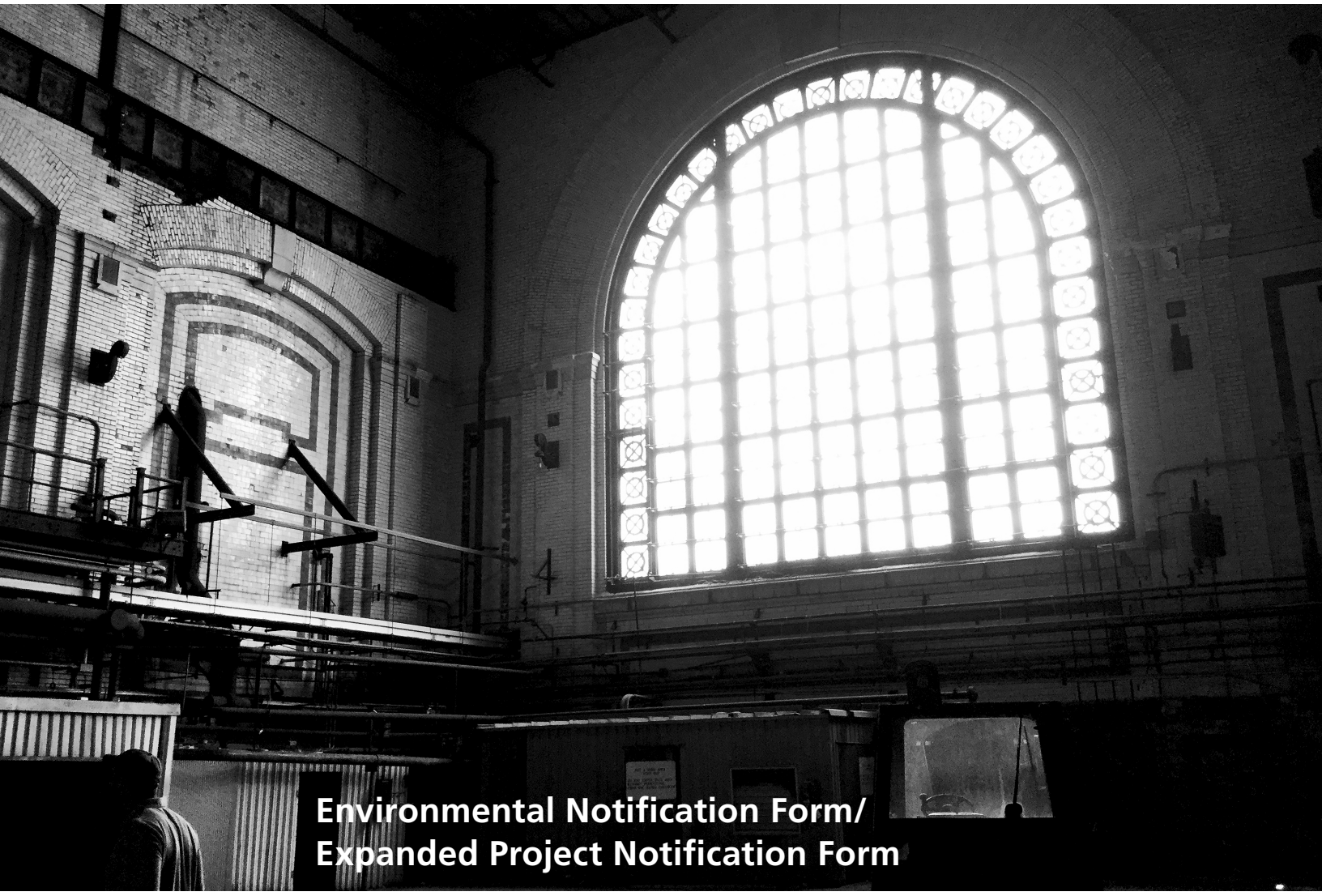
May 2017

L Street Station Redevelopment

776 Summer Street, Boston, MA 02127



Environmental Notification Form/ Expanded Project Notification Form

SUBMITTED TO

Executive Office of Energy and Environmental Affairs
Massachusetts Environmental Policy Office and the Boston Planning and Development Agency

PROPONENT

HRP 776 Summer Street LLC

PREPARED BY

vhb

99 High St.
Boston MA 02110

IN ASSOCIATION WITH

SGA Architects
Stoss Landscape Urbanism
Greenberg Consultants
WSP Parsons Brinckerhoff
MacRostie Historic Advisors
Geosyntec
DLA Piper
Bruner/Cott & Associates

REDGATE™

May 15, 2017

Matthew A. Beaton, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street
Boston, MA 02114

Re: **L Street Station Redevelopment Project**
Boston, MA

Dear Secretary Beaton:

HRP 776 Summer Street, LLC, ("the Proponent"), is pleased to submit the enclosed Environmental Notification Form ("ENF") [as a joint filing which also includes an expanded Project Notification Form ("EPNF") initiating review under Article 80B of the City of Boston Zoning Code] for the construction of the L Street Station Redevelopment Project (the "Project"), in the South Boston neighborhood of Boston, Massachusetts.

The Project includes the redevelopment of a 15-acre site along the Reserved Channel (the "Project Site"). The Project is located at 776 Summer Street on land formerly occupied by the Boston Edison L Street Power Station and is comprised of the following key elements:

- The cleanup and abatement of the Project Site and existing buildings;
- The adaptive reuse of portions of the existing Boston Edison L Street Power Station buildings and equipment to preserve their historical and architectural significance;
- The transformation of a previously fenced-off and inaccessible site into a public waterfront destination with new local dining and retail, as well as community arts and business uses; and
- The provision of approximately 104,500 square feet of new outdoor public spaces with inviting landscaping, waterfront activation, programmable open areas, and amenities, including a new 1.15-acre publicly accessible waterfront open space.

The Project design has been shaped by a robust community engagement process and guided by hundreds of comments and recommendations by South Boston neighbors. It will bring new energy to the previously inaccessible site by providing a vibrant mix of uses, new public amenities, new "Arts and Industry" space for local artists, artisans, and makers, and flexible outdoor public open spaces. It will function to integrate and connect the South Boston neighborhood, serving as a transition point between the industrial uses to the north and east, and the residential areas to the south.

With the submission of this ENF/EPNF, we respectfully request the EOEEA publish notice of availability of this ENF/EPNF for public review in the May 24th edition of the *Environmental Monitor*. We will also public notice of the submission in the Boston Herald on or before May 24th, as required by 301 CMR 11.15(1). Based upon this tentative schedule, public comments will be due by July 7th to align with the BPDA public comment period, and a decision will be due July 14th.

REDGATE™

We look forward to working with you and your staff in your reviewing of the Project. Requests for copies of the ENF should be directed to Seth Lattrell at (617) 607-2973 or via email at slattrell@vhb.com.

Sincerely,

Ralph Cox
Principal, Redgate Capital Partners

Cc: MEPA Distribution List
Brian Golden, Director, BPDA

REDGATE™

May 15, 2017

Ref: 13656.00

Brian Golden, Director
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

Re: **L Street Station Redevelopment Project**
Boston, MA

Dear Direct Golden:

HRP 776 Summer Street, LLC, ("the Proponent"), is pleased to submit the enclosed "expanded" Project Notification Form ("EPNF") [as a joint filing which also includes an Environmental Notification Form ("ENF") initiating review under Article 80B of the City of Boston Zoning Code] for the construction of the L Street Station Redevelopment Project (the "Project"), in the South Boston neighborhood of Boston, Massachusetts.

The Project includes the redevelopment of a 15-acre site along the Reserved Channel (the "Project Site"). The Project is located at 776 Summer Street on land formerly occupied by the Boston Edison L Street Power Station and is comprised of the following key elements:

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- The adaptive reuse of portions of the existing Boston Edison L Street Power Station buildings and equipment to preserve their historical and architectural significance;
- The transformation of a previously fenced-off and inaccessible site into a public waterfront destination with new local dining and retail, as well as community arts and business uses; and
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We look forward to working with you and your staff in your reviewing of the Project. The Proponent will publish notice of submission of the EPNF, as required by Section 80A-2(3) coincident with the filing of this EPNF. Based upon this tentative schedule, public comments will be due by July 7th. Requests for copies of the EPNF should be directed to Seth Lattrell at (617) 607-2973 or via email at slattrell@vhb.com.

REDGATE™

Sincerely,

Ralph Cox
Principal, Redgate Capital Partners

Enclosure
cc: Gary Uter, BPDA

L Street Station Redevelopment

Boston, Massachusetts

SUBMITTED TO **Executive Office of Energy and Environmental Affairs**
100 Cambridge Street, Suite 900 (9th Floor)
Attn: MEPA Office
Boston, MA 02114

Boston Planning and Development Agency
One City Hall Square
Boston, MA 02201

PROPONENT **HRP 776 Summer Street, LLC**
99 Summer Street, Suite 500
Boston, MA 02210

PREPARED BY **VHB**
99 High Street, 10th Floor
Boston, MA 02110

In association with:

SGA Architects
Stoss Landscape Urbanism
Greenberg Consultants
WSP Parsons Brinckerhoff
MacRostie Historic Advisors
Geosyntec
DLA Piper
Bruner/Cott & Associates

May 2017

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Appendices

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Note: All report figures are provided at the end of each chapter/section.

Commonwealth of Massachusetts

Executive Office of Energy and Environmental Affairs
Massachusetts Environmental Policy Act (MEPA) Office

Environmental Notification Form

For Office Use Only

EEA#: _____

MEPA Analyst: _____

The information requested on this form must be completed in order to submit a document electronically for review under the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: **L Street Station Redevelopment**		
Street Address: **776 Summer Street**		
Municipality: **Boston**	Watershed: **Boston Harbor**	
Universal Transverse Mercator Coordinates: **4689484.3 N / 332426.4 E**	Latitude: **42°20'22.48" N** Longitude: **71°02"03.18" W**	
Estimated commencement date: **2018**	Estimated completion date: **2030**	
Project Type: **Mixed Use**	Status of project design: **10% Complete**	
Proponent: **HRP 776 Summer Street, LLC, c/o Hilco Real Estate**		
Street Address: **99 Summer Street, Suite 500**		
Municipality: **Boston**	State: **MA**	Zip Code: **02110**
Name of Contact Person: **Elizabeth Grob**		
Firm/Agency: **VHB**	Street Address: **99 High St., 10th Floor**	
Municipality: **Boston**	State: **MA**	Zip Code: **02110**
Phone: (**617) 728-7777**	Fax: (**617) 728-7782**	E-mail: **egrob@vhb.com**

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
☒Yes ☐No

If this is an Expanded Environmental Notification Form (ENF) (see 301 CMR 11.05(7)) or a Notice of Project Change (NPC), are you requesting:

a Single EIR? (see 301 CMR 11.06(8))	☐Yes ☒No
a Special Review Procedure? (see 301CMR 11.09)	☐Yes ☒No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	☐Yes ☒No
a Phase I Waiver? (see 301 CMR 11.11)	☐Yes ☒No

(Note: Greenhouse Gas Emissions analysis must be included in the Expanded ENF.)

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?

301 CMR 11.03(3)(a)(5) – Project requires a new Chapter 91 license for a non-water dependent use which occupies more than one acre of tidelands

301 CMR 11.03(6)(a)(6) – Generation of 3,000 or more new ADT on roadways providing access to a single location

301 CMR 11.03(6)(b)(15) – Construction of 300 or more New parking spaces at a single location

301 CMR 11.03(10)(b)(a) – Demolition of any exterior part of any Historic Structure listed in or located in any Historic District listed in the State Register of Historic Places or in the Inventory of Historic and Archaeological Assets of the Commonwealth

Which State Agency Permits will the project require?

Massachusetts Department of Environmental Protection (DEP) – Chapter 91 License

Massachusetts Historic Commission (MHC) – Memorandum of Understanding

Identify any financial assistance or land transfer from an Agency of the Commonwealth, including the Agency name and the amount of funding or land area in acres:

The Project does not require any financial assistance or a land transfer.

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	15 ac		
New acres of land altered		0[1]	
Acres of impervious area	9.8 ac[2]	2.7 ac	12.5 ac
Square feet of new bordering vegetated wetlands alteration		0	
Square feet of new other wetland alteration		93,000	
Acres of new non-water dependent use of tidelands or waterways		4	
STRUCTURES			
Gross square footage	185,800[3]	1.9 Million	2.1 Million
Number of housing units	0	1,588	1,588
Maximum height (feet)	330 (166[4])	54	220[4]
TRANSPORTATION			
Vehicle trips per day (Unadjusted/Adjusted)	0	20,370/8,780	20,370/8,780
Parking spaces	275	712	987
WASTEWATER			
Water Use (Gallons per day)	0	329,890	329,890
Water withdrawal (GPD)	0	0	0
Wastewater generation/treatment (GPD)	0	299,900	299,900
Length of water mains (miles)	0.08	0.25	0.33
Length of sewer mains (miles)	0.08	0.25	0.33

Has this project been filed with MEPA before?
☐ Yes (EEA #_____) ☒No

Has any project on this site been filed with MEPA before?
☐ Yes (EEA #_____) ☒No

[1] Entire Site previously developed and historically inaccessible to the general public
[2] Existing land characterized as pervious surface located generally along the easterly edge of the Site is believed to be comprised primarily of compacted gravel and urban fill, previously used for vehicle parking. Although an increase in post-development impervious surface area is anticipated, the final build condition design will incorporate on-site stormwater management and treatment systems, which are expected to result in improved water quality and reduced stormwater runoff volumes and peak rates of runoff in comparison to existing conditions."
[3] Existing square footage based on City of Boston Assessors data
[4] In accordance with the Boston Zoning Code, heights are measured from "Grade" consisting of the average elevation of the nearest sidewalks at the lines of the streets on which the Project abuts to the top of the highest occupied structure. 330 feet reflects the height of the existing smoke stacks.

GENERAL PROJECT INFORMATION – all proponents must fill out this section

Existing Conditions

The Project Site includes approximately 15 acres of developed land in South Boston located at 776 Summer Street (the "Project Site"). Refer to Figure 1.1 for the site location map. The Project Site contains a series of buildings and legacy infrastructure related to its prior use for energy generation. The Project Site is bounded to the west by Summer Street, to the south by East First Street, to the east by a land parcel owned by the Massachusetts Bay Transportation Authority ("MBTA"), and to the north by the Reserved Channel and the Conley Dedicated Freight Corridor (the "DFC").

The Project Site is located at the transition between the marine industrial and residential areas of South Boston, with the rapidly transforming Seaport neighborhood and Raymond L. Flynn Marine Park to the north. It is located near the Massachusetts Port Authority's ("Massport") Conley Terminal, as well as regional destinations including the Boston Convention and Exhibition Center ("BCEC") and the Boston Innovation and Design Building. The Project Site is located approximately 0.5 miles from the Silver Line at Design Center Place, and 1.5 miles from South Station, which provides access to the Red Line, Silver Line, commuter and passenger rails, Amtrak, and local and regional bus service. The Project Site is also located along local bus routes that provide access to South Station. See Figures 1.2a-b, Project Context Map and Figure 1.3, Existing Conditions Site Plan.

Project Description

HRP 776 Summer Street ("the Proponent") proposes the construction of the new mixed use L Street Station Redevelopment Project (the "Project"). The Project consists of 2.1 million square feet[3] of development situated along the Reserved Channel in the South Boston neighborhood. The Project includes the following key components:

1. The cleanup and abatement of the Project Site and Power Plant buildings;
2. The adaptive reuse of portions of the existing Power Plant buildings and equipment to preserve their historical and architectural significance;
3. The transformation of a previously fenced-off and inaccessible Site into a public waterfront destination with new dining and retail, as well as community arts and business uses; and
4. The provision of approximately 104,500 square feet of new outdoor public spaces with inviting landscaping, waterfront activation, programmable open areas, and amenities, including a new 1.15-acre publicly accessible waterfront open space.

Figure 1.4 presents the proposed site plan for the Project. Refer to Chapter 1*, Project Description*, for additional information.

Summary of Environmental Impacts

The Project is being designed to avoid environmental impacts to the natural and built environment to the maximum extent practicable. Project-related environmental impacts will be mitigated and will be counterbalanced by the significant benefits for the adjacent neighborhoods and the City. The analysis of potential environmental impacts resulting from the Project yield the following conclusions:

- Shadow – Shadow impacts have been minimized to the maximum extent practicable to avoid any

[3] Project area is described in Gross Square Footage, exclusive of structured parking areas

noticeable effect on pedestrian use patterns. Due to the massing of the existing structure, the anticipated design of the proposed buildings, and the orientation of the Site, new shadows are anticipated to be minimal, and the majority of new shadows won't impact public spaces.

- Daylight – When viewed from the adjacent sidewalks, the Project will result in an increase in visible skydome from some viewpoints and a decrease when viewed from others. Such changes are consistent with the Project's urban context and the replacement of the large existing structures with a new mix of development blocks.
- Wetlands/Waterways – Following revision of the Designated Port Area ("DPA") designation, the Project will comply with applicable wetlands and waterways regulations, and will open the previously inaccessible Site to the public with the provision of approximately 104,500 square feet of open spaces including a new 1.15-acre publicly accessible waterfront open space.
- Water Quality – The Project will improve water quality by collecting and treating stormwater runoff through a series of structural Best Management Practices.
- Noise – Based on preliminary design, the Project's operations will have no adverse noise impacts at nearby sensitive receptor locations and will not contribute to a violation of the City of Boston's noise standards.
- Solid and Hazardous Materials – The environmental conditions on the Site will be addressed accordance with the Massachusetts Contingency Plan as applicable. Existing solid and hazardous materials within the Site buildings will be removed and disposed of in accordance with applicable state and federal regulations.
- Groundwater – Significant groundwater impacts associated with construction activities are not anticipated because excavations below the groundwater table are not proposed. The Project Site is not located within Boston's Groundwater Conservation Overlay District.
- Geotechnical – The geology across the Project Site generally consists of 10 to 20 feet of fill overlying deposits of sand, silt, and clay. The geotechnical engineer and construction manager will work together closely throughout excavations and construction of foundations to avoid adverse impacts to adjacent structures and infrastructure.
- Construction – The Project has been designed to avoid, minimize and mitigate potential construction-related impacts. The Project Team will work with the City to reduce potential construction period impacts.

Potential environmental impacts associated with wind, solar glare, air quality, and GHG will be more fully described, as necessary, in the subsequent DEIR/DPIR filing.

Alternatives

The following project alternatives are evaluated in Section 1.6, *Alternatives Analysis*:

- **No-Build Alternative** – The No-Build Alternative would leave in place the existing conditions at the Project Site. It would leave the currently vacant buildings on the property in place, and the Project Site and the waterfront would remain inaccessible to the public, as described in Section 1.2, *Site Context and Existing Conditions*.
- **Alternative B** – Alternative B contemplates infill development of the existing structures to accommodate 1.5 million square feet of office development along with a new parking garage to the east of the existing buildings.
- **Preferred Alternative** – The Preferred Alternative (the Project), as described in Section 1.3 and shown in Figure 1.4, proposes 2.1 million square feet of mixed-use development on the 15-acre Project Site, including both the rehabilitation of some of the historic buildings and the

construction of eight new buildings. This alternative will provide public access to this previously inaccessible portion of the waterfront.

Mitigation Measures

Appropriate mitigation for Project-related impacts to the natural and built environment will be further determined at the completion of the impact analyses, as required as part of the subsequent DEIR/DPIR. Based on the proposed program and current level of design, the Project is expected to include mitigation for potential impacts to the following:

- Transportation;
- Air Quality and Greenhouse Gas (GHG) emissions;
- Chapter 91 Waterways;
- Hazardous Materials;
- Stormwater; and
- Construction Period Impacts.

Construction Phasing

The Project will be constructed in phases over a 10 to 15-year construction period. Refer to Section 1.3.6, *Anticipated Project Schedule and Phasing*, for additional information.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN:
Is the project within or adjacent to an Area of Critical Environmental Concern?
☐Yes (Specify_____)
☒No
if yes, does the ACEC have an approved Resource Management Plan? ___ Yes ___ No;
If yes, describe how the project complies with this plan._____
Will there be stormwater runoff or discharge to the designated ACEC? ___ Yes ___ No;
If yes, describe and assess the potential impacts of such stormwater runoff/discharge to the designated ACEC._____

RARE SPECIES:
Does the project site include Estimated and/or Priority Habitat of State-Listed Rare Species? (see http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/priority_habitat/priority_habitat_home.htm)
☐Yes (Specify_____) ☒No

HISTORICAL /ARCHAEOLOGICAL RESOURCES:
Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?
☒Yes (Specify: **The Boston Edison L Street Power Station is on the inventory of Historic and Archeological Assets of the Commonwealth)** ☐No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? ☒Yes (Specify: **Portions of the inventoried Boston Edison L Street Power Station will be demolished as part of the Project**) ☐No

WATER RESOURCES:
Is there an Outstanding Resource Water (ORW) on or within a half-mile radius of the project site?
___Yes **_X_** No; if yes, identify the ORW and its location._____

Are there any impaired water bodies on or within a half-mile radius of the project site? ___Yes **_X_** No; if yes, identify the water body and pollutant(s) causing the impairment:_____.

Is the project within a medium or high stress basin, as established by the Massachusetts Water Resources Commission? ___Yes _**X**_No

STORMWATER MANAGEMENT:

Generally describe the project's stormwater impacts and measures that the project will take to comply with the standards found in MassDEP's Stormwater Management Regulations:

The Project will comply with the standards set forth in the DEP Stormwater Management Regulations through the incorporation of on-site stormwater management and treatment systems that are expected to improve water quality, reduce runoff volume, and control peak rates of runoff in comparison to existing conditions. Refer to Chapter 8, *Infrastructure,* for additional information.

MASSACHUSETTS CONTINGENCY PLAN:

Has the project site been, or is it currently being, regulated under M.G.L.c.21E or the Massachusetts Contingency Plan? Yes _**X**_No ___ ; if yes, please describe the current status of the site (including Release Tracking Number (RTN), cleanup phase, and Response Action Outcome classification):

The Project Site is not currently regulated under the Massachusetts Contingency Plan ("MCP") but has been previously. There are seven release tracking numbers ("RTNs") associated with the Site and all have been closed under the MCP. The Response Action Outcome classification for each RTN is summarized in the table below. Only one of the seven RTNs (3-13007) was closed using an Activity and Use Limitation ("AUL").

RTN	Release Condition	Regulatory Status
3-12817	Sulfuric acid release to containment structures and subsurface soils.	Permanent Solution (Class A-1 RAO[4]) filed in 1996
3-13007	No. 6 fuel oil containing TPH, EPH, volatile organic compounds (VOCs), and polycyclic aromatic hydrocarbons (PAHs) released to subsurface soils.	Permanent Solution (Class B-2) with Activity and Use Limitation (AUL) filed in 2001
3-14575	Sulfuric acid released to containment structures and subsurface soils.	Permanent Solution (Class A-1) filed in 1997
3-17596	Petroleum with EPH and VPH released to the subsurface.	Permanent Solution (Class A-2) filed in 2000
3-22165	Lubricating oil released to facility surfaces, pavement, and Reserved Channel.	Permanent Solution (Class A-1) filed in 2002
3-26342	Sulfuric acid released to cement and soils.	Permanent Solution (Class A-1) filed in 2007
3-28038	Weathered oil stains containing EPH and polycyclic chlorinated biphenols (PCBs) on soil.	Permanent Solution (Class B-1) filed in 2009

Is there an Activity and Use Limitation (AUL) on any portion of the project site? Yes _**X**_ No ___; if yes, describe which portion of the site and how the project will be consistent with the AUL:

The AUL area is an approximately 5,600 square-foot area adjacent to Summer Street and approximately 127 feet north of East First Street. The use of the Project Site in this portion of the property will be consistent with the AUL, or additional response actions may be completed to allow for removal of the AUL.

Are you aware of any Reportable Conditions at the property that have not yet been assigned an RTN? Yes ___ No _**X**_ ; if yes, please describe:_____

SOLID AND HAZARDOUS WASTE:

If the project will generate solid waste during demolition or construction, describe alternatives considered

[4] RAO stands for Response Action Outcome statement. This terminology was replaced with the terms Permanent Solution and Temporary Solution as part of 2014 revisions to the MCP.

for re-use, recycling, and disposal of, e.g., asphalt, brick, concrete, gypsum, metal, wood:

The Project Construction Manager will implement a waste management plan to divert Project-related construction waste material from landfills through recycling and salvaging where practicable. The majority of structures to be demolished consist of brick, concrete and iron. Existing brick, concrete and iron will be processed and reused on-site, or recycled by the Contractor. Any construction waste will be handled in a manner consistent with all local, state, and federal regulations.

(NOTE: Asphalt pavement, brick, concrete and metal are banned from disposal at Massachusetts landfills and waste combustion facilities and wood is banned from disposal at Massachusetts landfills. See 310 CMR 19.017 for the complete list of banned materials.)

Will your project disturb asbestos containing materials? Yes _**X**_ No ___ ;
if yes, please consult state asbestos requirements at http://mass.gov/MassDEP/air/asbhom01.htm

The Proponent will work closely with the environmental due diligence team to assess and quantify above-grade environmental conditions and risks which are expected to include certain conditions such as asbestos-containing materials (tiles, pipe, wrapping, waterproofing), contaminated brick and other building surfaces and other possible generation station-specific historic uses such as mercury-containing and/or PCB-containing electrical gears, switches and transformers. The environmental due diligence team and the demolition contractor will also consider the potential for environmental risks associated with subsurface utility infrastructure including stormwater outfalls and utility tunnels and other structures.

All materials will be managed in accordance with applicable solid waste and air regulations, and disposed of at a licensed facility as asbestos-containing waste.

Describe anti-idling and other measures to limit emissions from construction equipment:

The Commonwealth of Massachusetts' anti-idling law will be enforced during the construction phase of the Project with the installation of on-site anti-idling signage.

DESIGNATED WILD AND SCENIC RIVER:

Is this project site located wholly or partially within a defined river corridor of a federally designated Wild and Scenic River or a state designated Scenic River? Yes ___ No _**X**_;
if yes, specify name of river and designation: If yes, does the project have the potential to impact any of the "outstandingly remarkable" resources of a federally Wild and Scenic River or the stated purpose of a state designated Scenic River? Yes ___ No _**X**_;

ATTACHMENTS:

1. List of all attachments to this document.
   Appendix A: Letter of Intent
   Appendix B: BPDA Planning Process Report
   Appendix C: Preliminary BPDA Checklists
   Appendix D: Modelling Assumptions
   Appendix E: MEPA Distribution List

2. U.S.G.S. map (good quality color copy, 8-½ x 11 inches or larger, at a scale of 1:24,000) indicating the project location and boundaries.
   Refer to Figure 1.1 for project locus

3.. Plan, at an appropriate scale, of existing conditions on the project site and its immediate environs, showing all known structures, roadways and parking lots, railroad rights-of-way, wetlands and water bodies, wooded areas, farmland, steep slopes, public open spaces, and major utilities.
   Refer to Figure 1.2a-b for site context and 1.3 for existing conditions

4 Plan, at an appropriate scale, depicting environmental constraints on or adjacent to the project site such as Priority and/or Estimated Habitat of state-listed rare species, Areas of Critical Environmental Concern, Chapter 91 jurisdictional areas, Article 97 lands, wetland resource area delineations, water supply protection areas, and historic resources and/or districts.
   Refer to Chapter 6, *Environmental Protection,* for environmental constraints, and Chapter 7, *Historic Resources*, for historic resources.

5. Plan, at an appropriate scale, of proposed conditions upon completion of project (if construction of the project is proposed to be phased, there should be a site plan showing conditions upon the completion of each phase).
   Refer to Figure 1.6 for proposed conditions plan

6. List of all agencies and persons to whom the proponent circulated the ENF, in accordance with 301 CMR 11.16(2).
   Refer to Appendix E – MEPA Distribution List

7. List of municipal and federal permits and reviews required by the project, as applicable.
   Refer to Table 2-1, Anticipated Project Permits and Approvals

LAND SECTION – all proponents must fill out this section

I. Thresholds / Permits

A. Does the project meet or exceed any review thresholds related to **land** (see 301 CMR 11.03(1)
___ Yes **_X_** No; if yes, specify each threshold:

II. Impacts and Permits

A. Describe, in acres, the current and proposed character of the project site, as follows:

	Existing	Change	Total
Footprint of buildings	6.5	1.2	7.7
Internal roadways	0	3.7	3.7
Parking and other paved areas	0	0	0
Other altered areas	8.5[1]	(6.0)	2.5
Undeveloped areas	0	1.1[2]	1.1[2]
Total: Project Site Acreage	**15**	**0**	**15**

[1] Includes areas of degraded pavement and gravel parking areas
[2] Includes new publicly accessible landscaped open space

B. Has any part of the project site been in active agricultural use in the last five years?
___ Yes **_X_** No; if yes, how many acres of land in agricultural use (with prime state or locally important agricultural soils) will be converted to nonagricultural use?

C. Is any part of the project site currently or proposed to be in active forestry use?
___ Yes **_X_** No; if yes, please describe current and proposed forestry activities and indicate whether any part of the site is the subject of a forest management plan approved by the Department of Conservation and Recreation:

D. Does any part of the project involve conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97? ___ Yes **_X_** No; if yes, describe:

E. Is any part of the project site currently subject to a conservation restriction, preservation restriction, agricultural preservation restriction or watershed preservation restriction? ___ Yes **_X_** No; if yes, does the project involve the release or modification of such restriction? ___ Yes ___ No; if yes, describe:

F. Does the project require approval of a new urban redevelopment project or a fundamental change in an existing urban redevelopment project under M.G.L.c.121A? ___ Yes **_X_** No; if yes, describe:

G. Does the project require approval of a new urban renewal plan or a major modification of an existing urban renewal plan under M.G.L.c.121B? Yes ___ No **_X_**; if yes, describe:

III. Consistency

A. Identify the current municipal comprehensive land use plan
The Project is addressed in several municipal plans. Refer to Chapter 2, *Planning Context and General Information,* for a detailed description of Project consistency with applicable plans.

B. Describe the project's consistency with that plan with regard to:
Refer to Chapter 2, *Planning Context and General Information*

C. Identify the current Regional Policy Plan of the applicable Regional Planning Agency (RPA)
Refer to Chapter 2, *Planning Context and General Information*

D. Describe the project's consistency with that plan with regard to:
Refer to Chapter 2, *Planning Context and General Information*

RARE SPECIES SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **rare species or habitat** (see 301 CMR 11.03(2))? ___ Yes **_X_** No; if yes, specify, in quantitative terms:

(NOTE: If you are uncertain, it is recommended that you consult with the Natural Heritage and Endangered Species Program (NHESP) prior to submitting the ENF.)

B. Does the project require any state permits related to **rare species or habitat**? ___ Yes **_X_** No

C. Does the project site fall within mapped rare species habitat (Priority or Estimated Habitat?) in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes **_X_** No.

D. If you answered "No" to all questions A, B and C, proceed to the **Wetlands, Waterways, and Tidelands Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Rare Species section below.

WETLANDS, WATERWAYS, AND TIDELANDS SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wetlands, waterways, and tidelands** (see 301 CMR 11.03(3))? **_X_** Yes ___ No; if yes, specify, in quantitative terms:

301 CMR 11.03(3)(a)(5) – Project requires a new Chapter 91 license for a non-water dependent use which occupies more than one acre of tidelands.

B. Does the project require any state permits (or a local Order of Conditions) related to **wetlands, waterways, or tidelands**? **_X_** Yes ___ No; if yes, specify which permit:

Massachusetts Department of Environmental Protection – Chapter 91 License
Boston Conservation Commission – Order of Conditions

C. If you answered "No" to both questions A and B, proceed to the **Water Supply Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wetlands, Waterways, and Tidelands Section below.

II. Wetlands Impacts and Permits

A. Does the project require a new or amended Order of Conditions under the Wetlands Protection Act (M.G.L. c.131A)? **_X_** Yes ___ No; if yes, has a Notice of Intent been filed? ___ Yes **_X_** No; if yes, list the date and MassDEP file number: _____; if yes, has a local Order of Conditions been issued? ___ Yes ___ No; Was the Order of Conditions appealed? ___ Yes ___ No. Will the project require a Variance from the Wetlands regulations? ___ Yes ___ No.

B. Describe any proposed permanent or temporary impacts to wetland resource areas located on the project site:

Refer to Chapter 6, *Environmental Protection*, Section 6.9, *Wetlands and Waterways,* for a detailed description of wetlands and waterways impacts.

C. Estimate the extent and type of impact that the project will have on wetland resources, and indicate whether the impacts are temporary or permanent:

Coastal Wetlands	Area (square feet) or Length (linear feet)	Temporary or Permanent Impact?
Land Under the Ocean	TBD[1]	TBD
Designated Port Areas	0[2]	
Coastal Beaches	N/A	N/A
Coastal Dunes	N/A	N/A
Barrier Beaches	N/A	N/A
Coastal Banks	TBD[1]	TBD
Rocky Intertidal Shores	N/A	N/A
Salt Marshes	N/A	N/A
Land Under Salt Ponds	N/A	N/A
Land Containing Shellfish	N/A	N/A
Fish Runs	N/A	N/A
Land Subject to Coastal Storm Flowage	93,000 sf	Permanent
Inland Wetlands		
Bank (lf)	N/A	N/A
Bordering Vegetated Wetlands	N/A	N/A
Isolated Vegetated Wetlands	N/A	N/A
Land under Water	N/A	N/A
Isolated Land Subject to Flooding	N/A	N/A
Bordering Land Subject to Flooding	N/A	N/A
Riverfront Area	N/A	N/A

Notes:

1. The Proponents are exploring potential waterfront activation elements that may have minor temporary and permanent impacts to Land Under the Ocean and/or the existing bulkhead (Coastal Bank).
2. The Proponents anticipate that the DPA will be modified to exclude the Project Site.

D. Is any part of the project:

1. proposed as a **limited project**? ___ Yes _X_No; if yes, what is the area (in sf)?____
2. the construction or alteration of a **dam**? ___ Yes _X_No; if yes, describe:
3. fill or structure in a **velocity zone** or **regulatory floodway**? ___ Yes _X_No
4. dredging or disposal of dredged material? ___ Yes _X_No ; if yes, describe the volume of dredged material and the proposed disposal site:
5. a discharge to an **Outstanding Resource Water (ORW)** or an **Area of Critical Environmental Concern (ACEC)**? ___ Yes _X_No
6. subject to a wetlands restriction order? ___ Yes _X_No; if yes, identify the area (in sf):
7. located in buffer zones? _X_Yes ___No; if yes, how much (in sf) Approx. 60,000 SF of the Project Site is located within buffer to Coastal Bank.

E. Will the project:

1. be subject to a local wetlands ordinance or bylaw? ___ Yes _X_No
2. alter any federally-protected wetlands not regulated under state law? ___ Yes _X_No; if yes, what is the area (sf)?

III. Waterways and Tidelands Impacts and Permits

A. Does the project site contain waterways or tidelands (including filled former tidelands) that are subject to the Waterways Act, M.G.L.c.91? _X_Yes ___ No; if yes, is there a current Chapter 91 License or Permit affecting the project site? _X_Yes ___ No; if yes, list the date and license or permit number and provide a copy of the historic map used to determine extent of filled tidelands:

Refer to Chapter 6, *Environmental Protection*, Section 6.9, *Wetlands and Waterways,* for a detailed description of the Project license history.

B. Does the project require a new or modified license or permit under M.G.L.c.91? **_X_** Yes ___ No; if yes, how many acres of the project site subject to M.G.L.c.91 will be for non-water-dependent use? Current 0 (existing structures supported a water-dependent power generation facility) Change **4.1** Total **4.1**

If yes, how many square feet of solid fill or pile-supported structures (in sf)?
177,000 square feet of solid fill and approximately 10,000 square feet of structures

C. For non-water-dependent use projects, indicate the following:

Area of filled tidelands on the site: **4.1**
Area of filled tidelands covered by buildings: **Approx. 50,000 SF**
For portions of site on filled tidelands, list ground floor uses and area of each use:
Ground floor building uses within tidelands are anticipated to include a combination of commercial, retail/restaurant, and lobby space. Refer to Chapter 3, *Urban Design*, for a more detailed discussion of ground floor uses.

Does the project include new non-water-dependent uses located over flowed tidelands? Yes ___ No **_X**
Height of building on filled tidelands
The maximum building height on filled tidelands is approximately 80 feet.

Also show the following on a site plan: Mean High Water, Mean Low Water, Water-dependent Use Zone, location of uses within buildings on tidelands, and interior and exterior areas and facilities dedicated for public use, and historic high and historic low water marks.

Refer to Chapter 6, *Environmental Protection* report figures.

D. Is the project located on landlocked tidelands? ___ Yes **_X_** No; if yes, describe the project's impact on the public's right to access, use and enjoy jurisdictional tidelands and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

E. Is the project located in an area where low groundwater levels have been identified by a municipality or by a state or federal agency as a threat to building foundations? ___Yes **_X_** No; if yes, describe the project's impact on groundwater levels and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

F. Is the project non-water-dependent **and** located on landlocked tidelands **or** waterways or tidelands subject to the Waterways Act **and** subject to a mandatory EIR? **_X_** Yes ___ No;
(NOTE: If yes, then the project will be subject to Public Benefit Review and Determination.)

G. Does the project include dredging? ___ Yes **_X_** No; if yes, answer the following questions:
What type of dredging? Improvement ___ Maintenance ___ Both ____
What is the proposed dredge volume, in cubic yards (cys) _____
What is the proposed dredge footprint ____length (ft) ___width (ft)____depth (ft);
Will dredging impact the following resource areas?
Intertidal Yes__ No__; if yes, ___ sq ft
Outstanding Resource Waters Yes__ No__; if yes, ___ sq ft
Other resource area (i.e. shellfish beds, eel grass beds) Yes__ No__; if yes __ sq ft
If yes to any of the above, have you evaluated appropriate and practicable steps to: 1) avoidance; 2) if avoidance is not possible, minimization; 3) if either

avoidance or minimize is not possible, mitigation?

If no to any of the above, what information or documentation was used to support this determination?

Provide a comprehensive analysis of practicable alternatives for improvement dredging in accordance with 314 CMR 9.07(1)(b). Physical and chemical data of the sediment shall be included in the comprehensive analysis.

Sediment Characterization

Existing gradation analysis results? __Yes ___No: if yes, provide results.

Existing chemical results for parameters listed in 314 CMR 9.07(2)(b)6? ___Yes ____No; if yes, provide results.

Do you have sufficient information to evaluate feasibility of the following management options for dredged sediment? If yes, check the appropriate option.

Beach Nourishment ___
Unconfined Ocean Disposal ___
Confined Disposal:
Confined Aquatic Disposal (CAD) ___
Confined Disposal Facility (CDF) ___
Landfill Reuse in accordance with COMM-97-001 ___
Shoreline Placement ___
Upland Material Reuse____
In-State landfill disposal____
Out-of-state landfill disposal ____
(NOTE: This information is required for a 401 Water Quality Certification.)

IV. Consistency:

A. Does the project have effects on the coastal resources or uses, and/or is the project located within the Coastal Zone? _**X**_ Yes ___ No; if yes, describe these effects and the projects consistency with the policies of the Office of Coastal Zone Management:
Refer to Chapter 6*, Environmental Protection*, for a CZM Consistency review.

B. Is the project located within an area subject to a Municipal Harbor Plan? ___ Yes _**X**_ No; if yes, identify the Municipal Harbor Plan and describe the project's consistency with that plan:

WATER SUPPLY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **water supply** (see 301 CMR 11.03(4))? ___ Yes _**X**__ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **water supply**? ___ Yes _**X**__ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Wastewater Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Water Supply Section below.

WASTEWATER SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wastewater** (see 301 CMR 11.03(5))? ___ Yes _X_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **wastewater**? ___ Yes _X_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Transportation -- Traffic Generation Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wastewater Section below.

TRANSPORTATION SECTION (TRAFFIC GENERATION)

I. Thresholds / Permit

A. Will the project meet or exceed any review thresholds related to **traffic generation** (see 301 CMR 11.03(6))? _**X**_ Yes ___ No; if yes, specify, in quantitative terms:

(6)(a)(6) Generation of 3,000 or more New ADT on roadways providing access to a single location

B. Does the project require any state permits related to **state-controlled roadways**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Roadways and Other Transportation Facilities Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Traffic Generation Section below.

II. Traffic Impacts and Permits

A. Describe existing and proposed vehicular traffic generated by activities at the project site:

	Existing	Change	Total
Number of parking spaces	**275***	**712**	**987**
Number of vehicle trips per day:			
Unadjusted	**0**	**20,370**	**20,370**
Adjusted**	**0**	**8,780**	**8,780**

*325 spaces were allocated to the site location from the South Boston Parking Freeze, however 50 have been given to Massport.

**ITE Land Use Code(s): LUC 220 – Apartments, LUC 310 – Hotel, LUC 710 – Office, LUC 820 – Shopping Center

B. What is the estimated average daily traffic on roadways serving the site?

Roadway	Existing	Change	Total
1. **Summer Street**	*	*	*
2. **L Street**	*	*	*
3. **East 1st Street**	*	*	*

*Roadway volumes subject to detailed analysis to be documented in the EIR

C. If applicable, describe proposed mitigation measures on state-controlled roadways that the project proponent will implement:

The Project does not require mitigation on state-controlled roadways at this time.

D. How will the project implement and/or promote the use of transit, pedestrian and bicycle facilities and services to provide access to and from the project site?

Consistent with the State and City's goals to reduce auto dependency, the Project will include a series of Transportation Demand Management ("TDM") measures to encourage alternative modes of transportation and discourage single-occupancy vehicle trips. The Project will benefit from nearby access to the Massachusetts Bay Transportation Authority ("MBTA") services at South Station as well as the bus service and the surrounding pedestrian and bicycle networks. The TDM Plan for the Project will be fully explored and documented in the DEIR/DPIR filing.

E. Is there a Transportation Management Association (TMA) that provides transportation demand management (TDM) services in the area of the project site? _**X**_ Yes ____ No; if yes, describe if and how will the project will participate in the TMA:

The Proponent is an active member of the local Transportation Management Association, operated by A

Better City ("ABC"), and the Project will include a comprehensive transportation management plan developed in consultation with ABC, the Boston Transportation Department ("BTD") and MassDOT, to the extent appropriate. The DEIR/DPIR will describe a comprehensive program of TDM strategies to be implemented by the Project, including membership in ABC's TMA.

F. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation facilities? ____ Yes _**X**_ No; if yes, generally describe:

G. If the project will penetrate approach airspace of a nearby airport, has the proponent filed a Massachusetts Aeronautics Commission Airspace Review Form (780 CMR 111.7) and a Notice of Proposed Construction or Alteration with the Federal Aviation Administration (FAA) (CFR Title 14 Part 77.13, forms 7460-1 and 7460-2)?

The Proponent will determine the applicability of such filings and initiate them in due course in accordance with the Project Schedule.

III. Consistency

Describe measures that the proponent will take to comply with municipal, regional, state, and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services:

The Project will provide pedestrian and bicycle transportation infrastructure that is consistent with BTD Complete Streets guidelines and bicycle parking guidelines. The Project is consistent with Massachusetts and the City of Boston plans and policies to reduce vehicle trip generation and promote alternative modes of transportation. In addition, the Project is consistent with the City of Boston's zoning for the area as described in the Land section above.

TRANSPORTATION SECTION (ROADWAYS AND OTHER TRANSPORTATION FACILITIES)

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **roadways or other transportation facilities** (see 301 CMR 11.03(6))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **roadways or other transportation facilities**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Energy Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Roadways Section below.

ENERGY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **energy** (see 301 CMR 11.03(7))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **energy**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Air Quality Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Energy Section below.

AIR QUALITY SECTION

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **air quality** (see 301 CMR 11.03(8))? ___ Yes __**X**__ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **air quality**? ___ Yes __**X**__ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Solid and Hazardous Waste Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Air Quality Section below.

SOLID AND HAZARDOUS WASTE SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **solid or hazardous waste** (see 301 CMR 11.03(9))? ___ Yes _X_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **solid and hazardous waste**? ___ Yes _X_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Historical and Archaeological Resources Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Solid and Hazardous Waste Section below.

HISTORICAL AND ARCHAEOLOGICAL RESOURCES SECTION

I. Thresholds / Impacts

A. Have you consulted with the Massachusetts Historical Commission? __**X**__ Yes ___ No; if yes, attach correspondence. For project sites involving lands under water, have you consulted with the Massachusetts Board of Underwater Archaeological Resources? ____Yes __**X**__No; if yes, attach correspondence

A Project Notification Form has been submitted to the MHC. A determination is anticipated prior to the Secretary's decision on this ENF/EPNF.

B. Is any part of the project site a historic structure, or a structure within a historic district, in either case listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? __**X**__ Yes ___ No; if yes, does the project involve the demolition of all or any exterior part of such historic structure? __**X**__ Yes ___ No; if yes, please describe:

Portions of the existing historic structures will be demolished due to their condition and state of utility.

C. Is any part of the project site an archaeological site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ___ Yes __**X**__ No; if yes, does the project involve the destruction of all or any part of such archaeological site? ___ Yes ___ No; if yes, please describe:

D. If you answered "No" to all parts of both questions A, B and C, proceed to the **Attachments and Certifications** Sections. If you answered "Yes" to any part of either question A or question B, fill out the remainder of the Historical and Archaeological Resources Section below.

II. Impacts

Describe and assess the project's impacts, direct and indirect, on listed or inventoried historical and archaeological resources:

The Project will include demolition of several buildings on the site and retention and rehabilitation of the Turbine Hall.

There are 36 historic resources listed in the Massachusetts Cultural Resource Inventory (MACRIS) located within a ¼-mile radius of the Project Site. Of the 36 resources, four have been demolished and the remaining resources are not listed on the State or National Register of Historic Places. The adjacent resources will not be significantly impacted by the Project. Refer to Chapter 7, *Historic Resources*, for additional information.

III. Consistency

Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to preserving historical and archaeological resources:

A Project Notification Form has been submitted to the MHC and the Proponent will be in consultation with the MHC and identified interested parties at the federal, state, regional and local levels to address any impacts on historic resources by the Project.

CERTIFICATIONS:

1. The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

   Boston Herald – May 24, 2017

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

Signatures:

Signature of Proponent	5/24/17 Date	Signature of person preparing ENF
Ralph Cox		**Elizabeth Grob**
Name (print or type)		Name (print or type)
HRP 776 Summer Street		**VHB**
Firm/Agency		Firm/Agency
99 Summer Street, Suite 500		**99 High Street**
Street		Street
Boston, MA 02110		**Boston, MA 02110**
Municipality/State/Zip		Municipality/State/Zip
(617) 904-7000		**(617) 728-7777**
Phone		Phone

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Project Description

1.1 Introduction

In accordance with Massachusetts Environmental Policy Act ("MEPA") Massachusetts General Law ("MGL") Chapter 30, Section 61-62I and the regulations promulgated thereunder set forth at 301 CMR 11.00, and Article 80B of the City of Boston Zoning Code and Enabling Act (the "Code"), HRP 776 Summer Street, LLC, ("the Proponent") respectfully submits this joint Environmental Notification Form and "expanded" Project Notification Form ("ENF/EPNF") for the construction of a new mixed use development project, known as the L Street Station Redevelopment Project (the "Project"), in Boston, Massachusetts.

This ENF/EPNF is being submitted as a first step in the Boston Redevelopment Authority's ("BRA's"), d/b/a the Boston Planning and Development Agency ("BPDA"), Large Project Review process, and in accordance with the Executive Office of Energy and Environmental Affairs ("EEA") Massachusetts Environmental Policy Act ("MEPA") process. Following issuance of the BPDA Scoping Determination and the Secretary of the EEA's MEPA Certificate, a Draft Environmental Impact Report/Project Impact Report ("DEIR/DPIR") for the Project will be prepared and filed.

This chapter provides an overview of the existing site conditions and describes the Project. This chapter also presents Project-related benefits, an analysis of alternatives and a description of community outreach efforts.

1.2 Site Context and Existing Conditions

The Project site includes approximately 15 acres of developed land along the Reserved Channel in South Boston located at 776 Summer Street (the "Project Site" or "Site"). Refer to Figure 1.1 for the site location map. The Site contains a series of buildings and legacy infrastructure related to the Boston Edison L Street Power Station (the "Power Plant"), which operated on the Project Site from 1898 until its decommissioning in 2007. As discussed in Chapter 7, *Historic Resources*, the Power Plant is recognized as an architectural and engineering landmark for the electrical power industry. Preserving and enhancing the public value of the Site's historic structures and equipment is a central theme of the Project.

The Project Site is bounded on the west by Summer Street, on the south by East 1st Street, on the east by a land parcel owned by the Massachusetts Bay Transportation Authority ("MBTA"), and on the north by the Reserved Channel and the Conley

Dedicated Freight Corridor ("DFC"). The Project Site is located at the transition between the marine industrial and residential areas of South Boston, with the rapidly transforming Seaport neighborhood and Raymond L. Flynn Marine Park to the north.

The Project Site is located in close proximity to the Massachusetts Port Authority's ("Massport's") Conley Terminal, as well as area destinations including the Boston Convention and Exhibition Center ("BCEC") and the Boston Innovation and Design Building. The Project Site is located approximately 0.5 miles from the Silver Line at Design Center Place, and 1.5 miles to South Station, which provides access to the Red Line, Silver Line, commuter and passenger rails, Amtrak, and local and regional bus service. The Project Site is also located along local bus routes which provide access to South Station. See Figures 1.2a-b, Project Context Map, Figure 1.3, Existing Conditions Site Plan, and Figures 1.5 and 1.6, Existing Photos – Exterior and Interior.

Outside of the Power Plant structures, the Site is comprised of compacted dirt, gravel, and deteriorated paved areas with limited vegetation. The Project Site is significantly sloped from east to west and from south to north with approximately 15 feet of grade change throughout the Project Site.

1.2.1 Designated Port Area Context

The Project Site is currently within a Designated Port Area ("DPA") and is zoned as Maritime Economy Reserve ("MER"), consistent with historic industrial uses on the Site which were dependent upon saltwater intake for coolant. It is located at the western end of the DPA, and is separated from the Reserved Channel by the DFC. The DFC is intended to assist with Massport operations at Conley Terminal, and is intended to remove truck traffic from residential streets. It was previously reviewed and approved by MEPA (EEA #15053), and is anticipated to be completed late 2017. Because of the limited potential for future water-dependent industrial development of the Project Site, and the construction of the DFC which separates the Project Site from the waters of the DPA, the Proponent is in discussions with the City of Boston, Massport, the Department of Environmental Protection ("DEP"), the Massachusetts Office of Coastal Zone Management ("CZM"), and EEA to remove the DPA designation from the Project Site, as discussed in greater detail in Section 2.6, *Designated Port Area*.

The Proponent will work closely with Massport to ensure that the Project has no adverse impact with the existing and planned water-dependent industrial uses at Conley Terminal and the DFC immediately north of the Project shoreline.

1.3 Project Description

The Project proposes to construct a vibrant mixed use, transit oriented development, which celebrates the industrial past of the Site through the adaptive reuse of portions of the existing buildings and equipment. The Project will bring new energy

to the previously inaccessible Site with 2.1 million gross square feet[1] of mixed-use redevelopment featuring new public amenities, "Arts and Industry" space, and publicly accessible open space. The Project will be divided into eight individual development blocks to provide compatibility with the surrounding neighborhood and maintain a welcoming pedestrian scale roadway network. Figure 1.4 presents the proposed Site Plan for the Project.

The Project design has been and continues to be guided by City and community input supported by overlapping planning studies and regulations that provide the template for Project planning. Consistent with these planning and design themes and considerations, the Project proposes the following key components:

1. The cleanup and abatement of the Project Site and Power Plant buildings;
2. The adaptive reuse of portions of the existing Power Plant buildings and equipment to preserve their historical and architectural significance;
3. The transformation of a previously fenced off and inaccessible Site into a public waterfront destination with new dining and retail, as well as community arts and business uses; and
4. The provision of approximately 104,500 square feet of new outdoor public spaces with inviting landscaping, waterfront activation, programmable open areas, and amenities, including a new publicly accessible waterfront open space.

The Project is envisioned to rejuvenate the Site and re-integrate 15 acres of former industrial land into the thriving South Boston neighborhood. The Project will create active retail uses, places for outdoor dining, bicycle and pedestrian oriented publicly accessible open spaces and streetscape enhancements such as street trees, seating and lighting. In addition, five residential blocks, one 150-key hotel and two commercial buildings are planned. The residential blocks will bring new residents who will enliven the area on a 24/7 basis and help sustain economic growth.

To further its goal of creating an Arts and Industry district at the Site, the Proponent will make available both indoor and outdoor space for local artists, artisans and makers. This will include floor spaces for both local individuals and organizations to be located on-site, as well as spaces for the performance, display or sale of their work. This is in addition to making outdoor spaces available for Arts and Industry uses, which will be programmed in a complementary manner.

Central to the Project is the stabilization and rehabilitation of portions of the existing Power Plant Buildings, specifically turbine halls one through three (the "Turbine Hall"), which were constructed by Boston Edison between 1903 and 1908. As discussed in greater detail in Chapter 7, *Historic Resources,* the Turbine Hall is recognized as the most architecturally significant structure on the Project Site.

1 Exclusive of structure parking area

The following sections describe the proposed development program, building design approach, including sustainable elements and key site improvements, and Project schedule.

1.3.1 Proposed Development Program

The proposed development program is provided in Table 1-1 below:

Table 1-1 Proposed Development Program

Use/Element	Dimensions[1]/Quantity
Project Site Lot Area	15 Acres
Building Height[2]	44' – 220'
Office Uses	339,639 SF
Retail Uses	68,077 SF
Residential Uses	1.5 Million SF[3]
Hotel Uses (Keys)	150
Parking (Structured Spaces)	987 Spaces
Total	2.1 Million SF[4]

1 All areas are provided as gross square feet (GSF) as defined by the Code
2 In accordance with the Code, heights are measured from "Grade" consisting of the average elevation of the nearest sidewalks at the lines of the streets on which the Project abuts to the top of the highest occupied structure
3 Current program contains approximately 1,588 units
4 Exclusive of structure parking area

1.3.2 Site Improvements

Site improvements will include waterfront access enhancements and public realm improvements as described below.

Waterfront Access Enhancements

Enhancing waterfront access on the Project Site is a key goal of the Project. To achieve this goal, all new development is set back to the existing building line at the northern edge of the Turbine Hall, preserving a clear relationship between the historic buildings and the waterfront and creating approximately 1.15-acres of new, publicly accessible open space along the waterfront.

The open space is envisioned as a fully accessible public amenity, which provides views of the City, access to the water and access to the pedestrian walkways and retail corridors adjacent to the Turbine Hall. Refer to Section 3.6.2, *Pedestrian Access/Circulation and Accessibility,* for additional detail.

Public Realm Improvements

The Project Site design strategy focuses on creating vibrant and accessible pedestrian-oriented sidewalks and streets. The public realm will be upgraded to provide public amenities throughout the Project Site, including a new network of outdoor open spaces, direct access to the waterfront, arts and community programming and a thriving retail corridor that will link interior and exterior public spaces. Public realm improvements will be consistent with the fundamental goals of the Boston Transportation Department's ("BTD") Complete Streets guidelines, wherever feasible. Refer to Section 3.6, *Public Realm Improvements,* for additional details.

1.3.3 Site Access

Access to the Project Site is designed to encourage bicycle and pedestrian use through improvements to adjacent roadways. The primary pedestrian and bicycle connections to the surrounding neighborhoods are envisioned to be north/south along Summer Street and east/west along East 1st Street. Perimeter sidewalks and bicycle accommodations will connect to a network of internal sidewalks and roadways to provide safe and efficient travel.

Two vehicular access points/driveways are provided into the Project Site; one will be located on Summer Street near the intersection with Elkins Street, and a second will be located on East 1st Street near the intersection with M Street. Current congestion at the intersection of Summer Street and L Street/East 1st street is anticipated to be alleviated by the DFC, which will remove truck traffic from East 1st Street. Refer to Chapter 5, *Transportation*, for additional details.

1.3.4 Neighborhood Connectivity

The Project Site has convenient public transit access and is located approximately 0.5 miles from the Silver Line at Design Center Place, and 1.5 miles to South Station, which provides access to the Red Line, Silver Line, commuter and passenger rails, Amtrak, and local and regional bus service. The Project Site is also located along local bus routes that provide access to South Station, which facilitates opportunities to minimize vehicle trips and encourages alternative modes of travel.

The open space, pedestrian pathways and sidewalk connections to be provided as part of the Project will be designed to complete connections with the existing network of parks and pathways in the area, including creating links to nearby open space networks such as the Harborwalk and nearby Butler Park and Castle Island. Refer to Chapter 5, *Transportation*, for additional details.

1.3.5 Parking

Parking for the Project will be wrapped with retail and amenity spaces to hide it from view to the greatest extent practicable. Approximately 987 parking spaces are

proposed to support the Project. Additional street parking may be provided in consultation with BTD.

1.3.6 Anticipated Project Schedule and Phasing

The existing buildings, other than the Turbine Hall, will be demolished and the Project will be built over an approximately ten-year period beginning in 2018. The eight development blocks and associated open space will be constructed through multiple phases due to scale, logistics and market factors. The strategy for phasing would be to prioritize the rehabilitation of the Turbine Hall and construction of residential along First Street to re-link the Site to the neighborhood and create an active edge. The next phase would likely move to the blocks along Summer St, again to activate this edge and create a vibrant boundary that would invite the neighborhood to the Site. It would also prioritize neighborhood retail ahead of office and hotel uses. Ground floor public amenities will be implemented concurrent with the development of the respective blocks. Additional details on Project phasing and mitigation will be presented in the DEIR/DPIR.

1.4 Summary of Public Benefits

This section outlines the benefits to the public that are associated with the Project.

Urban Design

- ***Enhancement of the Property –***
  - Demolishes a significant portion of a decommissioned and vacant power station and renovates existing historic and architecturally significant Power Plant buildings for new community and commercial uses.
- ***Improved Street and Pedestrian Environment –***
  - Includes landscape and Project Site improvements such as active new open spaces with new amenities for a safe, secure, and inviting shopping, dining, and residential experience.
  - Enhances the pedestrian realm and connectivity from the South Boston Neighborhood through and around the Turbine Hall to a newly created waterfront open space.
- ***New Retail and Service Development –***
  - Improves area's urban design character through the provision of a human-scaled, mixed-use development, acting as a neighborhood hub for local cultural institutions and commercial activity within a live/work/play district.
- ***New Housing –***
  - Increase diversity of the housing stock through the construction of approximately 1,588 new residential units.

Sustainability/Green Building and Climate Change Resiliency

- ***Area Revitalization*** **–**
  - Revitalizes and reuses a previously developed, underutilized urban site as opposed to an undeveloped open space.
  - Provides increased density with a mix of uses, including commercial office, residential, hotel, and retail in close proximity to public transit and walkable from the South Boston neighborhood.
  - Provides an efficient redevelopment plan with new open space, including a new 1.15-acre publicly accessible waterfront open space.
- ***LEEDv4 Certifiable*** **–**
  - Complies with Article 37 by targeting Leadership in Energy and Environmental Design version 4 ("LEEDv4") certifiable status.
  - Incorporates a variety of sustainable design strategies that will improve water quality and reduce the urban heat island effect, among other environmental benefits.
- ***Stormwater Management*** **–**
  - Incorporates on-site stormwater management and treatment systems that are expected to improve water quality, reduce runoff volume, and control peak rates of runoff in comparison to existing conditions.
  - Is not expected to result in the introduction of any increased peak flows, pollutants, or sediments that would potentially impact the local drainage systems.
- ***Resource Conservation*** **–**
  - Maximizes the conservation of energy and water, and minimizes impacts to regional infrastructure and water resources by utilizing sustainable design strategies and exceeding the minimum building energy code requirements.
  - Meets the requirements of the current Massachusetts Stretch Energy Code.
  - Reduces overall annual energy consumption by an estimated 15.4 percent through the implementation of energy optimizing building design and systems, which equates to an estimated 10.2 percent reduction in stationary source CO2 emissions. (Note, the percentages of energy use are different than emission reductions due to emissions conversion factors.)
  - Intends to participate in local utility incentive programs to evaluate the cost benefit of various energy conservation measures and maximize building energy performance.
- ***Climate Resilience*** **–**
  - Seeks to integrate climate change adaptations that reduce vulnerability to rising sea levels and changes in intensity and frequency of storms.
  - Provides protection to the Site relative to the FEMA 100-year and 500-year floodplain limits through site grading and landscaping.

- Raises the Project Site grade so that the finished floor elevation for the Project is at +21.5 BCB, which includes taking into consideration sea level rise scenarios over the lifetime of the Project, making the Project resilient to current and future extreme storm events.

Transportation

› ***Roadway Improvements –***

- Includes significant functional and aesthetic improvements to the existing Project Site that will benefit the surrounding area.
- Allows for potential improvements at the adjacent Summer Street/L Street intersection by setting Project building back from the existing roadway.

› ***Trip Reduction –***

- Captures internal trips between different uses, resulting in the reduction of vehicle trips and creating opportunities to limit parking through sharing of parking spaces for different users by time of day.

› ***Transportation Demand Management –***

- Incorporates bicycle accommodations in compliance with BTD's guidelines to encourage bicycling, as well as walking, as strong transportation modes.
- Implements a robust program of TDM strategies to take full advantage of nearby public transportation options.

