125 Sumner Street

East Boston, Massachusetts

Expanded Project Notification Form

February 1, 2017

submitted to the **Boston Planning and Development Agency**
submitted by **WinnDevelopment**

prepared by **Fort Point Associates, Inc.**

in association with
Lendlease
The Architectural Team
A.T. Leonard & Associates
Nitsch Engineering
Howard Stein Hudson
Goulston & Storrs
Steven Winter Associates, Inc.
Haley & Aldrich

Fort Point Associates, Inc.
Urban Planning Environmental Consulting Project Permitting

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

Chapter 1

PROJECT SUMMARY

CHAPTER 1: PROJECT SUMMARY

1.1 PROJECT IDENTIFICATION

Project Name: 125 Sumner Street

Address/Location: 125 Sumner Street, East Boston

Assessor's Parcels: The Project Site is comprised of two parcels including:

- 0105401000 (125 -131 Sumner Street)
- 0105400010 (Msgr Albert A Jacobbe Road)

1.2 PROJECT SUMMARY

WinnDevelopment Company LP (the "Proponent") proposes to construct a mixed-income, transit-oriented residential development called 125 Sumner Street (the "Project") which will replace four existing buildings owned and operated by the Boston Housing Authority (BHA) as Clippership Apartments, part of Heritage Apartments affordable housing. These buildings and an associated private road are located on a site comprised of two parcels in the Maverick Square area of East Boston totaling approximately 1.1 acre or 46,330 square feet (the "Project Site").

The four existing buildings on the Project Site house 20 units in 2-story brick masonry townhouse-style apartment buildings constructed in 1974. The Project Site is roughly bounded by Sumner Street on the north, Clipper Ship Lane on the east, Jacobbe Road (private way) and the Clippership Wharf residential development under construction on the south, and an existing 7-story residential building on the west. The Project Site is a one-block walk from MBTA Blue Line rail and bus service at Maverick Station.

The Proponent was selected as a result of an open Request for Proposals (RFP) issued in April of 2016 by the BHA, seeking developers to renovate or replace the existing buildings in order to ensure that the 20 affordable family units were preserved for the long term. These buildings currently suffer from severe dilapidation; and there is no other funding available to save them. The BHA noted in its RFP that the addition of market rate units would be acceptable as a means to support the affordable and BHA units and to create much needed housing stock for a range of incomes not otherwise being served by recent and ongoing waterfront developments.

The Proponent proposes to transform this aging housing complex, which has no financial resources of its own, into a vibrant, pedestrian-friendly, mixed-income, transit-oriented, residential development. The Project will provide approximately 20 rental apartments in one

building and 30 home ownership units in a second building for a range of incomes including affordable and middle income earners. The Project will provide approximately 19 surface parking spaces. The unit mix will include three- and four-bedroom units for the affordable rental apartments, and a mix of studio, one-, two-, and three-bedroom units for the mixed income home ownership condominiums. The Project will provide affordable units which meet and further the requirements in the City's Inclusionary Development Policy. The Project includes activated ground level retail space and a Community Room in the rental apartment building.

See Figure 1-1, Locus Plan, Figure 1-2, Existing Conditions Survey, Figure 1-3 Aerial View and Existing Conditions Photographs Key Plan, and Figure 1-4 through Figure 1-5, Existing Conditions Site Photographs.

1.3 COMMUNITY PROCESS

A Letter of Intent was filed with the Boston Planning & Development Agency (the "BPDA") on November 2, 2016 beginning the Project's formal public review process. The Proponent has met with residents, abutters, local elected officials, and area community groups, and will continue to discuss the Project with interested parties as the permitting process and design progress.

The Proponent places serious value on the community and resident's input. The residents will have and maintain a seat at the table in partnership with the Proponent and their team throughout the pre-development and design processes as well as an ongoing voice in the operation of the Project. The Proponent prides itself on long lasting partnerships with residents at similar public housing sites across the country. The Project will continue that tradition of resident partnership.

1.4 PUBLIC AND COMMUNITY BENEFITS

The Project includes the demolition of four existing, deteriorating residential public housing buildings and the construction of two sustainably designed buildings to provide affordable rental and home ownership housing units on the East Boston waterfront which will uniquely serve a range of incomes including low and middle income earners. The Project will include numerous benefits to the neighborhood and the City of Boston, including but not limited to:

- The Project will create approximately 50 new transit-oriented residential units proximate to Maverick Station.

- The creation, in Building 1, of 20 new affordable rental units for families, and the replacement, at 1:1, of the existing 20 outdated BHA units built in the 1970s which are located on the Project Site today and are in dire need of renovation.

- Building 1 will also house an approximately 1,040 sf community room, which will be made available for residents with the option for use by the community and neighborhood groups.

- In Building 2, approximately 30 new units will be constructed and sold as affordable workforce and market rate home ownership condominiums. The condominium mix represents a unique opportunity to supply much needed home ownership opportunities, affordable to a range of incomes not currently available from the other waterfront projects under development.

- The Project will satisfy the Clippership Wharf Inclusionary Development Policy off-site affordable housing requirement.

- Approximately 233 construction jobs will be created. The Proponent will adhere to all standards set forth by the Boston Residents Jobs Policy on Construction Projects.

- The Project will provide an increase in annual property taxes, a substantial increase as the Project Site is currently exempt from paying property taxes.

- The Project will provide a creative variety of unit sizes for individuals, couples, and families at a variety of incomes.

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

- The Maverick neighborhood will once again be connected to the waterfront through the creation of a private way, Havre Street Extension, which will be aligned with Havre Street. Views of Boston Harbor and the Financial District will extend deep into the neighborhood.

- The private way will provide parallel parking spaces for residents. The private way will be open to the public for pedestrian and bicycle use, connecting Sumner Street and Havre Street to the harborwalk.

- There will be a retail component in Building 1, totaling approximately 3,400 sf which will enliven the Project Site and activate the streetscape on Sumner Street.

- Promotion of Transit Oriented Development as the Project is a two minute walk to the Maverick Blue Line Station.

- The Project will create a 40 bike storage room in Building 1. Residents will be given preference; any remaining slots will be open to the public. Additional outdoor bike racks will be located on the sidewalks, by the retail location, and near the community room.

- The Project will support the City's goals for a sustainable future through the development of energy-efficient and environmentally friendly buildings that will be LEED certifiable by meeting the requirements of Article 37, Green Building, of the Boston Zoning Code.
- The Project's massing will be similar in scale to the surrounding residential buildings.
- Improved streetscape will be created along Clipper Ship Lane, Jacobbe Road and Sumner Street, including wider sidewalks, street lighting and street plantings.

These public benefits and this Project would not be possible without a large component of private funding, available only for this project.

1.5 SUMMARY OF REQUIRED PERMITS AND APPROVALS

The following table is a list of anticipated approvals for the Project.

Table 1-1: Anticipated Project Approvals

Agency	Approval
Local	
Boston Planning and Development Agency (BPDA)	• Article 80B Large Project Review • Cooperation Agreement • Boston Residents Construction Employment Plan • Affordable Housing Agreement • Green Building Report • Certificate of Compliance • Certificate of Completion
Boston Conservation Commission	• Order of Conditions
Boston Transportation Department	• Transportation Access Plan Agreement • Construction Management Plan
Boston Water and Sewer Commission	• Site Plan Approval • Sewer Connection Permit • Cross Connection Permit
Public Improvement Commission	• Specific Repair Plan Approval- Sidewalks • License, Maintenance, Indemnification Agreement • Potential Discontinuance
Inspectional Services Department	• Building Permit • Certificate of Occupancy
Boston Fire Department	• General Assembly Permit

Agency	Approval
State	
MEPA	• Certificate of the Secretary of Energy and Environmental Affairs • Public Benefits Determination (Tidelands)
Department of Environmental Protection	• Chapter 91 License • Notice of Construction • Source Registration for Sewer Discharge
Massachusetts Historic Commission	• No Adverse Effect Finding
Federal	
Environmental Protection Agency	• NPDES Construction/Stormwater General Permit • Stormwater Pollution Prevention Plan
MassDOT	• Chapter 40/54A

1.6 PROJECT TEAM

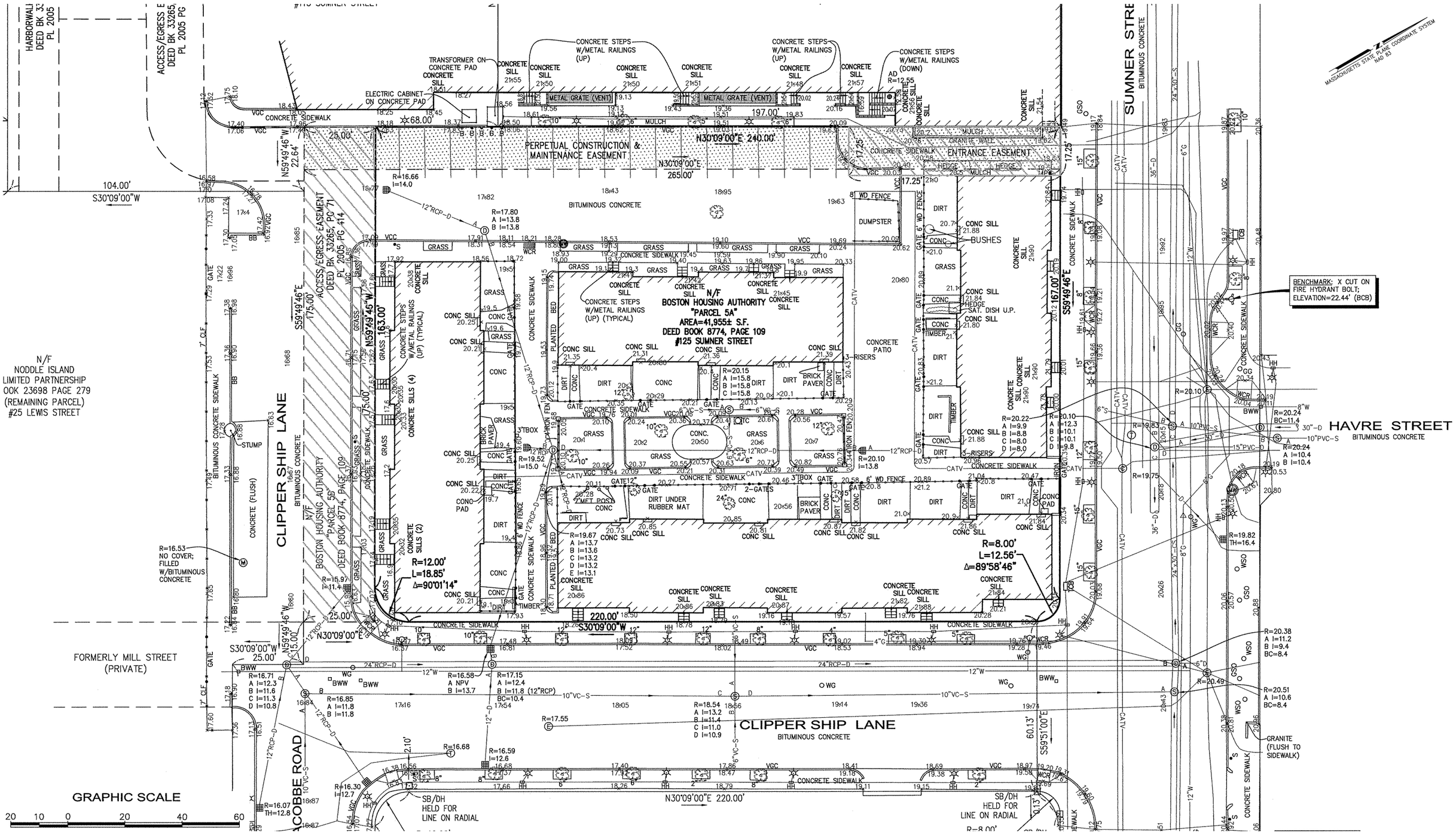
Proponent	WinnDevelopment 6 Faneuil Hall Marketplace Boston, MA 02109 Contact: Chris Fleming Senior Project Director 617-239-4580 cfleming@winnco.com
Development Advisor	Lendlease Development, Inc. 20 City Square, 2nd Floor Boston, MA 02129 Contact: Nick Iselin General Manager, Development 617-557-6417 nicholas.iselin@lendlease.com
Planning and Permitting	Fort Point Associates, Inc. 31 State Street, 3rd Floor Boston, MA 02109

	Contact: Jamie Fay President 617-357-7044 jfay@fpa-inc.com Lindsey Mac-Jones Associate Planner lmacjones@fpa-inc.com
Architect	The Architectural Team 50 Commandant's Way at Admiral's Hill Chelsea, MA 02150 Contact: Andrew Stebbins Senior Project Manager 617-889-4402 astebbins@architecturalteam.com
Landscape Architect	A.T. Leonard & Associates 675 Jones Hill Road Ashby MA 01431 Contact: Andrew Leonard Principal 978-386-1212 atl@atleonard.com
Legal	Goulston & Storrs 400 Atlantic Avenue Boston, MA 02110 Contact: Adam Hundley Director, Real Estate Practice 617-574-3540 ahundley@goulstonstorrs.com

Transportation	Howard Stein Hudson 11 Beacon Street 10th Floor, #1010 Boston, MA 02108 Contact: Brian Beisel Senior Transportation Engineer 617-348-3357 bbeisel@hshassoc.com
Civil Engineering	Nitsch Engineering 2 Center Plaza, Suite 430 Boston, MA 02108 Contact: William Maher Project Manager 857-206-8737 wmaher@nitscheng.com
Geotechnical	Haley & Aldrich 465 Medford Street Boston MA 02129 Contact: Dennis Bell Senior Engineer 617-886-7343 dbell@haleyaldrich.com
Greenhouse Gas	Steven Winter Associates 61 Washington Street Norwalk, CT 06854 Contact: Karla Butterfield Senior Sustainability Consultant 203.857.0200 x303 kbutterfield@swinter.com

East Boston, Massachusetts

Figure 1-1
Locus Plan
Source: USGS, Fort Point Associates, Inc., 2016



East Boston, Massachusetts

Figure 1-2
Existing Conditions Survey
Source: Nitsch, 2017

East Boston, Massachusetts

Figure 1-3

Aerial View and Existing Conditions Photographs Key Plan

Source: Bing Maps, Fort Point Associates, Inc., 2016

Photograph 1: View of the Site looking southeast along Sumner Street

Photograph 2: View of the Site looking southwest from Sumner Street along Clipper Ship Lane

Figure 1-4

Existing Conditions Photographs

Source: The Architectural Team, Google Street View, 2017

Photograph 3: View of the Site looking west from Clipper Ship Lane

Photograph 3: View of the Site looking northwest from the corner of Clipper Ship Lane and Jacobbe Road

Figure 1-5

Existing Conditions Photographs

Source: The Architectural Team, Google Street View, 2017

Chapter 2

PROJECT DESCRIPTION

CHAPTER 2: PROJECT DESCRIPTION

2.1 PROJECT SITE AND SURROUNDINGS

The approximately 1.1 acre Project Site is comprised of four 2-story brick masonry buildings, surface parking, and concrete walkways. The Project Site is one block west of Maverick Square, a growing commercial area characterized by many small businesses and restaurants housed in two to four story buildings with residential uses above the ground floor. Maverick Square also houses the MBTA Maverick blue line and bus station, making the Project Site a prime location for highly walkable, transit-oriented development.

A cohesive neighborhood characterized mostly by dense single and multifamily residential buildings surrounds Maverick Square and lies to the north of the Project Site. To the south lies the Clippership Wharf residential development, currently under construction, and the Boston Harbor beyond.

This neighborhood is also an exciting, emerging area of new development along the East Boston waterfront. Over 850 new units of housing have been developed nearby in recent years at Maverick Landing, Carlton Wharf, The Eddy, and Portside at East Pier. Another 950 units are under construction at Boston East, Clippership Wharf and Portside at East Pier. At least an additional 250 units are planned at 99 Sumner Street and Portside at East Pier. Major public infrastructure investments have been made in the complete renovation of the Maverick Blue Line Station and a three-phase rebuilding of LoPresti Park has just been completed. The area has been invigorated by the new residents and new investment in market rate housing, but retains one of the most diverse range of income levels of housing of any section of the City. Maverick Square and surrounding areas are seeing significant investment in new residential and commercial development.

2.2 PROPOSED PROJECT

The Project represents an exciting opportunity to deliver a quality housing solution that provides benefits to the existing residents, contributes toward the affordable housing goals of the city, and provides meaningful enhancements to the urban fabric of East Boston.

The Project calls for the demolition of the existing 20 units on site and reconfiguration to accommodate the new construction of 50 residential units in two buildings. The proposed buildings will be three-story wood-framed buildings with exterior materials and details that are compatible with the surrounding context. The building massing will also be consistent with other buildings in the area, including the Maverick Landing complex across Sumner Street. The proposed site reconfiguration will link to the urban grid at Havre Street, extending the street, and creating Havre Street Extension through the site to provide a nearly quarter-

mile view corridor to the waterfront, and allowing pedestrian access through the Project Site to the harborwalk proposed at the neighboring Clippership Wharf development.

See Figure 2-1, Project Site Plan; Figure 2-2 Ground Floor Plan; and Figure 2-3; Typical Upper Floor Plan.

2.2.1 RESIDENTIAL USES

To the west of the new private way is a 20-unit rental building, Building 1, containing replacement units for the BHA units currently occupying the site. The proposal calls for 15 3-bedroom units and 5 4-bedroom units in a walk-up flat style with unit sizes comparable to the existing units (1,180 sf for a 3-bedroom and 1,340 sf for 4-bedroom).

To the east of the new private way a 30-unit mixed-income condominium building uniquely providing much needed home ownership opportunities for low and middle income earners, Building 2, is proposed. These units, designed as walk-up flats, include a mix of Studios, 1-bedrooms, 2-bedrooms, and 3-bedrooms.

Table 2-1: Full Project Unit Summary

	Studio	1 Bed	2 Bed	3 Bed	4 Bed	Total
Ground Floor	2	3	4	4	1	14
Level Two	2	3	4	7	2	18
Level Three	2	3	4	7	2	18
Total	6	9	12	18	5	**50**

Table 2-2: Building Summary

	Residential (gsf)	Facilities of Public Accommodation (gsf)	Total (gsf)
Building One	29,189	4,809	33,998
Building Two	27,354	0	27,354
Total	56,543	4,809	**61,352**

2.2.2 GROUND FLOOR USES

The ground floor of Building 1 will contain approximately 3,400 sf of retail space fronting on Sumner Street which will enliven the Project and activate the streetscape on Sumner Street. On the opposite southern end of Building 1, the Project will provide an approximately 1,040 sf Community Room, fronted by a community patio with views to the harbor and City skyline beyond.

Open space is proposed between Building 1 and the neighboring Carlton Wharf residential building. A grilling area and community garden are envisioned for this space. The new Havre Street extension will optimize safety for residents and neighbors with one-way vehicular circulation. Clipper Ship Lane will remain the primary vehicular connection from Sumner Street to Jacobbe Road, reinforcing the private nature of Havre Street Extension.

2.2.3 PARKING AND ACCESS

Vehicular

The Project is organized around a new private roadway running through the Project Site from Sumner Street to Jacobbe Road. The proposed one-way drive, Havre Street Extension, aligns with Havre Street and will provide a new 6-block long pedestrian connection through the Project. The private way will be lined with nine parallel parking spaces for residents. Nine additional spaces located off along Jacobbe Road bring the total private parking count to 18 spaces. The 0.36 space per unit ratio provides ample parking for the project given its proximity to public transit, with the Maverick Blue Line T station a short walk away.

Pedestrian/Bicycle

A goal of the Project is to design the buildings, streets, pedestrian friendly sidewalks, and multimodal access as laid out in Boston's Complete Streets guidelines, creating a Project that aligns with the residential scale neighborhood. The buildings are connected to the sidewalks with stoops and accessible ramps, engaging the residential units with the sidewalk. The retail space has an at-grade connection with the Sumner Street sidewalk. The streets provide raised crosswalks to calm traffic, improve accessibility, and provide a more comfortable pedestrian environment.

The Project includes bike parking adjacent to each building and potential for multimodal transit options. Sidewalks of varying widths (from 5 feet to 12 feet) provide a connected pedestrian system with the surrounding neighborhood. Whether generous in width or protected with greenzone plantings, the sidewalks are intended to separate pedestrians from the moving vehicles, to connect residents to parking spaces, multimodal locations and retail options, and to allow for engagement between residents.

Greenscape zones include street trees, rain gardens, and plantings providing scale and color to the urban environment. These zones increase infiltration and improve runoff water quality. Site furniture, night sky friendly post lighting, decorative planters and signage create a sense of place for the residents.

The Project Site's improved sidewalk and street grid system will create stronger connections with the harborwalk improvements being made at the Clippership Wharf

Development to the south, which in turn are improving connectivity all along the East Boston waterfront. In addition, pedestrians and cyclists at the Project Site will have easy access to many nearby greenspaces including LoPresti Park, Lombardi Memorial Park, and Piers Park.

Accessibility

A handicapped accessible route will be provided from the accessible parking spaces into Building 1. Full access to the Community Room, Leasing Center, and retail space will be provided. There will be accessible routes to all Building 1 ground floor units, including one fully accessible unit (with hearing and visual aid devices). At Building 2, four of the ground level units will be provided with an accessible route.

The full Project Site, including outdoor amenity areas and sidewalks, will be fully accessible.

2.2.4 CONSTRUCTION PHASING AND PLAN

Construction of the Project will occur in a single phase and is estimated to commence in the fourth quarter of 2017 and occur over approximately 15-18 months.

Typical construction hours will be from 7:00 a.m. to 6:00 p.m., Monday through Friday, with most shifts ending at 3:30 p.m. No substantial sound-generating activity will occur before 7:00 a.m. If longer hours, additional shifts, or Saturday work is required, the Proponent will place a work permit request to the Boston Air Pollution Control Commission and the Boston Transportation Department ("BTD") in advance.

2.3 COMPLIANCE WITH BOSTON ZONING CODE

Zoning District

The Project Site is located entirely within the Waterfront Residential Subdistrict of the East Boston Neighborhood District (Article 53 of the Zoning Code). The Project Site is also located within an Urban Renewal Area Overlay District, but we believe the Urban Renewal Plan for this area has now expired. The site is not located in any other overlay district.

The Proponent anticipates subdividing the site into two parcels to accommodate separate ownership and financing of the apartments and condominiums, and accordingly the zoning requirements summarized immediately below will apply separate to each parcel.

Uses

Within the Waterfront Residential District, multi-family residential dwellings and ground-floor local retail businesses are permitted. Ground-floor community rooms and ground-floor

restaurants are conditional uses, and accordingly depending on the final uses of the ground floor the Project might require a conditional use permit from the Board of Appeal.

Bulk and Dimensional Requirements

The Project is expected to require relief from certain bulk and dimensional requirements applicable to projects within the Waterfront Residential Subdistrict. As described below, the Proponent anticipates requesting variances from applicable Zoning Code requirements from the Board of Appeal.

For multi-family dwellings in the Waterfront Residential Subdistrict, the minimum lot area per dwelling unit is 2,000 square feet for the first two units, and 1,000 square feet for each additional unit; the minimum lot width and minimum lot frontage are 40 feet; the maximum Floor Area Ratio (FAR) is 1.0; the maximum building height is 3 stories or 35 feet; the minimum usable open space per dwelling unit is 200 square feet; and the minimum front, side, and rear yards are 5, 5, and 10 feet, respectively. Section 53-13 of the Zoning Code addresses tidelands requirements and states that at least 40% of the ground floor of projects involving new construction must be for Facilities of Public Accommodation (FPAs), and Section 53-17 states that projects on tidelands subject to Chapter 91 must devote at least 50% of the lot area to open space.

Subject to design changes during the permitting and design review process, the Project is expected to comply with certain of these requirements, including those relating to lot width, lot frontage, and height. The Project is likely to require variances from the requirements relating to minimum lot area per dwelling unit, FAR, usable open space per dwelling unit and open space for Chapter 91 projects, and minimum yards. At least 25% of the ground floor will be devoted to FPAs as required under Chapter 91.

Parking and Loading; Other Design Requirements

Parking and loading requirements for projects within the Waterfront Residential Subdistrict are established during Large Project Review for projects subject to such review. Since the Project will undergo Large Project Review, the developer will work closely with BPDA staff and others to address parking and loading needs for the Project. The Proponent will also work closely with BPDA design staff to ensure the Project complies with the design standards and requirements set forth in Sections 53-19 and 53-51 through 53-54 of the Zoning Code.

2.4 PROJECT ALTERNATIVE

The Proponent is exploring, at a preliminary level, a project alternative which would include a small sliver of Clipper Ship Lane as a third Project Site parcel, by discontinuance. This would increase the width of the Project Site by approximately five feet. In this alternative, the design of the two buildings would remain consistent with what is presented in this document. The footprint of the buildings would shift two to three feet to the east, allowing

for more generous sidewalks on Havre Street Extension and a landscape buffer along Clipper Ship Lane. The Proponent feels this alternative would also be beneficial to the neighborhood fabric as it would narrow the width of Clipper Ship Lane, bringing it more in line with the general street widths in the surrounding area.

If this alternative should move forward as a possibility, the Proponent will consult with the BPDA to address the resulting landscape and streetscape changes.

