135 BREMEN STREET, EAST BOSTON

Expanded Project Notification Form

Submitted Pursuant to Article 80B of the Boston Zoning Code

October 7, 2014

Submitted By:

135 Bremen Street, LLC
C/o Law Offices of Jeffrey R. Drago
62B Commercial Wharf East
Boston, MA 02210

Submitted To:

Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

Prepared By:

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41 Brush Hill Road
Newton, MA 02461

In Association With:

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GEI Consultants, Inc.
Law Offices of Jeffrey R. Drago
McPhail Associates LLC
Neshamkin French Architects, Inc.
Nelson/Nygaard
Roome & Guarracino LLC

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October 7, 2014

Brian Golden, Acting Director
Boston Redevelopment Authority
Boston City Hall, 9th Floor
Boston, MA 02201
Attn: Casey Hines, Project Manager

Re: 135 Bremen Street Project
Project Notification Form (PNF)

Dear Acting Director Golden:

135 Bremen Street, LLC (the "Proponent") is submitting this Project Notification Form ("PNF") for the 135 Bremen Street Project ("Proposed Project") in accordance with the Article 80B Large Project Review requirements of the Boston Zoning Code ("Code") to redevelop a property located on 36,000 square feet of underutilized commercial land, containing vacant buildings at 135 Bremen Street in the East Boston neighborhood, between Gove and Porter Streets ("Project Site").

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

The Proposed Project involves the mixed use development of 126,189 gsf including 94 residential units (with affordable units provided in accordance with Boston's affordable unit policy), 7,790 gsf of commercial space, and 126 associated parking spaces in two garage levels with bike rack space, as well as landscaped areas that will revitalize an otherwise abandoned location, and will utilize its central location and proximity to public transportation ("Proposed Project")

The Proponent is also proposing to include a bike repair shop space in the lower level garage along the East Boston Greenway corridor, as well as an outside rest area that will accommodate East Boston's growing population of bicycle users along the Greenway path.

The Proposed Project will exceed the 50,000 square foot total build-out size requirement for a project in a Boston neighborhood and therefore requires the preparation of filing(s) under the Large Project Review regulations, pursuant to Article 80 of the Code. A Letter of Intent to File a Project Notification Form was filed with the Boston Redevelopment Authority for the Proposed Project on June 7, 2014 (attached as **Appendix A** to the PNF).

The public notice for the PNF appears in the October 8, 2014 *Boston Herald*.

On behalf of the entire project team, we would like to thank you and the BRA staff assigned to the 135 Bremen Street Project, particularly the BRA Project Manager, Casey Hines, for invaluable assistance provided allowing the Proponent to achieve this comprehensive PNF filing.

We believe that the Proposed Project will be a significant addition to East Boston, the Bremen Street mixed-use use neighborhood corridor, and the City of Boston as a whole.

Sincerely,
On Behalf of the 135 Bremen Street, LLC

Jeffrey R, Drago, Esq., Legal Counsel

Attachment: 135 Bremen Street Expanded Project Notification Form
(10 Copies Plus CD Disk)

Cc: Erico Lopez, BRA
Mitchell Fischman, Mitchell L. Fischman Consulting, LLC

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1.0 EXECUTIVE SUMMARY

1.1 Introduction

135 Bremen Street LLC (the "Proponent") is submitting this Project Notification Form ("PNF"), in accordance with the Article 80B Large Project Review requirements of the Boston Zoning Code ("Code"), for a new 126,189 gsf mixed use development including 94 residential units, 7,790 gsf of commercial space, and 126 associated parking spaces in two garage levels with bike rack space for 100 bikes, as well as landscaped areas ("Proposed Project") at 135 Bremen Street in the East Boston neighborhood, between Gove and Porter Streets ("Project Site"). The Project Site comprises approximately 36,000 square feet of underutilized commercial land, containing vacant buildings, along the Bremen Street corridor that lies within East Boston's Corridor Enhancement Zoning Subdistrict off the East Boston Greenway and across Bremen Street from a strip of 3-4 story existing residences ("Proposed Site"). See **Figures 1-1** and **1-2** for site locus.

The Proposed Project will exceed the 50,000 square foot total build-out size requirement for a project in a Boston neighborhood, and therefore will require preparation of filing(s) under the Large Project Review regulations, pursuant to Article 80 of the Boston Zoning Code. In parallel with this filing, the Proponent will seek zoning dimensional and use relief from the Code from the Boston Zoning Board of Appeal related to the size and change of use for the Proposed Project.

A Letter of Intent to File a Project Notification Form was filed with the Boston Redevelopment Authority for the Proposed Project on June 7, 2014 (See **Appendix A**).

The Proposed Project will be constructed as a six-story residential market rate development (with affordable units provided in accordance with Boston's affordable unit policy) with ground floor commercial space. The Proposed Project is ideally situated within close proximity to Airport and Maverick Square MBTA stations' and the Sumner and Ted Williams Tunnels, making it convenient for future resident commuters. The Proposed Project will be in close proximity to the East Boston Greenway connector and Bremen Street Park, providing residents with significant of open and green spaces to utilize. The proposed Site is also within walking distance to both Maverick and Central Squares, offering many neighborhood shops and restaurants to service the new residents of the development. The Proponent is proposing a project that would include both residential units and neighborhood commercial space that will revitalize an otherwise abandoned location, and will utilize its central location and proximity to public transportation.

The proposed residences will have a mixture of unit types and sizes, which will accommodate East Boston's diverse and growing population, including 5 studio units, 10 one bedroom units, 5 one bedroom plus/den units, 54 two bedroom units, 15 two bedroom/plus den units, and 5 three bedroom units. The Proponent understands that parking is always a concern to neighborhood residents, and is proposing an underground parking facility that will house 126 parking spaces and 100 bike racks for both residents and commercial patrons at 135 Bremen Street.