Social and Economic Benefits

› ***Additional Residential Opportunities –***

- Provides up to approximately 1,588 new units of housing – a low traffic-generating use – geared to meet the needs of both the for-sale condominiums and rental housing markets.
- Promotes a vibrant mixed-use neighborhood that will draw customers to restaurants, stores, and services in the area.

› ***Affordable Housing –***

- Establishes affordable housing opportunities consistent with the BPDA's Inclusionary Development Policy.

› ***Enhanced Retail Opportunities –***

- Provides new and diverse retail opportunities for neighborhood residents, visitors, and the public at large.

› ***New Job Creation –***

- Enhances the economy by providing new job opportunities and a source of customers for local retail and restaurant establishments.
- Creates permanent jobs relating to the retail, restaurant, parking and residential administration components, and creates approximately 1,700 construction jobs in a variety of trades.

› ***Enhanced Tax Revenues –***

- Generates new real estate tax revenues for the City of Boston.

1.5 Agency Coordination and Community Outreach

Over the last several months, the Proponent has engaged abutters, neighborhood groups, community leaders, business owners, elected officials, City and State regulatory agencies, and other stakeholders through a vigorous public engagement process to seek input and feedback as the Project team prepared the redevelopment plan for the Project. The

1.5.1 City of Boston

As discussed in Chapter 2*, Planning Context and General Information*, the Proponent, in close coordination with the BPDA, has hosted a series of meetings including an open house, two walking tours of the Project Site, and two design charrettes prior to this filing. Through this engagement process, the City received hundreds of recommendations from the community expressing their aspirations for the Project Site and thoughts and ideas regarding the overall development. The City's findings from this outreach effort are included in Appendix B.

In addition to working with the BPDA on community outreach, the Proponent has met on several occasions with City staff to confirm that the Project is developed in a manner that is consistent with the City's goals, and that the Project filings are responsive to their concerns. The Proponent is committed to implementing a Project that enhances the surrounding community and provides significant benefit to the City.

1.5.2 State Agency Coordination

The Proponent has consulted with state agencies during the planning phase of the Project to ensure compatibility with state policies and planning efforts. In particular, members of the team have met with EEA, Massport, DEP, and CZM on multiple occasions to discuss compatibility with the surrounding maritime uses and consistency with the DPA. The Proponent endeavors to deliver a project that is respective of its context and enhances the surrounding uses. Reflective of this effort, and to minimize any potential impacts to the DFC and Massport's truck access, the Project includes a buffer of commercial and residential uses between the DFC and planned residential uses.

1.6 Alternatives Analysis

In accordance with 301 CMR 11.07(6)(f), this section provides a summary of Site development alternatives considered, including a future "No-Build" alternative, a "Preferred Alternative" and "Alternative B."

1.6.1 Project Alternatives

The following project alternatives are evaluated in this section:

- ***No-Build Alternative –*** The No-Build Alternative would leave in place the existing conditions at the Project Site.
- ***Alternative B –*** Alternative B contemplates infill development of the existing structures to accommodate 1.5 million square feet of office development along with a new parking garage to the east of the existing buildings.
- ***Preferred Alternative –*** The Project as discussed in Section 1.3.2, consisting of the renovation of some of the buildings and the construction of a new mixed-use development.

Table 1-2 Project Build Alternatives

	Alternative B	Preferred Alternative
Total Square Footage	1.5 Million SF	2.1 Million SF
Parking Spaces	1,500	987
Number of New Buildings	- 0 -	8
Primary Ground Floor Use	Office	Public Uses / Residential
Primary Upper Floor Use	Office	Hotel/Residential/ Commercial/Retail

No-Build Alternative

The No-Build Alternative would not include any of the community or economic benefits associated with the Project, as discussed in Section 1.4, *Summary of Public Benefits*. It would leave the currently vacant buildings on the property in place, and the Project Site and the waterfront would remain inaccessible to the public. The existing buildings and facility equipment are not suitable for reuse without significant repair and rehabilitation, therefore re-occupation of the buildings is not feasible without significant capital investment.

The No-Build Alternative is compliant with Chapter 91 regulations in its existing condition; however, given the specialized nature of the existing buildings and lack of deep water access due to the DFC, the only realistic opportunity for the existing buildings to serve a water-dependent industrial use would be the continued use of the facility for power generation requiring cold water intake. Supported by the lack of meaningful proposals over the past decade to reoccupy the site for power generation, it is unlikely that a water-dependent industrial use could justify the costs necessary to reoccupy the buildings and restore functionality. As such, the No-Build Alternative fails to provide any new public benefits or contribute to the maritime economy, and therefore fails to satisfy the intended goals of Chapter 91 or DPA regulations. Additionally, the No-Build Alternative would not include any of the

environmental benefits anticipated by the cleanup of the Project Site and improvements to stormwater management.

Alternative B

Alternative B contemplates the reoccupation of the existing structures by redeveloping the Site for general office uses. This alternative includes 1.5 million square feet of infill development within the existing buildings supported by a new 1,500 car garage on the former surface parking lot east of the Power Plant. The Proponent explored several options for redevelopment of the property prior to acquiring the Site. Due to existing site grading challenges, contamination concerns, and other site constraints, feasible redevelopment alternatives for the Site are severely limited. The two potential development alternatives explored for the Site were this infill developed alternative (Alternative B) and the complete redevelopment of the Site for mixed uses as described below as the Preferred Alternative. Alternative B would reactivate the Site and provide new jobs and tax revenue; however, it would fail to meet the stated goals of the City and community for a mixed-use development on the Site, as described in Chapter 2, *Planning Context and General Information*.

While Alternative B may include some improvement of the existing Turbine Hall to stabilize the existing structures for use, the structures would remain inaccessible to the Public, and would be repaired for functionality, not rehabilitated to highlight their period significance as is proposed by the Project.

It is assumed that Alternative B would be a nonwater-dependent use, and therefore inconsistent with Chapter 91 and DPA regulations absent a boundary review. The specialized nature of the existing buildings and the lack of deepwater access limit the potential for redevelopment of the Site for water-dependent uses as previously discussed (refer to Figure 1.7).

Preferred Alternative

The Preferred Alternative (or the Project), as described in Section 1.3 and shown in Figure 1.4, proposes 2.1 million square feet of mixed-use development, including the rehabilitation of portions of the historic building and the construction of new mixed-use buildings. This alternative will involve and engage the South Boston community and provide all of the public benefits described in Section 1.4, including the addition of new open space; dedicated areas for arts, culture and industry; and a variety of retail and commercial uses.

The Preferred Alternative will activate the waterfront and improve connectivity throughout the neighborhood. By proposing a mix of uses, the Preferred Alternative will become a destination for both residents and visitors, and will generate economic benefits to the surrounding neighborhood and the City.

1.6.2 Qualitative and Quantitative Comparison Analysis

The sections below compare potential environmental impacts of the Project alternatives. Table 1-3 below provides a quantitative impact analysis comparing the No-Build Alternative, Alternative B and the Preferred Alternative.

Table 1-3 Comparison of Project Alternatives

Impact Category	No-Build Alternative	Alternative B	Preferred Alternative
Land			
Total Impervious Surface Area (building footprint and paved area)	9.8 ac	13 ac	12.5 ac
Waterways/Public Benefits			
Ch. 91 Compliant FPAs[1]	NA	No[2]	Yes
Public Open Space	NA	Limited	Yes
Restoration of Historic Buildings	No	Limited	Yes
Water & Wastewater			
Water Use (GPD)	0	123,750	329,890
Wastewater Generation (GPD)	0	112,500	299,900
Traffic			
Peak Hour AM Trips	0	1,002	620
Peak Hour PM Trips	0	1,054	692
Parking			
Parking Spaces	350	1,500	987

1 Facilities of Public Accommodation as defined under 310 CMR 9.02.
2 FPA's are not required beyond 100 feet of the Project Shoreline in Private Tidelands under Chapter 91.

Land

The No-Build Alternative would result in no change in impervious area; however, existing pervious areas on the Project Site are comprised of compacted dirt and gravel with limited vegetation and poor infiltration capacity. Alternative B would result in an increase in impervious area due to the construction of the parking garage on the eastern portion of the Site. Given the anticipated use as an office building, public access to the site would be limited, and landscape/green space improvements would be geared toward the benefit of the employees rather than the public. The Preferred Alternative will create new public open and landscaped green space in areas that are currently vacant and inaccessible. The Preferred Alternative will result in an increase in impervious area, primarily due to the development of the eastern half of the parcel which is currently undeveloped, but will improve the quality, accessibility, and functionality of the Project Site.

Wetlands and Waterways

The No-Build Alternative would continue to comply with Chapter 91 and DPA regulations. Alternative B is assumed to be a nonwater-dependent use and therefore require a DPA boundary review to be consistent with Chapter 91 and DPA regulations. The Preferred Alternative will comply with Chapter 91 following revision of the DPA boundary, and unlike the two other alternatives, will significantly increase public use and enjoyment of the waterfront.

The Preferred Alternative will result in a more thorough cleanup of existing contamination on the Project Site than either of the other two alternatives.

Water and Wastewater

Due to the larger development program and inclusion of residential and hotel uses, the Preferred Alternative is expected to require more potable water and result in more sanitary sewage than Alternative B.

Traffic and Parking

Alternative B generates fewer daily trips than the preferred alternative, but more trips during the morning and evening peak hours. For traffic studies, only peak hour trips in the morning and evening are analyzed as opposed to the total daily traffic because it's the time frame when drivers are more likely to experience the effects of congestion in area intersections due to project generated trips.

Trips generated by office use tend to peak substantially during the morning and evening peak hours compared to other land uses. This is because employees all tend to arrive and depart at the same time. Residential, hotel, and retail land uses have a wider spread of trips throughout the day and don't experience such a heavy peak at one given time. Therefore, the impact of vehicle trips on the community would be greater from the smaller office development in Alternative B than the larger mixed-use development in the Preferred Alternative.

Historic

The Preferred Alternative will rehabilitate the Turbine Hall as a public destination, activated with new arts and culture space. Due to the high cost of preservation and nature of the use, it is assumed that Alternative B would only restore the Turbine Hall to functionality and would not reactivate the space for public use. The No-Build Alternative would take no action to preserve the buildings or provide new public access.

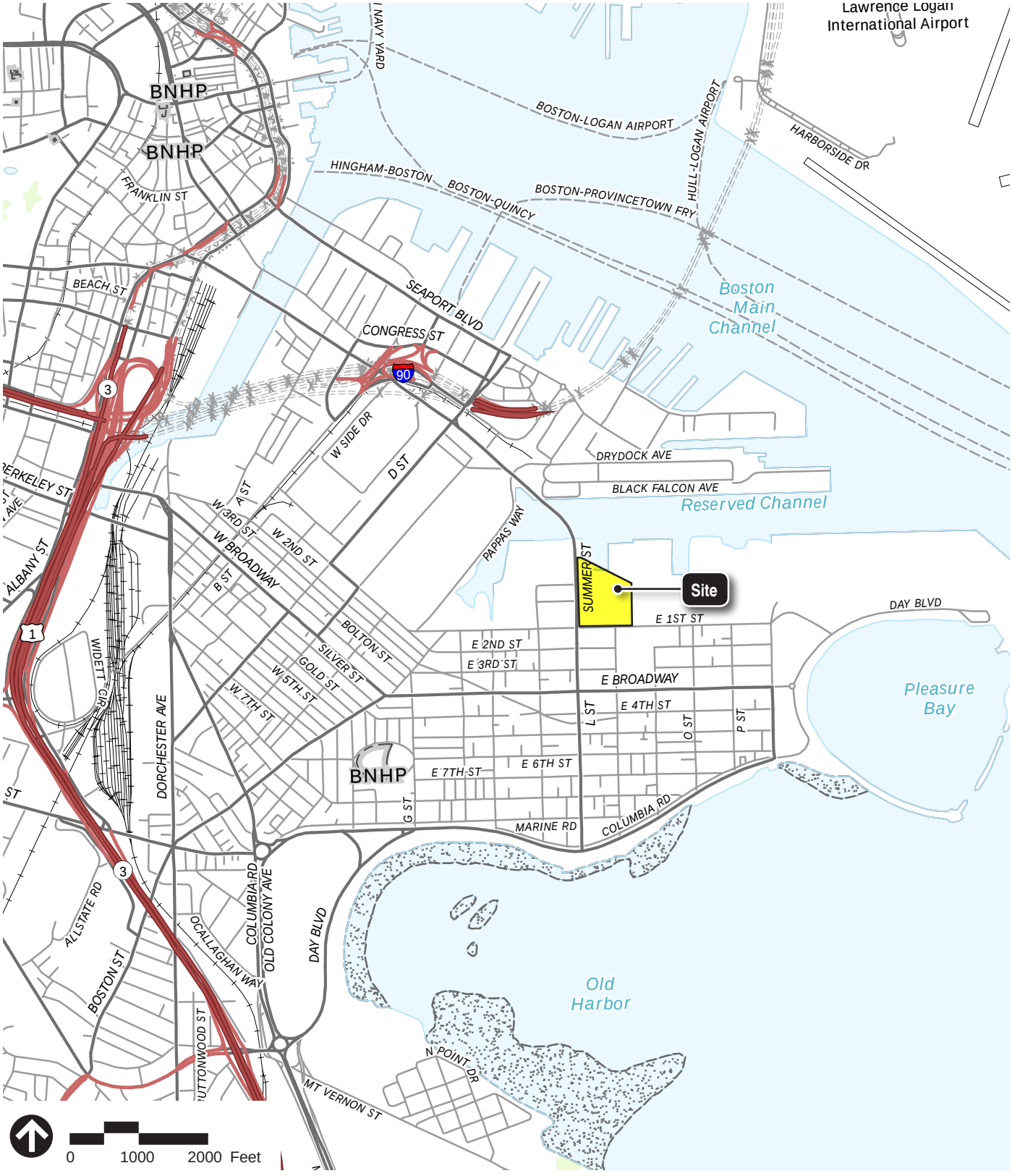
Consistency with Planning

As discussed in Chapter 2, *Planning Context and General Information*, the Preferred Alternative Supports the goals of the South Boston neighborhood and the City of Boston. This alternative will provide open space that the neighborhood of South Boston is currently lacking. The Preferred Alternative will create a "live-work-play"

neighborhood with a variety of new uses. Under the No-Build Alternative, the Project Site would remain inaccessible to the public, cutting off a large area of the waterfront for public use and enjoyment. Alternative B would provide a limited level of access, but would not deliver the active waterfront proposed by the Project.

1.6.3 Conclusion

The Preferred Alternative avoids or minimizes environmental impacts to a greater extent than the No-Build Alternative or Alternative B by improving water quality by improving the treatment of stormwater across pervious surfaces. The Preferred Alternative will provide a modern and sustainable development that is consistent with planning recommendations, and which strongly supports the economic development and sustainable goals of the City and State. Analysis of the Preferred Alternative, including its existing site characteristics, development costs, and mitigation requirements did not identify a practical alternative that would significantly reduce the environmental impacts over the Preferred Alternative. The Preferred Alternative offers substantial public and environmental benefits that are expected to extend to the broader community, City, and region, providing new opportunities for housing, employment, and recreation. Consequently, the Preferred Alternative is carried forward for further analysis in this document.

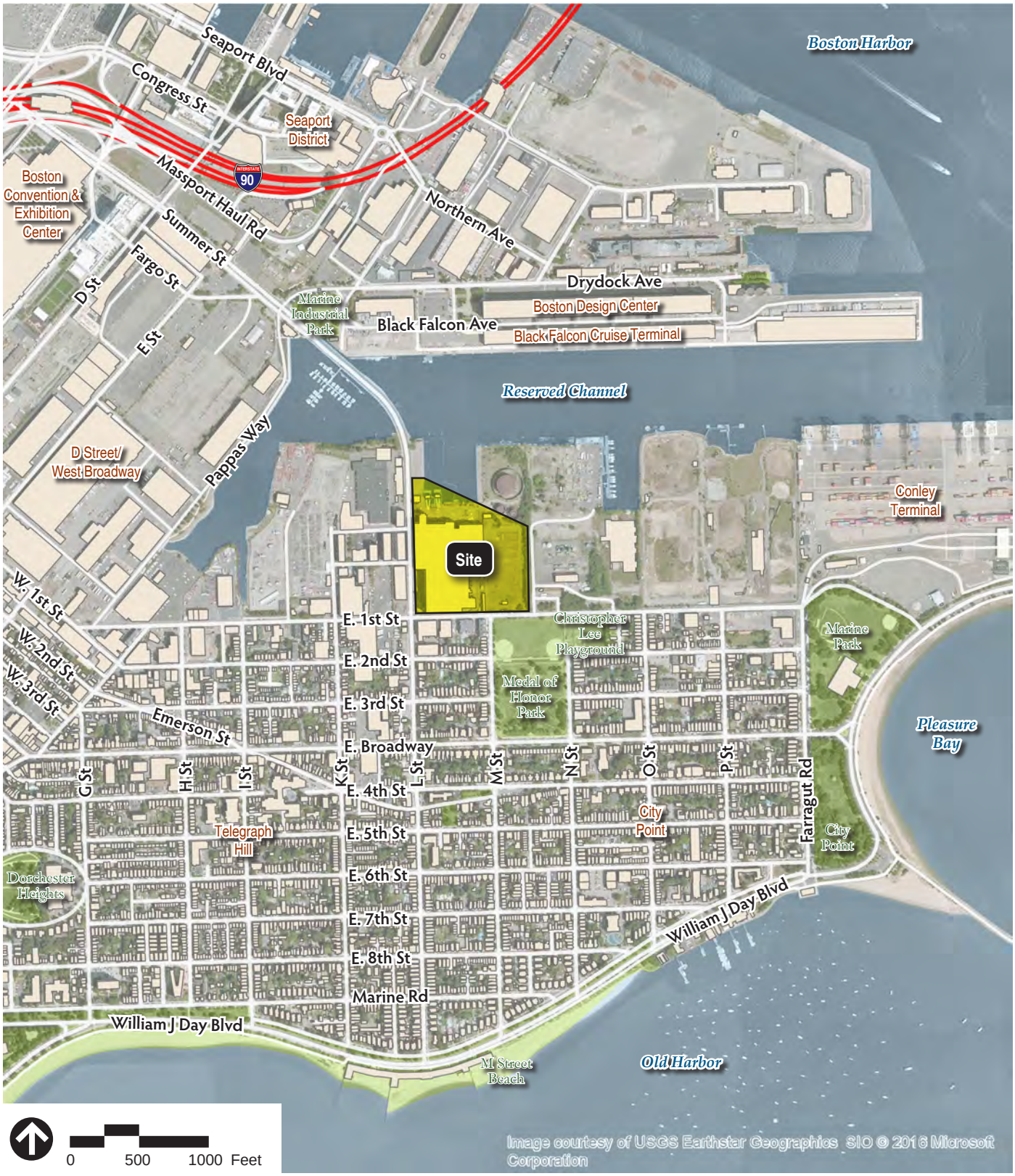


Source: 2015 USGS Topo Boston South

Figure 1.1

Project Location Map

L Street Station Redevelopment
Boston, Massachusetts

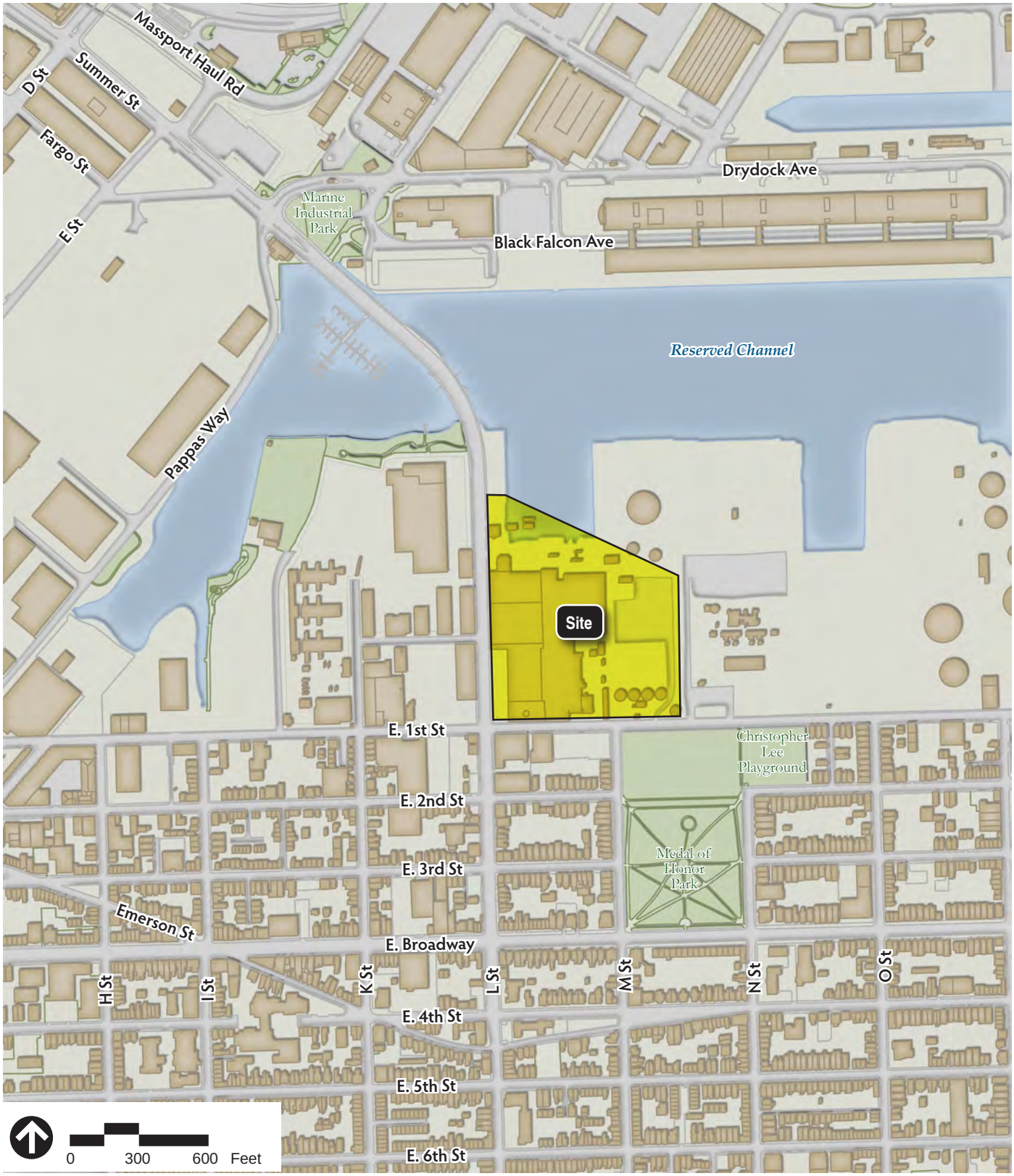


Source: ArcGIS Bing Aerial, MassGIS

Figure 1.2a

Project Context Map

L Street Station Redevelopment
Boston, Massachusetts



Source: Boston Planning & Development Agency

Figure 1.2b

Project Context Map

L Street Station Redevelopment
Boston, Massachusetts

Source: MassGIS

Figure 1.3

Existing Conditions Site Plan

L Street Station Redevelopment
Boston, Massachusetts

KEY

- PUBLIC OPEN SPACE
- PROPOSED BUILDING
- EXISTING BUILDINGS TO REMAIN
- PROJECT SITE
- CHAPTER 91 JURISDICTION

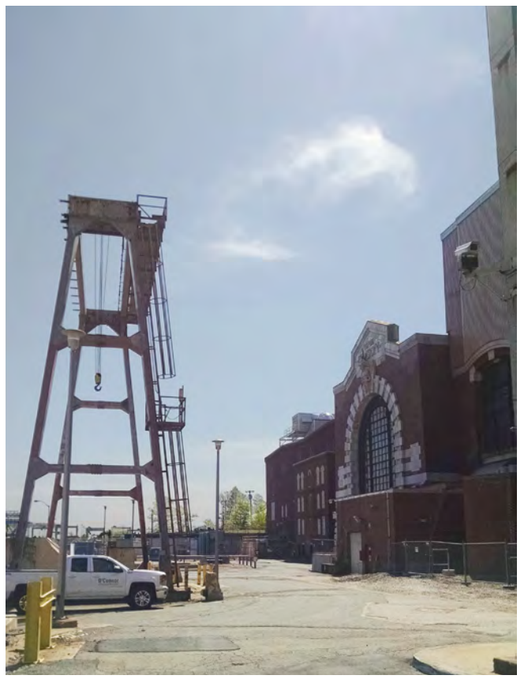
N

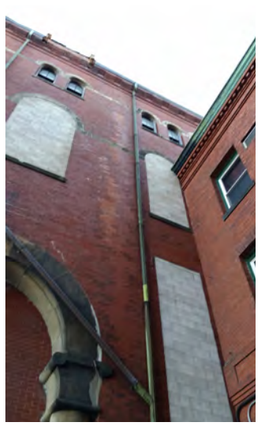
1 100 200

L Street Station Redevelopment | Boston, Massachusetts

SGA ARCHITECTURE | PLANNING
INTERIOR DESIGN | VDC
BRANDED ENVIRONMENTS

FIGURE 1.4
PROPOSED CONDITIONS SITE PLAN





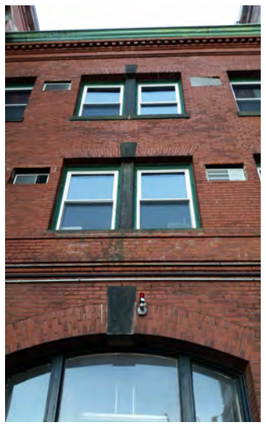
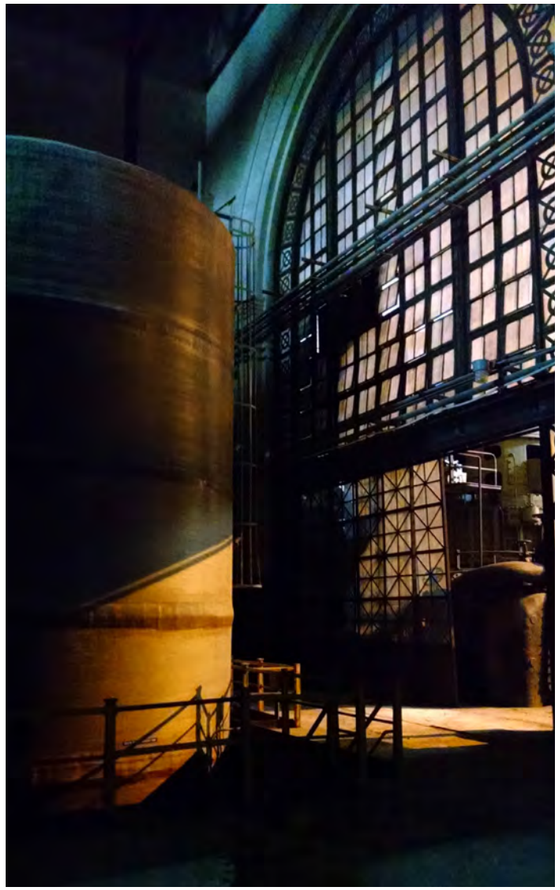
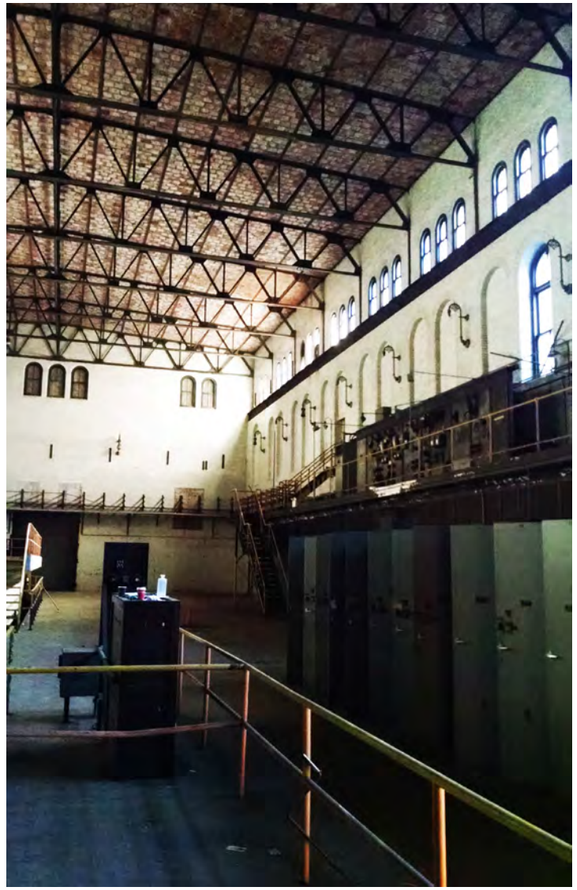
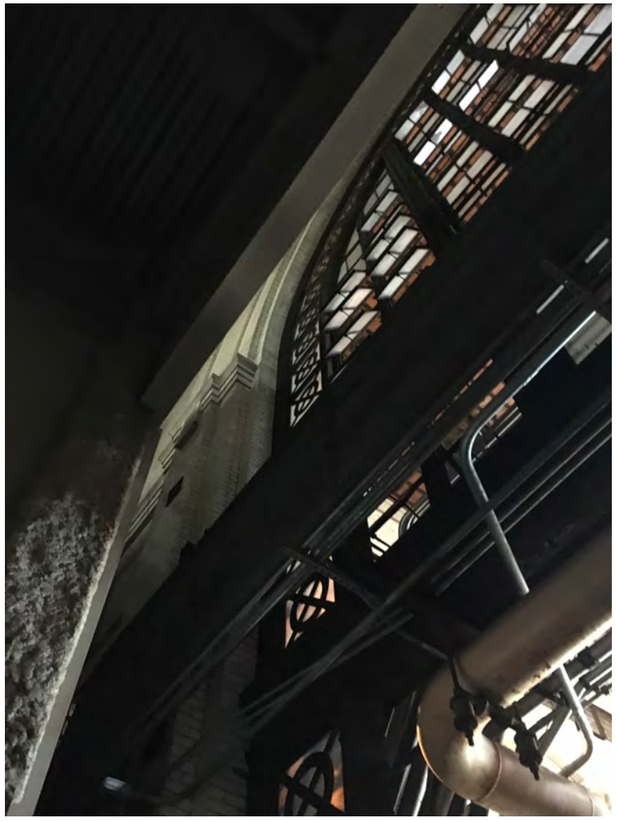
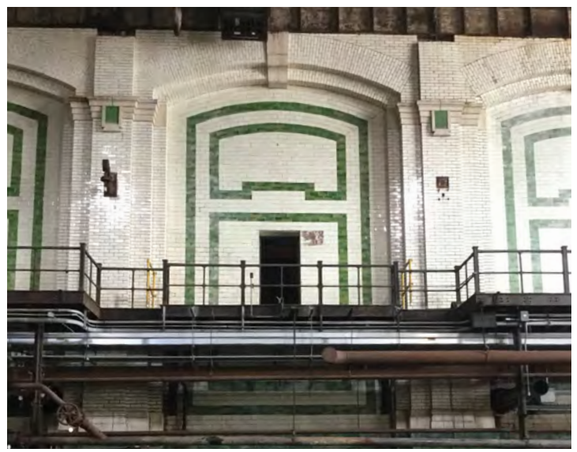


FIGURE 1.5
EXISTING PHOTOS | EXTERIOR



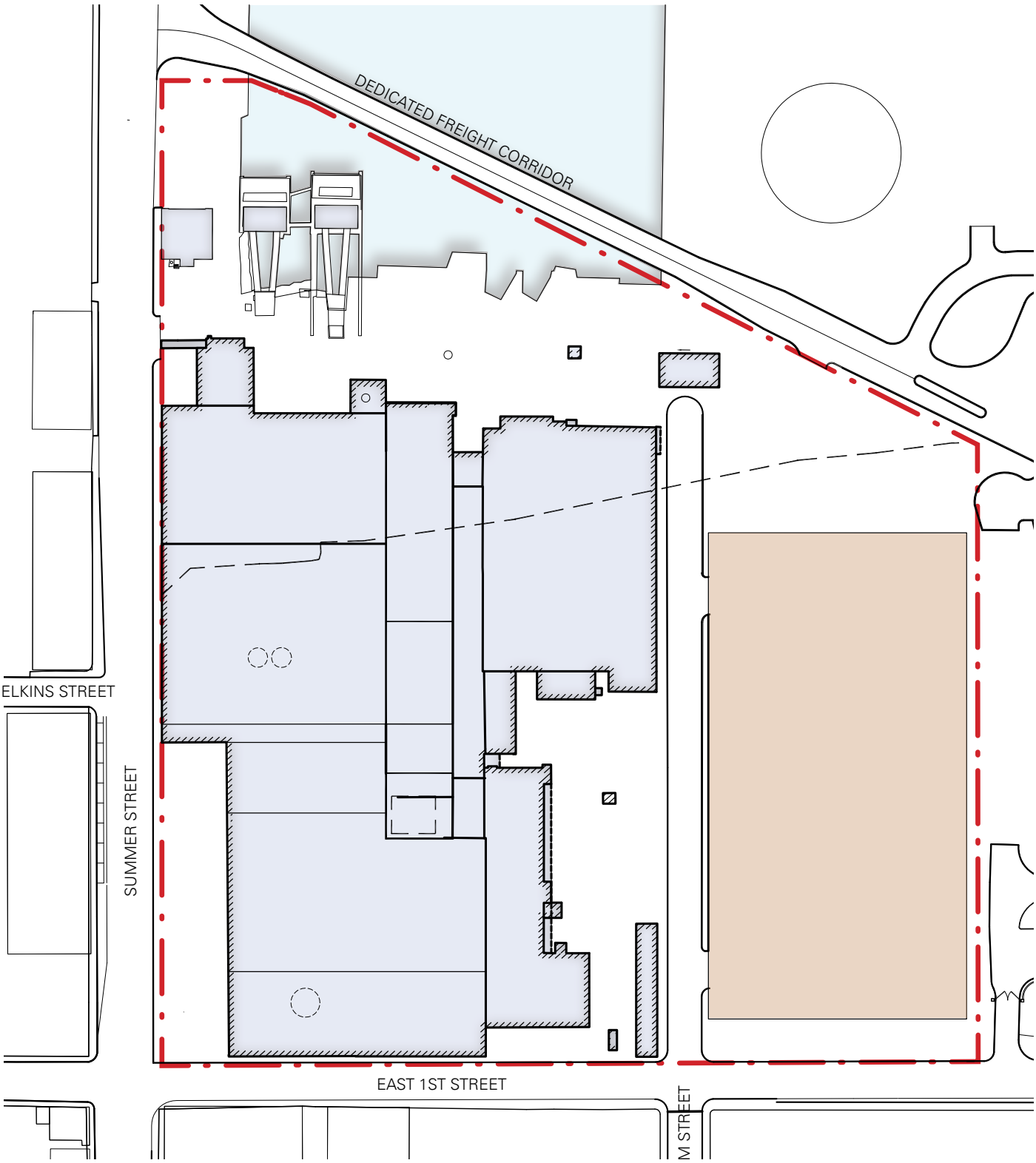






L Street Station Redevelopment | Boston, Massachusetts

FIGURE 1.6
EXISTING PHOTOS | INTERIOR



KEY

- EXISTING BUILDING
- PARKING GARAGE
- PROJECT SITE
- CHAPTER 91 JURISDICTION

N

1 100 200

L Street Station Redevelopment | Boston, Massachusetts

SGA ARCHITECTURE | PLANNING
INTERIOR DESIGN | VDC
BRANDED ENVIRONMENTS

FIGURE 1.7
ALTERNATIVE B

2

Planning Context and General Information

2.1 Introduction

This Chapter provides a summary of planning and regulatory controls and anticipated permits applicable to the Site.

2.2 Planning Context

The City of Boston and the South Boston Neighborhood have been the subject of extensive City planning efforts for many years. When the potential for redevelopment of the Project Site became apparent, the City initiated a proactive effort to help guide potential future development of the Site. Since acquisition of the Property, the City and Proponent have worked cooperatively to ensure that the Project would be planned and designed to be consistent with the goals of area planning guidelines including driving inclusive economic growth and new housing opportunities, improving the quality of life in the surrounding South Boston Neighborhood, and creating a vibrant, publicly accessible waterfront destination.

To ensure that the City and community goals for the Project are prioritized, the Proponent has established the following guiding principles for the Project:

- Decommission and clean up this heavily industrial Project Site so that it is clean, healthy and safe;
- Remove the walls and fences surrounding the Project Site, and create connections into and through the Site, so that it is accessible and inviting to the South Boston neighborhood, all the way down to the water's edge;
- Convert the Project Site to a live/work/play mix of uses that fit with the neighborhood;
- Preserve and protect the continuing operation of an active, thriving Conley Terminal;
- Include retail and other uses, and significant public spaces, that will be used by the neighborhood;
- Preserve some significant building elements to give the Site character and a sense of history;
- Minimize the use of cars by providing better alternatives (buses, shuttles, ridesharing services, biking, walking, etc.); and
- Make the Site green, sustainable and resilient.

By designing the Project in a manner consistent with these design principles, the Project will satisfy the City and community's goals for the Project Site. A summary of plans and their recommendations and goals as they pertain to the Project Site and the South Boston Neighborhood is provided below.

2.2.1 BPDA Planning Process and Guiding Principles

In early 2017, the BPDA initiated a public engagement process to solicit community input to better understand the priorities and aspirations of the neighborhood and affected stakeholders. The BPDA and Proponent hosted an open house and two walking tours of a portion of the Turbine Hall to introduce the Project Site and its history to the community, as well as review the regulatory and planning context related to the Site. Two community workshops were held in February to solicit input used to develop the "Redevelopment Vision and Concepts" which were subsequently presented in the BPDA's Planning Process Report provided in Appendix B.

2.2.2 Imagine Boston 2030

Imagine Boston 2030 is the first citywide plan in 50 years which aims to create a framework to preserve and enhance Boston while embracing growth as a means to address challenges and make the City stronger and more inclusive. The plan sets goals to preserve wisely, enhance equitability, and grow inclusively through;

- Providing quality of life in accessible neighborhoods;
- Driving inclusive economic growth;
- Promoting a healthy environment and adapting to climate change; and
- Investing in infrastructure, open space and culture.

The Project has embraced these goals throughout planning and design. As discussed in Section 1.3, *Project Description,* the planning principles developed for the Project are closely aligned with the City's Imagine Boston 2030 goals.

The Project represents a considerable investment in a previously inaccessible industrial site, and proposes to transform the Project Site into a publicly accessible mixed use waterfront destination. As described in Chapter 1, *Project Description,* the Project will serve to drive inclusive economic growth with new job and housing opportunities, and improve quality of life in the surrounding South Boston neighborhoods.

2.2.3 Go Boston 2030

The Go Boston 2030 plan, compiled by the Boston Transportation Department ("BTD") on behalf of Boston's residents and workers as well as the Mayoral Advisory Committee, envisions the City's long-term transportation future. The plan focuses primarily on;

- Increasing connectivity between the neighborhoods of Boston for all modes of travel;
- Collaborating on design and education to substantially reduce collisions on every street;

- Prioritizing making travel predictable on Boston's transit and roadway networks; and
- Improving equity, economic opportunity and climate preparedness.

As presented in Chapter 5, *Transportation,* the Proponent is committed to a thorough analysis of the surrounding roadway conditions to assess traffic and safety for pedestrians and motorists, as well as a thoughtful site design with an eye toward the future of transportation in the City.

2.2.4 Seaport Public Realm Plan

The Seaport Public Realm Plan, published in 1999 by the then BRA (now BPDA), aims to ensure that development within the Seaport district will include benefits to the community beyond business expansion and job opportunities. The primary objectives of the plan are to;

- Promote access to the Boston Harbor;
- Preserve and enhance the industrial port;
- Create a mixed-use neighborhood to attract people beyond the end of the workday;
- Develop within the economic context of Boston and add to the local and regional economy; and
- Ensure that the residential community of South Boston benefits from development in the area.

  The plan is implemented through the Municipal Harbor Planning process and zoning of the South Boston Waterfront. Although the Project Site is not located within the jurisdiction of these regulatory controls, the general goals for a mixed-use, sustainable and accessible Project will be achieved through this Project.

2.2.5 South Boston Waterfront Sustainable Transportation Plan

The South Boston Waterfront Sustainable Transportation Plan, published in 2015 by the Massachusetts Convention Center Authority, Massport, the City of Boston and the Massachusetts Department of Transportation ("MassDOT"), in collaboration with A Better City ("ABC"), provides a vision for the South Boston Waterfront to define and prioritize transportation system investments, influence travel behaviors, and improve the public realm. The plan seeks to transform the South Boston Waterfront into a neighborhood that;

- Supports a broad cross-section of the region's economic drivers, including:
  - Traditional maritime and industrial trades;
  - Innovative economy/incubator businesses;
  - Financial, legal, and technology sectors;
  - Convention and tourism business and related services; and
  - Arts and culture.

- Provides residential space and quality of life for a diversity of Boston's residents; and
- Is a world renowned, memorable, and accessible destination for tourists, conventioneers, and visitors alike.

The plan recommendations include: improving regional access, expanding community connections, enhancing internal waterfront mobility, improving the public realm, implementing supportive management strategies and policies, and maintaining a state of good repair. Sustainable transportation planning is a foundational element of the Project Design. Consistency with this plan is discussed in greater detail in Chapter 5, *Transportation*.

2.2.6 Open Space & Recreation Plan

The Open Space and Recreation Plan 2015-2021, published January 2015 by the Parks and Recreation Department, assesses the current state of open space in Boston and outlines the challenges and potential solutions to expanding and improving that access. The challenges identified by the Open Space and Recreation Plan are the quantity of and access to open space, the quality of open space, and climate change and resilience. The specific goals of the plan are;

- Steward the exceptional open space system that the City of Boston has inherited;
- Envision and create an accessible and equitable open space system for Boston's future; and
- Enhance the urban natural environmental and improve quality of life and well-being in the City.

For South Boston, the plan emphasizes the importance of publicly-accessible waterfront as the greatest open space resource for the area. The ratio of acres of open space per 1,000 residents is currently lower in South Boston than the City average. As the residential population in the area grows, creation of new open space is essential to help preserve and improve upon the current quality of life. As discussed in greater detail in Chapter 3, *Urban Design*, the Project will provide new access to a previously restricted portion of the waterfront. Through thoughtful design, the Project endeavors to create a unique public waterfront destination that blends forward thinking resiliency and sustainability strategy with homage to its industrial past.

2.2.7 Boston Creates

Boston Creates, published in 2016, broadly outlines the City's to do in order to realize its vision for arts and culture over a 10-year time frame. It includes strategies and tactics to achieve the following goals;

- Create fertile ground for a vibrant and sustainable arts and culture ecosystem;
- Keep artists in Boston and attract new ones here, recognizing and supporting artists' essential contribution to creating and maintaining a thriving, healthy, and innovative city;

- Cultivate a city where all cultural traditions and expressions are respected, promoted, and equitably resourced, and where opportunities to engage with arts and culture are accessible to all;
- Integrate arts and culture into all aspects of civic life, inspiring all Bostonians to value, practice, and reap the benefits of creativity in their individual lives and their communities; and
- Mobilize likely and unlikely partners, collaborating across institutions and sectors, to generate excitement about, and demand and resources for, Boston's arts and culture sector.

As the Project design continues to advance, the Proponent looks forward to collaborating with local groups and though leaders to support the continued growth of arts and culture in South Boston.

2.2.8 Housing a Changing City

The Housing a Changing City plan was published in 2015 with the goal of providing housing for all people, regardless of race, age, economic status, or physical ability in the city of Boston. The plan outlines strategies to help achieve this goal, while also accommodating an increase in the number of households in the City, generating revenue through development, and creating construction jobs through the year 2030. Specific goals of the plan include;

- Create more than 53,000 housing units by 2030, and mechanisms to achieve higher levels of affordability;
- Produce more deed-restricted low, moderate, and middle income housing through inclusionary development, density bonuses and other tools; and
- Develop a robust anti-displacement policy package.

As presented in Chapter 1, *Project Description,* the Project supports the goals of this plan through the creation of approximately 1,588 new residential units, including affordable and accessible units. The Project establishes affordable housing opportunities consistent with the BPDA's Inclusionary Development Policy.

2.2.9 Climate Ready Boston

Climate Ready Boston is an ongoing initiative to develop resilient solutions to prepare the City for climate change. A report was released in December 2016 to address the current and future challenges that Boston faces in regards to climate change. This report features;

- Updated climate projections for extreme temperatures, sea level rise, extreme precipitation, and storms;
- A vulnerability assessment outlining the potential risks associated with extreme heat, stormwater flooding, and coastal and riverine flooding for Boston's people, buildings, infrastructure and economy;

- A list of focus areas where some risks may be spatially concentrated including Charlestown, Charles River, Dorchester, Downtown, East Boston, Roxbury, South Boston and the South End; and
- A list of climate resilience initiatives that are summarized in an Implementation Roadmap that sets forth responsibility, time frame and key milestones for each initiative.

This plan highlights South Boston as one of the high-risk areas of Boston due to the potential losses it faces with predicted coastal flooding and sea level rise conditions. With the heightened risk South Boston faces, the Climate Ready Boston initiative calls for resiliency measures to be put in place for new development occurring in South Boston. Consistency with the Climate Ready Boston initiative is detailed in Chapter 4, *Sustainability/Green Building and Climate Change Resiliency*.

2.3 Zoning Controls/Planned Development Areas

2.3.1 Zoning and Regulatory Controls (PDA)

The Project Site is located within the South Boston Marine Economy Reserve Subdistrict of the Harborpark Dorchester Bay/Neponset River Waterfront District, which is governed by Article 42A of the Code and shown on Zoning Map 4B/4C. The entire Project Site is also located within the Restricted Parking Overlay District ("RPOD").

Given a number of factors, particularly the size of the Project Site, the scale and complexity of the Project, and the proposed mix of uses, the Proponent intends to pursue approval of a Planned Development Area ("PDA") pursuant to Article 3-1A and Section 80C of the Code and the Proponent intends to submit a PDA Development Plan application. Once approved, the PDA Development Plan will set forth the relevant use, dimensional and other requirements applicable to the development of the Project in full compliance with the Code, including any relief which may be required from any of the above-referenced zoning districts. Discussions with the BPDA Staff have indicated that this approach to project permitting is appropriate. Approval of a PDA Development Plan for the Project will be coordinated with Large Project Review in accordance with Article 80B of the Code (and with MEPA).

Due to the location of the Project within the Harborpark District, demolition or partial demolition of buildings may require review in accordance with the provisions of Article 85 of the Code. The need for Article 85 review will be determined through consultation with Boston Landmarks Commission staff in accordance with the provisions of Section 85-5 of the Code. If such review is required, it will be coordinated with the Article 80B and 80C approvals required for the Project.

2.3.2 Article 80 Large Project Review

The Project will undergo Large Project Review pursuant to Article 80 of the Code. The Proponent filed a Letter of Intent ("LOI") with the BPDA on April 24, 2017 (refer to Appendix A for a copy of the LOI). To maximize coordination between Article 80 and MEPA review processes, the Proponent has filed a combined ENF/EPNF.

2.4 MEPA Review

The Project is subject to MEPA review because it exceeds a review threshold pursuant to:

1. **301 CMR 11.03(3)(a)(5)** – Project requires a new Chapter 91 license for a non-water dependent use which occupies more than one acre of tidelands;
2. **301 CMR 11.03(6)(a)(6)** – Generation of 3,000 or more new ADT on roadways providing access to a single location;
3. **301 CMR 11.03(6)(b)(15)** – Construction of 300 or more New parking spaces at a single location;
4. **301 CMR 11.03(10)(b)(a)** – Demolition of any exterior part of any Historic Structure listed in or located in any Historic District listed in the State Register of Historic Places or in the Inventory of Historic and Archaeological Assets of the Commonwealth; and
5. Requires the state actions described in Section 2.7 below.

2.5 Chapter 91

Chapter 91 codifies the Massachusetts Public Waterfront Act which preserves and protects certain rights within existing and filled tidal waters and lands. The Project requires a new license under Chapter 91 because it includes work within historically filled tidelands and meets the regulatory criteria listed in 310 CMR 9.05(1) for activities requiring a license. A detailed description of Project compliance with the Chapter 91 regulations is presented in Chapter 6, *Environmental Protection*.

2.5.1 Public Benefits Determination

The regulations at 301 CMR 13.02 require a public benefits determination be made by the Secretary for any project that:

- Files an Environmental Notification Form after November 15, 2007;
- Requires an Environmental Impact Report ("EIR"); and,
- Is completely or partially located in tidelands or landlocked tidelands.

The Project meets these criteria and therefore, requires a Public Benefit Determination. The regulations require the EEA Secretary to consider the following when making a Public Benefits Determination:

- Purpose and effect of the development;
- Impact on abutters and the surrounding community;
- Enhancement of the property;
- Benefits to the public trust rights in tidelands or other associated rights;
- Community activities on the development site;
- Environmental protection and preservation;
- Public health and safety; and,
- General welfare.

A description of the Project's public benefits as they relate to the above categories is provided in Chapter 6, *Environmental Protection*.

2.6 Designated Port Area

The Project is located entirely within the South Boston DPA along the Reserved Channel. Established in 1978 by CZM, the DPA program was created to protect water-dependent industrial uses in and along state waterways. The program seeks to preserve previously developed shorelines for water-dependent industrial users to support maritime industry and to reduce the need for substantial alteration of previously undeveloped shorelines.

CZM's designation of DPA boundaries are based on the need for three basic components:

1. A waterway and associated waterfront that have been developed for commercial navigation;
2. A land area adjoining the water's edge that is conducive in both physical configuration and use character to the siting of industrial operations; and
3. Land-based transportation and public utility service appropriate for general industrial purpose.

While the L Street Station has historically been categorized as a water-dependent industrial use due to its dependency on large volumes of water for cooling, the potential for future water-dependent industrial use is extremely limited. As discussed in Section 1.6, *Alternatives Analysis,* the redevelopment of the Project Site for a similar use is not economically feasible due to the steep cost associated with environmental cleanup and remediation, and the Project Site is not accessible from the Reserved Channel due to the presence of the DFC.

Based on the lack of access to navigable water and the lack of feasible water-dependent development options, the Proponent will work collaboratively with the City and the Commonwealth to identify the appropriate mechanism for moving forward with the revision to the DPA.

2.7 List of Anticipated Permits and Approvals

Table 2-1 below provides a comprehensive list of approvals and/or permits anticipated to be required for the Project.

Table 2-1 Anticipated Project Permits and Approvals

Agency/Department	Permit/Approval/Action
Federal	
Federal Aviation Administration	Determination of no hazard to air navigation (buildings and cranes), as necessary
Environmental Protection Agency	National Pollutant Discharge Elimination System ("NPDES")
	NPDES Construction General Permit
	NPDES Dewatering General Permit
	NPDES Remediation General Permit
	Stormwater Pollution Prevention Plan Preparation
Army Corps of Engineers	Section 10 / Section 404 Permit(s) (*if required*)
Commonwealth of Massachusetts	
Executive Office of Energy and Environmental Affairs	Massachusetts Environmental Policy Act Review
	Coastal Zone Management Consistency Review
	Chapter 91 License
	Designated Port Area ("DPA") Amendment
	Public Benefits Determination
Massachusetts Historical Commission	State Register Review
	Memorandum of Understanding ("MOU") (*if required*)
Massachusetts Port Authority	Abutter Agreements
Massachusetts Department of Environmental Protection	Pre-construction Notices
	Permit for discharge to groundwater (*if required*)
	Filings/approvals for remediation of hazardous materials
	Water Quality Certification (*if required*)
	Sewer Connection Permit (*if required*)
	Water/Sewer Cross Connection Permit (*if required*)
	Clean Air Act Permit(s) (*if required*)
Architectural Access Board	Regulation Variances (M.G.L. c.22, §13A; 521 CMR 3.00 et. seq.) (*if required*)
Massachusetts Water Resources Authority	Permit for Construction Dewatering *(if required*)

Table 2-1 Anticipated Project Permits and Approvals (Continued)

Agency/Department	Permit/Approval/Action
City of Boston	
Boston Planning and Development Agency	Article 80B Large Project Review
	Article 80B-8 Disclosure of Beneficial Interests
	Article 80C Review – PDA Development Plan Approval
	Article 85 Demolition Day
	Conditional Use Permit (Restricted Parking Overlay District)
	BPDA Cooperation Agreement
	Development Impact Project ("DIP") Agreement
	Affordable Housing Agreement
	Boston Resident Construction Employment Plans
	City of Boston Jobs MOU
	First Source Agreement
Boston Civic Design Commission	Design Review
Public Improvement Commission	Licenses for earth retention, groundwater observation wells and street and sidewalk improvements, as necessary
Boston Conservation Commission	Order of Conditions
Boston Water & Sewer Commission	Site Plan Approval
Boston Transportation Department	Transportation Access Plan Agreement
	Construction Management Plan
Committee on Licenses, Public Safety Commission	Garage Permit and Fuel Storage License
Air Pollution Control Commission	Modified Parking Permit under South Boston Parking Freeze (*if required*)
Inspectional Services Department	Building Permit
	Certificate of Occupancy
Boston Parks Department	Permission required for erection or alteration of buildings or structures within 100 feet of Christopher Lee Playground/Medal of Honor Park (*if required*)

* This is a preliminary list of local, state and federal permits and approvals that may be sought for the Project. This list is based on current information about the Project, and is subject to change as the design of the Project evolves.

2.8 Development Team

The following lists the key members of the development team for the Project (the "Project Team"):

Proponent	HRP 776 Summer Street LLC, c/o Hilco Real Estate LLC in conjunction with Redgate Capital Partners Redgate 265 Franklin Street Boston, MA 02210 Ralph Cox ralph.cox@redgate-re.com Greg Bialecki gregory.bialecki@redgate-re.com Megha Vadula megha.vadula@redgate-re.com Hilco Real Estate, LLC 99 Summer Street, Suite 500 Boston, MA 02110 Benjamin Spera bspera@hilcoglobal.com Andrew Chused achused@hilcoglobal.com
Legal Counsel	DLA Piper 33 Arch Street, 26th Floor Boston, MA 02110 John Rattigan john.rattigan@dlapiper.com Bryan Connolly bryan.connolly@dlapiper.com
Public Relations	InkHouse LLC 260 Charles Street Waltham, MA 02453 Susan Elsberee info@inkhouse.com
Retail Broker	Graffito SP 108 Lincoln Street Boston, MA 02111 Jesse Baerkahn info@graffitosp.com

Project Architect	SGA 200 High Street, 2nd Floor Boston, MA 02110 Al Spagnolo aspagnolo@sga-arch.com John Sullivan jsullivan@sga-arch.com David Enriquez denriquez@sga-arch.com Heath Cody hcody@sga-arch.com
Landscape Architecture	Stoss Landscape Urbanism 54 Old Colony Avenue, 3rd Floor Boston, MA 02127 Chris Reed cr@stoss.net Amy Whitesides aw@stoss.net
Planner/Designer	Greenberg Consultants 20 Niagara Street, Unit 603 Toronto MSV 3L8 Ken Greenberg info@greenbergconsultants.com
Permitting Consultant	VHB 99 High Street, 10th Floor Boston, MA 02110 Elizabeth Grob egrob@vhb.com Seth Lattrell slattrell@vhb.com
Transportation Consultant	VHB 99 High Street, 10th Floor Boston, MA 02110 Susan Sloan-Rossiter ssloanrossiter@vhb.com
Site/Civil Engineer	VHB 99 High Street, 10th Floor Boston, MA 02110 Mark Junghans mjunghans@vhb.com

Land Surveyor	Beals and Thomas Reservoir Corporate Center 144 Turnpike Road Southborough, MA 01772
Geotechnical Engineer	Geosyntec Consultants 1330 Beacon Street, Suite 317 Brookline, MA 02446 Julianna Connolly jconnolly@geosyntec.com
Cultural Resources	MacRostie Historic Advisors 810 Memorial Drive Cambridge, MA 02139 Albert Rex arex@mac-ha.com
Historic Architect	Bruner/Cott & Associates 130 Prospect Street Cambridge, MA 02139 Lawrence Cheng lcheng@brunercott.com Henry Moss hmoss@brunercott.com
Mechanical/Electrical/ Plumbing Services	WSP 88 Black Falcon Avenue, Suite 210 Boston, MA 02210 Tom Burroughs thomas.burroughs@wspgroup.com David Venturoso david.venturoso@wspgroup.com
Sustainability/Resiliency/LEED	WSP 88 Black Falcon Avenue, Suite 210 Boston, MA 02210 Tom Burroughs thomas.burroughs@wspgroup.com David Venturoso david.venturoso@wspgroup.com

2.9 Legal Information

2.9.1 Legal Judgements or Actions Pending Concerning the Project

To the Proponent knowledge, there are no legal judgements or actions pending concerning the Project.

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

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

2.9.3 Evidence of Site Control

The Proponent owns fee title to the real property upon which the Project will be developed pursuant to a Quitclaim Deed granted to the Proponent by Exelon New Boston, LLC, dated April 21, 2016 and recorded at the Suffolk County Registry of Deeds in Book 56031, Page 130.

2.9.4 Public Easements

The Project Site is not subject to any easements for use by the public

3

Urban Design

3.1 Introduction

This chapter includes detailed descriptions of the design of the Project, including significant public realm improvements. The Project represents a unique opportunity to combine adaptive re-use of historically significant industrial buildings and neighborhood creation in the context of a thriving working port and a growing residential neighborhood. The Project integrates the Site's industrial past within a neighborhood scale street grid and use-mix to instill a unique and vibrant residential character. The resultant Project is a transformational development that serves as both a natural extension of an established neighborhood and a unique district providing new opportunities for retail, commerce and living.

3.2 Summary of Key Findings and Benefits

The Project will provide a range of public and community benefits to promote neighborhood enrichment, usable new open space, access to the waterfront, environmental remediation, economic activity, improved circulation, and a mix of uses and housing options. Public and community benefits of the Project include the following:

- The demolition of a significant portion of a decommissioned and vacant power station and the renovation of existing historic and architecturally significant Power Plant buildings for new community and commercial uses.
- The construction of approximately 1,588 new residential units, which will increase diversity of the housing stock.
- Improvements to the area's urban design character through the provision of a human-scaled, mixed-use development, acting as a neighborhood hub for local cultural institutions and commercial activity within a live/work/play district.
- Landscape and Project Site improvements including active new open spaces with new amenities for a safe, secure, and inviting shopping, dining, and residential experience.
- Pedestrian and connectivity enhancements from the South Boston Neighborhood through and around the Turbine Hall to a newly created Waterfront Plaza with landscaped sidewalk connections.
- Support for the City's goals for a sustainable future through the development of energy-efficient and environmentally friendly buildings that will be LEED certifiable and resilient to climate change.

3.3 Neighborhood Context

The Project is situated at the northernmost point of the South Boston neighborhood. It is directly adjacent to the Reserved Channel and is bordered by South Boston neighborhoods to the south and industrial and port uses immediately to the east and west. It is located in a transitional area between industrial and residential uses, at the gateway from the Seaport to the to the South Boston neighborhood. This unique location is embodied by the Project design and programming through a mix of uses, scales and public space types which transition the large historically industrial Site down to a neighborhood scale. Emphasis will be placed on a mix of moderately scaled buildings with lower residential buildings closer to the existing residential neighborhoods. The Proponent recognizes both the industrial and the residential history of the neighborhood, and deference will be paid to the character of the historic structures in both the scale and material expression.

3.4 Planning Principles and Design Goals

3.4.1 Site Planning

The Project Site will be planned with an emphasis on the enhancement of the public realm, the rehabilitation of historic buildings for current and future uses, and the thoughtful balance of open space and building height density. Emphasis will be placed on the preservation of the large Waterfront Plaza, seen as the cultural and community focus of the development. This open space will be the entrance to South Boston from the Seaport and will feature the north façade of the Turbine Hall, as well as public uses facing the plaza from the ground floor of the new buildings.

Expansion of the local street grid into the Project Site creates moderately-sized development blocks that lend themselves to a variety of mixed uses, densities and building heights. The streets are laid out in a modified grid pattern and feature landscaped sidewalk zones consistent with Boston's Complete Streets guidelines.

Each street has its own unique character resulting in a variety of pedestrian experiences:

- Elkins Street runs east to west through the Project Site, and is envisioned to have the most energy and street life with outdoor cafes, intersection with the Turbine Hall, shops, and landscaped open space along its length.
- M Street runs south to north and connects the existing neighborhood to the eastern side of the new neighborhood. The street will be quieter and more residential than Elkins Street, lined with townhouses and apartment stoops characterized by a more typical South Boston scale.
- A shared street and waterfront open-space is planned for the Northern edge of the Project Site. This space will accommodate outdoor dining, revolving cultural events, public art and farmers' markets.
- Two pedestrian-only streets running north to south on either side of the Turbine Hall link East First Street to the waterfront. These are conceived of as intimate

pedestrian-only streets which allow access to cafes and amenities located in the Turbine Hall.

- A narrow trucks-only service spur from the DFC is being considered for service access to the east of the Project Site.