East Boston, Massachusetts

Figure 2-1
Project Site Plan
Source: The Architectural Team, 2016

Figure 2-2
Ground Floor Plan
Source: The Architectural Team, 2017

Figure 2-3
Typical Upper Level Floor Plan
Source: The Architectural Team, 2017

Chapter 3

URBAN DESIGN

CHAPTER 3: URBAN DESIGN

3.1 INTRODUCTION

The Project Site is located in a dense neighborhood of East Boston, approximately a block west of the Maverick MBTA station. Directly to the west of the Project Site is Carlton Wharf, a six-story building clad in brick with metal panel; to the east is Heritage Apartments a four-story brick building; to the north are 3-story rowhouses which are a mix of residential and small commercial buildings clad in a combination of brick and horizontal clapboards; bordering to the south is the Clippership Wharf development site with views of Boston Harbor and the City beyond.

The existing Clippership Apartments, which occupy the Project Site today are not connected to the surrounding urban fabric, and block access to the water's edge. In contrast, the Project will engage both the urban context and the waterfront in a meaningful way. The primary move to accomplish this is the extension of the existing street grid through the site by aligning Havre Street Extension and flanking this new private way with two new buildings. This street extension will open up the Project Site and provide a nearly quarter mile long connection that currently does not exist, from the interior of East Boston to the waterfront.

3.2 MASSING

The proposed design reinforces the existing scale and pattern of the surrounding neighborhood. Though the immediately adjacent buildings south of Sumner Street are taller than the Project, the proposed three-story massing is consistent with the majority of the buildings in the area, including those along Havre Street. The relationship of the adjacent buildings with the proposed three-story massing will reinforce the role of the Project in creating an extension of Havre Street.

The proposed building massing of the Project relates to the program and site conditions at this unique urban location adjacent to East Boston's waterfront. The north end of the Project Site is an urban edge bordering Sumner Street; a street lined with buildings at the sidewalk edge. The south end of the Project Site is a waterfront edge that fronts the harbor with views to the City beyond. The proposed massing of the Project will respond to these two disparate conditions of the Project Site.

Building 1 (rental building) massing is categorized by raised parapets on each short end of the building to distinguish the edges and to mark the importance of the public use spaces located at the ground level. Residential entries are located within recesses located mid-block along the private way. At the urban edge on Sumner Street, the building is located at,

and directly accessible to, the public sidewalk. At the waterfront side, the building is set back from the Project Site boundary allowing for a public patio that will be directly accessed from the Community Room.

Building 2 (condo building) massing makes a gesture to the importance of each end of the Project Site as well as Havre Street Extension. The building is conceived as having two ends with a series of repetitive projecting bays along the private way. These angled bays reach out to capture water views and stand in contrast to the rectilinear projections at either end. The projections create a sense of movement. At Sumner Street, the projection at the corner of the private way reaches out in both directions with a tilted roof line to mark the entrance of Havre Street Extension. At the southern end, a projecting bay frames the view back through the private drive and provides a book end to the saw-tooth repetition that occurs mid-block. Similarly to Building 1, residential entrances are located within recesses along the new private way. From Clipper Ship Lane, the cadence of the building's interior layout is expressed with the building's undulation in plan and in elevation with a change of parapet heights. Building 2 is set back from the Sumner Street sidewalk and the interior floor elevation is raised above the street level which is an intentional departure from Building 1's more direct engagement with the public domain through its retail presence.

See Figures 3-1 through 3-5, Perspective Views.

3.3 CHARACTER AND MATERIALS

The proposed use of exterior materials will provide each building with their own identity, but will also relate to existing buildings in the neighborhood. Building 1 is designed to read as a single entity with consistent detailing used around all facades of the building. Canopies will line the retail area along Sumner Street and the water-side facade of the Community Room. The canopies will not only provide shelter but will also mark the areas open to the public. The Building 2 exterior treatment will utilize a cement fiber panel rainscreen system. The proposed color and coursed layout of the panels allude to the masonry clad buildings that exist to either side of the Project and in the neighborhood generally.

The materials on Building 2 respond directly to the massing by reinforcing the identity of the stacked unit configurations and entrance locations. This material hierarchy achieves an intimate scale along the street, compatible with the existing neighborhood context. Articulation in the cladding, such as color and pattern, will enrich the facades and further emphasize the intimate scale of the buildings.

See Figures 3-6 and 3-7, Building Elevations.

3.4 LANDSCAPE AND STREETSCAPE

The landscape of the Project Site is conceived with two strategies: planting of the frontage zones along the building foundations and common spaces dedicated to the use and enjoyment of the residents. The plantings along the frontage zones, the area between sidewalk and building façade, add color to the street, ground the buildings, and create attractive visual edges that separate the public space from the units. The plantings will be drought tolerant, non-invasive, selected for sun/shade conditions, and, whenever possible, native species.

The common spaces frame the south and west sides of Building 1 and are directly connected to the common amenity spaces of Building 1. The common spaces include an elevated social terrace with a variety of site furnishings and planters overlooking the Harbor, a colorful perennial and ornamental grass garden border to the social terrace, a grilling patio with dining tables and built in grills, tables and chairs in a more quiet and shaded area, and a community garden in and among the seating areas. The common spaces are intended to serve a series of small clusters of residents or a larger community gathering.

Stairs and accessible ramps connect the common spaces and units to the streetscape. Stairs and ramps are distributed not only to provide proper access and egress to and from the building but also to maintain a strong planting edge in the frontage zones.

See Figure 3-8, Landscape Plan; Figure 3-9, Preliminary Hardscape Palette; and Figure 3-10, Preliminary Plant Palette.

3.4.1 STREETSCAPES

A goal of the Project is to design the buildings, streets, pedestrian friendly sidewalks, and multimodal access as laid out in Boston's Complete Streets guidelines, creating a Project that aligns with the residential scale neighborhood. The buildings are connected to the 5' minimum clear (8' average) concrete sidewalks with stoop like stairs and accessible ramps, engaging the residential units with the sidewalk. Proposed street trees in tree grates scale the streetscape and separate the vehicle from the pedestrian. City-standard post lighting lines the streets in a pattern with the street trees.

The retail space has an at grade connection with the Sumner Street sidewalk. The Sumner Street sidewalk protects the street trees while adding site furniture, planters, event boards, and bike racks to create an engaging pedestrian-scale public sidewalk space adjacent to the retail space.

The Project will provide raised crosswalks on the streets to calm traffic, improve accessibility, and provide a more comfortable pedestrian environment. Rain

gardens are proposed at the southern end of Havre Street Extension and Clipper Ship Lane to assist in silt removal to decrease stormwater run-off velocity.

3.4.1.1 PARKING

Proposed street parking for the Project relates to the urban condition in which it is located. Along the one-way Havre Street Extension, nine parallel parking spaces, typical of street parking, will be provided. From the extension to the end of the two-way portion of Jacobbe Road, there will be eight perpendicular spaces. This perpendicular parking will include accessible spaces to provide access to the Community Room, Leasing Center, and residential entrance.

3.5 CONSISTENCY WITH AREA PLANS

3.5.1 EAST BOSTON MUNICIPAL HARBOR PLAN

The East Boston Municipal Harbor Plan Amendment (EBMHPA), was submitted by the BPDA on May 18, 2008 and approved on March 4, 2009. The EBMHPA included substitute provisions for 6-26 New Street, Boston East and 125 Sumner Street (The Project). The Project was included in the amendment specifically to provide relief from the requirement of 100% ground floor public uses for projects located on Commonwealth tidelands.

The Project will meet the EBMHPA requirement that a minimum of 25% of the ground floor (excluding upper floor accessory uses) of any development on the Project Site be used for Facilities of Public Accommodation (FPA). The 25% FPAs will be located on the ground floor to promote public use and enjoyment of the Project Site. The location of the FPAs on Sumner Street along the Havre Street corridor will serve to draw the public to the Project Site and anchor the Havre Street pedestrian connection to the waterfront. The Community Room space at the seaward end of the building will also help to draw the public into the site and activate the water-facing edge of the building.

3.5.2 EAST BOSTON MASTER PLAN

The East Boston Master Plan Amendment (EBMP) was released by the BPDA in April of 2000. The Project will directly address a number of this plan's key concerns. By improving the urban design character of the Project Site and improving its connection to the waterfront and the rest of East Boston. The Project will contribute to the ongoing revival of the East Boston waterfront. Providing new retail space along Sumner Street will expand and enhance the neighborhood's commercial center. By providing additional housing opportunities, including affordable units, the Project will strengthen the residential neighborhood of East Boston.

Additionally, the Project will improve the streetscape and add new open space and community programming.

East Boston, Massachusetts

Figure 3-1
Aerial Perspective
Source: The Architectural Team, 2017

East Boston, Massachusetts

Figure 3-2
Perspective- View down Havre Street Extension
Source: The Architectural Team, 2017

East Boston, Massachusetts

Figure 3-3
Perspective- View from Sumner Street
Source: The Architectural Team, 2017

East Boston, Massachusetts

Figure 3-4
Perspective- View from Sumner Street
Source: The Architectural Team, 2017

East Boston, Massachusetts

Figure 3-5
Perspective- View from Harborwalk
Source: The Architectural Team, 2017

Havre Street Extension Elevation

Sumner Street Elevation

Rear Elevation

South Elevation

Figure 3-6
Building 1 Elevations
Source: The Architectural Team, 2017

Clipper Ship Lane Extension Elevation

Sumner Street Elevation

Havre Street Extension Elevation

South Elevation (Jacobbe Road)

Figure 3-7
Building 2 Elevations
Source: The Architectural Team, 2017

Figure 3-8
Landscape Plan
Source: A.T. Leonard & Associates, 2017

East Boston, Massachusetts

Figure 3-9
Preliminary Hardscape Palette
Source: A.T. Leonard & Asociates, 2017

Gleditsia triacanthos - Honey Locust

Quercus rubra - Red Oak

Buxus sempervirens - Boxwood

Clethra alnifolia - Summersweet

Fothergilla gardenii - Dwarf Fothergilla

Hosta

Tiarella cordifolia - Foam Flower

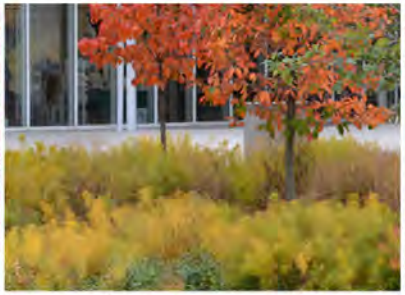
Liriope spicata - Creeping Lilyturf

Rudbeckia goldstrum - Black-eyed Susan

Nepeta x faassenii 'Walkers Low' - Catmint

Phlox subulata - Creeping Phlox

Echinacea purpurea - Purple Coneflower



Amsonia huberecti - Blue Star

Calamagrostis - Feather Reed Grass

Figure 3-10
Preliminary Plant Palette
Source: A.T. Leonard & Asociates, 2017

Chapter 4

SUSTAINABLE DESIGN

CHAPTER 4: SUSTAINABLE DESIGN

4.1 SUSTAINABLE DESIGN

Sustainability is an important factor in every design decision. Enduring and efficient buildings conserve embodied energy and preserve natural resources. The 125 Sumner Street Project Team embraces the opportunity to positively influence the urban environment. Its urban location takes advantage of existing infrastructure while convenient access to public transportation will reduce dependence on single occupant vehicle trips and minimize transportation impacts.

The Proponent and the project team are committed to an environmentally sustainable design approach and are using the LEED for Homes Low Rise Version 4 ("LEED v4") rating systems to track sustainability measures. The Project's proposed LEED rating will exceed Boston's Green Building standard.

A preliminary LEED score card targeting 71.5 of 110 credits indicates that the Project is on target to meet all prerequisites and be certifiable at Gold Level. The Project incorporates site factors, water, energy, material efficiency, good indoor air quality, climate change, and resiliency practices in alignment with the LEED v4 rating system as outlined in the sustainability narrative below.

See Figures 4-1 through 4-3, LEED Checklist.

4.2 ARTICLE 37/LEED COMPLIANCE

4.2.1 INNOVATION & DESIGN PROCESS

The LEED v4 process rewards and facilitates an Integrated Design Approach. In addition to the Proponent, the project team includes the architect, mechanical engineer, civil engineer, landscape architect, energy rater, and structural engineer. During a full day design charrette, representatives from these technical skill sets will collaborate for a more energy efficient and sustainable project.

4.2.2 LOCATION AND LINKAGES

The Project has several attributes highlighted in this category. The site has existing infrastructure and proximity to playing fields and neighborhood amenities which will allow future residents to procure goods and services without relying on automobile transportation. Maverick Station, an MBTA hub, providing subway and bus service is within ¼ miles of the site. Because flooding is the most common disaster in the

United States and this site borders FEMA's high risk area, a comprehensive resiliency plan includes the following strategies: residential ground floors are designed 3 feet above flood plain elevation, electrical and mechanical equipment will be raised above flood plain elevation, and no elevators are being installed.

4.2.3 SUSTAINABLE SITES

In addition to satisfying mandates for erosion protections and avoidance of invasive species, the Project will target native plantings and no turf to limit reliance on irrigation. Storm water management in a lot to lot urban design context can be a challenge; the Project goal will be to infiltrate one-inch of stormwater run-off from impervious areas into the ground. The project may seek additional credits under this section if more rainwater can be captured.

4.2.4 WATER EFFICIENCY

Although the Site will have limited landscaping, the project is targeting highly efficient irrigation systems with zone-specific controls, sub-metering, and weather-informed controllers. Indoor water efficiency will be realized through 1.5 gallon per minute (gpm) bathroom faucets or aerators, 1.75 gpm showerheads and 1.28 gpf toilets; where appropriate, fixtures will be Water Sense Labeled. In addition, ENERGY STAR household appliances will be installed for water savings as well as energy savings.

4.2.5 ENERGY & ATMOSPHERE

Energy modeling was performed on a sample set of apartments with varying orientations, locations and plan layouts. Strategies for energy savings include a high performance envelope, new ENERGY STAR compliant heating, cooling, and domestic hot water equipment, and LED lighting with occupancy controls/bi-level function in back-of house spaces, stairwells, and corridors.

For the purpose of whole building energy prediction, REM/Rate software was used to demonstrate compliance with the Mass UDRH (2016). Preliminary energy modeling on a sample of units was also completed; a worse case apartment demonstrates a 22% Normalized Consumption (kBtu/sf floor area/yr) savings compared to baseline.

Reducing greenhouse gases is critical to achieving the goals of Housing Boston 2030. The Project modeling predicts 40% reduction in the source energy consumption and total emissions reduction of 34% to 52%. To ensure continued building performance and long term sustainable performance, tenant and building management training will be conducted at occupancy and turn over.

4.2.6 MATERIALS & RESOURCES

Water management and durability will be met through enhanced building enclosure, component systems, and material selection. As an Energy Star v3 project, the water management system builder checklist will be used as a guide and verification tool. Resource efficiency will be met by specifying and installing materials of recycled content and locally sourced when available. A construction waste management plan includes off site sorting construction debris with a goal of reducing waste by recycling 60% of debris.

4.2.7 INDOOR ENVIRONMENTAL QUALITY

Good indoor air quality begins with great ventilation. Individual bathroom exhaust fans will be ENERGY STAR-labeled running on demand with a 20 minute timer to ensure complete removal of moisture and contaminants. Ventilation will meet the minimum requirements of ASHRAE 62.2, 2010 for bathroom, kitchen, and whole-house ventilation. Apartments will each have heat recovery ventilators (HRV) to provide tempered, fresh air while common areas and corridors will meet ASHRAE 62.1, 2010 ventilation requirements. All combustion equipment will be directly exhausted to the outside and hard-wired carbon monoxide detectors will be installed to protect against accidental occupant introduction of dangerous gases through combustion. There are no attached garages or installed fireplaces both of which are common sources of pollutants and emphasis is placed on air sealing common partitions to ensure compartmentalization. While low emitting materials and finishes will be specified, the project team is also considering post-construction, pre-occupancy air quality testing for the following contaminants: formaldehyde, TVOCs, CO, ozone, particulates, and CDPH targeted chemicals.

4.2.8 INNOVATION AND REGIONAL PRIORITY

As a component to overall well-being of its residents, the project team will incorporate additional strategies, if feasible, such as access to community gardening and/or radon mitigation in zone 3.

4.2.9 CLEAN AND RENEWABLE ENERGY ANALYSIS

Combined heat and power is not feasible for this Project where domestic hot water, heating and cooling are unitary. Each building is approximately 30,000 sf and the apartments will be individually metered. Natural gas will be utilized for domestic hot water and heating with 97% EF tank-less units to small fan coil units distributing through a ducted system. SEER 15 condensers, per apartment, will provide cooling.

Photovoltaic panels may be feasible for the common and supportive areas in Building 1; the Proponent will explore the feasibility of solar PV as the Project design process continues.

4.2.10 ENERGY EFFICIENCY ASSISTANCE

MassSave's low-rise new construction program offers incentives for projects exceeding the Massachusetts Stretch Code. While the base line (User Defined Reference Home) is anticipated to change on January 1, 2017, preliminary modeling for this project exceeds 15% savings to qualify for tier I incentives at $650/unit, or $32,500 for the entire Project.

4.2.11 CREDIT NARRATIVES

In addition to meeting all mandatory LEED pre-requisites, the Project will be designed and constructed in accordance with certain LEED credits worth a total of 71.5 points. The specific credits that the Project will address in order to achieve LEED Gold certification are described below:

- IPc Integrative Process, 2 of 2: The project team will meet and conduct a full-day design charrette workshop to review sustainable design goals and targets and ensure the entire project team is integrated and engaged around the Project's LEED goals throughout design development. Prior to construction, contractors will be required to participate in at least eight hours of trades training on the green aspects of the project.

- LTc Site Selection, 7 of 8: The Project earns 4 points as a previously developed area and an additional 2 points as an infill development. One additional point is earned for the project's proximity (less than ½ mile) to open space of at least ¾ acre.

- LTc Compact Development, 3 of 3: The Project's density (dwelling units per acre) will be approximately 61 dwelling units per acre of buildable land, earning the project 3 points.

- LTc Community Resources, 2 of 2: There are 26 community resources within a ½ mile walking distance of the property, earning the Project 2 points under this LEED credit.

- LTc Access to Transit, 2 of 2: The residents of the Project will have access to more than 500 weekday transit trips and 339 weekend transit trips, earning the project 2 points under this credit category.

- SSc Heat Island Reduction, 1 of 2: The Project's Energy Star qualified roof will be awarded 1 point for reducing the heat island effect.

- SSc Nontoxic Pest Control, 1 of 2: The Project will seal all external cracks, joints, penetrations, edges, and entry points with appropriate caulking to prevent pest entry during and after construction. An additional ½ point will be earned for discharging water at least 24 inches away from the foundation.

- WEc Indoor Water Use, 3 of 6: All lavatory faucets, showerheads, and toilets will be WaterSense labeled to reduce water consumption. In addition, clothes washers will be ENERGY STAR qualified.

- WEc Outdoor Water Use, 4 of 4: 100% of the new plants that will be planted at the Project will be native or adaptive species.

- EAc Annual Energy Use, 23 of 29: As demonstrated in the preliminary energy modeling outputs attached hereto, the Project's anticipated HERS score is 52. This HERS index indicates the units at the Project are expected to perform much more efficiently than an average home, earning the project 23 points for this LEED credit.

- EAc Efficient Hot Water Distribution System, 2 of 5: DHW pipe insulation will be R-5 for two points.

- EAc Advanced utility Tracking, 1 of 2: Owner and/or tenant utilities will be tracked and shared with USGBC via a third-party.

- EAc HVAC Start-Up Credentialing, 1 of 1: The HVAC contractor will have North American Technician Excellence certification and will complete the appropriate ENERGY STAR for Homes quality installation checklists at start-up to ensure HVAC systems operate at peak efficiency and to reduce energy consumption.

- MRc Durability Management Verification, 1 of 1: The project team will follow the ENERGY STAR for Homes version 3 water management system builder checklist for all applicable measures. The checklist will be verified by a third party to earn 1 credit for this criterion.

- MRc Environmentally Preferable Products, 2 of 4: Materials and Resources points may be awarded for the Project for utilizing locally produced aggregate for concrete and foundation work, locally produced drywall and interior sheathing, and insulation composed of recycled content.

- MRc Material-Efficient Framing, 0.5 of 2: At least 90% of headers will be sized for actual loads and at least 90% of two-stud corners will be used.

- EQc Contaminant Control, 1 of 2: During construction, permanent ducts and vents will be sealed to prevent the entry of dust and particles. Prior to occupancy, the building will be flushed to improve indoor air quality. Finally, walk-off mats in building entryways will be permanently installed.

- EQc Balancing of Heating and Cooling Distribution Systems, 3 of 3: Fan coil units will be tested and balanced prior to occupancy.

- EQc Combustion Venting, 2 of 2: No fireplaces or woodstoves will be installed at the Project.

- EQc Enhanced Garage Pollutant Protection, 2 of 2: No garage will be constructed as part of this Project.

- EQc Low-Emitting Products, 1 of 3: The Project plans to use low-emitting paints, flooring, adhesives and sealants, and low or non-emitting formaldehyde wood products.

- INc Innovation, 3 of 5: The Project may earn additional points for certain innovative project characteristics which may include its proximity to community resources, project density, radon mitigation, and integrative design process.

- RPc Regional Priority, 4 of 4: In accordance with USGBC's Regional Priority Credit library, the proposed location of the Project in East Boston will earn LEED points related to community resources, site selection, and compact development.

LEED BD+C: Homes and Multifamily Lowrise v4 - LEED v4

125 Sumner Street Scorecard

Note: The information on this tab is READ-ONLY. To edit this information, see the Credit Category tabs.

Integrative Process		**Preliminary**	Y	2 of 2	M	*0*	**Verified**	0
IPc	**Integrative Process**			2 of 2		*0*		
Location and Transportation		**Preliminary**	Y	14 of 15	M	*0*	**Verified**	0
LTp	Floodplain Avoidance			Required				Not Verified
Performance Path								
LTc	LEED for Neighborhood Development			0 of 15		*0*		
Prescriptive Path								
LTc	Site Selection			7 of 8		*0*		
LTc	Compact Development			3 of 3		*0*		
LTc	Community Resources			2 of 2		*0*		
LTc	Access to Transit			2 of 2		*0*		
Sustainable Sites		**Preliminary**	Y	2 of 7	M	*0*	**Verified**	0
SSp	Construction Activity Pollution Prevention			Required				Not Verified
SSp	No Invasive Plants			Required				Not Verified
SSc	Heat Island Reduction			1 of 2		*0*		
SSc	Rainwater Management			0 of 3		*0*		
SSc	Nontoxic Pest Control			1 of 2		*0*		
Water Efficiency		**Preliminary**	Y	7 of 12	M	*0*	**Verified**	0
WEp	Water Metering			Required				Not Verified
Performance Path								
WEc	Total Water Use			0 of 12		*0*		
Prescriptive Path								
WEc	Indoor Water Use			3 of 6		*0*		
WEc	Outdoor Water Use			4 of 4		*0*		

Figure 4-1
LEED Checklist
Source: Steven Winters Associates, Inc., 2017

Energy and Atmosphere		**Preliminary**	Y	27 of 38	M	*0*	**Verified**	0
EAp	Minimum Energy Performance			Required				Not Verified
EAp	Energy Metering			Required				Not Verified
EAp	Education of the Homeowner, Tenant or Building Manager			Required				Not Verified
Performance Path								
EAc	Annual Energy Use			23 of 29		*0*		
Performance and Prescriptive Paths								
EAc	Efficient Hot Water Distribution System			2 of 5		*0*		
EAc	Advanced Utility Tracking			1 of 2		*0*		
EAc	Active Solar-Ready Design			0 of 1		*0*		
EAc	HVAC Start-Up Credentialing			1 of 1		*0*		
Prescriptive Path								
EAp	Home Size			Required				Not Verified
EAc	Building Orientation for Passive Solar			0 of 3		*0*		
EAc	Air Infiltration			0 of 2		*0*		
EAc	Envelope Insulation			0 of 2		*0*		
EAc	Windows			0 of 3		*0*		
EAc	Space Heating & Cooling Equipment			0 of 4		*0*		
EAc	Heating & Cooling Distribution Systems			0 of 3		*0*		
EAc	Efficient Domestic Hot Water Equipment			0 of 3		*0*		
EAc	Lighting			0 of 2		*0*		
EAc	High-Efficiency Appliances			0 of 2		*0*		
EAc	Renewable Energy			0 of 4		*0*		
Materials and Resources		**Preliminary**	Y	3.5 of 10	M	*1*	**Verified**	0
MRp	Certified Tropical Wood			Required				Not Verified
MRp	Durability Management			Required				Not Verified
MRc	Durability Management Verification			1 of 1		*0*		
MRc	Environmentally Preferable Products			2 of 4		*1*		
MRc	Construction Waste Management			0 of 3		*0*		
MRc	Material-Efficient Framing			0.5 of 2		*0*		

Figure 4-2
LEED Checklist Continued
Source: Steven Winters Associates, Inc., 2017

Indoor Environmental Quality		**Preliminary**	Y	9 of 16	M	*3*	**Verified**	0
EQp	Ventilation			Required				Not Verified
EQp	Combustion Venting			Required				Not Verified
EQp	Garage Pollutant Protection			Required				Not Verified
EQp	Radon-Resistant Construction			Required				Not Verified
EQp	Air Filtering			Required				Not Verified
EQp	Environmental Tobacco Smoke			Required				Not Verified
EQp	Compartmentalization			Required				Not Verified
EQc	Enhanced Ventilation			0 of 3		*0*		
EQc	Contaminant Control			1 of 2		*1*		
EQc	Balancing of Heating and Cooling Distribution Systems			3 of 3		*0*		
EQc	Enhanced Compartmentalization			0 of 1		*0*		
EQc	Combustion Venting			2 of 2		*0*		
EQc	Enhanced Garage Pollutant Protection			2 of 2		*0*		
EQc	Low-Emitting Products			1 of 3		*2*		
Innovation		**Preliminary**	Y	3 of 6	M	*5*	**Verified**	0
INp	Preliminary Rating			Required				Not Verified
INc	Innovation			3 of 5		*4*		
INc	LEED Accredited Professional			0 of 1		*1*		
Regional Priority		**Preliminary**	Y	4 of 4	M	*0*	**Verified**	0
RPc	Regional Priority			4 of 4		*0*		

Point Floors	
The project earned at least 8 points total in Location and Transportation and Energy and Atmosphere	No
The project earned at least 3 points in Water Efficiency	No
The project earned at least 3 points in Indoor Environmental Quality	No

Total		**Preliminary**	Y	71.5 of 110	M	9	**Verified**	0

Certification Thresholds Certified: 40-49, Silver: 50-59, Gold: 60-79, Platinum: 80-110

Figure 4-3
LEED Checklist Continued
Source: Steven Winters Associates, Inc., 2017

Chapter 5

TRANSPORTATION

CHAPTER 5: TRANSPORTATION

5.1 INTRODUCTION

Howard Stein Hudson (HSH) has conducted an evaluation of the transportation impacts of the Project. This study includes an evaluation of the existing condition, future conditions with and without the Project, projected parking demand, loading operations, transit services, pedestrian and bicycle activity, and construction-period impacts.