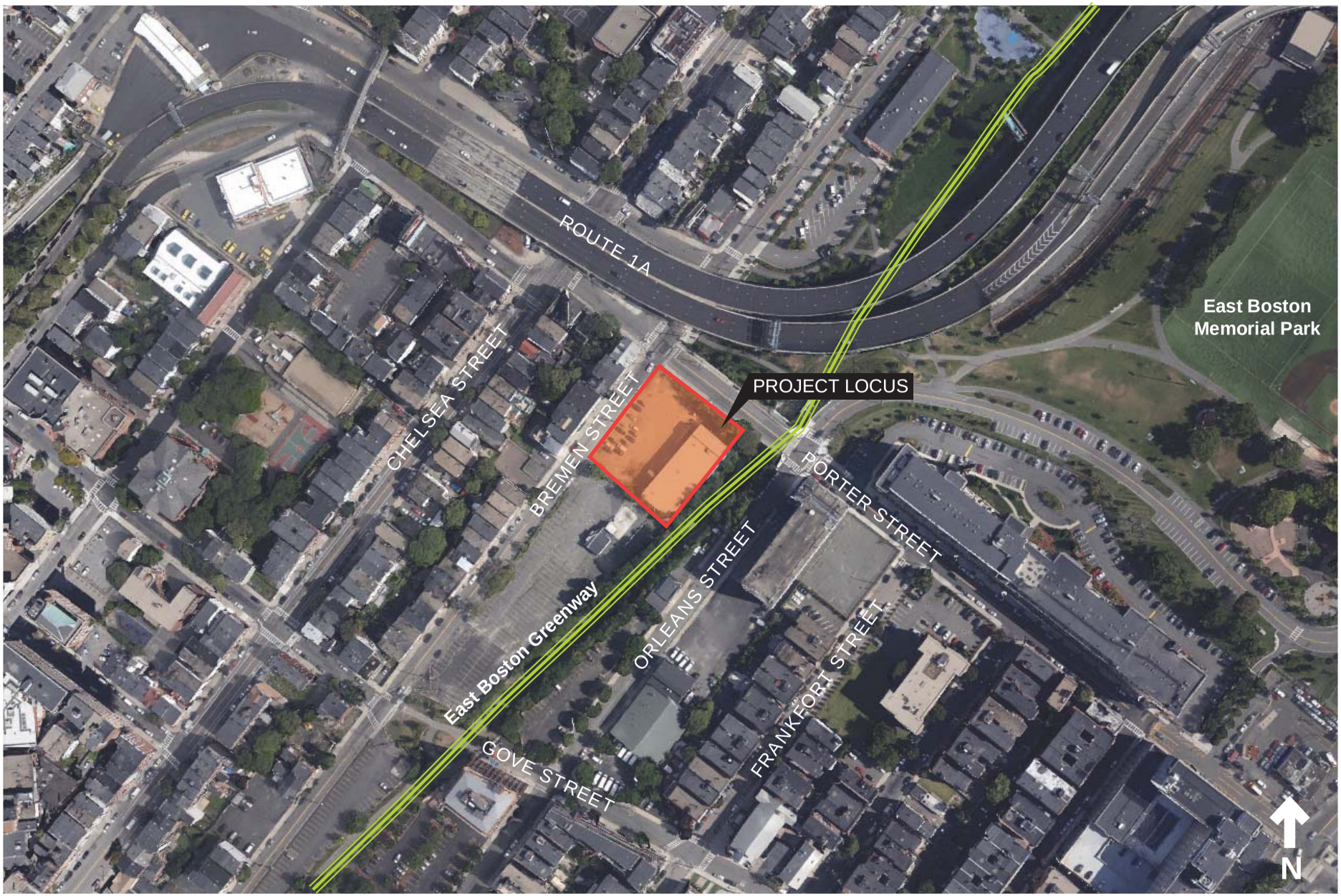


Figure 1 - 1
Project Locus

Figure 1-2
USGS Map

The Proposed Project is unique to the community because it provides such a high number of private parking spaces for residents, and is within walking distance to two MBTA stations, which will minimize community impact from resident/patron parking spillover onto local streets.

The East Boston community has been looking to add more commercial retail/restaurant space to new projects, to ensure that residents can both live and shop within the community. Therefore, the proposed retail space will accommodate the needs of East Boston's growing population. The space will include at least one local neighborhood restaurant/retail space that allows for residents to walk to the establishment from their homes or from one of the busy MBTA stations. The Proponent is also proposing to include a bike repair shop space in the lower level garage along the Greenway corridor that will accommodate East Boston's growing population of bicycle users along the Greenway path.

1.2 Proposed Project

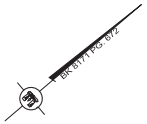
1.2.1 Project Site and Surroundings

The Project Site is adjacent to the East Boston Greenway and across from a residential area within the Maverick Square neighborhood of East Boston. The East Boston Greenway is a linear park located along the old railroad right-of-way, connecting neglected portions of East Boston's historic waterfront to Piers Park, the Boston Park's stadium and two urban marshes. An MBTA Blue Line tunnel runs below a portion of the site (See **Figure 1-3 Existing Site Conditions**). The current site was used as a trucking terminal in the past and also houses two billboards at the corner of Bremen and Porter Streets. As part of the community benefits related to the Proposed Project, the existing and unsightly one-story commercial building will be demolished and the existing billboards will be removed from the site.

A review of the Site history by GEI Consultants during the Phase I Environmental Site Assessment investigation in 2012, disclosed that based on Sanborn Maps as early as 1888, railroad tracks were shown running through the Site as a part of the Boston and Main Railroad which also included a freight house and platform located on the eastern portion of the Site between 1927 and 1950. The Sanborn Maps showed the railroad continuing to abut the Site until sometime after 1998.

1.2.2 Detailed Project Description

The Proposed Project will be constructed as a six-story residential market rate development (with affordable units provided in accordance with Boston's affordable unit policy) with ground floor commercial space. (See **Table 1-1 Approximate Project Dimensions**.) The Proposed Project is ideally situated within close proximity to Airport and Maverick Square MBTA stations' and the Sumner and Ted Williams Tunnels, making it convenient for future resident commuters. The Proposed Project will be in close proximity to the East Boston Greenway connector and Bremen Street Park, providing residents with significant of open and green spaces to utilize. The proposed Site is also within walking distance to both Maverick and Central Squares, offering many neighborhood shops and restaurants to service the new residents of the development. The Proponent is proposing a project that would include both residential units and neighborhood



LEGAL DESCRIPTION

A CERTAIN PARCEL OF LAND SITUATED ON THE SOUTHERLY SIDELINE OF BREMEN STREET IN THE CITY OF BOSTON, COMMONWEALTH OF MASSACHUSETTS, BOUNDED, AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE SOUTHERLY SIDELINE OF BREMEN STREET, SAID POINT BEING THE WESTERLY CORNER OPORTER STREET, THENCE

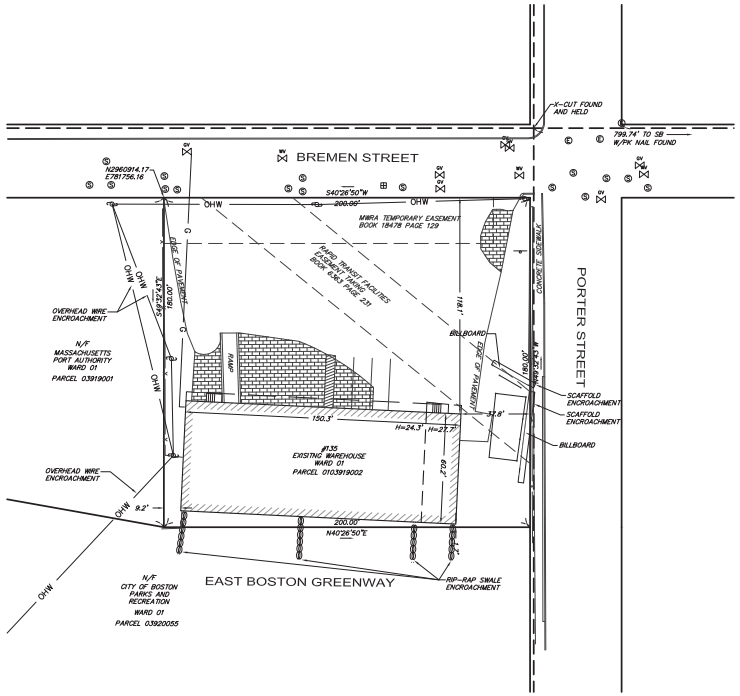
S 40°-26'-50" W A DISTANCE OF TWO HUNDRED FEET AND 00/100 (200.00') FEET; THENCE"

S 49°-32'-43" E A DISTANCE OF ONE HUNDRED EIGHTY FEET AND 00/100 (180.00') FEET; THENCE:

N 40°-26'-50" E A DISTANCE OF TWO HUNDRED FEET AND 00/100 (200.00') FEET, THENCE;

N 49°-32'-43" W A DISTINCE OF ONR HUNDRED EIGHT FEET AND 00/100 (180.00') FEET BY THE SIDELINE OF PORTER STREET TO THE POINT OF BEGINING

SAID PARCEL CONTAINS A TOTAL AREA OF 36,000 SQUARE FEET ±



NOTES:

1. OWNER OF RECORD: DESANCTIS HOLDINGS, LLC.
   C/O RACKEMANN, SAWYER & BREWSTER
   160 FEDERAL ST.
   BOSTON, MA 02110
2. SURVEYOR: DECELLE–BURKE & ASSOCIATES
3. PARCEL LIES WITHIN ZONING DISTRICT CE (CORRIDOR ENHANCEMENT SUBDISTRICT), ACCORDING TO ZONING DISTRICTS, CITY OF BOSTON MAP 3A/3B, EAST BOSTON NEIGHBORHOOD DISTRICT, EFFECTIVE JUNE 16, 2010, LOCUS IS IN ZONE CE.
4. ACCORDING TO FEMA, MAP 25025C0081G, DATED 9/25/2009, LOCUS IS IN ZONE AE (EL.9 NAVD88, OR EL. 15.5 BOSTON CITY BASE).
5. REFERENCE IS MADE TO FIRST AMERICAN TITLE INSURANCE COMPANY TITLE POLICY 5011400–0376561e DATED 7/19/12..
6. NUMBER OF PAINTED PARKING SPACES 3.
7. HORIZONTAL DATUM NAD'83

PLAN REFERENCES:

1. BREMEN STREET LAYOUT L3816, SEP 27, 1904
2. PORTER STREET LAYOUT
3. PLAN 7436/553 LOCUS SUBDIVISION.
4. PLAN 8171/672 ABUTTER – MASSACHUSETTS PORT AUTHORITY.
5. PLAN 6363/231 RAPID TRANSIT FACILITIES EASEMENT

TO FIRST AMERICAN TITLE INSURANCE CO, LAW OFFICE OF ALESSANDRA PETRUCCELLI AND 135 BREMEN STREET, LLC:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEYS ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6b, 7a, 8, 9, 11(a), & 20 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JULY 12, 2012.

I HEREBY CERTIFY THAT WATER, GAS, ELECTRIC TELEPHONE, STORM AND SANITARY SEWER SERVICES ARE AVAILABLE EITHER OVER OR UNDER LAND FROM A PUBLIC WAY NAMELY BREMEN AND PORTER STREETS WHICH ABUT SAID PREMISES.

LAWRENCE W. DECELLE, JR., PLS DATE

DeCELLE BURKE & Associates, Inc.
149 Independence Avenue Quincy, MA 02169
(617) 405-5100 (O) (617) 405-5101 (F)

LAWRENCE W. DECELLE, JR., PLS DATE

GENERAL NOTES:

ZONING: CORRIDOR ENHANCEMENT
MINIMUM REQUIREMENTS:
AREA: NO REQUIREMENT
FRONT SETBACK: NO REQUIREMENT
SIDE SETBACK: NO REQUIREMENT
REAR SETBACK: 20'
LOT FRONTAGE/WIDTH: NO REQUIREMENT

DEED REFERENCE:
Book 48295 Page 104

PROJECT TITLE & LOCATION:

135 BREMEN STREET
EAST BOSTON, MA
02128

PLAN TITLE:
ALTA/ACSM

PREPARED FOR:

DESANCTIS HOLDINGS, LLC.
C/O RACKEMANN, SAWYER & BREWSTER
160 FEDERAL ST.
BOSTON, MA 02110

DATE: JULY 12, 2012
REVISED: AUGUST 1, 2012

JOB NUMBER: 12-0 SHEET 1 OF 1

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

Figure 1 - 3
Existing Conditions

commercial space that will revitalize an otherwise abandoned location, and will utilize its central location and proximity to public transportation.

The mixed use Proposed Project will include 94 residential units and 7,790 square feet of commercial space along the ground floor of the building along Bremen Street. The residences will have a mixture of unit type and sizes, which will accommodate East Boston's diverse and growing population, including 5 studio units, 10 one bedroom units, 5 one bedroom plus/den units, 54 two bedroom units, 15 two bedroom/plus den units, and 5 three bedroom units. The Proponent understands that parking is always a concern to neighborhood residents, and is proposing an underground parking facility that will house 126 parking spaces and 100 bike racks for both residents and commercial patrons at 135 Bremen Street. The Proposed Project is unique to the community because it provides such a high number of private parking spaces for residents, and is within walking distance to two MBTA stations, which will minimize community impact from resident/patron parking spillover onto local streets.

Table 1-1 135 Bremen Street, Approximate Project Dimensions

Lot Area:	Approx. 36,000 sf (0.8 Acres)
Gross Building Footprint Area:	29,638 sf
Gross Square Feet:	126,189 gsf
FAR:	3.5
Floors:	5 Residential Floors Above the Garage Level
Height:	Up to 69 feet

The East Boston community has been looking to add more commercial retail/restaurant space to new projects, to ensure that residents can both live and shop within the community. Therefore, the proposed retail space will accommodate the needs of East Boston's growing population. The space will include at least one local neighborhood restaurant/retail space that allows for residents to walk to the establishment from their homes or from one of the busy MBTA stations. The Proponent is also proposing to include a bike repair shop space in the lower level garage along the Greenway corridor that will accommodate East Boston's growing population of bicycle users along the Greenway path.

The Site circulation plan is designed to create a safe and pleasant entry to the Proposed Project with the main residential entrance at the corner of Porter and Bremen Streets (as well as an additional residential access from Porter Street to be used as an auxiliary access). The commercial space will be accessed from Bremen Street. Automobiles for the commercial and residential uses will enter the garage from Bremen Street. Service vehicle and a loading area access will also be provided from Bremen Street.

1.3 Summary of Project Impacts and Mitigation

1.3.1 Urban Design

The design intent of the 135 Bremen Street residential proposal is to restore the urban fabric and residential street life of traditional East Boston to this now desolate site. The proposed architectural style is sympathetic to East Boston with brick and traditional bays but translated into a more modern form which is in keeping with other new residential developments of this era in this area. It is expected that the Proposed Project will restore a residential presence and vitality to this long dysfunctional East Boston urban edge. To reinforce this sense of extension of the residential fabric, we believe that the commercial/ restaurant use at the first floor is traditional in the neighborhood and appropriate in restoring a sense of street vitality.

The siting of the building attempts to accomplish a number of design goals. They are different for each face of the building. At Bremen Street the goal is to create a strong residential presence while restoring the neighborhood tradition of first floor restaurant/commercial uses. By siting the main residential entrance on Porter Street, we hope to improve the safety and user perception of this portion of the street. It is now desolate and quite foreboding at night. The combination of placing neighborhood eyes on the street and the new entrance will add both to the safety and perception of the Porter Street and neighborhood. The Greenway façade and building program are the most challenging. It is our proposal to "enhance "the Greenway corridor by creating a welcoming respite for walkers and bikers during their Greenway travels. On the project property we propose a small sitting area and bike repair station to contribute to the liveliness of the Greenway. This would include a 24-hour seven-day a week free air station and at designated hours offering a communal bike repair station. In addition the proposed bike storage area for the building is at this level. The exercise and community rooms look out over the Greenway. All of these functions are fully accessible through the building's entrance and elevator system. In addition to bikes, this design will enhance wheelchair access to the Greenway. In terms of the lot to the South, We believe that this strong residential statement will encourage additional residential development on the underutilized adjacent lots. Electric and smart car parking will be included on site. Because of the location near the Airport and Maverick T-stops on the Blue line, pedestrian circulation is designed to promote access to the T.

The massing of the building is in a U-shape. It is designed to form a hard edge against the elevated ramp structure to the North and to re-establish the Bremen/Porter Streets intersection as the beginning of a new residential district. The open end of the U faces Bremen Street. This offers an articulated facade along Bremen that diminishes its impact on the residential side of Bremen and minimizes shadow impacts. Along the Greenway the existing grade around the building is kept high for planting except for the terraced and well planted sitting/biking area.