3.5 Building Design Concept and Development

3.5.1 Height and Massing

The heights of the proposed buildings are in compliance with Federal Aviation Administration ("FAA") airspace restrictions for Logan Airport Runway 22R and Chapter 91 height limitations, and are respectful of the neighborhood context along East First Street.

The Project consists of eight new neighborhood blocks with buildings ranging from 60 to 220 feet in zoning height. Refer to Figures 3.1 through 3.3 for the below grade plan, grade level plan and typical floor plan. Refer to Figures 3.4a-c sectional studies.

Maximum anticipated buildings heights are as follows:

- Block A – 70 feet – Residential, 7 stories
- Block B – 60 feet – Residential, 6 stories
- Block C – 220 feet – Residential, 21 stories
- Block D – 170 feet – Residential/Hotel, 16 stories
- Block E – 200 feet – Residential, 20 stories
- Block F – 200 feet – Residential, 20 stories
- Block G – 79 feet – Office, 6 stories
- Block H – 128 feet – Office, 10 stories

3.5.2 Character and Exterior Materials

The Project will be designed with a focus on the pedestrian experience. Buildings will have a variety of textures, patterns, and colors, all of which will respect the historic context of the Project Site. Mixtures of industrial as well as traditional residential materials will be used to blend the character of the South Boston neighborhood and the urban and industrial nature of the Site. Building materials will include brick, painted brick, concrete, stone, wood, metal, tile, fiber cement clapboards and panels, glass, and metal canopies. Sidewalks will include concrete surfaces, and may include flush curbs to enhance accessibility and reinforce the shared street concept, artful landscaping, and creative bench and lighting designs. Refer to Figures 3.5a-c for Project Renderings.

3.5.3 Signage

All signage throughout the Project Site will be in keeping with the historic character of the area and will complement the architectural identify of existing and proposed buildings. Signage will be thoughtfully located, designed to generate an inviting streetscape, and appropriately scaled for the location. Wayfinding signage will be incorporated as appropriate to facilitate access and encourage pedestrian permeability throughout the Site.

3.5.4 Public Realm Improvements

The creation of a vibrant public realm is at the core of the Project. This is achieved through pedestrian-friendly and publicly accessible streetscapes, a diverse network of outdoor open spaces that include access to the waterfront and arts and community programming, and a thriving retail corridor divided between indoor and outdoor spaces. The rehabilitation of the Turbine Hall at the center of the Project Site adds further indoor programming for a wide range of publicly accessible cultural activities and local market opportunities.

3.5.5 Complete Streets

The Project incorporates the goals of BTD's Complete Streets Guidelines throughout the Project Site. Summer and East 1st Streets feature an expanded pedestrian realm, vehicular access, access to area transit and street trees. Internal streets are limited to focus vehicular traffic onto two primary corridors through the Project Site (M Street Extension and Elkins Street Extension), which provide access to primary amenities and to on-street and sub-grade parking. Internal streets will include street plantings and potential green infrastructure for stormwater management to improve water quality and pedestrian experience. Refer to Figure 3.6, Streetscape Improvement Plan.

Streetscape lighting will be provided throughout the public realm. This will be achieved through a mixture of light sources including vehicular light poles along M Street Extension and Elkins Street Extension, and pedestrian light poles and/or accent lighting in key areas throughout the Project Site.

Trees and other plantings in the streetscape will be selected to provide year-round interest and improved pedestrian wind conditions and will include species well adapted to the New England climate.

3.5.6 Pedestrian Access/Circulation and Accessibility

All roadways are designed to favor easy and full access to public buildings and open spaces on the Project Site, including direct entry to parking lots and on-street parking. Circulation routes are designed to improve the pedestrian experience through accessible sidewalks with comfortable walking widths and plentiful street amenities such as seating. Where appropriate, curbless environments, which favor

pedestrian movement when vehicular volumes are low, will be used. All pedestrian routes will be kept to a maximum five percent grade in compliance with Americans with Disabilities Act ("ADA") regulations. Refer to Figure 3.8, Site Circulation.

The Project will provide accessible transitions from grade into public spaces and will provide access to all Project Site amenities for people of all abilities. These design features address the goals of the Accessibility Checklist provided in Appendix C, and as outlined below.

At the waterfront:

- The waterfront open space will be developed as a public, fully accessible amenity that provides views of the City, access to the water, and access to the pedestrian walkways and retail corridors adjacent to the Turbine Hall
- Entry to the waterfront open space will be provided from Summer Street, via the pedestrian corridors along Turbine Hall, and from the end of the M Street Extension
- All new development along the waterfront will be held back to the existing building line at the northern edge of the Turbine Hall, preserving a clear relationship between the historic buildings and the waterfront and providing ample waterfront open space.

In connection to public open space:

- All public open spaces are designed in accordance with universal accessibility guidelines including material choices, grading and inclusive access for all activities and programs planned for the space.
- Open spaces will be at-grade with primary circulation routes, or will be connected to them via ramps (maximum five percent grade) integrated into the landscape.
- Open spaces, such as the corner of Summer and East 1st Street, will be located along primary transit routes, or are adjacent to primary public amenities, such as the retail corridors along the Turbine Hall and the waterfront.
- All open spaces will be accessible via public transportation and/or vehicular drop-off areas.

In connection with the development of the Turbine Hall:

- Retail areas along the western edge and entries into the Turbine Hall will be at-grade and fully accessible to the public.
- The Turbine Hall and adjacent retail area will be accessible via public transportation (at Summer Street and East 1st Street) or by vehicular drop-off on Elkins Street Extension.

In connection with the development of retail and residential buildings:

- Proposed buildings are organized around a lively, diverse system of public open space, squares, retail corridors and pedestrian walkways which together create a

network of open space that connect the Site back to the fabric of the adjacent South Boston neighborhood

3.5.7 Retail/Placemaking Strategy

The Project's retail and placemaking strategy has been guided by feedback received during the BPDA planning process, and is intended to engage the community with distinctive placemaking that is contextually respectful of the existing South Boston neighborhood. The goal is to develop a neighborhood-serving district composed of locally-owned merchants and makers, community-oriented uses, and creative programming that integrates with the Project's open spaces to create an active, vibrant, and unique public realm.

This strategy is guided by the existing conditions and historic structures, which provide unique opportunities for site activation. The retail will be located on the ground-floor, throughout the site of the Project and will use different types of retail to create different levels of destination or neighborhood amenity. A street-front zone that includes the building edges on Summer and East 1st Streets, will have neighborhood-scale shops consistent with the character and size of existing retail along other commercial streets in South Boston such as East and West Broadway. The central area alongside the Turbine Hall will house maker, arts, cultural and other unique place-making spaces that attract people from the greater Boston area in addition to the local neighborhood. Retail that is more focused on specific services will be located more inward as they do not need to be located along the primary pedestrian corridors of Summer and East 1st Streets.

The retail and placemaking strategy is intended to provide new options to the community that support and complement existing local businesses, and attract a broad, multi-generational population. The Proponent will continue to work with the community to further develop this strategy as design progresses, and will provide additional details in the DEIR/DPIR.

3.6 Open Space/Landscape Approach

The approach to open space is multi-faceted, encompassing streets, private residential courtyards, and publicly accessible open spaces of varied scale and programming. The Project is anticipated to include a total of approximately 104,500 square feet of combined public open space. Open space on the Project Site seeks to create a vibrant public realm and to improve regional connections to the Seaport, Harborwalk, and to Castle Island through Site-wide pedestrian connections and connection to the newly created Butler Park along East 1st Street. Refer to Figure 3.7, Open Space Activity Plan.

3.6.1 Publicly Accessible Open Spaces

Public open space is an organizing element of the Project with a variety of open spaces dispersed throughout the Project Site and significant public open space accessible from each of the development blocks. These spaces contain passive pockets which will link to active movement corridors that connect throughout the development. Refer to Figure 3.8, Site Circulation.

The most prominent and public open space is along the waterfront and will be an approximately 1.15 acres. It will be the most programmed and programmable and it will provide access to the water, retail corridor, and rehabilitated Turbine Hall, as well as views across the water to the Design District, Conley Terminal, and Flynn Cruiseport Boston. This open space and the landscape design embraces and celebrates the industrial nature of the working waterfront in this area while also providing space for arts and culture programming and passive leisure along Boston's waterfront. Where possible, based on structural integrity analysis, existing structures at the waterfront will be retained and enhanced as historical and character creating features.

The waterfront open space connects pedestrians and the public directly to the M Street Extension through a topographic design element. The change in grade that occurs here is envisioned to be mitigated by occupiable steps and ramps that could also function as an outdoor living room or amphitheater where cultural productions could occur. The intent is to provide another connection to the waterfront from the neighborhood from the south to the north.

The Elkins Street Extension is envisioned to direct visitors into and through the Site from the west and east. Along this axis, an open space will be provided adjacent to the existing Turbine Hall on the east side and just below the proposed Elkins Street Extension. Next to the park, the opening in the Turbine Hall is imagined to be storefront or other transparent material to allow activities inside this portion of the Hall to spill out into the open space through use of movable furnishings. ADA compliant ramping will connect residents and visitors to the adjacent residential buildings, East 1st Street and M Street Extension.

At the terminus of the Elkins Street Extension, another open space provides a direct connection to Butler Park, which provides a dog park as well as a longer pedestrian path that the Project would plug into. This open space is also imagined a more local open space to the immediate residences surrounding the space.

At the corner of Summer and East 1st Streets, open space provides a "welcome mat" for visitors and residents. This new open space will provide views into the Turbine Hall, connect people to ground-floor retail at the corner of Summer and East 1st Street and invite them into the planned retail corridor along the west side of the Turbine Hall.

All public open spaces are planned with consideration of diversity of shady and sunny spaces throughout the year, as well as protected from winds where possible.

Open spaces will feature high-quality materials and plantings suitable to the New England environment.

3.6.2 Streetscapes

The streetscapes and pedestrian walkways internal to the Project Site, and along its perimeter, are intended to act as part of the open space network, connecting open spaces across the Project Site and to the Turbine Hall, and linking them to larger open space networks such as the Harborwalk and nearby Butler Park and Castle Island. Walkability and accessibility for users of all ages will be strongly considered in choosing materials and key points of access to these streets and walkways. Refer to Figure 3.6, Streetscape Improvement Plan.

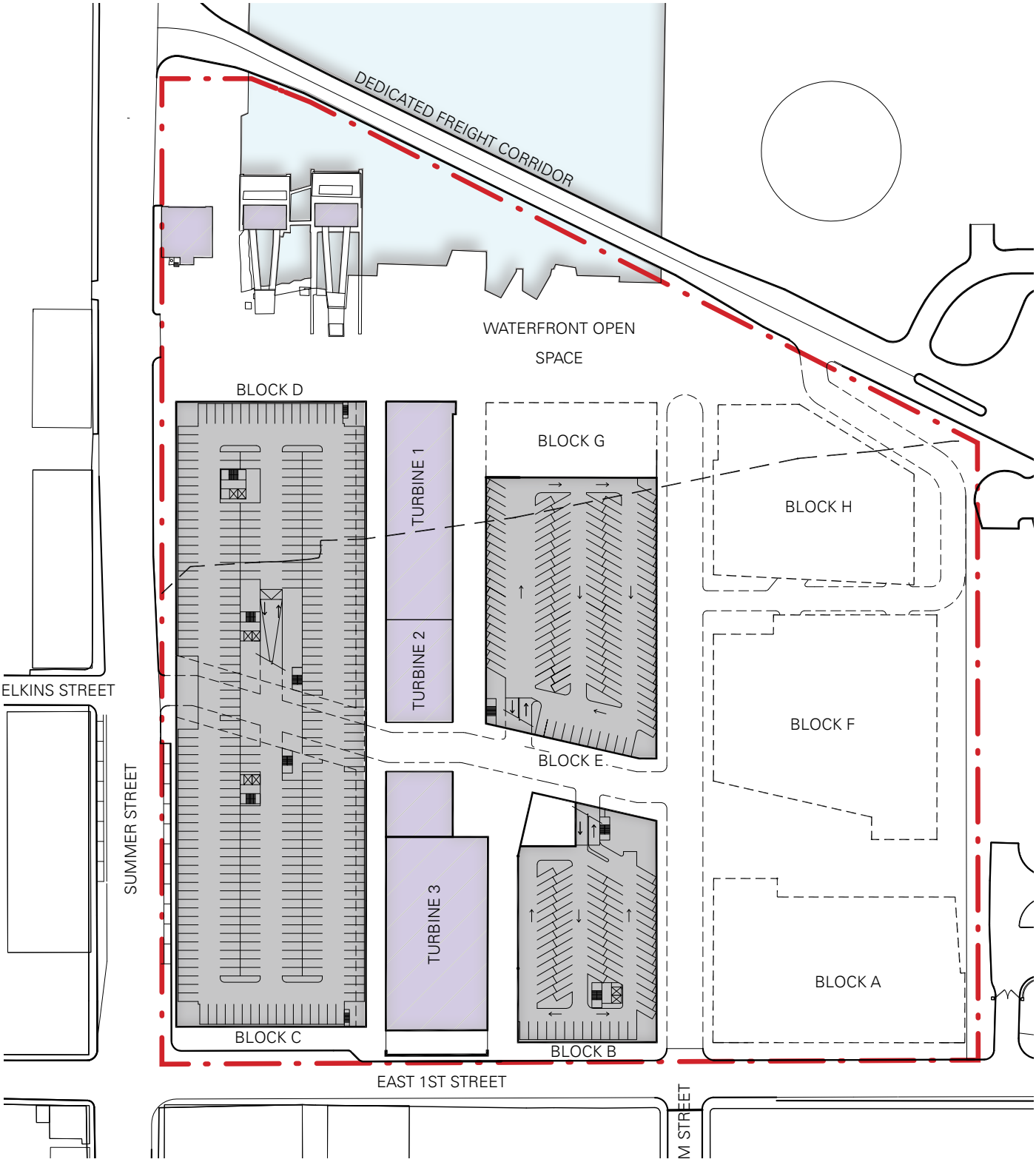
3.6.3 Precincts

The Project is being developed as three precincts, each with a specific character and design intent. Refer to Figure 3.9a, Landscape Design Precincts. Though each precinct remains distinctive, there are perimeter transition zones where the two neighboring characters transition from one to the next. Refer to Figure 3.9b, Precinct Materials.

The Industrial Waterfront precinct will celebrate the heritage and industrial character of the shoreline, while also providing native vegetation as tribute to the salt marshes that originally dominated the South Boston flats. This area will encourage opportunities for both larger gatherings and passive recreation throughout the seasons.

Rehabilitation of the historic Turbine Hall will become an emblematic gateway into the Turbine Precinct at both the north and south borders of this area. Historic artifacts of industry will be showcased, while granite and brick will become the dominant materials with minimal vegetative intervention. Outdoor spaces will encourage more intimate cultural and social events.

The Residential Upland precinct will be a distinctive area that builds from the neighboring connections to Butler and Medal of Honor parks with a continuation of trees and vegetation. The feeling within this area will be one of community and passive recreational uses. Industrial heritage transitions subtly into residential character through more with occasional artifacts or recycled surfacing.



KEY

BELOW GRADE PARKING

EXISTING BUILDINGS TO REMAIN

PROJECT SITE

CHAPTER 91 JURISDICTION

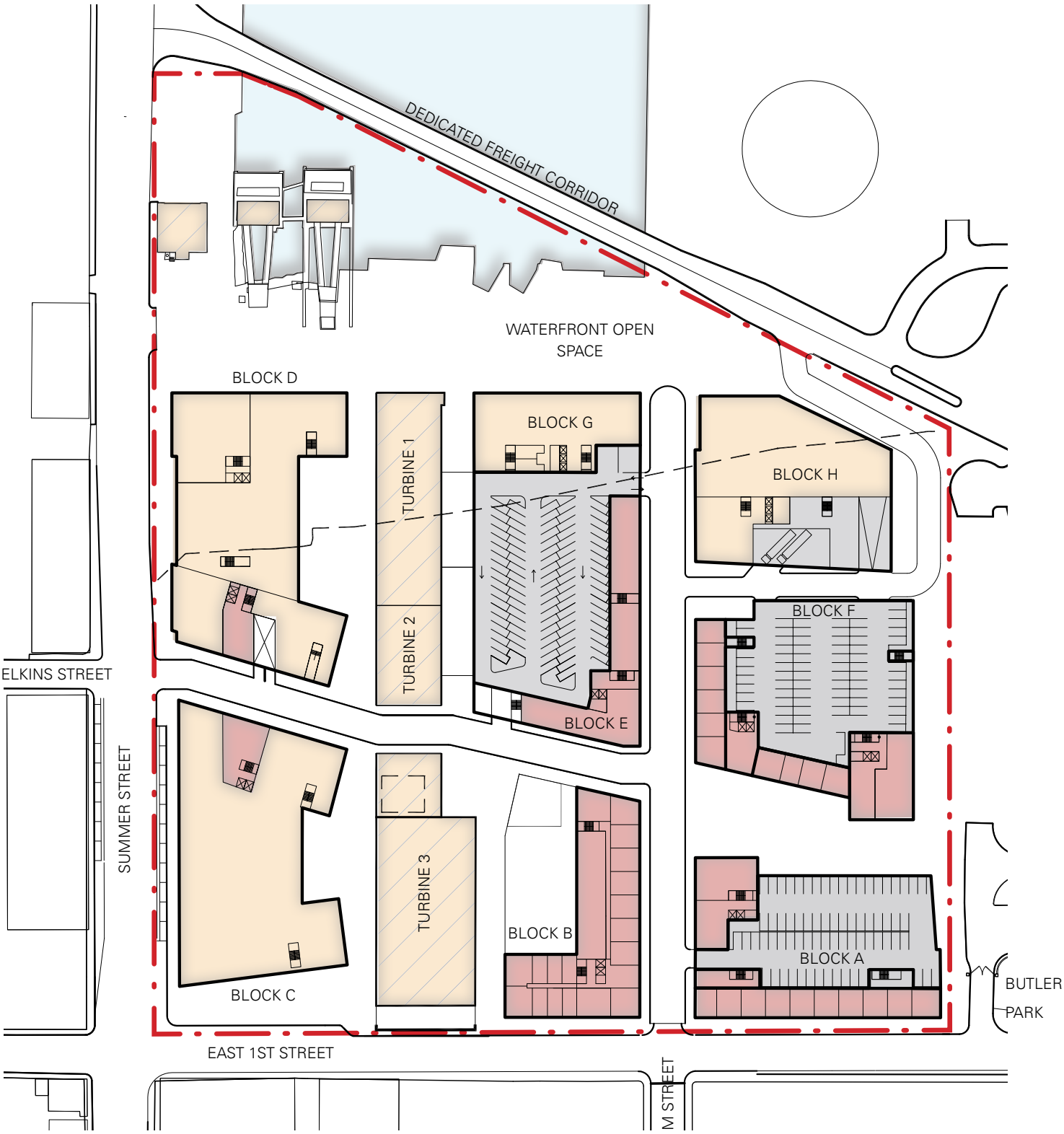
N

1 100 200

L Street Station Redevelopment | Boston, Massachusetts

SGA ARCHITECTURE | PLANNING
INTERIOR DESIGN | VDC
BRANDED ENVIRONMENTS

FIGURE 3.1
BELOW GRADE PARKING LEVEL PLAN



KEY

- ACTIVE GROUND FLOOR USES
- RESIDENTIAL
- EXISTING BUILDINGS TO REMAIN
- PROJECT SITE
- PARKING
- CHAPTER 91 JURISDICTION

N

1 100 200

L Street Station Redevelopment | Boston, Massachusetts

SGA ARCHITECTURE | PLANNING
INTERIOR DESIGN | VDC
BRANDED ENVIRONMENTS

FIGURE 3.2
GRADE LEVEL PLAN

KEY

- HOTEL | COMMERCIAL
- RESIDENTIAL
- CHAPTER 91 JURISDICTION
- COMMERCIAL
- CREATIVE OFFICE, RETAIL + CULTURAL USE
- BUILDING AREA BELOW
- PROJECT SITE

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L Street Station Redevelopment | Boston, Massachusetts

FIGURE 3.3
TYPICAL FLOOR PLAN

KEY

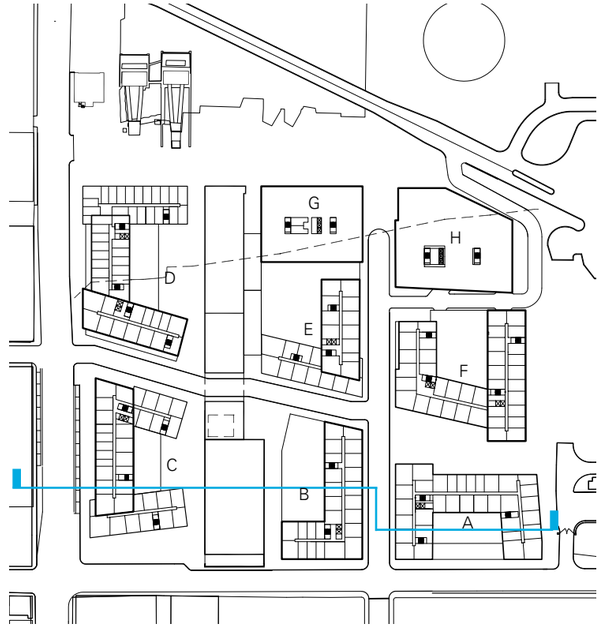
RESIDENTIAL

PARKING

CREATIVE OFFICE

ACTIVE GROUND FLOOR USE

NOTE: - GRADE ELEVATIONS SHOWN IN NAVD88
- BUILDING HEIGHTS ARE ABOVE GRADE



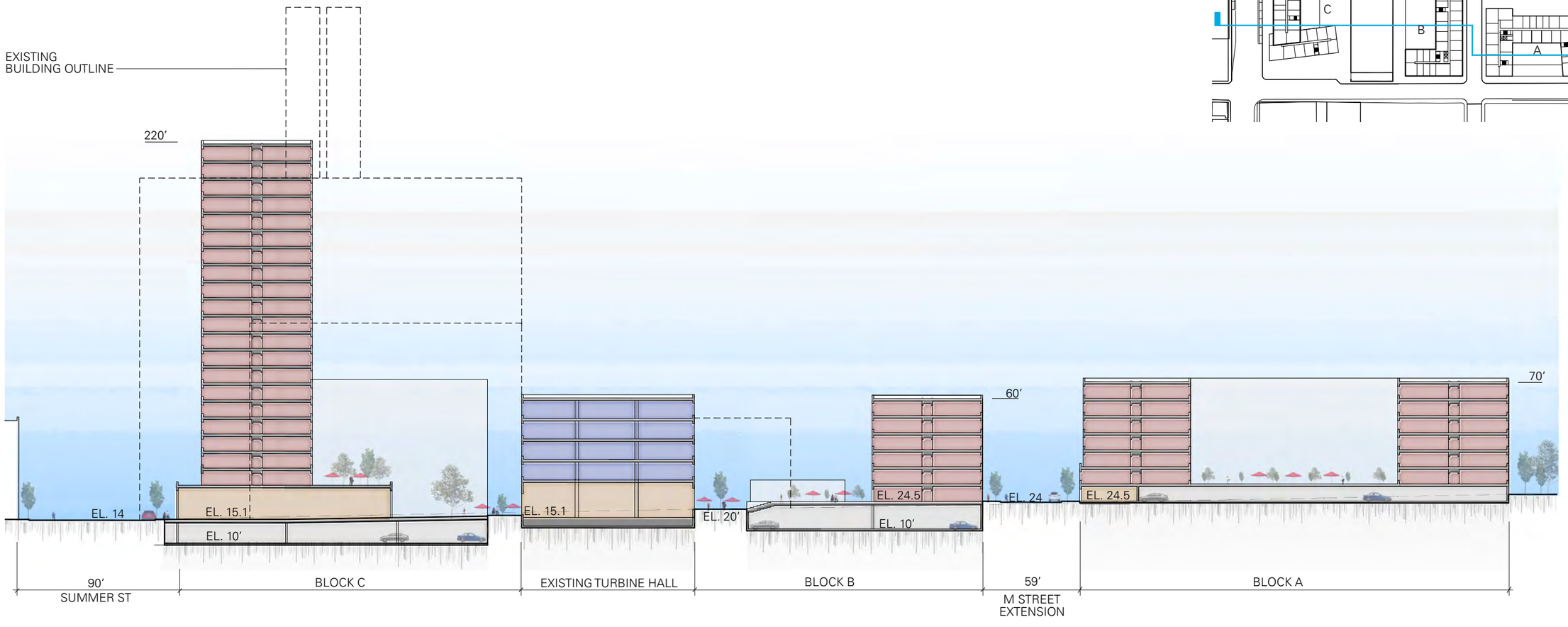


FIGURE 3.4a
SECTIONAL STUDIES

KEY

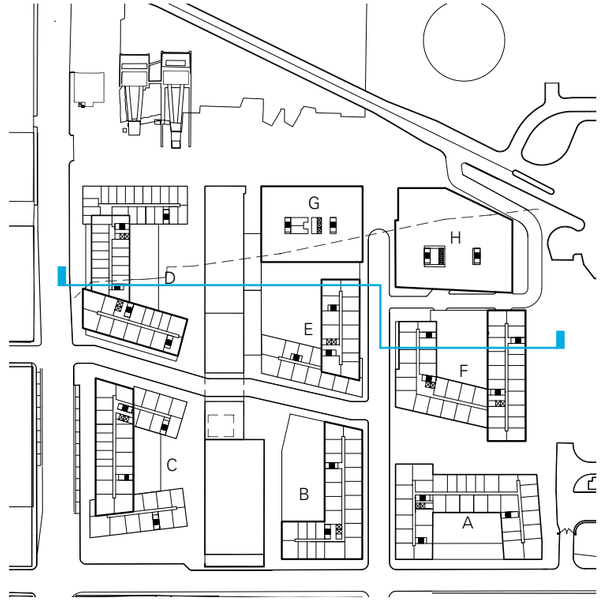
RESIDENTIAL

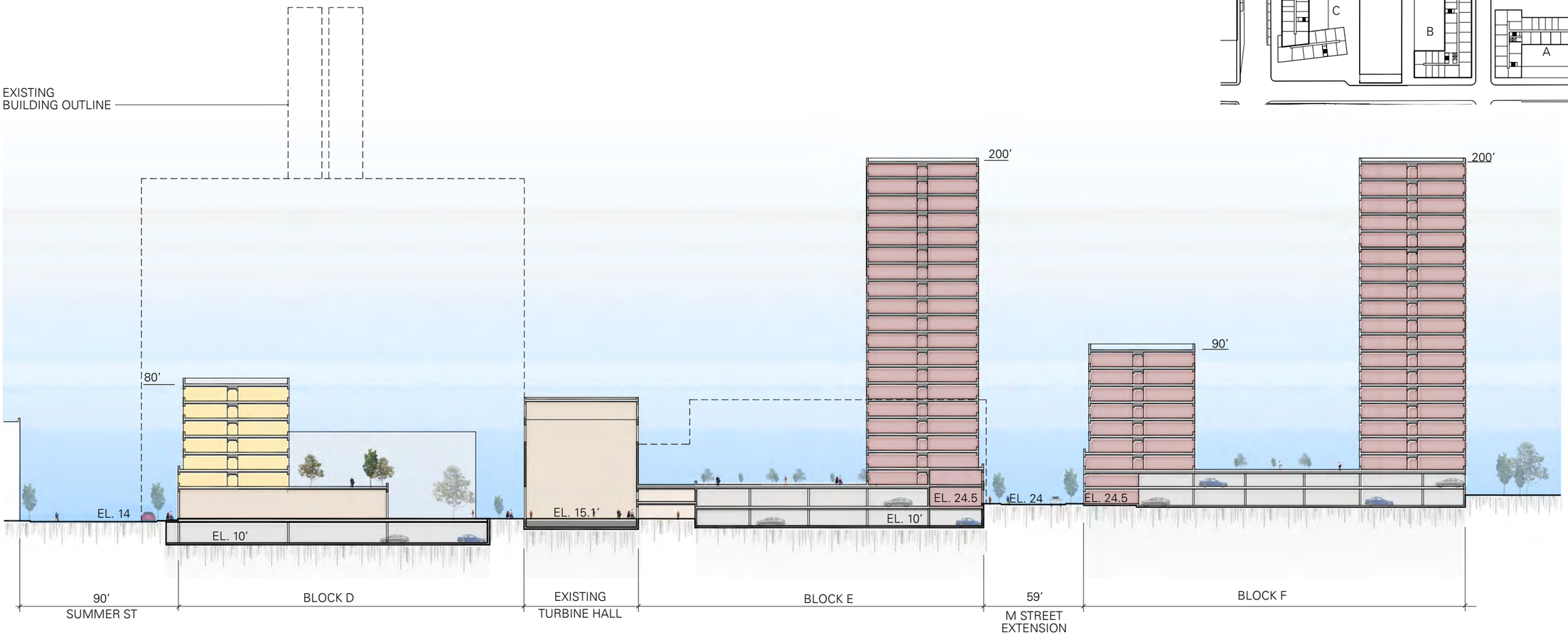
PARKING

HOTEL

ACTIVE GROUND FLOOR USE

NOTE: - GRADE ELEVATIONS SHOWN IN NAVD88
- BUILDING HEIGHTS ARE ABOVE GRADE





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BRANDED ENVIRONMENTS

FIGURE 3.4b
SECTIONAL STUDIES

KEY

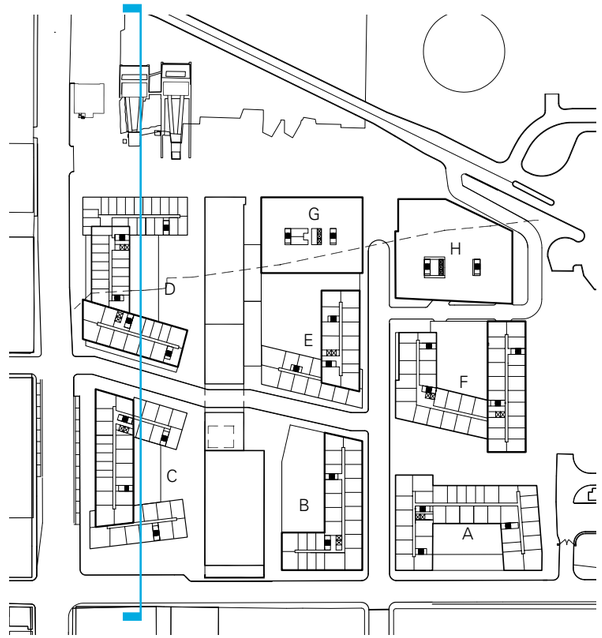
RESIDENTIAL

PARKING

HOTEL

ACTIVE GROUND FLOOR USE

NOTE: - GRADE ELEVATIONS SHOWN IN NAVD88
- BUILDING HEIGHTS ARE ABOVE GRADE



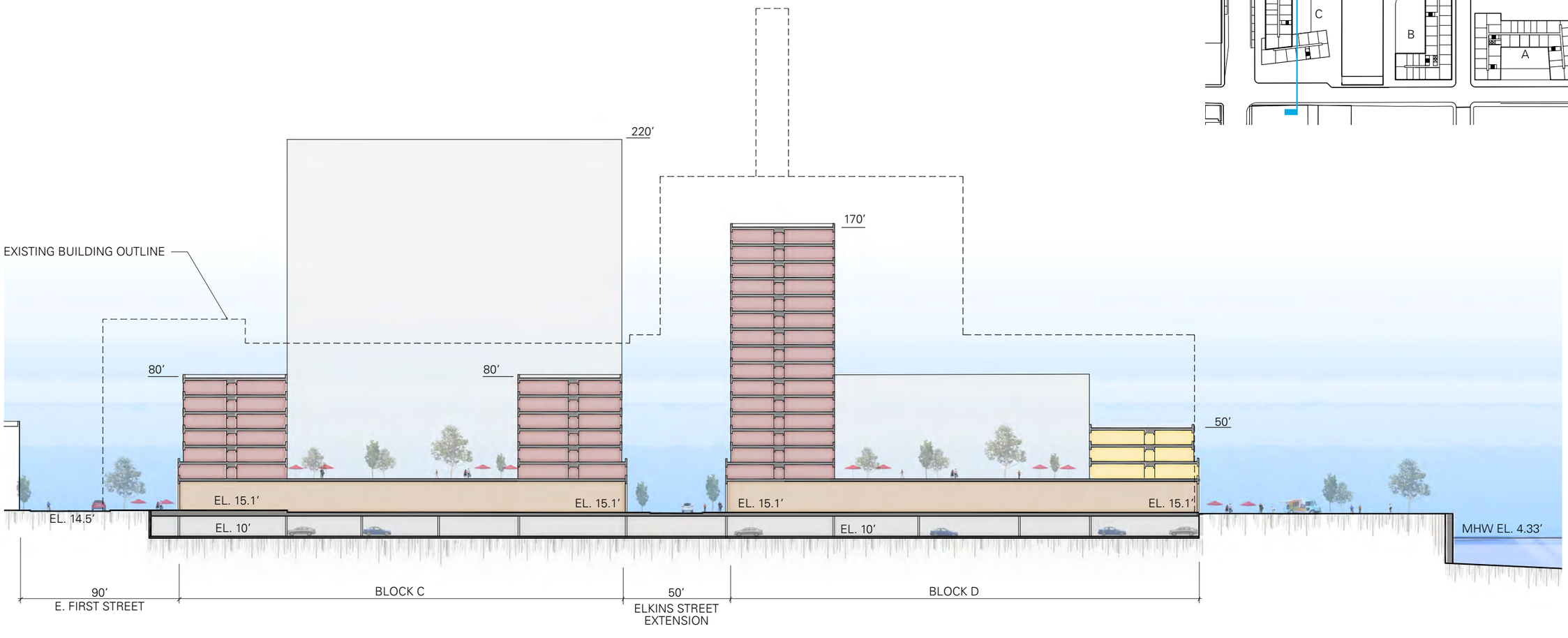


FIGURE 3.4c
SECTIONAL STUDIES

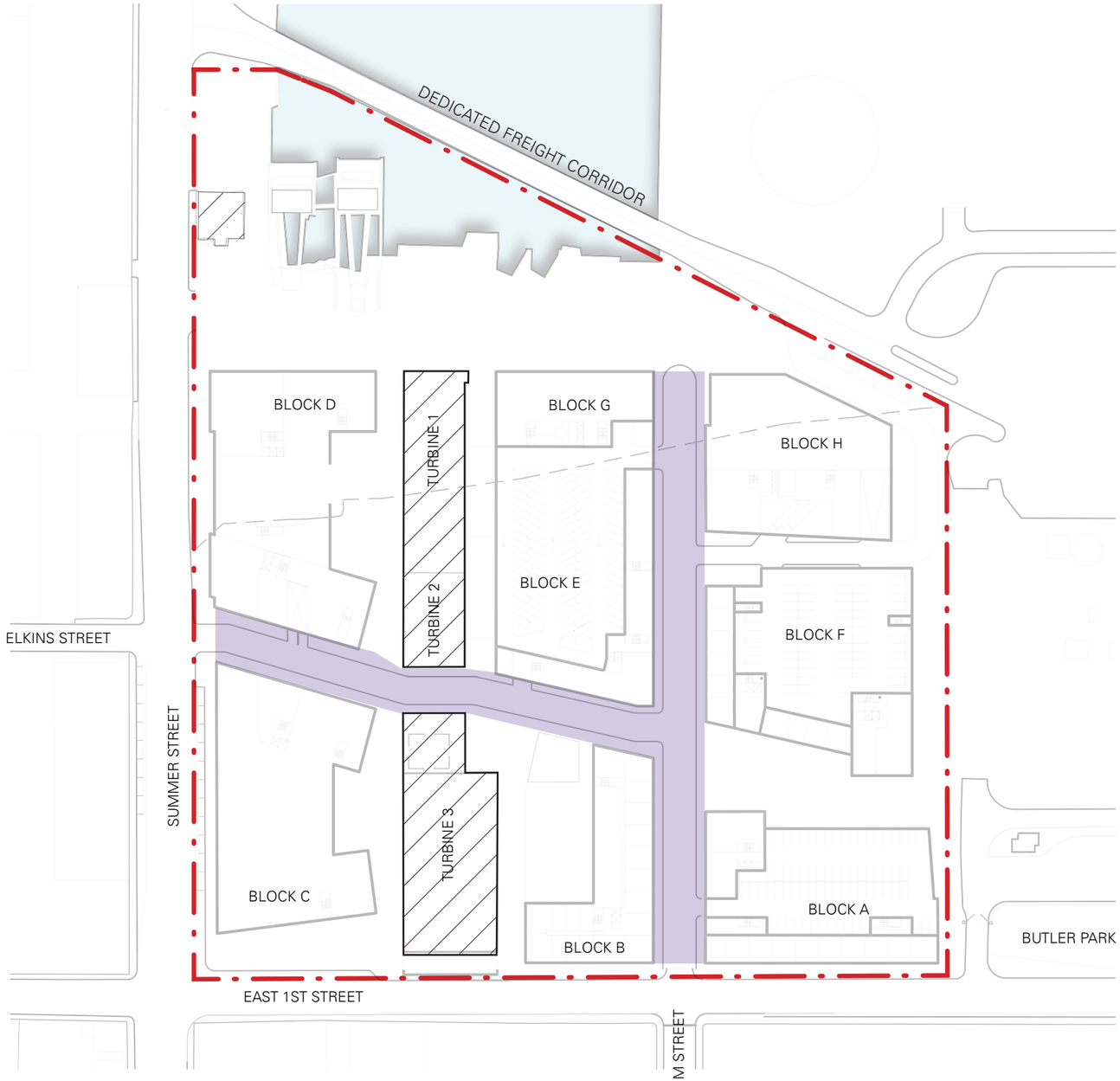
L Street Station Redevelopment | Boston, Massachusetts

FIGURE 3.5a
PROJECT RENDERINGS

L Street Station Redevelopment | Boston, Massachusetts

FIGURE 3.5b
PROJECT RENDERINGS

L Street Station Redevelopment | Boston, Massachusetts



KEY

- EXTERIOR STREETS
- INTERIOR STREETS
- EXISTING BUILDINGS TO REMAIN
- PROJECT SITE

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SGA
ARCHITECTURE | PLANNING
INTERIOR DESIGN | VDC
BRANDED ENVIRONMENTS

FIGURE 3.6
STREET SCAPE IMPROVEMENT PLAN

WATERFRONT ACTIVITIES

PASSIVE RECREATION

CULTURAL PROGRAMMING

ACTIVE RECREATION

Source Info

Program Focus Area

SLOSS

Figure 3.7

Open Space Activity Plan

L Street Station Redevelopment
Boston, Massachusetts

Source Info

Pedestrian/Accessible Route

Vehicular

Bicycle

Figure 3.8

Site Circulation

L Street Station Redevelopment
Boston, Massachusetts

TERRACED BOARDWALK
High Line, NY

MARSH WITH INDUSTRIAL HERITAGE
Erie Plaza, Milwaukee

INDUSTRIAL & CULTURAL
Distillery District, Toronto, CA

ACCENT LIGHTING
Distillery District, Toronto, CA

RECYCLED CONCRETE SLABS
Navy Yard, Philidelphia

RESIDENTIAL SCALE
Pearl District, Portland

Source Info

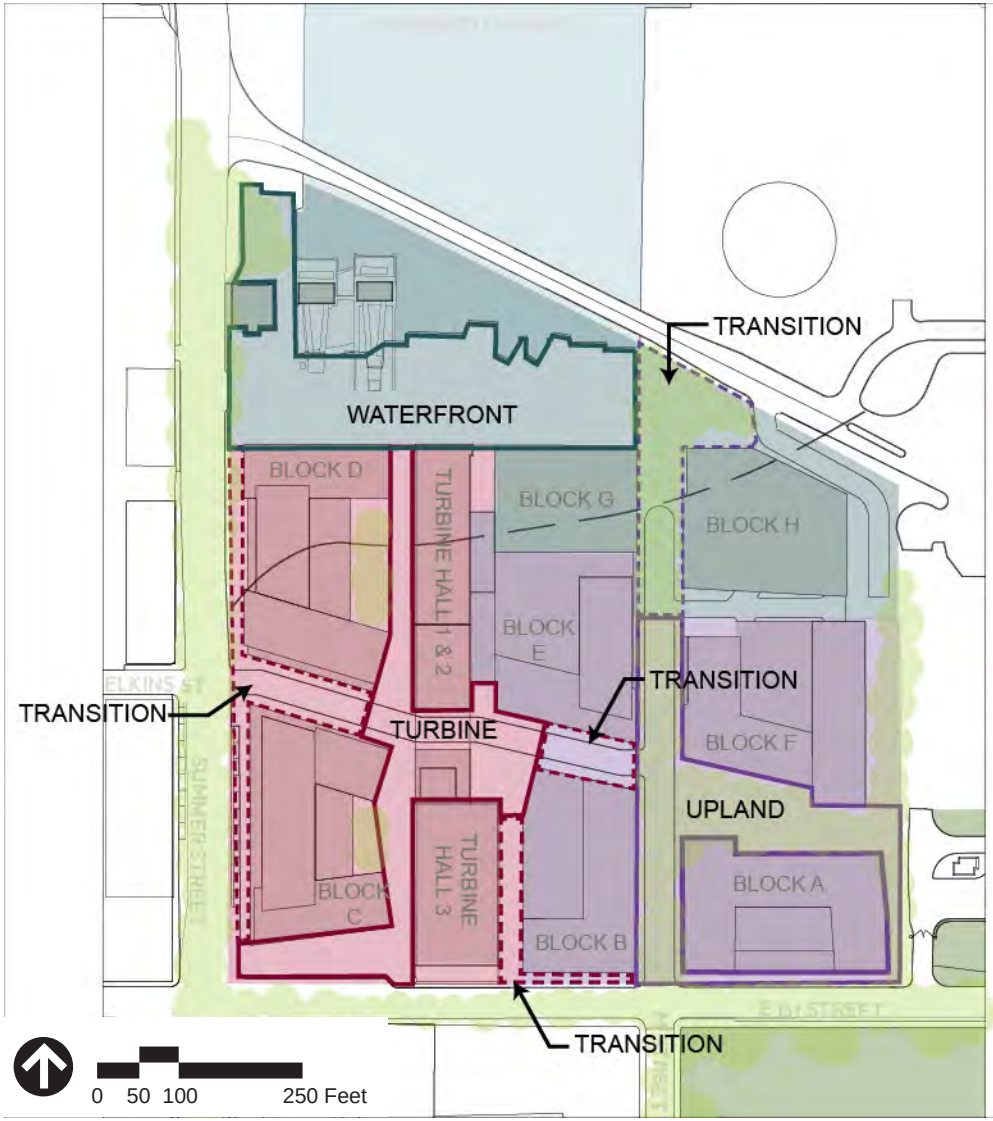
- Industrial Waterfront
- Turbine Precinct
- Residential Upland
- Green/Tree Border

SLOSS

Figure 3.9a

Precinct Plan

L Street Station Redevelopment
Boston, Massachusetts



SALT MARSH
Brooklyn Bridge Park, NY

WOOD BOARDWALK
City Deck, Philidelphia

INDUSTRIAL ARTIFACTS
Baltimore Museum of Industry, Baltimore

GRANITE SETTS

GROVE AND STREET TREES
Lincoln Center, NY

PLANTING & INDUSTRIAL INTEGRATION
Navy Yard, Philidelphia

Source Info

- Precinct Transition
- Industrial Waterfront
- Turbine Precinct
- Residential Upland

SOSS

Figure 3.9b

Precinct Materials

L Street Station Redevelopment
Boston, Massachusetts

4

Sustainability/Green Building and Climate Change Resiliency

4.1 Introduction

This chapter provides preliminary information regarding the Project's sustainability/ green building, and climate change preparedness and resiliency strategies, as applicable. It identifies the proposed U.S. Green Building Council's ("USGBC") Leadership in Energy and Environmental Design ("LEED™") version 4 ("v4") rating system level based on early design. This chapter also discusses the approach to preparing for predicted climate change, in accordance with the BPDA Climate Change Resiliency and Preparedness Policy (the "Resiliency Policy"). The required Climate Change Resiliency and Preparedness Checklist (the "Resiliency Checklist") has been completed for the Project and is provided in Appendix C.

4.2 Summary of Key Findings and Benefits

The key findings and benefits related to sustainability/green building design and climate change preparedness include the following Project attributes:

- Reuses an existing previously developed Project Site in a dense urban setting as opposed to an undeveloped open space.
- Provides a mix of uses, including commercial office, residential, hotel, and retail, in close proximity to public transit and within walking distance from the South Boston neighborhood.
- Provides an efficient redevelopment plan with parking both at and below grade and 104,500 square feet of open space, including a new 1.15-acre publicly accessible Waterfront Plaza.
- Provides protection to the Site relative to the FEMA 100-year and 500-year floodplain limits through site grading and landscaping. By raising the Project Site grade so that the finished floor elevation for the Project is at +21.5 BCB, which includes taking into consideration sea level rise scenarios over the lifetime of the Project, the Project will be resilient to both current and future extreme storm events.
- Complies with Article 37, Green Buildings of the Code by demonstrating compliance with the LEEDv4 program at the certifiable level, as demonstrated by the draft LEEDv4 scorecard.

- Utilizes sustainable design strategies and exceeds the minimum building energy code requirements, thereby maximizing the conservation of energy and water, and minimizing impacts to regional infrastructure and water resources.
- Reduces overall annual energy consumption by an estimated 15.4 percent through the implementation of energy optimizing building design and systems, which equates to an estimated 10.2 percent reduction in stationary source CO_2 emissions. (Note, the percentages of energy use are different than emission reductions due to emissions conversion factors.)
- Meets the Massachusetts Stretch Energy Code requirement to be 10% better than ASHRAE 90.1-2013.
- Intends to participate in local utility incentive programs to evaluate the cost benefit of various energy conservation measures and maximize building energy performance.

4.3 Regulatory Context

The following section provides an overview of the state and local regulatory context related to energy efficiency and greenhouse gas ("GHG") emissions.

4.3.1 Article 37 Green Buildings

Through Article 37 – Green Buildings, the City of Boston encourages major building projects to be "planned, designed, constructed, and managed to minimize adverse environmental impacts; to conserve natural resources; to promote sustainable development; and to enhance the quality of life in Boston." Any project that is subject to Article 80, Large Project Review, is also subject to the requirements of Article 37.

Article 37 requires all projects over 50,000 gross square feet to meet LEED certification standards by either certifying the Project or demonstrating that the Project would meet the minimum requirements to achieve a LEED Certified level without registering the project with the USGBC ("LEED certifiable"). With the LEEDv4 rating system effective as of October 31, 2016, the BPDA requires initial Article 80 Large Project Review submissions to demonstrate that they will be LEED certifiable using LEEDv4.

Boston Green Building Credits

Appendix A of Article 37 lists "Boston Green Building Credits," which are credits that may be included in the calculation toward achieving a LEEDv4 certifiable project. These credits, along with prerequisites, were developed by the City and are intended to address local issues unique to development within Boston.

4.3.2 Stretch Energy Code

As part of the Green Communities Act of 2008, Massachusetts developed an optional building code, known as the "Stretch Energy Code," that gives cities and towns the ability to choose stronger energy performance in buildings than otherwise

required under the state building code. Codified by the Board of Building Regulations and Standards as 780 CMR Appendix 115.AA of the 8th edition Massachusetts Building Code, the Stretch Energy Code is an appendix to the Massachusetts building code, based on further amendments to the International Energy Conservation Code ("IECC").

The Stretch Energy Code increases the energy efficiency code requirements for new construction and major residential renovations or additions in municipalities that adopt it. The Stretch Energy Code applies to both residential and commercial buildings and, specifically, to all new commercial buildings over 100,000 square feet in size. The City of Boston adopted the Stretch Energy Code, which became mandatory on July 1, 2011.

Effective January 1, 2017, the Stretch Energy Code now requires 10 percent greater energy efficiency compared to the state's energy code (the "Base Code"). This ENF/EPNF assesses the energy performance of the Project using the Stretch Energy Code requirements in effect as of January 1, 2017 in order to demonstrate the Project can meet such requirements.

4.3.3 BPDA Climate Change Preparedness and Resiliency Policy

In conformance with the Mayor's 2011 Climate Action Leadership Committee's recommendations, the BPDA requires projects subject to Boston Zoning Article 80 Large Project Review to complete a Resiliency Checklist to assess potential adverse impacts that might arise under future climate conditions, and any project resiliency, preparedness, and/or mitigation measures identified early in the design stage. The Resiliency Checklist is reviewed by the IGBC.

4.3.4 MEPA Greenhouse Gas Policy and Protocol

The EEA has developed the MEPA Greenhouse Gas Emissions Policy and Protocol (the "MEPA GHG Policy"), which requires project proponents to identify and describe the feasible measures to minimize both mobile and stationary source GHG emissions generated by their proposed project(s). Mobile sources include vehicles traveling to and from a project while stationary sources include on-site boilers, heaters, and/or internal combustion engines (direct sources) as well as the consumption of energy in the form of fossil fuels (indirect sources). Greenhouse gases include several air pollutants, such as carbon dioxide ("CO_2"), methane, hydrofluorocarbons, and perfluorocarbons. The MEPA GHG Policy calls for the evaluation of CO_2 emissions for a land development project because CO_2 is the predominant man made contributor to global warming. This evaluation makes use of the terms CO_2 and GHG interchangeably.

The MEPA GHG Policy states that all projects undergoing MEPA review requiring the submission of an EIR must quantify the project's GHG emissions and identify measures to avoid, minimize, or mitigate such emissions. In addition to quantifying project-related GHG emissions, the MEPA GHG Policy requires proponents to

quantify the effectiveness of proposed improvements in terms of energy savings and, therefore, potential emissions reductions. The goal of the MEPA GHG Policy is to identify and implement measures to minimize or reduce the total GHG emissions anticipated to be generated by that respective project.

The Proponent will provide an analysis of stationary and mobile source GHG emissions in accordance with the MEPA GHG Policy as part of the DEIR/DPIR.

4.4 Sustainability Approach

The Project is located on a previously developed site in the South Boston neighborhood of the City of Boston. It is located in close proximity to MBTA bus routes as well as vehicular access to major highway routes.

The Proponent will include sustainable features and strategies that will benefit tenants, residents and owners. The design team is exploring opportunities in energy conservation and sustainable design throughout the development and will determine appropriate sustainable design approaches suited for integration into each building. The Proponent will incorporate sustainable features through the LEEDv4 rating system to demonstrate compliance with Article 37 (discussed further below in Section 4.3.1).

Energy savings measures will include high efficiency building systems, (mechanical, plumbing and electrical) and sustainable design measures such as LED lighting, low flow plumbing fixtures, and building energy management systems. Building envelope measures will be further studied during the design phase of the Project, with the goal maximizing roof, wall, and window performance where feasible.

4.4.1 Compliance with Article 37

The City of Boston Zoning Ordinance Article 37 requires new building projects to be designed to meet the compliance level of LEED certifiable using the LEEDv4 rating system as guidance. Based on preliminary design, each building is targeting a LEEDv4 Certified rating, as demonstrated in the preliminary LEED scorecards presented in Figures 4.1a and 4.1b.

Due to the varying use types, the Project is using the USGBC LEEDv4 rating guidance as follows:

- LEEDv4 for New Construction (BD+C) for Block A, B, C, D, E, and F (Residential and Hotel) (Figure 4.1a); and
- LEEDv4 for Core & Shell for Block G and H and the Turbine Hall (Office and Turbine Hall) (Figure 4.1b).

The minimum point threshold to achieve LEEDv4 Certified rating is 40 points. The mixed-use Residential and Hotel buildings are currently tracking 42 “Yes” points and 34 “Maybe” points. The Office and Turbine Hall buildings are currently tracking 41 “Yes”

points and 35 "Maybe" points. The Proponent will continue to evaluate and incorporate sustainable design and energy conservation as the design process continues.

4.5 Energy Conservation Approach

The Proponent reviewed the possibility of establishing a central plant to provide hot water and chilled water for the entire building complex. Project phasing would limit the practicality of a central plant because a central plant would need to be on-line for the first building; however, it could be several years before the final building is complete. It is also possible that each building will be separately owned and maintained by different entities, making the feasibility of the central plant more difficult.

This section presents a preliminary assessment of the Project-related GHG emissions, as required by Article 80 requirements for initial submissions. As previously mentioned, the subsequent MEPA DEIR/DPIR filing will present the full GHG assessment, in accordance with the MEPA GHG Policy methodologies and requirements.

In support of Boston's GHG reduction goals, the Proponent has evaluated and incorporated strategies to minimize energy consumption associated with the Project through building energy modeling based on conceptual design as well as considered clean/renewable energy sources. Each building will have a central plant with high efficiency cooling tower equipment and condensing boilers. Ventilation air will be provided through energy recovery units ("ERUs"). The residential and hotel towers will have water source heat pump units. The core and shell office tenants will provide their own duct distribution and terminal Variable Air Volume ("VAV") units.

The Proponent will engage utility providers to better understand available alternative/cleaner energy sources and grants/rebates.

4.5.1 Preliminary Energy Model

The computer-based eQUEST whole building energy simulation software was used to estimate the amount of overall energy consumed by the proposed buildings including the garage and retail space from its projected electricity and gas usage based on assumptions for the Project's building elements, such as the specific type of use(s) and users of the buildings, building configuration and architecture type, building envelope (walls/windows), interior fit-out (where known), and HVAC equipment efficiency ratings. To estimate associated stationary source GHG emissions, the amount of consumed energy is then converted into the amount of CO_2 emitted using a standardized conversion factor.

The Stretch Energy Code requirements, as of January 1, 2017, were considered by using the state energy code (ASHRAE 90.1-2013) as the baseline for which to compare energy savings to (the "Base Case"). For the purposes of the stationary source GHG emissions assessment, the buildings have been designed (the "Design Case") to meet the Stretch Energy Code requirements or approximately 10 percent better than the Base Code.

The results of the preliminary energy models in Tables 4-1 through 4-4, and Figures 4.2a-d, demonstrate that it is feasible for the Project to comply with the Stretch Energy Code requirements. Based on the preliminary design parameters assumed in the Design Case, the proposed buildings would achieve an energy savings of approximately 15.4 percent when compared to the Base Case. This would result in a GHG emissions reduction of 10.2 percent (from an estimated 8,700 tons per year CO_2 emissions to 7,816 tons per year).

4.5.2 Energy Efficiency Measures

The energy savings calculated in the preliminary energy model were based on several key energy conservation measures for the Project that include:

- Condenser water plant that exceeds base energy code efficiency with variable speed technology, and energy recovery for exhaust;
- High-efficiency water-source heat pumps and water-cooled rooftop units;
- Low lighting power density;
- Ventilation air heat recovery;
- Condensing hot water boilers and water heaters; and
- Commissioning to help ensure major energy-using equipment is installed correctly.

Building envelope measures will be further studied during the design phase of the Project, with the goal of maximizing roof, wall, and window performance where feasible. Glazing percentages for the residential and hotel buildings will be below 40 percent, while the office buildings will be limited to approximately 60 percent glazing.

As the Project's design progresses, the Proponent will consider further load reduction where possible through additional strategies. A list of all baseline and proposed modeling inputs can be found in Appendix D.

4.5.3 Clean and Renewable Energy Analysis

The Proponent evaluated the following clean and renewable energy sources as described below: photovoltaic panels; combined heat and power; wind; transpired solar collectors; and solar thermal systems.

Photovoltaic Panels

For the purposes of gaining a better understanding of their potential contribution to on-site power generation, an analysis of rooftop locations for solar photovoltaic ("PV") systems will be conducted for the Project. The locations where PV systems are feasible will depend on a number of factors including shading from adjacent buildings, as well as competing space requirements for mechanical equipment and rooftop amenities.

Table 4-1 Preliminary Energy Model Results – Residential Building

Residential Buildings - Block 1, 2, 3, 4, and 5		Energy Consumption			Greenhouse Gas (CO_2) Emissions		
		Electricity	Natural Gas	Total EUI	Electricity	Natural Gas	Total
		(MBtu)	(MBtu)	(kBtu/sf)	(short tons)	(short tons)	(short tons)
Base Case (ASHRAE 90.1-2013)	Block 1	8,716	7,713	45	954	451	5317
	Block 2	4,200	3,716		460	217	
	Block 3	5,130	4,540		562	266	
	Block 4	9,038	7,998		989	468	
	Block 5	5,893	5,215		645	305	
	TOTAL	32,977	29,182		3,610	1,707	
		53%	47%		68%	32%	
Design Case	Block 1	9,291	4,379	37	1,017	256	4817
	Block 2	4,477	2,110		490	123	
	Block 3	5,469	2,578		599	151	
	Block 4	9,634	4,542		1,055	266	
	Block 5	6,281	2,961		688	173	
	TOTAL	35,152	16,570		3,848	969	
		68%	32%		80%	20%	
Savings		-2,174	12,612	7	-238	738	500
Percent Savings Target		-	-	10%	-	-	-
Percent Savings		-7%	43%	**17%**	-7%	43%	**9%**

Table 4-2 Preliminary Energy Model Results – Mixed-Use Residential/Hotel

Mixed Use Hotel and Residential Building		Energy Consumption			Greenhouse Gas (CO_2) Emissions		
		Electricity	Natural Gas	Total EUI	Electricity	Natural Gas	Total
		(MBtu)	(MBtu)	(kBtu/sf)	(short tons)	(short tons)	(short tons)
Base Case (ASHRAE 90.1-2013)	Block 6 Total	7,423	5,887	55	813	344	1,157
		56%	44%		70%	30%	
Design Case	Block 6 Total	7,730	3,400	46	846	199	1,045
		69%	31%		81%	19%	
Savings		-307	2,487	9	-34	145	112
Percent Savings Target		-	-	10%	-	-	-
Percent Savings		-4%	42%	**16%**	-4%	42%	10%

Table 4-3 Preliminary Energy Model Results – Office Building

Office Buildings - Block 7 and 8		Energy Consumption			Greenhouse Gas (CO_2) Emissions		
		Electricity (MBtu)	Natural Gas (MBtu)	Total EUI (kBtu/sf)	Electricity (short tons)	Natural Gas (short tons)	Total (short tons)
Base Case (ASHRAE 90.1-2013)	Block 7	4,063	710	35	445	42	1734
	Block 8	10,421	1,821		1,141	107	
	TOTAL	14,484	2,531		1,586	148	
		85%	15%		91%	1%	
Design Case	Block 7	3,605	673	32	395	39	1547
	Block 8	9,246	1,725		1,012	101	
	TOTAL	12,852	2,398		1,407	140	
		84%	16%		91%	9%	
Savings		1,633	133	4	179	8	186
Percent Savings Target		-	-	10%			
Percent Savings		11%	5%	**10%**	11%	5%	**11%**

Table 4-4 Preliminary Energy Model Results – Turbine Hall

Turbine Halls - 1 ,2 and 3		Energy Consumption			Greenhouse Gas (CO_2) Emissions		
		Electricity (MBtu)	Natural Gas (MBtu)	Total EUI (kBtu/sf)	Electricity (short tons)	Natural Gas (short tons)	Total (short tons)
Base Case (ASHRAE 90.1-2013)	Turbine 1	510	207	49	56	12	492
	Turbine 2	385	156		42	9	
	Turbine 3	2,802	1,138		307	67	
	TOTAL	3,696	1,501		405	88	
		71%	29%		82%	18%	
Design Case	Turbine 1	380	249	43	42	15	407
	Turbine 2	287	188		31	11	
	Turbine 3	2,087	1,367		228	80	
	TOTAL	2,754	1,804		301	106	
		60%	40%		74%	26%	
Savings		943	-303	6	103	-18	85
Percent Savings Target		-	-	10%	-	-	-
Percent Savings		26%	-20%	**12%**	26%	-20%	**17%**

Note: 747 lb CO2/MWh was used to convert electricity consumption into the amount of CO2 emissions (2015 ISO New England Electric Generator Air Emissions Report, January 2017). 117 lb CO2/Mbtu was used to convert gas consumption into the amount of CO2 emissions (The Energy Information Administration Documentation for Emissions for GHG).

As the design progresses, the team will evaluate the possibility of a solar PV array installation once there is more detail regarding the available roof area and a better understanding of any possible incentive or grant programs to help offset the initial investment. At a minimum the buildings will be solar ready in order to accommodate a possible future solar installation. This will give the owner flexibility if the market changes and they want to invest in solar at a later date. The Proponent will consider how the roof structure, roof space, and building orientation will affect a future installation. The necessary infrastructure will be included as the building design evolves and solidifies.

Combined Heat and Power

Combined heat and power ("CHP") systems, also known as cogeneration, generate electricity and useful thermal energy in a single, integrated system. CHP systems are most advantageous for facilities that have a hot water demand year-round. The Project Team will explore the benefits of implementing CHP for the larger residential buildings for use in heating domestic hot water. Due to the lack of a significant domestic hot water demand, the benefits of CHP are minimal for the office buildings and Turbine Hall.

A 75 kW CHP system to power the base electrical load for each of the high-rise residential buildings (Blocks C, F, and E) will be considered. Each of these buildings will have more than 200,000 square feet of residential space with year-round domestic hot water demand. For the economics to make sense, it is important that all thermal energy produced by the CHP is consumed by the building, rather than rejected to the outside. A detailed economic analysis will be conducted during the design phase of each project. With involvement and input from the utility, including the utility's approval to connect back into the grid, such a system can be further evaluated.

