>Estimated Maximum Daily Flow (gpd)</i>
42 Studio Units	42 rooms	110 gpd/room	4,620
42 (1) Bed Units	42 rooms	110 gpd/room	4,620
10 (2) Bed Units	20 rooms	110 gpd/room	2,200
Restaurant	146 seats (4,500 sf)	35 gpd/seat	5,110
Office Space	4,000 sf	75 gpd/1,000 sf	300
<b>Total</b>			<b>16,850</b>

***Sanitary Sewer Connection***

The Proponent expects that sanitary services for the Project will tie into the BWSC 28-inch by 42-inch combined sewer main in Washington Street. The proposed Project will have one 10-inch sanitary service. The Proponent will submit a Site Plan to BWSC for review and approval. The restaurant kitchen waste line will be routed to a grease trap prior to tying into the municipal system. All existing building services will be cut and capped at the main if the wyes are not reused.

***Effluent Quality***

The Project is not expected to generate industrial wastes. As previously mentioned, a grease trap will be provided to treat kitchen waste streams minimizing any grease reaching the municipal system.

### ***Sewer System Mitigation***

The environmental design goals for the Project include reducing wastewater volumes by incorporating efficient fixtures into the design. Low-flow faucets, aerated shower-heads, and dual-flush toilets are being considered to reduce water usage and sewer generation.

The Project will be designed, constructed and maintained so as to minimize all inflow and infiltration into the BWSC's sanitary sewer system, and to meet the needs of the BWSC's ongoing Infiltration and Inflow reduction program.

### **3.16.3      *Water system***

#### ***Existing Water Service***

The water distribution system in the vicinity of the Project site is owned and maintained by BWSC. There is a 16-inch pit cast iron distribution line located in Washington Street that is part of BWSC's Southern High service network. Originally, installed in 1906, it was cleaned and cement-lined in 2000. See Figure 3.16-2.

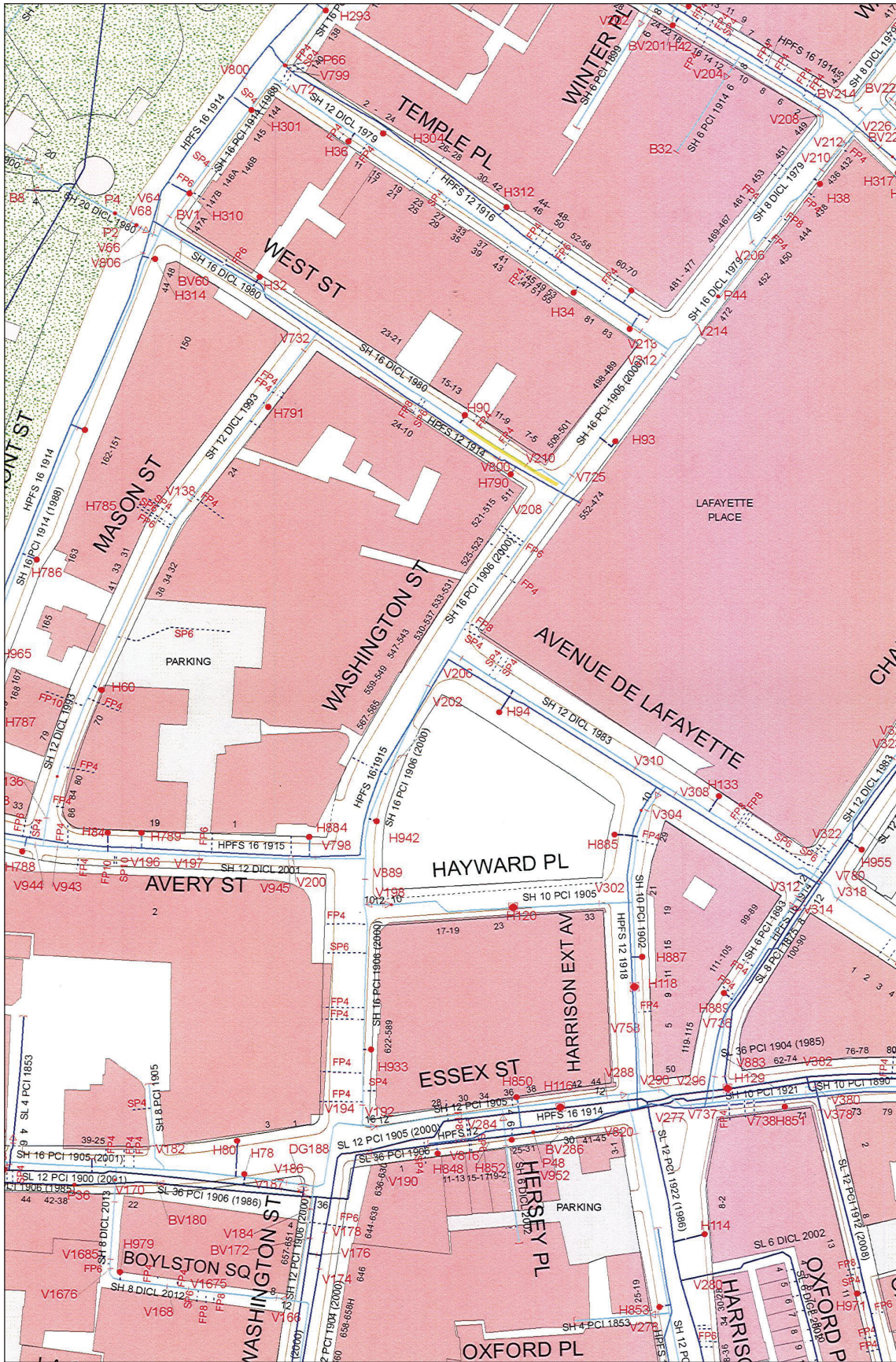
According to BWSC records, the existing building has a 6-inch water service. The service connects to the 16-inch (Southern High) water main in Washington Street. The locations of the existing water services will be confirmed as the Project moves to the Design Development phase. The services are not expected to be reused and will be cut and capped at the main.