1.3.2 Sustainable Design

Sustainability informs every design decision. Enduring and efficient buildings conserve embodied energy and preserve natural resources. The full development of 135 Bremen Street embraces the opportunity to positively influence the urban environment. Its urban location takes advantage of existing infrastructure while convenient access to mass transportation will reduce dependence on single occupant vehicle trips and minimize transportation impacts.

Our team is committed to incorporating environmentally sensitive, sustainable design elements into the 135 Bremen Street project. These elements will improve the quality of life for the residents of this project, as well as the neighborhood, while helping to protect the global environment. Ultimately, they will also reduce operating costs while increasing value for the project, improving its business viability.

We are committed to identifying opportunities presented by the development of 135 Bremen Street by setting proactive goals and ensuring an undertaking that is LEED Silver certifiable as a minimum and satisfies the requirements of the City of Boston Environment Department. The LEED rating system tracks the sustainable features of the project by achieving points in following categories: Sustainable Sites; Water Efficiency; Energy and Atmosphere; Materials and Resources; Indoor Environmental Quality; and Innovation and Design Process. A summary of the design intent of the LEED calculations is contained in **Section 3.6** and the more detailed draft of the Boston Green Building Report with detailed discussion of each of the LEED points proposed is contained in **Appendix E.**

1.3.3 Wind

The Proposed Project is similar in mass to buildings on the south side of the East Boston Greenway along Orleans Street. Although the proposed 69 ft building height will exceed existing zoning allowance of 35 feet, the 135 Bremen Street proposal will be within 25-30 feet of the heights of buildings on the opposite side of Bremen Street. As there are no hi-rise buildings in the Proposed Project vicinity, and significant open space exists to the southwest along the Greenway portion of the project, the overall wind environment is not expected to change as a result of the Proposed Project. It is also expected that the East Boston Greenway's wind environment during the winter condition, with predominate north and northeast winds, will improve. The new structure will provide a buffer to those winds and serve as mitigation for those walking on the Greenway during the winter months.

1.3.4 Shadow

Section 4-1 of this PNF provides a shadow analysis describing and graphically depicting the anticipated shadow impacts from the Proposed Project for the No Build and Build condition. New shadow is generally limited to the streets surrounding the Site. Although late afternoon and evening shadows will extend in a northeasterly direction toward the Sumner Tunnel elevated highway link, but with almost no impact on the East Boston Greenway to the south of the Proposed Project. Overall, the Project's shadow impacts will be consistent with current patterns and will not adversely impact the Project Site and surrounding areas.

1.3.5 Daylight

Although the Proposed Project would cause an increase in daylight obstruction when compared to the existing conditions at the vacant site, the Proposed Project was designed to be of a similar massing to existing buildings along Bremen Street and along Orleans Street. The Proposed Project would have reached a maximum of 65 feet in height, which is somewhat higher than the existing buildings along Bremen Street as well as the existing zoning. The additional height will be mitigated by a court yard above the second floor between the two building masses. As a result, daylight obstruction values from the Proposed Project are expected to be consistent with and typical to the surrounding neighborhood.

1.3.6 Solar Glare

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

1.3.7 Air Quality

A microscale air quality analysis was not performed for the Proposed Project due to its extremely small motor vehicle trip generation. The extremely small number of motor vehicle trips generated by the Project will not have a significant impact on the delays or the level of service at the local intersections. Therefore, the motor vehicle traffic generated by the project will not have a significant impact on air quality at any intersection in the Project area and a microscale air quality analysis is not necessary for this Project. It is expected that the air quality in the Project area will remain safely in compliance with the NAAQS for CO after the Project is built.

1.3.8 Noise Analysis

It is expected that the operation of the Proposed Project will comply with the Massachusetts DEP Noise Policy and City of Boston Noise Regulations and will incorporate mitigation measures to ensure compliance with applicable City of Boston noise regulations, ordinances and guidelines and with the DEP Noise Policy and with HUD's Residential Site Acceptability Standards.

1.3.9 Stormwater Management and Water Quality

The Proposed Project will improve the quality of stormwater leaving this site. The existing site is 100% impervious with no stormwater treatment or controls. The Proposed Project will improve on this percentage and implement new measures into the new design including erosion and sediment control measures during construction to minimize the transport of site soils to off-site areas and BWSC storm drain systems. During construction, existing catch basins will also be protected with filter fabric, hay bales and/or crushed stone aprons, to provide for sediment removal from runoff. These controls will be inspected and maintained throughout the construction phase until the areas of disturbance have been stabilized through the placement of pavement, structure, or vegetative cover.

The Proposed Project will promote stormwater recharge into groundwater. 1-inch over the site's impervious area can be recharged as prescribed in BWSC's Site Plan Requirements. Stormwater runoff from vehicular areas will be treated through the use of deep sump catch basins and water quality treatment structures. An operation and maintenance plan will be developed to support the long-term functionality of the proposed stormwater management system.

The Proposed Project will meet the Department of Environmental Protection's (DEP) Stormwater Management Standards for redevelopment. All necessary dewatering will be conducted in accordance with applicable MWRA and BWSC discharge permits. Once construction is completed, the Proposed Project will be in compliance with local and state stormwater management policies.

1.3.10 Solid and Hazardous Waste

Solid Waste

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

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

Hazardous Waste

A Phase I Environmental Site Assessment was completed at the time of sale for 135 Bremen Street (the "Property") by GEI Consultants, Inc. ("GEI") on August 12, 2012. According to GEI, there were no records of spills or releases at the Property associated with the prior railroad use, and there are no records of underground storage tanks (USTs) or of oil and/or hazardous materials (OHM) use at the Property. GEI's report did not identify any recognized environmental conditions (RECs), defined by the ASTM as evidence of a past, current, or potential for a release of OHM at the Property. See **Section 4.3.2** for more detail on the GEI environmental site analysis.

As appropriate, the Proponent will provide Licensed Site Professional support services during property redevelopment activities to both maintain compliance with the Massachusetts Contingency Plan (MCP) requirements.

1.3.11 Geotechnical/Groundwater Impacts Analysis

The site is underlain by approximately 12 to 15-foot thickness of fill and organic material. Successive deposits of sand and gravel and marine clay underlie the fill and organic deposits. Groundwater at the site is generally between about 11 to 16 feet below the existing ground surface which corresponds to between 2 and 7 feet below the surface of the lowest-level slab. After the completion of the construction of the below-grade space, the proposed building is not anticipated to have adverse long-term effects on the regional groundwater levels. Additionally, the MBTA Blue Line tunnel passes diagonally across the site from east to west. The tunnel is about 30 feet wide and 22 feet tall and consists of reinforced concrete. The top of the tunnel varies from about 13 to 14 feet below the existing ground surface.

The proposed foundations will require support on either the natural sand and gravel or marine clay deposits. Two foundation types will be required depending on their plan distance from the MBTA Blue Line Tunnel that runs below the site. To prevent surcharging the tunnel, no footings will have bearing support located above an influence line drawn up and out from the bottom edge of the tunnel mat at a 1.5 horizontal to 1 vertical slope. Therefore, foundations located adjacent to the tunnel will require either a drilled caisson or drilled mini-pile support in the marine clay deposit. To construct the single level of below-grade parking cross the project site, a temporary earth support system consisting of steel sheet piling around the entire site to provide a groundwater

cutoff. Where the earth support crosses over the tunnel (up to approximately a 50 - 60 foot span), the temporary earth support will need to be designed as an internally braced system with bracing, struts, pin piles and/or rakers. Construction mitigation measures will be incorporated into the Proposed Project to avoid any potential for ground movement and settlement. See **Section 4.4** for a more detailed analysis of the geotechnical/groundwater analysis.