It is important to note that full build-out of each Block is many years out. Given this timeframe, it is anticipated that energy conservation technologies will advance providing additional, potentially more viable options than a CHP system. Therefore, the Proponent is committed to continuing to evaluate the feasibility and benefits of a CHP system for the Project as well as other technologies for comparative purposes.

Wind

The feasibility of generating electricity from wind sources was assessed and rejected for the following reasons:

- Competing roof area for mechanical equipment and amenities;
- Wind speed in Boston is too low for cost-effective electricity generation;
- Small, vertical wind turbines provide insignificant electricity generation relative to total building demand; and
- Wind turbines have additional operation and maintenance costs to consider since they contain moving parts.

Transpired Solar Collectors

The feasibility of using solar energy to preheat ventilation air was assessed and rejected for the following reasons:

- Transpired solar collectors are ideal for large opaque south-facing walls. Residential, hotel and office projects have too much glazing and not enough continuous opaque wall area to make this technology viable; and
- The Project includes energy recovery wheels to preheat all outside air entering the building. The energy recovery wheels recover heat from building return air that would otherwise be exhausted. Since the residential buildings will have operable windows, installing a solar collector would not be a cost-effective solution.

Solar Thermal

The feasibility of generating thermal energy from solar thermal was assessed and rejected for the following reasons:

- Competing roof area for mechanical equipment and amenities;
- Photovoltaic arrays typically have a similar economic payback as solar thermal, but require lower operation and maintenance costs;
- Roof area on the high-rise towers is very small relative to high hot water demands in residential and hotel buildings; and
- There is minimal hot water demand in the office buildings and Turbine Hall.

4.5.4 Energy Efficiency Assistance

The Proponent is aware that the Project's electrical and natural gas service providers may potentially offer technical assistance and incentives for implementing energy efficiency measures. By working with these utilities throughout the design process, the Proponent will evaluate additional energy conservation strategies and, therefore, additional energy savings and associated GHG emissions reductions may be achieved.

Furthermore, the Proponent is committed to meeting the applicable requirements of the City of Boston Building Energy Reporting and Disclosure Ordinance, Section 7-2.2 of the Boston Ordinances, once the Project is in operation.

4.6 Climate Chance Preparedness and Resiliency

Climate change is expected to result in rising sea levels, more frequent extreme storms, and more extreme weather events. The following sections describe how the predicted effects of climate change and potential resiliency measures have been considered in the design of the Project.

As required by the BPDA for all Large Project Review projects, the Proponent has considered anticipated changes in climate, which is reflected in the Resiliency Checklist provided in Appendix C.

4.6.1 Predicted Future Conditions

The Proponent has surveyed climate change publications and data to evaluate potential future conditions over the life of the Project including changes in temperature, precipitation, and flooding events.

Extreme Precipitation

The City of Boston is expected to experience less frequent, but more extreme precipitation events due to climate change. Increases in the intensity of precipitation events cause stormwater infrastructure to reach capacity faster with greater volumes of precipitation runoff. This results in inland flooding, where surface runoff cannot be conveyed to stormwater infrastructure properly. While inland flooding can damage buildings with floodwaters, stormwater overflows can cause combined sewer systems to reach capacity preventing the appropriate conveyance of wastewater from nearby buildings, while sending diluted wastewater into local waterways. To prevent these deleterious consequences, stormwater infrastructure needs to be designed to accommodate the expected increases in precipitation intensity and stormwater management needs to be applied across the local watershed.

Extreme Weather Conditions

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

Sea Level Rise

New England is expected to experience sea level rise due to climate change. There are many sources which have quantified the expected sea level rise and evaluated various scenarios for the City of Boston. CZM has prepared the document *Sea Level Rise: Understand and Applying Trends and Future Scenarios for Analysis and Planning* ("CZM Report"), which provides projections of expected sea level rise for Boston at several points in the future under different emission scenarios: Lowest; Intermediate Low; Intermediate High; and Highest.

The CZM Report gives planners and designers a resource for 'bathtub model' evaluations of assets and infrastructure. These elevations can be added to flood elevations provided by

resources such as the FEMA Flood Insurance Rate Map ("FIRM") program. These maps provide the 1 and 0.2 percent annual chance of floods (i.e. 100-year and 500-year flood elevations along U.S. waterways and coasts). These maps, when combined with sea level rise projections, can provide a basic flood elevation evaluation tool.

The Massachusetts Department of Transportation ("MassDOT") and Federal Highway Administration ("FHWA") took the CZM sea level rise information one-step further than the 'bathtub' model, by creating a dynamic flooding model. The *MassDOT-FHWA Pilot Project Report: Climate Change and Extreme Weather Vulnerability Assessments and Adaptation Options for the Central Artery* ("MassDOT-FWHA Study") provided flood elevations generated by a hydrodynamic model coupled with a wave simulation model, over the topography and bathymetry of the greater Boston area. This model provides the most accurate publicly available site-specific flooding model with sea level rise in Boston for certain planning years and emission scenarios.

On June 1, 2016, a publication was issued by the City of Boston and the Green Ribbon Commission for the Climate Ready Boston project. The Boston Research Advisory Group ("BRAG") Report *Climate Change and Sea Level Rise Projections for Boston* ("BRAG Report") provided results focused on the City of Boston proper for three climate scenarios: Lowest Emissions; Intermediate Emissions; and Highest Emissions. BRAG was established in 2015 to develop a consensus on possible climate changes and sea level rise that would impact the City of Boston by years 2030, 2050, 2070 and 2100. The report lists a Maximum and a Likely Range for all scenarios studied.

4.6.2 Vulnerability Assessment

Because the Project Site is adjacent to the Reserved Channel, it is susceptible to flooding from inland flooding, extreme flooding events, and/or predicted sea level rise. The following describes the Project Site vulnerabilities to flooding that the Proponent has considered.

FEMA 100-year Floodplain

A portion of the Project Site is located within the AE Zone of the FEMA FIRM number 25025C0083J, effective March 16, 2016. There are two flood elevations on the Project Site roughly separated by the shoreline. The Project Site flood elevation is +18.45 BCB over land and +19.45 over water. Refer to Figure 4.3 for the FEMA 100-year floodplain map.

Inland Flooding

The Project Site is in a watershed serviced by the stormwater infrastructure of the Boston Water and Sewer Commission ("BWSC"). The BWSC designs its infrastructure capacity to convey the 10-year, 24-hour design storm event. This design storm event is defined as a storm which generates 4.80 inches of precipitation in 24 hours, with a peak intensity of 1.52 inches per hour. In storm events that exceed the 10-year design storm event,

drainage infrastructure either can be expected to surcharge into local roadways or combined sewer infrastructure, if cross connections exist.

Sea Level Rise Studies Referenced

CZM Report

The CZM report provides sea level rise scenarios from the Low to High emissions scenario from the United States National Climate Assessment, which have been adjusted for local conditions in Boston.

The sea level rise elevations for the design year 2075 are presented below in Table 4-5. In addition, these values were added to the Mean Higher High Water ("MHHW") value and the 100-year flood event from the FEMA FIRM. MHHW is defined as the average height of the higher high tide of each day (typically two high tides per day). These values indicate that with the highest emission sea level rise, low levels of the existing Site would experience flooding during MHHW.

Table 4-5 Flooding Elevations with Sea Level Rise - CZM

Site Elevation	High Emission Sea Level Rise	Intermediate High Emission Sea Level Rise	Intermediate Low Emission Sea Level Rise	Low Emission Sea Level Rise
Mean Higher High Water (MHHW)	El. +11.23			
FEMA 100-Year Flood	El. +18.46			
CZM Report 2075	+3.92′	2.47′	1.21′	0.6′
MHHW + CZM 2075	El. +15.15	El. +13.7	El. +12.44	El. +11.83
FEMA + CZM 2075	El. +22.38	El. +20.93	El. +19.67	El. +19.06
L Street Station Redevelopment		EL. +21.56		

MassDOT-FHWA Study

The flooding elevations from the MassDOT-FHWA Study have been obtained for the Project Site. This report presents a single map for the coupled 100-year storm event with sea level rise for the High emission scenario in 2070 and the Intermediate High emission scenario in 2100. While there is no direct comparison between the MassDOT and CZM reports, the resulting flood elevation from the MassDOT-FHWA Study would be comparable to the CZM 2075 High Emissions Scenario Sea Level Rise coupled with the 100-year flooding event

BRAG Report

The flooding elevations from the BRAG report have been obtained for the City of Boston. The CZM Intermediate High Scenario, which was used by the design team to

establish a finished floor elevation of 21.56′ BCB, falls within the Likely Range of the BRAG report's High Emissions/Business As Usual scenario, wherein CO_2 emissions continue to increase, tripling by 2100.

Table 4-6 Flooding Elevations with Sea Level Rise [a] – BRAG Report

Projection	Current (2016)	Near-Term (2030)	Mid-Century (2050)	Late-Century (2070)	End-of-Century (2100)
Low Emissions	18.5′	18.8-19.3′	19.2-19.9′	19.7-20.9′	20.4-22.4′
Medium Emissions	18.5′	18.8-19.3′	19.2-20.0′	19.8-21.1′	20.1-23.7′
High Emissions	18.5′	18.8-19.3′	19.3-20.0′	20.0-21.7′	21.7-26.0′

[a] Projected SLR above 2000 MHHW added to BFE of 12′ NAVD88, converted to BCB datum.

4.6.3 Potential Resiliency Measures

The Proponent has identified building and site design resiliency measures to address the potential impacts described above.

Flooding

Several building and site design measures have been evaluated to make the Project more resilient to flooding events. Based on the comprehensive analysis of the Project vulnerabilities to flooding presented above, the finished floor elevation for the Project has been set at +21.5 BCB. This strategic design approach will ensure that the Project will maintain operational capacity during a 100-year flood event evaluated by FEMA with the projected High Emission Sea Level Rise in 2070. Figure 4.3 depicts the FEMA 100-year floodplain elevation (18.45 BCB) in the existing condition. In addition to setting the finished floor elevation three feet above the current 100-year flood elevation, the Proponent is exploring the use of both movable and permanent flood barriers at potentially vulnerable areas such as garage entrances.

The following Project design elements will further increase resiliency:

- All life safety/standby emergency generators will be located on the roof.
- The HVAC system will be evaluated for performance during extreme weather events and anthropogenic future climate change.
- Operable windows within residential spaces provide natural ventilation during a power loss.
- A CHP system and building-integrated solar PV will be studied to provide utility grid relief and resilient back-up power generation.
- All electrical distribution system equipment/components will be located above the 100-year flood level.
- The stormwater management system will retain stormwater on-site in excess of the required 1-inch precipitation event. This reduction in stormwater provides

relief to the existing BWSC drainage infrastructure by freeing up capacity in relation to the existing site conditions.

- To cope with increasing intensity in precipitation, the stormwater infrastructure will be designed to capture and convey short-duration, high-intensity precipitation events.
- The surficial landscape has been designed to be resilient to the potential flooding of the Project Site. The plantings at the lower site elevations adjacent to the Reserved Channel will be selected for their tolerance to inundation by saltwater.
- To prevent surcharging of sanitary sewer flows into the buildings, backflow preventers will be installed on all connections to the sanitary sewer system.

Extreme Heat Events

To address extreme weather conditions that the City of Boston is expected to experience in the future, the Project has been designed to withstand and mitigate the expected increase in extreme heat events. The evapotranspiration from the extensive Project open space will provide an enhanced pedestrian environment in extreme heat events. The Site design will maximize green space and focus on the creation of micro climates to enhance usability during all seasons.

The use of native plant materials will minimize the need for irrigation and maintenance, while providing habitat for local fauna. To accommodate any irrigation needs, the Project is evaluating the use of treated greywater and/or stormwater capture and storage as sources for water usage. Tree species will be evaluated to ensure high performance and functionality while requiring minimal irrigation and maintenance. The landscape design will explore the use of plant materials known for hydraulic redistribution to ensure survival in the multitude of conditions that will be encountered over the life of the Project Site. With the addition of ground level plantings, the Project will ultimately help to reduce heat island effect in the area exponentially from the current site condition (i.e., asphalt for surface parking).

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

Project Checklist

Project Name: 776 Summer Street - Block 1, 2, 3, 4, 5 and 6 (Residential and Hotel)
Date: February 10, 2017

Y	?	N			
1			Credit	Integrative Process	1

10	4	2	Location and Transportation		16
		x	Credit	LEED for Neighborhood Development Location	16
1			Credit	Sensitive Land Protection	1
		2	Credit	High Priority Site	2
4	1		Credit	Surrounding Density and Diverse Uses	5
3	2		Credit	Access to Quality Transit	5
1			Credit	Bicycle Facilities	1
	1		Credit	Reduced Parking Footprint	1
1			Credit	Green Vehicles	1

1	5	4	Sustainable Sites		10
Y			Prereq	Construction Activity Pollution Prevention	Required
	1		Credit	Site Assessment	1
		2	Credit	Site Development - Protect or Restore Habitat	2
		1	Credit	Open Space	1
	2	1	Credit	Rainwater Management	3
1	1		Credit	Heat Island Reduction	2
	1		Credit	Light Pollution Reduction	1

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

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

4	6	3	Materials and Resources		13
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
	3	2	Credit	Building Life-Cycle Impact Reduction	5
1		1	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
1	1		Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
1	1		Credit	Building Product Disclosure and Optimization - Material Ingredients	2
1	1		Credit	Construction and Demolition Waste Management	2

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

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

0	1	3	Regional Priority		4
		1	Credit	Regional Priority: High Priority Site	1
	1		Credit	Regional Priority: Rainwater management (2 pt threshold)	1
		1	Credit	Regional Priority: Optimize Energy (8 pt threshold)	1
		1	Credit	Regional Priority: Renewable Energy (2 pt threshold)	1

42	34	34	TOTALS	Possible Points:	110

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

Figure 4.1a

LEED Scorecard

L Street Station Redevelopment
Boston, Massachusetts

LEED v4 for BD+C: Core and Shell

Project Checklist

Project Name: 776 Summer Street - Block 7 and 8 (Office and Turbine Halls)
Date: February 10, 2017

Y	?	N			
1			Credit	Integrative Process	1

12	5	3	**Location and Transportation**		**20**
		x	Credit	LEED for Neighborhood Development Location	20
2			Credit	Sensitive Land Protection	2
		3	Credit	High Priority Site	3
4	2		Credit	Surrounding Density and Diverse Uses	6
4	2		Credit	Access to Quality Transit	6
1			Credit	Bicycle Facilities	1
	1		Credit	Reduced Parking Footprint	1
1			Credit	Green Vehicles	1

2	5	4	**Sustainable Sites**		**11**
Y			Prereq	Construction Activity Pollution Prevention	Required
	1		Credit	Site Assessment	1
		2	Credit	Site Development - Protect or Restore Habitat	2
		1	Credit	Open Space	1
	2	1	Credit	Rainwater Management	3
1	1		Credit	Heat Island Reduction	2
	1		Credit	Light Pollution Reduction	1
1			Credit	Tenant Design and Construction Guidelines	1

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

10	8	14	**Energy and Atmosphere**		**33**
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
3	2	1	Credit	Enhanced Commissioning	6
4	4	10	Credit	Optimize Energy Performance	18
1			Credit	Advanced Energy Metering	1
		1	Credit	Demand Response	2
	1	2	Credit	Renewable Energy Production	3
	1		Credit	Enhanced Refrigerant Management	1
2			Credit	Green Power and Carbon Offsets	2

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

5	4	1	**Indoor Environmental Quality**		**10**
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
1	1		Credit	Enhanced Indoor Air Quality Strategies	2
2	1		Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
	2	1	Credit	Daylight	3
1			Credit	Quality Views	1

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

0	2	2	**Regional Priority**		**4**
		1	Credit	Regional Priority: High Priority Site	1
	1		Credit	Regional Priority: Rainwater management (2 pt threshold)	1
	1		Credit	Regional Priority: Optimize Energy (8 pt threshold)	1
		1	Credit	Regional Priority: Renewable Energy (2 pt threshold)	1

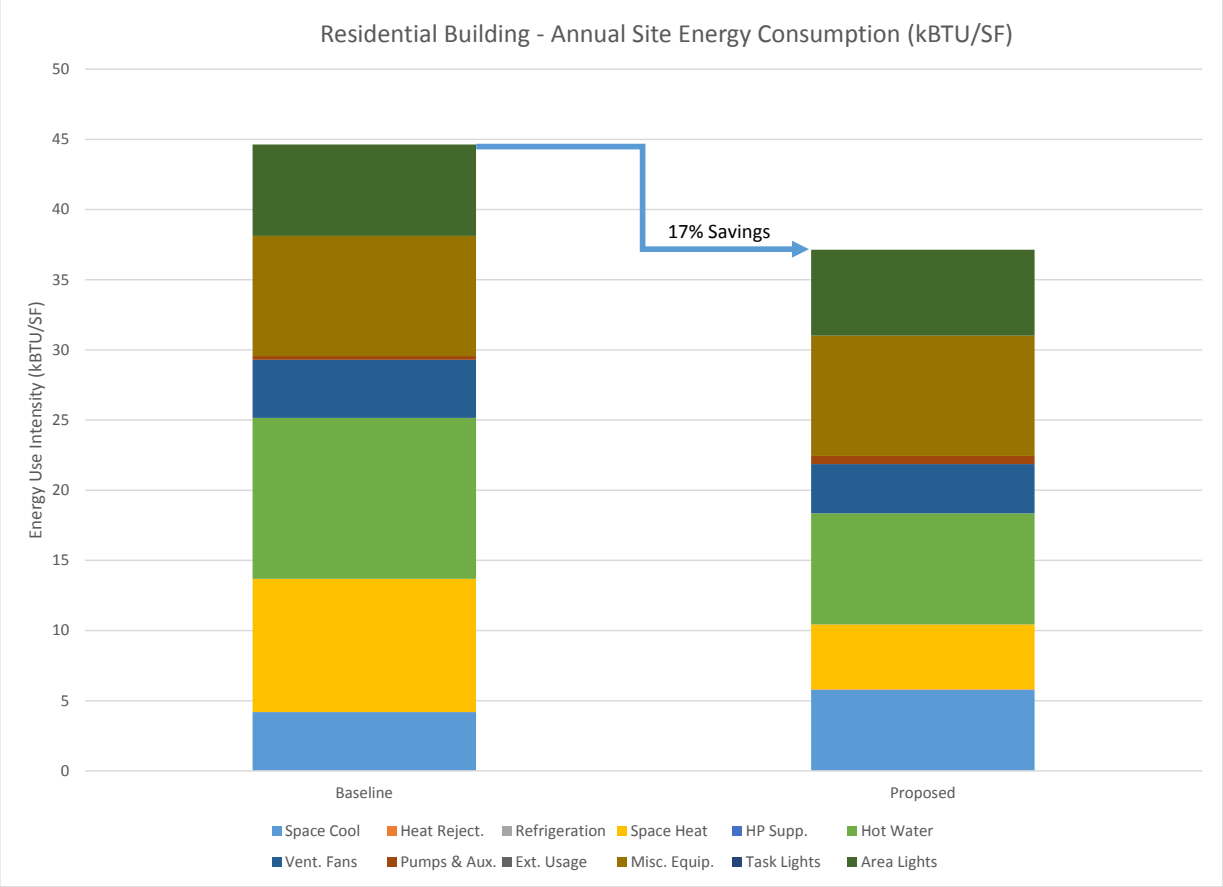
41	35	33	**TOTALS**	Possible Points:	**110**

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

Figure 4.1b

LEED Scorecard

L Street Station Redevelopment
Boston, Massachusetts

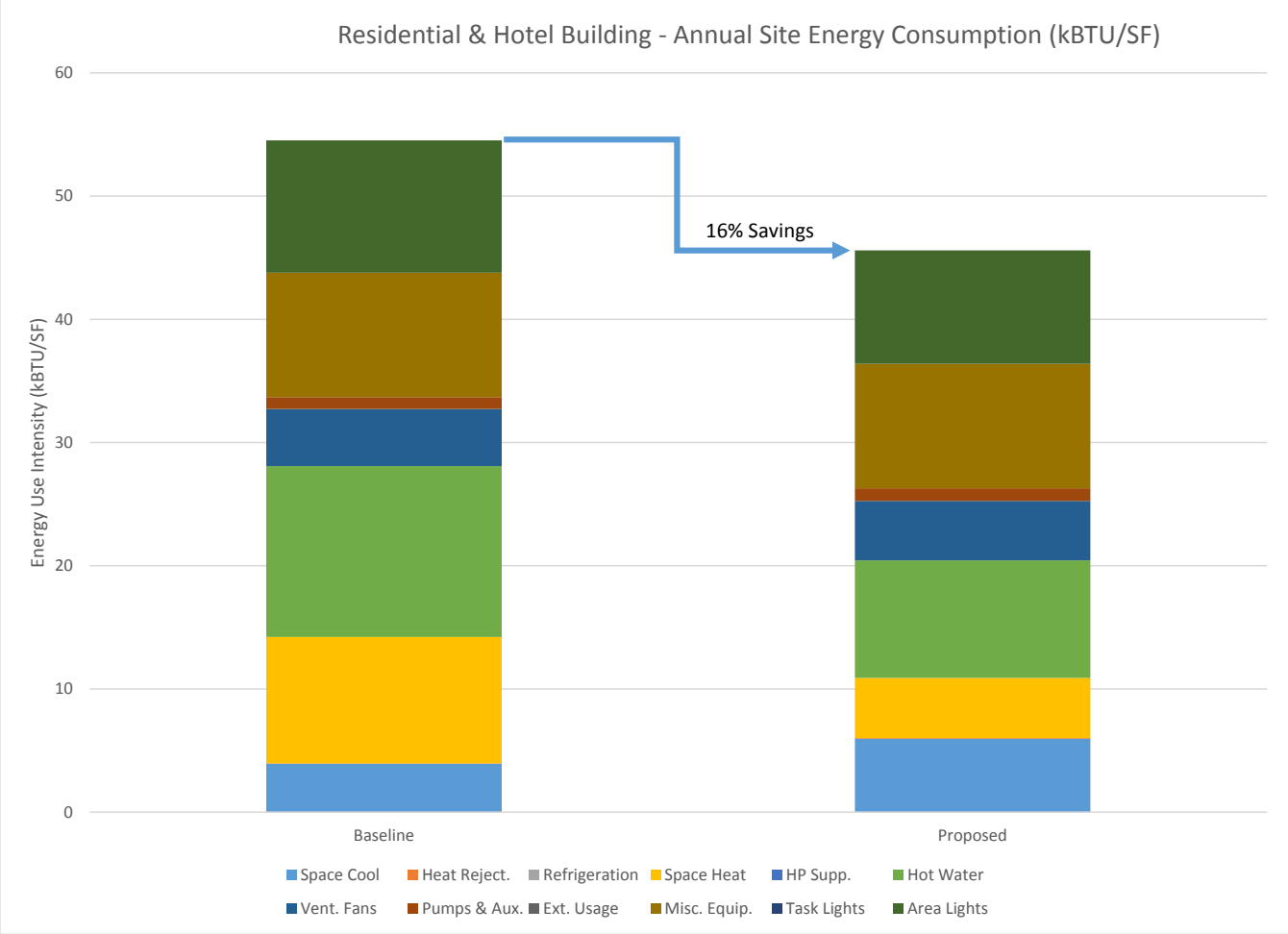


Residential Buildings - Block 1, 2, 3, 4, and 5		Energy Consumption			Greenhouse Gas (CO_2) Emissions		
		Electricity	**Natural Gas**	**Total EUI**	**Electricity**	**Natural Gas**	**Total**
		(MBtu)	**(MBtu)**	**(kBtu/sf)**	**(short tons)**	**(short tons)**	**(short tons)**
Base Case (ASHRAE 90.1-2013)	Block 1	8,716	7,713	45	954	451	5317
	Block 2	4,200	3,716		460	217	
	Block 3	5,130	4,540		562	266	
	Block 4	9,038	7,998		989	468	
	Block 5	5,893	5,215		645	305	
	TOTAL	32,977	29,182		3,610	1,707	
		53%	47%		68%	32%	
Design Case	Block 1	9,291	4,379	37	1,017	256	4817
	Block 2	4,477	2,110		490	123	
	Block 3	5,469	2,578		599	151	
	Block 4	9,634	4,542		1,055	266	
	Block 5	6,281	2,961		688	173	
	TOTAL	35,152	16,570		3,848	969	
		68%	32%		80%	20%	
Savings		-2,174	12,612	7	-238	738	500
Percent Savings Target		-	-	10%	-	-	-
Percent Savings		-7%	43%	**17%**	-7%	43%	**9%**

Figure 4.2a

Preliminary Energy Model Results
Residential Building

L Street Station Redevelopment
Boston, Massachusetts

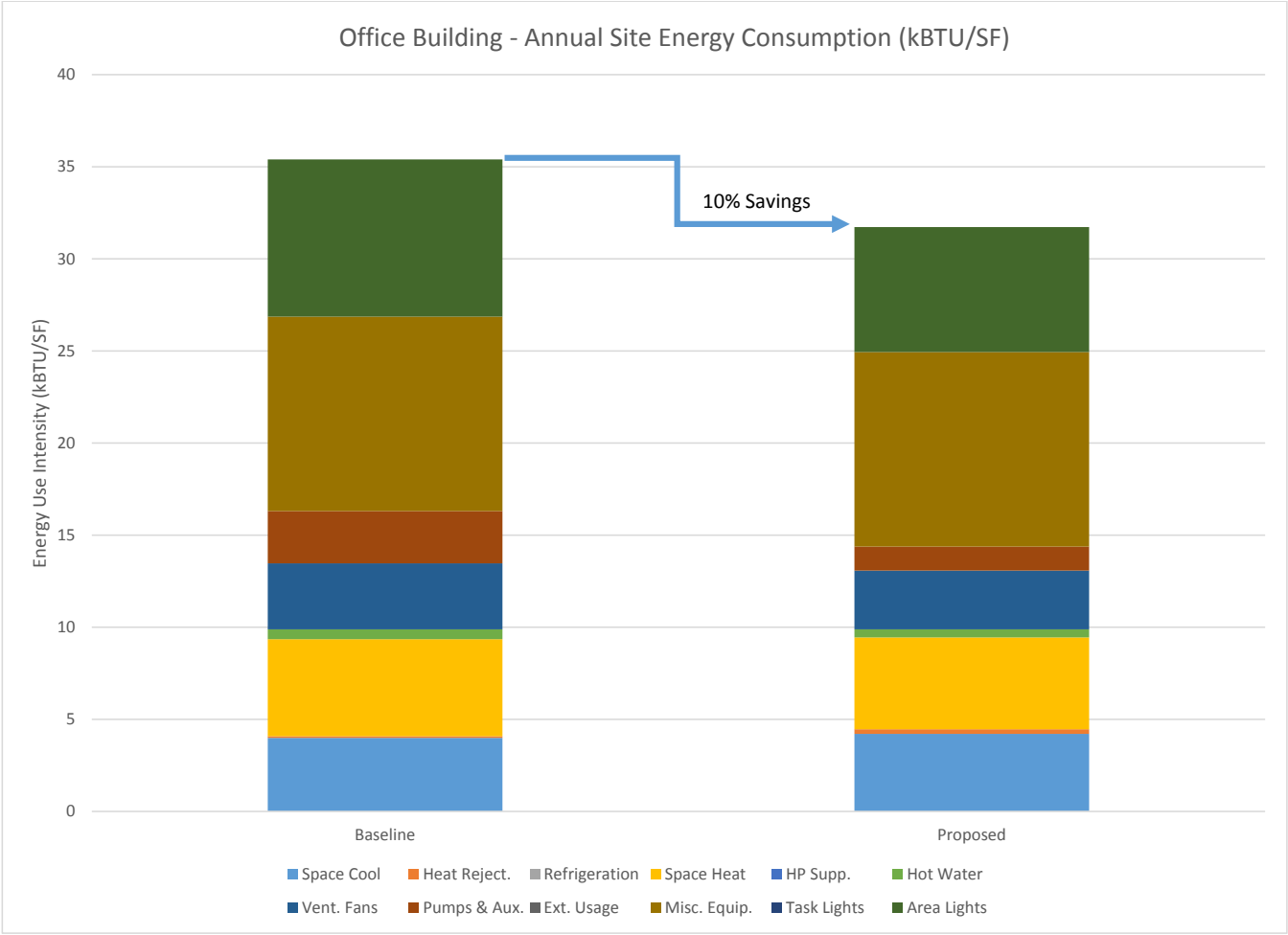


Mixed Use Hotel and Residential Building		Energy Consumption			Greenhouse Gas (CO_2) Emissions		
		Electricity	**Natural Gas**	**Total EUI**	**Electricity**	**Natural Gas**	**Total**
		(MBtu)	**(MBtu)**	**(kBtu/sf)**	**(short tons)**	**(short tons)**	**(short tons)**
Base Case (ASHRAE 90.1-2013)	Block 6 Total	7,423	5,887	55	813	344	1,157
		56%	44%		70%	30%	
Design Case	Block 6 Total	7,730	3,400	46	846	199	1,045
		69%	31%		81%	19%	
Savings		-307	2,487	9	-34	145	112
Percent Savings Target		-	-	10%	-	-	-
Percent Savings		-4%	42%	**16%**	-4%	42%	10%

Figure 4.2b

Preliminary Energy Model Results
Mixed-Use Residential/Hotel

L Street Station Redevelopment
Boston, Massachusetts

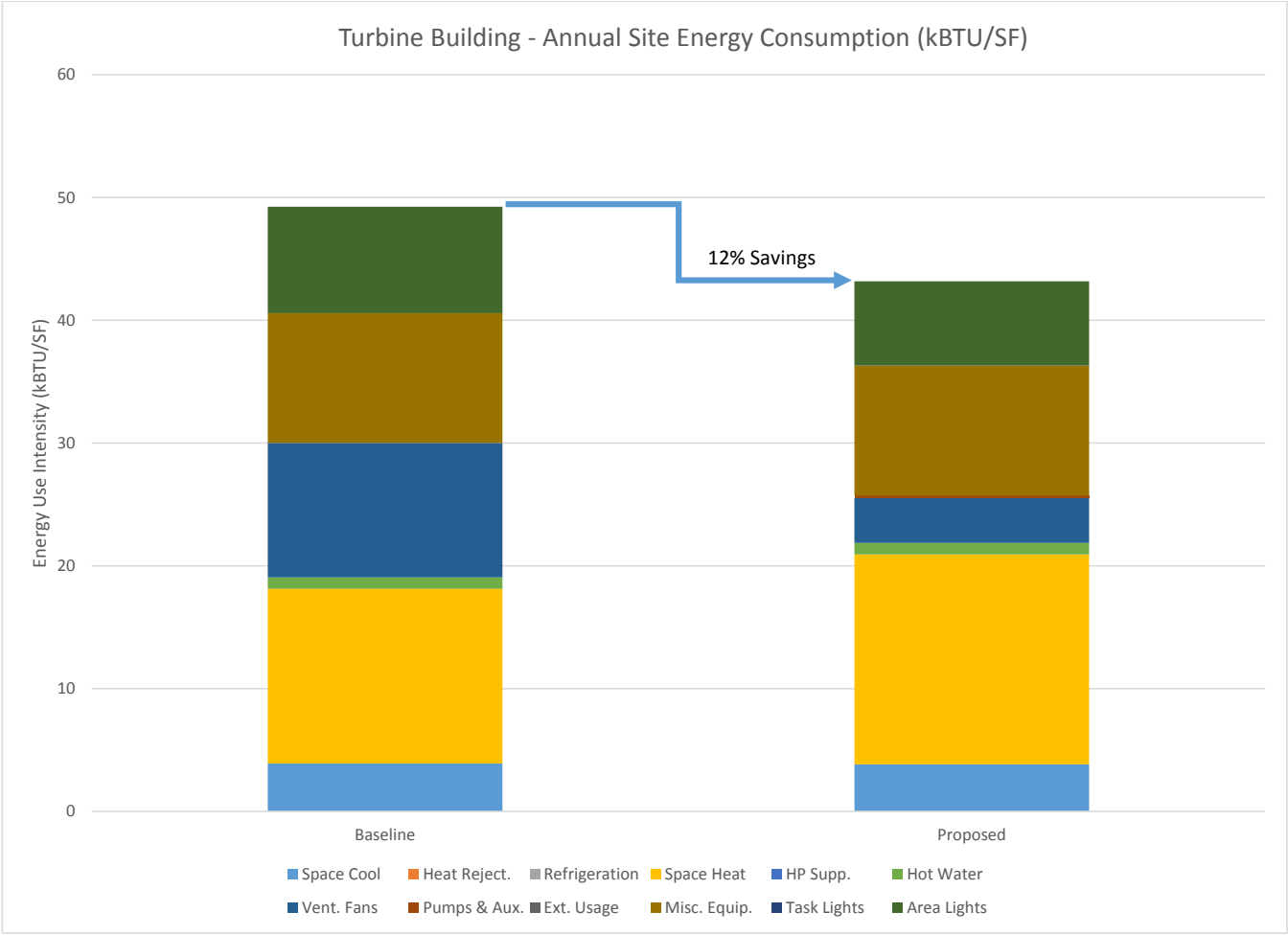


Office Buildings - Block 7 and 8		Energy Consumption			Greenhouse Gas (CO_2) Emissions		
		Electricity	**Natural Gas**	**Total EUI**	**Electricity**	**Natural Gas**	**Total**
		(MBtu)	**(MBtu)**	**(kBtu/sf)**	**(short tons)**	**(short tons)**	**(short tons)**
Base Case (ASHRAE 90.1-2013)	Block 7	4,063	710	35	445	42	1,734
	Block 8	10,421	1,821		1,141	107	
	TOTAL	14,484	2,531		1,586	148	
		85%	15%		91%	1%	
Design Case	Block 7	3,605	673	32	395	39	1,547
	Block 8	9,246	1,725		1,012	101	
	TOTAL	12,852	2,398		1,407	140	
		84%	16%		91%	9%	
Savings		1,633	133	4	179	8	186
Percent Savings Target		-	-	10%			
Percent Savings		11%	5%	**10%**	11%	5%	**11%**

Figure 4.2c

Preliminary Energy Model Results
Office Buildin

L Street Station Redevelopment
Boston, Massachusetts

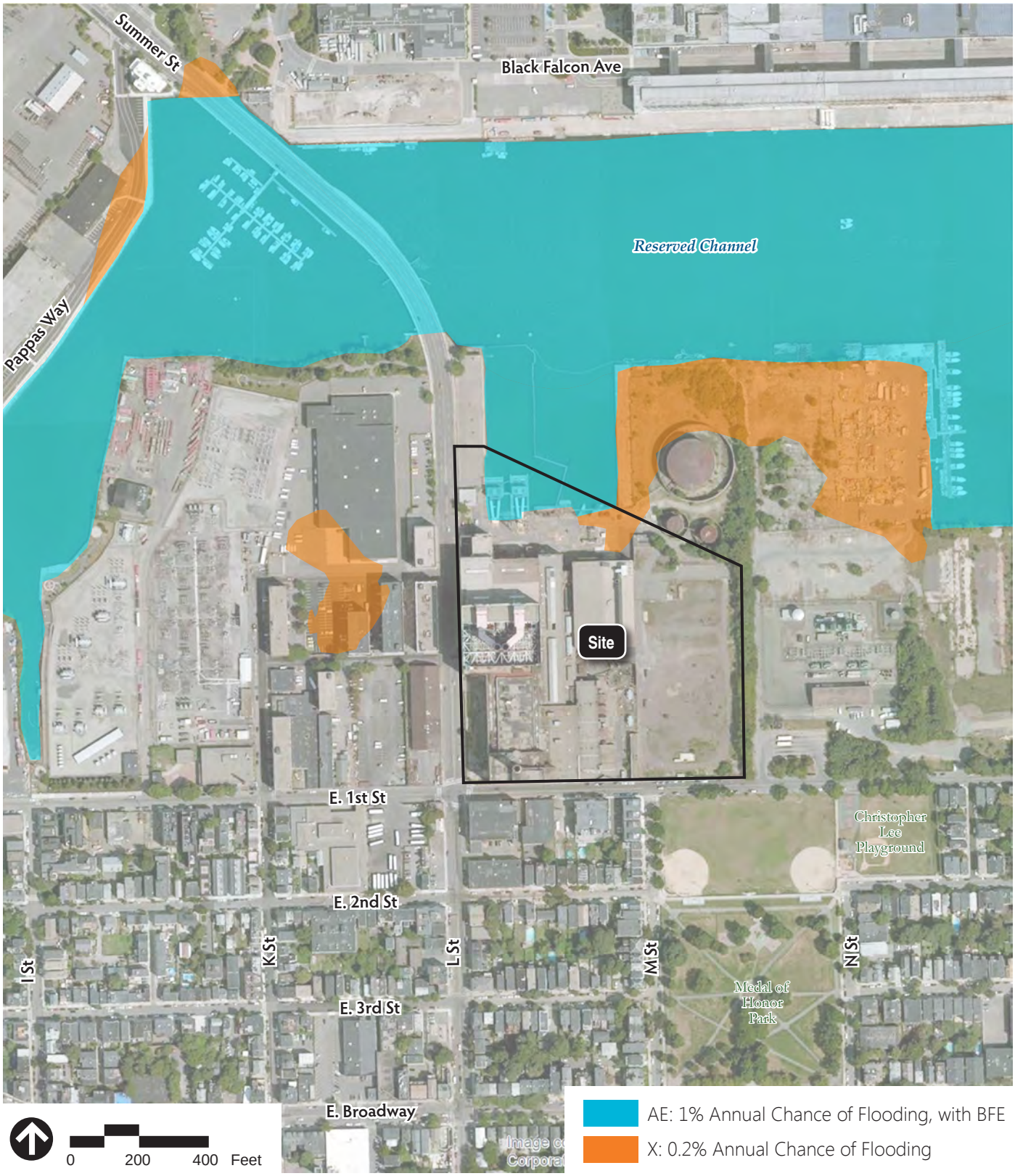


Turbine Halls - 1 ,2 and 3		Energy Consumption			Greenhouse Gas (CO_2) Emissions		
		Electricity	**Natural Gas**	**Total EUI**	**Electricity**	**Natural Gas**	**Total**
		(MBtu)	**(MBtu)**	**(kBtu/sf)**	**(short tons)**	**(short tons)**	**(short tons)**
Base Case (ASHRAE 90.1-2013)	Turbine 1	510	207	49	56	12	492
	Turbine 2	385	156		42	9	
	Turbine 3	2,802	1,138		307	67	
	TOTAL	3,696	1,501		405	88	
		71%	29%		82%	18%	
Design Case	Turbine 1	380	249	43	42	15	407
	Turbine 2	287	188		31	11	
	Turbine 3	2,087	1,367		228	80	
	TOTAL	2,754	1,804		301	106	
		60%	40%		74%	26%	
Savings		943	-303	6	103	-18	85
Percent Savings Target		-	-	10%	-	-	-
Percent Savings		26%	-20%	**12%**	26%	-20%	**17%**

Figure 4.2d

Preliminary Energy Model Results
Turbine Hall

L Street Station Redevelopment
Boston, Massachusetts



Source: MassGIS

Figure 4.3
FEMA Flood Zone

L Street Station Redevelopment
Boston, Massachusetts

5

Transportation

This chapter provides an overview of the Project's transportation characteristics, as well as potential impacts, as identified based on a preliminary evaluation. This will be the subject of detailed analysis to be presented in the DEIR/DPIR based on further discussion with the transportation agencies. The following sections describe vehicle and transit site access, Project travel characteristics, trip generation by mode, and parking.

5.1 Introduction

The L Street Station Redevelopment will consist of approximately 2.1[1] million gross square feet of mixed-use development and the rehabilitation of a portion of the Turbine Hall. The Project proposes a mix of uses, including residential, office (commercial), hotel, and retail.

The mix of residential, commercial, and retail uses in the Project will benefit from available MBTA bus service and an expanded pedestrian and bicycle network, resulting in a higher proportion of alternative mode trips rather than vehicle trips. Further, the capture of internal trips between different Project uses will support reduced vehicle trip-making and opportunities to control parking demand through parking sharing strategies that take into consideration the needs of different users by time of day

Additionally, the Project will implement a robust program of Transportation Demand Management ("TDM") strategies to take full advantage of its mobility options and its synergy with the surrounding neighborhoods. An important component of the TDM plan will be the incorporation of additional bicycle accommodations within the garages, internal roadway network, or elsewhere within the Project Site in compliance with BTD Bicycle Guidelines. The Project will encourage bicycling, as well as walking, as a strong transportation mode.

There will be two access roads into the Project Site; one access driveway will be located off Summer Street near its intersection with Elkins Street, and a second driveway will be located off East 1st Street near its intersection with M Street. Internal streets will also be constructed as part of the Project to allow for efficient internal trip distribution.

1 Excluding structured parking.

5.2 Summary of Key Findings and Benefits

The following are key findings related to transportation:

- The Proponent will make significant functional and aesthetic improvements to the existing Project Site that will benefit the surrounding area by providing pedestrian and bicycle access within and through the project site.
- The mix of uses (office, residential, retail, and hotel) will result in the reduction of vehicle trips due to employees, residents, and patrons using multiple elements of the project, such as employees and residents using the retail stores and restaurants.
- Improvements in vehicle technology, such as autonomous vehicles and rideshare services, such as Uber and Lyft, will reduce parking demand for private vehicles through carsharing and use of other alternative modes of travel.
- Current MBTA bus services in the project site are oversubscribed and residents experience overcrowded buses during the peak commuting hours.
- Since the Project will be constructed over the course of 10 years, transportation serving South Boston will continue to evolve to accommodate changes in technology, commuting, work-life and parking trends.
- The Project Site plan allows for possible improvements at the adjacent Summer Street/L Street intersection which may include geometric changes to the intersection, sidewalk reconstruction, and bicycle accommodations.
- The Project will incorporate bicycle accommodations in compliance with BTD's Guidelines to encourage bicycling, as well as walking, as strong transportation modes to and from the Site.
- The Project will implement a robust program of TDM strategies to take full advantage of its mobility options and its synergy with the surrounding neighborhood.

5.3 Trip Generation

5.3.1 Unadjusted ITE Trips

To estimate traffic generated by the Project, Institute of Transportation Engineers' ("ITE") average trip generation rates for Residential (LUC 220), Office (LUC 710), Hotel (LUC 310), and Retail (LUC 820) were used to support this analysis. As previously noted, for analysis purposes, the commercial square footage was categorized as office space. The trip rates were applied without adjustment for local mode share and vehicle occupancy characteristics. The results of this analysis are presented in Table 5-1 which includes daily (24-hour) and peak hour (morning and evening) unadjusted vehicle trips for each land use. While the unadjusted trips are required to be included in the ENF/EPNF to help assess MEPA jurisdiction, they are largely based upon non-urban data and do not represent the actual vehicle trips expected to be generated by the Project. The trips generated by the Project are more appropriately determined by applying mode share characteristics for this location in South Boston, as discussed in the next section.

Table 5-1 Unadjusted ITE Vehicle Trips

	Daily (24-hour)	Unadjusted Vehicle Trips
Daily		
Office	IN	1,810
	OUT	1,810
	TOTAL	3,620
Residential	IN	5,280
	OUT	5,280
	TOTAL	10,561
Retail	IN	2,426
	OUT	2,426
	TOTAL	4,852
Hotel	IN	669
	OUT	669
	TOTAL	1,338
	Daily Total IN	**10,185**
	Daily Total OUT	**10,185**
	DAILY TOTAL 2-Way	**20,370**
AM Peak Hour		
Office	IN	490
	OUT	67
	TOTAL	557
Residential	IN	162
	OUT	648
	TOTAL	810
Retail[2]	IN	67
	OUT	43
	TOTAL	109
Hotel	IN	58
	OUT	42
	TOTAL	100
	AM Total IN	**777**
	AM Total OUT	**800**
	AM TOTAL 2-Way	**1,576**
PM Peak Hour		
Office	IN	86
	OUT	418
	TOTAL	504
Residential	IN	640
	OUT	345
	TOTAL	985
Retail	IN	207
	OUT	215
	TOTAL	422
Hotel	IN	51
	OUT	54
	TOTAL	105
	PM Total IN	**984**
	PM Total OUT	**1,032**
	PM TOTAL 2-Way	**2,015**

Source: Trip Generation, 9th Edition; Institute of Transportation Engineers; average rates & regression formula

The morning and evening peak hours are the busiest continuous 1-hour blocks during the weekday morning and evening commuter periods, respectively. The morning peak hour in the study area occurs between 7:30 and 8:30 AM, and the evening peak hour occurs between 5:00 and 6:00 PM.

5.3.2 Mode Share Assumptions

Mode shares from BTD Area 13 (South Boston region inclusive of the Project Site) were used for the trip generation analysis. The City's Imagine Boston 2030 Plan has developed an aspirational set of goals to discourage single-occupant vehicle travel in the future as Boston continues to grow. As part of the 2030 plan, the City has begun the process of updating the mode share data provided to transportation consultants for use in conducting transportation studies. Although the City anticipates updating the mode share data for this area of South Boston, to date this new mode share data is not available and the City recommended using the established BTD mode share data. The BTD Area 13 mode shares by land use are presented in Table 5-2.

Table 5-2 Project Mode Shares by Land Use Type

		Vehicles	Transit	Walk/Bike/ Other
Morning Peak Hour				
Office	IN	60%	17%	23%
	OUT	44%	27%	29%
Residential	IN	49%	16%	35%
	OUT	34%	24%	42%
Retail/Hotel	IN	58%	13%	29%
	OUT	35%	22%	43%
Evening Peak Hour				
Office	IN	44%	27%	29%
	OUT	60%	17%	23%
Residential	IN	34%	24%	42%
	OUT	49%	16%	35%
Retail/Hotel	IN	35%	22%	43%
	OUT	58%	13%	29%

Source: BTD Area 13 rates

5.3.3 Adjusted Project Trips

To convert the unadjusted ITE Project trips to actual numbers of expected Project trips by mode, the local mode shares and vehicle occupancy ratios for each land use were applied to the unadjusted ITE trips. An internal capture has been applied to account for sharing of trips between the on-site uses. In addition, a 20 percent pass-by rate will be applied to retail trips.

As shown in Table 5-3, the Project is expected to generate just over 10,000 total daily (24-hour) vehicle trips, with just over 650 vehicle trips being made in the morning peak hour and approximately 750 vehicle trips in the evening peak hour. The level of actual vehicle trip generation reflects the Project's location and the existing area transit opportunities.

5.4 Access and Circulation

The Project proposes two access points/driveways into the Project Site; one will be located on Summer Street near its intersection with Elkins Street, and a second will be located on East 1st Street near its intersection with M Street.

Once completed, the DFC, located to the north of the Site, will carry the Conley Terminal truck activity that currently is served by East 1st Street. The relocation of Conley trucks from East 1st Street will improve the neighborhood traffic and help to alleviate some of the congestion that the intersection of Summer Street and L Street/East 1st Street currently experiences. The new intersection of the Conley Terminal Dedicated Freight Corridor at Summer Street has been designed as a signalized intersection.

5.5 Pedestrians and Bicycles

A walking distance map with quarter-mile and half-mile radii around the Project Site is illustrated in Figure 5.1. The existing pedestrian infrastructure consists of sidewalks along the roads bordering the Project and crosswalks at the approaches of the Summer Street and L Street/East 1st Street intersection. The sidewalk along Summer Street, adjacent to the Project, is in good condition. The sidewalk along East 1st Street, however, is narrow and has obstacles, such as street lighting, occupying a portion of the sidewalk width in various locations. The existing sidewalk that borders the Project along East 1st Street will be widened and made ADA-compliant. Sidewalks through the Project Site will be provided on both sides of the new access street to provide pedestrian connections between the parcels.

Surrounding the Project Site, there is only a single roadway segment with bicycle accommodations, which is found along East 1st Street, from the City Point Bus Terminal extending to the east. A newly constructed shared-use path is provided on the northern side of the street. As part of the Project and to create space for bicyclists, bicycle accommodations along East 1st Street and Summer Street will be explored. The City's 30-year Bike Network Plan calls for the installation of a cycle track on East 1st Street and Summer Street, as shown in Figure 5.2. Both the pedestrian and bicycle improvements will be contributing to the City's vision for the surrounding area.

Table 5-3 Adjusted Project Trips

		Vehicle	Transit	Walk/Bike/ Other
Daily (24-hour)				
Office	IN	1,033	430	450
	OUT	1,033	430	450
	TOTAL	2,066	860	900
Residential	IN	2,482	1,134	2,029
	OUT	2,482	1,134	2,029
	TOTAL	4,964	2,268	4,964
Retail	IN	1,262	648	1,425
	OUT	1,262	648	1,425
	TOTAL	2,524	1,296	2,850
Hotel	IN	348	221	486
	OUT	348	221	486
	TOTAL	696	442	972
	Daily Total IN	**5,125**	**2,432**	**4,390**
	Daily Total OUT	**5,125**	**2,432**	**4,390**
	DAILY TOTAL 2-Way	**10,250**	**4,864**	**8,780**
AM Peak Hour				
Office	IN	265	85	115
	OUT	21	15	16
	TOTAL	286	100	131
Residential	IN	78	29	63
	OUT	214	170	298
	TOTAL	292	199	361
Retail	IN	28	11	25
	OUT	10	11	21
	TOTAL	38	22	46
Hotel	IN	34	17	37
	OUT	11	16	30
	TOTAL	45	33	67
	AM Total IN	**405**	**142**	**240**
	AM Total OUT	**256**	**212**	**365**
	AM TOTAL 2-Way	**661**	**354**	**605**
PM PEAK HOUR				
Office	IN	28	20	21
	OUT	231	74	100
	TOTAL	259	94	121
Residential	IN	185	147	258
	OUT	141	52	114
	TOTAL	326	199	372
Retail	IN	58	65	127
	OUT	83	33	74
	TOTAL	141	98	201
Hotel	IN	13	18	35
	OUT	29	14	32
	TOTAL	42	32	67
	PM Total IN	**284**	**250**	**441**
	PM Total OUT	**484**	**173**	**320**
	PM TOTAL 2-Way	**768**	**423**	**761**

5.6 Transit Service

5.6.1 Public Transit

The Project Site is currently served by the MBTA bus system. MBTA Route #'s 5, 7, 9, 10, and 11 are within walking distance of the Project Site. These routes are shown in Figure 5.3 and are described in more detail in Table 5-4.

Table 5-4 Public Transit Services

MBTA Service	Origin / Destination	Major Stops	Stop Closest to Project Site	Peak Hour Frequency (minutes)	Hours of Service
Bus Route 5	City Point – McCormack Housing via Andrew Station	City Point McCormack Housing Andrew Station	East 1st Street @ O Street	60	Weekdays: 9:05 AM – 3:23 PM Saturday: 9:16 AM – 3:23 PM Sunday: No Service
Bus Route 7	City Point – Otis & Summer Streets via Summer Street & South Station	City Point South Station Summer Street	Summer Street @ East 1st Street	4-6	Weekdays: 5:15 AM – 10:32 PM Saturday: 5:15 AM – 10:31 PM Sunday: No Service
Bus Route 9	City Point – Copley Square via Broadway Station	City Point Broadway Station Copley Square	East 1st Street @ O Street	5-10	Weekdays: 5:13 AM – 1:14 AM Saturday: 5:10 AM – 1:14 AM Sunday: 6:00 AM – 1:12 AM
Bus Route 10	City Point – Copley Square via Andrew Station & B.U. Medical Center	City Point Andrew Station Copley Square	East 1st Street @ O Street	20-25	Weekdays: 4:55 AM – 1:31 AM Saturday: 6:15 AM – 1:14 AM Sunday: 6:00 AM – 1:11 AM
Bus Route 11	City Point – Downtown BayView Route	City Point East 8th Street East Berkeley Street	East 1st Street @ O Street	6-12	Weekdays: 5:11 AM – 1:22 AM Saturday: 5:10 AM – 1:20 AM Sunday: 6:15 AM – 1:28 AM

The South Boston Waterfront Sustainable Transportation Plan[2], documented and examined the existing transportation infrastructure in South Boston as well as offered alternative measures that could improve the existing infrastructure. It provided short-term and long-term goals for the area aimed at improving the area's characteristics such as access, mobility, growth, and vitality. As part of the report, the capacity of MBTA bus routes servicing the area were reviewed and analyzed. Bus routes were included that serve the Project Site such as the Route 7 and Route 11. The findings of this study indicate that Route 7 exceeds the seated capacity inbound during the morning peak hour and outbound during the evening peak hour. Similarly, the Route 11 exceeds the seated capacity inbound during the morning peak hour and outbound during the evening peak hour. This demonstrates that there is heavy ridership entering and then exiting Downtown Boston during the morning and evening peak hours, respectively.

With construction of the Project, these bus routes are expected to experience increased utilization. The South Boston Waterfront Sustainable Transportation Plan discussed short and medium to long-term transit alternatives that could be considered in South Boston such as enhancements to Route 7 and reinstatement of the Silver Line 3 to City Point and rerouting of Route 7 bus line. The short-term and medium to long-term transit alternatives from the South Boston Waterfront Sustainable Transportation Plan are shown in Figure 5.4a and Figure 5.4b, respectively.

In April 2017, the MBTA's Fiscal and Management Control Board approved a Fiscal Year 2018 operating budget which directs funding to improve transportation service. The operating budget acknowledges the existing lack of adequate service in the South Boston neighborhood and provides specific allocations to improve South Boston bus capacity. A detailed Transit Capacity Impact Analysis will be included as part of the Project's DEIR/DPIR submission documents. The analysis will also include a discussion of possible shuttle services for the Project Site.

5.7 Technology and Improved Mobility

It is expected that in the Project's full build year of 2030, there will be improved mobility and transportation options for South Boston.

Technology, culture, and communities are evolving at a breakneck pace and our transportation system is at the crossroads of these social and technological changes. While this ENF/EPNF reviews the potential impacts of the proposed development, it's important to note changes to mobility that will impact the world over the next decades and beyond. Emerging technologies will not only change our mobility options, but also change our life choices and how we interact with each other. While

2 Published in 2015 by VHB (https://www.massdot.state.ma.us/Portals/17/docs/Studies/SBostonWaterfrontFullReport_jan2015.pdf)

some experts offer implementation timeframes lasting decades, South Boston is quickly becoming Boston's proving ground for innovative transportation solutions.

5.7.1 Go Boston 2030 Vision and Action Plan

As discussed in the Go Boston 2030 Vision and Action Plan,[3] several key short-term and long-term improvements will be made in the South Boston neighborhood to improve connectivity and travel to downtown Boston.

Smart Signals

The Plan calls for a smart signal district from Summer Street in the east to Seaport Boulevard in the west and A Street in the north to Pappas Way in the south. This rectangular district is directly north of the Site. The addition of this smart signal district will improve the flow of vehicles in the Seaport area and in and out of downtown Boston. Smart signals may also help maintain the headways for the Route 7 bus along Summer Street.

Priority Bicycle Project

The Boston Transportation Department calls out Summer Street from South Station to L Street as a "Priority Project". The Plan calls for a protected bike lane, and this is listed as an "Early Action Project" (expected to be complete within the next five years). This bike lane will improve connectivity from the residential neighborhoods of South Boston to downtown Boston along Summer Street and will provide a protected and low-stress bicycling facility.

Neighborhood Mobility MicroHUB

The intersection of L Street at East Broadway, south of the Site, is shown as a location for a Neighborhood Mobility MicroHUB. Each MicroHUB location will provide interactive displays with information about transit schedules, shared vehicle availability in the area, and Hubway station locations. Free Wi-Fi will also be provided in addition to signage for wayfinding and areas for placemaking such as plazas, parklets, etc.

North Station to South Boston Waterfront Rapid Bus

The lack of connectivity from North Station to the South Boston Waterfront is also addressed in the Plan. Over the next fifteen years, Boston Transportation Department aims to improve the connectivity with a rapid bus system.

3 Published in March 2017 by the Boston Transportation Department (https://www.boston.gov/sites/default/files/go_boston_2030_-_full_report_to_download.pdf)

Carpool and Vanpool

Companies such as Lyft, Uber, and other ride sharing services provide an alternative method for transportation for single occupancy drivers by matching riders for carpools and vanpools. The rider is matched with a nearby vehicle along a similar travel route and picked up at a nearby designated location. These Transportation Network Companies ("TNC's") provide demand responsive either carpool or private vehicle travel which are often competitively priced with public transit options and often provide services to locations either not served or not directly served by local transit routes. These services can reduce the number of single occupancy vehicle trips and reduce the number of private vehicles in the roadway network by providing a convenient alternative to single occupant vehicle travel and car ownership. These companies also help reduce the demand on the public transportation system and reduce the parking demand for office and residential locations.

5.7.2 Autonomous Vehicles

Mobility tech companies such as nuTonomy have brought a fleet of autonomous vehicles ("AVs") to the Seaport District, and Lyft predicts a full fleet of shared-autonomous vehicles ("SAVs") within a five-year timeframe. A functioning SAV fleet will fundamentally change trip-making behavior within dense urban areas like South Boston for work trips and recreational trips.

Autonomous and shared-autonomous vehicles can increase the use of transit, particularly in South Boston, by resolving the "last-mile" challenge. The Project Site is located approximately 1.5 miles from South Station and a half mile from the Silver Line. As such, privately owned autonomous vehicles or a fleet of SAV's can provide on-demand service, opening up access to the heart of Boston's transit network and decreasing total travel time.

Autonomous vehicles, particularly SAV's, can also reduce future parking demand by enabling families that would typically purchase more than one vehicle to share a single vehicle throughout the day. SAV's can eliminate this need altogether by providing a subscription service for mobility on demand. As such, SAV's can change reduce an individual or family's decision to purchase a vehicle in the first place. The Project's office, hotel and retail uses will also benefit from AV's and SAV's. Parking demands for these uses could be significantly reduced given the improved access to the MBTA's transit network.

Further, AV's can alter the size and the shape of parking facilities. AV's can drop their riders off at the curb, they can park themselves in parking stalls of reduced width, requiring no accommodation for door swing. In addition, autonomous vehicles will be able to stack within parking facilities and arrange themselves in the most efficient arrangements.

As discussed in the Go Boston 2030 Vision and Action Plan, AV's may improve roadway capacity over the next decade and increase the local vehicle occupancy rate.

This may help reduce congestion due to the higher number of people per vehicle and lower number of vehicles on the roadway.

5.8 Parking

The Project will seek to reduce dependence on auto travel and will implement a comprehensive package of TDM strategies to reduce auto trips and parking demand. As part of TDM plan, the proposed parking supply will reflect the limited parking ratios and incorporation of shared parking between residential and commercial uses. Parking will be provided at each block for the various land uses. During the early phases of the residential uses, it is anticipated that the structured parking spaces will be supplemented with temporary surface parking in order to increase the residential parking space ratio. It is also intended that the Project will share parking between uses. Given anticipated technological advances by full Project build-out, the Proponent anticipates an ultimate residential parking ratio of 0.4 spaces per unit.

The projected parking supply for the Project is based on the following preliminary ratios:

- Office: 0.6 parking space per 1,000 square feet of office
- Residential: 0.4 parking spaces per residential unit
- Retail: No parking provided
- Hotel: 0.5 parking space per keys/hotel rooms

The resulting preliminary parking program for the Project is summarized in Table 5-5.

Table 5-5 Parking Ratios

Land Use	Size	Parking Spaces Provided	Parking Supply Ratio (approx.)
Office	380 KSF	224	0.6 spaces per KSF
Residential	1,588 units	688	0.4 spaces per unit
Retail	114 KSF	0	0 spaces per KSF
Hotel	150 keys	75	0.5 spaces per key
	Project Total	**987**	

The Proponent understands that the Project's parking needs will be balanced across land uses. The Project's parking supply impact on the South Boston parking freeze limit will be reviewed, and may involve a modest increase in the 275 commercial parking freeze spaces currently allocated to the Site.