There are two fire hydrants located in the vicinity of the Project site. There is one hydrant to the east on Avenue De Lafayette (H 94). There is also a hydrant to the north (H790) on West Street. It appears that these hydrants will provide sufficient coverage for the Project. The Proponent will confirm this with BWSC and the Boston Fire Department (BFD) during the detailed design phase.

#### ***Anticipated Water Consumption***

The maximum daily water demand is estimated to be 18,530 gpd based on the sewage flow estimate and an added factor for system losses including the average requirements for the Project's cooling system. More detailed water use and meter sizing calculations will be submitted to BWSC as part of the Site Plan approval process.





533 Washington Street Boston, Massachusetts



### ***Proposed Water Service***

Separate domestic water and fire protection services for the Project will be directly tapped from the 16-inch (Southern High) service main in Washington Street. The water supply systems servicing the building will be gated so as to minimize public hazard or inconvenience in the event of a water main break. Final locations and sizes of the services will be provided on a Site Plan during the detailed design phase and submitted to BWSC for review and approval.

Water service to the building will be metered in accordance with BWSC's requirements. The property owner will provide a suitable location for a Meter Transmission Unit (MTU) as part of BWSC's Automatic Meter Reading System. Water meters over three inches will be provided with a bypass to allow BWSC testing without service interruption. A backflow preventer will be installed on the fire protection service and will be coordinated with BWSC's Cross Connection Control Department. Separate services will be provided for domestic use and fire protection.

### ***Water Supply Conservation and Mitigation Measures***

As discussed in the Sewer System Mitigation Section, water conservation measures such as low-flow fixtures, aerated showerheads, and dual-flush toilets are being considered to reduce potable water usage.

#### ***3.16.4 Storm Drainage System***

##### ***Existing Storm Drainage System***

The storm drain system in the vicinity of the Project site is owned and maintained by BWSC. There is an existing 28-inch by 42-inch combined sewer culvert in Washington Street to the east of the Project site.