5.1.1 PROJECT DESCRIPTION

The Project Site is located along Sumner Street in the East Boston neighborhood. The Project Site is bounded by Clipper Ship Lane to the east and south, Sumner Street to the north, and a residential building (119 Sumner Street, Carlton Wharf) to the west. The Project Site currently has four 2 story brick buildings with a total of 20 income restricted residential apartment units.

The Project includes the construction of two buildings that will replace the 20 existing income restricted residential units, with a total of 50 new residential units and approximately 3,400 sf of ground floor retail space. The Project will also include the construction of a new roadway connection between Sumner Street and Jacobbe Road through the middle of the Project Site. This new roadway will be located opposite of Havre Street and will be called Havre Street Extension. The Project will include 18 surface parking spaces and secure storage for approximately 40 bicycles, as well as publically accessible bicycle storage for visitors.

5.1.2 STUDY AREA

The study area includes intersections along Meridian Street, Maverick Street, and Sumner Street in the vicinity of the Project Site. As shown in Figure 5-1, the study area includes the following fourteen intersections:

- Sumner Street/London Street (unsignalized);
- Sumner Street/Havre Street (unsignalized);
- Sumner Street/Clipper Ship Lane (unsignalized);
- Sumner Street/Paris Street (unsignalized);
- Sumner Street/Maverick Square/Chelsea Street (signalized);

- Sumner Street/Bremen Street (unsignalized);
- Maverick Street/Bremen Street (unsignalized);
- Meridian Street/Chelsea Street/Maverick Street/Maverick Square (unsignalized);
- Maverick Street/Paris Street (unsignalized);
- Maverick Street/Havre Street (unsignalized);
- Maverick Street/London Street (unsignalized);
- Meridian Street/Paris Street/Emmons Street (unsignalized);
- Meridian Street/Havre Street/Decatur Street/Gove Street (unsignalized); and
- Meridian Street/London Street (unsignalized).

5.1.3 STUDY METHODOLOGY

This transportation study and supporting analyses were conducted in accordance with Boston Transportation Department (BTD), Boston Planning and Development Agency (BPDA), Massachusetts Department of Transportation (MassDOT), and MEPA guidelines and is described below.

This transportation study adheres to BTDs Transportation Access Plan Guidelines and the BPDA Article 80 development review process. However, after discussions with the BTD, it was decided that the study would follow a streamlined approach. The study will use the Clippership Wharf February 2015 Notice of Project Change (NPC) Build Condition as the baseline for this traffic study. The expected traffic generated by the proposed Project has been added to the Baseline Condition to determine the Clippership Apartments Build Condition.

The future transportation conditions analysis evaluates potential transportation impacts associated with the Project. Long-term impacts are evaluated for the year 2020 including the following scenarios:

- The Baseline Condition includes both general background traffic growth and traffic growth associated with specific developments that are planned in the vicinity of the Project Site, as well as transportation infrastructure improvements in the study area. For the purpose of this study, per discussions with BTD, the Baseline Condition is based on the Clippership Wharf Build (2020) Condition from the February 2015 NPC.

- The Build Condition includes Project-generated traffic volume estimates added to the traffic volumes from the Baseline Condition. Additionally, site access, loading, and parking are discussed as part of the Build Condition.

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

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

5.2 EXISTING CONDITION

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

5.2.1 EXISTING ROADWAY CONDITIONS

The study area roadways are described below. The descriptions reflect functional classifications by the MassDOT Highway Division's Office of Transportation Planning.

Sumner Street is a two-way, two-lane roadway located to the north of the Project Site. Sumner Street is classified as an urban minor arterial roadway to the east of Maverick Square and as an urban local roadway to the west of Maverick Square under BTD jurisdiction. Sumner Street runs predominately in the east-west direction between the Boston Harbor Street to the east and New Street to the west. Within the study area, on-street parking and sidewalks are provided on both sides of the roadway.

London Street is a one-way southbound, one-lane roadway located to the northwest of the Project Site. London Street is classified as an urban local roadway under BTD jurisdiction that runs predominately in the north-south direction between Bennington Street to the north and Sumner Street to the south. Within the study area, on-street parking and sidewalks are provided along both sides of the roadway.

Havre Street is a one-way northbound, one-lane roadway located to the northwest of the Project Site. Havre Street is classified as an urban local roadway under BTD jurisdiction that runs predominately in the north-south direction between Route 1A to the north and Sumner Street to the south. Within the study area, on-street parking and sidewalks are provided along both sides of the roadway.

Clipper Ship Lane is a two-way, two lane roadway located to the north of the Project Site. Clipper Ship Lane is classified as an urban local roadway under BTD jurisdiction that runs in a predominately north-south direction between Sumner Street to the north and Father Jacobbe Road to the south. At Father Jacobbe Road, Clippership lane turns 90 degrees to the west and runs in the east-west direction until it dead ends.

Paris Street is a one-way southbound, one-lane roadway located to the northwest of the Project Site. Paris Street is classified as an urban local roadway under BTD jurisdiction that runs predominately in the north-south direction between Porter Street to the north and Sumner Street to the south. Within the study area, on-street parking and sidewalks are provided along both sides of the roadway.

Meridian Street is a two-way, two-lane roadway located to the north of the Project Site. Meridian Street is classified as an urban minor arterial roadway under BTD jurisdiction that runs predominately in the southeast-northwest direction between the Andrew McArdle Bridge to the north and Maverick Square to the south. Within the study area, on-street parking and sidewalks are provided along both sides of the roadway.

5.2.2 EXISTING INTERSECTION CONDITIONS

Sumner Street/London Street is a four legged, unsignalized intersection with three approaches. The Sumner Street eastbound approach is a free movement and consists of one lane, a shared through/right-turn lane. The Sumner Street westbound approach is a free movement and consists of one lane, a shared left-turn/through lane. The London Street southbound approach is stop controlled and consists of one lane, a shared left-turn/through/right-turn lane. On-street parking is provided on all approaches to the intersection. Crosswalks and wheelchair ramps are provided across Sumner Street eastbound approach and the London Street southbound approach.

Sumner Street/Havre Street is a three legged, unsignalized intersection with two approaches. The Sumner Street eastbound approach is a free movement and consists of one lane, a shared left-turn/through lane. The Sumner Street westbound approach is a free movement and consists of one lane, a shared through/right-turn lane. On-street parking is provided on all approaches to the intersection. Crosswalks and wheelchair ramps are provided across the Sumner Street eastbound approach and the Havre Street southbound approach.

Sumner Street/Clipper Ship Lane is a three legged, unsignalized intersection with three approaches. The Sumner Street eastbound approach is a free movement and consists of one lane, a shared through/right-turn lane. The Sumner Street westbound approach is a free movement and consists of one lane, a shared left-turn/through lane. The Clippership Lane northbound approach is stop controlled and consists of one

lane, a shared left-turn/right-turn lane. On-street parking is provided on all approaches to the intersection. Crosswalks and wheelchair ramps are only provided across the Clippership Lane northbound approach. The crosswalk is extremely faded.

Sumner Street/Paris Street is a three legged, unsignalized intersection with three approaches. The Sumner Street eastbound approach is a free movement and consists of one lane, a through only lane. The Sumner Street westbound approach is a free movement and consists of one lane, a through only lane. The Paris Street southbound approach is stop controlled and consists of one lane, a shared left-turn/right-turn lane. Crosswalks and wheelchair ramps are provided across all approaches to the intersection.

Maverick Street/Paris Street is a four legged, unsignalized intersection with two approaches. The Maverick Street westbound approach is stop controlled and consists of one lane, a shared left-turn/through lane. The Paris Street southbound approach is stop controlled and consists of one lane, a shared through/right-turn lane. On-street parking is provided on all approaches to the intersection. Crosswalks and wheelchair ramps are provided across all approaches to the intersection.

Maverick Street/Havre Street is a four legged, unsignalized intersection with two approaches. The Maverick Street westbound approach is stop controlled and consists of one lane, a shared through/right-turn lane. The Havre Street northbound approach is stop controlled and consists of one lane, a shared left-turn/through lane. On-street parking is provided on all approaches to the intersection. Crosswalks and wheelchair ramps are provided across all approaches to the intersection.

Maverick Street/London Street is a four legged, unsignalized intersection with two approaches. The Maverick Street westbound approach is a free movement and consists of one lane, a shared left-turn/through lane. The London Street southbound approach is stop controlled and consists of one lane, a shared through/right-turn lane. On-street parking is provided on all approaches to the intersection. Crosswalks and wheelchair ramps are provided across Maverick Street eastbound and westbound approaches and the London Street northbound approach.

Meridian Street/Paris Street/Emmons Street is a four-legged unsignalized intersection with three approaches. The Paris Street southbound approach is stop controlled and consists of one lane, a shared slight left-turn/through/hard right-turn lane. The Meridian Street south-eastbound approach is a free movement and consists of one lane, a shared hard left-turn/through/slight right-turn lane. The Meridian Street north-westbound approach is a free movement and consists of one lane, a shared hard left-turn/through/slight right-turn lane. The Emmons Street westbound approach is offset to the north of Meridian Street by approximately 50 feet. On-street parking is provided on all approaches to the intersection. Crosswalks and wheelchair ramps are

provided across the Paris Street southbound approach and the Meridian Street southeast/northwest approaches, connecting the southeast corner with the northwest corner of the roadway.

Meridian Street/Havre Street/Decatur Street/Gove Street is a six-legged, unsignalized intersection with four approaches. The Decatur Street eastbound approach is stop controlled and consists of one lane, a shared hard left-turn/left-turn/through/slight right-turn lane. The Havre Street northbound approach is stop controlled and consists of one lane, a shared left-turn/slight left-turn/through/right-turn/hard right-turn lane. The Meridian Street south-eastbound approach is a free movement and consists of one lane, a shared hard left-turn/slight left-turn/through/hard right-turn lane. The Meridian Street north-westbound approach is a free movement and consists of one lane, a shared slight left-turn/through/slight right-turn/hard right-turn lane. The Decatur Street eastbound approach is offset to the south of Meridian Street approximately 75 feet and the Gove Street westbound approach is offset to the north of Meridian Street by approximately 50 feet. On-street parking is provided on all approaches to the intersection. Crosswalks and wheelchair ramps are provided across all stop controlled approaches to the intersection and Meridian Street southeast/northwest approaches, connecting the southeast corner with the northwest corner of the roadway.

Meridian Street/London Street is a four-legged, unsignalized intersection with four approaches that meet at a skewed angle. The London Street northbound approach is stop controlled and consists of one lane, a shared slight left-turn/through/hard right-turn lane. The London Street southbound approach is stop controlled and consists of one lane, a shared slight left-turn/through/hard right-turn lane. The Meridian Street south-eastbound approach is a free movement and consists of one lane, a shared hard left-turn/through/slight right-turn lane. The Meridian Street north-westbound approach is a free movement and consists of one lane, a shared hard left-turn/through/slight right-turn lane. On-street parking is provided on all approaches to the intersection. Crosswalks and wheelchair ramps are provided across the London Street northbound and southbound approach and Meridian Street southeast/northwest approaches, connecting the southeast corner with the northwest corner of the roadway.

5.2.3 EXISTING PARKING AND CURB USE

Curb use regulations near the Project Site include mostly 2-hour commercial parking, resident only parking, and 2-hour parking except with resident sticker. Handicapped parking is provided as needed. Almost every street had on-street parking along both sides of the roadway. Figure 5-2 illustrates the on-street parking regulations in the vicinity of the study area.

5.2.4 CAR SHARING SERVICES

Car sharing enables easy access to short term vehicular transportation. Vehicles are rented on an hourly or daily basis, and all vehicle costs (gas, maintenance, insurance, and parking) are included in the rental fee. Vehicles are checked out for a specific time period and returned to their designated location. Zipcar is the only company that provides car sharing services within the project area. There are five Zipcar locations located in close proximity of the Project Site. The nearby Zipcar locations are shown in Figure 5-3.

5.2.5 EXISTING PUBLIC TRANSPORTATION

The Project Site is located approximately 500 feet away from Maverick Station. Maverick Station provides access to the MBTA's Blue Line and five MBTA bus routes. The following describes each public transportation route served by the Maverick MBTA station. Figure 3-4 shows a map of all public transportation service located in close proximity of the Project Site.

MBTA Blue Line – The Blue Line branch of the MBTA subway system stops at Maverick Station. The Blue Line provides access between Bowdoin Station in downtown Boston to the southwest and Wonderland Station in Revere to the northeast. The Blue Line operates with headways of approximately 5 to 8 minutes.

MBTA Bus Route 114 provides service between Maverick Station and Bellingham Square in Chelsea. Weekday service runs from approximately 9:00 AM to 4:16 PM, with headways ranging from approximately 50 minutes to 55 minutes. MBTA Bus Route 114 does not provide weekend bus service.

MBTA Bus Route 116 provides service between Maverick Station and Wonderland Station in the Revere via Revere Street. Weekday service runs from approximately 5:15 AM to 2:50 AM, with headways ranging from approximately 20 minutes to 30 minutes. Saturday and Sunday service from approximately 5:25 AM to 1:23 AM, with headways ranging from approximately 30 minutes to 40 minutes.

MBTA Bus Route 120 provides service between Maverick Station and Orient Heights Station in East Boston. Weekday service runs from approximately 5:25 AM to 1:18 AM, with headways ranging from approximately 20 minutes to 25 minutes. Saturday and Sunday service from approximately 5:25 AM to 1:17 AM, with headways ranging from approximately 25 minutes to 30 minutes.

MBTA Bus Route 121 provides service between Maverick Station and Wood Island in East Boston. Weekday service runs from approximately 6:00 AM to 6:46 PM, with

headways of approximately 30 minutes. MBTA Bus Route 121 does not provide weekend bus service.

Existing Bicycle Accommodations

In recent years, bicycle use has increased dramatically throughout the City of Boston. The Project Site is conveniently located in close proximity to several bicycle facilities. The City of Boston's "Bike Routes of Boston" map indicates that The East Boston Greenway and Marginal Street are designated as beginner routes suitable for all types of bicyclists including newer cyclists, cyclists with limited on-road experience and/or children. Additionally, Sumner Street and Maverick Street are designated as intermediate routes, suitable for riders with some on-road experience.

The Project Site is also located in proximity to bicycle sharing alternatives provided by Hubway. Hubway is the bicycle sharing system in the Boston area, which was launched in 2011 and consists of over 180 stations and 1,600 bicycles. Hubway just recently started operating in East Boston with the installation of ten Hubway Stations in late September 2016. There are five Hubway locations within a half mile of the Project Site. Figure 5-5 shows the Hubway stations within one half mile radius.

5.2.6 EXISTING PEDESTRIAN ACCOMMODATIONS

In general, sidewalks are provided along all roadways and are in good condition. Crosswalks and pedestrian signal equipment are also provided at the study area intersections. Adjacent to the Project Site, the sidewalks are approximately 14 feet in width along Clipper Ship Lane. The East Boston Greenway is also located in close proximity and provides direct access from the Project Site to East Boston.

5.3 BASELINE TRAFFIC CONDITION

As previously discussed, the Baseline Condition was obtained from the Build (2020) Condition from the Clippership Wharf 2015 NPC. The Baseline Condition incorporates anticipated traffic volume changes associated with background traffic growth independent of any specific project; traffic associated with other planned specific developments, planned infrastructure improvements that will affect travel patterns throughout the study area. These infrastructure improvements include roadway, public transportation, pedestrian and bicycle improvements.

5.3.1 BASELINE CONDITION TRAFFIC VOLUME DATA

The Baseline Condition traffic volumes are based on Turning Movement Counts (TMCs) collected at all study area intersection on Thursday, January 8, 2015 during the weekday a.m. and p.m. peak periods (7:00 – 9:00 a.m. and 4:00 – 6:00 p.m., respectively). The traffic classification counts included car, truck, pedestrian, and bicycle movements were also collected. Where necessary, traffic volumes were balanced between intersections.

In order to account for seasonal variation in traffic volumes throughout the year a seasonal adjustment factor of three percent was used to increase the volumes to reflect the average month conditions. This percentage is based on the most recent MassDOT Weekday Seasonal Factors (2011) for the month of January. The MassDOT 2011 Weekday Seasonal Factors table is provided in Appendix A.

The Baseline Condition traffic volumes were increased to reflect the future year of 2020 by a general background traffic growth of one-half percent per year and traffic growth associated with specific developments that are planned in the vicinity of the Project Site (such as the New Street Development, later phases of Portside at Pier 1, the Hodge Boiler Works site, the Coppersmith Village development, the Boston East development, and 135 Bremen Street). The final step to determine the Clippership Wharf Build Condition was to add the traffic expected to be generated by that project. The Baseline Condition morning and evening peak hour traffic volumes are shown in Figure 5-6, and Figure 5-7, respectively.

5.4 BUILD CONDITION

As previously summarized, the Project will consist of the rehabilitation of 20 residential apartment units and the construction of 30 new residential units with 3,400 sf of ground floor retail space. Parking will be provided for approximately 18 vehicles. The Build Condition reflects a future scenario that adds anticipated Project-generated trips to the Baseline Condition traffic volumes.

5.4.1 VEHICLE SITE ACCESS AND CIRCULATION

Vehicular access/egress will be provided via a new northbound private roadway (open to public travel) between Clipper Ship Lane and Sumner Street. The intersection with Sumner Street will be located across from Havre Street. The proposed site access plan is illustrated in Figure 5-8.

5.4.2 PARKING

The Project will include 18 surface parking spaces, with nine parallel spaces located along the west side of the private street, and an additional parallel space and eight perpendicular spaces located along the north side of Clipper Ship Lane to the south of the Project Site.

The parking goals developed by the BTD for this section of East Boston are a maximum of 0.75 to 1.25 parking spaces per residential unit. The parking ratio of 0.36 spaces per residential unit is consistent with the district-based parking goals.

5.4.3 LOADING AND SERVICE ACCOMMODATIONS

Loading and service operations, including deliveries and residential move-in/move-out activity, can be accommodated on-site along Havre Street Extension. Trash will be stored internally and wheeled to Sumner Street for City pick-up.

5.4.4 TRIP GENERATION METHODOLOGY

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

To estimate the number of trips expected to be generated by the Project, data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation*

Manual[1] were used. ITE provides data to estimate the total number of unadjusted vehicular trips associated with the Project. In an urban setting well served by transit, adjustments are necessary to account for other travel mode shares such as walking, bicycling, and transit.

Trip generation estimates for the Project were derived using the following Land Use Codes (LUC):

LUC 220 – Apartment. The apartment land use is defined as rental dwellings located within the same building with at least three other dwelling units. Calculations of the number of trips are based on ITE's average rate per dwelling unit.

LUC 820 – Shopping Center. A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. Of the ITE retail categories, The Shopping Center LUC best suits the retail component proposed within the Project. Calculations of the number of trips are based on ITE's average rate per 1,000 sf.

5.4.5 TRAVEL MODE SHARES

The BTD publishes vehicle, transit, and walking mode split rates for different areas of Boston. The Project is located within designated Area 7 – East Boston. The unadjusted vehicular trips were converted to person trips by using vehicle occupancy rates published by the Federal Highway Administration (FHWA)[2]. The BTD's travel mode share data for Area 7 are shown in Table 5-1.

[1] *Trip Generation Manual*, 9th Edition; Institute of Transportation Engineers; Washington, D.C.; 2012.
[2] *Summary of Travel Trends: 2009 National Household Travel Survey*; FHWA; Washington, D.C.; June 2011.

Table 5-1, Travel Mode Shares

Land Use		Walk/Bike[1]	Transit[1]	Auto[1]	Local VOR[2]
Daily					
Residential	In	29%	17%	54%	1.13
	Out	29%	17%	54%	1.13
Commercial	In	52%	6%	42%	1.78
	Out	52%	6%	42%	1.78
a.m. Peak Hour					
Residential	In	34%	15%	51%	1.13
	Out	30%	25%	45%	1.13
Commercial	In	58%	5%	37%	1.78
	Out	56%	9%	35%	1.78
p.m. Peak Hour					
Residential	In	30%	25%	45%	1.13
	Out	34%	15%	51%	1.13
Commercial	In	56%	9%	35%	1.78
	Out	58%	5%	37%	1.78

1 Boston Transportation Department mode share data for Area 7 for the residential and retail use.

2 2009 National Household Travel Survey.

5.4.6 PROJECT TRIP GENERATION

The mode share percentages shown in Table 5-1 were applied to the number of person trips to develop walk/bicycle, transit, and vehicle trip generation estimates. The trip generation for the 30 new units of the Project by mode is shown in Table 5-2. The detailed trip generation information is provided in Appendix A.

Table 5-2, Trip Generation Summary

Time Period	Direction	Walk/Bike Trips	Transit Trips	Vehicle Trips
Daily				
Apartment[1]	In	33	19	54
	Out	33	19	54
	Total	**66**	**38**	**108**
Retail[2]	In	67	8	31
	Out	67	8	31
	Total	**134**	**16**	**62**
Total	In	100	27	85
	Out	100	27	85
	Total	**200**	**54**	**170**
a.m. Peak Hour				
Apartment[1]	In	1	0	2
	Out	4	4	5
	Total	**5**	**4**	**7**
Retail[2]	In	3	0	1
	Out	1	0	1
	Total	**4**	**0**	**2**
Total	In	4	0	3
	Out	5	4	6
	Total	**9**	**4**	**9**
p.m. Peak Hour				
Apartment[1]	In	4	4	5
	Out	3	1	4
	Total	**7**	**5**	**9**
Retail[2]	In	7	1	2
	Out	8	1	3
	Total	**15**	**2**	**5**
Total	In	11	5	7
	Out	11	2	7
	Total	**22**	**7**	**14**

1 Based on ITE LUC 220 – Apartment. Based on 30 units.

2 Based on ITE LUC 820 – Shopping Center. Based on 3,400 sf.

As shown in Table 5-2, the 30 new units and ground floor retail are expected to generate approximately 170 new daily vehicle trips (85 entering and 85 exiting), with 9 new vehicle trips during the a.m. peak hour (3 entering and 6 exiting) and 14 new vehicle trips during the p.m. peak hour (7 entering and 7 exiting). This corresponds to an increase of approximately 1 vehicle trip every seven minutes during the a.m. peak hour and 1 vehicle trip every four minutes during the p.m. peak hour on adjacent roadway network during the peak periods.

5.4.7 TRIP DISTRIBUTION

The trip distribution identifies the various travel paths for vehicles arriving and leaving the Project Site. Trip distribution patterns for the Project were based on BTD's origin-destination data for Area 7 – East Boston, and trip distribution patterns presented in traffic studies for nearby projects. The trip distribution patterns for the Project are illustrated in Figure 5-9**.**

5.4.8 FUTURE TRAFFIC VOLUMES

The vehicle trips were distributed through the study area. The project-generated trips for the a.m. and p.m. peak hours are shown in Figure 5-10 and Figure 5-11, respectively. The trip assignments were added to the Baseline Condition vehicular traffic volumes to develop the Future Condition vehicular traffic volumes. The Future Condition a.m. and p.m. peak hour traffic volumes are shown on, Figure 5-12 and Figure 5-13, respectively.