5.9 Proposed Study Area

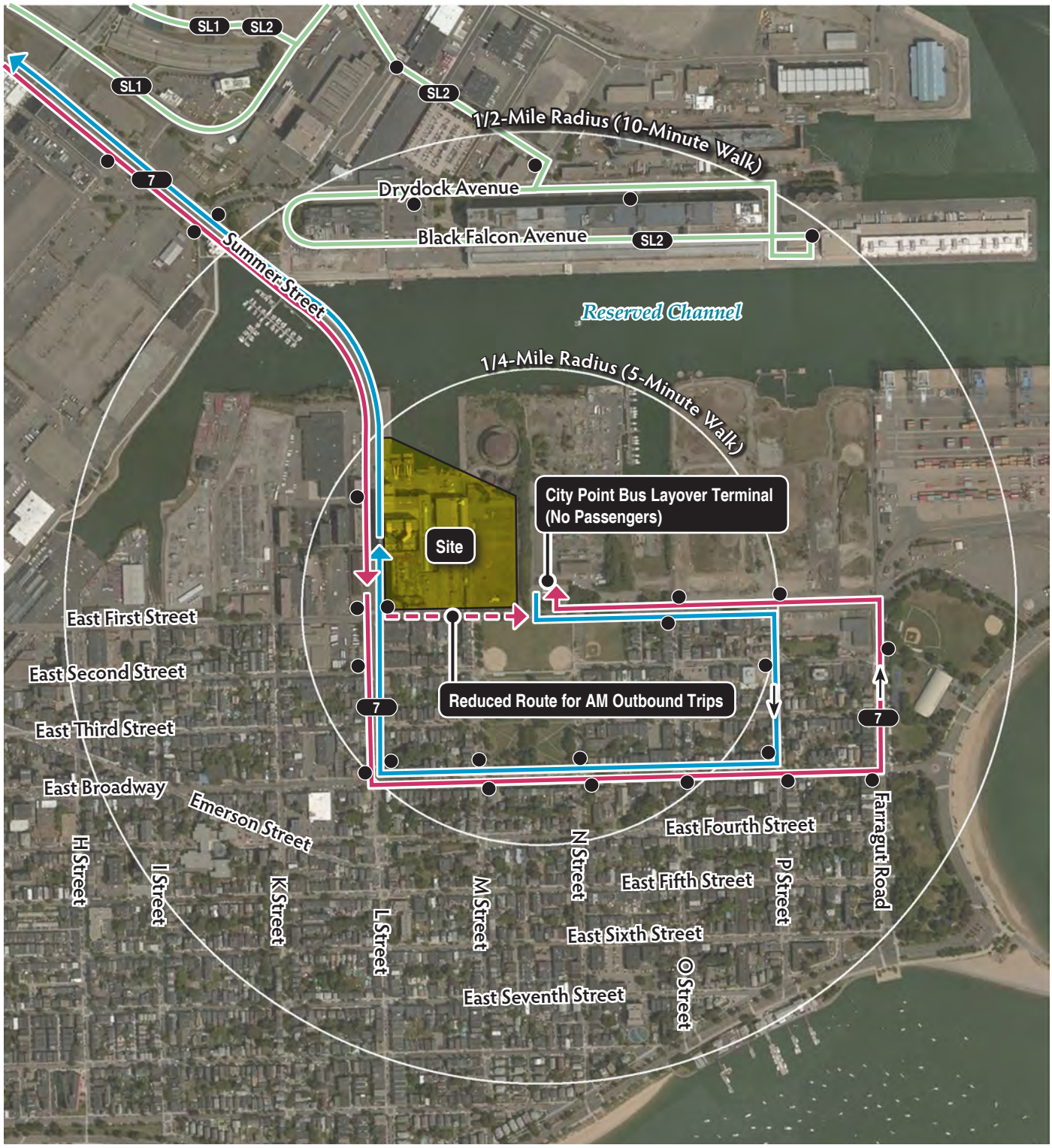
The DEIR/DPIR analysis will be performed and presented in accordance with the current Guidelines for Transportation Impact Assessment ("TIA"), based on a scope of analysis to be coordinated with and approved by MassDOT and BTD.

Based on functional evaluation of Project trips, their potential impacts to the roadway network, and preliminary input from the City BTD and BPDA, a study area comprising the following thirteen (13) intersections is proposed, as presented in Figure 5.5:

1. Summer Street / Drydock Avenue / Pappas Way
2. Summer Street / Dedicated Freight Corridor
3. Summer Street / Elkins Street / Site Driveway *(unsignalized)*
4. Summer Street / L Street / East 1st Street
5. L Street / East 2nd Street *(unsignalized)*
6. L Street / East 3rd Street *(unsignalized)*
7. L Street / East Broadway
8. East 1st Street / K Street *(unsignalized)*
9. East 1st Street / M Street / Site Driveway *(unsignalized)*
10. East 1st Street / West 1st Street / Pappas Way *(unsignalized)*
11. L Street / East 5th Street
12. L Street / East 8th Street
13. L Street / Day Boulevard / Columbia Road

The operational analysis at the study area intersections will examine level of service ("LOS"), delay and queuing under Existing and Future conditions for the build year 2030, as determined by BTD. Year 2030 Future conditions analyses will include general background growth of 0.25 percent per year (per recommendation by BTD) as well as planned projects expected to be completed in this time-frame, and will comprise of No-Build conditions (without the Project) and Build conditions (with the Project).

The proposed study area covers a wide area to capture the potential impacts of the Project itself.



0 400 800 Feet

Source: ArcGIS Online Bing Aerial

Inbound Service
(City Point to Downtown)

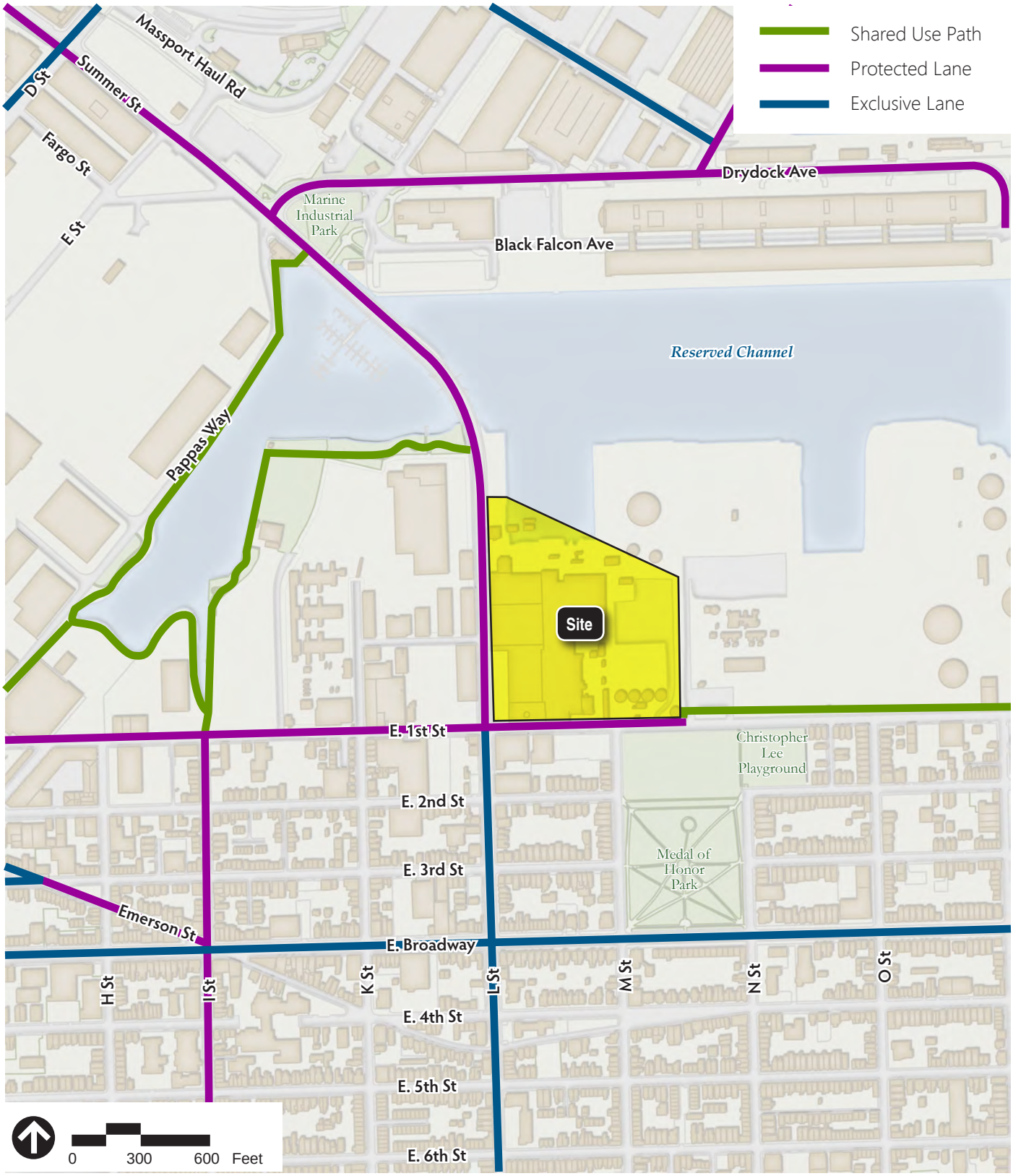
Outbound Service
(Downtown to City Point)

Bus Stop

Figure 5.1

Walking Distance

L Street Station Redevelopment
Boston, Massachusetts

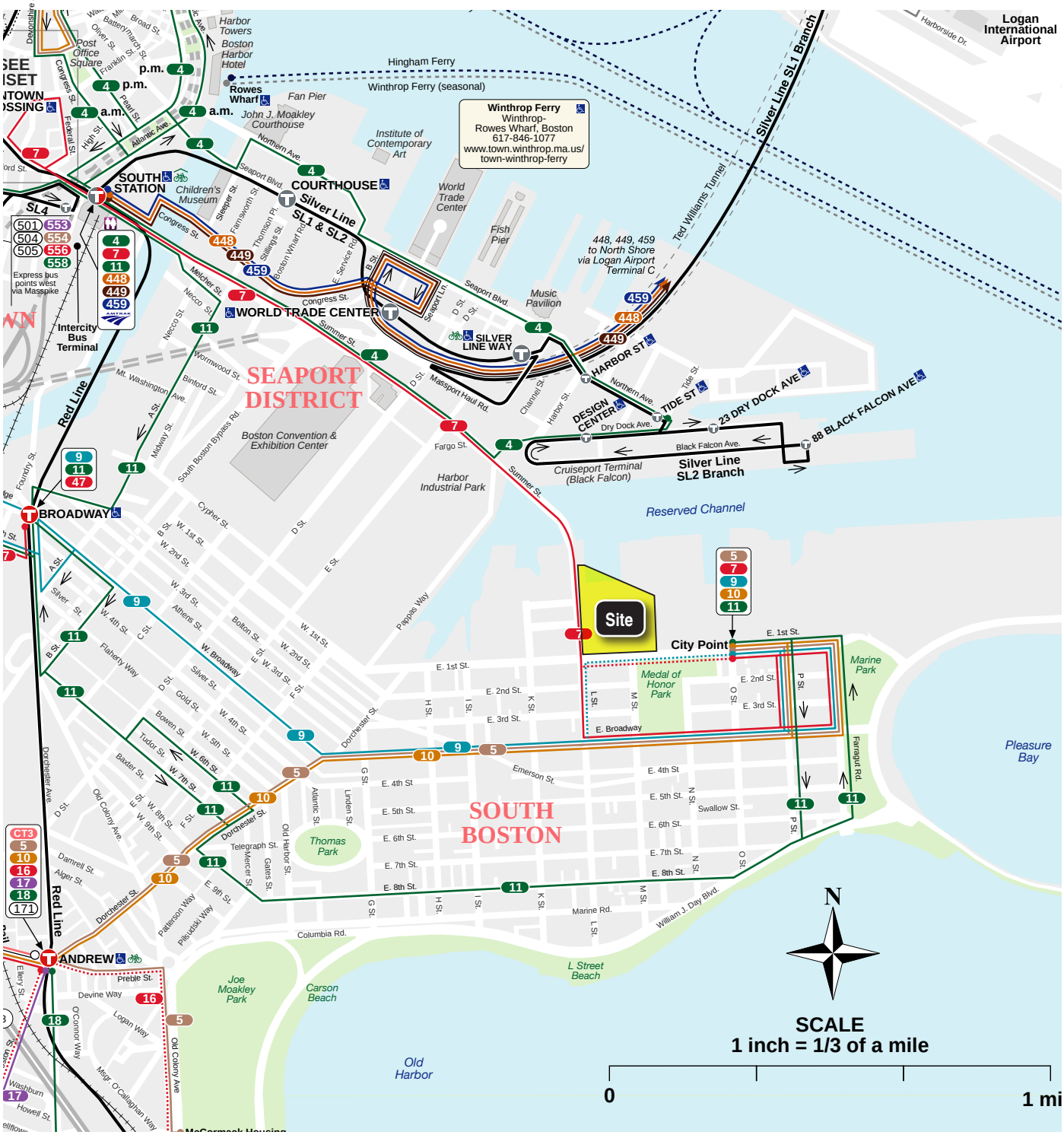


Source: Boston Planning & Development Agency

Figure 5.2

Boston 5-Year Bicycle Network Plan

L Street Station Redevelopment
Boston, Massachusetts

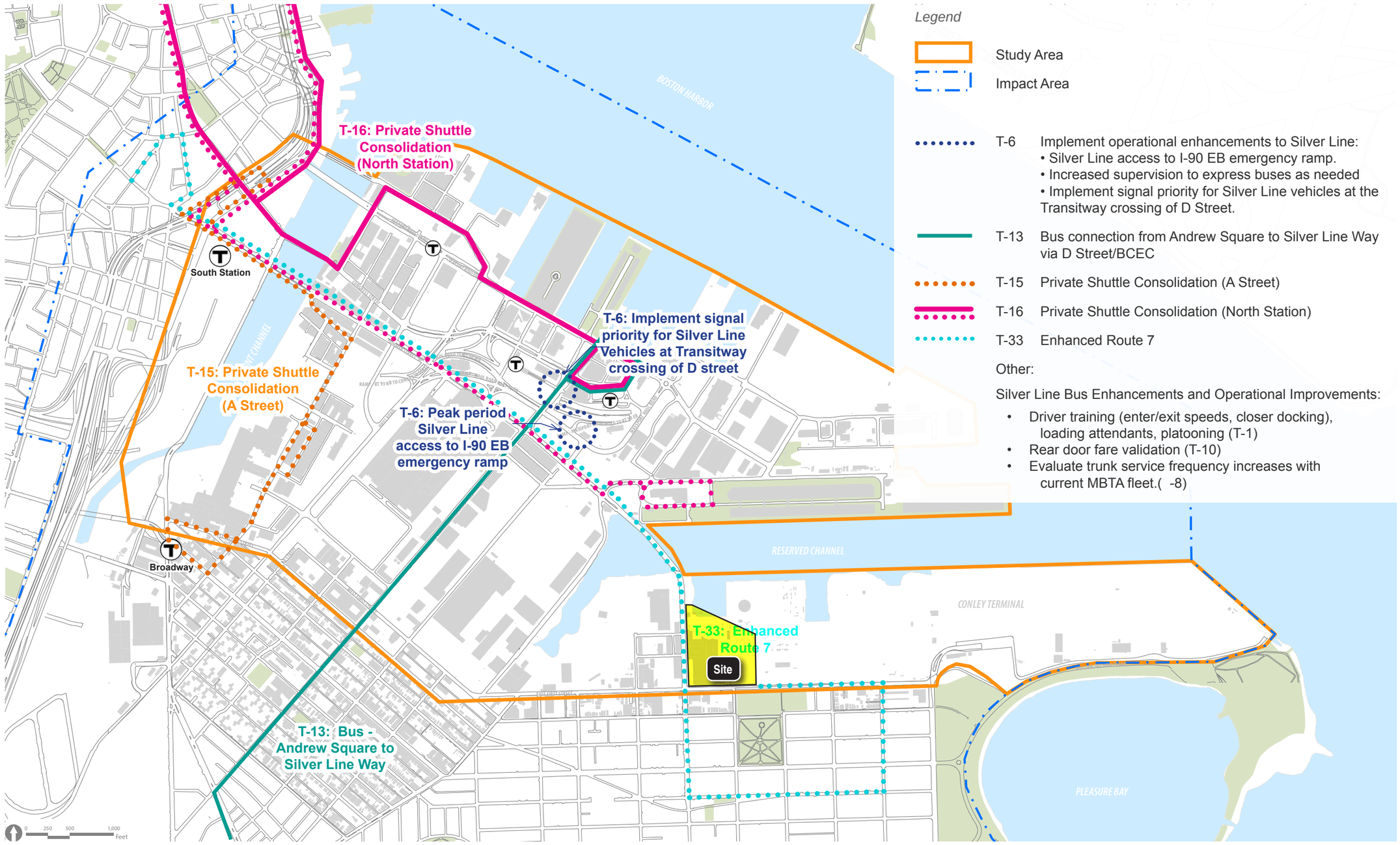


Source: MBTA.com

Figure 5.3

Public Transportation

L Street Station Redevelopment
Boston, Massachusetts

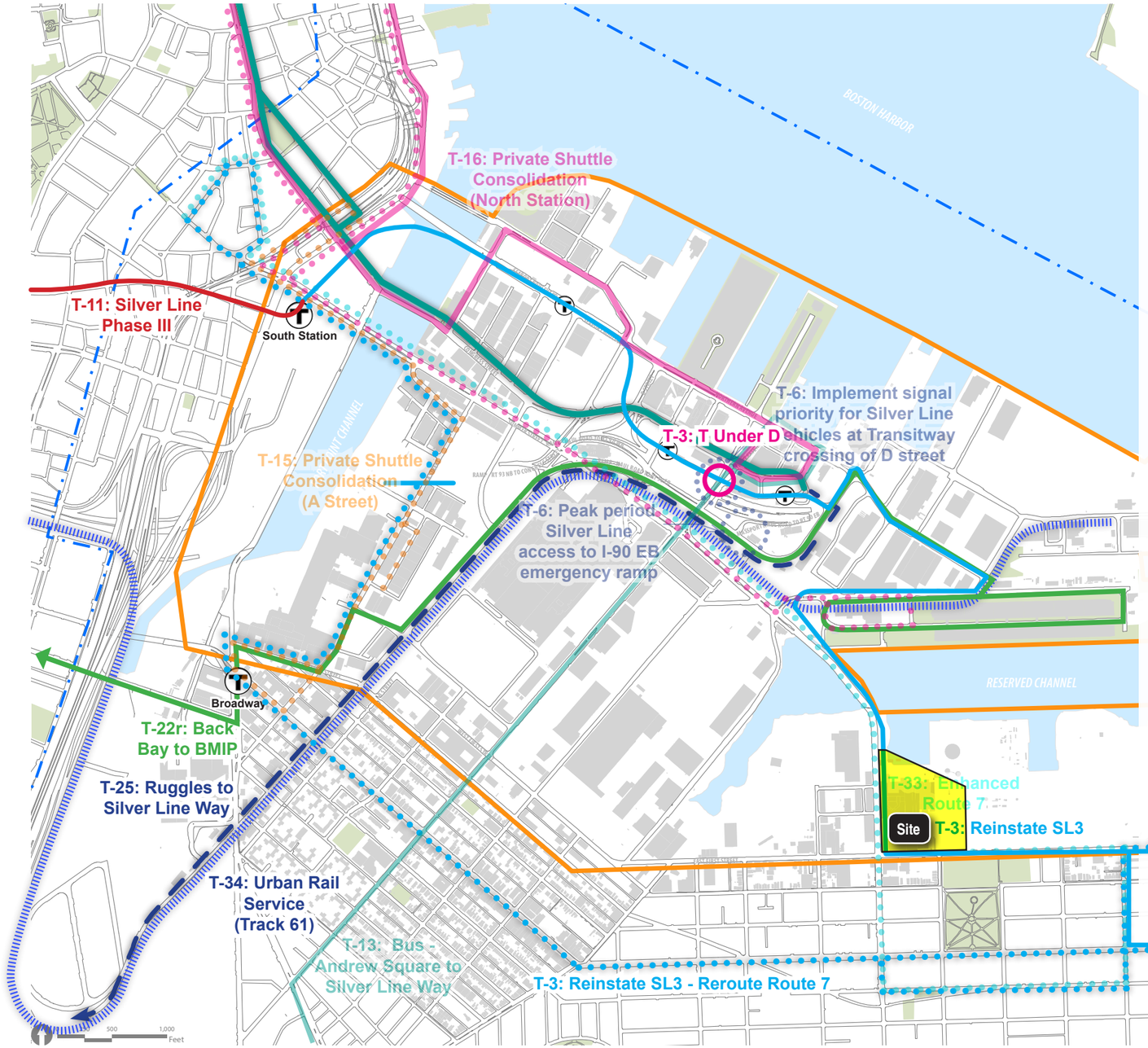


Source: South Boston Waterfront Sustainable Transportation Plan, Published in 2015 by VHB (https://www.massdot.state.ma.us/Portals/17/docs/Studies/SBostonWaterfrontFullReport_jan2015.pdf)

Figure 5.4a

SBWSTP Recommended Alternatives (Short-Term)

L Street Station Redevelopment
Boston, Massachusetts



Legend

Study Area

Impact Area

T-3 Reinitiate SL3 to City Point, in conjunction with rerouting the Route 7 bus

T-4 Silver Line tunnel under D Street

T-6 Implement operational enhancements to Silver Line:
- Silver Line access to I-90 EB emergency ramp.
- Increased supervision to express buses as needed
- Implement signal priority for Silver Line vehicles at the Transitway crossing of D Street.

T-11 Silver Line Phase III

T-13 Bus connection from Andrew Square to Silver Line Way via D Street/BCEC

T-15 Private Shuttle Consolidation (A Street)

T-16 Private Shuttle Consolidation (North Station)

T-17 Enhanced Bus Service via Congress and Merrimac

T-22r Bus service between Back Bay Station, Broadway Station, and BMIP via SBBR and Haul Road

T-25 Bus service between Ruggles and SBW via Melnea Cass Blvd and SBBR

T-33 Enhanced Route 7

T34 Urban Rail Service via Track 61

Other:

Silver Line Bus Enhancements and Operational Improvements:
- Driver training (enter/exit speeds, closer docking), loading attendants, platooning (T-1)
- Rear door fare validation (T-10)
- Evaluate trunk service frequency increases with current MBTA fleet.(-8)

Source: South Boston Waterfront Sustainable Transportation Plan, Published in 2015 by VHB (https://www.massdot.state.ma.us/Portals/17/docs/Studies/SBostonWaterfrontFullReport_jan2015.pdf)

Figure 5.4b

SBWSTP Recommended Alternatives (Long-Term)

L Street Station Redevelopment
Boston, Massachusetts

- # Signalized Intersection
- # Unsignalized Intersection

1. Summer Street/Drydock Avenue/Pappas Way
2. Summer Street/Dedicated Freight Corridor
3. Summer Street/Elkins Street/Site Driveway
4. Summer Street/L Street/East 1st Street
5. L Street/East 2nd Street
6. L Street/East 3rd Street
7. L Street/East Broadway
8. East 1st Street/K Street
9. East 1st Street/M Street/Site Driveway
10. East 1st Street/West 1st Street/Pappas Way
11. L Street/East 5th Street
12. L Street/East 8th Street
13. L Street/William J Day Boulevard

Source: ArcGIS Bing Aerial, MassGIS

Figure 5.5
Study Area Intersections

L Street Station Redevelopment
Boston, Massachusetts

6

Environmental Protection

6.1 Introduction

This chapter provides information on existing environmental conditions at the Project Site and the potential environmental impacts of the Project. The following sections assess potential Project-related impacts and identify the steps that have been or will be taken to avoid, minimize, and/or mitigate adverse impacts.

In compliance with City of Boston Article 80 and State MEPA requirements, this Project will address potential environmental impacts in the following categories:

- *Pedestrian Wind*
- *Shadow*
- *Daylight*
- *Solar Glare*
- *Wetlands/Waterways*
- *Air Quality*
- *Water Quality*
- *Noise*
- *Solid and Hazardous Materials*
- *Groundwater*
- *Geotechnical*
- *Construction*
- *Greenhouse Gas*

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

6.2 Summary of Key Findings and Benefits

The key findings and benefits related to environmental protection include:

- **Shadow** – Shadow impacts have been minimized to the maximum extent practicable to avoid any noticeable effect on pedestrian use patterns. Due to the massing of the existing structure, the anticipated design of the proposed buildings, and the orientation of the site, new shadows are anticipated to be minimal, and the majority of new shadows won't impact public spaces.
- **Daylight** – When viewed from the adjacent sidewalks, the Project will result in an increase in visible skydome from some viewpoints and decrease when viewed from others. Such changes are consistent with the Project's urban context and the replacement of the large existing structures with a new mix of development blocks.

- **Wetlands/Waterways** – Following revision of the Designated Port Area ("DPA") designation, the Project will comply with applicable wetlands and waterways regulations, and will open the previously inaccessible site to the public with the provision of approximately 104,500 square feet of open spaces, including a new 1.15-acre publicly accessible waterfront open space.
- **Water Quality** – The Project will improve water quality by collecting and treating stormwater runoff through a series of structural Best Management Practices.
- **Noise** – Based on preliminary design, the Project's operations will have no adverse noise impacts at nearby sensitive receptor locations and will not contribute to a violation of the City of Boston's noise standards.
- **Solid and Hazardous Materials** – The environmental conditions on the Site will be addressed accordance with the Massachusetts Contingency Plan as applicable. Existing solid and hazardous materials within the Site buildings will be removed and disposed of in accordance with applicable state and federal regulations.
- **Groundwater** – Significant groundwater impacts associated with construction activities are not anticipated because excavations below the groundwater table are not proposed. The Project Site is not located within an Overlay Area of the Groundwater Conservation Overlay District.
- **Geotechnical** – The geology across the Project Site generally consists of 10 to 20 feet of fill overlying deposits of sand, silt, and clay. The geotechnical engineer and construction manager will work closely together throughout excavations and construction of foundations to avoid adverse impacts to adjacent structures and infrastructure.
- **Construction** – The Project has been designed to avoid, minimize and mitigate potential construction-related impacts. The Project Team will work with the City to reduce potential construction period impacts.

Potential environmental impacts associated with wind, solar glare, air quality, and GHG will be more fully described in the subsequent DEIR/DPIR filing.

6.3 Wind

The Project will require a quantitative (wind tunnel) analysis comparing existing and proposed conditions pursuant to the Section B.1 of the BPDA Development Review Guidelines because it includes one or more buildings greater than 150 feet high.

The Proponents have commenced a detailed quantitative analysis in accordance with this requirement, and are working closely with architect and wind engineers to proactively incorporate wind mitigation techniques into the design of the buildings. The techniques include building fenestration, podium elements, shifts in massing, recessed entries at street-level, canopies and other architectural elements, and the incorporation of building-level and street-level vegetation. A complete report of the results will be presented in the DEIR/DPIR.

6.4 Shadow

An analysis of the shading impact under the No-Build and Build Conditions is a requirement of the Article 80, Large Project Review (Section 80B-2(c) of the Code). The shading analysis was prepared in accordance with the requirements of Section B.2. of the BPDA Development Review Guidelines.

6.4.1 Methodology

A shadow impact analysis was conducted at regular time intervals to investigate the effect that the Project will have throughout the year. A computer model of the Project and surrounding urban area was developed. A number of days and times were analyzed, as required under Article 80. The analysis used "clear sky" solar data at Boston's Logan International Airport, meaning the assumption that no cloud cover ever occurs; therefore, providing a "worst case" scenario showing the full extent of when and where shadow could occur.

In order to represent a variety of shadow conditions at various times of the day, and times of the year, three time intervals (9:00AM, 12:00PM, 3:00PM) are represented for the June 21 (see Figure 6.1a), September 21/March 21 (see Figure 6.1b), and December 21 (see Figure 6.1c). Per the BPDA Development Review Guidelines, 6:00PM has been added to the June 21 and September 21 shadow study. The study shows both existing shadows in and around the Project Site, and the shadow impact of the Project. The analysis focuses on the shadow cast onto existing pedestrian areas, open spaces, and sidewalks adjacent to and in the vicinity of the Project Site.

As a result of the demolition of a portion of the existing buildings and the shift in massing to individual blocks, the Project will eliminate some existing shadows and create new unshaded open space where there is currently building. Shown in orange on Figures 6.1a-c, this "gained daylight" will enhance both new and existing spaces and create a more welcoming environment around the Site.

6.4.2 Shadow Analysis Findings

June 21

The future No-Build and net new shadows associated with the Project for June 21 are illustrated in Figure 6.1a. June 21 is the summer solstice and the longest day of the year. The sun rises at 5:08 AM EDT in the southeastern sky and sets at 8:25 PM EDT.

At 9:00 AM the morning shadow is generally contained within the Project Site, with some new shadow falling along Summer Street. There is a net gain in daylight at the intersection of Summer Street and Elkins Street, at the approach to East 1st Street, and along a portion of the internal east-west roadway. Due to the higher angle of the sun, the shadows quickly shorten and rotate eastward.

At 12:00 PM, shadows are generally contained within the Project Site, with some incremental new shadow falling onto a small portion of the DFC. There is a net gain

of daylight throughout the Project street network, and all public open spaces experience sunlight.

At 3:00 PM shadows extend eastward, with incremental net new shadow falling within the Project Site and on the adjacent MBTA parcel.

At 6:00 PM the sun begins to set and the Project casts some incremental net new shadow on a portion of Butler Park and the MBTA parcel. During the summer the waterfront open space is anticipated to remain generally open to sunlight throughout the day.

September 21 and March 21

The future No-Build and net new shadows associated with the Project for September 21 and March 21 are illustrated in Figure 6.1b. September 21 is the fall equinox and March 21 is the vernal equinox; for both of these dates, the length of daytime and nighttime are equal. The sun rises at 6:31 AM EDT in the southeastern sky and sets at 6:42 PM EDT. The shadows cast on these dates are almost identical.

At 9:00 AM the morning shadow is generally contained within the Project Site, with shadows falling to the west onto existing buildings and shading internal streets, sidewalks and open spaces. There is a net gain in daylight at the intersection of Summer and Elkins and along a portion of the internal east-west roadway.

At 12:00 PM, shadows are generally contained within the Project Site and shifting off the waterfront open space, with some net new shadow being cast onto the waterfront open space and the DFC. There is a net gain in daylight within the Project Site along the internal street network and all public open spaces experience daylight.

At 3:00 PM the Project casts net new shadow to the northeast onto the DFC and to the east on the MBTA parcel, as well as internally onto the street network and the waterfront open space.

At 6:00 PM, as a result of the low sun angle, shadows are long, and some net new shadow falls to the east on the already heavily shaded MBTA and Massport parcels, and a portion of Butler Park.

December 21

The future No-Build and net new shadows associated with the Project on December 21 are depicted on Figure 6.1c. December 21 is the winter solstice and the shortest day of the year. The sun is at its lowest inclination above the horizon at each hour of the day. Even low buildings cast long shadows in northerly latitudes such as Boston. The sun rises at 7:10 AM EST and sets at 4:15 PM EST in December.

At 9:00 AM, due to the low sun angle, morning shadows extend to the northeast with some net new shadow falling onto Summer Street and the buildings across the waterfront open space and the DFC. There is some net gained daylight along Summer Street.

At 12:00 PM there are new shadows cast internally on the Project Site, and on the eastern side of the DFC. There is a net gain in daylight along the internal street network, the waterfront open space, and a small portion of the DFC to the west.

At 3:00 PM, there are new shadows cast on a small portion of the Project Site, and new shadows cast to the northeast over the MBTA and Massport properties. Although net new shadow is greatest at this period, the days during this time of year are less bright and there is much less contrast between shaded and unshaded areas.

6.5 Daylight

The following section describes the anticipated effect on daylight coverage at the Project Site as a result of the Project. An analysis of the percentage of skydome obstructed under the No-Build and Build Conditions is a requirement of Article 80 (Section 80B-2(c)). The daylight analysis was prepared using the BPDA's Daylight Analysis Program ("BRADA") and has been completed in accordance with the requirements of Article 80. The results of the analysis are presented in Figures 6.2a-c.

6.5.1 Methodology

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

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

6.5.2 Viewpoints

The following viewpoints were used for this daylight analysis:

- **East 1st Street** – This viewpoint is located on the centerline of East 1st Street, centered on the south side of the Project Site.
- **L Street North** – This viewpoint is located along L Street at the center of Block D on the west side of the Project Site.

› **L Street South** – This viewpoint is located along L Street at the center of Block C on the west side of the Project Site.

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

6.5.3 Results

Daylight Existing/No-Build Conditions

Under the Existing/No-Build Condition, the existing structures located on the study site obstruct a large portion of the skydome. The existing skydome obstruction based on the viewpoints ranges from approximately 56 percent at the East 1st Street study point, 52 percent on the L Street north study point, and 56 percent at the L Street south study point.

Daylight Build Conditions

Table 6-1 below presents the percentage of skydome that is expected to be obstructed with and without the Project from both viewpoints. Figures 6.2a, 6.2b and 6.2c graphically show the Project-related daylight impacts from the viewpoints from East 1st Street, L Street south and L Street north, respectively.

Table 6-1 Existing/No-Build and Build Daylight Conditions

Viewpoint	Existing/No-Build Skydome Obstruction	Build Skydome Obstruction
East 1st Street	56.3%	54.6%
L Street North	52.0%	39.9%
L Street South	55.7%	72.3%

Under the Existing/No-Build Condition, skydome is substantially obstructed by the existing buildings which abut the sidewalk with limited buffer. The studied viewpoints are offset from the tallest portions of the existing structures, and therefore this analysis presents a more conservative estimate of daylight obstruction. Notwithstanding this conservative approach, the obstruction of skydome as a result of this Project is anticipated to be minimal, and in many places will decrease due to increased setback from the street, and by replacing a nearly monolithic structure with eight individual blocks. Breaking up the large structure into a series of blocks creates a more accessible and pedestrian scale development. It also reduces skydome obstruction along portions of the adjacent public way which will offset areas of increased obstruction improving the pedestrian experience.

6.6 Solar Glare

The City of Boston BPDA Development Guidelines require projects undergoing Large Project Review to analyze the potential impacts from solar glare on the following areas to identify the potential for visual impairment or discomfort due to reflective spot glare:

- Potentially affected streets;
- Public open spaces; and
- Pedestrian areas.

Furthermore, projects must consider the potential for solar heat buildup in any nearby buildings receiving reflective sunlight from the Project, if applicable.

A detailed review of these potential impacts on the Project area from solar glare will be included in the DEIR/DPIR when the Project's design has further advanced and materials have been selected.

6.7 Air Quality

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

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

6.7.1 Background

The CAAA resulted in states being divided into attainment and non-attainment areas, with classifications based upon the severity of their air quality problems. Air quality control regions are classified and divided into one of three categories: attainment, non-attainment and maintenance areas depending upon air quality data and ambient concentrations of pollutants. Attainment areas are regions where ambient concentrations of a pollutant are below the respective NAAQS; non-attainment areas are those where concentrations exceed the NAAQS. A maintenance area is an area that used to be non-attainment, but has demonstrated that the air quality has improved to attainment. After 20 years of clean air quality, maintenance areas can be re-designated to attainment.

The Project is located in the City of Boston, Suffolk County which under the EPA designation is a CO Maintenance area. Projects located in a CO maintenance area are required to evaluate their CO concentrations with the NAAQS. As such, CO concentrations need to be considered for this Project. The City of Boston is in attainment for the remainder of the criteria pollutants.

6.7.2 Air Quality Standards

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

Table 6-2 National Ambient Air Quality Standards

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

DEP maintains a network of air quality monitors to measure background CO concentrations. Background concentrations are ambient pollution levels from all stationary, mobile, and area sources. Background CO concentrations are determined by choosing the maximum of the 2nd-highest annual values from the previous three years. Looking at the air quality monitor closest to the Project Site (Von Hillern) for the years 2013-2015, the CO background values are 1.8 ppm for the 1-hour averaging time and 1.2 ppm for the 8-hour averaging time. These values are much less than the 1-hour and 8-hour NAAQS. The background values are presented in Table 6-3.

Table 6-3 Air Quality Background Concentrations

	Background Concentrations		NAAQS	
Pollutant	**Level**	**Averaging Time**	**Level**	**Averaging Time**
Carbon Monoxide	1.2 ppm	8-hour	9 ppm	8-hour
	1.8 ppm	1-hour	35 ppm	1-hour

Monitoring Location: Von Hillern, Boston, MA. Years 2013-2015.

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

6.7.3 BPDA Development Review Guidelines

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

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

6.7.4 Traffic Data

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

1. Summer Street / Drydock Avenue / Pappas Way
2. Summer Street / Dedicated Freight Corridor
3. Summer Street / Elkins Street / Site Driveway *(unsignalized)*
4. Summer Street / L Street / East 1st Street
5. L Street / East 2nd Street *(unsignalized)*
6. L Street / East 3rd Street *(unsignalized)*
7. L Street / East Broadway
8. East 1st Street / K Street *(unsignalized)*
9. East 1st Street / M Street / Site Driveway *(unsignalized)*
10. East 1st Street / West 1st Street / Pappas Way *(unsignalized)*
11. L Street / East 5th Street
12. L Street / East 8th Street
13. L Street / Day Boulevard / Columbia Road

The traffic study predicted Project generated trips. The Project is expected to generate 661 new vehicle trips in the morning peak hour and 768 new vehicle trips in the evening peak hour. The localized, or microscale, air quality impacts, if any, of the additional project-generated traffic will be analyzed in the forthcoming DEIR/DPIR.

6.7.5 Microscale Screening Analysis

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

- Project traffic is expected to impact a limited number of intersections potentially operating at LOS D, E, or F. With the increased volumes, there is expected to be an increase in intersection delay in the Build Condition and a potential reduction in LOS to LOS D, E, or F.
- Project traffic is expected to increase traffic volumes at some nearby intersections by 10 percent or more. Compared to existing conditions, the Project is expected to generate 661 vehicle trips in the weekday morning peak hour and 768 vehicle trips in the evening peak hour.
- The Project will generate at least 3,000 or more new average daily trips on the study area roadways. The Project will generate 10,250 new weekday vehicle trips, greater than the 3,000 vehicles per day threshold.

The microscale screening analysis demonstrates the Project will exceed the BPDA Review Guidelines for requiring a quantitative CO analysis. Therefore, a quantitative CO hotspot analysis will be conducted as part of the DEIR/DPIR filing in a manner consistent with the methodology prescribed by EPA guidelines for hotspot analysis and by DEP. This analysis will aim to demonstrate that all existing and future carbon monoxide concentrations at nearby receptors will be below the NAAQS.

6.7.6 Mesoscale Air Quality Analysis

A mesoscale air quality analysis may be required if the Project is expected to be of regional significance. The BPDA requires a mesoscale air quality analysis if a project produces 10,000 or more vehicle trips per day. The Project is not anticipated to generate over 10,000 or more vehicle trips per day, therefore this analysis is not required for the BPDA. MEPA requires that all projects filing an EIR assess GHG and Ozone Precursors (for projects in an Ozone non-attainment area) in a mesoscale analysis. As such, a quantitative mesoscale air quality analysis consistent with EPA and DEP guidelines will be conducted for the DEIR/DPIR filing.

6.8 Noise

The noise impact assessment evaluated the potential noise impacts associated with the Project's activities, including mechanical equipment and loading activities. This section discusses the fundamentals of noise, noise impact criteria, noise analysis methodology, existing ambient conditions, and potential noise impacts associated with the Project. The analysis demonstrates that the Project will comply with City of Boston noise regulations.

6.8.1 Fundamentals of Noise Analysis

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

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

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

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

The human ear does not perceive sound levels from each frequency as equally loud. To compensate for this phenomenon in perception, a frequency filter known as A-weighted [dB(A)] is used to evaluate environmental noise levels. Table 6-4 presents a list of common outdoor and indoor sound levels.

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

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

Table 6-4 Common Outdoor and Indoor Sound Levels

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

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

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

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

6.8.2 Noise Methodology

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

Receptor Locations

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

- R1 – K Street at East First Street neighborhood
- R2 – East Second Street between K Street and L Street;
- R3 – East First Street between L Street and M Street
- R4 – East Second Street between L Street and M Street;
- R5 – Christopher Lee Playground;
- R6 – Medal of Honor Park;
- R7 – East First Street between Acadia Street and O Street; and
- R8 – East Second Street between N Street and O Street.

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

6.8.3 Noise Impact Criteria

The City of Boston has developed noise standards that establish noise thresholds deemed to result in adverse impacts. The noise analysis for the Conley Terminal Improvements project compared existing and future sound levels to these criteria and used these standards to evaluate whether the proposed development would generate sound levels that result in adverse impacts.

Under Chapter 40, Section 21 of the General Laws of the Commonwealth of Massachusetts and the City of Boston Code, Ordinances, Title 7, Section 50, the Air Pollution Control Commission of the City of Boston has adopted Regulations for the Control of Noise in the City of Boston.[1] These regulations establish maximum allowable sound levels based upon the land use affected by the proposed development. Table 6-5 summarizes the noise standard for the various land uses covered by the ordinance. These maximum allowable sound levels should not be exceeded.

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

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

1 Regulations for the Control of Noise in the City of Boston*, City of Boston Air Pollution Control Commission*.

Table 6-5 City of Boston Zoning District Noise Standards, dB(A)

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

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

6.8.4 Existing Noise Conditions

A noise monitoring program was conducted to establish existing sound levels in the vicinity of the Project Site. Short-term noise measurements (approximately 20 minutes) were conducted during the weekday daytime (1:00 PM to 4:00 PM) and evening (5:00 PM to 7:00 PM) periods at sensitive receptor areas on April 9, 2012. Supplemental short-term measurement was conducted on April 14, 2012 and long-term (approximately 2 days) noise measurement was also conducted along East First Street from July 16, 2012 to July 18, 2012. The measurements were conducted using a Type 1 sound analyzer (Larson Davis 831). The sound level data were dominated by vehicular traffic (primarily trucks and buses along East First Street), general neighborhood noise sources, building mechanical equipment, and aircraft activity from nearby Logan International Airport. The noise monitoring locations are shown in Figure 6.3.

The existing average daytime sound levels ranged from 56 dB(A) to 71 dB(A). The ambient nighttime sound levels ranged from 47 dB(A) to 51 dB(A). These sound levels are typical of an urbanized area. The noise monitoring indicates that the sound levels within the Study Area are above the City's daytime noise standard of 60 dB(A) and the City's nighttime standard of 50 dB(A) for Residential Districts. The existing sound level data are shown in Table 6-6.

Table 6-6 Measured Existing Sound Levels, dB(A)

	Boston Noise Criteria		Measured Sound Levels		
Monitoring Location[1]	Daytime	Nighttime	Daytime	Nighttime	Pure Tone Condition
M1 - 711 East Second Street	60	50	56	-	Yes
M2 - Christopher Lee Playground	60	50	**70**	**54-**	Yes
M3 - East Second Street at O Street	60	50	56	47	No
M4 - East First Street at P Street	60	50	**71**	**51**	No
M5 – East First Street at Acadia Street	60	50	**65**	48	No

Source: VHB, Inc.
1 See Figure 6.3 for monitoring locations.
Bold values exceed the City of Boston's noise criteria.

6.8.5 Future Noise Conditions

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

Mechanical Equipment

Since the Project is in the early stages of the design process, the specific details related to the final selection of mechanical equipment are unknown at the time of this noise assessment. Based on preliminary design plans, the anticipated mechanical equipment associated with the Project are expected to include the following:

- Air handling units,
- Cooling towers,
- Energy recovery units,
- Boilers;
- Pumps;
- Exhaust vents; and
- Emergency generators.

Most of the mechanical equipment will be located within mechanical penthouses on top of the proposed buildings. During the design and selection process, the appropriate low-noise mechanical equipment will be selected, including potential noise mitigation measures, such as acoustical enclosures and/or acoustical silencers. The Project will incorporate noise attenuation measures necessary to comply with City of Boston's noise criteria at the sensitive receptor locations.

With the proposed building heights ranging from approximately 60 feet to 220 feet, the mechanical systems would be strategically located, utilizing the height of the buildings in providing noise attenuation. Noise attenuation could be achieved by the Project's building design as the heights of the Project's buildings are greater than the height of nearby sensitive receptors. The rooftops of the Project's buildings will serve as a barrier and break the direct line of exposure between the noise sources and receptors. As such, the sound levels associated with the Project's mechanical equipment are expected to be negligible at the surrounding sensitive receptor locations. With greater distances and impeding building structures, receptors located further away from the Project are expected to experience lower sound levels associated with the Project's noise sources.

The Project may require an emergency generator for life safety purposes, such as emergency exit lighting. The determination of specific generator parameters, such as the sizes and locations will be made during the building design process. The Project will be required to adhere to DEP's regulations that require such equipment to be certified and registered. As part of the air permitting process, the Project will be required to meet additional noise requirements described in DEP regulations under

the Codes of Massachusetts Regulations (310 CMR 7.00). When the details of the emergency generator are developed, the proponent will submit the appropriate application to DEP, which would include noise mitigation measures (such as acoustic enclosures and exhaust silencers) that are necessary to meet DEP's noise criteria.

Service and Loading Activities

Off-street designated loading area are anticipated for loading and service activities associated with the Project. The loading areas will be located within the ground level of the proposed buildings. The loading dock activities will be managed so that service and loading operations do not impact traffic circulation on the adjacent local roadways. Since loading and service activities will be enclosed or shielded by the proposed buildings and operations will be managed, noise impacts to nearby sensitive receptor locations are expected to be negligible.

Designated Freight Corridor

As previously stated, one contributing source to the existing sound levels in the area is related to the truck activities, more specifically associated with Massport's Conley Terminal. In response to the neighborhoods concerns in regards to noise, Massport is in the process of implementing improvements at Conley Terminal. As part of the improvement project, Massport is constructing the DFC, which is located north of East First Street and abuts the northern side of the Project. Additionally, Massport has committed to constructing a buffer open space with a noise wall along East 1st Street to minimize noise and visual impacts of the truck activities at the nearby noise-sensitive uses. The new DFC will relocate container truck traffic off the local roadway system, more specifically a portion of Summer Street and East 1st Street, away from the residential neighborhood. The DFC will be accessed off Summer Street and pass the Project Site to the north. The shift in truck traffic to the DFC will reduce the sound levels along the eastern and southern sides of the Project, abutting Summer Street and East 1st Street respectively. However, the noise sources will pass by the northern side of the Project.

The results of the noise monitoring program indicate existing exterior sound levels in the vicinity of the Project Site exceed the City's noise standards. The Project Site layout will be designed to locate residential units further from the dedicated freight corridor and potentially utilize the proposed building structures as shielding to minimize the impacts associated with the DFC.

Noise Attenuation

Noise attenuation measures are limited since the Project consists of multi-level residential buildings and noise walls are not a feasible measure for receptors at high heights. The Project will consider measures to minimize the impacts to interior sound levels even though the City's noise ordinance does not provide interior noise standards. The buildings will be designed to incorporate building materials with the appropriate sound transmission class to minimize the impacts to the interior sound levels of the proposed residential units. Substantial sound level reductions are considered achievable since general construction material typically provides

20 decibels of attenuation. The building design would consider restricting exposure to exterior noise environment through measures such as limiting operable windows or balconies and providing central climate control systems.

6.8.6 Conclusion of Noise Impact Assessment

The noise analysis evaluated the sound levels associated with the Project. This analysis determined that the sensitive receptor locations in the vicinity of the Project Site currently experience sound levels exceeding the City of Boston's daytime and nighttime noise standards. Due to the anticipated location of the proposed equipment within mechanical penthouses on the rooftop, the sound levels associated with the Project's mechanical equipment are expected to have no adverse noise impacts at nearby sensitive receptor locations. While impacts of the emergency generator are also expected to be negligible, a separate DEP permitting process will allow for further review of this equipment at a later date. The Project is designed such that the loading areas will be enclosed or shielded by the proposed building structures, which will attenuate sound levels associated with the loading activities. As a result of the preliminary design, the Project's operations will have no adverse noise impacts at nearby sensitive receptor locations.

The noise evaluation demonstrates that the existing ambient sound levels in the vicinity of the Project site exceed the City's noise standards. As a result, the design of the residential buildings will incorporate sufficient acoustical material with the appropriate sound transmission class rating to minimize impacts to interior sound levels.

6.9 Wetlands and Waterways

This section described the Project's compliance with the Massachusetts Public Waterfront Act, Massachusetts Office of Coastal Zone Management Policies, a Public Benefit Determination, and the Massachusetts Wetlands Protection Act.

6.9.1 Massachusetts Public Waterfront Act (Chapter 91)

The Massachusetts Public Waterfront Act, MGL Chapter 91, as implemented by the DEP through the Waterways Regulations (310 CMR 9.00), regulates activities in filled and flowed tidelands within the Commonwealth, and is intended to protect and promote public use of the waterfront. The limit of Chapter 91 jurisdiction is defined by the oldest most credible map depicting the mean high water mark prior to placement of fill. This presumed historic shoreline is used to define the historic high water mark and the limits of Chapter 91 jurisdiction at the Project Site. According to GIS data compiled through the DEP/CZM Chapter 91 Historic Shoreline Mapping project, historic mean high water for the Project Site was determined based on the Non Coastal Survey of the Inner Harbor, surveyed in 1847 (see Figures 6.4 and 6.6).

Approximately four acres of the Project Site along the shoreline is located seaward of the historic mean high water, and is therefore within Chapter 91 jurisdiction. Although the Project Site is located on filled tidelands and will be effectively separated from the waterfront by the DFC, the Project Site does not meet the

definition of "landlocked tidelands" as defined by 310 CMR 9.02 because the public way was not in existence as of January 1, 1984. As shown on Figure 6.5, the historic mean low water ("HMLW") mark is located in the Reserved Channel, and the Project Site is owned in fee by a private party with no fee ownership held by the Commonwealth, therefore the filled tidelands at the Project Site are private rather than Commonwealth tidelands per their definitions under 310 CMR 9.02.

18 Waterways Licenses have been identified pertaining to the Project Site issued between 1898 and 1999. Based on review of these licenses and the cartographic history, it appears that all fill bulkheads and pile-supported structures within Chapter 91 Jurisdiction on the Project Site are licensed. No licenses were identified for the existing legacy buildings on the Project Site that are located within Chapter 91 Jurisdiction, as is typical for buildings of this vintage. The limits of Chapter 91 jurisdiction on the Project Site are shown in Figure 6.6.

Compliance with Chapter 91 Regulations

Chapter 91 provides for the protection of the public's rights to navigation along and access to the Massachusetts shoreline. The Chapter 91 regulations establish standards for jurisdictional projects based on a number of criteria. Key among these are a project's status as water-dependent or nonwater-dependent, its location on flowed or filled tidelands, and its location on tidelands identified as either Private or Commonwealth Tidelands. The regulations also apply additional criteria to that portion of a project site within the "water-dependent use zone." In the case of water dependency, a project that is principally nonwater-dependent will be reviewed as nonwater-dependent in whole, whether or not it includes water-dependent aspects.

The following sections review licensing provisions of Chapter 91.

Facilities of Private Tenancy

The Project Site is subject to 310 CMR 9.51(3)(b), which, among other things, prohibits ground floor facilities of private tenancy in new or expanded buildings for nonwater-dependent use on any filled tidelands within 100 feet of the shoreline. The current design does not anticipate new nonwater-dependent buildings within 100 feet of the shoreline. If design evolves to include renovation or expansion of the existing buildings/structures within 100 feet of the shoreline, then the use of those buildings will remain consistent with this requirement.

Water-Dependent Use Zone

The Project Site is subject to 310 CMR 9.51(3)(c), which prohibits new or expanded buildings for nonwater-dependent use to be located within a water-dependent use zone. A water-dependent use zone ("WDUZ") extends for the lesser of 100 feet or 25 percent of the average distance from the ordinary high water line to the landward lot line of the property. The WDUZ on the Project Site is depicted in Figure 6.6, Chapter 91 Jurisdiction. No new buildings for nonwater-dependent purposes are located within the WDUZ, therefore the Project is consistent with this standard. If existing structures within the WDUZ are renovated they will not be expanded, or their uses will not conflict with or discourage water-dependent activity or public use of the WDUZ.

Open Space

The Project Site is subject to 310 CMR 9.51(3)(d), which requires that at least one square foot of the Project Site at ground level be preserved as open space for every one square foot of tideland area within the combined footprint of buildings containing nonwater-dependent use. Open space, for Chapter 91 purposes, as interpreted by DEP, includes all areas not covered by buildings that are at grade and open to the sky.

Although the provisions of 310 CMR 9.53 (which require more expansive and active open space) do not apply to the Project because it is located landward of HMLW and privately owned, the Project will maintain the waterfront area as both an asset to the Project Site and a benefit to the community. As such, the Project will meet the open space requirements and provide quality programming and year-round activity that will be enhanced by activity from the surrounding buildings and community in general.

Height

The Project Site is subject to 310 CMR 9.5.1(3)(e), which restricts the height of new or expanded buildings within jurisdictional filled tidelands. Building heights[2] shall not exceed 55 feet within 100 feet of the existing MHW line. At further landward distances, buildings may be increase in height by one-half foot for every additional one foot of separation from the MHW line. Figure 6.6 depicts the corresponding building height setbacks. At a distance of 200 feet from the MHW, the maximum allowable building height is approximately 130 feet. The Project will fully comply with Chapter 91 height limitations.

Facilities of Public Accommodation ("FPA") within 100 Feet of the Project Shoreline

The Project Site is subject to 310 CMR 9.51(3)(b), which prohibits facilities of private tenancy within 100 feet of the shoreline on the ground floor of buildings on filled private tidelands. Facilities of private tenancy are defined in 310 CMR 9.02 as any facility at which the advantages of use accrue, on either a transient or a permanent basis, to a relatively limited group of specified individuals (e.g., private club, condominium building) rather than to the public (e.g., restaurant, coffee shop, aquarium or a museum). The Project fully complies with this regulation and does not include any facilities of private tenancy within 100 feet of the shoreline. Since the Project Site contains Private Tidelands, not Commonwealth Tidelands, facilities of private tenancy are allowed within tidelands greater than 100 feet inshore of the shoreline.

Utilization of the Shoreline for Water-Dependent Purposes

The Project Site includes a 100-foot wide WDUZ as defined by 310 CMR 9.51(3)(c). This regulation, combined with the requirements of 310 CMR 9.52 requires non-water dependent use projects to devote a reasonable portion of tidelands in jurisdiction to water-dependent use that promote public access of and public use of the waterfront. The regulation at 310 CMR 9.52(1) requires one or more facilities that generate water-dependent activity and a pedestrian access network that is appropriate for the Project Site and the Project. The Project team is currently

2 As measured according to local zoning.

exploring creative opportunities to maximize the utility and public benefit of this unique waterfront Project Site and will fully comply with this requirement.

6.9.2 Coastal Zone Management (CZM) Policies

The Project Site is located within the Massachusetts Coastal Zone and, as the Project will be a non-water dependent project, must be consistent with the regulatory policies established by CZM under the federally approved Massachusetts Coastal Zone Program.[3]

Table 6-7 lists the CZM policies which are applicable to the Project, and assesses the consistency with those applicable policies.

Table 6-7 Consistency with Applicable Massachusetts Coastal Zone Management Policies

CZM Policy	Summary of Policy	Summary of Consistency Statement
Coastal Hazard Policy # 1	Preserve, protect, restore, and enhance the beneficial functions of storm damage prevention and flood control provided by natural coastal landforms	The policy does not apply. The Project Site is currently developed and does not contain natural coastal landforms.
Coastal Hazards Policy # 2	Ensure that construction in water bodies and contiguous land areas will minimize interference with water circulation and sediment transport	The Project does not involve work in a water body, and will not impact water circulation or sediment transport in any way. The adjacent bank consists of a man-made bulkhead and does not serve as a sediment source.
Coastal Hazards Policy # 3	Ensure that state and federally funded public works projects would be safe from flood and erosion-related damage	The policy does not apply. The Project is not a state or federally funded public works project.
Coastal Hazards Policy #4	Prioritize acquisition of hazardous coastal areas that have high conservation and/or recreation values	This policy does not apply. The Project is not located within a coastal high hazard area.
Energy Policy # 1	For coastally dependent energy facilities, assess siting in alternative coastal locations	This policy does not apply. The Project is not an energy facility.
Energy Policy # 2	Encourage energy conservation and use of renewable sources	Project will incorporate energy conservation measures and include assessment of renewable energy potential to the extent practicable as presented in Chapter 4, *Sustainability/Green Building and Climate Change Resiliency*.
Growth Management Policy #1	Encourage sustainable development that is consistent with state, regional, and local plans	Project will incorporate sustainable design elements, and is consistent with regional, state, and local plans. Project sustainability is discussed further in Chapter 4, *Sustainability/Green Building and Climate Change Resiliency*.
Growth Management Policy #2	Ensure that state and federally funded infrastructure projects serve developed urban areas	The policy does not apply. The Project is not a state or federally funded infrastructure project.
Growth Management Policy #3	Encourage revitalization and enhancement of existing development in the coastal zone	The Project will revitalize and activate the Project Site on a year-round basis.

3 Massachusetts Office of Coastal Zone Management Policy Guide, Executive Office of Energy and Environmental Affairs, October 2011.

Table 6-7 Consistency with Applicable Massachusetts Coastal Zone Management Policies (Continued)

CZM Policy	Summary of Policy	Summary of Consistency Statement
Habitat Policy # 1	Protect coastal, estuarine, and marine habitats to preserve wildlife habitats	The Project will obtain an Order of Conditions from the Boston Conservation Commission.
Habitat Policy # 2	Advance the restoration of degraded or former habitats in coastal areas	This policy does not apply.
Ocean Resources Policy # 1-3	Not applicable	This policy does not apply at this time, as no work is currently proposed within the waterway.
Ports and Harbors Policy # 1-5	Not applicable	The policies will not apply. The Project does not propose any dredging, and the Project Site will seek to be removed from the Designated Port Area.
Protected Areas Policy # 1-2	Not applicable	The Project Site is not within or proximate to any ACECs or designated scenic rivers.
Protected Areas Policy # 3	Ensure that proposed developments in or near designated or registered historic places respect the preservation intent of the designation and that potential adverse effects are minimized.	Refer to Chapter 7, *Historic Resources,* for a detailed evaluation of the Project's approach to enhancing the existing historic resources.
Public Access Policy # 1	Ensure that development would promote general public use and enjoyment of water front	The Project will create new recreational opportunities through the enhancement of filled tidelands by providing new pedestrian oriented open space and public accommodations.
Public Access Policy # 2	Improve public access to coastal recreational facilities; facilitate multiple uses; minimize adverse impacts of developments	The Project proposes significant improvements to public open space and pedestrian accessibility. The proposed development will support a mix of uses and will minimize impacts.
Public Access Policy # 3	Expand coastal recreational facilities and develop new public areas for recreational activities	This policy does not apply. The Project does not involve the development of coastal recreational facilities. The Project Site will include public access in the form of the open space and public pedestrian access ways along the waterfront open space.
Water Quality Policy # 1	Ensure that point-source discharges do not comprise water quality standards	No point source discharges are associated with the proposed improvements. An improved stormwater management system will be designed and constructed for the Site which meets federal stormwater management standards and is compliant with both the DEP Stormwater Management Policy and Boston Water and Sewer Commission requirements.
Water Quality Policy # 2	Implement nonpoint source pollution controls to promote the attainment of water quality standards and protect designated uses and other interests	Potential nonpoint discharge is limited to stormwater runoff. Stormwater at the Project Site will be collected and treated in appropriate stormwater management structures designed in accordance with federal stormwater management standards, DEP Stormwater Management Policy and Boston Water and Sewer Commission requirements.
Water Quality Policy # 3	Ensure that subsurface waste discharges conform to applicable standards	The policy does not apply as the Project does not propose subsurface waste discharges.

6.9.3 Public Benefit Determination

The Project is subject to the jurisdiction of the 2007 statute "*An Act Relative to Licensing Requirements for Certain Tidelands*" (2007 Mass. Acts Ch. 168, sec 8) because it is entirely within filled tidelands. The act requires the Secretary to consider the following when making a Public Benefit Determination:

- Purpose and effect of the development;
- The impact on abutters and the surrounding community;
- Enhancement of the property;
- Benefits to the public trust rights in tidelands or other associated rights;
- Community activities on the development site;
- Environmental protection and preservation;
- Public health and safety; and
- General welfare.

The following sections describe how the Project provides appropriate public benefits and is adequately protective of the Public Trust rights inherent in tidelands.

Purpose and Effect of the Development

The overall purpose of the Project is the redevelopment of a former industrial site and the rehabilitation of the existing Turbine Hall into a mixed-use development.

The Project will provide substantial direct and indirect public benefits, including the provision of access and recreational opportunity on previously inaccessible tidelands, the remediation of Project Site contamination, new housing and employment opportunities, the rehabilitation of the historic Turbine Hall, and improvements to the public realm.

Impact on Abutters and Community

The Project will result in a substantial net benefit to the community by advancing the goals of the Imagine Boston 2030 plan and converting an underutilized site into a new community asset and public resource.

Community impacts are relatively limited in nature and will be mitigated to the extent feasible to preserve or improve upon the existing conditions. Potential traffic impacts of the Project will be mitigated through the transportation improvements described in Chapter 5, *Transportation*. These improvements will be designed in close consultation with the BTD and will encourage alternatives to single-occupancy vehicle use, improve vehicular circulation, and pedestrian safety.

Enhancement of the Property

The Project will enhance the Project Site by converting a non-operational industrial Power Plant and deteriorating historic buildings into a vibrant mixed-use development with new interior and exterior public spaces.

Benefits to the Public Trust Rights in Tidelands or Other Associated Rights

As described above, the Project will include numerous direct public benefits related to tidelands including restoring public access to the shoreline after over a century of restricted access, providing new public open space, and substantial ground floor public facilities.

Community Activities on the Site

The Project will result in a substantial net improvement to community activity at the Project Site by providing new ground floor public uses as well as activated landscapes and streetscapes.

Environmental Protection/Preservation

The Proponents are committed to redeveloping the Project Site in accordance with all applicable local, state, and federal environmental protection regulations. Table 2-1 in Chapter 2, *Regulatory Context*, provides a list of the regulatory approvals anticipated to be required.

Public Health and Safety

The Project will promote public health and safety through implementing a site design that provides a safe and universally accessible facility from all directions. The design includes on-site and off-site transportation improvements to increase pedestrian and bicyclist safety and accessibility in the neighborhood. Improvements include landscape and appropriate lighting and signage to provide a safe well-lit environment for visitors and employees on a 24/7 basis.