The existing building occupies the entire Project site. Rooftop runoff from the existing building is conveyed by building service pipes to the surrounding municipal combined sewer systems. Runoff from paved surfaces around the property is generally captured in catch basins. The stormwater runoff from the Project site eventually discharges to the 28-inch by 42-inch combined sewer culvert in Washington Street. There are no existing stormwater management systems that would attenuate peak flows and the Project site provides little opportunity for recharge. Very little water quality treatment is realized before these areas are drained to the municipal combined sewer system.

### ***Proposed Storm Water System***

The proposed building will occupy the entire Project site. Its proximity to existing buildings and the MBTA Orange Line limit the opportunity to infiltrate stormwater. The Project team will investigate if any stormwater infiltration system is feasible. The roof drain or overflow from the infiltration system will discharge to the 28-inch by 42-inch combined sewer culvert in Washington Street.

After construction, the Project site will continue to consist almost entirely of impervious surfaces, associated with building roofs and the paved sidewalks surrounding the Project site. The existing drainage patterns will not change significantly as the runoff will continue to drain to surrounding municipal storm drain systems.

All storm drain system improvements will be designed in accordance with BWSC's design standards and the BWSC "Requirements for Site Plans." A Site Plan will be submitted for BWSC approval and a General Service Application will be completed prior to any off-site storm drain work. Any storm drain connections terminated as a result of construction will be cut and capped at the storm drain in the street in accordance with BWSC standards.

Erosion and sediment controls will be used during construction to protect adjacent properties and the municipal storm drain system. An operation and maintenance plan will be developed to support the long-term functionality of the proposed stormwater management system.

#### ***3.16.5 Electrical Service***

Eversource owns and maintains the electrical transmission system located in Washington Street. The actual size and location of the proposed building services will be coordinated with Eversource during the detailed design phase. It is anticipated that a transformer room will be provided on the first floor of the proposed building.

The Proponent is investigating energy conservation measures, including high efficiency lighting.

#### ***3.16.6 Telecommunications Systems***

Verizon owns and maintains infrastructure in the vicinity of the Project site. It is anticipated that Verizon will supply telephone and high-speed internet service to the proposed building. The actual size and location of the proposed building services will be coordinated with Verizon during the detailed design phase.

### **3.16.7**      *Gas Systems*

National Grid owns and maintains a 20-inch low pressure gas main in Washington Street. The Project is expected to use natural gas for heating and domestic hot water. The actual size and location of the building services will be coordinated with National Grid during the detailed design phase.

### **3.16.8**      *Steam Systems*

Veolia Energy owns and maintains the steam transmission system located in the vicinity of the Project site. There is an 8-inch steam main in West Street to the north of the site. There is no steam system located in this section of Washington Street.

### **3.16.9**      *Utility Protection during Construction*

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

## **3.17**    **Accessibility**

The proposed Project will be designed and built to fully comply with the requirements of the Americans with Disabilities Act (ADA). Appendix B includes an Accessibility Checklist.



## Chapter 4.0

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### Coordination with Other Governmental Agencies

## **4.0 COORDINATION WITH OTHER GOVERNMENTAL AGENCIES**

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### **4.1 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 A for the Accessibility Checklist.

### **4.2 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 or state funding or to involve a state land transfer.

### **4.3 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. 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.

### **4.4 Boston Landmarks Commission**

The existing building on the Project Site is over 50 years of age; therefore, the proposed partial demolition of the building is subject to review by the Boston Landmarks Commission (BLC) under Article 85 of the Boston Zoning Code. At the appropriate time, the Proponent will submit an Article 85 application with the BLC for its review and consideration.

### **4.5 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**

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**Climate Change Preparedness and Resiliency Checklist**

# 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/](http://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](http://www.bostonredevelopmentauthority.org/planning/Hotspot%20of%20Accelerated%20Sea-level%20Rise%202012.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](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](#).