1.3.12 Construction Impacts Analysis

Section 4.7 presents impacts likely to result from the construction of the Proposed Project and the steps that will be taken to avoid or minimize environmental and transportation-related impacts. Construction methodologies and scheduling will aim to minimize impacts on the surrounding environment. The Proponent will insure that the general contractors will be responsible for developing construction phasing and staging plans and for coordinating construction activities with all appropriate regulatory agencies. The Project's geotechnical consultant will also provide consulting services associated with foundation design recommendations, prepare geotechnical specifications, and review the construction contractor's proposed procedures.

The construction period for the Proposed Project is expected to extend for approximately 12-14 months, beginning in the 3rd Quarter 2015 and reaching completion in the 3rd- 4th Quarter 2016

1.3.13 Wetlands/Flood Hazard Zone

The existing Project Site is a part of a wetland resource area regulated by the Massachusetts Wetland Protection Act, as described below, and may require review by the Boston Conservation Commission.

Based on the Preliminary Flood Insurance Rate Maps (FIRM) for Suffolk County, the Project site is located in an AE 100-year base flood zone (i.e. the flood has a 1% annual chance of occurring in any given year). The base flood elevation indicated on the FEMA FIRM for this AE zone is 9 feet (NAVD 88).

1.3.14 Response to Climate Change Resiliency and Adaptability Questionnaire

The Proponent's response to the Climate Change Resiliency and Adaptability Questionnaire is contained in **Appendix C.**

1.3.15 Historic Resources Component

The Proposed Project is located on approximately 36,000 square feet of underutilized commercial land along the Bremen Street corridor. It is located within a ¼ mile of numerous historic churches, schools, residential areas, and commercial properties,

including one local landmark, the street clock on Chelsea Street. There are not expected to be any impacts to these properties with the proposed new construction.

No known archaeological resources were located within the Project site during the review of Massachusetts Historic Commission files and MACRIS, therefore no impacts to archaeological resources are anticipated. See **Section 5.0** for a further discussion of historic resources in the Project vicinity.

1.3.16 Infrastructure Systems Component

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

Bremen Street contains an 18-inch sanitary sewer line, a 32x48-inch combined Sewer line, a 10-inch water main, a 6-inch gas line, and various electric and telecommunication conduits.

There is a dedicated 24-inch storm drain line and a 36-inch sanitary sewer line within the site itself. The existing sewer system and water distribution and storm drain systems are shown in the figures in **Section 6.0.**

The Boston Water and Sewer Commission (BWSC) owns and operates the sanitary sewer, storm drain, and water distribution systems in the City of Boston, except as noted above. A BWSC approved Site Plan and General Service Application is required for the construction of proposed sewer, storm drain, and water connections to the main lines in Hyde Park Avenue. Proposed connections to the BWSC's sewer, storm drain, and water distribution systems will be designed in conformance with the BWSC's design standards, Sewer Use and Water Distribution System Regulations, and Requirements for Site Plans. The Proponent will submit the General Service Application and Site Plans to BWSC for review and approval prior to construction. The Site Plans will indicate the existing and proposed sewer lines, storm drain lines, and water mains within the site and in the abutting public ways. The Site Plans will show any existing utilities to be abandoned, the locations of proposed connections, and the limit of work to be performed in the public ways. Abandoned services will be cut and capped at the main line according to BWSC standards.

The following items will be coordinated with the respective city agencies and utility companies:

- The Boston Fire Department reviews projects with respect to fire protection measures such as fire department connections, standpipes and hydrants.

- Energy and telecommunication system sizing and connections will be coordinated with the respective utility providers.
- New utility connections are authorized by the City of Boston Public Works Department through the street opening permit process.

1.3.17 Transportation Component

Section 7.0 presents the comprehensive transportation study completed by Nelson\Nygaard for the proposed Project in conformance with the BTD *Transportation Access Plan Guidelines* (2001). The study analyzes existing conditions within the Project study area, as well as conditions forecast to be in place under the five-year planning horizon of 2019. Pre-filing meetings were held with BTD to confirm the geographic and overall scope of the transportation analysis for this analysis.

The 135 Bremen project will substantially improve the overall Site for all users. Currently, the Site is fenced off on all sides, and on the Bremen Street frontage, there is no sidewalk, though parking is allowed along the front fenceline of the property. The building will front Bremen and Porter Streets, providing a sidewalk, streetwall, and curbside parking along Bremen Street. The building will be set back on the Site, to establish a sidewalk and curbside parking. These facilities will be on the 135 Bremen Street property, and the Proponent will work with the City to establish these as accessible to the public. Two-way traffic on Bremen Street will be preserved and the sidewalk will be widened at the Porter Street intersection to provide better pedestrian connections.

Driveway access to the internal parking will be provided from Bremen Street at the south end of the property. Separate full access driveways will have access respectively to the lower and ground level internal parking facilities. The sidewalk will be continued across the driveways to the edge of the Site. Delivery access to an internal loading facility will be created through the northern driveway on the surface level internal parking.

Pedestrian entries to the residential lobby are shown both from Bremen Street and Porter Street. These will connect to the residential entry, elevators, and parking facility. These multiple entries will help provide convenient pedestrian access to the Site and to the surrounding neighborhood. New or improved sidewalks will be a benefit not just to the 135 Bremen project, but to the neighborhood at large.

Additionally, the 135 Bremen project will provide a direct entry and connection along the east side of the property along the East Boston Greenway. Project residents and visitors will have easy access to this neighborhood amenity, and fast, direct connections along the Greenway to other neighborhood destinations.

The transportation analysis employed mode use data for the area surrounding the Project site based on BTD data for Area 7, and identifies the number of trips generated by the

Project by mode. Due to the transit-oriented nature of the Project and non-auto alternatives such as Zipcar, and the East Boston Greenway, it is anticipated that many of the Project-generated trips will occur via transit, on foot, and by bicycle.

A conservative analysis was completed using both specific known projects and a background growth rate for the No Build analysis, and a larger than currently proposed square footage for the commercial retail space. Between the No Build and Build analysis, with the added Project trips, no approach at any intersection shows a degradation in LOS, with only minimal changes in other measurables. In the Future Build analysis, the proposed driveway and its intersection with Bremen Street operate at LOS A in both the AM and PM peaks.

Section 7.0, the Transportation section, includes a list of transportation improvements to be created by the Site, including a Transportation Demand Management Program. A summary of that list is also provided below:

- Providing a new sidewalk, parking and pedestrian connections along Bremen Street, by moving the building footprint back to create an accessible sidewalk;
- Adding commercial space to the Bremen Street frontage that will be neighborhood oriented;
- Creating an accessible pedestrian entry on the East Boston Greenway providing "eyes" on the Greenway and an amenity for all users;
- Providing for a publicly accessible sitting area and bike repair station on the East Boston Greenway
- Providing sufficient parking for the Project's uses onsite;
- Encouraging unused parking spaces to be made available for lease to neighborhood residents;
- Providing for off-street loading and trash service for the apartments and commercial space; and
- Creating on-site secure, weather protected bicycle parking and outdoor parking for use by visitors;

1.3.18 Response to Accessibility Guidelines

The Proponent's response to the City of Boston Accessibility Guidelines is contained in **Appendix D.**

2.0 GENERAL INFORMATION

2.1 Applicant Information

2.1.1 Project Proponent

The 135 Bremen Street, LLC is comprised of two local real estate developers and investors, Mr. Joseph Ricupero and Mr. Michael Merullo. Both of these developers have purchased and developed both large and small projects in the East Boston Neighborhood, and also own a local business that services Boston and surrounding municipalities in Suffolk County.