5.4.9 BICYCLE ACCOMMODATIONS

BTD has established guidelines requiring projects subject to Transportation Access Plan Agreements to provide secure bicycle parking for residents and employees and secure bicycle storage spaces on-site. Secure bicycle storage for 40 bicycles will be provided. Additional storage will be provided by outdoor bicycle racks accessible to visitors to the Project Site in accordance with BTD guidelines.

All bicycle racks, signs, and parking areas will conform to BTD guidelines and be located in safe, secure locations. The Proponent will work with BTD to identify the most appropriate quantity and location for bicycle racks on the Project Site as part of the Transportation Access Plan Agreement (TAPA) process.

5.5 TRAFFIC OPERATIONS

The criterion for evaluating traffic operations is level of service (LOS), which is determined by assessing average delay incurred by vehicles at intersections and along intersection approaches. Trafficware's Synchro (version 9) software package was used to calculate average delay and associated LOS at the study area intersections. This software is based on the traffic operational analysis methodology of the Transportation Research Board's 2000 *Highway Capacity Manual* (HCM). Field observations were performed by HSH to collect intersection geometry such as number of turning lanes, lane length, and lane width that were then incorporated into the operations analysis.

LOS designations are based on average delay per vehicle for all vehicles entering an intersection. Table 5-3 displays the intersection level of service criteria. LOS A indicates the

most favorable condition, with minimum traffic delay, while LOS F represents the worst condition. LOS D or better is typically considered acceptable in an urban area. However, LOS E or F is often typical for a stop controlled minor street that intersects a major roadway and does not necessarily indicate that the operations at the intersection are poor or failing.

Table 5-3, Level of Service Criteria (HCM Excerpt)

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

Source: *2000 Highway Capacity Manual,* Transportation Research Board.

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

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

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

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

5.5.1 BASELINE TRAFFIC OPERATIONS

Table 5-4 and Table 5-5 present the Baseline Condition operational analysis for the study area intersections during the a.m. and p.m. peak hours, respectively. The detailed analysis sheets are provided in Appendix A.

Several minor street approaches, as discussed below, are forecast to operate at LOS E or LOS F under Build Conditions. This level of operation is not uncommon for stop controlled approaches to urban arterial roadways. The HCM analysis for unsignalized intersections incorporates more conservative parameters than what is typically experienced in an urban environment, such as critical gap.[3] Given the methodology, it is important to recognize that the forecasted delays/queues under LOS E or LOS F are overestimated when compared to observations made in real world conditions.

[3] The critical gap is the minimum interval in the major street traffic stream that a minor-street vehicle can make a maneuver into the intersection.

Table 5-4, Baseline Condition Level of Service Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (seconds)	V/C Ratio	95th Percentile Queue length (feet)
Sumner Street/London Street	-	-	-	-
Sumner Street EB thru/right	A	0.0	0.11	0
Sumner Street WB left/thru	A	0.5	0.00	0
London Street SB left/thru/right	B	11.4	0.14	12
Sumner Street/Havre Street	-	-	-	-
Sumner Street EB left/thru	A	1.5	0.03	2
Sumner Street WB thru/right	A	0.0	0.08	0
Sumner Street/Clipper Ship Lane	-	-	-	-
Sumner Street EB thru/right	A	0.0	0.12	0
Sumner Street WB left/thru	A	1.8	0.03	2
Clipper Ship Lane NB left/right	B	11.1	0.19	17
Sumner Street/Paris Street	-	-	-	-
Sumner Street EB thru	A	0.0	0.16	0
Sumner Street WB thru	A	0.0	0.07	0
Paris Street SB left/right	B	11.5	0.13	11
Maverick Street/Paris Street	-	-	-	-
Maverick Street WB left/thru	A	8.4	0.18	18
Paris Street SB thru/right	A	8.1	0.18	15
Maverick Street/Havre Street	-	-	-	-
Maverick Street WB thru/right	A	8.2	0.19	18
Havre Street NB left/thru	A	8.5	0.19	18
Maverick Street/London Street	-	-	-	-
Maverick Street WB left/thru	A	0.8	0.01	1
London Street SB thru/right	B	12.3	0.36	40
Meridian Street/Paris Street/Emmons Street	-	-	-	-
Paris Street SB slight left/thru/hard right	D	31.0	0.57	81
Meridian Street SEB slight left/thru/slight right	A	0.1	0.00	0
Meridian Street NWB hard left/thru/hard right	A	0.4	0.01	1
Meridian St./Havre St./Decatur St./Gove St.	-	-	-	-
Havre Street NB slight left/thru/right/hard right	F	>100	>1.50	Err
Meridian Street SEB hard left/slight left/thru/hard right	A	8.9	0.38	46
Meridian Street NWB slight left/thru/slight right/ hard right	A	0.4	0.01	1
Meridian Street/London Street	-	-	-	-
London Street NB slight left/thru/hard right	F	58.3	0.36	36
London Street SB slight left/thru/hard right	F	>100	>1.50	473
Meridian Street SEB hard left/thru/slight right	A	0.1	0.00	0
Meridian Street NWB hard left/thru/slight right	A	0.0	0.00	0

Grey shading indicates a LOS E or F.

Table 5-5, Baseline Condition Level of Service Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (seconds)	V/C Ratio	95th Percentile Queue length (feet)
Sumner Street/London Street	-	-	-	-
Sumner Street EB thru/right	A	0.0	0.11	0
Sumner Street WB left/thru	A	1.1	0.01	1
London Street SB left/thru/right	B	12.7	0.23	22
Sumner Street/Havre Street	-	-	-	-
Sumner Street EB left/thru	A	1.1	0.02	2
Sumner Street WB thru/right	A	0.0	0.11	0
Sumner Street/Clipper Ship Lane	-	-	-	-
Sumner Street EB thru/right	A	0.0	0.13	0
Sumner Street WB left/thru	A	2.5	0.05	4
Clipper Ship Lane NB left/right	B	11.2	0.13	11
Sumner Street/Paris Street	-	-	-	-
Sumner Street EB thru	A	0.0	0.13	0
Sumner Street WB thru	A	0.0	0.09	0
Paris Street SB left/right	B	12.1	0.09	17
Maverick Street/Paris Street	-	-	-	-
Maverick Street WB left/thru	A	9.0	0.25	25
Paris Street SB thru/right	A	8.9	0.29	30
Maverick Street/Havre Street	-	-	-	-
Maverick Street WB thru/right	A	8.5	0.25	25
Havre Street NB left/thru	A	8.6	0.20	18
Maverick Street/London Street	-	-	-	-
Maverick Street WB left/thru	A	1.2	0.02	1
London Street SB thru/right	B	12.6	0.27	27
Meridian Street/Paris Street/Emmons Street	-	-	-	-
Paris Street SB slight left/thru/hard right	F	>100	1.14	336
Meridian Street SEB slight left/thru/slight right	A	0.1	0.00	0
Meridian Street NWB hard left/thru/hard right	A	0.4	0.02	1
Meridian St./Havre St./Decatur St./Gove St.	-	-	-	-
Havre Street NB slight left/thru/right/hard right	F	>100	>1.50	Err
Meridian Street SEB hard left/slight left/thru/hard right	B	10.1	0.42	52
Meridian Street NWB slight left/thru/slight right/ hard right	A	0.7	0.03	2
Meridian Street/London Street	-	-	-	-
London Street NB slight left/thru/hard right	F	>100	>1.50	Err
London Street SB slight left/thru/hard right	F	>100	>1.50	Err
Meridian Street SEB hard left/thru/slight right	A	0.5	0.02	1
Meridian Street NWB hard left/thru/slight right	A	0.0	0.00	0

Grey shading indicates a LOS E or F.

In the Baseline Condition, all unsignalized intersections approaches operate at LOS D or better during both the weekday a.m. and p.m. peak hours with the exception of:

Meridian Street/Paris Street/Emmons Street – The Paris Street southbound approach operates at LOS F during the weekday p.m. peak hour.

Meridian St./Havre St./Decatur St./Gove St. – The Havre Street northbound approach operates at LOS F during both the weekday a.m. and p.m. peak hours.

Meridian Street/London Street – Both the London Street northbound and southbound approaches operate at LOS F during both the weekday a.m. and p.m. peak hours.

5.5.2 BUILD CONDITION TRAFFIC OPERATIONS

The Build Condition traffic operations analyses use the same methodology as the Baseline Condition analyses. The results of the Future Condition traffic analysis at study area intersections are presented in Table 3-6 and 3-7 for the a.m. and p.m. peak hours, respectively. The shaded cells in the tables indicate a decrease in LOS between the Baseline Condition and the Future Condition. The detailed analysis sheets are provided in Appendix A.

As discussed previously, it is important to recognize that the forecasted delays/queues under LOS E or LOS F are overestimated when compared to observations made in real world conditions. This is due to the HCM analysis for stop controlled intersections incorporating more conservative parameters than what is typically experienced in an urban environment.

Table 5-6, Build Condition Level of Service Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (seconds)	V/C Ratio	95th Percentile Queue length (feet)
Sumner Street/London Street	-	-	-	-
Sumner Street EB thru/right	A	0.0	0.11	0
Sumner Street WB left/thru	A	0.5	0.00	0
London Street SB left/thru/right	B	11.4	0.14	12
Sumner Street/Havre Street	-	-	-	-
Sumner Street EB left/thru/right	A	1.5	0.03	2
Sumner Street WB left/thru/right	A	0.0	0.08	0
Havre Street Extension NB left/thru/right	B	12.1	0.01	1
Sumner Street/Clipper Ship Lane	-	-	-	-
Sumner Street EB thru/right	A	0.0	0.12	0
Sumner Street WB left/thru	A	1.8	0.03	2
Clipper Ship Lane NB left/right	B	11.2	0.19	17
Sumner Street/Paris Street	-	-	-	-
Sumner Street EB thru	A	0.0	0.16	0
Sumner Street WB thru	A	0.0	0.08	0
Paris Street SB left/right	B	11.5	0.14	12
Maverick Street/Paris Street	-	-	-	-
Maverick Street WB left/thru	A	8.4	0.18	18
Paris Street SB thru/right	A	8.2	0.18	15
Maverick Street/Havre Street	-	-	-	-
Maverick Street WB thru/right	A	8.2	0.20	18
Havre Street NB left/thru	A	8.5	0.20	18
Maverick Street/London Street	-	-	-	-
Maverick Street WB left/thru	A	0.8	0.01	1
London Street SB thru/right	B	12.3	0.36	41
Meridian Street/Paris Street/Emmons Street	-	-	-	-
Paris Street SB slight left/thru/hard right	D	31.6	0.57	83
Meridian Street SEB slight left/thru/slight right	A	0.1	0.00	0
Meridian Street NWB hard left/thru/hard right	A	0.4	0.01	1
Meridian St./Havre St./Decatur St./Gove St.	-	-	-	-
Havre Street NB slight left/thru/right/hard right	F	>100	>1.50	Err
Meridian Street SEB hard left/slight left/thru/hard right	A	8.9	0.38	46
Meridian Street NWB slight left/thru/slight right/ hard right	A	0.4	0.01	1
Meridian Street/London Street	-	-	-	-
London Street NB slight left/thru/hard right	F	57.9	0.36	36
London Street SB slight left/thru/hard right	F	>100	>1.50	479
Meridian Street SEB hard left/thru/slight right	A	0.1	0.00	0
Meridian Street NWB hard left/thru/slight right	A	0.0	0.00	0

Table 5-7, Build Condition Level of Service Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (seconds)	V/C Ratio	95th Percentile Queue length (feet)
Sumner Street/London Street	-	-	-	-
Sumner Street EB thru/right	A	0.0	0.11	0
Sumner Street WB left/thru	A	1.2	0.01	1
London Street SB left/thru/right	B	12.8	0.24	23
Sumner Street/Havre Street	-	-	-	-
Sumner Street EB left/thru/right	A	1.1	0.02	2
Sumner Street WB left/thru/right	A	0.0	0.11	0
Havre Street Extension NB left/thru/right	B	12.6	0.02	1
Sumner Street/Clipper Ship Lane	-	-	-	-
Sumner Street EB thru/right	A	0.0	0.13	0
Sumner Street WB left/thru	A	2.7	0.06	4
Clipper Ship Lane NB left/right	B	11.3	0.13	11
Sumner Street/Paris Street	-	-	-	-
Sumner Street EB thru	A	0.0	0.13	0
Sumner Street WB thru	A	0.0	0.09	0
Paris Street SB left/right	B	12.2	0.19	18
Maverick Street/Paris Street	-	-	-	-
Maverick Street WB left/thru	A	9.0	0.25	25
Paris Street SB thru/right	A	8.9	0.29	30
Maverick Street/Havre Street	-	-	-	-
Maverick Street WB thru/right	A	8.6	0.25	25
Havre Street NB left/thru	A	8.7	0.21	20
Maverick Street/London Street	-	-	-	-
Maverick Street WB left/thru	A	1.2	0.02	1
London Street SB thru/right	B	12.7	0.27	27
Meridian Street/Paris Street/Emmons Street	-	-	-	-
Paris Street SB slight left/thru/hard right	F	>100	1.24	383
Meridian Street SEB slight left/thru/slight right	A	0.1	0.00	0
Meridian Street NWB hard left/thru/hard right	A	0.4	0.02	1
Meridian St./Havre St./Decatur St./Gove St.	-	-	-	-
Havre Street NB slight left/thru/right/hard right	F	>100	>1.50	Err
Meridian Street SEB hard left/slight left/thru/hard right	B	10.1	0.42	52
Meridian Street NWB slight left/thru/slight right/ hard right	A	0.7	0.03	2
Meridian Street/London Street	-	-	-	-
London Street NB slight left/thru/hard right	F	>100	>1.50	Err
London Street SB slight left/thru/hard right	F	>100	>1.50	Err
Meridian Street SEB hard left/thru/slight right	A	0.5	0.02	1
Meridian Street NWB hard left/thru/slight right	A	0.0	0.00	0

In the Build Condition, all unsignalized intersection approaches continue to operate at the same LOS as compared to the Baseline Condition during both the weekday a.m. and p.m. peak hours.

5.6 TRANSPORTATION MITIGATION MEASURES

While the traffic impacts associated with the new Project generated trips are minimal, the Proponent will continue to work with the City of Boston to create a Project that efficiently serves vehicle trips, improves the pedestrian environment, and encourages transit and bicycle usage. As part of the Project, the Proponent will bring all abutting sidewalks and pedestrian ramps to the City of Boston standards in accordance with the Boston Complete Streets design guidelines. This will include the reconstruction and widening of the sidewalks where possible; the installation of new, accessible ramps; improvements to street lighting where necessary; planting of street trees; and providing bicycle storage racks surrounding the Project Site, where appropriate.

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

The Proponent will also produce a Construction Management Plan (CMP) for review and approval by BTD. The CMP will detail the schedule, staging, parking, delivery, and other associated impacts of the construction of the Project. See Section 5.8 for additional information related to the CMP.

5.7 TRANSPORTATION DEMAND MANAGEMENT

The Proponent is committed to implementing Transportation Demand Management (TDM) measures to reduce dependence on automobiles. TDM will be facilitated by the nature and location of the Project.

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

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

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

- Orientation Packets**:** The Proponent will provide orientation packets to new residents and tenants containing information on available transportation choices, including transit routes/schedules and nearby Zipcar locations. On-site management will work with residents and tenants as they move in to help facilitate transportation for new arrivals.

- Provide an annual (or more frequent) newsletter or bulletin summarizing transit, ride-sharing, bicycling, alternative work schedules, and other travel options.

- Bicycle Accommodation: The Proponent will provide bicycle storage in secure, sheltered areas for residents. Secure bicycle storage will also be made available to employees and visitors of the commercial portion of the Project Site to encourage bicycling as an alternative mode of transportation. Subject to necessary approvals, public use bicycle racks for visitors will be placed near building entrances.

5.8 EVALUATION OF SHORT-TERM CONSTRUCTION IMPACTS

Details of the overall construction schedule, working hours, number of construction workers, worker transportation and parking, number of construction vehicles, and routes will be addressed in detail in a Construction Management Plan (CMP) to be filed with BTD in accordance with the City's transportation maintenance plan requirements. The CMP will also address the need for pedestrian detours, lanes closures, and/or parking restrictions, if necessary, to accommodate a safe and secure work zone.

To minimize transportation impacts during the construction period, the following measures will be incorporated into the Construction Management Plan:

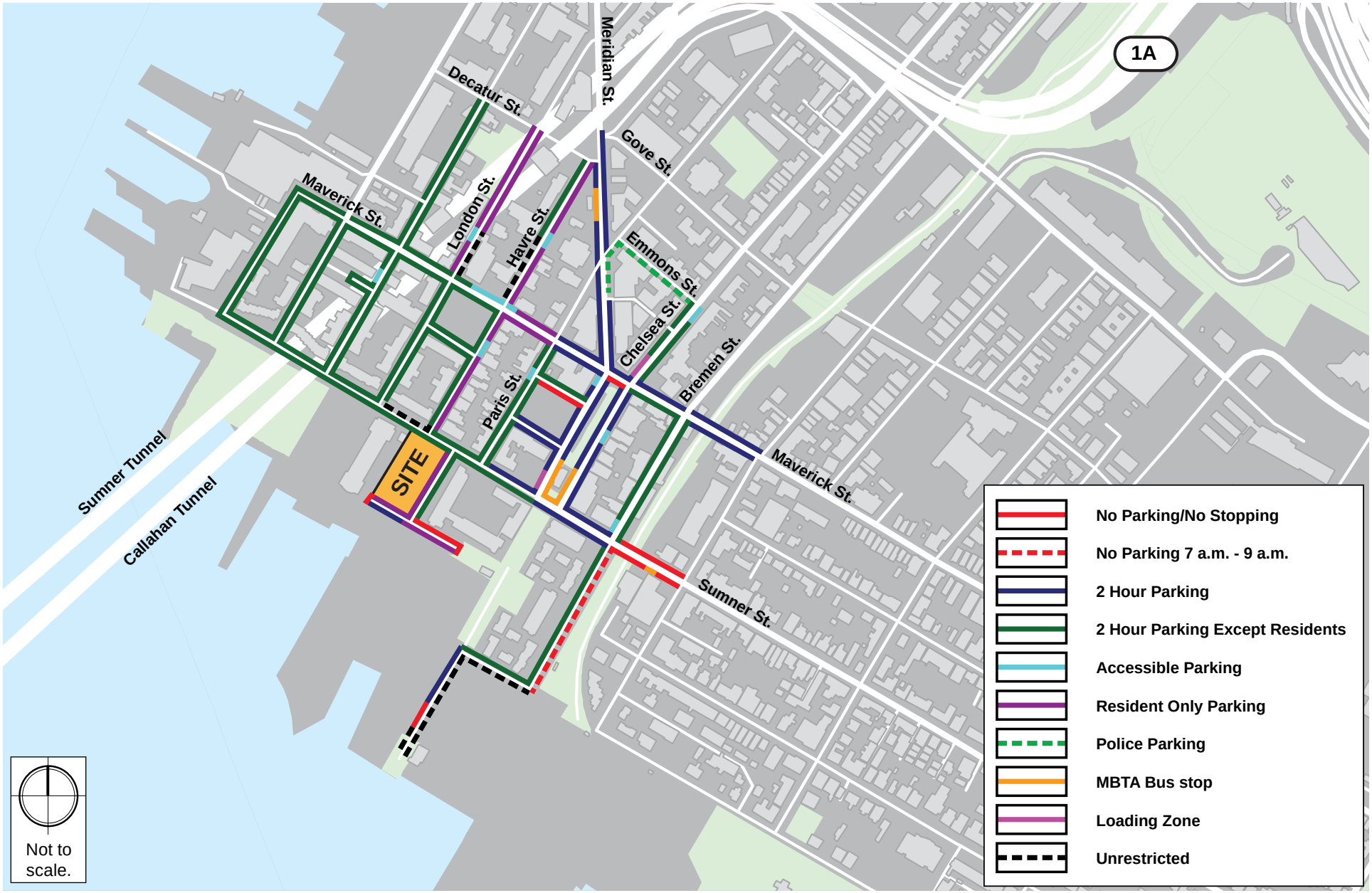
- Construction workers will be encouraged to use public transportation and/or carpool.

- A subsidy for MBTA passes will be considered for full-time employees; and

- Secure spaces will be provided on-site for workers' supplies and tools so they do not have to be brought to the Project Site each day.

Clippership Apartments
East Boston, MA

Figure 5-1
Study Area Intersections
Howard Stein Hudson



Clippership Apartments
East Boston, MA

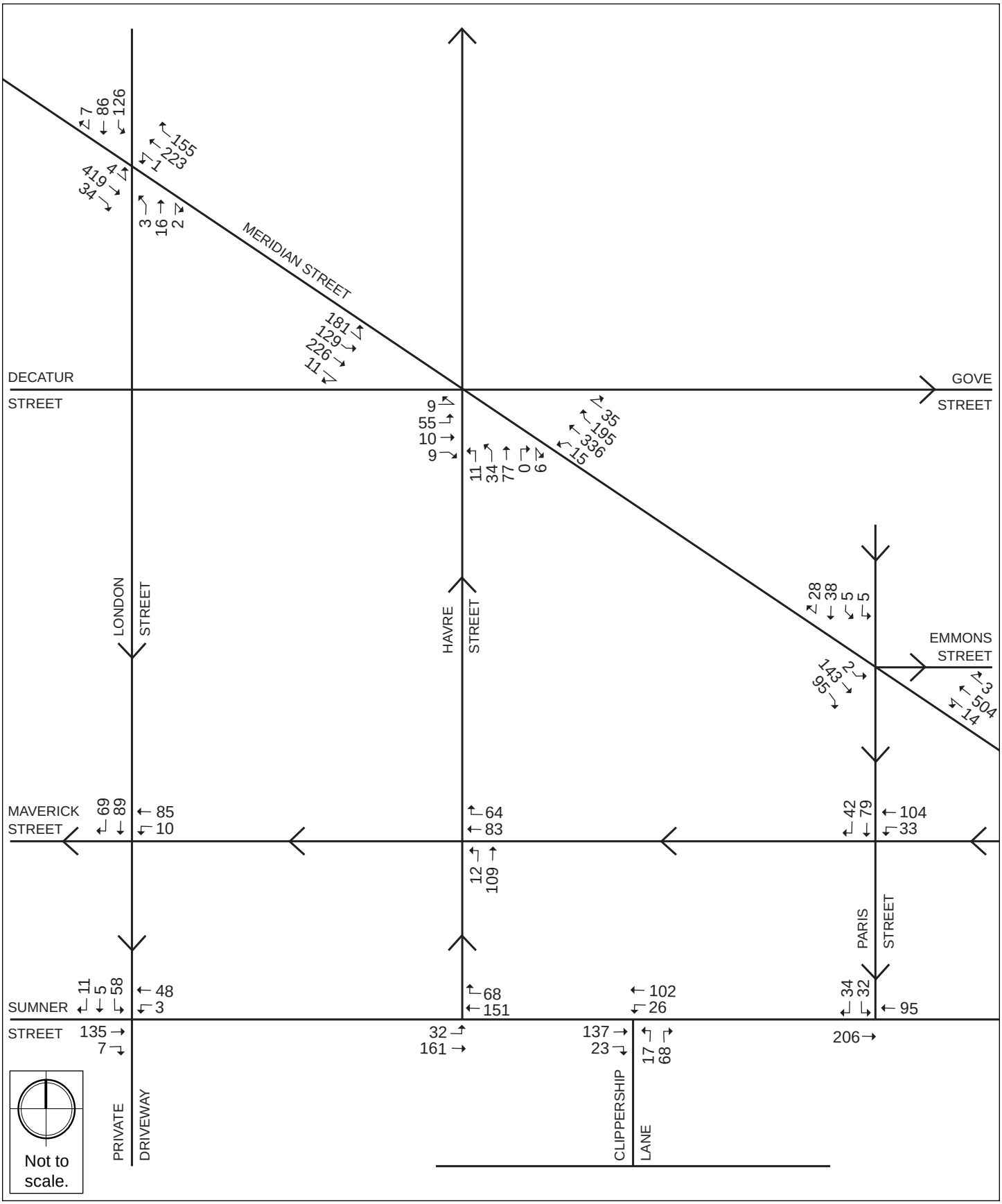
Figure 5-2
On-Street Parking Regulations
Howard Stein Hudson