## Climate Change Resiliency and Preparedness Checklist

### A.1 - Project Information

Project Name:	533 Washington Street
Project Address Primary:	533 Washington Street
Project Address Additional:	
Project Contact (name / Title / Company / email / phone):	Collin Yip, Director, Rafi Properties, LLC, collinyip@rafiproperties.com, (339) 206-1111

### A.2 - Team Description

Owner / Developer:	Rafi Properties, LLC
Architect:	Stantec Architecture
Engineer (building systems):	tbd
Sustainability / LEED:	Stantec Architecture
Permitting:	Epsilon Associates, Inc.
Construction Management:	tbd
Climate Change Expert:	Epsilon Associates, Inc.

### A.3 - Project Permitting and Phase

At what phase is the project – most recent completed submission at the time of this response?

<input checked="" type="checkbox"/> PNF / Expanded PNF Submission	<input type="checkbox"/> Draft / Final Project Impact Report Submission	<input type="checkbox"/> BRA Board Approved	<input type="checkbox"/> Notice of Project Change
<input type="checkbox"/> Planned Development Area	<input type="checkbox"/> BRA Final Design Approved	<input type="checkbox"/> Under Construction	<input type="checkbox"/> Construction just completed:

### A.4 - Building Classification and Description

List the principal Building Uses:	Residential, Restaurant, Office
List the First Floor Uses:	Restaurant, Lobby

What is the principal Construction Type – Concrete

<input type="checkbox"/> Wood Frame	<input type="checkbox"/> Masonry	<input type="checkbox"/> Steel Frame	<input type="checkbox"/> Concrete
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Describe the building?

Site Area:	3,648 SF	Building Area:	105,000 SF
Building Height:	302 Ft.	Number of Stories:	30 Floors.
First Floor Elevation (reference Boston City Base):	Approximately 32.0 BCB	Are there below grade spaces/levels, if yes how many:	Yes, one level below grade

### 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:	<input checked="" type="checkbox"/> New Construction	<input type="checkbox"/> Core & Shell	<input type="checkbox"/> Healthcare	<input type="checkbox"/> Schools
	<input type="checkbox"/> Retail	<input type="checkbox"/> Homes Midrise	<input type="checkbox"/> Homes	<input type="checkbox"/> Other
Select LEED Outcome:	<input type="checkbox"/> Certified	<input checked="" type="checkbox"/> Silver	<input type="checkbox"/> Gold	<input type="checkbox"/> Platinum

Will the project be USGBC Registered and / or USGBC Certified?

Registered:	<input type="checkbox"/> Yes	Certified:	<input type="checkbox"/> Yes

### A.6 - Building Energy

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

Electric:	<input type="text" value="(kW)"/>	Heating:	<input type="text" value="(MMBtu/hr)"/>
What is the planned building Energy Use Intensity:	<input type="text" value="(kWh/SF)"/>	Cooling:	<input type="text" value="(Tons/hr)"/>

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

Electric:	<input type="text" value="(kW)"/>	Heating:	<input type="text" value="(MMBtu/hr)"/>
		Cooling:	<input type="text" value="(Tons/hr)"/>

What is nature and source of your back-up / emergency generators? **To be Determined.**

Electrical Generation:	<input type="text" value="(kW)"/>	Fuel Source:	<input type="text" value=""/>
System Type and Number of Units:	<input type="checkbox"/> Combustion Engine	<input type="checkbox"/> Gas Turbine	<input type="checkbox"/> Combine Heat and Power <span style="float: right;">(Units)</span>

## 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:	<input type="checkbox"/> 10 Years	<input type="checkbox"/> 25 Years	<input checked="" type="checkbox"/> 50 Years	<input type="checkbox"/> 75 Years
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What is the full expected operational life of key building systems (e.g. heating, cooling, ventilation)?

Select most appropriate:	<input type="checkbox"/> 10 Years	<input checked="" type="checkbox"/> 25 Years	<input type="checkbox"/> 50 Years	<input type="checkbox"/> 75 Years
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What time span of future Climate Conditions was considered?

Select most appropriate:	<input type="checkbox"/> 10 Years	<input type="checkbox"/> 25 Years	<input checked="" type="checkbox"/> 50 Years	<input type="checkbox"/> 75 Years
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Analysis Conditions - What range of temperatures will be used for project planning – Low/High?