Mr. Ricupero and Mr. Merullo's properties are located on Bremen Street, Border Street, Bennington Street, McClellan Highway, Byron Street, Saratoga Street, and Condor Street. Their properties represent a mix between residential, commercial and industrial parcels, and span into every section of East Boston. The two have also developed both residential and commercial projects in East Boston.

Mr. Ricupero and Mr. Merullo own two commercial/residential waste management businesses in East Boston and Revere; where they manage over 100 employees. Their business, Capitol Waste and EZ Disposal, handles all of the residential/commercial trash and recycling pick up for Boston, Revere, and Winthrop, and for many other surrounding cities and towns.

Mr. Ricupero and Mr. Merullo, therefore, have experience in managing and developing real estate, and in managing local businesses, which will guide this Proposed Project to completion.

2.2 Project Team

Project Name:	135 Bremen Street, East Boston
Property Owner / Developer	**Capitol Waste Services, Inc.** 1222 Bennington Street East Boston, MA Joseph Ricupero, Sr. and Michael Merullo Tel: 617-569-1718 Capitolwasteservices@verizon.net
Article 80 Permitting Consultant	**Mitchell L. Fischman Consulting ("MLF Consulting") LLC** 41 Brush Hill Road Newton, MA 02461 Mitchell Fischman, mitchfischman@gmail.com Tel: 781-760-1726
Legal Counsel / Outreach	**Jeffrey R. Drago, Esq.** Law Offices of Jeffrey R. Drago 62B Commercial Wharf East Boston, MA 02110 Jeffrey@Drago-Law.com Tel: 617-646-4468
Architect	**Neshamkin French Architects, Inc.** 5 Monument Square Charlestown, Ma 02129 Tel: 617-242-7422 Jack French, jwfrench@nfarchitects.com Velija Catovic, vcatovic@nfarchitects.com Jillian Wiedenmayer, jillian@nfarchitect.com
Transportation Planner / Engineer	**Nelson/Nygaard** 77 Franklin Street Boston, MA 02110 Ralph DeNisco, rdenisco@nelsonnygaard.com Tel : 617-279-0932 Cynthia Lin, clin@nelsonnygaard.com Tel : 617-603-0165

Civil Engineer	**DeCelle-Burke & Associates** 149 Independence Avenue Quincy, MA 02169 James DeCelle, jdecelle@decelle-burke.com Tel: 617-405-5103 Office Tel: 617-872-8551 Cell
Geotechnical Engineer	**McPhail Associates LLC** 2269 Massachusetts Avenue Cambridge, MA 02140 Jason Huestis, jhuestis@mcphailgeo.com Tel: 617-868-1420 x337
Environmental/ Phase I Environmental Site Assessment Consultant	**GEI Consultants, Inc.** 400 Unicorn Park Drive Woburn, MA 01801 Tel: 781-721-4000

Project Schedule	**135 Bremen Street Project**
Construction Commencement	3rd Quarter 2015
Construction Completion	3rd - 4th Quarter 2016
Status of Project Design	Schematic

2.3 Legal Information

2.3.1 Legal Judgments or Actions Pending Concerning the Proposed Project:

None.

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

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

2.3.3 Nature and Extent of Any and All Public Easements:

The Project Site is bounded by streets containing sewer, electric, telephone, and gas utilities. Additionally, based on the GEI Consultant's Phase I Environmental Site Assessment, an MBTA easement runs diagonally across the Site from southwest to northeast for the MBTA's Blue Line (Subway) Tunnel.

2.4 Public Benefits

The Proposed Project will provide substantial benefits to the City of Boston and the East Boston community. The Proposed Project will generate both direct and indirect economic and social benefits to the East Boston neighborhood including:

- Creating much needed market rate housing in the East Boston Neighborhood.
- Creating affordable rental units within the Proposed Project.
- Revitalizing an underutilized and abandoned former trucking terminal and creating a mixed use building that will add life to this underutilized Bremen Street Corridor.
- Creating commercial retail space along the Bremen Street Corridor to accommodate East Boston's growing population of residents, which will allow residents to not only live but also shop and dine in the neighborhood.
- Removing two active billboards from the Project Site, thereby to meet a community objective to reduce the number of active billboards within the neighborhood.
- Constructing a building that will incorporate access to the East Boston Greenway bike and walking path which will invite residents to utilize all of the open space that the Greenway has to offer.
- Constructing an underground parking facility that will accommodate parking spaces for both the residents of the building and patrons of the commercial establishments created in the

development. (This Project will also create more parking than any other Project being developed within this section of East Boston.)

- Encouraging alternative modes of transportation through the use of bicycling and walking (including along the adjacent Greenway path), close proximity to the MBTA at Maverick and Airport stations, and access to zip car spaces inside the development's parking garage.

- Creating 100 bike racks within the building to encourage bicycling as a mode of transportation, leading to less vehicular traffic.

- Creating a new sidewalk and other streetscape amenities along Bremen Street, which is currently non-existent.

- Introducing a seating area and bike services along the Greenway portion of the Proposed Project;

- Utilizing the MBTA stations at both Airport and Maverick as commuter transportation, and reducing vehicular traffic and parking along Bremen Street.

- Adding revenue in the form of new property taxes to the City of Boston.

- Creating full time jobs (commercial/ retail).

- Creating temporary construction and labor jobs.

2.5 Regulatory Controls and Permits

2.5.1 Compliance with Boston Zoning Code- Use and Dimensional Requirements

The Site is located in a CE (Corridor Enhancement) Sub District of the East Boston Neighborhood District, Article 53 of the Boston Zoning Code (the "Code"). (See **Table 2-1 135 Bremen Street - Zoning Compliance.)**

The Site consists of 35,998 square feet of land with proposed improvements of 126,189 square feet of residential housing. Multi-family dwellings are an allowed use under Article 62, Table F.

The Proposed Project requires relief from the Boston Zoning Code by the Zoning Board of Appeal as outlined in Article 53. The proposed structure will have a floor area ratio ("FAR") of 3.5, exceeding the maximum allowable FAR of 2.0 set for the area. The Proposed Project at 69 feet exceeds the height limitations of the Code for the area, which is 35 feet. Although the proposed height is keeping with other building heights in the vicinity along the Greenway, variances will be required. The commercial space on the first floor is a forbidden use under the Code, and will require zoning relief. The Proposed

Project will further require zoning relief for insufficient off-street parking and traffic visibility across a corner. Design elements of the project will be reviewed in accordance with Article 80 Large Project Review.

The Site is located in a transition area between existing residential and industrial uses. As one proceeds east on Porter Street, the buildings are much taller and their uses range from hotel, loft-style residential and abandoned warehouse. The design team feels that given this location, and the structures influencing the design, the proposed building's height, mass and scale create an appropriate transition from the residential neighborhood to the larger scale buildings and elevated road structures beyond the Site.

2.5.2 Compliance with Parking and Off-Street Loading Requirements

For a proposed project that is subject to Large Project Review, required off-street parking spaces and off-street loading facilities will be determined as a part of the Large Project Review in accordance with the provisions of Article 80 of the Code.

According to Article 53-36 of the Code, parking and off-street loading requirements for proposed residential developments of 10 units or more, subject to Article 80 review, and are determined as part of the Article 80 review process. The Code requires 2 spaces per unit for residential and 2 spaces per thousand SF of commercial use for a total of a 192 spaces.

The Project provides 81 below-grade and 45 at grade spaces in a garage format for a total of 126 a ratio of 1.2 spaces per residential unit. Although the proposed parking ratio exceeds the Boston Transportation Department Guidelines for this area, the Proponent has taken into consideration the sensitivity of the community and its desire to maximize parking for new developments in providing as much parking as possible on the Site. The Parking is also enhanced by the building location which is between two fully accessible T stops, Maverick and Airport.