Clippership Apartments
East Boston, MA

Figure 5-3
Car Sharing Locations
Howard Stein Hudson

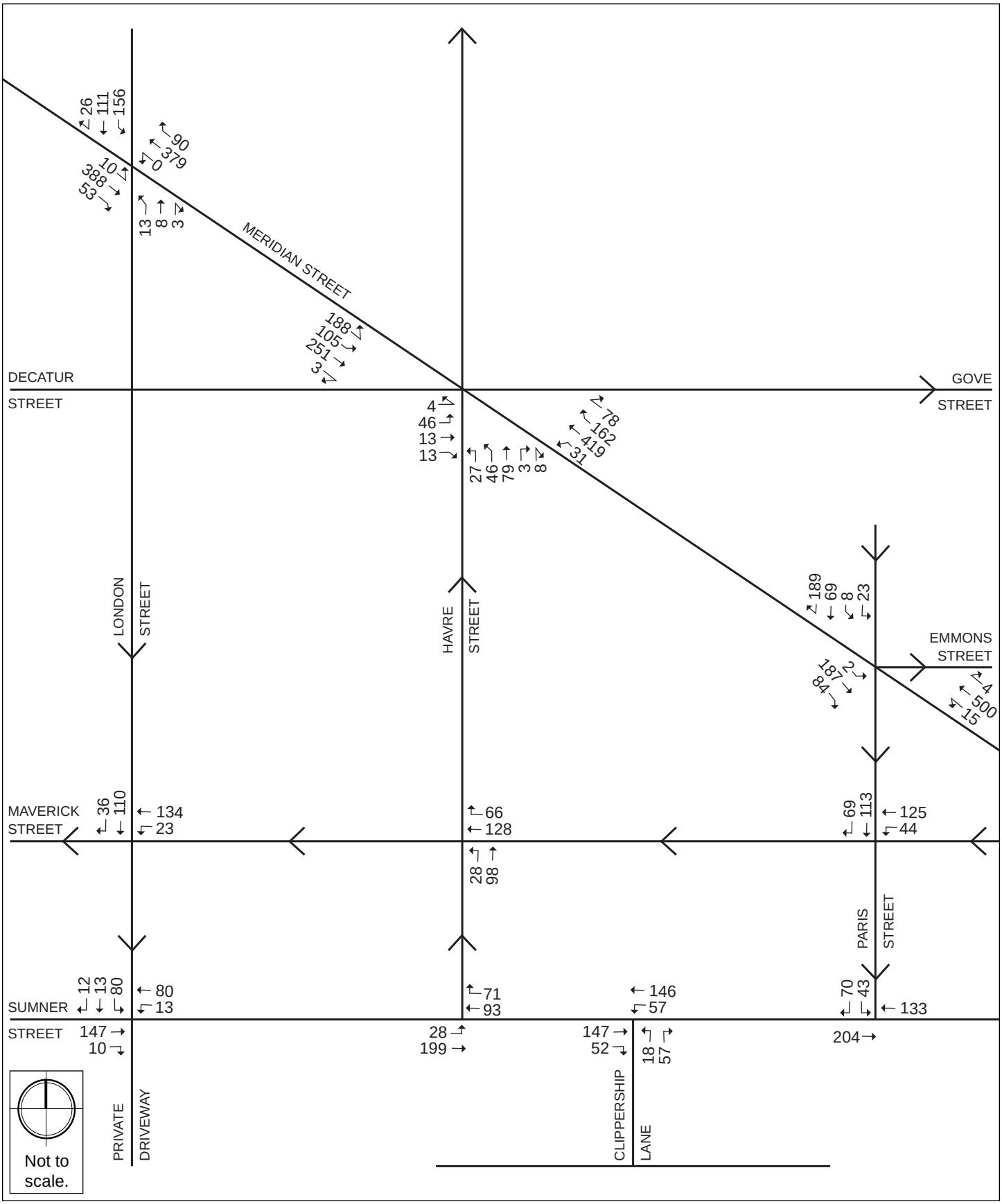
Figure 5-4
Existing Transit Service
Howard Stein Hudson

Figure 5-5
Hubway Locations
Howard Stein Hudson



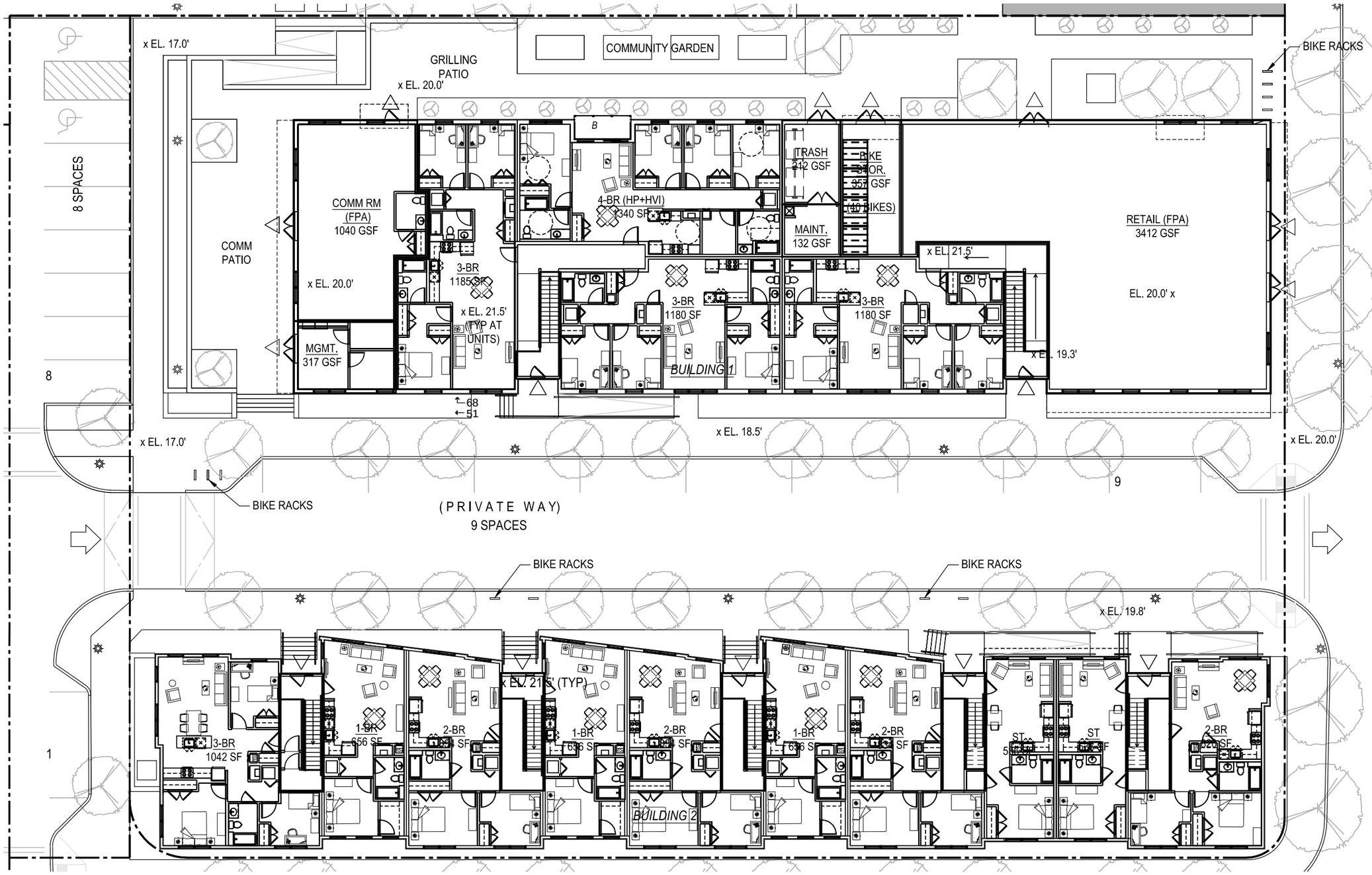
Clippership Apartments
East Boston, MA

Figure 5-6
Baseline Condition Traffic Volumes, a.m. Peak Hour
Howard Stein Hudson



Clippership Apartments
East Boston, MA

Figure 5-7
Baseline Condition Traffic Volumes, p.m. Peak Hour
Howard Stein Hudson



Building Summary - GSF by Level			
	RES.	FPA	TOTAL
LVL 1	15631	4809	20440
LVL 2	20456	0	20456
LVL 3	20456	0	20456
TOTAL	56543	4809	61352

(FPA - 25% OF FOOTPRINT - UFAS)

Building Summary - GSF by Bldg			
	RES.	FPA	TOTAL
Building 1	29189	4809	33998
Building 2	27354	0	27354
TOTAL	56543	4809	61352

Unit Summary						
	ST	1 BR	2 BR	3 BR	4 BR	TOTAL
LVL 1	2	3	4	4	1*	14
LVL 2	2	3	4	7	2	18
LVL 3	2	3	4	7	2	18
TOTAL	6	9	12	18	5	50

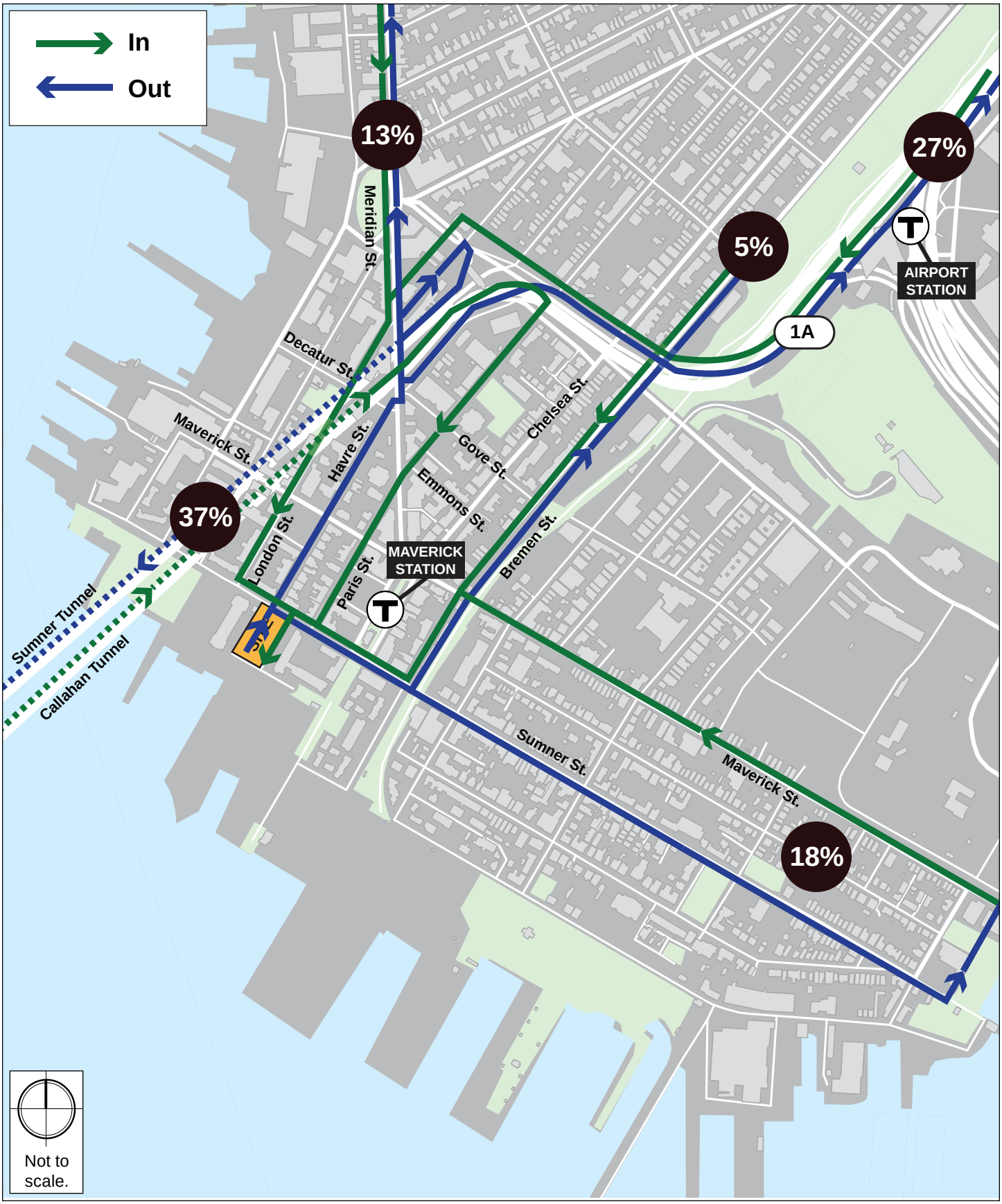
* 1 TYPE 2A UNIT (W/HVI) = 5% OF RENTALS

PRIVATE PARKING SPACES: 18

B= BALCONY

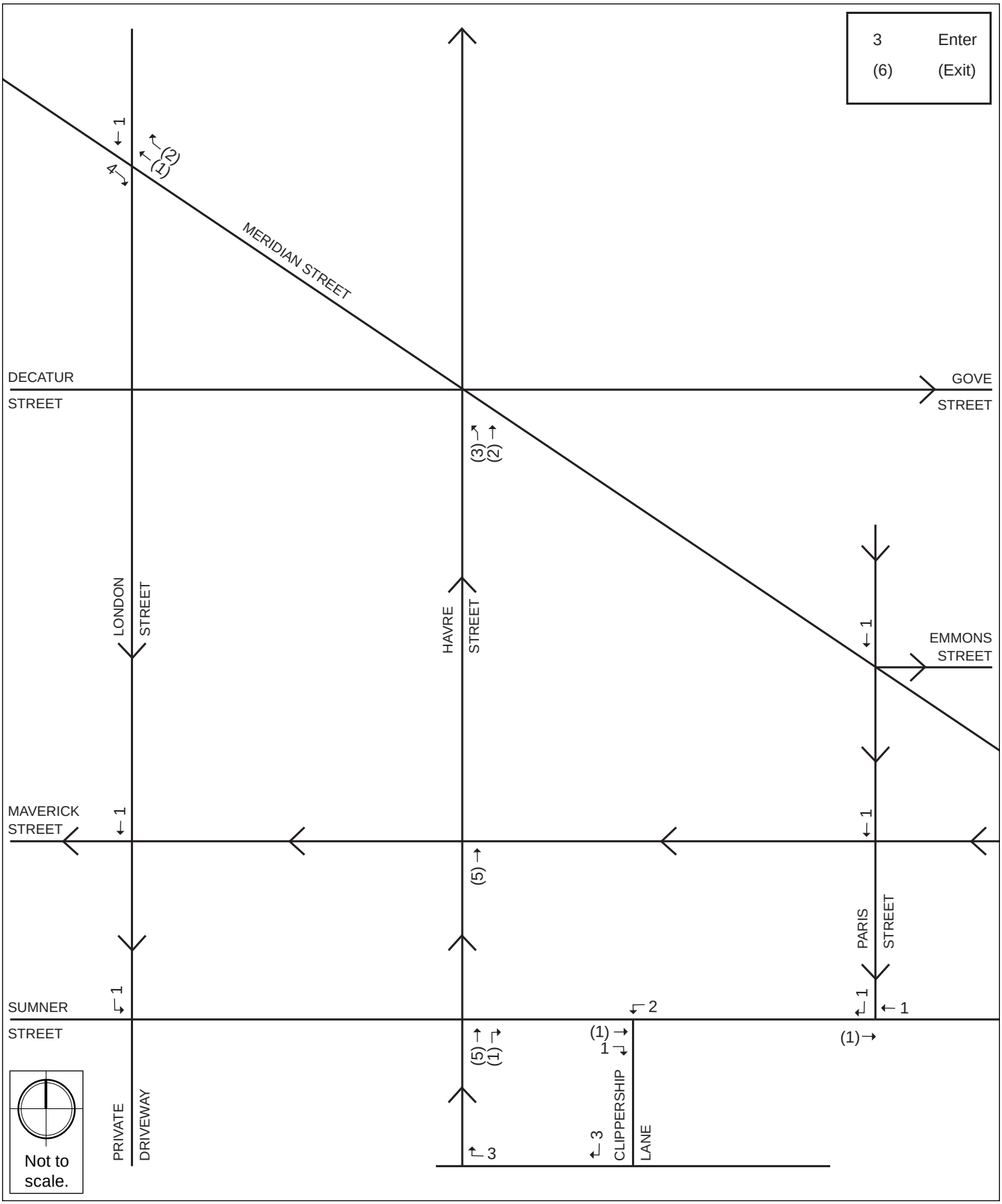
0 5 20 40

Not to scale.



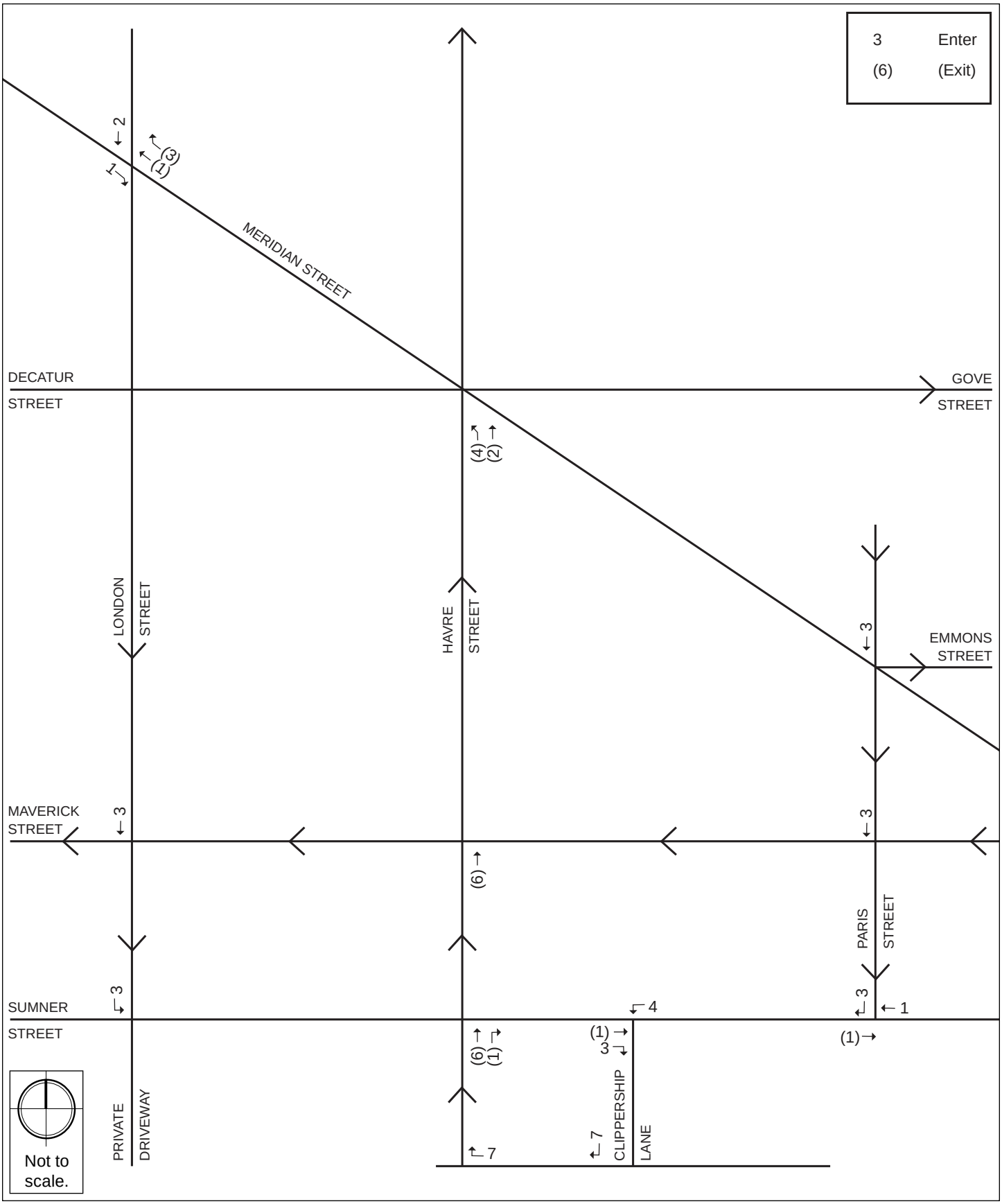
Clippership Apartments
East Boston, MA

Figure 5-9
Trip Distribution
Howard Stein Hudson



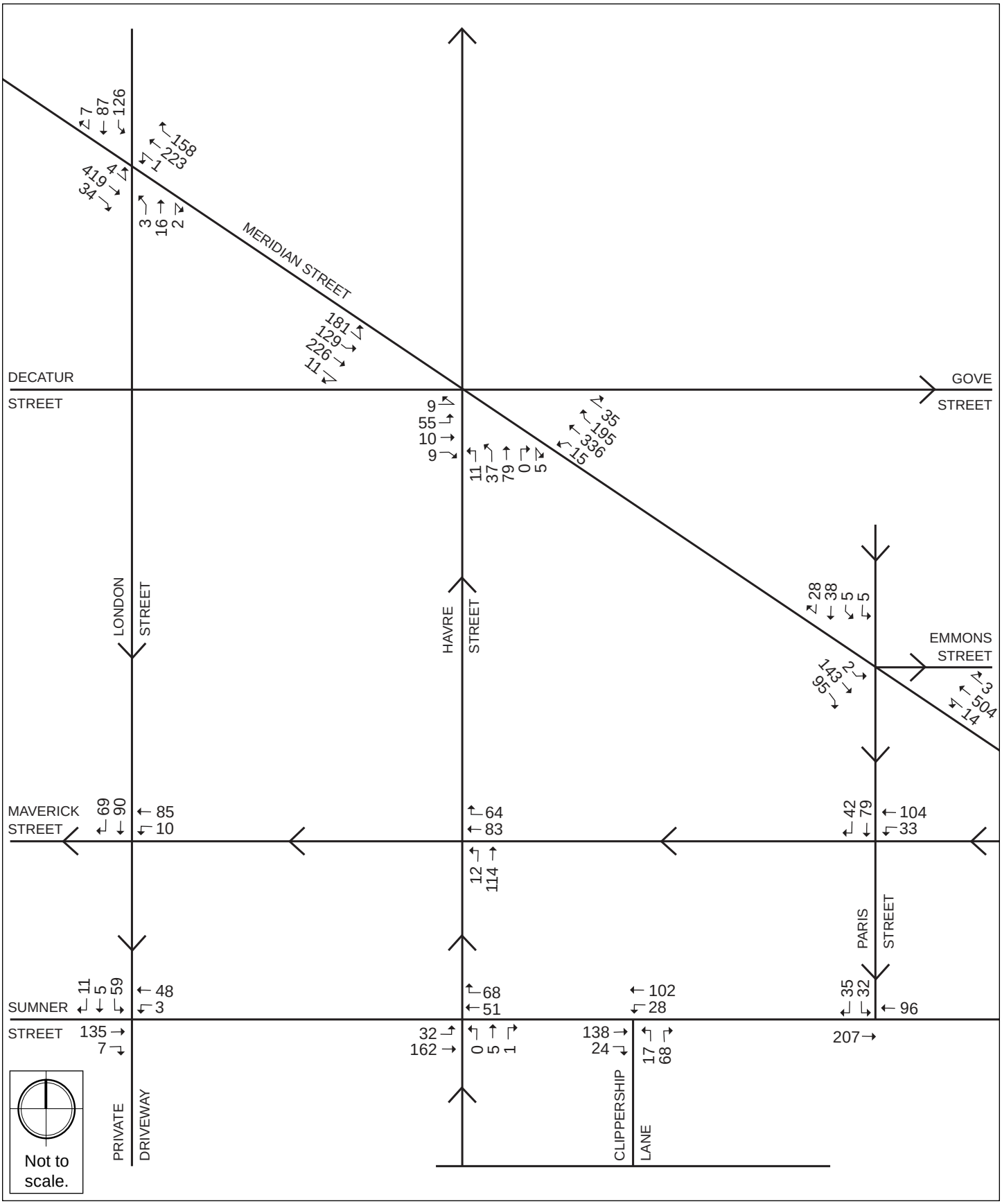
Clippership Apartments
East Boston, MA

Figure 5-10
Project-generated Trips, a.m. Peak Hour
Howard Stein Hudson



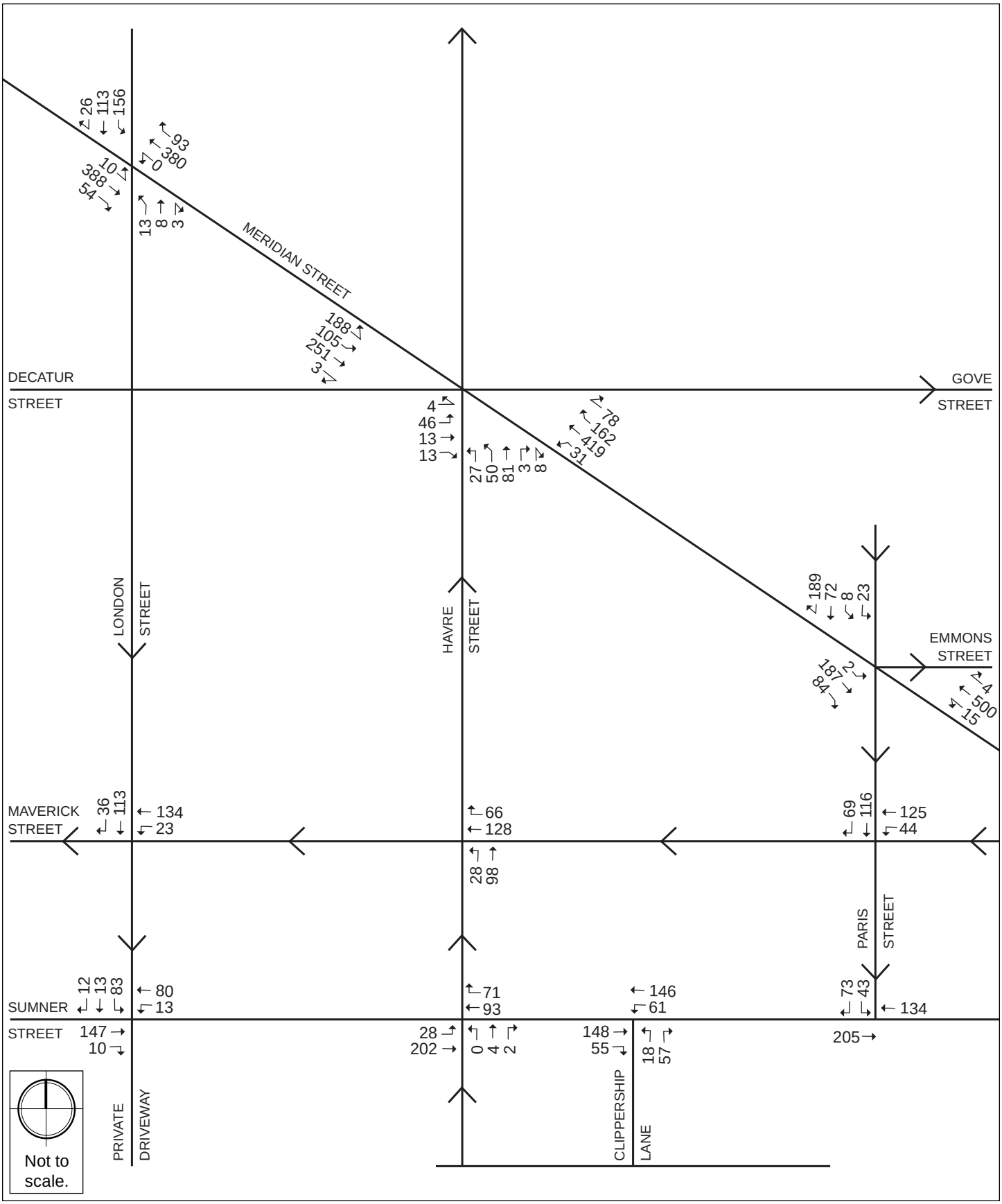
Clippership Apartments
East Boston, MA

Figure 5-11
Project-generated Trips, p.m. Peak Hour
Howard Stein Hudson



Clippership Apartments
East Boston, MA

Figure 5-12
Build Condition Traffic Volumes, a.m. Peak Hour
Howard Stein Hudson



Clippership Apartments
East Boston, MA

Figure 5-13
Build Condition Traffic Volumes, p.m. Peak Hour
Howard Stein Hudson

Chapter 6

ENVIRONMENTAL PROTECTION

CHAPTER 6: ENVIRONMENTAL PROTECTION

6.1 INTRODUCTION

The Project will be built in full compliance with federal, state, and City environmental regulations. An appropriate Construction Management Plan to avoid and mitigate construction period impacts will be strictly followed.