8/91 Deg.
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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.
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What Drought characteristics will be used for project planning – Duration and Frequency?

30-90 Days	0.2 Events / yr.
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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.
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What Extreme Wind Storm Event characteristics will be used for project planning – Peak Wind Speed, Duration of Storm Event, and Frequency of Events per year?

105 Peak Wind	10 Hours	0.25 Events / yr.
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## 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
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What specific measures will the project employ to reduce building energy consumption?

Select all appropriate:

<input checked="" type="checkbox"/> High performance building envelop	<input type="checkbox"/> High performance lighting & controls	<input type="checkbox"/> Building day lighting	<input checked="" type="checkbox"/> EnergyStar equip. / appliances
<input checked="" type="checkbox"/> High performance HVAC equipment	<input type="checkbox"/> Energy recovery ventilation	<input type="checkbox"/> No active cooling	<input type="checkbox"/> No active heating

Describe any added measures: 

--

What are the insulation (R) values for building envelop elements?

Roof:	R = 30	Walls / Curtain Wall Assembly:	R = 13 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?

<input type="checkbox"/> On-site clean energy / CHP system(s) possible – Collin?	<input type="checkbox"/> Building-wide power dimming	<input type="checkbox"/> Thermal energy storage systems	<input type="checkbox"/> Ground source heat pump systems
<input type="checkbox"/> On-site Solar PV	<input type="checkbox"/> On-site Solar Thermal	<input type="checkbox"/> Wind power	<input checked="" type="checkbox"/> None

Describe any added measures: 

--



Will the project employ Distributed Energy / Smart Grid Infrastructure and /or Systems?

Select all appropriate:	<input type="checkbox"/> Connected to local distributed electrical	<input type="checkbox"/> Building will be Smart Grid ready	<input type="checkbox"/> Connected to distributed steam, hot, chilled water	<input type="checkbox"/> Distributed thermal energy ready
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Will the building remain operable without utility power for an extended period? STANTEC No

	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:	<input type="checkbox"/> XSolar oriented - longer south walls	<input type="checkbox"/> Prevailing winds oriented	<input type="checkbox"/> External shading devices	<input type="checkbox"/> Tuned glazing,
	<input type="checkbox"/> Building cool zones	<input type="checkbox"/> XOperable windows	<input checked="" type="checkbox"/> XNatural ventilation	<input type="checkbox"/> Building shading
	<input type="checkbox"/> Potable water for drinking / food preparation	<input type="checkbox"/> Potable water for sinks / sanitary systems	<input type="checkbox"/> Waste water storage capacity	<input checked="" type="checkbox"/> X High Performance Building Envelop
Describe any added measures:				

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

Select all appropriate:	<input type="checkbox"/> High reflective paving materials	<input type="checkbox"/> Shade trees & shrubs	<input type="checkbox"/> XHigh reflective roof materials	<input type="checkbox"/> Vegetated roofs
Describe other strategies:				

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

Select all appropriate:	<input type="checkbox"/> On-site retention systems & ponds	<input type="checkbox"/> Infiltration galleries & areas	<input type="checkbox"/> Vegetated water capture systems	<input type="checkbox"/> Vegetated roofs
Describe other strategies:				

What measures will the project employ to accommodate extreme storm events and high winds?

Select all appropriate:	<input type="checkbox"/> Hardened building structure & elements	<input type="checkbox"/> XBuried utilities & hardened infrastructure	<input type="checkbox"/> Hazard removal & protective landscapes	<input type="checkbox"/> 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?

No

Describe site conditions?

Site Elevation – Low/High Points:

approx. 32 BCB [BCB]

Building Proximity to Water:

2,725 Ft.

Is the site or building located in any of the following?

Coastal Zone: No

Velocity Zone: No

Flood Zone: No

Area Prone to Flooding: 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?

2016 FEMA FIRMs: No

Future floodplain delineation updates: No

What is the project or building proximity to nearest Coastal, Velocity or Flood Zone or Area Prone to Flooding?

1,125 Ft.

If you answered YES to any of the above Location Description and Classification questions, please complete the following questions. Otherwise you have completed the questionnaire; thank you!