Table 2-1. 135 Bremen Street - Zoning Compliance			
Categories	**CE Sub District**	**Existing Condition**	**Proposed Project**
Lot Area (Square Feet)	None	35,998 S.F.	35,998 S.F.
Floor Area Ratio	2.0	n/a	3.54
Minimum Lot Width	None	231 feet	231 feet
Minimum Lot Frontage	None	231 feet	231 feet
Minimum Front Yard	None[1]	n/a	n/a
Minimum Side Yard	None except 10' abutting MFR	n/a	10/0 feet 10 at N side yard
Minimum Rear Yard	20 ft/15 Rear lot line not parallel to building	n/a	20 feet except 15' at NE corner
Maximum Building Height	35 ft	n/a	69 feet
Minimum Useable Open Space Per Dwelling Unit (Square Feet):	4,950 S.F. (50% may be on balconies or roofs)	n/a	14,800 S.F.
Off-Street Parking Spaces (* To be Reviewed in Accordance with Article 80 Large Project Review Requirements)	198 [2]	85	126*
Maximum Height of Structures in Rear Yard (above the average natural grade of rear yard)	n/a	n/a	n/a

1 This project is Subject to Article 80

2 Using guidelines in Article 53: 2 spaces per unit

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

Agency Name	Permit or Action*
State Agencies	
MA Department of Environmental Protection, Division of Water Pollution Control	Sewer Connection Self Certification
MA Bay Transportation Authority	Review of Subsurface Easement
Local Agencies	
Boston Redevelopment Authority	Article 80 Review and Execution of Related Agreements; Section 80 B-6 Certificate of Compliance;
Boston Conservation Commission	Review of a Proposed Building within a Flood Plain
Boston Transportation Department	Transportation Access Plan Agreement; Construction Management Plan
Boston Department of Public Works Public Improvements Commission	Possible Sidewalk Repair Plan; Curb-Cut Permit; Street/Sidewalk Occupancy Permit; Permit for Street Opening; Other
Boston Zoning Board of Appeals	Possible Variances and Dimensional Relief from the Existing Zoning Code Requirements
Boston Public Safety Commission Committee on Licenses	Permit for Storage of Fuel in (Emergency Storage) Tanks; Garage License
Boston Fire Department	Approval of Fire Safety Equipment
Boston Water and Sewer Commission	Approval for Sewer and Water and Connections; Construction Site Dewatering; and Storm Drainage
Boston Department of Inspectional Services	Building Permits; Certificates of Occupancy; Other Construction-Related Permits

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

2.6 Public Review Process and Agency Coordination

The 135 Bremen Street development team has provided extensive community outreach efforts for the Proposed Project including community meetings in the East Boston neighborhood, and presentations before the elected officials. As part of the process, the development team has held an abutters meeting to explain the Project to surrounding neighbors that will be directly impacted during and after construction. The Proponent received positive feedback from neighbors, and has made design changes accordingly. The development team also appeared before the Jeffries Point Neighborhood Association's Zoning Sub-Committee, for an informational meeting, where the Sub-Committee provided positive commentary on the Proposed Project's design and generous parking scheme.

The Proposed Project abuts the East Boston Greenway at the rear of the building, and also sits above an active MBTA tunnel running underneath. The development team will appear before the East Boston Greenway Council for a presentation before the Council at a later date. The Proponent's attorney has also met with Mr. Russ Croteau of the MBTA, and its real estate consulting group, Greystone, and is in the process of applying for the necessary licensing requirements to build above the MBTA tunnel.

As part of the required community outreach process, the Boston Redevelopment Authority in collaboration with East Boston's elected officials has selected a seven member Impact Advisory Group (IAG), which the development team will work in conjunction with on the design and community impacts of the Project. The Boston Redevelopment Authority will also hold its own Article 80 required public meeting during which the development team will make a presentation and public comments will be received.

Finally, the development team has met individually with all of East Boston's elected officials and their staff members, including: Senator Anthony Petrucelli, Representative Carlo Basile, City Councilor Salvatore LaMattina, and Mayor's Office Liaison for East Boston, Corinne Petraglia. East Boston's elected officials have had input during the community outreach process, and have had staff presence at all of the community meetings

The Proponent has also discussed the Proposed Project with representatives of the Boston Redevelopment Authority ("BRA") prior to filing this Project Notification Form in order to identify issues/concerns as well as design requirements related to the Proposed Project. Meetings have been held with the BRA's planners and urban design staff.

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

2.7 Development Impact Payment ("DIP") Status

Based on current schematic design plans, it is not anticipated that Development Impact Payments ("DIP"), in accordance with Article 80B-7 of the Code, will be required for Proposed Project. That project is expected to have approximately 8,000 gross non-residential FAR square feet, and be below the 100,000 gsf threshold where DIP is required.

3.0 URBAN DESIGN AND SUSTAINABILITY COMPONENT

3.1 Site and Surroundings

The Project Site is located in East Boston and is bounded on the west by Bremen Street, on the north by Porter Street, on the east by the East Boston Greenway and on the south by the East Boston Health Center's parking facility. The exiting site contains a 5,000 SF one-story, metal warehouse type building at the rear of the site abutting the Greenway. It sits about 10 feet above the walking elevation of the Greenway. This building will be demolished. The remainder of the approximately 36,000 SF site is open parking lot covered in mixed worn pavements. There is no sidewalk along the Bremen Street property line. An MBTA tunnel easement of approximately 30 feet in width extends diagonally across the site from Southeast to Northwest. There are only warehouse type buildings and parking lots on the eastern side of Bremen Street. The eastern side also appears to have no established sidewalks. The western side of Bremen Street contains a mixture of 1, 2 and 3 family houses in predominately late 19th Century architectural styles. The northeast corner of the Bremen-Porter Streets intersection is dominated by the 2-½ story, green metal vehicular access ramp leading to Logan Airport.

3.2 Project Description

The Proposed Project consists of construction of a new building of 5-stories above the garage level containing 94 residential apartment units. 126 parking spaces will be provided on-site in a two level garage. The first floor facing Bremen Street will contain approximately 7,790 GSF of commercial space. Behind the commercial space will be at grade parking with a second above level.

3.3 Proposed Building Uses and Dimensions

Table 3-1 that follows provides a summary of the approximate Proposed Project dimensions.

Table 3-1 135 Bremen Street - Summary of Proposed Project Dimensions	
Lot Area	35,998 Sq. Ft.
Gross Floor Area Residential: Commercial Parking Garage GSF (On-Grade) Parking GSF (Below-Grade): Total	 119,470 Gross Sq. Ft. 7,872 Gross Sq. Ft. 16,022 Gross Sq. Ft. 29,522 Gross Sq. Ft. 172,886 Gross SF
Gross Floor Area (*Per Boston Zoning Code)*	127,342 Gross SF
Number of Residential Units	94 units
Floor Area Ratio	3.54
Height of Tallest Portion of Building (*Per Zoning Code*)	69 feet
Number of Stories	5 Residential Floors Above the Garage Level
Parking Spaces Surface – On-Grade Garage + New Street Parking Below-Grade Garage: Total:	 45 81 126 spaces

3.4 Urban Design Concept

The proposed design intent of this residential project is to restore the urban fabric and residential street life of traditional East Boston to this now desolate site. The proposed architectural style is sympathetic to East Boston with brick and traditional bays but translated into a more modern form which is in keeping with other new residential developments of this era in this area. It is expected that the Proposed Project

will restore a residential presence and vitality to this long dysfunctional East Boston urban edge. To reinforce this sense of extension of the residential fabric, we believe that the commercial/ restaurant use at the first floor is traditional in the neighborhood and appropriate in restoring a sense of street vitality.