6.2 WIND

The Project has a similar massing to the surroundings and to existing conditions. The Project is not expected to have adverse pedestrian-level wind impacts adjacent to or in the vicinity of the Project Site due to its modest building heights and proximity to neighboring buildings. As a result of the placement of the proposed new buildings in the existing context, pedestrian level winds along adjacent sidewalks are not anticipated to exceed the BPDA guidelines for wind speeds of 31 miles per hour.

6.3 SHADOW

The Project is composed of 3-story buildings and has a similar height to the existing conditions. The modest building heights and proximity to neighboring buildings will create minimal change to the existing shadows cast from the Project Site onto surrounding sidewalks, streets, and neighborhood context. Table 6-1 shows the times of day and times analyzed, see Figures 6-1 through 6-4, Shadow Studies.

Table 6-1: Shadow Study Dates and Times

Date	Time
Vernal Equinox - March 21st	9:00 a.m., 12:00 p.m., 3:00 p.m., 6:00 p.m.
Summer Solstice - June 21st	9:00 a.m., 12:00 p.m., 3:00 p.m., 6:00 p.m.
Autumnal Equinox - September 21st, EDT	9:00 a.m., 12:00 p.m., 3:00 p.m., 6:00 p.m.
Winter Solstice - December 21st, EST	9:00 a.m., 12:00 p.m., 3:00 p.m., 6:00 p.m.

6.4 DAYLIGHT

The Project will be constructed in a developed urban area. Adequate daylight will be ensured by siting the proposed buildings interspersed with pedestrian walkways, roadways, and open space to create separation.

6.5 SOLAR GLARE

A solar glare analysis is intended to measure potential reflective glare from the building onto streets, public open spaces, and sidewalks in order to determine the likelihood of visual impairment or discomfort due to reflective spot glare. As a result of the design and the use of generally non-reflective materials, it is not anticipated the Project will have adverse solar glare impacts or create solar heat buildup in nearby buildings. Site landscaping and street trees will further absorb sunlight to minimize reflection from the buildings onto the street, sidewalk, and neighboring properties.

6.6 AIR QUALITY

This section provides a qualitative review of air quality sources and impacts as a result of the Project from traffic, parking, and heating and mechanical ventilation systems. Impacts from construction and operations are addressed in Section 6.12, Construction Impacts.

6.6.1 TRAFFIC SOURCES

Due to the modest number of new vehicle trips contributed to the local roadway network by the Project, the impact of Project trips on the performance of the transportation study area intersections relative to air quality is modest. The BPDA typically requires a future air quality CO analysis for any intersection where the level of service (LOS) is expected to fall to a D or lower and the proposed Project causes a 10% increase in traffic; or where the LOS is E or F and the project contributes to a reduction in LOS.

As shown in Chapter 5, Transportation, all intersections under the Build Condition will continue to operate at an acceptable LOS during AM and PM peak hours. Most individual approaches to area intersections will operate at LOS D or better, with the exception of a few approaches that are already operating at LOS F. For this reason, no mesoscale air quality analysis was performed for the Project.

Transportation Demand Management strategies are a significant component of this Project and are anticipated to assist in minimizing traffic impacts and, by extension, air quality impacts. The Proponent will implement TDM measures to reduce dependence on automobiles, see Section 5.7 Transportation Demand Management.

6.6.2 PARKING SOURCES

The Project Site is currently occupied by residential buildings and surface parking. The Project will improve and enliven the Project Site with improved residential units, ground floor retail, and open space, and will include space for covered bicycle parking plus additional exterior bicycle parking for visitors and 18 surface vehicle parking spaces.

In keeping with Boston's Complete Streets Guidelines, a high bicycle to vehicle/parking ratio will be used to encourage bicycle use and help reduce parking demand. Combined with the Project's proximity to transit, these factors will minimize air pollution from vehicle sources associated with the Project.

6.6.3 BUILDING OPERATION SOURCES

Heating and cooling systems will be provided on an individual basis. Heating will be hydronic heat supplied by individual gas-fired on-demand tankless water heaters with cooling provided by individual condenser units located on the roof. They are small residential style systems with low impact on air quality. The retail component will consist of a gas-fired roof top unit for heating and cooling. In combination, these building operation factors are not expected to contribute to changes in air quality.

6.7 NOISE

The Proponent does not anticipate an increase in noise impacts associated with the residential or commercial uses at the Site. The Boston Air Pollution Control Commission regulates noise in the City of Boston based on zoning and land use classification. The regulations set fixed noise limits for daytime and nighttime use of equipment serving the building (for residential areas, a maximum level of 60 dBA for daytime use, and 50 dBA for nighttime use is required). These levels are limits for equipment sound assessed at the property lines of the Project. The limits apply to equipment that operates on a significant basis to serve the building, such as climate control equipment and fans. In addition to the overall sound level requirements, the regulations list specific octave band frequency limits for daytime and night time periods.

The primary sources of exterior sound for the Project will include heating, cooling, and ventilation systems. Based on the systems design and location, the equipment is not expected to produce significant sound levels at the building property lines, though noise control measures will be provided if required.

Intermittent increases in noise levels will occur in the short-term during construction. Construction work will comply with the requirements of the City of Boston Noise Ordinance. Noise impacts will be controlled during construction, as appropriate, through the use of mufflers on heavy equipment, construction hour restrictions, and other noise mitigation.

6.8 FLOOD ZONES

As part of its administration of the National Flood Insurance Program, the Federal Emergency Management Agency (FEMA) publishes flood hazard maps, called Flood Insurance Rate Maps (FIRM). The purpose of a FIRM is to show the areas in a community that are subject to flooding and the risk associated with these flood hazards. The latest map that covers the flood zones for the area including the Project Site, 25025C0081J, was published in March of 2016.

According to FEMA, portions of the southwestern side of the Project Site are located within a flood zone.

This southwestern edge is located within a Zone AE special flood hazard area. Therefore, the residential portions of the buildings will be approximately three feet above the base flood elevation, to respond to possible storm surges and future sea-level rise. The common spaces and retail are proposed to be located at a minimum of 30 inches above the base flood elevation.

6.9 SEA LEVEL RISE

In addition to the coastal flooding concerns covered by FEMA, the effects of global climate change and sea level rise is of great concern in this area. In the past decade, climate change adaptation has gained national attention as a critical environmental factor that must be addressed in new development projects. In Boston, sea level rise has become a serious concern as recent weather patterns and future modeling are demonstrating that storms impacting the City are likely to continue to intensify. The recent Climate Ready Boston Report, released by the City in December of 2016 lists East Boston as one neighborhood of particular concern for climate vulnerability and future intervention. It is for this reason that the level of the Project Site will be elevated 48 inches above the flood plain, 36 inches above what is required.

6.10 WATER QUALITY

During construction, best management practices (BMPs) will be used to limit the transportation of sediment off-site. The contractor will obtain a National Pollution Discharge Elimination System (NPDES) stormwater permit and implement BMPs to minimize pollutant runoff. The Contractor will also follow these measures:

- Comply with all federal, state, and City codes, ordinances, and regulations governing the on-site discharge of construction dewatering effluent
- Use filter socks to prevent silt or soil from entering existing catch basins
- Use temporary wheel wash areas within the Project Site
- Use temporary gravel entrance berms at the main exits from the Project Site
- Isolate and protect stockpiled materials
- Monitor the proper use of tarpaulin-covered trucks
- Prevent/control truck spillage
- Clean the adjacent portions of City streets entering and exiting the Project Site

6.11 GEOTECHNICAL

The Project can be supported on deep foundations driven or drilled into the underlying Marine Deposits and clay layers. The site is underlain by thick Fill soils, Organic deposits and Marine deposits. Significant obstructions were encountered in the fill soils which will require pre-excavation and removal prior to pile installation. The building design has not been finalized and foundation loads are not known; however, using typical building loads, timber piles driven through fill and organic soils and bearing in the Marine Deposits is one potential alternative to support the proposed buildings.

Importing fill and raising the Project Site grade up to 48 inches is proposed. This fill may cause some time-related settlement of the underlying compressible organic and marine deposits. The lowest level floor slabs will be designed as structural slabs. Additional details of our evaluation are included below.

Additional geotechnical investigations are being perused for the final design of the project.

6.11.1 SUBSURFACE SOIL CONDITIONS

Four test borings were drilled at the Project Site by New England Boring Contractors, Inc. in November 2016. The borings were observed by a Haley & Aldrich geologist and were drilled to depths ranging from 7 feet to 25 feet below ground surface. Test boring HA16-103 encountered a concrete obstruction at 5 feet depth below ground surface and drilling was terminated at 7 foot depth. The purpose of the borings was to obtain information on soil composition, density, stratum thickness, and depth to groundwater.

Two samples of the marine deposits from test boring HA16-102 were submitted to the geotechnical laboratory for grain size analysis.

Generally, the subsurface explorations indicate the following geologic units listed in order of occurrence below ground surface. Subsurface conditions are interpreted from test boring data.

- Fill was encountered at each exploration location and was found to range in thickness from 6.5 feet to 18.5 feet. These soils are generally described as medium dense, poorly graded sand with gravel. Silty sand fill soils was present in boring HA16-101. In addition, varying amounts of oversize materials, granite blocks, timbers, ash, brick, cinders, slag, coal, metal, metal flakes, and wood debris were encountered.

- Organic Deposits were encountered underlying the fill soils in test boring HA16-103A. The organic deposits encountered were approximately 6.5 feet

thick and were described as medium dense organic soil with sand and trace amounts of organic fibers and shell fragments

- Hydraulic Fill was encountered in test boring HA16-102. Hydraulic fill consisted of very loose silty sand with trace organic soil to silt with sand. The Hydraulic fill is typically characterized as very loose to very soft and may be from previous harbor dredging operations depositing harbor bottom deposits at the site. At other harbor sites, hydraulic fill consists of very low strength silts, clays and sands.

- Marine (Sand) Deposits were encountered beneath the fill and organic soils at test boring HA16-103A. These soils are described as dense poorly graded sand with gravel.

- Marine (Clay) Deposits were encountered at test borings HA16-101 and 102. These soils are generally described as very soft to medium stiff lean clay and were encountered at 18.5 feet depth below ground surface. Marine Clay Deposits are expected to be present at depth below the site.

6.11.2 GROUNDWATER CONDITIONS

One groundwater observation well (B-101) was installed on August, 17 2010. Measurements indicate that groundwater level ranges from approximately El. 10 to El. 12. A.

6.11.3 FOUNDATION DESIGN AND CONSTRUCTION

The surficial fill soil, Hydraulic fill and organic deposits are unsuitable for foundation support of the new structures. The marine deposits are the uppermost suitable foundation bearing layer, about 18 ft below existing ground surface and 10 feet below water level. Based on the relatively low building loads and depth to suitable bearing soils, low capacity friction piles are recommended to support the building loads. Friction piles could consist of precast prestressed concrete, steel H-piles, drilled-in piles, or treated timber piles. Selection of the pile type can be completed during final design; however, treated timber piles are likely a cost-effective option.

Treated timber piles would extend through the fill and organic soils and into the underlying marine deposits. A vertical compressive design capacity of 40 kips per pile can be used for planning, using 10 inch diameter piles (8 inch minimum tip diameter). Each pile would extend about 35 to 40 feet into the marine deposit bearing layer and the estimated piles lengths would be up to 60 feet.

The minimum center to center spacing of piles should be 30 inch and Treated Timber Piles should conform to ASTM D25. The timber piles should be treated to prevent

deterioration. Pile caps should be laterally braced in accordance with Section 1810.2.2 of the Code. In addition to structure loads, planned site filling will likely induce some settlement of the underlying compressible site soils. This settlement could cause 'downdrag' on installed piles, which may reduce pile design capacities. Downdrag forces and potential impacts to pile capacities should be evaluated during final design.

6.12 SOLID AND HAZARDOUS WASTE

The ASTM E 1527-13 Standard defines an REC in part as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

The following RECs listed below were identified in connection with the subject site:

- REC #1: Reportable Concentrations of contamination in Urban Fill
- REC #2: Reportable Concentrations of Trichloroethylene (TCE) in Groundwater- Vapor Intrusion Potential
- REC #3: Asbestos in Soil

6.12.1 Site History and Compliance with MA Contingency Plan

Dates	Description of the Project Site
1888 through 1920s	National Tube Works Company, uses included brass foundry, copper and iron storage, copper sawing and planning, and pipe cutting and brass finishing.
Late 1920s through mid-1960s	Merchants Wool Scouring Company, uses included wool storage and scouring, wool warehouse, wool drying, and auto repair shop and garage. The 1964 Sanborn Map shows the auto repair shop and garage were in use in 1950 but appear to have been taken over for use as a wool warehouse by 1964. Two USTs are noted next to the garage in the 1950 and 1960 Sanborn Map on what is now Clipper Ship Lane. The 1964 Sanborn Map shows Merchant Wool Scouring Company is no longer in operation.
1974 to present	Clippership Apartments were constructed in 1974 and the Project Site has been used as low income apartment buildings and on-site parking since that time.

Evidence of reported releases were not recorded at the Project Site, however reportable concentrations in soil and groundwater were detected during a November 2016 subsurface investigation.

The following Reportable Environmental Conditions (RECs) were identified in connection with the Project Site:

REC #1: Reportable Concentrations of contamination in urban Fill

The Project Site was part of the Boston Harbor until it was filled in the 1830s prior to use by National Tube Works Company and later the Merchants Wool Scouring Company. Fill materials, ubiquitous in the Boston area, were encountered during Haley & Aldrich's November 2016 subsurface investigation at the Project Site. Six soil samples collected from two test borings exhibited concentrations of compounds above the applicable MCP RCS-1 reportable concentrations. Levels of benzo(a)pyrene, arsenic, copper and lead were detected above RCS-1. Based on a comparison of soil and groundwater quality to the applicable MCP Reportable Concentration, a 120-day reporting condition exists at the property. The presence of contamination in soil is attributable to historic site use and urban fill.

REC #2: Reportable Concentrations of Trichloroethylene (TCE) in Groundwater – Vaper Intrusion Potential

One groundwater sample was collected from an existing monitoring well at the subject site during the November 2016 subsurface investigation. The groundwater sample was submitted for chemical analysis of Volatile Organic Compounds. One VOC, TCE, was detected in the sample above the applicable RCGW-2 Reportable Concentration. A 120-day reporting condition exists at the property for TCE in groundwater in accordance with 310 CMR 40.0315(1).

The monitoring well is located within 30 ft of an occupied residential dwelling and the depth to groundwater was observed at 8 ft below ground surface. This is considered a Condition of Substantial Release Migration and the owner's (Boston Housing Authority – "BHA") Licensed Site Professional, GEI Consultants Inc., provided the required 72-hour notice to the Massachusetts Department of Environmental Protection ("MassDEP") on BHA's behalf. MassDEP assigned RTN 3-33981 to the release.

REC #3: Asbestos in Soil

Asbestos was found to be present in one soil sample at levels greater than 1% at the Project Site. Management of asbestos contaminated soil will be conducted in conjunction with and as part of remedial activities performed under the MCP.

6.13 CONSTRUCTION IMPACTS

This section discusses potential construction impacts from the construction of the Project.

6.13.1 CONSTRUCTION MANAGEMENT PLAN

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

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

During the construction phase of the Project, the Proponent will provide the name, telephone number and address of a contact person to communicate with on issues related to the construction. The construction contact will be a person who is responsible for responding to the questions, comments, and complaints of the residents of the neighborhood.

The Proponent intends to follow the guidelines of the City of Boston and the Massachusetts Department of Environmental Protection ("DEP"), which direct the evaluation and mitigation of construction impacts.

6.13.2 CONSTRUCTION ACTIVITY SCHEDULE

Construction of the Project is estimated to commence in the fourth quarter of 2017 and occur over approximately 15 months.

Typical construction hours will be from 7:00 a.m. to 6:00 p.m., Monday through Friday, with most shifts ordinarily ending at 3:30 p.m. No substantial sound-generating activity will occur before 7:00 a.m. If longer hours, additional shifts, or Saturday work is required, the Proponent will place a work permit request to the Boston Air Pollution Control Commission and BTD in advance.

6.13.3 CONSTRUCTION TRAFFIC IMPACTS

Construction methodologies that ensure public safety and protect nearby tenants will be employed. Techniques such as barricades and signage will be used. Construction management and scheduling will minimize impacts on the surrounding environment

and will include plans for construction worker commuting and parking, routing plans for trucking and deliveries, and the control of noise and dust.

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

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

6.13.4 CONSTRUCTION WORKER PARKING AND STAGING

The number of workers required for the construction of the Project will vary depending upon the stage of construction. Construction workers will typically arrive and depart prior to peak traffic conditions and the construction trips are not expected to substantially impact traffic conditions.

The general contractor will be responsible for educating all construction workers about public transit options and encouraging the use of high occupancy vehicles. All construction workers will be encouraged to utilize mass transit and ridesharing options to access the construction site and to minimize vehicle traffic and parking on the local streets. As part of the program to promote public transportation, the following will be implemented:

- Providing on-site secured space for workers' tool storage
- Posting transit schedules and maps at the Project Site
- Distributing informational brochures regarding public transportation
- Notifying all subcontractors and suppliers of worker access/parking restrictions

The Proponent will submit a Boston Residents Construction Employment Plan in accordance with the Boston Jobs Policy. The Plan will provide that the Proponent make good faith efforts to employ local tradespeople from the City of Boston. In this

effort, the Proponent will meet with local agencies prior to the start of construction to establish a community outreach program.

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

6.13.5 CONSTRUCTION AIR QUALITY

Short-term air quality impacts from fugitive dust may be expected in demolition and the removal of soil materials and during the early phases of the Site preparation activities. The construction contract for the Project will require the contractor to reduce potential emissions and minimize air quality impacts. Mitigation measures are expected to include the use of wetting agents where needed on a scheduled basis, covered trucks, minimizing exposed construction debris stored on-site, monitoring construction practices to ensure that unnecessary transfers and mechanical disturbances of loose materials are minimized, locating aggregate storage piles away from areas having the greatest pedestrian activity when possible, and periodic cleaning of streets and sidewalks to reduce dust accumulations.

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

6.13.6 CONSTRUCTION NOISE IMPACTS

Intermittent increases in noise levels will occur in the short term during the construction of the new buildings. Work will comply with the requirements of the City of Boston Noise Ordinance. Efforts will be made to minimize the noise impact of construction activities, including appropriate mufflers on all equipment such as air compressors and welding generators, maintenance of intake and exhaust mufflers, turning off idling equipment, replacing specific operations and techniques with less noisy ones, and scheduling equipment operations to synchronize the noisiest operations with times of highest ambient noise levels.

6.13.7 SEDIMENT CONTROL MEASURES

During demolition and construction, erosion and sediment control measures will be implemented to minimize the transport of Project Site soils to off-site areas and BWSC

storm drain systems. The existing catch basins will be protected with filter fabric or silt sacks to remove sediment from runoff. These controls will be inspected and maintained throughout the construction phase until all areas of disturbance have been stabilized through the placement of pavement, structure, or vegetative cover.

Other sediment controls, which will be implemented as needed during construction, will include the following:

- Stacked hay bales and/or silt fence barriers will be installed at the base of stockpiled soils and at erosion-prone areas throughout the construction phase of the Project.
- Erosion controls will be maintained and replaced as necessary to ensure their effectiveness.
- Where necessary, temporary sedimentation basins will be constructed to prevent the transport of sediment off-site.
- Measures to control dust will be implemented during renovations— all debris will be properly contained on the Site.
- Erosion controls will be maintained and replaced as necessary until the installation of pavement and the establishment of stabilized vegetation at the Site.

6.13.8 GEOTECHNICAL MITIGATION MEASURES

Some demolition activities and structural work, may generate low level vibrations. Vibration control criteria will be established in the construction specifications. Vibration monitoring will be conducted at nearby facilities using engineering seismographs during these activities.

The following mitigation measures will be implemented in the geotechnical construction:

- Specifications will be incorporated into the construction contract documents to establish performance requirements for protection of nearby structures and facilities.
- The design team will review and comment on contractor submittals for conformance to the Project contract documents.
- The submittals will include contingency measures that would be implemented in the event that problems or concerns related to the geotechnical construction arise during the work.
- The geotechnical aspects of the construction will be monitored by engineering personnel on behalf of the owner.

- Geotechnical instrumentation will be used to monitor the contractor's performance including elevation reference points on adjacent buildings and structures, as acceptable to the owners.
- Existing public and private infrastructure located within the public right-of-way will be protected during construction. The installation of proposed utilities within the public way will be in accordance with the MWRA, BWSC, Boston Public Works, Dig Safe, and the governing utility company requirements. All necessary permits will be obtained before the commencement of the specific utility installation. Specific methods for constructing proposed utilities where they are near to, or connect with, existing water, sewer and drain facilities will be reviewed by BWSC as part of its site plan review process.

6.13.9 RODENT CONTROL

The contractor will file a rodent extermination certificate with the building permit application to the City. Rodent inspection, monitoring, and treatment will be carried out before, during, and at the completion of all construction work for the Project, in compliance with the City's requirements. Rodent extermination prior to commencing work will treat areas throughout the Project Site, including building interiors. During the construction process, regular service visits will be made to maintain effective rodent control.

6.14 WILDLIFE HABITAT

The Project Site is fully developed with urban landscape materials and the Project will not impact important wildlife habitat. According to the latest Natural Heritage & Endangered Species Program maps, no Priority or Estimated Habitats are located on or near the Project Site.

6.15 HISTORIC AND ARCHAEOLOGICAL RESOURCES

The Project Site does not contain any known structure, site, or building listed or potentially eligible for listing on the National Register of Historic Places or State Register of Historic Places. This Site is not within a National Register Historic District or within a historic district that has been identified as potentially eligible for the National Register.

An area of potential effect (APE) of one-quarter mile has been analyzed for the purposes of identifying historic resources and assessing potential project-related impacts. A review of the Massachusetts Historical Commission (MHC) inventory revealed 34 extant inventoried historic properties and all or part of five MHC inventoried districts within the APE. There are no structures or districts within the APE listed on the National Register of Historic Places.

The Project is proposing residential and retail uses and associated parking. The new buildings will be similar in material and scale to the existing buildings and the surrounding fabric. Therefore, no adverse impacts to the historic structures in the surrounding area will result from the proposed Project.

There are no known archaeological sites on the Project Site.

6.15.1 HISTORIC RESOURCES IN THE VICINITY OF THE PROJECT SITE

Historic resources within approximately one quarter mile of the study area are described in Table 6-2 and shown in Figure 6-5, Historic Resources in the Vicinity of the Project Site.