C - Sea-Level Rise and Storms

This section explores how a project responds to Sea-Level Rise and / or increase in storm frequency or severity.

C.2 - Analysis

How were impacts from higher sea levels and more frequent and extreme storm events analyzed:

Sea Level Rise: Ft.

Frequency of storms: per year

C.3 - Building Flood Proofing

Describe any strategies to limit storm and flood damage and to maintain functionality during an extended periods of disruption.

What will be the Building Flood Proof Elevation and First Floor Elevation:

Flood Proof Elevation: Boston City Base Elev.( Ft.)

First Floor Elevation: Boston City Base Elev. ( Ft.)

Will the project employ temporary measures to prevent building flooding (e.g. barricades, flood gates):

Yes / No

If Yes, to what elevation Boston City Base Elev. ( Ft.)

If Yes, describe:

What measures will be taken to ensure the integrity of critical building systems during a flood or severe storm event:

<input type="checkbox"/> Systems located above 1 <sup>st</sup> Floor.	<input type="checkbox"/> Water tight utility conduits	<input type="checkbox"/> Waste water back flow prevention	<input type="checkbox"/> Storm water back flow prevention
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Were the differing effects of fresh water and salt water flooding considered:

Yes / No
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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.)
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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
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Describe any additional strategies to addressing sea level rise and or sever storm impacts:

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#### 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	<input type="checkbox"/> Hardened / Resilient Ground Floor Construction	<input type="checkbox"/> Temporary shutters and or barricades	<input type="checkbox"/> Resilient site design, materials and construction
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Can the site and building be reasonably modified to increase Building Flood Proof Elevation?

Select appropriate:	Yes / No	<input type="checkbox"/> Surrounding site elevation can be raised	<input type="checkbox"/> Building ground floor can be raised	<input type="checkbox"/> Construction been engineered
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Describe additional strategies:

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Has the building been planned and designed to accommodate future resiliency enhancements?

Select appropriate:	Yes / No	<input type="checkbox"/> Solar PV	<input type="checkbox"/> Solar Thermal	<input type="checkbox"/> Clean Energy / CHP System(s)
		<input type="checkbox"/> Potable water storage	<input type="checkbox"/> Wastewater storage	<input type="checkbox"/> 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](mailto:John.Dalzell.BRA@cityofboston.gov)

## **Appendix B**

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### 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](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](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](http://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/](http://www.mbta.com/about_the_mbta/accessibility/)

## Article 80 | ACCESSIBILITY CHECKLIST

### Project Information

Project Name:	533 Washington Street
Project Address Primary:	533 Washington Street
Project Address Additional:	
Project Contact (name / Title / Company / email / phone):	Collin Yip, Director, Rafi Properties, LLC, collinyip@rafiproperties.com, (339) 206-1111

### Team Description

Owner / Developer:	Rafi Properties, LLC
Architect:	Stantec Architecture
Engineer (building systems):	tbd
Sustainability / LEED:	Stantec Architecture
Permitting:	Epsilon Associates, Inc.
Construction Management:	tbd

### 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:



**Article 80 | ACCESSIBILITY CHECKLIST**

**Building Classification and Description**

What are the principal Building Uses - select all appropriate uses?

Residential – One to Three Unit	<b>Residential - Multi-unit, Four +</b>	Institutional	Education
Commercial	<b>Office</b>	<b>Retail</b>	Assembly
Laboratory / Medical	Manufacturing / Industrial	Mercantile	Storage, Utility and Other
First Floor Uses (List)			

What is the Construction Type – select most appropriate type?

Wood Frame	Masonry	Steel Frame	<b>Concrete</b>
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Describe the building?

Site Area:	3,648 SF	Building Area:	105,000 SF
Building Height:	302 Ft.	Number of Stories:	30 Floors.
First Floor Elevation (BCB):	Approximately 32.0 BCB	Are there below grade spaces:	No

**Assessment of Existing Infrastructure for Accessibility:**

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

Provide a description of the development neighborhood and identifying characteristics.