General Welfare

The Project will protect the general welfare by replacing vacant buildings with a modern pedestrian scale mixed use Project. The Project will comply with all applicable local, state, and federal environmental protection standards.

Protection of Groundwater

As described in Chapter 8, *Infrastructure*, the Project protects groundwater levels at the Project Site. The Project Site design includes new vegetated areas, and a stormwater management system sized to infiltrate in excess of the first one-inch of rainfall to groundwater. Groundwater levels are not expected to fall as a result of the Project.

6.9.4 Massachusetts Wetlands Protection Act

As depicted on Figure 6.7, DEP mapping identifies state-regulated wetland resource areas within the Project Site, including Land Subject to Coastal Storm Flowage, land within the 100-foot buffer zone to Coastal Bank associated with the Reserved Channel, and Land Under Ocean. These resources are subject to the jurisdiction of the Wetlands Protection Act ("WPA"). Work within these areas requires the filing of a Notice of Intent with the Boston Conservation Commission and the issuance of an Order of Conditions which protects the identified public interest of the WPA:

- Protection of public and private water supply;
- Protection of groundwater supply;
- Flood control;
- Storm damage prevention;
- Protection of land containing shellfish;
- Protection of fisheries; and
- Protection of wildlife habitat.

The following sections present the existing wetlands resources and detail compliance with WPA performance standards.

Existing Wetlands Resources

Based on review of the existing conditions survey, the following resource areas have been identified on or adjacent to the Project Site:

- **Land Subject to Coastal Storm Flowage ("LSCSF")** – As defined in §10.04, LSCSF means "land subject to any inundation caused by coastal storms up to and include that caused by the 100-year storm, surge of record, whichever is greater."
- **Coastal Bank** – As defined in §10.30(2), a coastal bank means "…seaward face or side of any elevated platform, other than coastal dune, whichever lies at the landward edge of the coastal beach, land subject to tidal action or other wetland."
- **Land Under the Ocean** – As defined in 310 CMR 10.25 (2), is (in part), "land extending from the mean low water line seaward to the boundary of the municipality's jurisdiction and includes land under estuaries."

Refer to Figure 6.7, Wetland Resources, for DEP mapping of on-site wetland resource areas.

Wetlands Protection Act Compliance

The proposed work will occur within the 100-foot buffer zone to Coastal Bank and within the resource area Land Subject to Coastal Storm Flowage. As design progresses, additional work may be proposed within Land Under Ocean.

Land Subject to Coastal Storm Flowage

The most recent FIRM for the City of Boston indicates that a significant portion of the Project Site is within Zone AE of the 100-year flood, with elevations at 12-13 feet NAVD88. Since the flood waters would extend from the tidal waters of the Reserved Channel, this area is regulated as LSCSF. The WPA does not prescribe any performance standards for LSCSF.

100-foot Buffer Zone to Coastal Bank

The WPA regulations under §10.02(2)(b) establish a 100-foot buffer zone from the limits of coastal bank. Work within the 100-foot Buffer Zone to Coastal Bank will require compliance with the performance standards enumerated within §10.30. The proposed work within the buffer zone will not result in any short-term construction related or long-term operational impacts to the off-site protected resource area, Coastal Bank, or any additional down gradient resource area.

Land Under the Ocean

Land Under the Ocean exists within the Reserved Channel seaward of the mean low water line. Land Under the Ocean consists of unconsolidated sediments, rocky material, and debris found within the regularly submerged portion of the Reserved Channel. According to data maintained by MassGIS Online Data Viewer ("OLIVER"), the Project Site does not contain any mapped eelgrass beds, mapped shellfish suitable areas, or areas identified as anadromous fishways. Land Under Ocean does not have a 100-foot buffer zone. If work is proposed within Land Under Ocean it will be done so in compliance with the applicable performance standards.

6.10 Water Quality

The Project will comply with the DEP Stormwater Management Standards and will improve the quality of stormwater runoff from the Project Site and reduce its quantity compared to the existing condition. The Project will improve water quality by collecting and treating stormwater runoff through a series of structural Best Management Practices ("BMPs") designed to remove oil, floatables, and Total Suspended Solids ("TSS"). Clean runoff from the Project Site will be directed to recharge systems designed to infiltrate stormwater runoff in order to replenish groundwater and provide phosphorous removal. Chapter 8, *Infrastructure*, provides a complete description of the existing and proposed stormwater management systems, to the extent these systems are designed, and provides a summary of the Project's compliance with the DEP Stormwater Management Standards.

6.11 Solid and Hazardous Materials

A Phase I Environmental Site Assessment ("ESA") was completed in April 2016 to evaluate the potential presence of oil and/or hazardous material in soil and groundwater at the Project Site.

The Project Site has been used for power generation since the 1880s. The Project Site is adjacent to the Reserved Channel, and at least portions of the Project Site consist of filled former tidelands. Known oil and/or hazardous material releases have been cleaned up and closed in accordance with the Massachusetts Contingency Plan ("MCP"). Typical of power generation operations, incidental spills, leaks, and small releases may have occurred on-site in addition to known releases. Based on a review of DEP records, there are seven release tracking numbers ("RTNs") (i.e., releases regulated under the MCP) associated with the Project Site. The RTNs related to the Project Site are summarized in the table below; one of the RTNs (3-13007) relies on an Activity and Use Limitation ("AUL") to support regulatory closure. Refer to Figure 6.8 for the locations of the RTNs on the Project Site.

RTN	Release Condition	Regulatory Status
3-12817	Sulfuric acid release to containment structures and subsurface soils.	Permanent Solution filed in 1996
3-13007	No. 6 fuel oil containing TPH, EPH, volatile organic compounds ("VOCs"), and polycyclic aromatic hydrocarbons ("PAHs") released to subsurface soils.	Permanent Solution with AUL filed in 2001
3-14575	Sulfuric acid released to containment structures and subsurface soils.	Permanent Solution filed in 1997
3-17596	Petroleum with EPH and VPH released to the subsurface.	Permanent Solution filed in 2000
3-22165	Lubricating oil released to facility surfaces, pavement, and Reserved Channel.	Permanent Solution filed in 2002
3-26342	Sulfuric acid released to cement and soils.	Permanent Solution filed in 2007
3-28038	Weathered oil stains containing EPH and polychlorinated biphenyls ("PCBs") on soil.	Permanent Solution filed in 2009

In addition to the MCP activities at the Project Site, the EPA determined that releases of hazardous wastes or hazardous constituents from Solid Waste Management Units or Areas of Concern do not pose a threat to human health or the environment. This determination is documented in EPA's Statement of Basis for Corrective Action Completion Determination dated 28 August 2015.

The Phase I ESA identified the presence of closed and existing underground storage tanks ("USTs"), aboveground storage tanks ("ASTs"), potential asbestos containing materials ("ACM") and potential polychlorinated biphenyl ("PCB") containing oil associated with transformers, underground transmission lines, and other electrical equipment.

Oil and/or hazardous materials encountered during the Project will be addressed in accordance with the MCP, as applicable. Soils will be characterized for off-site disposal or on-site reuse as required. Air monitoring will be performed as applicable, and best management practices for storm water runoff and dust control will be implemented. If PCB-impacted materials are encountered above applicable thresholds, they will be managed in accordance with state and federal regulations governing the handling, transport and disposal of PCB-impacted materials.

6.12 Groundwater/Geotechnical

6.12.1 Groundwater

The depth to groundwater varies from approximately 7 to 8 feet below ground surface near Summer Street to approximately 20 to 25 feet below ground surface at the eastern boundary of the Project Site. Significant excavations below the water table are not anticipated. The Project Site is not within the Groundwater Conservation Overlay District ("GCOD").

6.12.2 Geotechnical

The depth of fill at the Project Site ranges from 10 to 25 feet below ground surface. The fill overlies deposits of sand and gravel with up to 20 percent fines. Portions of the Project Site are underlain by clay and silt intervals and an approximately 3-foot peat interval.

Additional information will be provided in the DEIR/DPIR to describe potential impacts and any necessary mitigation measures.

6.13 Construction

The following section generally describes the potential temporary impacts resulting from construction activities and proposed mitigation measures anticipated to reduce these impacts. As design progresses, construction mitigation will be reviewed and refined by appropriate regulatory agencies through the development and submission of a parcel specific Construction Management Plan ("CMP"). The overall duration of construction for the Project will be dependent on the sequencing of the various phases.

6.13.1 NPDES Construction General Permit

The Project will alter greater than one acre of land. Accordingly, the individuals who control the construction activities on the Project Site (e.g. owner, contractor/s) are required to file a Notice of Intent ("NOI") at least seven days prior to the start of construction pursuant to the National Pollution Discharge Elimination System ("NPDES") General Permit for Stormwater Discharges from Construction Sites with the EPA. These regulations require the preparation of a Stormwater Pollution Prevention Plan ("SWPPP") for the site-specific construction activities and implementation by the individuals who control the site. The SWPPP must be in place at the time of the filing of the EPA NOI. The SWPPP will include information such as:

- Project Drawings relative to stormwater management
- Project/Site description
- Drainage report as an attachment, including a Long Term Operations and Maintenance ("O&M") Plan
- Soils information

- General project phasing
- Description and details of recommended erosion control BMPs as defined by state guidelines.
- Temporary and final stabilization recommendations
- Inspection schedule and maintenance checklists for BMPs
- Description of spill prevention and response actions
- Copy of Order of Conditions
- Copy of NPDES Construction General Permit regulations

During construction, the contractor will be responsible for maintaining the stormwater management system. Upon completion of construction, inspections and maintenance will be the responsibility of the property management.

6.13.2 Construction Period Impacts

Overview

Most construction activities will be accommodated within current Project Site boundaries. Details of the overall construction schedule, work hours, number of construction workers, worker transportation and parking, number of construction vehicles and routes will be addressed in the CMP to be filed with BTD in accordance with the City's transportation maintenance plan requirements. The CMP would also include more detail on:

Air Quality

No adverse air quality impacts from the construction of the Project are anticipated. Fugitive dust mitigation measures may include, as necessary:

- Wet suppression to minimize the generation of dust from excavation operations and on-site vehicle traffic, with provisions for any runoff control;
- Spraying any piles of excavation materials with soil cement or calcium chloride overnight and on weekends, and securely covering long-term material stock piles;
- Compacting of the soil or the use of gravel to stabilize the site access points;
- Washing vehicle wheels before leaving the Project Site, as necessary, with provisions for runoff control;
- Periodic cleaning of paved streets near the entrances to the Project Site to minimize vehicle mud/dirt carryout;
- Installing fencing around the perimeter of the Project Site to assist in containing wind-blown dust;
- Requiring that trucks hauling excavated material from the Project Site install secure covers over their loads; and,
- Encouraging the construction contractors for the Project to implement the Massachusetts Diesel Retrofit Program control measures for heavy-duty diesel equipment.

Noise

The construction of the Project will be performed in a manner that complies with the DEP and City of Boston noise regulations. To ensure compliance with these regulations during construction, the Proponents, to the extent practicable, will seek to incorporate into the general construction contract the following mitigation measures:

- Limited vehicle idling to five minutes;
- Limited construction vehicle warm-up to ten minutes;
- Insuring construction vehicles have ambient leveling sensors on the back up alarms;
- Limiting construction to the hours allowable by City of Boston regulations; and,
- Heavy trucks will be limited to the South Boston Haul Road

Traffic

By limiting construction traffic to truck haul roads, the Proponents will ensure that potential impacts from construction will be minimized. To minimize impacts to abutters and the local community, the Proponents will consider all available measures, including information on construction activities, specific construction mitigation measures, and construction materials access and staging area plans. Barricades, walkways, lighting and signage will be used to ensure public safety throughout the construction period.

Odor

Odor issues are not anticipated due to the lack of organic soils on the Project Site; however, if such soils are encountered, the Project Team will undertake appropriate mitigation measures to control the odor associated with their removal, such as:

- Cut and cover utility trenches whenever possible
- Protection of excavated materials with plastic sheathing to encapsulate odors
- Removal of excavated materials from the Site in a covered vehicle on a frequent basis

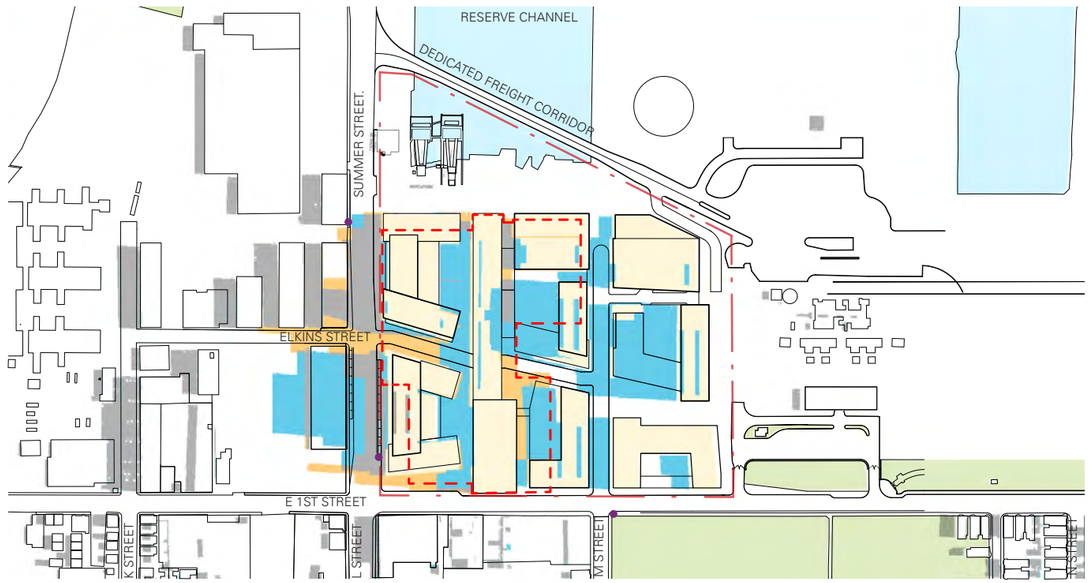
Rodents

The City of Boston has declared that the infestation of rodents in the city as a serious problem. In order to control this infestation, the City enforces the requirements established under the Massachusetts State Sanitary Code, Chapter 211, 105 CMR 410.550 and the State Building Code, Section 108.6. Policy Number 87-4 (City of Boston) established that preparation of a program for the extermination of rodents shall be required for issuance of permits for demolition, excavation, foundation, and basement rehabilitation. The Proponent will prepare and adhere to a rodent control program prior to demolition and on a regular basis throughout the duration of construction.

Cosntruction Staging – Public Safety

Prior to the beginning of construction, the Construction Manager will produce a Site Specific Safety Plan to be reviewed and approved by the City as well as all other agencies impacted in conjunction with the CMP.

The entire perimeter of the construction site will be protected with a construction fence with debris net on top of concrete barriers to separate the construction activities and general public. Vehicular gates will be provided for construction traffic in alignment with the flow of traffic on perimeter roads to allow safe entrance and exiting for construction vehicles. Sidewalks around the Project Site perimeter will be maintained during construction, and overhead protection will be utilized in areas where the new construction is in close proximity to the general public.



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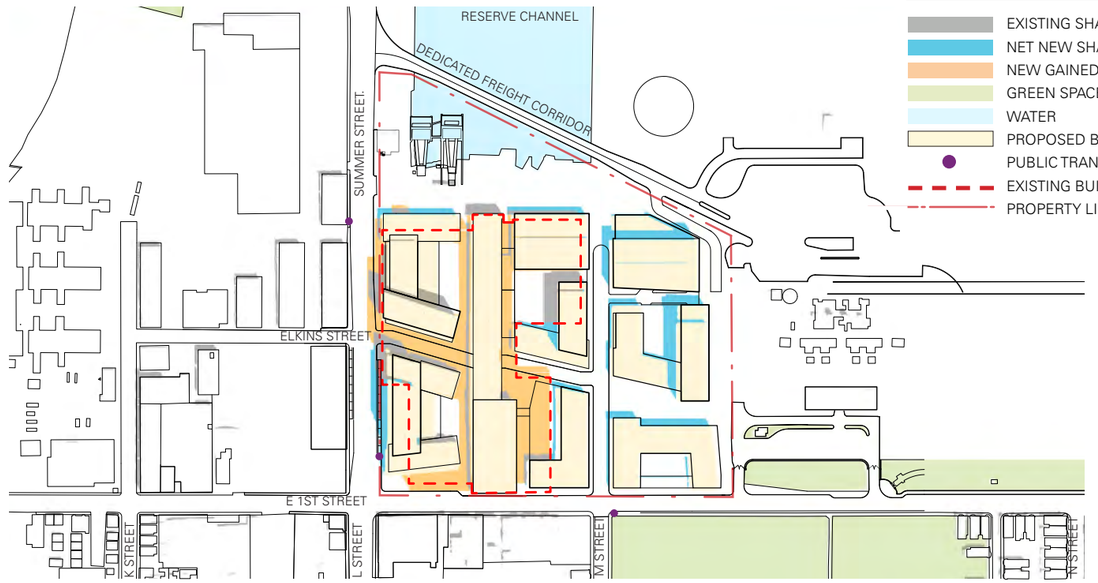

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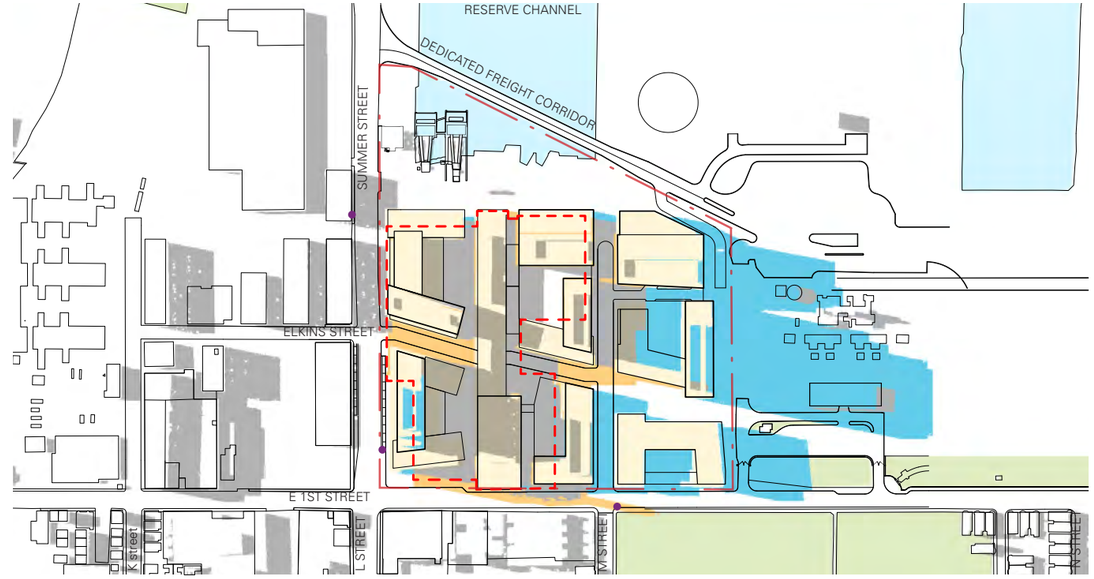

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KEY

- EXISTING SHADOW
- NET NEW SHADOWS
- NEW GAINED DAYLIGHT
- GREEN SPACE
- WATER
- PROPOSED BUILDINGS
- PUBLIC TRANSPORTATION
- EXISTING BUILDING FOOTPRINT
- PROPERTY LINE

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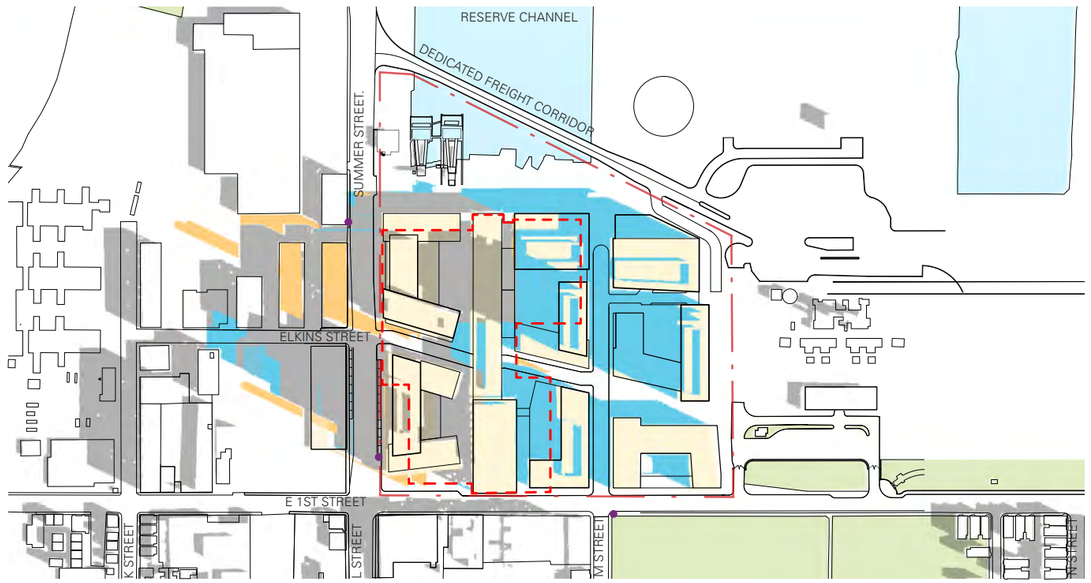
BRANDED ENVIRONMENTS

FIGURE 6.1a
SHADOW STUDIES SUMMER SOLSTICE | JUNE 21



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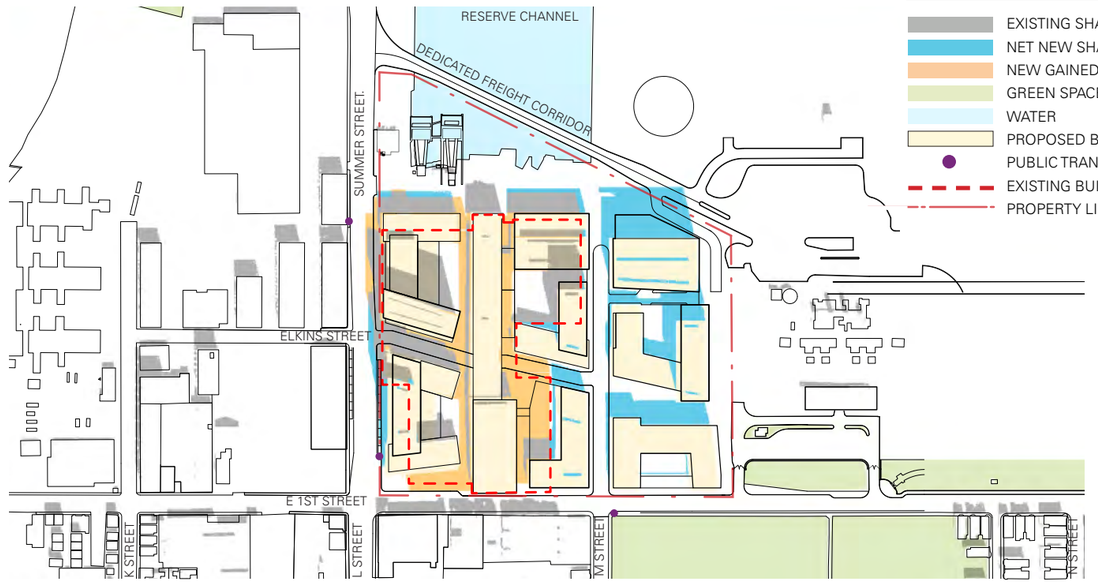

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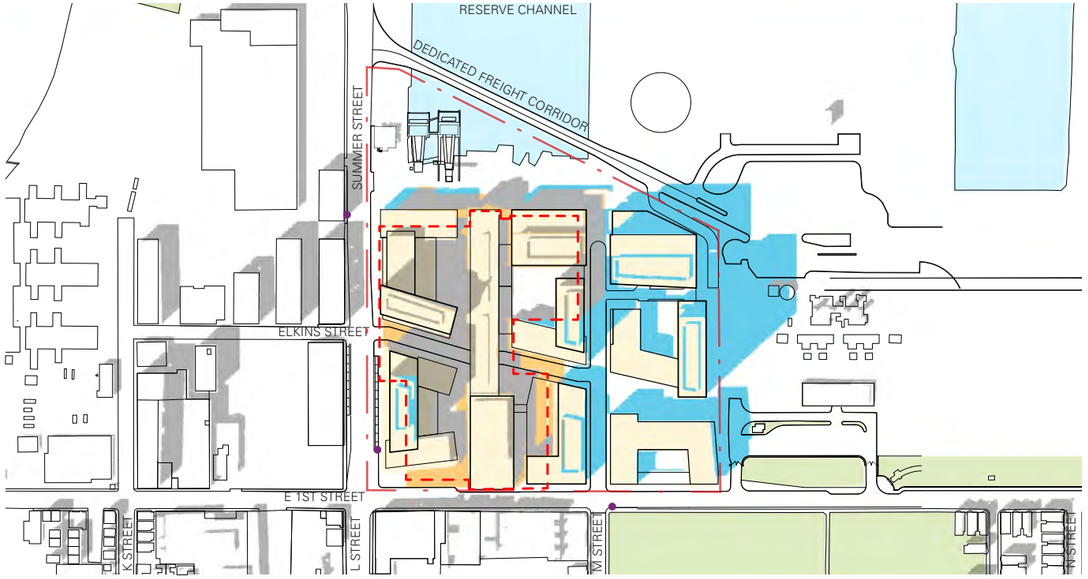

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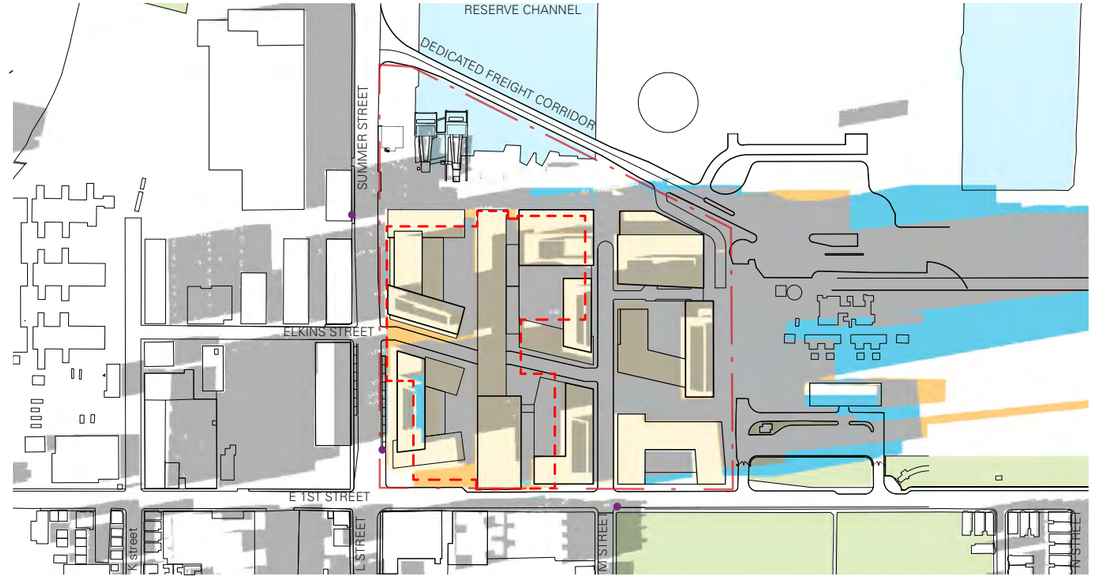

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- PROPOSED BUILDINGS
- PUBLIC TRANSPORTATION
- EXISTING BUILDING FOOTPRINT
- PROPERTY LINE

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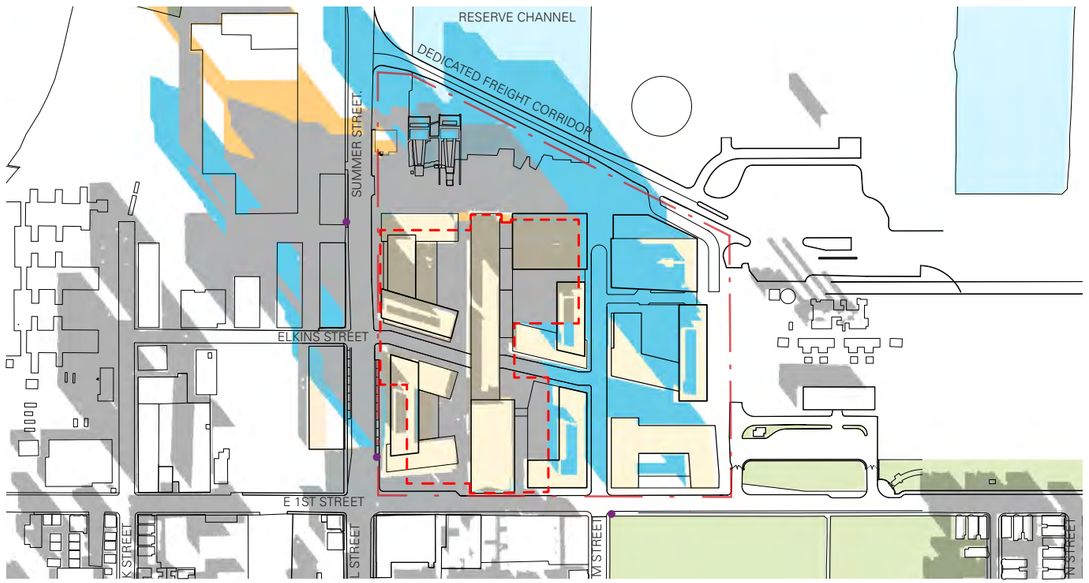
FIGURE 6.1b
SHADOW STUDIES SPRING | FALL EQUINOX



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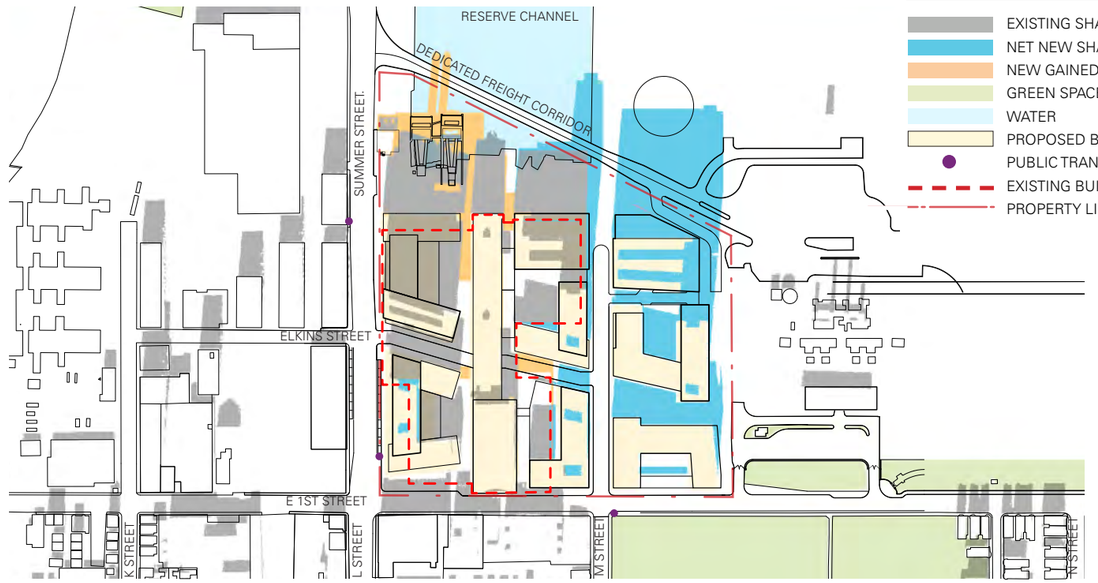

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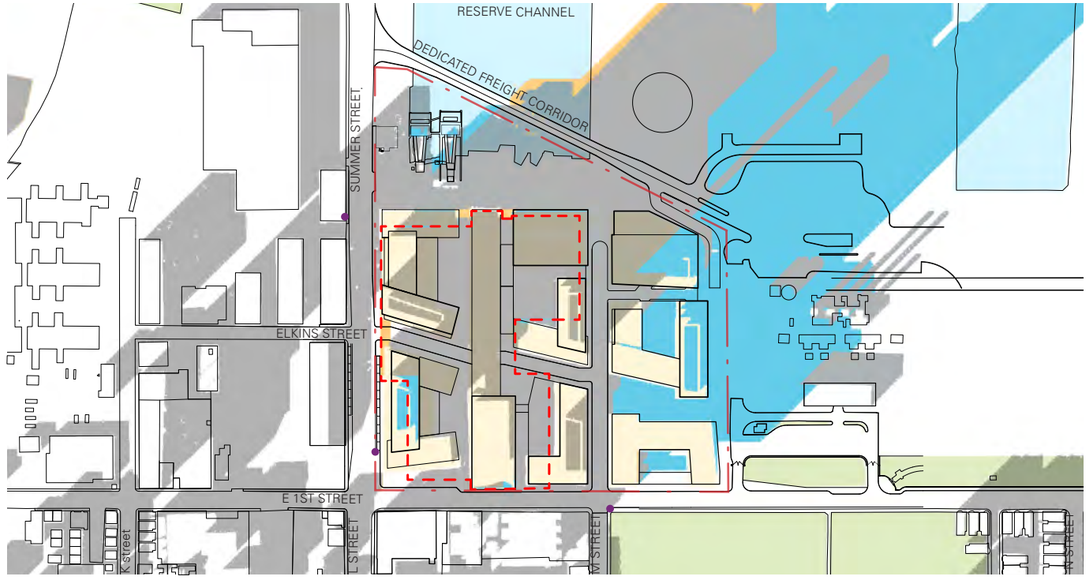

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KEY

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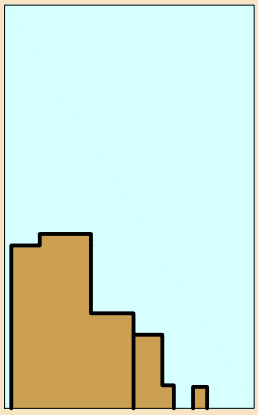
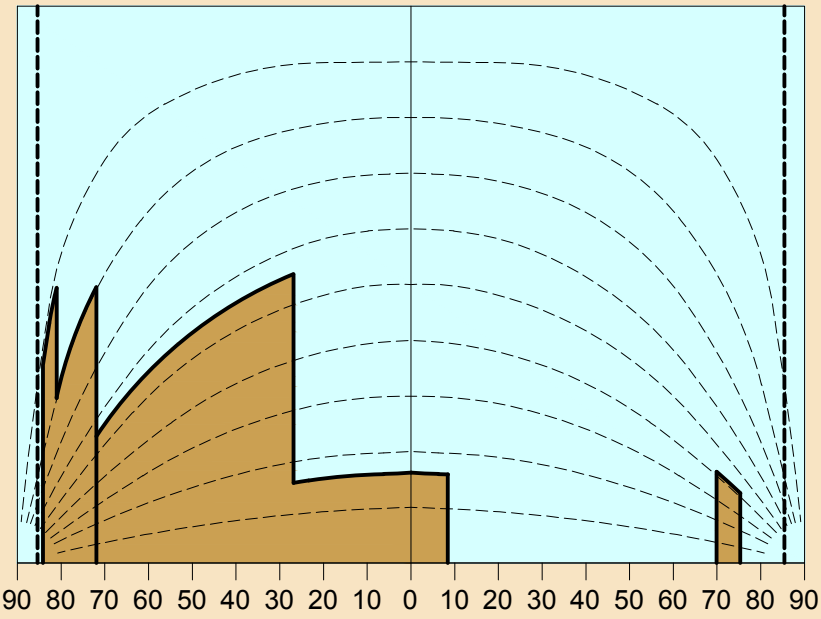
ARCHITECTURE | PLANNING
INTERIOR DESIGN | VDC
BRANDED ENVIRONMENTS

FIGURE 6.1c
SHADOW STUDIES WINTER SOLSTICE | DEC 21

Existing

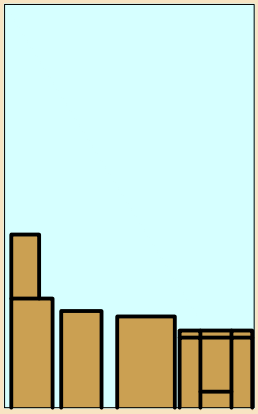
Obstruction of
Skyplane = 56.3%





Proposed

Obstruction of
Skyplane = 54.6%



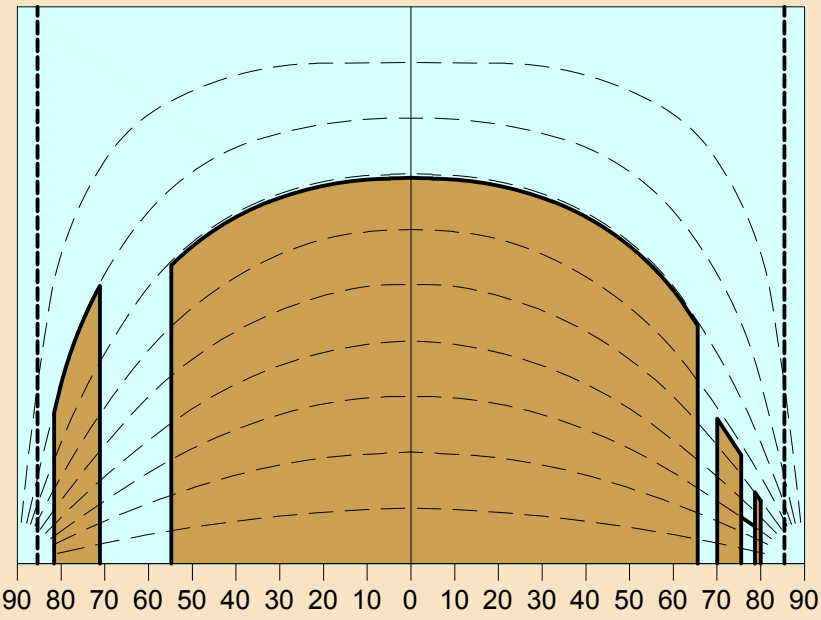
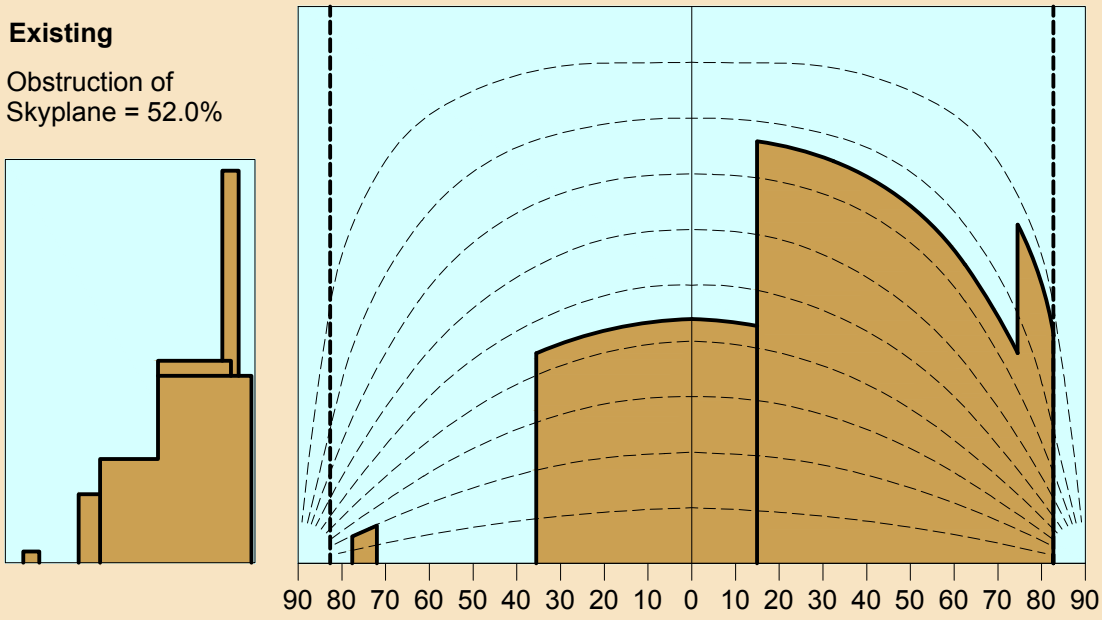


Figure 6.2a

Daylight Analysis
Center of East 1st Street

L Street Station Redevelopment
Boston, Massachusetts



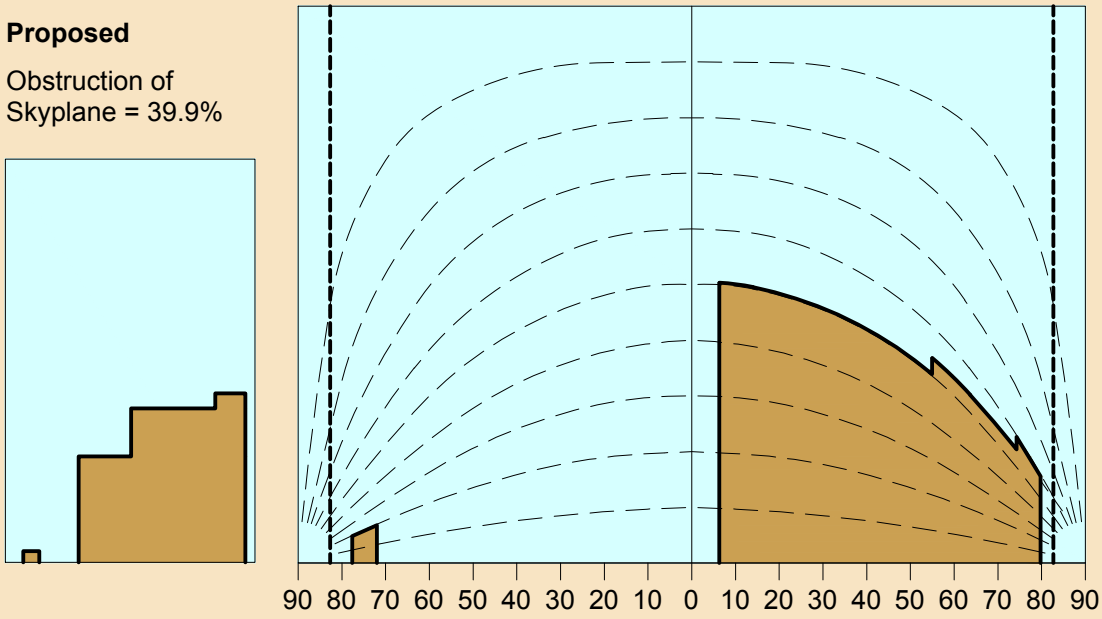


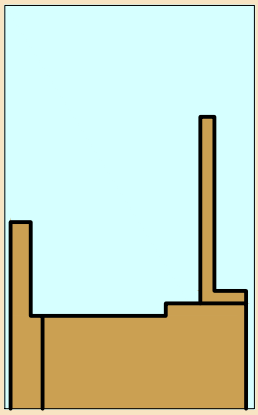
Figure 6.2b

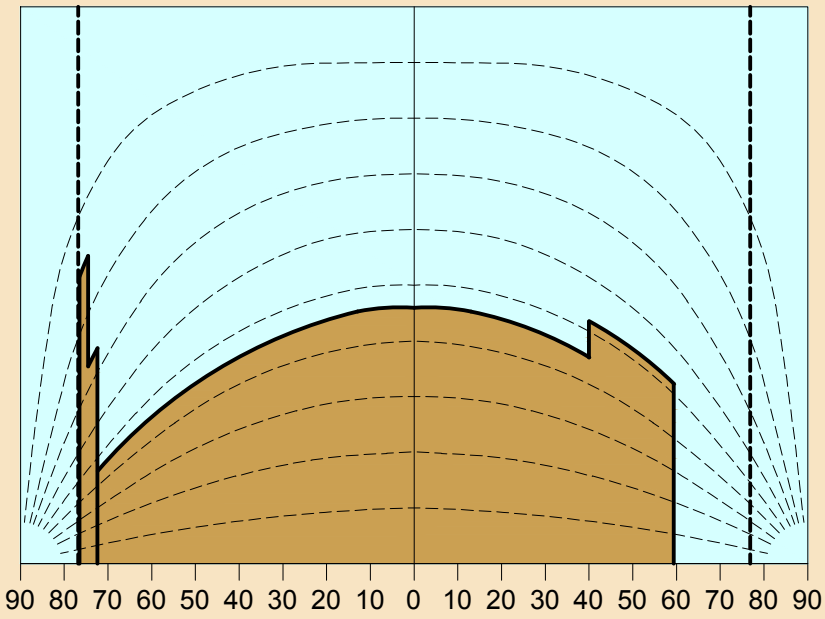
Daylight Analysis
Center of L Street - North

L Street Station Redevelopment
Boston, Massachusetts

Existing

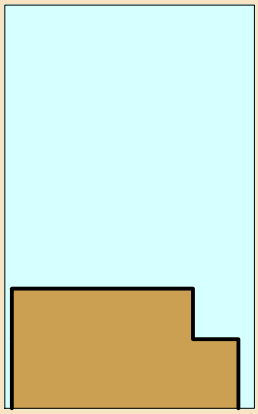
Obstruction of
Skyplane = 55.7%





Proposed

Obstruction of
Skyplane = 72.3%



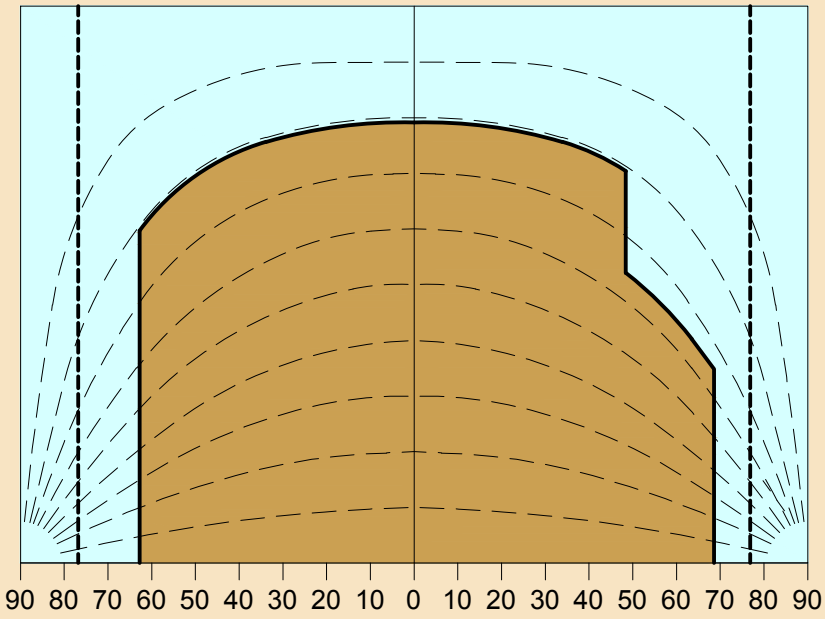


Figure 6.2c

Daylight Analysis
Center of L Street - South

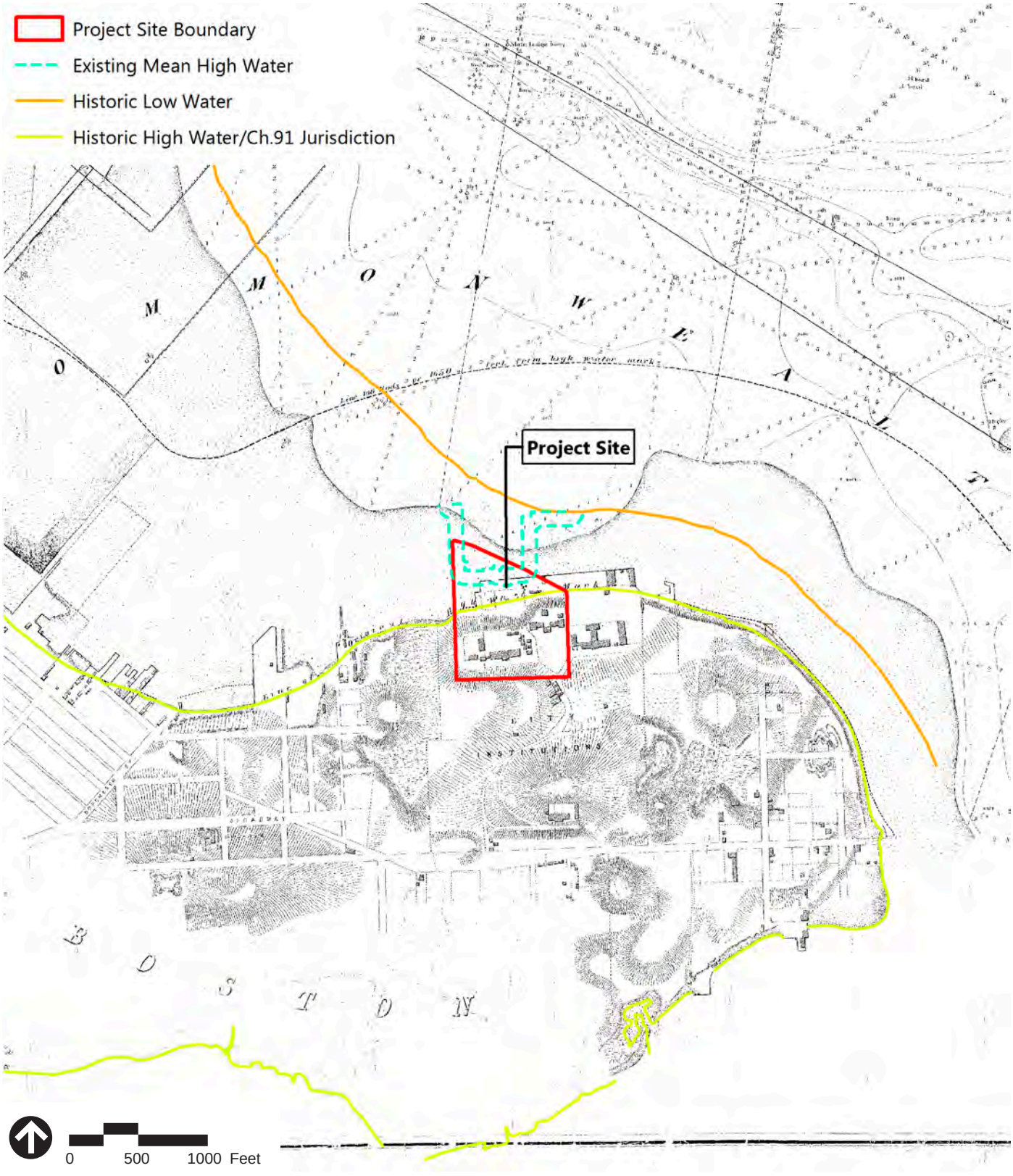
L Street Station Redevelopment
Boston, Massachusetts

Source: Boston Planning & Development Agency

Figure 6.3

Noise Monitoring and Receptor Locations

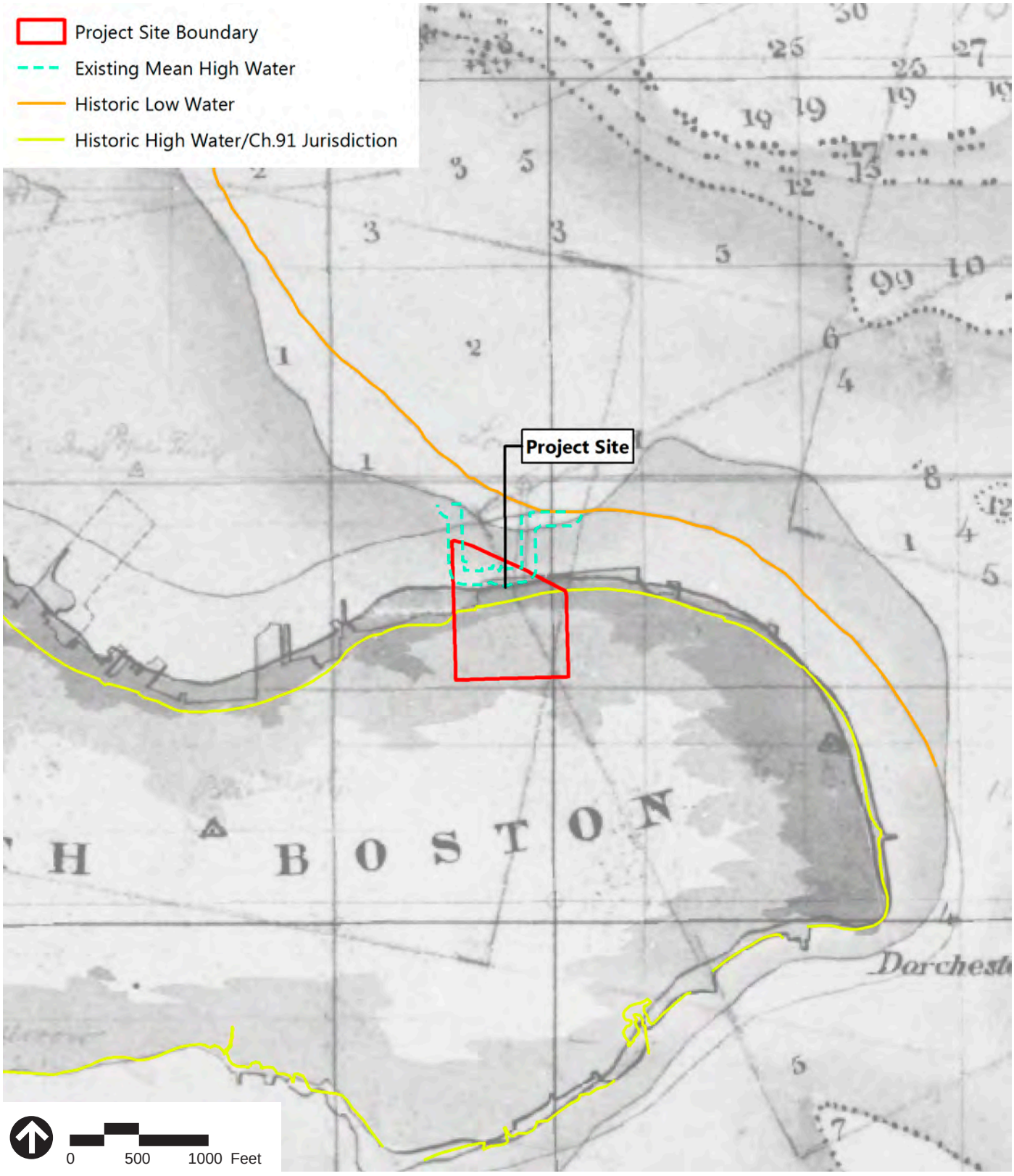
L Street Station Redevelopment
Boston, Massachusetts



Source: MassGIS, VHB, CZM
Imagery: Non Coastal Survey Boston Harbor 1847

Figure 6.4
Historic Coastal Survey HMHW

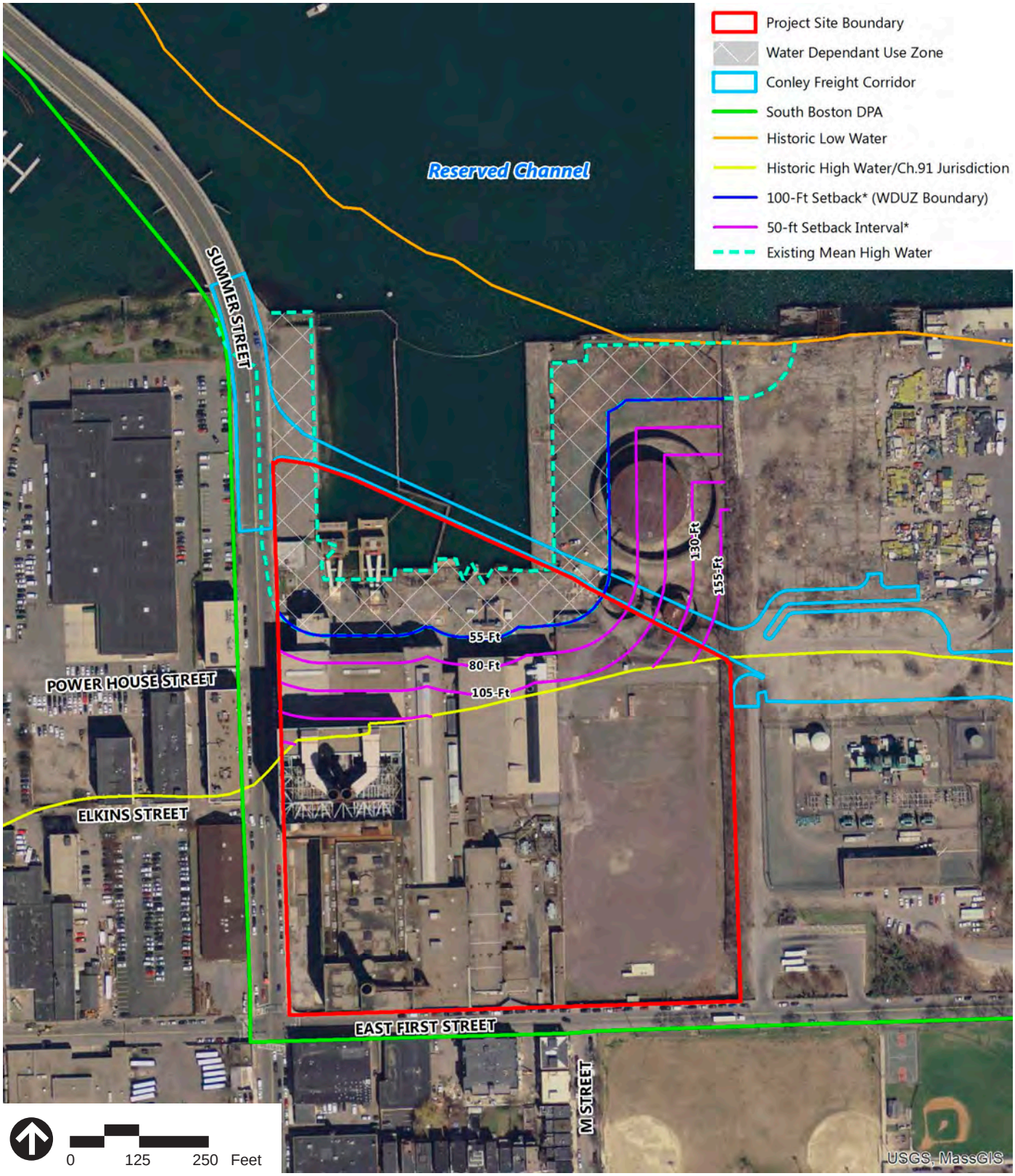
L Street Station Redevelopment
Boston, Massachusetts



Source: MassGIS, VHB, CZM
Imagery: Coastal Survey H1960

Figure 6.5
Historic Coastal Survey HMLW

L Street Station Redevelopment
Boston, Massachusetts

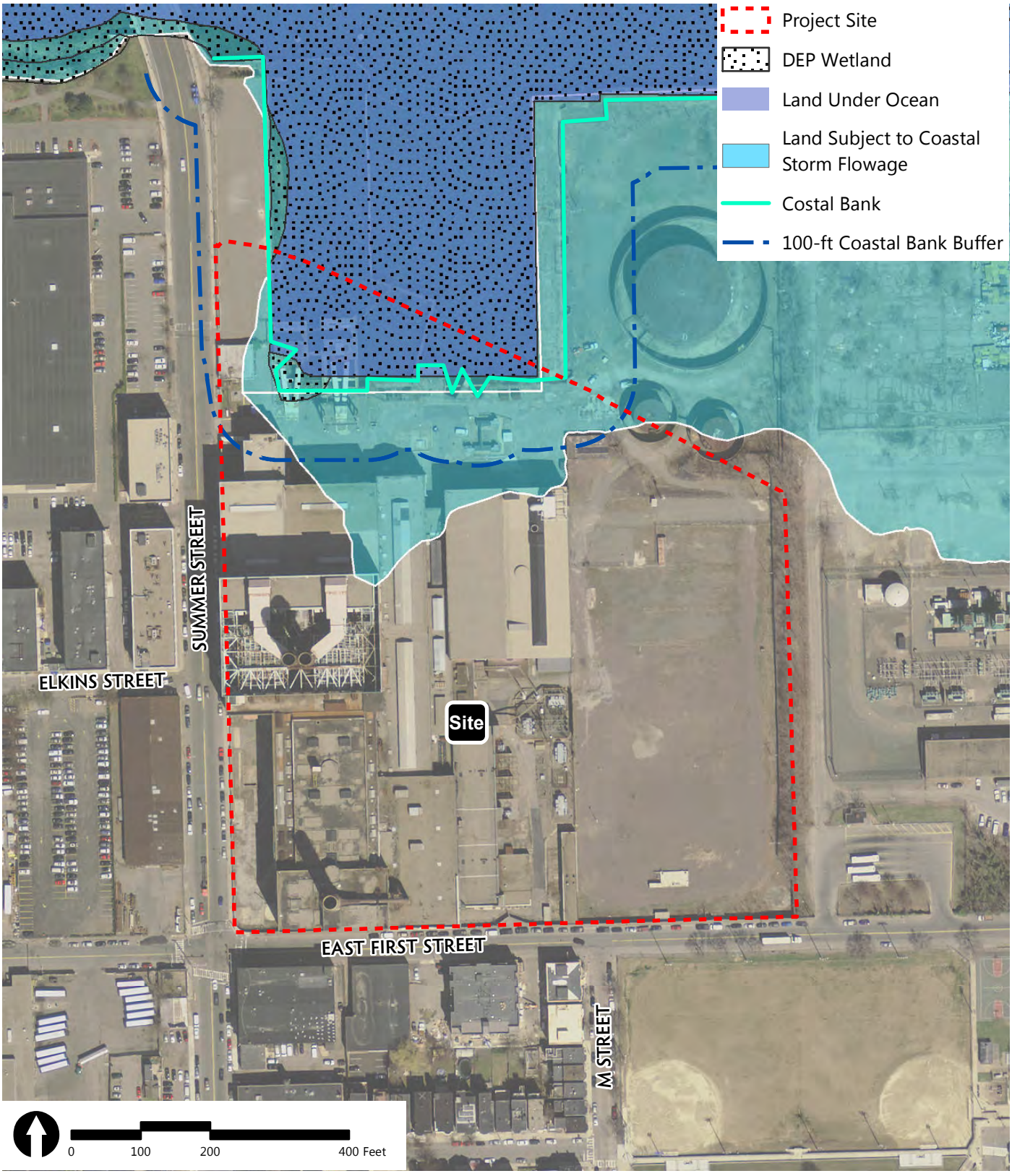


Source: MassGIS, VHB, CZM
* Allowable Building Height Labeled

Figure 6.6
Chapter 91 Jurisdiction

L Street Station Redevelopment
Boston, Massachusetts

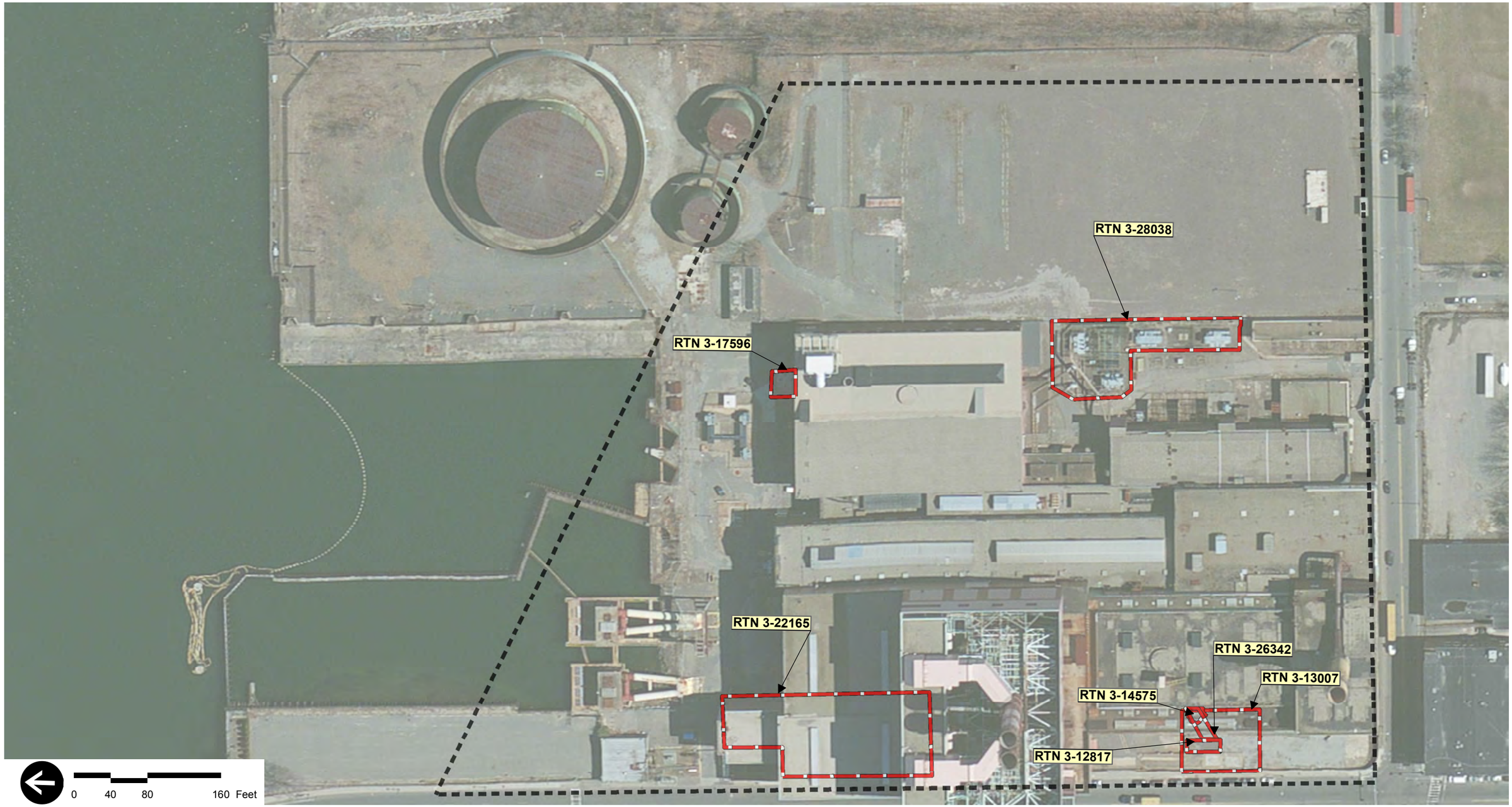
\\NHBEDATA\gislib\MA_Various\SummerSt_Boston\Wetland_Resources.mxd



Source Info: MassGIS, VHB, GE

Figure 6.7
Wetland Resources

L Street Station Redevelopment
Boston, Massachusetts



Source Info
1. Base map from Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Site Boundary

Release Tracking Number (RTN) Boundary

Figure 6.8

RTN Boundaries

L Street Station Redevelopment
776 Summer Street
Boston, Massachusetts

7

Historic Resources

7.1 Introduction

This chapter identifies properties location within and in the vicinity of the Project Site that are listed in the National and State Registers of Historic Places and/or are included in the Inventory of Historic and Archaeological Assets of the Commonwealth and evaluates potential Project-related effects on those properties. The Project includes the entire Power Plant, including all buildings within the Project Site.