Table 6-2: Historic Resources

#	Name/ Location	Description of Resource		Impact of Project on Resource
Historic Inventory Areas Listed on MACRIS				
1	8-18 Henry Street 9-28 Paris Street	Pocket of primarily residential construction located immediately west of Maverick Square. Built in the 1940's. Recommended for Paris Street National Register District.		No impact.
2	Maverick Square Area/Hotel Square	The oldest commercial focus in East Boston and the site of major commercial and institutional construction of both local and regional significance, although little remains today. The Maverick Square open space survives from the original 1833 plan of East Boston.		No impact.
3	Most Holy Redeemer Roman Catholic Church Complex	The oldest church and the oldest stone building existing in East Boston. Recommended for National Register Individual listing.		No impact.
4	East Boston Inner Harbor Industrial Area	Industrial Complex or District		No impact.
5	East Boston Dry Dock Company/Atlantic Works Shipyard	Abandoned or Vacant; Carpenter Shop; Other Industrial; Ship Yard		No impact.
#	**Name**	**Address**	**MHC Description of Resource**	**Impact of Project on Resource**
Individual Historic Inventory Properties Listed on MACRIS				
BOS.119	White, George Fund East Boston Health Unit	75 Paris St	Colonial Revival	No impact.
BOS.96	East Boston Police Station and Court House	35-39 Meridian St	Classical Revival	No impact.
BOS.15886	Atlantic Works Welding and Engineering Building	36 New St	No style	No impact.
BOS.9677	Atlantic Works Gate	102 Border St		No impact.
BOS.30		8-18 Henry St	Greek Revival	No impact.

BOS.189	East Boston Engine #40 Fire House	260 Sumner St	English Revival	No impact.
BOS.74	Most Holy Redeemer Roman Catholic Church	70 Maverick St	Gothic Revival	No impact.
BOS.80	East Boston Savings Bank	10-16 Meridian St	Classical Revival	No impact.
BOS.9805	Sumner Tunnel - East Boston Vent Tower	65 Liverpool St		No impact.
BOS.117	Engine #9 - Ladder Company #2 Fire House	60 Paris St	Not researched	No impact.
BOS.68	Immigrants Home Corporation Building	72-74 Marginal St	Classical Revival	No impact.
BOS.9672	Atlantic Works Derrick Pier	102 Border St		No impact.
BOS.77	Most Holy Redeemer Roman Catholic Church Rectory	65 London St	High Victorian Gothic	No impact.
BOS.12874	Atlantic Boiler Works - Wigglesworth Machinery Co.	60 Border St	No style	No impact.
BOS.31		18-20 Paris St	Greek Revival	No impact.
BOS.12875	Atlantic Boiler Works	80 Border St	No style	No impact.
BOS.9671	Atlantic Works Pier No. 4	102 Border St		No impact.
BOS.108	Atlantic Boiler Works Boiler Shop	40 New St	No style	No impact.
BOS.192	Woodbury Building	191-201 Sumner St	Greek Revival	No impact.
BOS.901	East Boston Tunnel - Third Rail Tunnel	Maverick Sq		No impact.
BOS.9678	New Street Sea Wall	6-26 New St		No impact.
BOS.76	Sisters of Notre Dame Roman Catholic Convent	56 Havre St	Greek Revival; Second Empire;	No impact.
BOS.906	Sumner Street Bridge over Conrail	Sumner St		No impact.
BOS.73	Winthrop Block	32-44 Maverick Sq	Altered beyond recognition	No impact.
BOS.33	Our Savior American Lutheran Church	28 Paris St	Colonial Revival	No impact.
BOS.75	Most Holy Redeemer Roman Catholic School	69 London St	Victorian Eclectic	No impact.
BOS.9463	Street Clock	9 Chelsea St		No impact.
BOS.911	Callahan Tunnel East Boston Vent Building	89 London St		No impact.
BOS.107	Boston Cold Storage Company - Building #8	10-16 New St	No style	No impact.
BOS.79	First Ward National Bank	2-8 Meridian St	Classical Revival	No impact.

BOS.81	Columbia Trust Company Building	18-20 Meridian St	Renaissance Revival	No impact.
BOS.32		22-24 Paris St	Greek Revival	No impact.
BOS.12885	American Architectural Iron Company	80 Liverpool St	No style	No impact.
BOS.900	Maverick Square Subway Station	Maverick Square		No impact.

6.16 TIDELANDS

6.16.1 OVERVIEW

The Project Site is subject to Chapter 91 licensing by DEP pursuant to 310 CMR 9.04(2). It is within the Secretary of Energy and Environmental Affairs' discretion to conduct a public benefit review of the Project. This section provides a description of the nature of the tidelands affected and the Project's public benefits.

6.16.2 JURISDICTION

The Project Site is comprised entirely of filled, formerly flowed tidelands, typical to most of the East Boston waterfront filled in the early to mid-1800's. The Chapter 91 historic high water mark is located just inland of Sumner Street, and the line of landlocked tidelands is demarcated by Sumner Street which is the first public way beyond 250 feet from the high water mark.

Due to the Project Site's location within jurisdiction and parcel ownership by the BHA, the entire Project Site is considered filled Commonwealth tidelands. See Figure 6-5, Chapter 91 Jurisdiction.

6.16.3 PUBLIC BENEFIT REVIEW AND DETERMINATION

In accordance with the requirements of the 310 CMR 11.05(4)(b) and 310 CMR 13.03, this section provides the following information regarding a Public Benefits Determination for projects in Commonwealth tidelands.

Nature of Tidelands Affected by the Project

The Project Site is considered Commonwealth tidelands. Fill was authorized in this area in Chapter 91 Licenses dating back to the 1880s. At that time, and through the following decades, the areas used for water dependent and non-water dependent industrial purposes including dockworks, wool scouring, and garage uses. The existing masonry buildings currently dominating the Project Site were built by the BHA in 1974, for residential use.

Public Benefits of the Project

The purpose of the Project is to build 20 new BHA housing units (to replace the 20 existing units on the Project Site which do not have an alternative source of funding for repair and preservation and would therefore otherwise eventually be lost forever without the Project's proposed solution) and to create 30 additional workforce and market rate home ownership options for the neighborhood. Approximately 36 of the residential units will be affordable. The Project contains substantial public benefits including the following:

- Improved visual and physical connection to the Harbor by continuing Havre Street through the Project Site, as imagined in the East Boston Harbor Plan;
- Improved energy efficiency of buildings on the Project Site; and
- Landscape improvements and public open space.

Impact on Abutters and the Surrounding Community

There will be minor impacts on the abutters and surrounding community. The Project will add 30 new housing units, a Community Room, and a small retail element. Upon completion, pedestrians will have greatly enhanced access to the waterfront through the Project Site.

Vehicle traffic will increase minimally due to the low increase in units and the close proximity to public transit available at Maverick Square. There are no expected decreases in the level of service on roads leading to the Project Site as a result of the Project. Although the traffic impacts associated with the Project are minimal, the Proponent will continue to work with the City of Boston to efficiently serve vehicle trips, the pedestrian environment, and transit and bicycle usage.

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

The Project will provide improved connections to the waterfront, job opportunities, affordable and mid-market rate housing, and open space for passive recreation.

The environmental impacts will be reduced as a result of the installation of a stormwater recharge system that reduces the peak rates of stormwater runoff and promotes runoff recharge. This recharge system will also help improve the health of the receiving waters.

General Welfare

The Project will not result in adverse impacts to the public's general welfare.

9:00 am

12:00 pm

3:00 pm

6:00 pm

Figure 6-1
Shadow Study March 21
Source: Fort Point Associates, Inc., 2016

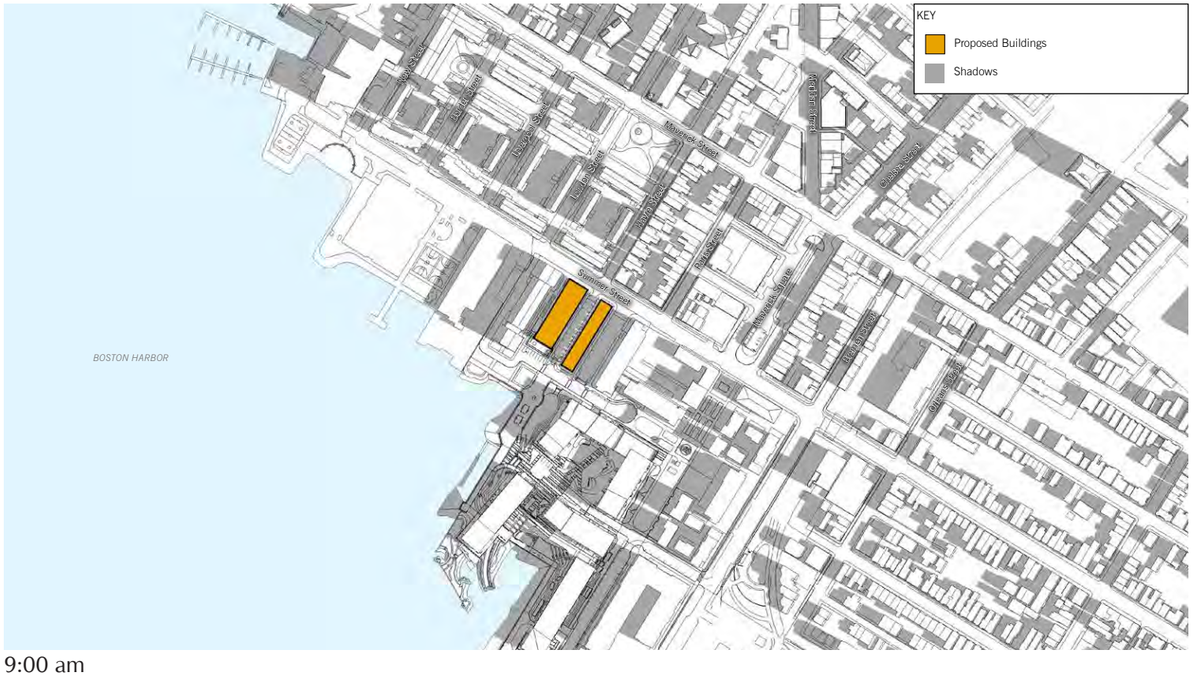
9:00 am

12:00 pm

3:00 pm

6:00 pm

Figure 6-2
Shadow Study June 21
Source: Fort Point Associates, Inc., 2016



9:00 am

12:00 pm

3:00 pm

6:00 pm

Figure 6-3
Shadow Study September 21
Source: Fort Point Associates, Inc., 2016

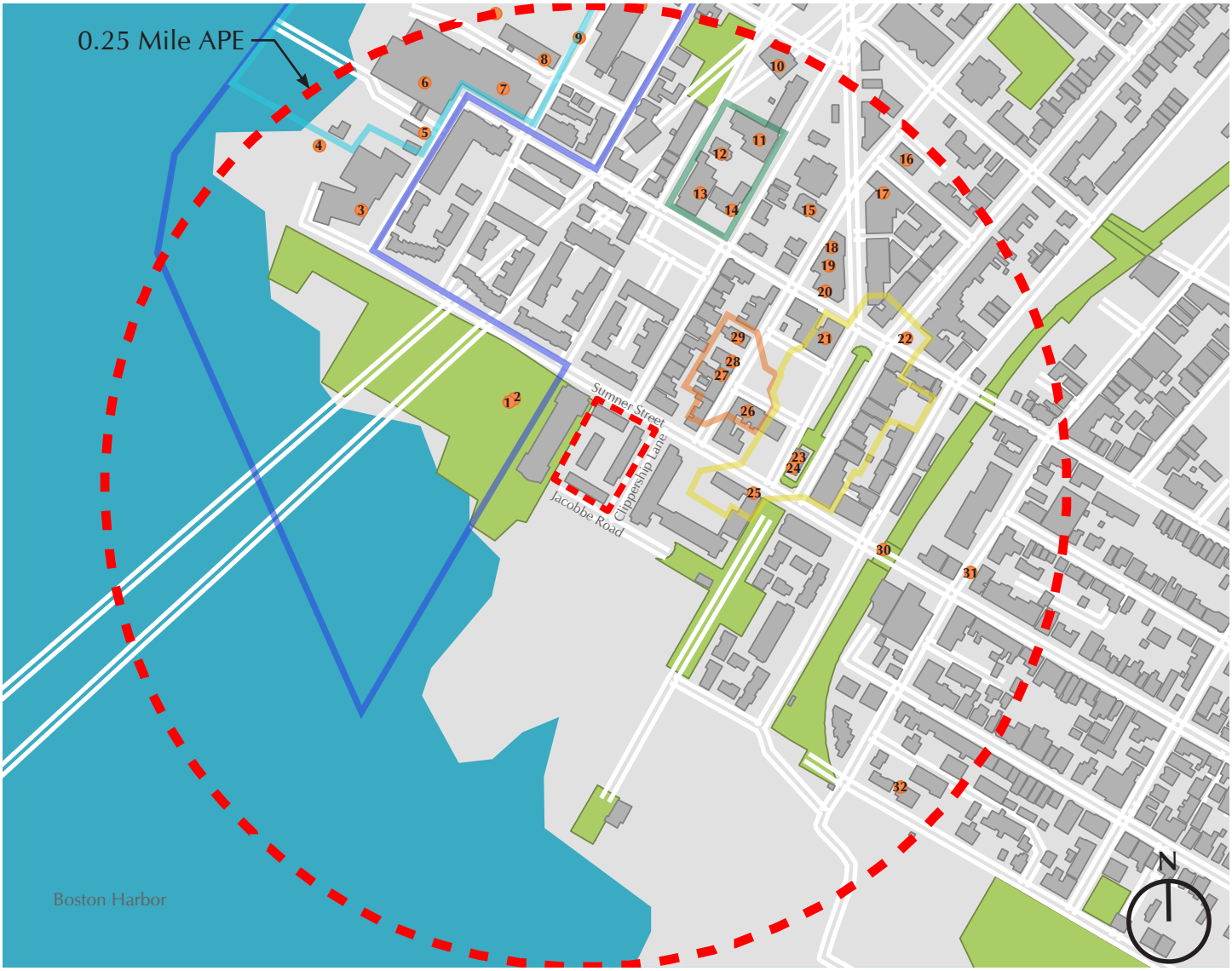
9:00 am

12:00 pm

3:00 pm

6:00 pm

Figure 6-4
Shadow Study December 21
Source: Fort Point Associates, Inc., 2016



MACRIS Inventoried Areas

- 8-18 Henry Street - 9-28 Paris Street
- Maverick Square Area
- Most Holy Redeemer Roman Catholic Church Complex
- East Boston Inner Harbor Industrial Area
- East Boston Dry Dock Company

MACRIS Inventoried Individual Properties

1 BOS187: Demolished (Hodge Boiler Works)
2 BOS 188: Demolished (Hodge Boiler Works)
3 BOS 107: Boston Cold Storage Company - Building #8
4 BOS 9678: New Street Sea Wall
5 BOS 15886: Atlantic Works Welding & Eng. Building
6 BOS 108: Atlantic Boiler Works Boiler Shop
7 BOS 12875: Atlantic Boiler Works
8 BOS 9671: Atlantic Works Pier No. 4
9 BOS 9672: Atlantic Works Derrick Pier
10 BOS 911: Callahan Tunnel East Boston Vent Building
11 BOS 75: Most Holy Redeemer Roman Catholic School
12 BOS 77: Most Holy Redeemer Rectory
13 BOS 74: Most Holy Redeemer Roman Catholic Church
14 BOS 76: Sisters of Notre Dame Roman Catholic Convent
15 BOS 117: Engine #9 - Ladder Company #2 Fire House
16 BOS 119: White, George Fund East Boston Health Unit
17 BOS 96: East Boston Police Station and Court House
18 BOS 81: Columbia Trust Company Building
19 BOS 80: East Boston Savings Bank
20 BOS 79: First Ward National Bank
21 BOS 73: Winthrop Block
22 BOS 9463: Street Clock
23 BOS 900: Maverick Subway Station
24 BOS 901: East Boston Tunnel - Third Rail Tunnel
25 BOS 192: Woodbury Building
26 BOS 30: 8-18 Henry Street
27 BOS 31: 18-20 Paris Street
28 BOS 32: 22-24 Paris Street
29 BOS 33: Our Savior American Lutheran Church
30 BOS 906: Sumner Street Bridge over Conrail
31 BOS 189: East Boston Engine #40 Fire House
32 BOS 68: Immigrants Home Corporation Building

East Boston, Massachusetts

Figure 6-5
Historic Resources in the Vicinity of the Project Site
Source: Fort Point Associates, Inc., 2016

East Boston, Massachusetts

Figure 6-6
Chapter 91 Jurisdiction
Source: Fort Point Associates, Inc., 2017

Chapter 7

INFRASTRUCTURE

CHAPTER 7: INFRASTRUCTURE

7.1 INTRODUCTION

The Infrastructure Systems section outlines the existing utilities surrounding the Project Site, the connections required to provide service to the Project, and any impacts on the existing utility systems that may result from the construction of the Project. The following utility systems are discussed herein:

- Sewer
- Domestic water
- Fire protection
- Drainage

7.2 WASTEWATER

This section describes existing and proposed wastewater conditions on the Project Site.

7.2.1 EXISTING SEWER SYSTEM

The Boston Water and Sewer Commission (BWSC) has an existing sanitary sewer main adjacent to the Project Site. There is an existing BWSC 10-inch sanitary sewer main located in Clipper Ship Lane and a 24x30-inch BWSC sanitary sewer main in Sumner Street adjacent to the Project Site.

The 10-inch sanitary sewer main in Clipper Ship Lane flows easterly to the 24x30-inch BWSC sanitary sewer main in Clipper Ship Lane. The 24-inch by 30-inch BWSC sanitary sewer main in Sumner Street continues to the East Boston Branch Sewer which ultimately flows to the MWRA Deer Island Waste Water Treatment Plant for treatment and disposal. The existing sewer system is illustrated in Figure 7-1.

7.2.2 PROJECTED SANITARY SEWER FLOW

The Project's sewage generation rates were estimated using 310 CMR 15.000 and the proposed building program. 310 CMR 15.000 lists typical sewage generation values for the proposed building use, as shown in Table 5-1. Typical generation values are conservative values for estimating the sewage flows from new construction. 310 CMR 15.000 sewage generation values are used to evaluate new sewage flows or an increase in flows to existing connections. Table 7-1 describes the increased sewage generation in gallons per day (gpd) due to the Project.

Table 7-1: Proposed Building

Room Use	GSF	Size	314 CMR Value (gpd/unit)	Total Flow
Residential	61,130	113 bedrooms	110/bedroom	12,430
Retail	4,809	4,809	50/1000sf	240
Total Proposed Sewer Flows (gpd)				**12,670**

7.2.3 SANITARY SEWER CONNECTION

The Proponent will coordinate with the BWSC on the design and capacity of the proposed connection to the sewer system and will submit a General Service Application. The Project is expected to generate an increase in wastewater flows of approximately 4,510 gpd (based on a net increase of 41 bedrooms for the current BHA units on the site), and would be required to obtain approval for the increase in sanitary flow from BWSC. The net sanitary flow is less than or equal to 50,000 gpd, therefore certification under 314 CMR 7.00 in the form of a MassDEP Sewer Compliance Certification will not be required.

The sewer services for the Project will connect to the existing 10-inch BWSC sanitary sewer main in Clipper Ship Lane or the 24x30-inch BWSC sanitary sewer main in Sumner Street.

Improvements and connections to BWSC infrastructure will be reviewed as part of the BWSC's site plan review process for the Project. This process will include a comprehensive design review of the proposed service connections, an assessment of Project demands and system capacity, and the establishment of service accounts.

7.3 WATER SYSTEM

This section describes existing and proposed water conditions on the Project Site.

7.3.1 EXISTING WATER SYSTEM

Water for the Project Site will be provided by the BWSC. There are five water systems within the City, and these provide service to portions of the City based on ground surface elevation. The five systems are southern low (commonly known as low service), southern high (commonly known as high service), southern extra high, northern low, and northern high. There are existing BWSC water mains in Clipper Ship Lane and Sumner Street. There is also an existing private water main within the Project Site.

There is a 12-inch BWSC Northern Low Main in Clipper Ship Lane. There is also a 12-inch BWSC Northern Low Main in Sumner Street. The existing water system is illustrated in Figure 7-2.

7.3.2 ANTICIPATED WATER CONSUMPTION

The Project's water demand estimate for domestic services is based on the Project's estimated sewage generation, described in the previous section. A conservative factor of 1.1 (10%) is applied to the estimated average daily wastewater flows calculated with 310 CMR 15.000 values to account for consumption, system losses and other usages to estimate an average daily water demand. The Project's estimated domestic water demand is approximately 13,937 gpd. The water for the Project will be supplied by the BWSC systems in Clipper Ship Lane and/or Sumner Street.

7.3.3 PROPOSED WATER SERVICE

New water services will be installed in accordance with the latest local, state, and federal codes and standards. Backflow preventers will be installed at both domestic and fire protection service connections. New meters will be installed with Meter Transmitter Units (MTU's) as part of the BWSC's Automatic Meter Reading (AMR) system.

5.3.4 WATER SUPPLY CONSERVATION AND MITIGATION MEASURES

Nitsch Efforts to reduce water consumption will be made. Aeration fixtures and appliances will be chosen for water conservation qualities. In public areas, sensor operated faucets and toilets will be installed.

7.4 STORM DRAINAGE SYSTEM

7.4.1 EXISTING STORM DRAINAGE SYSTEM

There are existing BWSC storm drain mains in Clipper Ship Lane and Sumner Street. Existing stormwater is collected by catch basins and is directed to the new 36-inch BWSC storm drain main in Sumner Street and a new 48-inch BWSC storm drain main in Clipper Ship Lane, which is directed to a stormwater outfall which discharges to the Boston Inner Harbor. Additional stormwater runoff sheets flows offsite directly to the Boston Inner Harbor. The existing BWSC storm drain system is illustrated in Figure 7-1.

The existing Project Site is comprised of paved areas, grass, and buildings, and is approximately 90-percent (90%) impervious cover.

7.4.2 PROPOSED DRAINAGE CONDITIONS

The amount of impervious area at the Project Site will remain approximately the same compared to the existing condition. The Project will reduce the existing peak rates of stormwater discharge and volumes of stormwater runoff from the site and promote runoff recharge to the greatest extent possible.

7.4.3 MITIGATION MEASURES

The Project will strive to infiltrate one-inch of stormwater runoff from impervious areas into the ground to the greatest extent possible. Different approaches to stormwater recharge will be assessed. It is anticipated that the stormwater recharge systems will work to passively infiltrate runoff into the ground with a gravity recharge system. The underground recharge system, and any required site closed drainage systems, will be designed so that there will be no increase in the peak rate of stormwater discharge from the Project Site in the developed condition compared to the existing condition.

Improvements and connections to BWSC infrastructure will be reviewed as part of the BWSC's site plan review process. The process will include a comprehensive design review of the proposed service connections, and assessment of project demands and system capacity.

If it is determined that groundwater recharge is not feasible, the Proponent will treat the stormwater runoff to adequately capture TSS and phosphorus prior to discharging to the BWSC system.

7.5 ELECTRICAL SERVICES

NSTAR owns the electrical system in the vicinity of the Project Site. It is expected that adequate service is available in the existing electrical systems in the surrounding streets to serve the Project. The Proponent will work with NSTAR to confirm adequate system capacity as design is finalized.

7.6 TELECOMMUNICATION SYSTEM

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

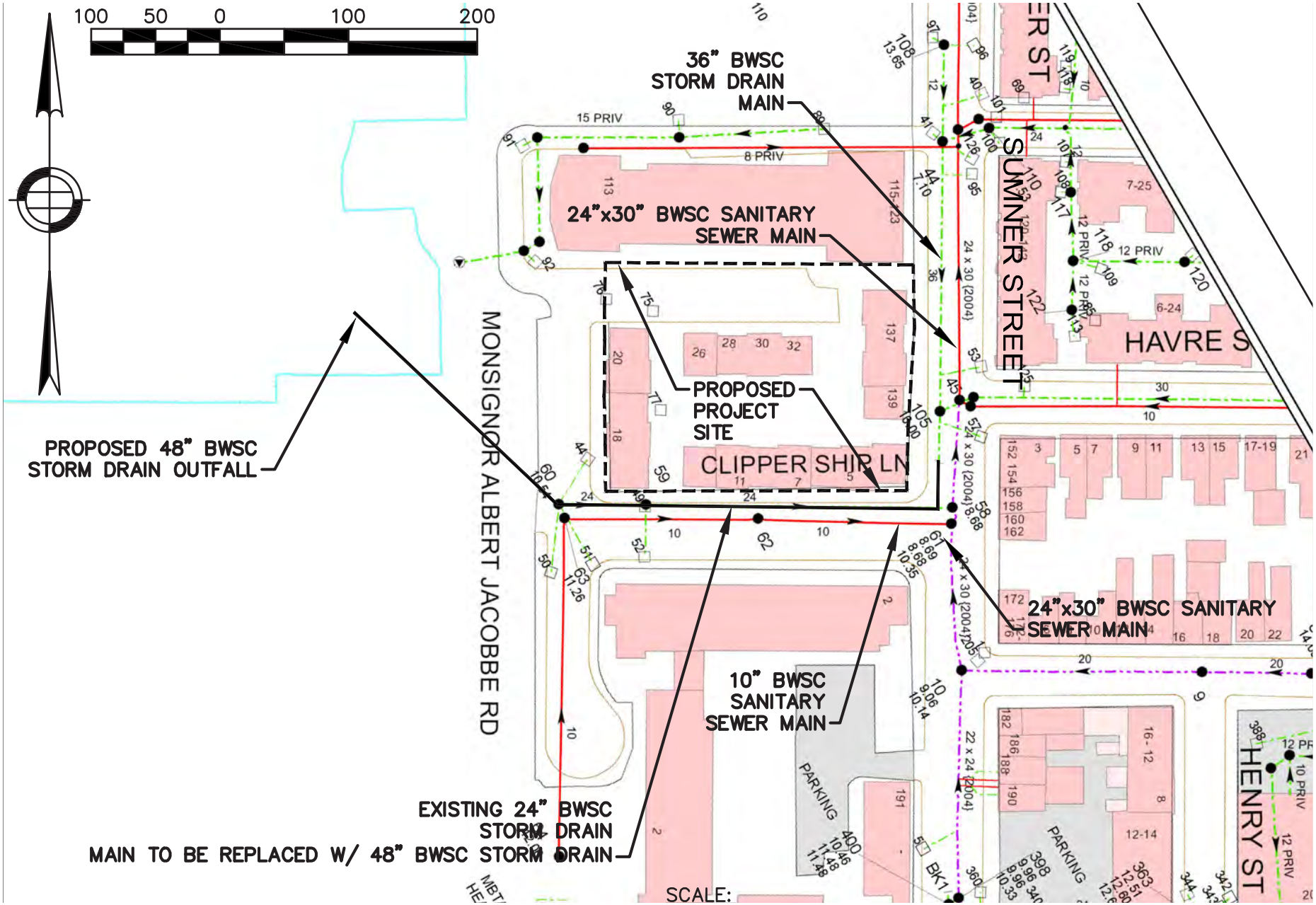
7.7 NATURAL GAS SYSTEM

National Grid has gas services adjacent to the Project Site. The Proponent will work with National Grid to confirm adequate system capacity as the design is finalized.