The Project is located in the Downtown Crossing area, a densely built area with a mix of commercial, retail, education and residential uses.

List the surrounding ADA compliant MBTA transit lines and the proximity to the development site: Commuter rail, subway, bus, etc.

Park Street Station (Green and Red Lines), Downtown Crossing Station (Red and Orange Lines), Chinatown Station (Orange Line), Boylston Street Station (Green Line), Silver Line, Bus Routes: 11, 43, 55

List the surrounding institutions:

Emerson College, Suffolk University, Tufts Medical Center

**Article 80 | ACCESSIBILTY CHECKLIST**

hospitals, public housing and elderly and disabled housing developments, educational facilities, etc.

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.

	No. Department of Transitional Assistance, Boston Housing Authority, Big Brothers Big Sisters

**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?

*If yes above*, list the existing sidewalk and pedestrian ramp materials and physical condition at the development site.

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.

Is the development site within a historic district? **If yes**, please identify.

	Yes
	The sidewalks and pedestrian ramps are concrete and in fair condition
	The sidewalks and pedestrian ramps will be reconstructed as part of the project
	Yes, Washington Street 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

**Article 80 | ACCESSIBILITY CHECKLIST**

people to comfortably pass each other, and a ten foot or wider Pedestrian Zone can support high volumes of pedestrians.

Are the proposed sidewalks consistent with the Boston Complete Street Guidelines? See: [www.bostoncompletestreets.org](http://www.bostoncompletestreets.org)

*If yes above*, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, Boulevard.

What is the total width of the proposed sidewalk? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone.

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?

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?

Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way?

*If yes above*, what are the proposed dimensions of the sidewalk café or furnishings and what will the right-of-way clearance be?

Downtown Commercial
Approximately 9 feet
Replace the concrete materials currently in place – all on City of Boston right-of-way.
N/A
TBD
TBD

**Article 80 | ACCESSIBILITY CHECKLIST**

**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?

0

What is the total number of accessible spaces provided at the development site?

0

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?

Visitor parking would be at nearby parking lots or parking garages.

Has a drop-off area been identified? **If yes,** will it be accessible?

Yes and yes

Include a diagram of the accessible routes to and from the accessible parking lot/garage and drop-off areas to the development entry locations. Please include route distances.

See attached Diagram ?

**Article 80 | ACCESSIBLTY CHECKLIST**

**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.	
Describe accessibility at each entryway: Flush Condition, Stairs, Ramp Elevator.	All entryways will provide a flush condition to the ground level uses and elevator access to all uses above or below the ground level
Are the accessible entrance and the standard entrance integrated?	yes
<b>If no above</b> , what is the reason?	N/A
Will there be a roof deck or outdoor courtyard space? <b>If yes</b> , include diagram of the accessible route.	No
Has an accessible routes way-finding and signage package been developed? <b>If yes</b> , 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?	94
How many units are for sale; how many are for rent? What is the market value vs. affordable breakdown?	All units are for rent and the breakdown is tbd
How many accessible units are being proposed?	Five percent of the total unit count will be type 2A in accordance with MAAB

**Article 80 | ACCESSIBILTY CHECKLIST**

Please provide plan and diagram of the accessible units.

The accessible units have not yet been selected

How many accessible units will also be affordable? If none, please describe reason.

tbd

Do standard units have architectural barriers that would prevent entry or use of common space for persons with mobility impairments? Example: stairs at entry or step to balcony. **If yes,** please provide reason.

All units that are not type 2A will be type 1 in accordance with MAAB. There are no plans for units that require stairs to enter.

Has the proponent reviewed or presented the proposed plan to the City of Boston Mayor’s Commission for Persons with Disabilities Advisory Board?

No

Did the Advisory Board vote to support this project? **If no,** what recommendations did the Advisory Board give to make this project more accessible?

No

Thank you for completing the Accessibility Checklist!

For questions or comments about this checklist or accessibility practices, please contact:

[kathryn.quigley@boston.gov](mailto:kathryn.quigley@boston.gov) | Mayors Commission for Persons with Disabilities

# Accessibility Diagram