An initial master planning process is being undertaken in order to better understand the Project Site, its resources, adjacent resources and the overall neighborhood relative to a large-scale multiphase project. This ENF/EPNF is being filed early in the planning process before having a complete structural assessment and ultimate designs for the existing building in order to receive community and agency feedback and to include that in the master planning process.

7.2 Summary of Key Findings and Benefits

- The Project will rehabilitate the Turbine Hall and make these previously inaccessible structures open to the public.
- There are 36 historic resources listed in the Massachusetts Cultural Resource Inventory ("MACRIS") located within a ¼-mile radius of the Project Site. Of the 36 resources, four have been demolished and the remaining resources are not listed on the State or National Register of Historic Places.

7.3 Regulatory Context

7.3.1 Massachusetts Historical Commission

The MHC has review authority over projects requiring state or federal funding, licensing, permitting, and/or approvals, in order to evaluate potential direct or indirect impacts to properties listed or eligible for listing in the National and State Registers of Historic Places, in compliance with State Register Review requirements (M.G. L. Chapter 9, Sections 27-27c, as amended by Chapter 254 of the Acts of 1988) and Section 106 of the National Historic Preservation Act of 1966 (if necessary).

The PNF was filed with MHC on March 30, 2017. MHC's response to the filing is expected to be received before completion of the ENF/EPNF comment period. It is

anticipated that the response to the PNF will require additional consultation with the MHC.

7.3.2 Boston Landmarks Commission

The submission of this ENF/EPNF initiates review of the Project by the Boston Landmarks Commission ("BLC") under the BPDA Article 80B, Large Project Review process, in association with the Boston Environment Department. The BLC's jurisdiction is focused on potential Project impacts to historic buildings and districts listed in the National and State Registers of Historic Places which are located within or in the vicinity of the Project Site, and how those impacts will be mitigated or minimized. Impacts to be considered by the BLC will include physical impacts to the historic buildings, as well as urban design, shadow, and visual impacts.

7.4 Historic Context

From its beginning the Power Plant has been the site of major innovations in the electrical industry, and the various expansions of the Power Plant reflect the evolution of the organization and technology of electrical power generation, and Boston Edison's responses to increasing demand for electricity.

During the first general phase of U.S. commercial electrical power generation from roughly 1880 to 1895, the industry was characterized by numerous small urban electrical companies which supplied of low voltage, direct current, or D.C. electricity almost exclusively for lighting purposes. This power was generated by turning dynamos with coal-fired steam engines, and transmission losses inherent in D.C. transmission made servicing large areas prohibitive (Cook 1991:4). The first such public electrical power station in the world was placed in operation on January 12, 1882 in London, and the first in the U.S. was opened in New York on September 4, 1882. Boston first saw electricity in 1878, when the Continental Clothing House at Washington and Harvard Streets used arc lamps to light its storefront (Stone 1930:1434). Subsequently companies such as the Boston Electric Light Company, and the Massachusetts Electrical Power Company supplied power to small, adjacent parts of the city. This situation existed until large-scale generation of alternating current (A.C.) was achieved after 1899 (Stott "Edison Electric…" 1983:30).

New Jersey inventor Thomas Alva Edison was closely associated with the international development of early electrical power generation and transmission equipment. In the early 1880s he organized the Edison Electric Illuminating Company with capital from New York financiers J.P. Morgan and Henry Villard, and initiated central station A.C. power in that city. The Edison Electrical Illuminating Company of Boston was organized on December 26, 1885 with a capitalization of $100,000 (Mansfield 1901:789). Edison's first Boston generating plant, originally at Haymarket Place, was moved to Head Place, and its first customer was the Bijou Theater (Mansfield 1901:798). The plant could produce enough power to light 2,400 sixteen-candle power lamps burning simultaneously (*The Engineering Record* 1891:1).

Initially, the company offered the policy of free wiring to attract new customers. The company's original area of supply was about one-eighth of a square mile, bounded by Tremont, Boylston, Carver, Pleasant, Shawmut, Indiana, Washington, Kneeland, Albany, Kingston, Summer, Arch, Milk, Congress, State, and Court Streets (*The Engineer* 589:1902). Soon this plant was working to full capacity, necessitating its enlargement and the installation and construction of additional Edison stations in the city.

The second general phase of U.S. commercial electrical generation began in the mid-1890s and was the result of technical advances in electrical generation and transmission which allowed the physical connection of small power producers and the high-voltage transmission of alternating current. This enabled the concentration of electricity generation at "central stations," and encouraged consolidation within the electric utility industry (Cook 1991:4). The Edison Company absorbed its last major Boston competitor in 1902 when it merged with the Boston Electric Light Company. This merger marked the end of the last two independent electrical lighting companies in Boston. This merger included Boston Electric Light's new 1898 South Boston Station, now the oldest section of Edison's L Street Station, and an early example of the bigger generation of power plants then being built to generate A.C. energy. This was the fourth station, and the first with A.C. generation, to be opened by the Boston Electric Light Company. It was opened on November 30, 1898 and had a capacity of 10,500 kw at that time (Stott "Edison Electric…" 1983:1). When purchased by Edison, it became Edison's fourth Boston plant, and their first with A.C. current. One of the earliest uses on record of oil circuit breakers occurred here in 1898 (Boston Edison ND:5). Prior to the construction of this plant, the lot was occupied by the Harrison Loring Company, a shipbuilding concern (Engineering Record 1898:540).

In 1904 Boston Edison began construction of a new A.C. electrical generating plant immediately east of, and physically attached to, their recently-acquired Boston Electric Light Company plant. Prior to construction, this lot contained the Lamsden & Van Stone pipe foundry, forge, and machine shop, and several wool warehouses and small furniture concerns *(Electrical Review* 1904:768). Rather than generating steam in boilers to run steam engines to directly turn generators, as in earlier configurations, the new plant used the steam from its boilers to turn General Electric steam turbines attached to the generators. This was one of the first electrical generating applications of the steam turbine in the U.S. *(Electrical Review* 1904:767). The new plant was designed to be built in sections, and was expanded south to its present dimensions between 1904 and 1908. A portion of the Suffolk County House of Correction grounds immediately to the east was obtained for use as a coal storage and handling facility for the plant *(Electrical Review* 1904:768; Sanborn Map 1899). The plant was designed by commercial architects Winslow and Bigelow of Boston, noted for the Tremont Office Building, Board of Trade Building, Kidder, Peabody & Co. Offices, and National Shawmut Bank Building (Withey 1970:666). The generation of A.C. current allowed Boston Edison to expand into neighboring communities, and between 1903 and 1912 the company acquired 18 surrounding

suburban electric companies (Stott "Edison Electric..."1983:2). The No. 4 turbine, installed in 1907 produced 60 cycle-per-second currents, making customer use of synchronous electric clock motors possible. The 14,000 kW No. 6 turbine was installed in 1911, and was said to be the largest turbine in the world at that time (Stott "Edison Electric...": 1983:3).

The third general phase of U.S. electrical power generation took place during the 1920s and 1930s, and was characterized by maturation of the utility industry, including larger and more complex generating facilities and corporate structures, standardization of technology, and major additions or reconstructions of generating facilities (Cook 1991:4). In 1922 Boston Edison substantially rebuilt the south end of the 1904-1908 boiler house structure to house larger boilers for increased steam generation. In 1930, Boston Edison's system, which then included major new electrical generating stations at Weymouth and Everett, served 43 eastern Massachusetts communities in an area 700 miles square (Stone 1930:1463). In 1918 Boston Edison established an operating relationship with the New England Power Association, a consortium of regional and New York electricity producers, enabling their electricity to be incorporated in a regional supply grid offering over 4 million horsepower (Stone 1930:1440).

During the mid-twentieth century, electrical utility growth was characterized by massive projects intended to meet increasing and projected demands for power. In the 1960s, the L Street Station's maximum capacity reached 96,000 kW. It operated with mainly the same equipment as had been in use since the 1940s, although demand was three-and-a-half times what it was at the start of World War II. To compensate for the new demand, the north end of the 1904-1908 boiler house was reconstructed between 1962 and 1965 to accommodate a new Westinghouse steam turbine-driven generating facility, called "New Boston", with a second unit, a General Electric installation, completed in 1967. With this addition, L Street Station became the largest single source of electric power in New England (Stott "Edison Electric..." 1983:4). Its sheer bulk is visible from vantage points throughout the city and approaches, as are the plumes of steam it generates in cold or wet weather. The most recent and significant change to the plant was a response to aesthetic and environmental concerns. The original four smokestacks and exposed ductwork of the 1960s New Boston section of the plant were recently shrouded in an enormous cube-shaped polychrome sheet metal housing, and the four short stacks have been reconfigured to a taller pair.

7.5 Historic Resources

There are 36 historic resources listed in MACRIS located within a ¼-mile radius of the Project Site. Of the 36 resources, four have been demolished and the remaining resources are not listed on the State or National Register of Historic Places.

7.5.1 Historic Resources within the Project Site

The first step in the process was to gather existing information on the property including drawings, site histories, Sanborn maps, other materials and the MHC Form B. The Form B (form number BOS.12943) includes an Opinion of Eligibility for the property from 1997 that finds it individually eligible for listing on the National Register under criteria A and C with a period of significance starting in 1898 with initial construction on the site through 1947. An additional opinion of eligibility was added to the Form in August of 2012 supporting the initial finding of being significant at the local level under Criteria A and C and extending the period of significance to 1967, the completion of the "New Boston" Station.

The Form B describes the expansion of the Power Plant over time relative to changes in the industry and the requirements for additional power and notes that the plant is divided into "three major blocks which have been altered, expanded, reconstructed, and obscured over time". The three blocks represent three major periods of history within the Site. Each block has several components to them, which are in different states of disrepair and utility depending on when they were last utilized for power production.

The original block was constructed in 1898 and included the coal pocket, forge shop, boiler room and engine generator room. The first three spaces were very industrial in character, constructed of red brick, with few exterior windows and even less interior fenestration. The buildings were purpose built to store and burn coal for power generation. The mundane character of these spaces has changed little over the years with the coal pocket having little utility beyond its intended use. The boiler room had similar uses but was repurposed later in its life to house backup power generation in the form of a jet engine, which was recently removed as a part of the plant's decommissioning. The engine generator room had a greater utility as the west elevation had a significant number of windows. The room also held original switchboard gallery. The expansion of the plant in the early part of the 20th century resulted in a large portion of the west elevation being covered by adjacent construction. Most of the original equipment was decommissioned and removed by 1950 the engine room contained a large frequency converter, but little other active equipment.

The second large phase of construction began in 1903 and was completed in 1908. As noted in the Form B, the components of the Power Plant constructed in this phase were built to be "functionally-independent" and developed for "modular expansion". Designed by Winslow and Bigelow, the original north-facing Turbine Room No. 1 remains fairly intact on the exterior with an oversized Mercury Figure, the date MCMIII and the name "EDISON" in a tile panel. Turbine Room No. 1, as noted, is an open gallery on the interior lit by a rooftop monitor and clad in glazed tile of white and green. The interior volume remains open, but all power generation equipment has been removed. A later one-story office area was constructed within the open volume running along the east wall for two-thirds of the buildings length to the party wall with Turbine Room No. 2. A large gantry crane remains above the

open volume just below the monitor. An electrical room was added between the original 1898 block and Turbine Room #1 in 1904. Turbine Room No. 2 has suffered the greatest intervention, but also houses the last surviving vertical turbo-generator, Turbine No. 8. From north to south, three-quarters of the rooms length and volume have been taken up by a later intervention of office space constructed of metal I-beams, steal decking, and metal studs covered in modern gyp board. Turbine No. 8 sits in the last quarter of the space to the south the remains in its original configuration with a large open volume, a gantry crane above and the glazed party wall with Turbine Room Number 3 to the south. Turbine Room Number 3 is the southernmost building and directly abuts the East 1st Street. The floor level of the building sits, 15' below the street level. The room maintains its open volume and tiled interior and is slightly wider than the other two turbine rooms. It features large dynamo blocks along the west wall, which used to support horizontal turbines. The blocks are constructed of concrete, are approximately 20' above the floor level and are accessible by stairs to concrete pads that are encircled with a guard rail that allowed the workers access around the entire turbine. All the turbines have been removed and the southernmost block supports modern desalinization equipment. A large overhead door is located on the southeast corner of the building, which allowed for removal of salt via truck. The three turbine rooms are the most architecturally significant structures on the Project Site and are representative of a period in American history where the design of the interior of these industrial spaces was as significant as the exterior.

The final major block of the Project Site sits to the west of the Turbine Hall. This section has a long-time period of construction as portions were built directly after the Turbine Hall, added on to in the nineteen teens and twenties with minor additions in the late 1930s and then significantly altered in the 1960s and again in the 1990s. The oldest remaining portion of this section faces north towards the Reserved Channel. The Boiler House is a five-bay wide section and has the same architectural characteristics as the exterior elevation of Turbine Hall No. 1 with a denticulated cornice, keystones above multi-story industrial sash, and a sandstone belt course above the first floor. The Boiler House ran parallel to the Turbine Hall and overlapped with Turbine Halls 1 and 2. During the changes to the facility, an additional section was added in the mid-to- late nineteen teens and two subsequent sections were added in 1924 and 1937 through 1939, bringing the façade of the last section out to East 1st Street. The boiler houses were set back from Summer Street and with the west elevation of the 1922 addition being much more restrained and sever then the northern elevations of the earlier buildings. The elevation currently has three larger arched openings extending from the second story to a stone belt course at the fourth story. There are also several small window openings in each bay at the top of the larger openings. The 1937 addition has larger openings that wrap Summer Street around to East 1st Street, where there are five bays of windows. The openings hold industrial sash that are four-stories tall and divided into equal sections by a metal spandrel panel. The windows along Summer and East 1st Streets help illuminate a large catwalk network that encircles the boilers inside, which are integral to the structure and constructed around the large brick smokestacks, which

have been taken down to roof level. The last additions to the plant began in the 1960s with the removal of the roof of Boiler Room 1 and the addition of open volumes above, which sit directly on top of the original brick load-bearing walls. The windowless metal paneled addition obliterated any detail of the historic buildings at the northwest corner of the site. The addition extended the Power Plant to the west and abuts directly on Summer Street. In addition to the increase volume for a new turbine room and boiler units, a section facing the Reserved Channel, with several offices, was constructed at the same time as well as two screen well buildings at the Channel's edge that supplied water to the new turbines. A massive framework of metal was added to the south end of the new addition and supported four new metal smokestacks. The introduction of the new system resulted in the retirement of the units in the Turbine Halls 1 through 3. A new boiler draft system was installed in 1993 and metal framework that supported the four 1960s stacks was enclosed in pink metal panels and extended up several stories. The new induced draft fans required two stacks, which extend above the structure to a height of 330 feet. One of the generator units exploded in October of 2002 causing significant damage on the interior. Site photos of the Project Site are presented in Figures 7.1 Photo Key and 7.2a-r.

7.5.2 Historic Resources within One-Quarter-Mile Radius of the Project Site

The area surrounding the Project Site has been thoroughly documented by historic resource surveys, resulting in 36 inventoried historic resources (Table 7-1; Figure 7.3). The surrounding neighborhood is densely developed with a mix of light industrial style buildings and residential row houses. Most of the industrial buildings are three to four stories and are of brick, while the row houses consist of two to three story buildings that are a mixture of brick and wood. The residential resources in the Project area have mostly retained their form, but have lost their architectural ornament and have been covered in later vinyl siding.

The industrial resources are in varying state of repair and can mostly be found to the west of Summer Street. The adjacent King Terminal Buildings (MHC BOS.RV), at the corner of Summer and Elkins Street, have been redeveloped and comprise a large number of resources within the quarter mile radius. The buildings are historically of brick and concrete but during their redevelopment many received stucco, non-historic windows and have been painted.

The other cluster of historic resources can be found to the south along Broadway and M Street adjacent to M Street Park (Independence Square MHC BOS.9259). These residential buildings are at the edge of the quarter-mile radius on the north side of East Broadway with the most intact buildings in the between East Third and East Broadway. The majority of the buildings are of brick and built between the 1860s and 1890s.

The area to the east along East 1st Street and adjacent to the Reserved Channel has lost its historic resources, which were more industrial in character.

Table 7-1 Historic Resources in the Vicinity of the Project Site

No.	Resource Name	Location	MHC Inventory No.	Designation
1	Cobb Lime Company Row House	774 East Broadway	BOS.6937	None
2	Dimes, Richard Silversmith Company	72 K St	BOS.13003	None
3	Burrell, Adoniram Row House	51 M St	BOS.7063	None
4	Cobb Lime Company Row House	772 East Broadway	BOS.6936	None
5	Whitney, William A. House	776 East Broadway	BOS.6938	None
6	King Terminal No. 7	22 Elkins St	BOS.13000	None
7	New England Annealing and Tool Company Building	80 K St	BOS.13004	None
8	Condit Electrical Company Building	603-609 East First St	BOS.6752	None
9	Goller, Allen Shoe Factory	60 K St	BOS.13002	None
10	Burrell, Adoniram Row House	49 M St	BOS.7062	None
11	Boston Elevated Railway South Boston Power Station	696 East First St	BOS.6753	Demolished
12	Burrell, Adoniram Row House	47 M St	BOS.7061	None
13	Gray, Solomon S. - Dana, Otis D. House	788 East Broadway	BOS.6942	None
14	Clayton, S. C. Syrup - Diamond Drug Company	803 Summer St	BOS.13005	None
15		East First St	BOS.12994	None
16		570 East First St	BOS.12993	None
17	King Terminal No. 11 - Kohnstamm, H. and Company	11 Elkins St	BOS.12997	None
18	Leeds, Samuel House	687 East Second St	BOS.6755	None
19	Handy, Lottie G. Row House	766 East Broadway	BOS.6933	None
20	Cobb Lime Company Row House	768 East Broadway	BOS.6934	None
21	Cobb Lime Company Row House	770 East Broadway	BOS.6935	None
22	Hemmen, Herman Double House	46-48 N St	BOS.7069	None
23		21 Elkins St	BOS.12999	Demolished
24	Burrell, Adoniram Row House	53 M St	BOS.7064	None
25	Karpp Building Supply Company	825 Summer St	BOS.13006	None
26	Shaw, John and Company Chemical Works	15 Elkins St	BOS.12998	None
27	Gray, Solomon S. - Dana, Otis D. Stable	786 East Broadway	BOS.6941	None
28	Puritan Wine - Northern Industrial Chemical Co.	7 Elkins St	BOS.12995	None
29	Whitney, William A. House	778 East Broadway	BOS.6939	None
30	Independence Square	East Broadway	BOS.9259	None
31	Pilgrim Hall	732-734 East Broadway	BOS.6932	None
32	Boston Edison L Street Power Station	776 Summer St	BOS.12943	None
33		564 East First St	BOS.12991	None
34	King Terminal Pump House - Electrical Cabinet	Elkins St	BOS.12996	Demolished
35	Hawes, Walter E. House	780 East Broadway	BOS.6940	None
36	Grueby Faience Company Work Shop	566 East First St	BOS.12992	Demolished

7.5.3 Archaeological Resources

No previously identified archaeological resources are located within the Project Site. No impacts to significant archaeological resources are anticipated as a result of the Project.

7.6 Potential Impacts to Historic Resources

The Proponent has undertaken an extensive internal evaluation/planning process to better understand the Project Site and its opportunities and challenges. Among the first steps in this process was understanding the historic resources on the Project Site and exploring understanding the opportunity to reuse the buildings based on this initial evaluation. The Proponent collected additional historic information about the Project Site, including plans, Sanborn maps etc., and is currently evaluating the structural integrity of the buildings. Though many of the buildings were constructed independently of each other, their interconnected nature relative to their historic uses, such as connections between turbine buildings and boiler buildings, can pose problems for reuse. Additionally, the actual nature of the construction may make reuse difficult as the internal workings of the building may be integral to its construction, meaning removal of these elements would result in removal of the building.

As discussed in Chapter 1, *Project Description*, the Proponent understands the historic importance of the Project Site and has initiated the planning and review process by working to determine which buildings may reasonably be reused based on their overall condition and utility, as well their historic character. Of the three blocks that make up the Power Plant, the newest block on the western side of the Project Site is most problematic from a reuse perspective and has the least utility and remaining historic character. The later 1960s and 1990s additions had a significant negative impact on Boiler Houses 1 and 2. In addition to removing the roof, the western exterior wall was removed for expansion of the 1960s components further to the west. The only remnant left of the building are the fives brick bays that face the Reserved Channel. There is no reasonable way to incorporate these portions of the Power Plant into the Project.

A similar issue arises with the southern portion of the third block. Though the perimeter walls appear intact along the southwest corner of the Project Site at the intersection of Summer and East 1st Streets, the preservation and incorporation of those buildings and their perimeter walls are impossible based on the interior configuration. As was noted earlier, the boilers and smokestacks that are original to this building are integral to the building's overall structural integrity and their presence forecloses any reuse of the space, but their removal will result in building collapse. Additionally, a failed attempt at remediation of asbestos by a previous owner has added additional issues to the reuse or demolition of this portion of the Project Site, so the Project Team is proposing demolition of any buildings to the west of the Turbine Hall.

The next block was the earliest portion of the Project Site to the northeast of the Turbine Hall. These buildings represent the oldest components of the Project Site but do present significant challenges relative to existing fenestration and addition of new floor area to make their reuse viable. The Coal Pocket and original Boiler House have only a few exterior windows. The Coal Pocket windows are at the top of the building along the east elevation, which is approximately 62 feet tall on its interior. The west elevation directly abuts the original Boiler House, so there are now windows and the north and south elevations also have limited windows set higher on the building. On the interior, the Coal Pocket has is a large open volume, which is challenging to reuse in its present form. The Proponent reviewed the potential reuse of the building, but it would take significant interventions including adding additional structure and cutting a multitude of new openings in the perimeter walls to provided light and air to the space. The interventions needed to create utility in the building would destroy any existing historic character. The original Boiler House is bounded on its long elevations, east and west, and therefore has fenestration only on the north and south facades, which, as with the Coal Pocket, are fairly limited and are higher up on the building. The final portion of the early block is the Engineer Room and the adjacent office building to the west. The Engineer Room shares some of the original detail with the adjacent and slightly later Turbine Hall, but has some limitations based on the abutting buildings and access to natural light. The west wall, which was originally fully exposed, is covered by later additions and the east wall abuts the boiler house and never had windows. Another issue related to reuse is the large frequency converter that was installed in the building in 1950. The converter takes up a large amount of floor area in the southeast corner of the building. Removal of the converter in a reasonable manner will require the demolition of a large portion of the southern wall. The Proponent is proposing demolition of the original block of buildings on the northeast corner of the site.

The final block of buildings contain the three turbine rooms which comprise the Turbine Hall. Designed by Winslow and Bigelow, the Turbine Hall runs north to south, and is the most architecturally significant building on the Site. The rooms are each an open volume that feature white and green glazed architectural tile. As noted above the Turbine Room 2 has later infill dating from the 1990s upgrades to the plant. The interconnected rooms have the greatest utility as the width and length of the hall can support different uses and the existing skylights and end window walls provide ample light for a number of reuses. Turbine Room 2 has the existing turbine as well as some elements related to power production. Turbine Room 3 has the large later dynamo blocks and large windows at East 1st Street. The Proponent proposes retaining the Turbine Hall and utilizing the space to extent feasible.

The remaining buildings on Project Site are located at the northwest and southeast corners of the Site. Buildings to the northwest adjacent to the Reserved Channel, including the original administrative building and the later screenwell buildings, will be retained and reused. The lower scale interconnected switch house buildings to the southeast corner have no windows on the east and west elevations, and are of concrete and have very limited reuse utility.

7.6.1 Urban Design

The design of the Project will have a limited impact on the surrounding historic resources. The scale and massing of the Project along Summer and East 1st Streets will be reflective of the existing building. The taller massing will be constructed where the 1990's era smoke stacks are located. The Project will be built-out to the street respecting the scale of the historic street wall and the adjacent buildings. The existing open space to the north will become accessible to the public, opening the Project Site to the Reserved Channel.

7.6.2 Shadow Impacts

Net new shadow impacts will be limited to currently undeveloped land to the east of the Project Site and will have no impact on extant historic resources.

7.6.3 Geotechnical

Potential geotechnical impacts will be analyzed as the plans are further developed. In general, a system for monitoring identified historic resources will be developed.

7.6.4 Wind

The Proponent has commenced a quantitative wind tunnel analysis to compare existing and proposed pedestrian level wind conditions, and anticipates providing a complete report of the results and a summary of any impacts on historic resources in the DEIR/DPIR. Pedestrian level wind mitigation is imbedded throughout the design of the Project and the Proponent is committed to providing a high quality pedestrian experience.

7.6.5 Documentation

The Proponent has begun the process of documenting the buildings. Documentation will include Historic American Buildings Survey/Historic American Engineering Record ("HABS/HAER") quality over all exterior and interior photography. Some of the interior areas present significant challenges relative to getting overall photographs, but the Project Team will attempt to document these areas as well. In addition to the overall photography, existing equipment will be identified and inventoried. Where feasible, this equipment will be retained and reused onsite in order to help interpret the Site's overall history and the history of power production.

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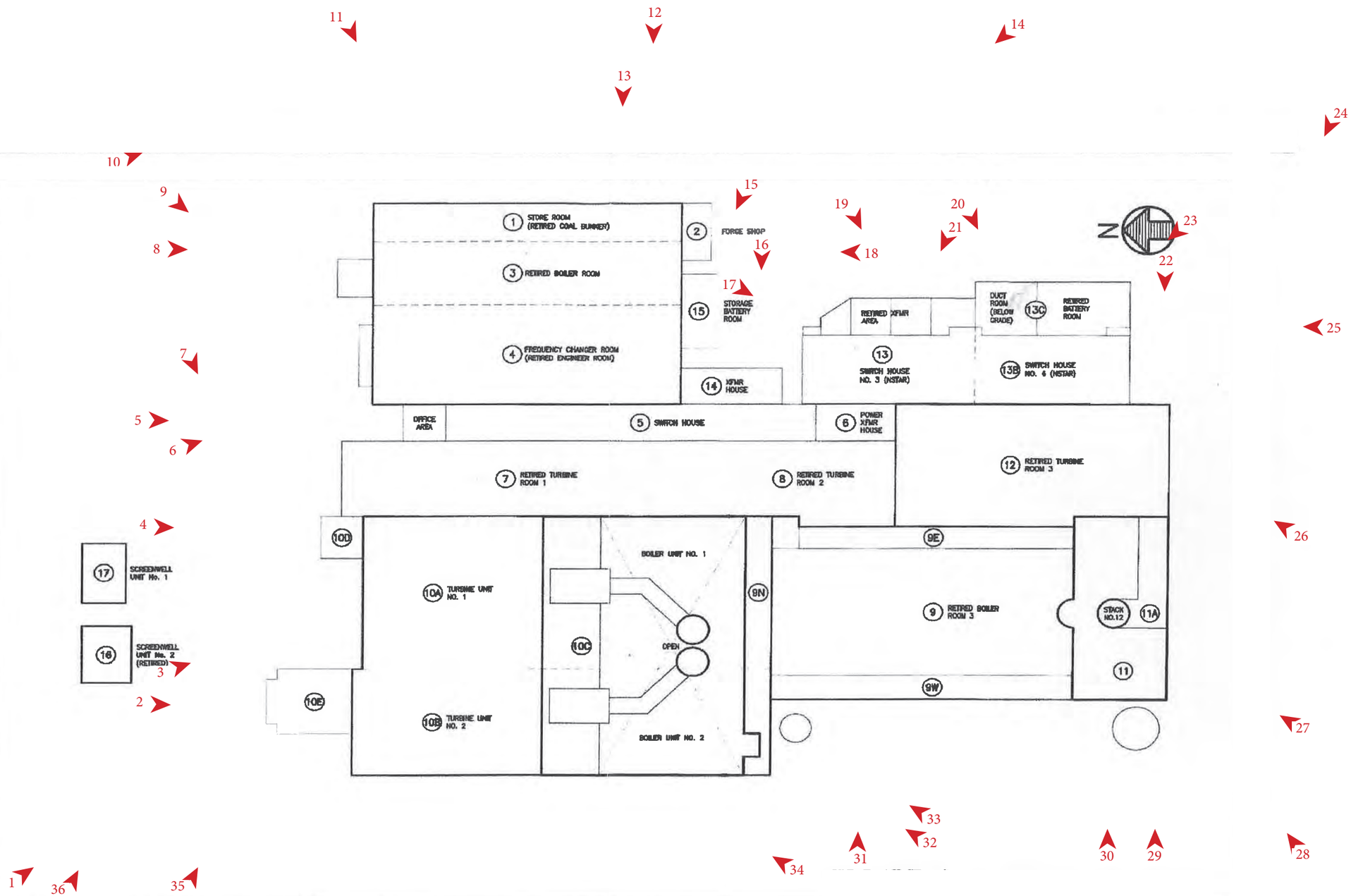


Figure 7.1
Site Photos Key

L Street Station Redevelopment
Boston, Massachusetts

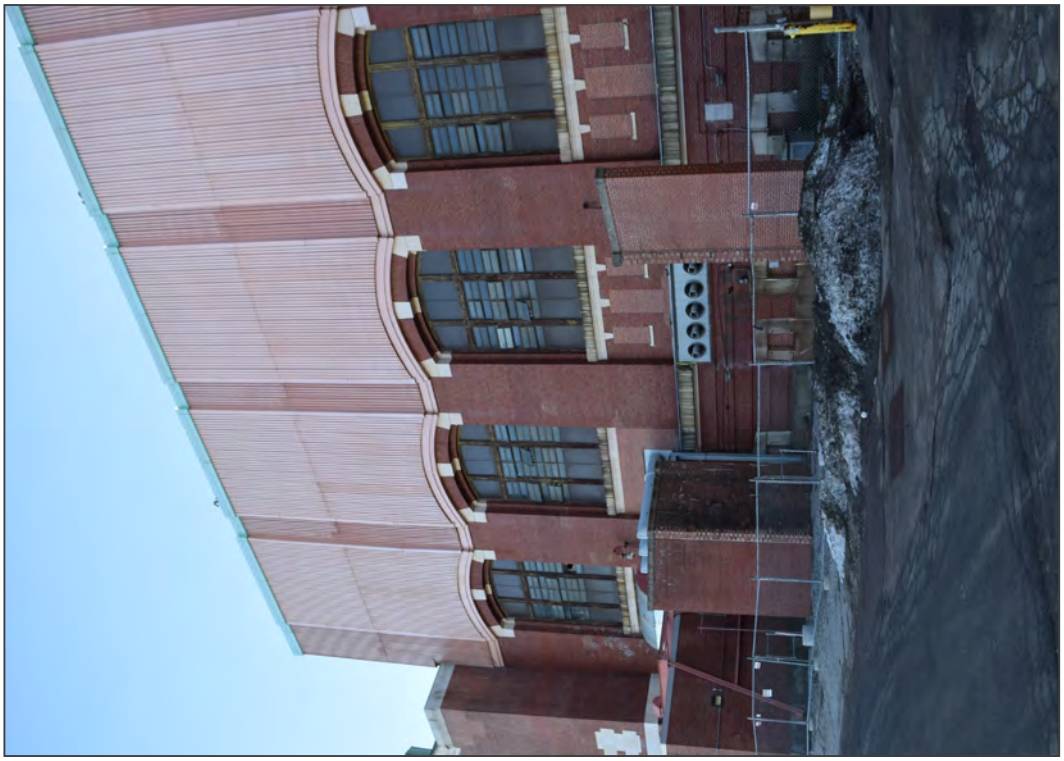
1. Facing southeast toward north elevation

2. Facing south toward north elevation

Figure 7.2a

Site Photos

L Street Station Redevelopment
Boston, Massachusetts



3. Facing south toward north elevation

4. Facing south toward north elevation

Figure 7.2b

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

5. Facing south toward north elevation

6. Facing south toward north elevation

Figure 7.2c

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

7. Facing southwest toward north elevation

8. Facing south toward north elevation

Figure 7.2d

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

9. Facing south toward north elevation

10. Facing southeast toward north and west elevations

Figure 7.2e

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

11. Facing west toward east elevation

12. Facing west toward east elevation

Figure 7.2f

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

13. Facing west toward east elevation

14. Facing northwest toward east elevation

Figure 7.2g

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

15. Facing northwest toward east elevation

16. Facing west toward east elevation

Figure 7.2h

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

17. Facing southwest toward north and east elevations

18. Facing north toward south elevation

Figure 7.2i

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

19. Facing southwest toward east elevation

20. Facing southwest toward east elevation

Figure 7.2j

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

21. Facing west toward east elevation

22. Facing west toward east elevation

Figure 7.2k

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

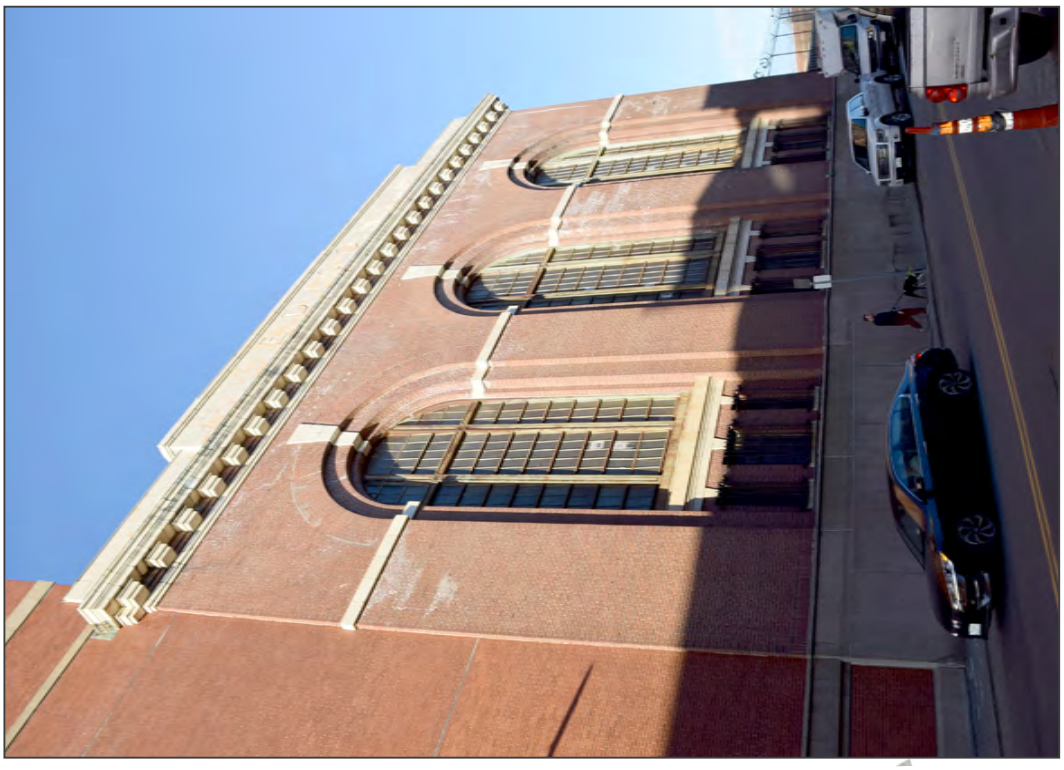
23. Facing northwest toward south and east elevations

24. Facing northwest toward east elevation

Figure 7.2l
Site Photos

L Street Station Redevelopment
Boston, Massachusetts

25. Facing north toward south elevation



26. Facing north toward south elevation

Figure 7.2m

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

27. Facing northeast toward south elevation

28. Facing northeast toward west elevation

Figure 7.2n

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

29. Facing east toward west elevation

30. Facing east toward west elevation

Figure 7.2o

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

31. Facing east toward west elevation

32. Facing northeast toward west elevation

Figure 7.2p

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

33. Facing northeast toward west elevation

34. Facing northeast toward west elevation

Figure 7.2q

Site Photos

L Street Station Redevelopment
Boston, Massachusetts

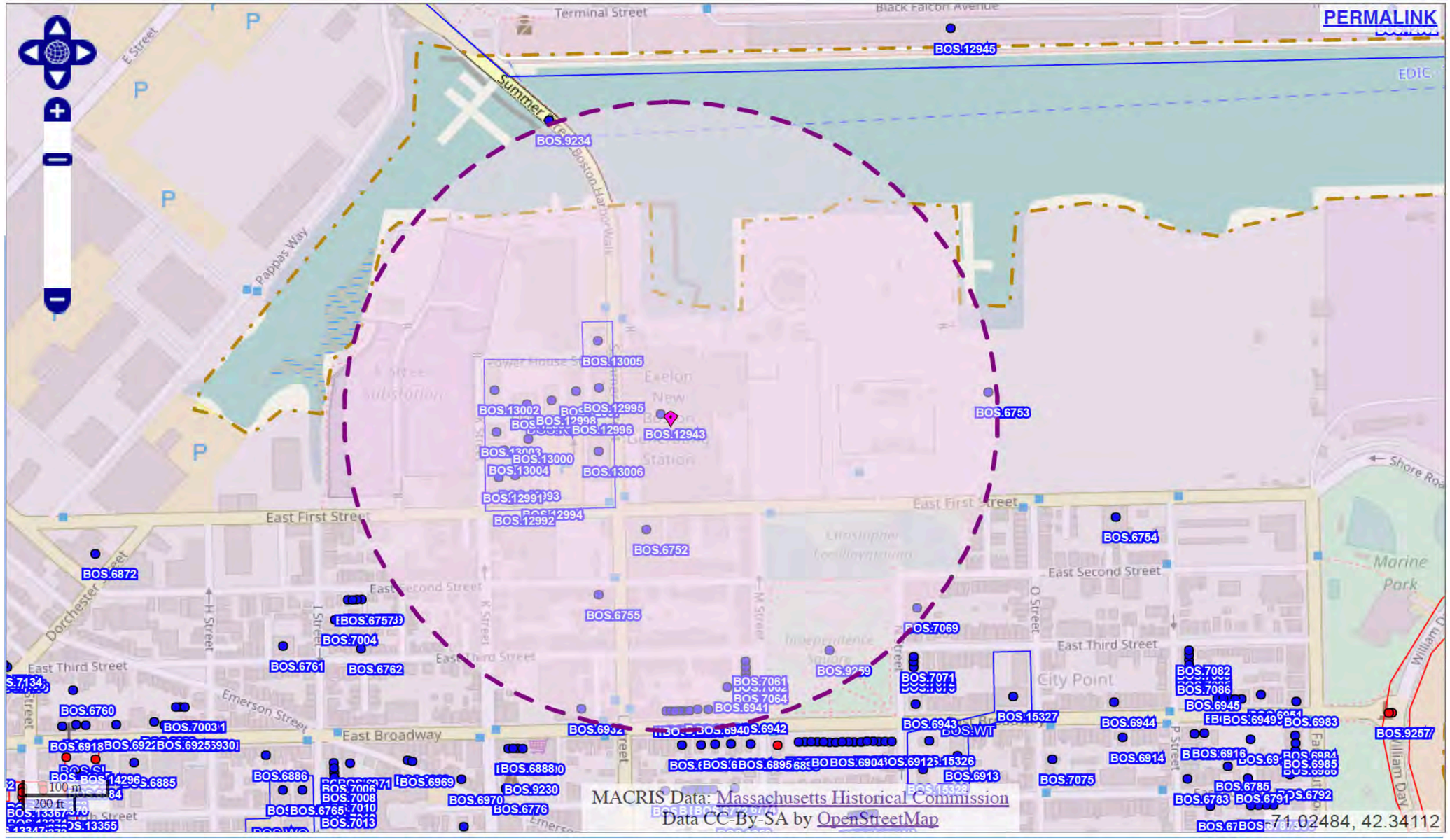
35. Facing southeast toward north and west elevation

36. Facing south toward north elevation

Figure 7.2r

Site Photos

L Street Station Redevelopment
Boston, Massachusetts



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Source Info

Legend

MHC Inventory Points

- Nat'l Register of Historic Places
- Preservation Restriction
- Local Historic District
- NRHP and LHD
- Inventoried Property

Figure 7.3
1/4 Mile Radius

L Street Station Redevelopment
Boston, Massachusetts

8

Infrastructure

8.1 Introduction

This chapter describes the existing infrastructure systems surrounding the Project Site, and discusses utility aspects of the Project and potential utility impacts. The following utilities are discussed: wastewater, water, stormwater management, natural gas, electricity, and telecommunications. Chapter 4, *Sustainability/Green Building and Climate Change Resiliency*, discusses energy conservation measures being considered as part of the Project.

The Project is expected to connect to existing city and utility company systems in the adjacent public streets. Based on available existing conditions plans and record utility drawings, it is expected that the increase in demand associated with the development and operation of the Project can be accommodated with existing infrastructure. Detailed design of the Project's utility systems will proceed in conjunction with the design of the building and interior mechanical systems.

The systems discussed herein include those owned or managed by the Boston Water and Sewer Commission ("BWSC") and private utility companies. There will be further coordination among these entities and with the project engineers and architects as the Project design develops and during the construction process for the Project. See Figure 8.1 for a site plan that shows the existing infrastructure at the Project Site.

8.2 Summary of Key Findings and Benefits

The key impact assessment findings related to infrastructure systems include:

- The existing city and utility infrastructure systems are expected to be adequately sized to accept the demand associated with the development and operation of the Project.
- The final build condition design is expected to incorporate on-site stormwater management and treatment systems, which are expected to result in improved water quality and reduced stormwater runoff volumes and peak rates of runoff in comparison to existing conditions.
- The Project Site is currently serviced by the BWSC for domestic and fire protection water and sanitary sewage conveyance.
- Based on the current development program, the Project is estimated to generate approximately 329,890 gallons per day of sanitary sewage and will require

approximately 299,900 gallons of water per day. For the purposes of estimating sewage generation, the existing Project Site under its previous use as a Power Plant was not considered.

Key Project-related mitigation and/or benefits associated with the infrastructure systems include:

- Construction of the Project will incorporate on-site stormwater management and treatment systems that are expected to improve water quality, reduce runoff volume, and control peak rates of runoff in comparison to existing conditions.
- The Project is not expected to result in the introduction of any increased peak flows, pollutants, or sediments that would potentially impact the local drainage systems.

8.3 Regulatory Context

The following discusses the regulatory framework of utility connection reviews and standards. A complete list of the anticipated state and local permits associated with Project-related infrastructure is included in Chapter 1, *Project Description*. For the Project:

- BWSC approval will be required for all water, sewer and stormwater systems.
- The Boston Fire Department will review the Project with respect to fire protection measures such as siamese connections, hydrants, and standpipes.
- Design of the Project Site access, hydrant locations, and energy systems (gas and electric) will also be coordinated with the respective system owners.
- Where new utility connections are needed and existing connections are to be capped, the excavation will be authorized by the Boston Public Works Department ("BPWD") through the street opening permit process, as required.

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

8.3.1 EPA National Pollutant Discharge Elimination System

The EPA requires that all projects that disturb greater than one acre of land obtain a permit for stormwater discharges through the National Pollutant Discharge Elimination System ("NPDES") Construction General Permit ("CGP") for Stormwater Discharges from Construction Activity (2012, EPA). Compliance with the CGP is achieved by the following:

- Developing and Implementing a Stormwater Pollution Prevention Plan ("SWPPP");
- Completing, certifying, and submitting a Notice of Intent (NOI) to the EPA; and
- Complying with the requirements contained in the CGP and the Order of Conditions.

Compliance with the CGP and its Standard Permit Conditions is the responsibility of the site Operator.

8.3.2 DEP Stormwater Standards

In March 1997, DEP adopted a new Stormwater Management Policy to address non-point source pollution. In 1997, DEP published the Massachusetts Stormwater Handbook as guidance on the Stormwater Policy, which was revised in February 2008. The Stormwater Management Standards are regulated under the Wetlands Protection Act Regulations 310 CMR 10.05(6)(k) through (q). The Policy prescribes specific stormwater management standards for redevelopment projects, including urban pollutant removal criteria for projects that may impact environmental resource areas.

8.3.3 BWSC Site Plan Review

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

8.4 Stormwater Management

8.4.1 Existing Drainage Conditions

Under existing conditions, the Project Site is primarily occupied by buildings, asphalt paved surface parking and walkway areas, and minimal landscape. There is no evidence of stormwater treatment or infiltration systems on site. Stormwater appears to be collected on site and conveyed primarily to existing BWSC infrastructure in Summer and East 1st Streets, ultimately discharging into the Boston Harbor. A portion of the Project Site's stormwater runoff appears to discharge directly into the Boston Harbor either over land or via private stormwater conveyance infrastructure.

A series of intake and discharge pipe structures are currently located underneath the Exelon Yard Facility, immediately south of the Reserved Channel, that are no longer functioning. The pipes previously provided cooling water to the turbines located in the former power plant building on Site and served as a means to discharge cooling water when the larger turbines were operational. The first system, generally known as the Edison system, was constructed in the 1920s but ultimately abandoned when the second system, often referred to as the New Boston system, was constructed in the 1960s. At this time, the condition of each underground system is unknown. Please refer to Chapter 7, *Historic Resources*, for more information on the history of the Project Site.

The BWSC owns and maintains the combined sewer infrastructure serving the Project Site according to BWSC system maps and record information. Summer Street contains an existing, BWSC-owned 30-inch combined sewer main adjacent to the Project Site; this main ultimately discharges at Combined Sewer Outfall ("CSO")

#079 into the Boston Harbor. Refer to Figure 8.1 for the existing on-site drainage facilities serving the Project.

8.4.2 Proposed Drainage Conditions

In order to address the City of Boston's stormwater management requirements and MassDEP's stormwater guidelines, the Project will incorporate on-site stormwater management and treatment systems which collectively are expected to improve water quality, reduce runoff volume, and control peak rates of runoff in comparison to existing conditions. Additionally, the Project is expected to reduce peak runoff rates and volumes for various design storm events for the post-development condition as compared to the pre-development condition, including the 2-, 10-, and 25-year design storms. Stormwater runoff from proposed and modified impervious surface areas is expected to be treated using new infrastructure such as deep-sump, hooded catch basins, subsurface infiltration basins, and proprietary treatment devices to reduce the Total Suspended Solids ("TSS") concentrations by at least 80 percent.

Construction of one inch of stormwater infiltration capacity within the site boundary is a general requirement of the BWSC. As the design progresses, a stormwater infiltration or equivalent system will be designed to accommodate a volume of one inch of stormwater over the site's impervious area.

8.4.3 Compliance with EPA National Pollutant Discharge Elimination System

The Project will be required to obtain coverage under the EPA NPDES permit ("CGP"), as the disturbance area of the Project is greater than one acre. Therefore, the Proponent will:

- Develop and implement a SWPPP;
- Certify and submit a Notice of Intent to the EPA; and
- Read and comply with the requirements contained in the CGP and the Order of Conditions.

The Proponent will ensure that the Operator perform the NPDES requirements during construction.

8.4.4 Compliance with DEP Stormwater Standards

Standard #1: No new stormwater conveyances (e.g., outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

- Compliance: The proposed design is intended to comply with this Standard through appropriate stormwater measures. No new untreated stormwater is expected to be

directly discharged to, nor is erosion expected to be caused to wetlands or waters of the Commonwealth as a result of stormwater discharges related to the Project.

The Project is expected to incorporate subsurface infiltration or equivalent systems, stormwater treatment devices, and deep-sump, hooded catch basins as potential stormwater control measures. It is the Proponent's intention to treat runoff through the options listed above or through mechanical treatment units prior to discharge into the public storm and/or combined sewer system.

Standard #2: Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.

› Compliance: The Project is expected to be designed to comply with this Standard. The Project is also required to comply with this stormwater standard by the BWSC. On-site infiltration systems or equivalent systems are expected to be designed to achieve these results for the Project.

Standard #3: Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to the maximum extent practicable. The annual recharge from the post development Project Site should approximate the annual recharge from the pre-development or existing Project Site conditions, based on soil types.

› Compliance: The Project is currently planning to incorporate the required subsurface infiltration systems to promote groundwater recharge to the maximum extent practicable. Further geotechnical explorations will be conducted.

Standard #4: For new development, stormwater management systems must be designed to remove 80 percent of the average annual load (post-development conditions) of TSS. It is presumed that this standard is met when: Suitable nonstructural practices for source control and pollution prevention are implemented; Stormwater BMPs are sized to capture the prescribed runoff volume; and Stormwater management BMPs are maintained as designed.

› Compliance: The proposed designs include BMPs intended to remove 80 percent of TSS as required by this standard, as well as the BWSC site design process. This is expected to be accomplished by using deep-sump, hooded catch basins, proprietary treatment devices, and infiltration or equivalent systems.

Standard #5: For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If, through source control and/or pollution prevention, all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent shall use the specific structural stormwater BMPs determined by the Department to be suitable for such uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with

higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53 and the regulations promulgated there under at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.

› Compliance: The majority of the Project Site will be occupied by buildings and paved driveways which are not associated with higher potential pollutant loads.

Standard #6: Stormwater discharge to critical areas must utilize certain stormwater management BMPs approved for critical areas. Critical areas are Outstanding Resource Waters ("ORWs"), shellfish beds, swimming beaches, cold-water fisheries and recharge areas for public water supplies.

› Compliance: The Project does not discharge to a critical area.

Standard #7: A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural stormwater best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.

› Compliance: The Project is considered a redevelopment project. The Project will comply with the Stormwater Management Standards to the extent practicable and is anticipated to improve upon existing conditions.

Standard #8: Erosion and sediment controls must be implemented to prevent impacts during construction or land disturbance activities.

› Compliance: Sedimentation and erosion controls will be incorporated as part of the design of the Project and be employed during construction. Erosion and sedimentation control plans will be submitted to the BWSC on a component by component basis and the contractor will be required to implement the measures as part of the BWSC general service application process.

Standard 9: A Long-Term Operation and Maintenance (O&M) Plan shall be developed and implemented to ensure that stormwater management systems function as designed.

› Compliance: An O&M Plan will be developed during the design process of this Project.

Standard 10: All illicit discharges to the stormwater management system are prohibited.

› Compliance: Currently there are no known illicit discharges. All proposed discharges will be reviewed by the BWSC to ensure consistency with this standard.

8.5 Sanitary Sewage

8.5.1 Existing Sewer System

The BWSC owns and maintains the sanitary sewer infrastructure serving the Project site. According to BWSC record drawings, Summer Street contains 15-inch and 18-inch sewer mains, and East 1st Street contains a 12-inch combined sewer main. For the purposes of estimating sewage generation, the existing site under its previous use as a Power Plant was not considered.

8.5.2 Proposed Sewage Flow and Connections

Based on the current development program, the Project is estimated to generate approximately 299,900 gallons per day of sanitary sewage. Table 8-1 below summarizes the proposed sewer generation rates based on Massachusetts State Environmental Code (Title 5) generation rates.

Changes to the proposed building program will vary sanitary flow. Final flow estimates will be determined as the Project design moves forward.

In addition to the sanitary sewer flow, wastewater will also be generated from the proposed below grade parking garages. Per BWSC requirements, the drainage for this type of parking is required to be drained into a Massachusetts Water Resources Authority ("MWRA") approved oil and gas trap. The resulting effluent is required to be sent to the sanitary sewer system per Massachusetts State Building Code and BWSC requirements.

8.6 Domestic Water and Fire Protection

8.6.1 Existing Water Supply System

The BWSC owns and maintains the water mains in the vicinity of the Project Site. According to BWSC record drawings, streets surrounding the Site are serviced by southern low ("SL") service pipes. These water service mains range in size from 12- to 16-inch mains in Summer and East 1st Streets adjacent to the site. The installation dates and materials of these pipes also vary, from cast iron ("CI") pipe installed in 1930 to ductile iron cement lined ("DICL") pipe installed in 1989. The existing water infrastructure provides a low level of service to the area. Additionally, currently seven fire hydrants are in close proximity to the Project Site.

8.6.2 Proposed Water Demand and Connections

Domestic water demand is based on estimated sewage generation with an added factor of 10 percent for consumption, system losses, and other use. Based upon standard sewage generation rates outlined in the DEP System Sewage Flow Design Criteria, 310 CMR 15.203, the Project will require approximately 329,890 gallons of water per day. The Proponent will continue to consider and evaluate methods to conserve water as building design evolves.

Table 8-1 Future Sewer Generation

Program Type	Units	Generation Rate	Sewer Generation (GPD)
Block A			
Residential	249 Bedrooms	110 GPD/Bed	28,820
Block B			
Residential	145 Bedrooms	110 GPD/Bed	15,950
Retail	2,423 SF	50 GPD/KSF	200 [1]
Block C			
Residential	596 Bedrooms	110 GPD/Bed	65,650
Retail	36,181 SF	50 GPD/KSF	1,809
Block D			
Residential	534 Bedrooms	110 GPD/Bed	56,837
Hotel	150 Rooms	110 GPD/Room	16,500
Retail	29,473 SF	50 GPD/KSF	1,474
Block E			
Residential	394 Bedrooms	110 GPD/Bed	43,340
Block F			
Residential	302 Bedrooms	110 GPD/Bed	63,140
Block G			
Office	119,135 SF	75 GPD/KSF	8,935
Block H			
Office	200,737 SF	75 GPD/KSF	15,055
Turbine Hall 1			
Retail	14,555 SF	50 GPD/KSF	728
Turbine Hall 2			
Retail	11,000 SF	50 GPD/KSF	550
Turbine Hall 3			
Retail	20,000 SF	50 GPD/KSF	1,000
Office	60,000 SF	75 GPD/KSF	4,500
TOTAL			**Approx. 299,900**

1 Minimum allowable GPD for system design: 200 GPD

New water connections will be designed in accordance with BWSC design standards and requirements. Water services to the new building will be metered in accordance with BWSC's Site Plan Requirements and Site Review Process. The review includes, but is not limited to, sizing of domestic water and fire protection services, calculation of meter sizing, backflow prevention design, and location of hydrants and Siamese connections conform to BWSC and Boston Fire Department (BFD) requirements. The

Proponent will provide for the connection of the meter to the BWSC's automatic meter reading system. Fire protection connections on the Project Site will also need approval of the BFD. The Proponent will request record hydrant flow test information from the BWSC to aid in the preliminary water design. In addition, the Proponent will request new hydrant flow tests on the main to which the Proponent intends on connecting.

8.7 Other Utilities

8.7.1 Natural Gas Service

The total estimated natural gas demand for the Project is unknown at this time. The Proponent will coordinate with National Grid (local gas provider) to determine whether their infrastructure can meet the demand estimated for this Project, and the best means of obtaining a system connection. National Grid record plans indicate a 6-inch main in Summer Street adjacent to the Site, as well as an existing 6-inch gas service in East 1st Street. As the building energy system design is developed, the Proponent will work with National Grid to ensure adequate capacity is available to serve the Project.

8.7.2 Electrical Service

The estimated electricity demand for the entire Project at this time is approximately 18,000 kW. Eversource owns and operates the electric facilities in the vicinity of the Project Site.