7.8 UTILITY PROTECTION DURING CONSTRUCTION

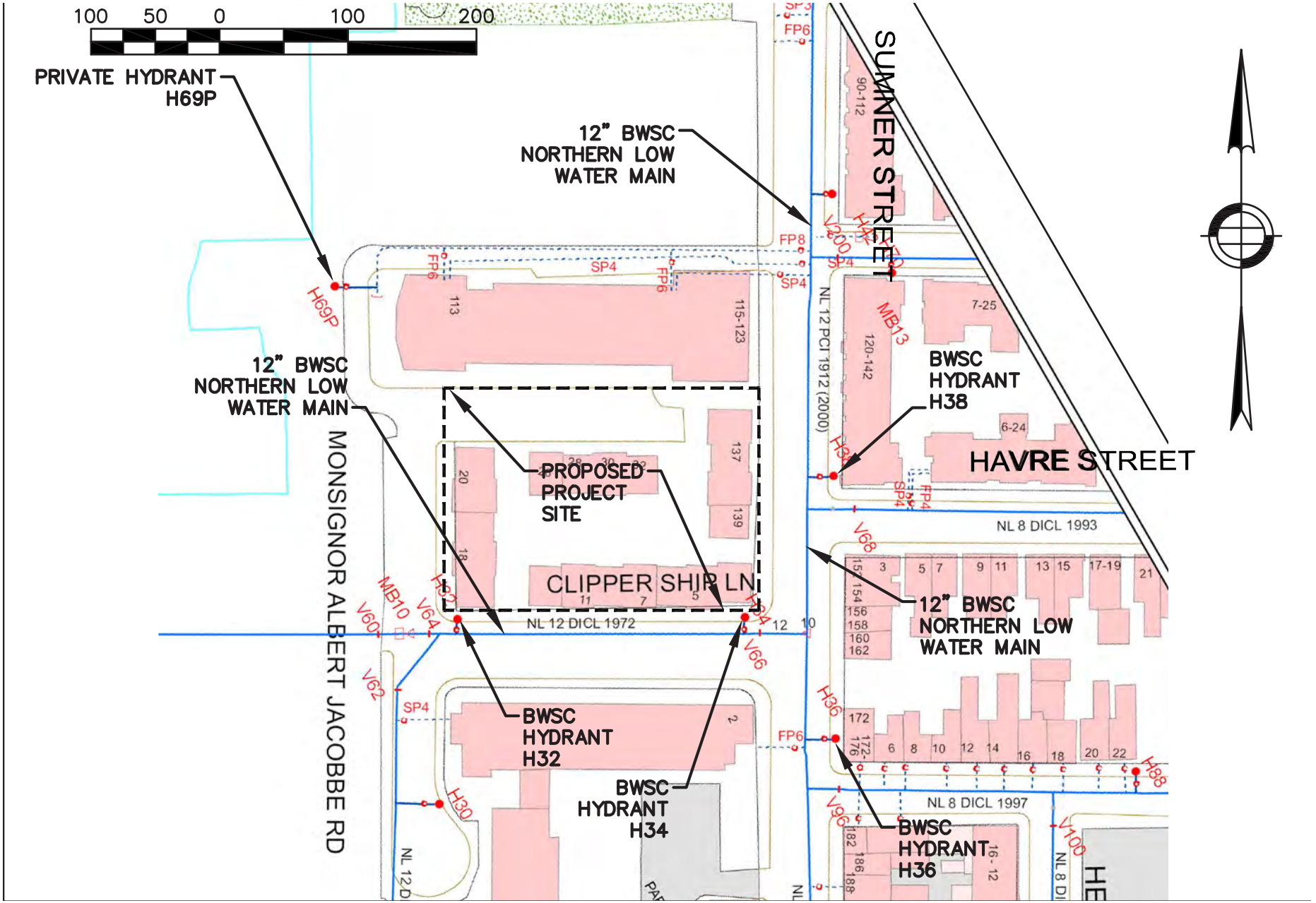
Existing public and private infrastructure located within nearby public rights-of-way will be protected during Project construction. The installation of proposed utility connections within public ways will be undertaken in accordance with BWSC, Boston Public Works Department, the Dig-Safe Program, and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

The Proponent will continue to work and coordinate with the BWSC and the utility companies to ensure safe and coordinated utility operations in connection with the Project.



East Boston, Massachusetts

Figure 7-1
Existing Sanitary Sewer and Stormwater Infrastructure
Source: Nitsch Engineering, 2016



East Boston, Massachusetts

Figure 7-2
Existing Water Infrastructure
Source: Nitsch Engineering, 2016

Appendix A

TRANSPORTATION APPENDIX

TRANSPORTATION TECHNICAL APPENDIX

The Transportation Technical Appendix is available under separate cover.

Appendix B

CLIMATE CHANGE CHECKLIST

Climate Change Resiliency and Preparedness Checklist

A.1 - Project Information

Project Name:	125 Sumner Street
Project Address Primary:	125 Sumner Street, East Boston, MA
Project Address Additional:	
Project Contact (name / Title / Company / email / phone):	Chris Fleming, Senior Project DIrector, WinnCompanies cfleming@winnco.com; 617-239-4580

A.2 - Team Description

Owner / Developer:	WinnDevelopment
Architect:	The Architectural Team
Engineer (building systems):	Petersen Engineering Inc.
Sustainability / LEED:	Steven Winter Associates
Permitting:	Fort Point Associates, Inc.
Construction Management:	Dellbrook
Climate Change Expert:	Fort Point Associates, Inc.

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
List the First Floor Uses:	Building 1: Commercial, Retail, and Residential; Building 2: Residential

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

Wood Frame	Masonry	Steel Frame	Concrete

Describe the building?

Site Area:	46,330 *SF*	Building Area:	61,350 *SF*
Building Height:	35.5 *Ft.*	Number of Stories:	3 *Flrs.*
First Floor Elevation (reference Boston City Base):	20.5'/21.5' *Elev.*	Are there below grade spaces/levels, if yes how many:	No ***No /*** *Number of Levels*

A.5 - Green Building

Which LEED Rating System(s) and version has or will your project use (by area for multiple rating systems)?

Select by Primary Use:	New Construction	Core & Shell	Healthcare	Schools
	Retail	Homes Midrise	**Homes**	Other
Select LEED Outcome:	Certified	Silver	**Gold**	Platinum

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

Registered:	***Yes*** */ No*	Certified:	***Yes*** */ No*

A.6 - Building Energy

(Additional energy modeling will be completed prior to building permit application submission.)

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

Electric - base / peak:	**19** / **68.2** *(kW)*	Heating – base / peak:	/ **.44** *(MMBtu/hr)*
What is the planned building Energy Use Intensity:	**30.2** *(kbut/SF or kWh/SF)*	Cooling – base / peak:	/ **26** *(Tons/hr)* **both bldgs**

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

Electric:	**14** *(kW)*	Heating:	**.22** *(MMBtu/hr)*
	both buildings	Cooling:	*(Tons/hr)*

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

Electrical Generation:	*n/a (kW)*		Fuel Source:	
System Type and Number of Units:	Combustion Engine	Gas Turbine	Combine Heat and Power	*(Units)*

B - Extreme Weather and Heat Events

Climate change will result in more extreme weather events including higher year round average temperatures, higher peak temperatures, and more periods of extended peak temperatures. The section explores how a project responds to higher temperatures and heat waves.

B.1 - Analysis

What is the full expected life of the project?

Select most appropriate:	10 Years	25 Years	**50 Years**	75 Years

What is the full expected operational life of key building systems (e.g. heating, cooling, and ventilation)?

Select most appropriate:	10 Years	**25 Years**	50 Years	75 Years

What time span of future Climate Conditions was considered?

Select most appropriate:	10 Years	25 Years	**50 Years**	75 Years

Analysis Conditions - What range of temperatures will be used for project planning – Low/High?

8 / 88 Deg.	

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

90 Deg.	4.5 Days	5 Events / yr.

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

14 Days	5 Events / yr.

What Extreme Rain Event characteristics will be used for project planning – Seasonal Rain Fall, Peak Rain Fall, and Frequency of Events per year?

60 Inches / yr.	6.4 Inches	6 Events / yr.

What Extreme Wind Storm Event characteristics will be used for project planning – Peak Wind Speed, Duration of Storm Event, and Frequency of Events per year?

105 Peak Wind	3 Secs	0.02 Events / yr.

B.2 - Mitigation Strategies

What will be the overall energy performance, based on use, of the project and how will performance be determined?

Building energy use below code:	22%
How is performance determined:	REM/Rate Residential Energy Analysis and Rating Software v 15.2

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

Select all appropriate:	High performance building envelope	High performance lighting & controls	Building day lighting	EnergyStar equip. /
	High performance HVAC equipment	Energy recovery ventilation	No active cooling	No active heating
Describe any added measures:				

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

Roof:	R = 30ci	Walls / Curtain Wall Assembly:	R = 23
Foundation:	R = N/A	Basement / Slab:	R = 10 perimeter only
Windows:	R = 3.33 / U = 50	Doors:	R = 6 / U = .17

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:	Investigate potential for Solar PV		

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

Select all appropriate:	Connected to a local electrical micro-grid	Building will be Smart Grid ready	Connected to distributed steam, hot, chilled water	Distributed thermal energy ready

Will the building remain operable without utility power for an extended period?

	*Yes / **No***	If yes, for how long:	*Days*
If Yes, is building "Islandable?			
If Yes, describe strategies:			

Describe any non-mechanical strategies that will support building functionality and use during an extended interruption(s) of utility services and infrastructure:

Select all appropriate:	Solar oriented – longer south walls	Prevailing winds oriented	External shading devices	Tuned glazing,
	Building cool zones	**Operable windows**	Natural ventilation	Building shading
	Potable water for drinking / food preparation	Potable water for sinks / sanitary systems	Waste water storage capacity	**High Performance Building Envelope**
Describe any added measures:				

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

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

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

Select all appropriate:	**On-site retention systems & ponds**	Infiltration galleries & areas	**vegetated water capture systems**	Vegetated roofs
Describe other strategies:				

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

Select all appropriate:	**Hardened building structure & elements**	Buried utilities & hardened infrastructure	Hazard removal & protective landscapes	**Soft & permeable surfaces (water infiltration)**
Describe other strategies:				

C - Sea-Level Rise and Storms

Rising Sea-Levels and more frequent Extreme Storms increase the probability of coastal and river flooding and enlarging the extent of the 100 Year Flood Plain. This section explores if a project is or might be subject to Sea-Level Rise and Storm impacts.

C.1 - Location Description and Classification:

Do you believe the building to susceptible to flooding now or during the full expected life of the building?

	***Yes** / No*

Describe site conditions?

Site Elevation – Low/High Points:	*Boston City Base* ***17.0/20.0*** *Elev.(Ft.)*

Building Proximity to Water: 130 *Ft.*

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

Coastal Zone:	***Yes*** / *No*	Velocity Zone:	*Yes* / ***No***
Flood Zone:	***Yes*** / *No*	Area Prone to Flooding:	***Yes*** / *No*

Will the 2013 Preliminary FEMA Flood Insurance Rate Maps or future floodplain delineation updates due to Climate Change result in a change of the classification of the site or building location?

2013 FEMA Prelim. FIRMs:	*Yes* / ***No***	Future floodplain delineation updates:	*Yes* / ***No***

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

10 *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:	1 per 100 *per year*

C.3 - Building Flood Proofing

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

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

Flood Proof Elevation:	*Boston City Base* 20.5 *Elev.(Ft.)*	First Floor Elevation:	*Boston City Base* 20.5/21.5 *Elev. (Ft.)*

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

	Yes / ***No***	If Yes, to what elevation	*Boston City Base Elev. (Ft.)*
If Yes, describe:			

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

Systems located above 1st Floor.	Water tight utility conduits	Waste water back flow prevention	Storm water back flow prevention

Were the differing effects of fresh water and salt water flooding considered:

Yes / *No*

Will the project site / building(s) be accessible during periods of inundation or limited access to transportation:

	Yes / *No*	If yes, to what height above 100 Year Floodplain:	*Boston City Base* 1 *Elev. (Ft.)*

Will the project employ hard and / or soft landscape elements as velocity barriers to reduce wind or wave impacts?

	*Yes / **No***
If Yes, describe:	

Will the building remain occupiable without utility power during an extended period of inundation:

	*Yes / **No***	If Yes, for how long:	*days*

Describe any additional strategies to addressing sea level rise and or sever storm impacts:

C.4 - Building Resilience and Adaptability

Describe any strategies that would support rapid recovery after a weather event and accommodate future building changes that respond to climate change:

Will the building be able to withstand severe storm impacts and endure temporary inundation?

Select appropriate:	***Yes** / No*	Hardened / **Resilient Ground Floor Construction**	Temporary shutters and or barricades	**Resilient site design, materials and construction**

Can the site and building be reasonably modified to increase Building Flood Proof Elevation?

Select appropriate:	***Yes** / No*	Surrounding site elevation can be raised	**Building ground floor can be raised**	Construction been engineered
Describe additional strategies:				

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

Select appropriate:	***Yes** / No*	**Solar PV**	Solar Thermal	Clean Energy / CHP System(s)
		Potable water storage	Wastewater storage	Back up energy systems & fuel
Describe any specific or additional strategies:				

Thank you for completing the Boston Climate Change Resilience and Preparedness Checklist!

For questions or comments about this checklist or Climate Change Resiliency and Preparedness best practices, please contact: John.Dalzell@boston.gov

Appendix C

ACCESSIBILITY CHECKLIST

Article 80 | ACCESSIBILTY CHECKLIST

Project Information

Project Name:	125 Sumner Street
Project Address Primary:	125 Sumner Street
Project Address Additional:	
Project Contact (name / Title / Company / email / phone):	Chris Fleming, Senior Project DIrector, WinnCompanies cfleming@winnco.com; 617-239-4580

Team Description

Owner / Developer:	Winn Development
Architect:	The Architectural Team, Inc.
Engineer (building systems):	Petersen Engineering
Sustainability / LEED:	Steven Winters Associates
Permitting:	Fort Point Associates
Construction Management:	TBD

Project Permitting and Phase

At what phase is the project – at time of this questionnaire?

PNF / Expanded PNF Submitted	Draft / Final Project Impact Report Submitted	BRA Board Approved
BRA Design Approved	Under Construction	Construction just completed:

Article 80 | ACCESSIBILTY CHECKLIST

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)	***Community Room, Retail, Leasing, Service/Support, Residential***			

What is the Construction Type – select most appropriate type?

	Wood Frame	Masonry	Steel Frame	Concrete

Describe the building?

Site Area:	***46,330*** *SF*	Building Area:	***61,350*** *SF*
Building Height:	***35*** *Ft.*	Number of Stories:	***3*** *Flrs.*
First Floor Elevation:	***20.5'/21.5'*** *Elev.*	Are there below grade spaces:	*Yes /* ***No***

Assessment of Existing Infrastructure for Accessibility:

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

Provide a description of the development neighborhood and identifying characteristics.	**Site is located in East Boston between Sumner Street and the waterfront**
List the surrounding ADA compliant MBTA transit lines and the proximity to the development site: Commuter rail, subway, bus, etc.	**Maverick Station is approximately 500 feet from the site**
List the surrounding institutions: hospitals, public housing and	**Heritage Apartments, Carlton Wharf, Maverick Gardens (BHA Housing)**

elderly and disabled housing developments, educational facilities, etc.	
Is the proposed development on a priority accessible route to a key public use facility? List the surrounding: government buildings, libraries, community centers and recreational facilities and other related facilities.	**No**

Surrounding Site Conditions – Existing:

This section identifies the current condition of the sidewalks and pedestrian ramps around the development site.

Are there sidewalks and pedestrian ramps existing at the development site?	**Yes**
If yes above, list the existing sidewalk and pedestrian ramp materials and physical condition at the development site.	**Sumner Street, Clipper Ship Lane, and Jacobbe Rd have concrete sidewalks**
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.	**Non-compliant walks and pedestrian walks directly adjacent to site to be reconstructed/rehabilitated.**
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**
If yes above, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, Boulevard.	**Residential**
What is the total width of the proposed sidewalk? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone.	**Frontage: 2.0' at Clippership Lane; 5.0' within site** **Pedestrian: 5.0'** **Furnishing: 3.0'**
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?	**Frontage: Planted** **Pedestrian: Concrete** **Furnishing: Concrete/Tree Grate**
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?	**No**
Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way?	**No**
If yes above, what are the proposed dimensions of the sidewalk café or furnishings and what will the right-of-way clearance be?	**N/A**

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?	**18 spaces**
What is the total number of accessible spaces provided at the development site?	**2 spaces**
Will any on street accessible parking spaces be required? If yes, has the proponent contacted the Commission for Persons with Disabilities and City of Boston Transportation Department regarding this need?	**No**
Where is accessible visitor parking located?	**On site**
Has a drop-off area been identified? If yes, will it be accessible?	**No drop off**
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.	**Provided**

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.	**Provided**
Describe accessibility at each entryway: Flush Condition, Stairs, Ramp Elevator.	**Residential: Ramp** **Commons: Flush**
Are the accessible entrance and the standard entrance integrated?	**Yes**
If no above, what is the reason?	**N/A**
Will there be a roof deck or outdoor courtyard space? If yes, include diagram of the accessible route.	**Commons Patio – route provided**
Has an accessible routes way-finding and signage package been developed? If yes, please describe.	**No**

Accessible Units: (If applicable)

In order to facilitate access to housing opportunities this section addresses the number of accessible units that are proposed for the development site that remove barriers to housing choice.

What is the total number of proposed units for the development?	**50 total units**
How many units are for sale; how many are for rent? What is the market value vs. affordable breakdown?	**30 units for sale** **20 units for rent**
How many accessible units are being proposed?	**1 unit**

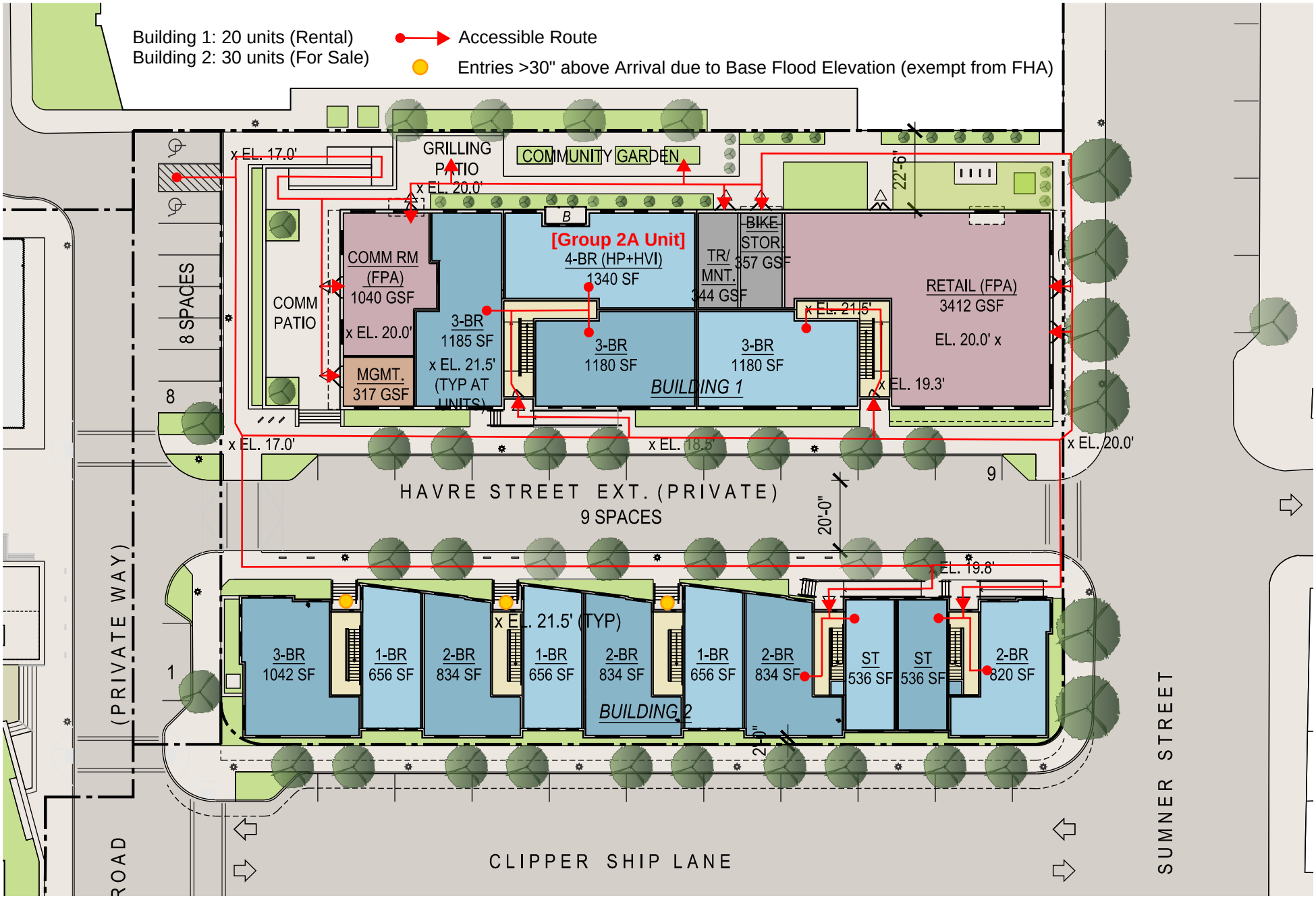
Article 80 | ACCESSIBILTY CHECKLIST

Please provide plan and diagram of the accessible units.	**Provided**
How many accessible units will also be affordable? If none, please describe reason.	**1 unit**
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.	**Stairs to units. Buildings do not have elevators.**
Has the proponent reviewed or presented the proposed plan to the City of Boston Mayor's Commission for Persons with Disabilities Advisory Board?	**No**
Did the Advisory Board vote to support this project? **If no,** what recommendations did the Advisory Board give to make this project more accessible?	**N/A**

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


Building 1: 20 units (Rental)
Building 2: 30 units (For Sale)
Accessible Route
Entries >30" above Arrival due to Base Flood Elevation (exempt from FHA)
x EL. 17.0'
GRILLING PATIO
x EL. 20.0'
COMMUNITY GARDEN
22'-6"
B
[Group 2A Unit]
4-BR (HP+HVI)
1340 SF
BIKE STOR.
357 GSF
TR/ MNT.
344 GSF
COMM RM (FPA)
1040 GSF
x EL. 20.0'
COMM PATIO
8 SPACES
3-BR
1185 SF
x EL. 21.5'
(TYP AT UNITS)
3-BR
1180 SF
3-BR
1180 SF
BUILDING 1
x EL. 21.5'
RETAIL (FPA)
3412 GSF
EL. 20.0' x
x EL. 19.3'
MGMT.
317 GSF
8
x EL. 17.0'
x EL. 18.5'
x EL. 20.0'
9
HAVRE STREET EXT. (PRIVATE)
9 SPACES
20'-0"
EL. 19.8'
x EL. 21.5' (TYP)
3-BR
1042 SF
1-BR
656 SF
2-BR
834 SF
1-BR
656 SF
2-BR
834 SF
1-BR
656 SF
2-BR
834 SF
ST
536 SF
ST
536 SF
2-BR
820 SF
BUILDING 2
1
(PRIVATE WAY)
CLIPPER SHIP LANE
SUMNER STREET