According to existing conditions plans and record information Eversource owns and operates existing electrical infrastructure located on site and has multiple easements for their equipment. The equipment includes a substation (Eversource Station 293) with electrical conduit that runs from the substation to Summer Street. Constructed approximately 50 years ago, Station 293 is a transformer station that receives 13.8kV power and transforms it into 4kV power that is believed to be conveyed to the surrounding neighborhoods. Additionally, an inactive transformer facility is located on the north side of the Power Plant building.

It is anticipated that the existing electrical service and connections will be expanded, modified and/or relocated as determined to be necessary in accordance with Eversource's standards.

8.7.3 Telephone and Telecommunications

Record survey information indicates that there are telephone and telecommunications manholes in Summer and East 1st Streets serving the site. As the project design progresses, the configuration of the proposed services will be developed with the resident utility companies to determine whether their

infrastructure can be used to service this Project, and the best means of obtaining a system connection.

8.7.4 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 constructed in accordance with BWSC, Boston Public Works Department, the Dig-Safe Program, and governing utility company requirements. All necessary permits will be obtained before the commencement of work. Specific methods for constructing proposed utilities where they are near, or connect with, existing water, sewer, and drain facilities are subject to review by the BWSC as part of its Site Plan Review process.

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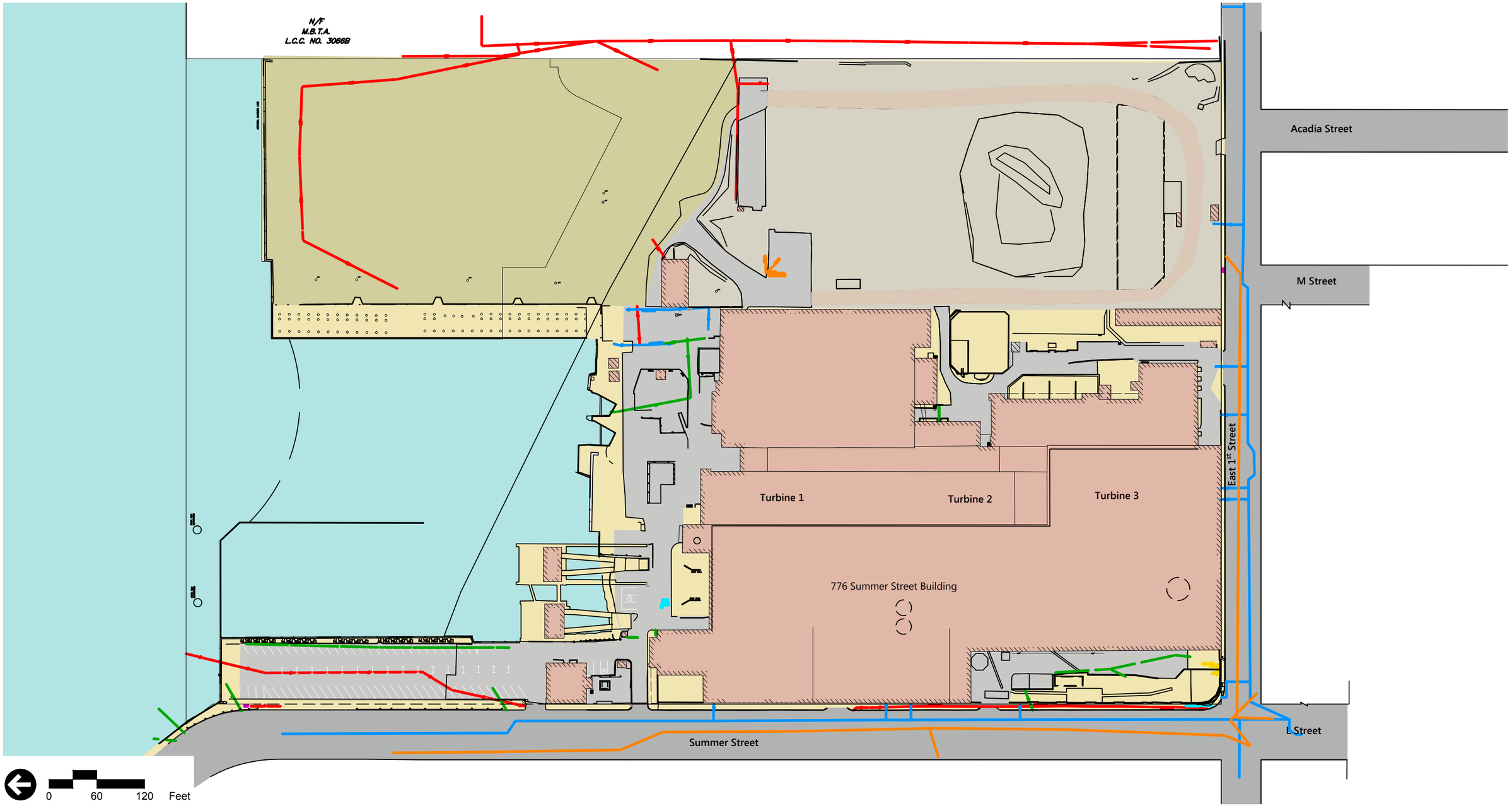

Figure 8.1
Existing Utility Infrastructure

L Street Station Redevelopment
Boston, Massachusetts

9

Project Certification

This ENF/EPNF has been submitted to the Boston Planning and Development Agency, as required by Article 80 of the Zoning Code, on the May 15, 2017.

Proponents
HRP 776 Summer Street, LLC,
c/o Hilco Redevelopment

Ralph Cox
Principle, Redgate Capital Partners

Preparer
VHB

Elizabeth Grob
Principal/Director of Urban Permitting

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Appendix A: Letter of Intent

HRP 776 SUMMER STREET, LLC
c/o Hilco Real Estate
99 Summer Street, Suite 500
Boston, Massachusetts 02110

April 24, 2017

By Hand Delivery

Brian P. Golden, Director
Boston Planning & Development Agency
One City Hall Plaza
Boston, Massachusetts 02201

Re: **Letter of Intent for 776 Summer Street**

Dear Director Golden:

HRP 776 Summer Street, LLC is the owner of the property located at 776 Summer Street in South Boston, containing approximately 15.2 acres, on which the power plant known as the New Boston Generating Station formerly operated (the "site"). Our proposed redevelopment of the site is anticipated to involve partial demolition and partial re-use of the existing vacant structures, and the construction of eight new buildings, over the next ten to fifteen years. The rehabilitated and new buildings are anticipated upon completion of the full build-out to contain approximately 2.1 million square feet of residential, office, hotel, retail, restaurant, and other commercial uses, together with ancillary parking (the "Project").

Following on the recommendations of the literally hundreds of South Boston neighbors and others who participated in the BPDA's two-month public engagement process, the Project will convert this isolated and abandoned industrial property into a welcoming gateway for South Boston and will allow it to become, at long last, an inviting and exciting part of this great neighborhood. The Project will:

- De-commission and clean up this heavily industrial site so that it is clean, healthy and safe
- Take down the walls and fences surrounding the site, and create connections into and through the site, so that it is accessible and inviting to the South Boston neighborhood, all the way down to the water's edge
- Rehabilitate and re-open the three remarkable turbine halls that run end-to-end through the middle of the site, allowing them to become the heart and soul of the Project
- Create a public open space of more than an acre next to the Reserve Channel that celebrates the working port
- Add local retail and other amenities desired by the neighborhood in the ground floor spaces of buildings
- Provide indoor and outdoor spaces that support an "arts and industry" district for artists, artisans and makers of all kinds

We are submitting this Letter of Intent pursuant to the Executive Order Relative to the Provision of Mitigation by Development Projects in Boston issued on October 10, 2000, as

amended, in anticipation of the submission of a Project Notification Form to commence the Article 80B Large Project Review process for the Project.

The site is located in (i) the South Boston Marine Economy Reserve Subdistrict of the Harborpark Dorchester Bay/Neponset River Waterfront District pursuant to Article 42A of the Boston Zoning Code, and (ii) the Restricted Parking Overlay District. Given the size of the site and the complexity of the Project, we anticipate pursuing approval of a Planned Development Area Development Plan under Section 80C of the Code to provide the zoning relief necessary for the Project.

We look forward to reviewing the Project with the Agency and with the community. If you have any questions, please do not hesitate to contact me at 617-904-7000.

Sincerely yours,

RFCox

Ralph Cox
Principal, Redgate Capital Partners

cc: Mr. Gary Uter

Appendix B: BPDA Planning Process Report

South Boston Edison Power Plant

Planning Process Report

boston planning & development agency

Edison Power Plant Workshop Outcomes

Over the next decade the Edison Power Plant site will undergo a transformation from an industrial relic that once provided energy and power for a growing city into a new, mixed-use development that will serve as a new source of vibrancy and enhance the South Boston community. The development of the 15-acre property will celebrate the site's history with the adaptive reuse of the 1903 Edison Turbine Hall and provide opportunities for new arts, civic and cultural uses, while creating new opportunities for jobs, housing, and businesses that can function with the adjacent port related uses along the Reserved Channel. After generations of the property being walled off from the community, new street networks and public realm activation will knit the district into the existing fabric of South Boston and allow for expanded access to the waterfront and create new, active open spaces.

Figure 1. Opposite: Rendering of Massport's Conley Terminal improvements with Edison Power Plant Site Boundary in red.

Image from Massachusetts Port Authority

Purpose and Process

In 2016 Exelon Corporation sold the decommissioned Edison Power Plant property, which dates back to 1898, to a joint venture of Redgate and Hilco Redevelopment Partners who intend on re-purposing the site for an expansive new mixed-use development project. Due to the prominence of the Edison Power Plant property in South Boston and the opportunities for its redevelopment to enhance the community, the Boston Planning & Development Agency (BPDA) initiated a public engagement process in early 2017 to better understand the priorities and aspirations of the neighborhood and affected stakeholders in advance of the City's Article 80 development review process. As part of the engagement process the BPDA hosted an open house event and walking tours of the Edison Turbine Hall to familiarize the community with the project site and its history, as well as review the regulatory and planning context related to the property. Two community workshops were also held in February through which the following Redevelopment Vision and Redevelopment Concepts were developed based upon resident and stakeholder comment and discussion. The Redevelopment Vision and Concepts are intended to assist in guiding the development plan for the site and future character of the Edison Power Plant redevelopment project.

Figure 2. Opposite Left: Image of existing street condition at the Edison Power Plant Site.

Opposite Right: Context map

Images from Developer Team and Planning Staff

Planning Area Context

The Edison Power Plant property is surrounded by a dynamic mix of residential, commercial and industrial uses, including the Massachusetts Port Authority's (Massport) Conley Terminal. Land use adjacent to the Reserved Channel is primarily governed by the state's Public Tidelands Act, Chapter 91, Designated Port Area standards, and the City's Maritime Economy Reserve zoning, which focus on water dependent

and marine industrial uses. Past zoning and planning initiatives that relate to the area include the 1999 Seaport Public Realm Plan, which envisioned 1st Street as more residential in scale and use, and the 2011 East & West First Street Planning and Rezoning effort (Article 68), which focused on use and dimensional standards to facilitate the development of a mixed-use district that reflects the changes in the community and protects both growing residential uses and existing commercial and industrial areas. Massport's adjacent Conley Terminal continues to function as the region's primary container and shipping terminal and is currently expanding its capacity to meet the needs of a growing port. As part of the expansion project Massport is also advancing efforts to mitigate port related impacts on the community, including the construction of the Thomas J. Butler Freight Corridor and Memorial Park, which will remove truck traffic from East 1st Street, and create new community open space that will function as a significant noise and visual buffer for adjacent residents.

Redevelopment Vision

Community

New development will involve and engage the South Boston community with programming and civic, cultural and retail uses that attract broad populations and are multi-generational in nature. Design and materials of new buildings and the public realm will be distinct and eye-catching yet respectful and contextual of the existing South Boston neighborhood. The development site plan and new uses anticipated for the property will serve community needs for gathering space, civic and cultural facilities, as well as new food and retail options.

Arts and Industry

The development will function as an "Arts and Industry" themed district with Edison Turbine Hall as the heart and soul of the site with its industrial and historic character serving as an aesthetic that defines the look and feel of new development. Art, cultural and civic uses will be integrated throughout the development with a focus on art that engages the public and utilizes innovative materials. Historic industrial and port-related attributes should be preserved with old industrial equipment, interpretive exhibits and signage that represents the history and role of energy production as a development theme.

Figure 3. Opposite: Images of Open House graphics, the walking tour, and the February workshop activity where community members discussed what they would like to see at the site

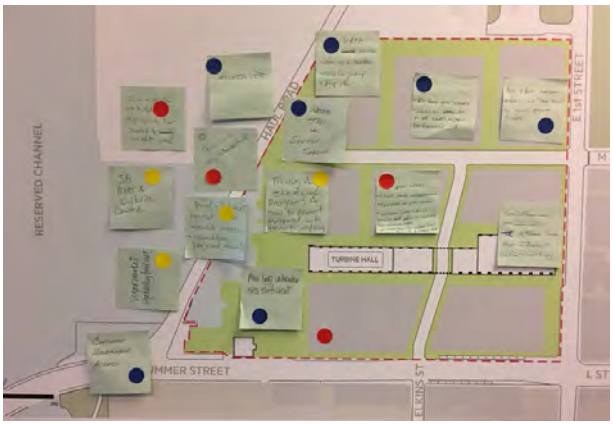
Images from Planning Staff

Mix of Uses

A mixed-use development program will serve as a destination that attracts a variety of communities and demographics. Active ground floor uses throughout the development will draw people in, with more active use along Summer Street, and quieter uses along East 1st Street where there are existing residential homes. New residential populations will activate the district, while retail will serve community needs, and support and complement local businesses. New uses will be located and organized to function with adjacent port activity and ensure the continued operation of an active and thriving Conley Terminal.

Waterfront and Open Space

New waterfront open space will accommodate a number of uses and be designed, along with streets and sidewalks, to have a public rather than private character. The waterfront open space will provide opportunities for active recreation, retail and civic uses, as well as in-water and watersheet uses that do not conflict with port related activities in the Reserved Channel. New open space will



connect with existing Harborwalk and parks along East 1st Street, and create views corridors through the site to establish visual connections to the water from East 1st and M Streets.

Design and Public Realm

Building, roadway, sidewalk and open space design will be legible and welcoming to the public and create a sense of discovery and curiosity that engages and draws people into the site. The design and development program will take cues from the site's former industrial uses and scale, and establish a new district within the neighborhood with a distinct character and sense of place.

Connections and Access

Traffic congestion and parking needs have long been neighborhood concerns that new development should not exacerbate, and where possible, improve access to transit, mobility conditions, and multi-modal infrastructure.

Redevelopment Concepts

Placemaking, Preservation and Programming:

- Edison Turbine Hall restored for adaptive reuse and functioning as a focal point of the site's redevelopment. The structure's size and scale, extending from the Reserved Channel to East 1st Street, allows for a number of potential uses. The building design should be public in nature, visible from surrounding streets with porosity and connectivity to the surrounding public ways, sidewalks and Harborwalk.
- Flexible facilities and accommodations for a variety of arts and cultural uses, including indoor and outdoor space for art galleries and exhibits, areas for rehearsal and fabrication, and an amphitheater for theater performances and concerts. Partnerships with other arts organizations and universities in the city can also assist in programming and administering arts and cultural space. Additional facilities to support the arts and artists should be considered, such as artist live work space and an artist in residency program.
- Makerspaces for fabrication or advanced manufacturing that celebrate the industrial nature of the site, continue the tradition of jobs on the property, support small, industry skill based jobs, and provide job training.
- The integration of civic uses into the project, such as community center that can function as a venue for weddings and baby showers, community meetings and other events. Additional classroom space could also be provided for educational, tutoring, and mentoring programs.
- A variety of retail and commercial uses that can address the needs of the South Boston community and function to draw broad populations to the site. The Edison Turbine Hall is envisioned as an opportune location for an open market food hall with seating and public amenities that spill into the public realm. Potential businesses that could thrive include a bakery, coffee shop, small-scale restaurants, local public vendors, and a deli/butcher, with an interest towards "mom-and-pop" scale stores as opposed to larger retail chains. Other retail and commercial interests include shoes and clothing, a grocery store, book stores, theater, housewares, antiques and a microbrewery.
- Include a diverse mix of uses such as a boutique hotel that can draw visitors into the area and support local businesses. To ensure the district is active, vibrant, and diverse new residential units should be part of the development program that accommodates mixed incomes and encourages home ownership.

Figure 4. Above: Precedent images of programming & placemaking, centered around an arts & industrial character

Images from February Workshop Developer Team Presentation

Figure 5. Opposite: Conceptual diagram of potential, distinct placemaking & programmatic zones - conceptual graphic developed through community workshop discussions and does not illustrate the final design

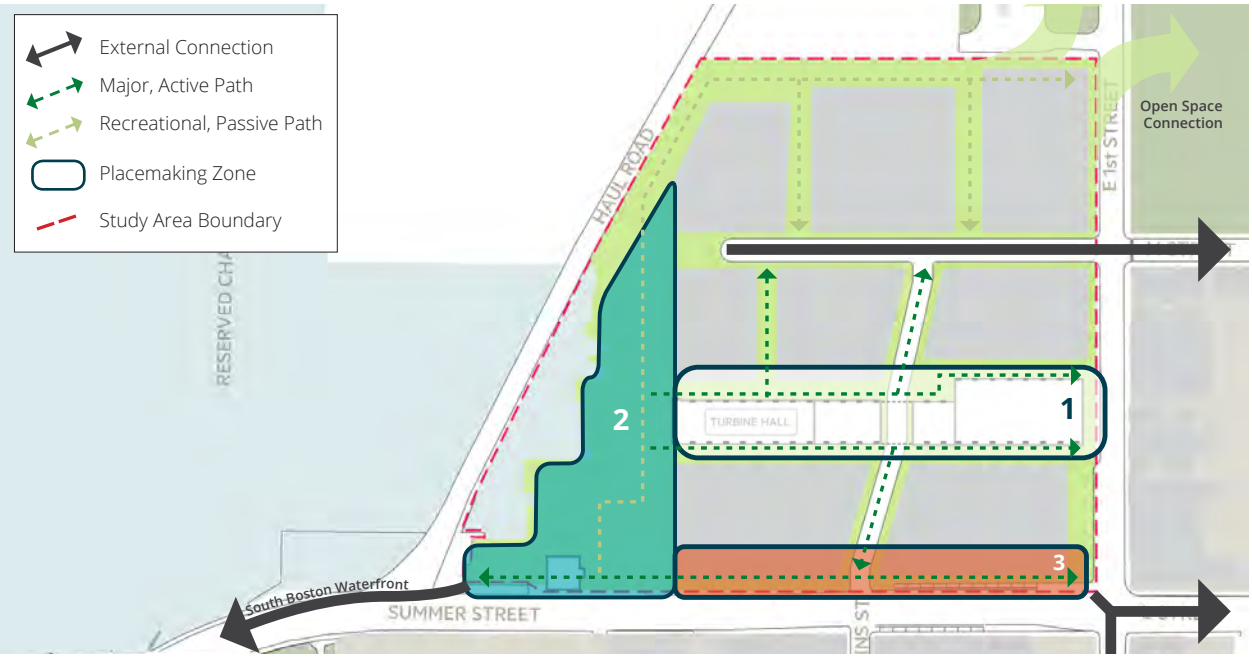
Illustrative Graphic Summarizing Community Dialogue Input - Placemaking

1 Turbine Hall Marketplace
Arts & Industrial Focal Point

- Pop-up retail and art exhibits
- Small-scale 21st century industrial (microbrewery, maker-space)
- Theater
- Open seating and dining areas
- Specialty Food (butcher, bakery)

2 Waterfront Activation Zone
Complementary Outdoor Arts

- Outdoor market
- Outdoor gallery and sculpture
- Outdoor theater, open seating
- Active and passive recreation



3 Summer St Commercial Row
Active Retail on Neighborhood Edge

- Grocery store
- Retail complementing arts & industrial character

Site-wide
Mixed-use

- Residential, office, active ground floors
- Boutique hotel

With housing affordability an issue throughout Boston, and particularly acute in South Boston, the redevelopment should respond to the city's Inclusionary Development Policy, and support of workforce and senior housing.

- The "Arts and Industrial" theme should relate to the design and architectural vernacular of new development through maintaining existing architectural and industrial elements and new buildings that are contextual to the surrounding community with more brick rather than the glass office buildings that define the South Boston Waterfront. Creative exterior lighting elements can also enhance the new and historic architectural elements on the site.

Neighborhood Character and Open Space:

- Reimagine the Summer Street corridor to create a sense of arrival and function as a "Welcome to South Boston" experience. The East 1st and Summer Streets intersection should serve as a primary gateway to the site with landscaping and welcoming and functional wayfinding signage. Also improve the pedestrian experience and sidewalk width along the north side of East 1st Street with a broader sidewalk that may extend into and through Turbine Hall, and better connect the site to the open space resources along East 1st and M Streets, including the adjacent Butler Memorial Park.
- Improve the condition and character of Summer Street and East 1st Street that currently define the western and southern limits of the site. Removal of the oppressive building massing and walls along these public ways, with more generous sidewalks, landscaping, benches, lighting and building setbacks to make more pedestrian friendly and transition into the site. New roads and pedestrian points of entry into the property should function to create porosity and extend view corridors from the community and through the site to the waterfront.
- A human scale built environment at the ground and street level that provides visual variety and is pedestrian friendly. Building massing should vary in height throughout the site and have an open character with light and air between building elements to prevent creating a cavernous or canyon like street condition. New buildings should respect and frame Edison Turbine Hall and not overwhelm the historic structure. Building density should step up from the surrounding streets and existing community's height datum with new, higher building elements situated where there are existing tall structures on site and not exceed those heights. Greater density may also be more appropriate away from the community and toward the adjacent Conley Terminal and MBTA properties, while limiting shadows that discourages use of adjacent open space resources.
- Utilize building massing along the north and east side of the property as a buffer between site and Massport's Butler Freight Corridor and Conley Terminal. Other design, massing, noise mitigation and site elevation measures should also be considered to visually buffer the site from the freight corridor.
- New open space and parks that function to create a network through the property to the adjacent Butler Memorial Park and M Street, and establish a signature park along the site's waterfront that serves as a destination for the community. The waterfront park should have Harborwalk that integrates into

Figure 6. Above: Precedent images of neighborhood character and public realm for the interior of the site, centered around the historical character of Turbine Hall

Images from February Workshop Developer Team Presentation

Figure 7. Above: Precedent images of neighborhood character and open space for the waterfront plaza.

Left, Right Images from February Workshop Developer Team Presentation. Center Image: Brooklyn Bridge Park, Julienne Schaer.

pathways and greenspace around Turbine Hall as well as unifying elements and connections to Summer Street and the internal street and pedestrian network. A number of active and passive uses are desired for the waterfront open space with amenities such as a water taxi dock, kayak rentals, accommodations for fishing, as well as benches, lighting and mix of surface materials and vegetation. There should be attention on ensuring the waterfront open space is active year-round with street performances, summer movies, games and possibly a winter garden. Uses and activities along the waterfront and areas adjacent to Massport and MBTA property must be able to function with port, bus and trucking related activity.

- Activation and programming precedents to reference include the Boston Convention and Exhibition Center's Lawn on D; the City of Chelsea's PORT waterfront park; Downtown's Boston Public Market and South End's SOWA market; and, New York City's High Line and Seattle's Pike Place market.
- Emphasis on "greening" the site with street and shade trees, vegetation and landscaping that soften the built and industrial scale elements and encourage a natural flow of foot traffic through the site. Expansive walking paths, sidewalks and open space areas should be designed to provide cues and read as a destination for public use and interaction that is fully integrated with private uses.
- Incorporate climate-smart design including landscaping and structural elements to ensure resiliency against rising seas and storm surge, increased temperatures, and higher precipitation levels.
- Advance sustainable design and green building principles. As the site has historically served as an energy production facility, new development provides an opportunity to exemplify how energy production has evolved through the integration of renewable energy technologies and community energy solutions.

Mobility & Access:

- MBTA bus service to the City Point and L Street Corridor of South Boston is currently not meeting community transit demands. Given the size and mix of uses anticipated with the new development, greater transit service and capacity needs to be advocated for and accommodated with space for bus stops and possibly a transit center, or hub on the adjacent MBTA property. Ideas also include having an express No. 7 bus to connect quickly to the city at peak commuting hours.
- Advance alternative means of transportation that work for all age groups and demographics, and reduce dependence on cars, while recognizing that cars will continue to have an important role as a mobility option. The establishment of a mobility hub that brings together transit, bike and car-share resources along with water transportation would be a great resource for the development and community. Accommodations should be made on the property for programs and infrastructure for car and bike share, electric vehicles, water transportation and pedestrian wayfinding and amenities. Becoming an added "Southie Shuttle" stop connecting the development site to the South Boston Waterfront, South Station and Broadway corridor would also alleviate dependence on cars and be a great community benefit.
- Integrate a new street network into the primary roads serving the adjacent community and provide for visual and pedestrian connections into the site and down to the waterfront. Design should accommodate wide and landscaped sidewalks, bike lanes, and well-marked pedestrian paths and crossings both within the site and connecting to adjacent residential areas. Traffic calming measures, particularly on Summer Street should be implemented to reduce vehicular speeds and enhance pedestrian access and comfort.
- Provide adequate parking for the anticipated mix of uses, and ensure new development does not function to place greater demands on community parking resources. Explore options for providing some level of fee-based public parking for area residents and visitors, with an emphasis on night and weekend parking. On-street parking on roads internal to the project should be provided to maintain neighborhood character.

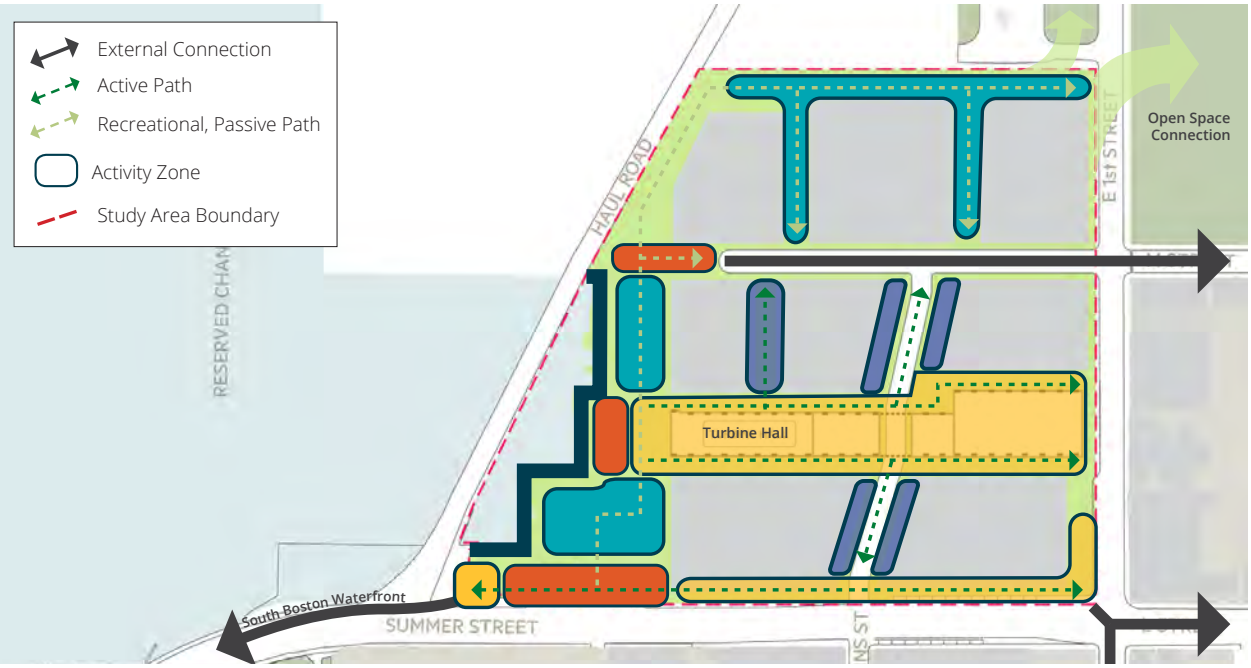
Figure 8. Above: Precedent images of walkable, multi-modal networks.

Images from February Workshop Developer Team Presentation

Figure 10. Opposite: Conceptual diagram of potential, distinct open space active uses - conceptual graphic developed through community workshop discussions and does not illustrate the final design

Figure 9. Opposite: Conceptual diagram of potential connections - conceptual graphic developed through community workshop discussions and does not illustrate the final design

Illustrative Graphic Summarizing Community Dialogue Input - Activity Zones



Waterfront Activities
Direct access to water
- fishing
- kayaking

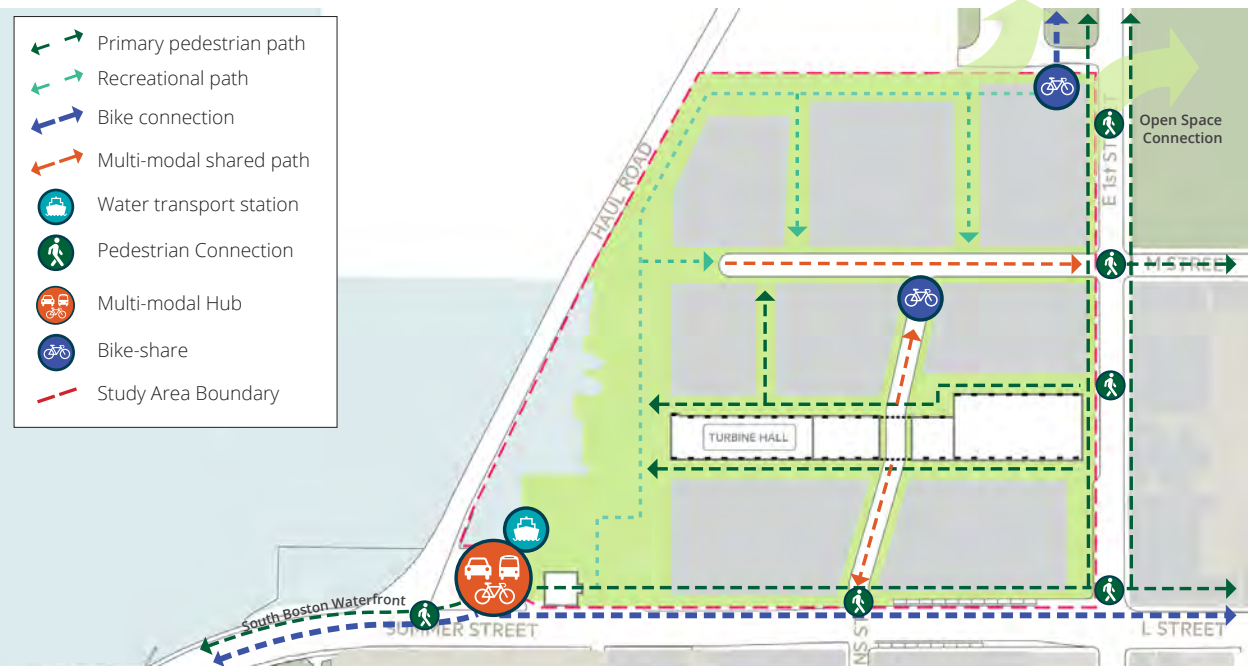
Passive Recreation
Diffuse, individual, buffer
- running paths
- small plazas for yoga
- outdoor gym

Cultural Programming
Arts opportunity
- see placemaking & programming diagram

Active, Indoor Recreation Edge
High investment, some indoor
- Fitness center
- Climbing wall

Active Recreation
High energy, space-intensive, durable equipment
- skate park
- splash park/pool
- playground/fitness park

Illustrative Graphic Summarizing Community Dialogue Input - Mobility & Access



Appendix C: BPDA Checklists

Accessibility Checklist

Climate Change Preparedness and Resiliency Checklist

Accessibility Checklist

(to be added to the BRA Development Review Guidelines)

In 2009, a nine-member Advisory Board was appointed to the Commission for Persons with Disabilities in an effort to reduce architectural, procedural, attitudinal, and communication barriers affecting persons with disabilities in the City of Boston. These efforts were instituted to work toward creating universal access in the built environment.

In line with these priorities, the Accessibility Checklist aims to support the inclusion of people with disabilities. In order to complete the Checklist, you must provide specific detail, including descriptions, diagrams and data, of the universal access elements that will ensure all individuals have an equal experience that includes full participation in the built environment throughout the proposed buildings and open space.

In conformance with this directive, all development projects subject to Boston Zoning Article 80 Small and Large Project Review, including all Institutional Master Plan modifications and updates, are to complete the following checklist and provide any necessary responses regarding the following:

- improvements for pedestrian and vehicular circulation and access;
- encourage new buildings and public spaces to be designed to enhance and preserve Boston's system of parks, squares, walkways, and active shopping streets;
- ensure that persons with disabilities have full access to buildings open to the public;
- afford such persons the educational, employment, and recreational opportunities available to all citizens; and
- preserve and increase the supply of living space accessible to persons with disabilities.

We would like to thank you in advance for your time and effort in advancing best practices and progressive approaches to expand accessibility throughout Boston's built environment.

Accessibility Analysis Information Sources:

1. Americans with Disabilities Act – 2010 ADA Standards for Accessible Design
    a. http://www.ada.gov/2010ADAstandards_index.htm
2. Massachusetts Architectural Access Board 521 CMR
    a. http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/aab/aab-rules-and-regulations-pdf.html
3. Boston Complete Street Guidelines
    a. http://bostoncompletestreets.org/
4. City of Boston Mayors Commission for Persons with Disabilities Advisory Board
    a. http://www.cityofboston.gov/Disability
5. City of Boston – Public Works Sidewalk Reconstruction Policy
    a. http://www.cityofboston.gov/images_documents/sidewalk%20policy%200114_tcm3-41668.pdf
6. Massachusetts Office On Disability Accessible Parking Requirements
    a. www.mass.gov/anf/docs/mod/hp-parking-regulations-mod.doc
7. MBTA Fixed Route Accessible Transit Stations
    a. http://www.mbta.com/about_the_mbta/accessibility/

Article 80 | ACCESSIBILTY CHECKLIST

Project Information

Project Name:	**L Street Station Redevelopment**
Project Address Primary:	**776 Summer Street, Boston, MA 02127**
Project Address Additional:	**N/A**
Project Contact (name / Title / Company / email / phone):	**Ralph Cox / Principle / Redgate** **ralph.cox@redgate-re.com / (617) 904-7000**

Team Description

Owner / Developer:	**HRP 776 Summer Street, LLC, c/o Hilco Real Estate**
Architect:	**SGA**
Engineer (building systems):	**WSP**
Sustainability / LEED:	**WSP**
Permitting:	**VHB**
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:

Building Classification and Description

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

Residential – One to Three Unit	**Residential - Multi-unit, Four +**	Institutional	Education
Commercial	**Office**	**Retail**	Assembly

	Laboratory / Medical	Manufacturing / Industrial	Mercantile	Storage, Utility and Other
First Floor Uses (List)	**Active Public Uses, Residential, Parking**			

What is the Construction Type – select most appropriate type?

Wood Frame	**Masonry**	**Steel Frame**	**Concrete**

Describe the building?

Site Area:	***15 acres***	Building Area:	***2.1 Million SF***
Building Height:	***220 Ft.***	Number of Stories:	***Varies***
First Floor Elevation:	***21.5 BCB***	Are there below grade spaces:	***Yes* (Partially)**

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 at the gateway to the South Boston neighborhood between the marine industrial uses of the South Boston Designated Port Area and Raymond L. Flynn Marine Industrial Park to the north and east, and residential areas to the south. The Project is bounded by East 1st Street to the south and Summer Street to the west. The Project Site has served industrial power generation uses for over a century.**
List the surrounding ADA compliant MBTA transit lines and the proximity to the development site: Commuter rail, subway, bus, etc.	**The Project is located 0.5 miles from the Silver Line at Design Center Place, and 1.5 miles to South Station, which provides access to the Red Line, Silver Line, commuter and passenger rails, Amtrak, and local and regional bus service. The Project Site is also located along the following local bus routes:** **Bus #7: Adjacent to Project Site – Summer St @ E 1st St; East 1st @ M St; Summer St @ Powerhouse St** **Bus #9: Adjacent to Project Site – East 1st @ M St** **Bus #5, 10, 11: 0.2 miles from Project Site – East 1st St opposite O St.**
List the surrounding institutions: hospitals, public housing and	**The Project is located in proximity to the following institutions:** **-Edward W. Brooke Charter School** **-South Boston Catholic Academy**

elderly and disabled housing developments, educational facilities, etc.	-Joseph P. Tynan School -South Boston Elderly Apartments -Boston Housing Authority
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.	The following public use facilities are within proximity of the Project Site: -Boston Public Library – South Boston Branch -Tynan Community Center -Christopher Lee Playground -Medal of Honor Park

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?	Sidewalks are currently along Summer St and E 1st St, not within the Project Site.
If yes above, list the existing sidewalk and pedestrian ramp materials and physical condition at the development site.	The existing sidewalks include concrete pavers along Summer Street and asphalt along East 1st Street. Portions of the existing sidewalks are extremely narrow and do not meet ADA requirements.
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.	No. All existing sidewalks and pedestrian ways are to be removed and replaced. Any non-compliant conditions will be improved and brought into compliance
Is the development site within a historic district? If yes, please identify.	No

Surrounding Site Conditions – Proposed

This section identifies the proposed condition of the walkways and pedestrian ramps in and around the development site. The width of the sidewalk contributes to the degree of comfort and enjoyment of walking along a street. Narrow sidewalks do not support lively pedestrian activity, and may create dangerous conditions that force people to walk in the street. Typically, a five foot wide Pedestrian Zone supports two people walking side by side or two wheelchairs passing each other. An eight foot wide Pedestrian Zone allows two pairs of people to comfortable pass each other, and a ten foot or wider Pedestrian Zone can support high volumes of

pedestrians.

Are the proposed sidewalks consistent with the Boston Complete Street Guidelines? See: www.bostoncompletestreets.org	**Yes. Proposed sidewalks along Summer Street and East 1st Street will be consistent with Boston Complete Streets Guidelines.**
If yes above, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, Boulevard.	**Varies**
What is the total width of the proposed sidewalk? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone.	**Varies**
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?	**Material selection is to be determined.**
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?	**Undetermined at this time.**
Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way?	**Undetermined at this time.**
If yes above, what are the proposed dimensions of the sidewalk café or furnishings and what will the right-of-way clearance be?	

Proposed Accessible Parking:

See Massachusetts Architectural Access Board Rules and Regulations 521 CMR Section 23.00 regarding accessible parking requirement counts and the Massachusetts Office of Disability Handicap Parking Regulations.

What is the total number of parking spaces provided at the development site parking lot or garage?	**The Project will provide approximately 987 structured parking spaces**
What is the total number of accessible spaces provided at the development site?	**The Project will comply with City requirements.**
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?	**Accessible parking spaces will be provided. The Proponents have not yet contacted the CPD or BTD regarding this need, but will do so when details of on street parking are prepared.**
Where is accessible visitor parking located?	**Accessible visitor parking locations have not yet been determined.**
Has a drop-off area been identified? **If yes,** will it be accessible?	**Undetermined at this time.**
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.	**Refer to Figure 3.8 in Chapter 3, *Urban Design*, for a preliminary Site circulation plan. All pedestrian pathways will be accessible, and all buildings will feature accessible entrances.**

Article 80 | ACCESSIBILTY 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.	Refer to Figure 3.8 in Chapter 3, *Urban Design*, for a preliminary Site circulation plan. All pedestrian pathways will be accessible, and all buildings will feature accessible entrances.
Describe accessibility at each entryway: Flush Condition, Stairs, Ramp Elevator.	Entries will have a combination of flush conditions, stairs, and accessible ramps
Are the accessible entrance and the standard entrance integrated?	Undetermined at this time.
If no above, what is the reason?	
Will there be a roof deck or outdoor courtyard space? If yes, include diagram of the accessible route.	Undetermined at this time.
Has an accessible routes way-finding and signage package been developed? If yes, please describe.	No. Such signage will be developed further into the design process.

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?	1,588 residential units
How many units are for sale; how many are for rent? What is the market value vs. affordable breakdown?	Undetermined at this time.
How many accessible units are being proposed?	The number of accessible units at the Project will be determined as the Project advances, however, as required by 521 CMR, it is anticipated that 5% will be designed to be accessible.

Article 80 | ACCESSIBILTY CHECKLIST

Please provide plan and diagram of the accessible units.	**Details will be determined as the designed advances**
How many accessible units will also be affordable? If none, please describe reason.	**The number of affordable accessible residential units will be determined as the Project design advances.**
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.	**The interior building design is early in its development, however, it is not anticipated that either residential units or common spaces will have any architectural barriers.**
Has the proponent reviewed or presented the proposed plan to the City of Boston Mayor's Commission for Persons with Disabilities Advisory Board?	**The Project has not yet been presented to the City of Boston Mayor's Commission for Persons with Disabilities Advisory board. The Project Team will meet with the Board as the Project design advances and is fully committed to delivering a Project that is ADA compliant.**
Did the Advisory Board vote to support this project? **If no,** what recommendations did the Advisory Board give to make this project more accessible?	**The Project has not yet been reviewed by the Advisory Board.**

Thank you for completing the Accessibility Checklist!

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

patricia.mendez@boston.gov | Mayors Commission for Persons with Disabilities

Climate Change Preparedness and Resiliency Checklist for New Construction

In November 2013, in conformance with the Mayor's 2011 Climate Action Leadership Committee's recommendations, the Boston Redevelopment Authority adopted policy for all development projects subject to Boston Zoning Article 80 Small and Large Project Review, including all Institutional Master Plan modifications and updates, are to complete the following checklist and provide any necessary responses regarding project resiliency, preparedness, and to mitigate any identified adverse impacts that might arise under future climate conditions.

For more information about the City of Boston's climate policies and practices, and the 2011 update of the climate action plan, *A Climate of Progress*, please see the City's climate action web pages at http://www.cityofboston.gov/climate

In advance we thank you for your time and assistance in advancing best practices in Boston.

Climate Change Analysis and Information Sources:

1. Northeast Climate Impacts Assessment (www.climatechoices.org/ne/)
2. USGCRP 2009 (http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/)
3. Army Corps of Engineers guidance on sea level rise (http://planning.usace.army.mil/toolbox/library/ECs/EC11652212Nov2011.pdf)
4. Proceeding of the National Academy of Science, "Global sea level rise linked to global temperature", Vermeer and Rahmstorf, 2009 (http://www.pnas.org/content/early/2009/12/04/0907765106.full.pdf)
5. "Hotspot of accelerated sea-level rise on the Atlantic coast of North America", Asbury H. Sallenger Jr*, Kara S. Doran and Peter A. Howd, 2012 (http://www.bostonredevelopmentauthority.org/planning/Hotspot of Accelerated Sea-level Rise 2012.pdf)
6. "Building Resilience in Boston": Best Practices for Climate Change Adaptation and Resilience for Existing Buildings, Linnean Solutions, The Built Environment Coalition, The Resilient Design Institute, 2103 (http://www.greenribboncommission.org/downloads/Building_Resilience_in_Boston_SML.pdf)

Checklist

Please respond to all of the checklist questions to the fullest extent possible. For projects that respond "Yes" to any of the D.1 – Sea-Level Rise and Storms, Location Description and Classification questions, please respond to all of the remaining Section D questions.

Checklist responses are due at the time of initial project filing or Notice of Project Change and final filings just prior seeking Final BRA Approval. A PDF of your response to the Checklist should be submitted to the Boston Redevelopment Authority via your project manager.

Please Note: When initiating a new project, please visit the BRA web site for the most current Climate Change Preparedness & Resiliency Checklist.

A.1 - Project Information

Project Name:	**L Street Station Redevelopment**
Project Address Primary:	**776 Summer Street, Boston, MA 02127**
Project Address Additional:	**N/A**
Project Contact (name / Title / Company / email / phone):	**Ralph Cox / Principle / Redgate ralph.cox@redgate-re.com / (617) 904-7000**

A.2 - Team Description

Owner / Developer:	**HRP 776 Summer Street, LLC, c/o Hilco Real Estate**
Architect:	**SGA**
Engineer (building systems):	**WSP**
Sustainability / LEED:	**WSP**
Permitting:	**VHB**
Construction Management:	**TBD**
Climate Change Expert:	**WSP/VHB**

A.3 - Project Permitting and Phase

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

PNF / Expanded PNF Submission	Draft / Final Project Impact Report Submission	BRA Board Approved	Notice of Project Change
Planned Development Area	BRA Final Design Approved	Under Construction	Construction just completed:

A.4 - Building Classification and Description

List the principal Building Uses:	**Residential, Office, Commercial, Retail, Hotel, Cultural**
List the First Floor Uses:	**Active Public Uses, Residential, Parking**

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

Wood Frame	**Masonry**	**Steel Frame**	**Concrete**

Describe the building?

Site Area:	***15 acres***	Building Area:	***2.1 Million SF***
Building Height:	***220 Ft.***	Number of Stories:	***Varies***
First Floor Elevation (reference Boston City Base):	***21.5 BCB***	Are there below grade spaces/levels, if yes how many:	***Yes* (Partially)**

A.5 - Green Building

Which LEED Rating System(s) and version has or will your project use (by area for multiple rating systems)?

Select by Primary Use:	**New Construction (version 4)**	**Core & Shell**	Healthcare	Schools
	Retail	Homes Midrise	Homes	Other
Select LEED Outcome:	Certified	Silver	Gold	Platinum

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

Registered:	**TBD**	Certified:	***TBD***

A.6 - Building Energy

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

(Note – Heating and cooling loads were derived from the energy model and do not represent connected utility loads)

Electric:	***18,000 kW***	Heating:	***15,000 MBH***
What is the planned building Energy Use Intensity:	***40 kBTU/SF/year***	Cooling:	***2,083 tons***

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

Electric:	***TBD***	Heating:	***None***
		Cooling:	***None***

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

Electrical Generation:	***TBD***		Fuel Source:	***Diesel***
System Type and Number of Units:	**Combustion Engine**	Gas Turbine	Combine Heat and Power	***TBD*** *(Units)*

B - Extreme Weather and Heat Events

Climate change will result in more extreme weather events including higher year round average temperatures, higher peak temperatures, and more periods of extended peak temperatures. The section explores how a project responds to higher temperatures and heat waves.

B.1 – Analysis

What is the full expected life of the project?

Select most appropriate:	10 Years	25 Years	**50 Years**	75 Years

What is the full expected operational life of key building systems (e.g. heating, cooling, ventilation)?

Select most appropriate:	10 Years	**25 Years**	50 Years	75 Years

What time span of future Climate Conditions was considered?

Select most appropriate:	10 Years	25 Years	**50 Years**	75 Years

Analysis Conditions - What range of temperatures will be used for project planning – Low/High?

91 °F/ 7° F Deg.

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

95 Deg.	*3 Days*	*1 Events / yr.*

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

Days	/ yr.

Drought tolerance will be addressed through a combination of native/adaptive plantings that require less water and maintenance, and a water-efficient irrigation system.

What Extreme Rain Event characteristics will be used for project planning – Seasonal Rain Fall, Peak Rain Fall, and Frequency of Events per year?

44 / yr.	6.19 Inches	127 / yr.

What Extreme Wind Storm Event characteristics will be used for project planning – Peak Wind Speed, Duration of Storm Event, and Frequency of Events per year?

There is still significant uncertainty with respect to how wind patterns and intensities will change with respect to future climatological conditions. Some models predict that a warming would lessen the difference in air mass temperatures, others show a decrease in atmospheric wind shear aspects – both of which would potential lead to less intense wind events. Other models predict an increase in wind intensities based on the increase of energy in the atmosphere. El Nino/La Nina add another layer of complexity to the projections. Based on this uncertainty, current wind design criteria are adopted for the Project.

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:	15.4%
How is performance determined:	eQUEST Energy Modeling with ASHRAE 90.1-2013 Appendix G Baseline

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

Select all appropriate:	High performance building envelope	**High performance lighting & controls**	Building daylighting	EnergyStar equip. / appliances
	High performance HVAC equipment	**Energy recovery ventilation**	No active cooling	No active heating
Describe any added measures:	**Low-flow Domestic Hot Water Fixtures**			

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

Roof:	*R = 30*	Walls / Curtain Wall Assembly:	*R = 18*
Foundation:	*R = 10*	Basement / Slab:	*R = 20 for 24"*
Windows:	*R = 2.4 / U = 0.42*	Doors:	*R = 2 / U =0.5*

What specific measures will the project employ to reduce building energy demands on the utilities and infrastructure?

On-site clean energy / CHP system(s)	Building-wide power dimming	Thermal energy storage systems	Ground source heat pump

	On-site Solar PV	On-site Solar Thermal	Wind power	None
Describe any added measures:	**Identified measures to be further evaluated as design progresses**			

Will the project employ Distributed Energy / Smart Grid Infrastructure and /or Systems? - **No**

Select all appropriate:	**Connected to local distributed electrical**	Building will be Smart Grid ready	Connected to distributed steam, hot, chilled water	Distributed thermal energy ready

Will the building remain operable without utility power for an extended period?

	*Yes / **No***	If yes, for how long:	*Days*
If Yes, is building "Islandable?	**Islanding capabilities are currently being explored**		
If Yes, describe strategies:			

Describe any non-mechanical strategies that will support building functionality and use during an extended interruption(s) of utility services and infrastructure:

Select all appropriate:	Solar oriented – longer south walls	Prevailing winds oriented	External shading devices	Tuned glazing,
	Building cool zones	**Operable windows**	**Natural ventilation**	Building shading
	Potable water for drinking / food preparation	**Potable water for sinks / sanitary systems**	Waste water storage capacity	High Performance Building Envelope
Describe any added measures:	**Identified measures to be further evaluated as design progresses**			

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

Select all appropriate:	**High reflective paving materials**	**Shade trees & shrubs**	**High reflective roof materials**	**Vegetated roofs**
Describe other strategies:	**The measures noted above will be explored for their feasibility as the Project design develops**			

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

Select all appropriate:	**On-site retention systems & ponds**	**Infiltration galleries & areas**	**vegetated water capture systems**	**Vegetated roofs**
Describe other strategies:	**The measures noted above will be explored for their feasibility as the Project design develops**			

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

Select all appropriate:	**Hardened building structure & elements**	**Buried utilities & hardened infrastructure**	**Hazard removal & protective landscapes**	**Soft & permeable surfaces (water infiltration)**
Describe other strategies:	**The measures noted above will be explored for their feasibility as the Project design develops**			

C - Sea-Level Rise and Storms

Rising Sea-Levels and more frequent Extreme Storms increase the probability of coastal and river flooding and enlarging

the extent of the 100 Year Flood Plain. This section explores if a project is or might be subject to Sea-Level Rise and Storm impacts.

C.1 - Location Description and Classification:

Do you believe the building to susceptible to flooding now or during the full expected life of the building?

Yes / No

Describe site conditions?

Site Elevation – Low/High Points:	**+14.5 / 36.5 BCB**
Building Proximity to Water:	**+/- 100 Feet**

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

Coastal Zone:	***Yes*** / No	Velocity Zone:	*Yes* / **No**
Flood Zone:	***Yes*** / No	Area Prone to Flooding:	***Yes*** / No

Will the 2013 Preliminary FEMA Flood Insurance Rate Maps or future floodplain delineation updates due to Climate Change result in a change of the classification of the site or building location?

2013 FEMA Prelim. FIRMs:	*Yes* / **No**	Future floodplain delineation updates:	*Yes* / **No**

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

0 Ft

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

C - Sea-Level Rise and Storms

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

C.2 - Analysis

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

Sea Level Rise:	***3 Ft.***	Frequency of storms:	***Not Analyzed***

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. (21.5 Ft.)***	First Floor Elevation:	***Boston City Base Elev. (21.5 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:	**Specific flood controls have not yet been determined**		

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

Systems located above 1st Floor.	**Water tight utility conduits**	**Waste water back flow prevention**	**Storm water back flow prevention**

Were the differing effects of fresh water and salt water flooding considered:

***Yes** / No*

Will the project site / building(s) be accessible during periods of inundation or limited access to transportation:

*Yes / **No***	If yes, to what height above 100 Year Floodplain:	*Boston City Base Elev. (Ft.)*

Based on the current 100 year flood elevation, portions of the Project Site along the waterfront would not be accessible during the 100 year flood event

Will the project employ hard and / or soft landscape elements as velocity barriers to reduce wind or wave impacts?

	***Yes** / No*
If Yes, describe:	**The landscaping adjacent to the Reserved Channel will be designed with native/adaptive landscape, such as tidal zone planting materials that will be resilient against flooding and potential saltwater intrusion. Hard landscape elements, such as walls, walkways, stairways, railings, benches and bike racks will also be designed using materials that can withstand potential saltwater inundation.**

Will the building remain occupiable without utility power during an extended period of inundation:

***Yes** / No*	If Yes, for how long:	*days*

Raising the site grade so that the finished floor elevation is at +21.5 BCB will ensure the building will maintain operational capacity during a 100-year flood event evaluated by FEMA under the future High Emission Sea Level Rise Scenario for the year 2070.

Describe any additional strategies to addressing sea level rise and or sever storm impacts:

Critical mechanical and life safety/standby emergency building systems outside of vulnerable elevations.

C.4 - Building Resilience and Adaptability

Describe any strategies that would support rapid recovery after a weather event and accommodate future building changes that respond to climate change:

Will the building be able to withstand severe storm impacts and endure temporary inundation?

Select appropriate:	***Yes** / No*	Hardened / Resilient Ground Floor Construction	Temporary shutters and or barricades	**Resilient site design, materials and construction**

Can the site and building be reasonably modified to increase Building Flood Proof Elevation?

Select appropriate:	*Yes* / ***No***	Surrounding site elevation can be raised	Building ground floor can be raised	Construction been engineered
Describe additional strategies:	**Surrounding site elevation has already been raised to be resilient to flooding from storm events with sea level rise.**			

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

Select appropriate:	***Yes*** / *No*	**Solar PV**	Solar Thermal	**Clean Energy / CHP System(s)**
		Potable water storage	Wastewater storage	Back up energy systems & fuel
Describe any specific or additional strategies:	**Identified measures to be further evaluated as design progresses**			

Thank you for completing the Boston Climate Change Resilience and Preparedness Checklist!

For questions or comments about this checklist or Climate Change Resiliency and Preparedness best practices, please contact: John.Dalzell.BRA@cityofboston.gov

Appendix D: Energy Model Assumptions

General Building Information	ASHRAE 90.1-2013 Baseline	Design
Space use type	Multi-family Residential High Rise	Multi-family Residential High Rise
Conditioned Square Feet	Varies per building	Varies per building
Operating Schedule (HVAC Fans)	24 / 7 / 365	24 / 7 / 365
Temperature Setpoints	Cooling - Occupied : 75°F	Cooling - Occupied : 75°F
	Heating - Occupied : 70°F	Heating - Occupied : 70°F
Building Envelope (Construction Assemblies)		
Roofs	R30ci Insulation Entirely Above Deck (U-0.032)	R-30
Walls	Steel Framed R-18 (U-0.055)	R-18
Fenestration and Shading		
Vertical fenestration area (of Wall area)	Residential = 40% Maximum	40%
Vertical Glazing U-factor	Fixed = U-0.42 Operable = 0.50	Fixed = U-0.42 Operable = 0.50
Vertical Glazing SHGC	0.4	0.4
HVAC (Air-side)		
HVAC System Type	System #7: VAV Rooftop Unit With HW Reheat - System per Floor - for residential support spaces System #1: Packaged Terminal A/C Units with HW - for residential units System #3 - Packaged Single Zone AC (exception 2) for Retail Areas	100% Outside Air Packaged Rooftop Energy Recovery Unit with water-cooled DX cooling and gas furnace heating Water Source Heat Pumps serving residential units System #3 - Packaged Single Zone AC (exception 2) for Retail Areas
Unitary Efficiency	System #1 PTAC: 12.2 EER System #3 PSZ: 11.7 - 12.1 EER	ERU DX cooling: 14.0 EER ERU Furnace Heating: 80% WSHP Cooling: 15.0 EER WSHP Heating: 4.5 COP

General Building Information	ASHRAE 90.1-2013 Baseline	Design
Fan System Operation	On continuously during occupied hours. Cycled to meet load during unoccupied hours.	RTUs - On continuously during occupied hours. Cycled to meet load during unoccupied hours. Heat Pumps - Cycle to meet load during all hours
Outdoor Air Design Min. Ventilation	ASHRAE 62.1-2010 Compliant per LEED v4	ASHRAE 62.1-2010 Compliant per LEED v4 Outside air ducted to all units (no natural ventilation)
Economizer High-Limit Shutoff	System #7 and #5: Outdoor Air Temperature with 70°F shutoff limit System #1 PTAC: Not required	Fixed - 100% outside air unit WSHP: Recirculation units only
Design Airflow Rates (Conditioned Spaces)	Auto sized based on 20F supply air to room air delta-T	Auto sized based on 20F supply air to room air delta-T
Minimum Supply Flow	Per ASHRAE 90.1-2013 Section G3.1.3.13 VAV - 30% Turndown Ratio	Per ASHRAE 90.1-2013 Section G3.1.3.13 VAV - 30% Turndown Ratio
Total System Fan Power (Conditioned)	Per ASHRAE 90.1-2013 G3.1.2.9 System #1 PTAC: - 0.0003 kW/cfm System #3 PSZ - 0.0008 kW/cfm System #7 VAV - 0.0015 kW/cfm	Residential WSHP: - 0.0002 kW/cfm System #3 PSZ - 0.0008 kW/cfm RTU/ERU - 0.0015 kW/cfm
Pressure Drop Adjustments	-Particulate filtration Credit MERV 13 -Sound Attenuation -Ducted Return -ERV in applicable systems	-Particulate filtration Credit MERV 13 -Sound Attenuation -Ducted Return -ERV in applicable systems
Exhaust Air Energy Recovery	50% effective enthalpy wheel on all VAV Systems as required by ASHRAE 90.1-2013 Table 6.5.6.1	70% effective enthalpy wheel on RTU/ERU
Supply Air Temperature Reset Parameters	Load Reset on VAV systems from 55F-60F	N/A
HVAC (Water-side)		
Number of Chillers	1	N/A
Chiller Part-Load Controls	No VSD	N/A
Chiller Capacity (Per Chiller)	≥75 and <150 Tons	N/A
Chiller Efficiency	4.9 COP	N/A
Chilled Water Loop Supply Temperature	44	N/A
Chilled Water (CHW) Loop Delta-T	12	N/A
CHW Loop Temp Reset Parameters	54F @ 60F OA, 44F @ 80F OA	N/A
CHW Loop Configuration3	Primary/Secondary	N/A
Number of Primary CHW Pumps	1	N/A
Primary CHW Pump Power	11 W/GPM	N/A
Primary CHW Pump Speed Control	One Speed	N/A

General Building Information	ASHRAE 90.1-2013 Baseline	Design
Secondary CHW Pump Power	11 W/GPM	N/A
Secondary CHW Pump Speed Control	One Speed	N/A
Number of Cooling Towers / Fluid Coolers	1	1
Cooling Tower Fan Control	Variable Speed	Variable Speed
Condenser Water Leaving Temperature	81	85
Condenser Water (CW) Loop Delta-T	10	10
CW Loop Temp Reset Parameters	Maintain 70°F when weather permits, floating up to leaving water temperature at design conditions	Fixed
CW Loop Configuration	Primary Only	Primary Only
Number of CW Pumps	1	1
CW Pump Power	19 W/GPM	19 W/GPM
CW Pump Speed Control	One Speed	Variable Speed
Water-side Economizer for Free Cooling	No	N/A
Number of Boilers	2	2
Boiler Part-Load Controls	Staged	Staged
Boiler Capacity (Per Boiler)	N/A	N/A
Boiler Efficiency	82% Natural Draft	95% Condensing
Boiler Water Loop Supply Temperature	180F	N/A
Hot Water or Steam (HW) Loop Delta-T	50F	N/A
HW Loop Reset Parameters	150F @ 50F OA, 180F @ 20F OA	N/A
Number of Primary HW Pumps	2	N/A
Primary HW Pump Power	19W/GPM	N/A
Primary HW Pump Speed Control	Variable Speed	N/A
Domestic Water Heating		
DHW Equipment Type	Natural Gas	Natural Gas
Equipment Efficiency	90%	95%
Temperature Controls	120F Constant	120F Constant
DHW Flow	Standard Flow Fixtures	Low Flow Fixtures / 20% Reduction in Flow Fixtures
Lighting		
Automatic Lighting Shutoff Method	Scheduled off during unoccupied hours	Scheduled off during unoccupied hours
Gross Lighted Floor Area	Varies per building	Varies per building
Interior Lighting Power Calc Method	Building Area	Building Area

General Building Information	ASHRAE 90.1-2013 Baseline	Design
Interior LPD by Building Area (W/SF)	Residential Common Areas = 0.51 W/sf	Residential Common Areas = 0.46 W/sf (10% reduction)
	Parking Garage = 0.21 W/sf	Parking Garage = 0.18 W/sf (10% reduction)
	Apartment Units = 0.51 W/sf (no credit taken)	Apartment Units = 0.51 W/sf (no credit taken)
Miscellaneous		
Receptacle Equipment	1.00 W/sf	1.00 W/sf
Escalators and Elevators	Average load = 40 HP per building	Average load = 40 HP per building
Utility Rates		
Electricity	$0.16/kWh	$0.16/kWh
Natural Gas	$1.15/therm	$1.15/therm