The siting of the building attempts to accomplish a number of design goals. These are different for each face of the building. At Bremen Street, the goal is to create a strong residential presence while restoring the neighborhood tradition of first floor restaurant/commercial uses (the main entrance is on Bremen Street; Porter Street is only a "key access" entrance), the design team hopes to improve the safety and user perception of this portion of the street. It is now desolate and quite foreboding at night.

The Greenway façade and building program are the most challenging. It is the design team's proposal to "enhance "the Greenway corridor by creating a welcoming respite for walkers and bikers during their Greenway travels. On the Proposed Project's property, a small sitting area and bike repair station is proposed to contribute to the liveliness of the Greenway. This would include a free air station at designated hours offering a communal bike repair station. In addition the proposed bike storage area for the building is at this level. The exercise and community rooms look out over the Greenway. All of these functions are fully accessible through the building's entrance and elevator system. In addition to bikes, this design will enhance wheelchair access to the Greenway. In terms of the lot to the South, the Proponent believes that this strong residential statement will encourage additional residential development on the underutilized adjacent lots. Electric and smart car parking will be included on site. Because of the location near the Airport and Maverick MBTA stops on the Blue Line, pedestrian circulation is designed to promote access to the T.

The massing of the building is in a U-shape. It is designed to form a hard edge against the elevated ramp structure to the north and to re-establish the Bremen/Porter intersection as the beginning of a new residential district. The open end of the U faces Bremen Street. This offers an articulated facade along Bremen that diminishes its impact on the residential side of Bremen and minimizes shadow impacts (see **Section 4.1 Shadow Analysis**). Along the Greenway the existing grade around the building is kept high for planting except for the terraced and well planted sitting/biking area.

3.5 Materials and Finishes

The building will be built utilizing three primary exterior wall materials. The dominant exterior material will be brick with precast concrete accents. Metal panel will form the bays and cornices.

3.6 Sustainable Design/Energy Conservation

3.6.1 Introduction

Sustainability informs every design decision. Enduring and efficient buildings conserve embodied energy and preserve natural resources. The full development of 135 Bremen Street embraces the opportunity to positively influence the urban environment. Its urban location takes advantage of existing infrastructure while convenient access to mass

transportation will reduce dependence on single occupant vehicle trips and minimize transportation impacts.

Our team is committed to incorporating environmentally sensitive, sustainable design elements into the 135 Bremen Street project. These elements will improve the quality of life for the residents of this project, as well as the neighborhood, while helping to protect the global environment. Ultimately, they will also reduce operating costs while increasing value for the project, improving its business viability.

We are committed to identifying opportunities presented by the development of 135 Bremen Street by setting proactive goals and ensuring an undertaking that is LEED Silver certifiable as a minimum and satisfies the requirements of the City of Boston Environment Department. The LEED rating system tracks the sustainable features of the project by achieving points in following categories: Sustainable Sites; Water Efficiency; Energy and Atmosphere; Materials and Resources; Indoor Environmental Quality; and Innovation and Design Process. A more detailed Green Building Report with detailed discussion of each of the LEED points proposed is contained in **Appendix E.**

3.6.2 Sustainable Sites

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

The previously developed site features connectivity to basic services in the community and is located in an urban setting that is well served by the existing utility infrastructure. The site's adjacency to basic services in the community and the development density of its urban context enable the project to satisfy available approaches to the Development Density and Community Connectivity credit. In addition, access two MBTA Blue line stops, a major bus terminal, and on-site bike storage will offer residents and visitors environmentally sound transportation alternatives.

A stormwater management plan that reduces impervious cover, promotes infiltration and captures and treats the stormwater runoff will assist in meeting Stormwater Design-Quantity credit. To achieve Heat Island Effect credits and minimize the project's impact on the creation of urban heat islands, a combination of high-albedo roofing membrane and planted site areas will maximize solar reflectance and minimize heat gain.

3.6.3 Water Efficiency

Buildings are major users of our potable water supply and conservation of water preserves a natural resource while reducing the amount of energy and chemicals used for sewage treatment. The goal of the Water Efficiency credit category is to encourage smarter use of water, inside and out. Water reduction is typically achieved through more efficient appliances, fixtures and fittings inside and water-wise landscaping outside. To satisfy the requirements of the Water Use Reduction Prerequisite and credit, the project will incorporate water conservation strategies that include high-efficiency plumbing fixtures for water closets and faucets.

Landscape materials will be selected that enhance sustainability and conservation of resources by virtue of suitability to site conditions. Native and adaptive plant species will be specified in landscaped areas to reduce the requirement for irrigation in all areas and satisfy the requirements for the Water Efficient Landscaping credit.

3.6.4 Energy and Atmosphere

According to the U.S. Department of Energy, buildings use 39% of the energy and 74% of the electricity produced each year in the United States. The Energy and Atmosphere credit category encourages a wide variety of energy strategies: commissioning; energy use monitoring; efficient design and construction; efficient appliances, systems and lighting, and other innovative practices. The team will use an integrated design approach in order to insure this project meets the goals of LEED in this category, in a cost effective manner.

Various HVAC systems will be explored in the design phase of the project, including water source heat pumps, which provide high efficiency, while allowing individual unit control. The possibilities of ground water utilization will be explored in connection with this scheme.

Placement and sizing of windows is intended to reduce daytime interior lighting needs, and improve winter heat gain without adding significant summer heat gain. LED, halogen or fluorescent bulbs are used in light fixtures throughout the property. These lights use much less energy, generate less heat and last much longer than incandescent bulbs.

The Proposed Project will meet or exceed the ASHRAE 90.1-2007 standard for Minimum Energy Performance through a variety of measures. Further, no chlorofluorocarbon (CFC) based refrigerants will be used in the project to reduce ozone depletion in the atmosphere and satisfy the Fundamental Refrigeration Management prerequisite. Fundamental Commissioning of Building Energy Systems will be performed to ensure that systems are operating at peak efficiency.

3.6.5 Materials and Resources

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

The project includes recycling facilities within the building for the convenience of the occupants in accordance with the requirements of the Storage and Collection of Recyclables prerequisite. A Construction Waste Management Plan will be implemented to divert construction waste material from landfills per the Construction Waste Management credit. Building materials will be specified based on their recycled content and proximity of extraction and manufacturing locations to the project site such that points will be achieved in each of the Recycled Content and Regional Materials credits.

3.6.6 Indoor Environmental Quality

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

During construction, an indoor air quality management plan will be implemented to prevent contamination of mechanical systems and absorptive materials. Additionally, in its selection of materials incorporated into the building it will provide for a high level of emissions reduction by the use of certified Low-Emitting Materials for Adhesives and Sealants, Paints, Carpet and Composite Wood.

Mechanical design will comply with Thermal Comfort requirements by complying with current ASHRAE 55 standards. The building design will provide occupants with control over the lighting and their thermal environment, as well as, access to daylight and views.

3.6.7 Innovation and Design Process

The Innovation in Design and Innovation in Operations credit categories provide additional points for projects that use new and innovative technologies, achieve performance well beyond what is required by LEED credits, or utilize green building strategies that are not specifically addressed elsewhere in LEED. The project will achieve additional credit points for its exceptional performance in the sustainable sites category

by placing 100% of parking underground, restoring the habitat, and locating the project within walking distance two major transit lines.

This credit category also rewards projects for including a LEED Accredited Professional on the team to ensure a holistic, integrated approach to design, construction, operations and maintenance.

3.7 Landscape Design

The landscape design will address the street and public realm at the Bremen Street sidewalk and along the East Boston Greenway to the rear of the Proposed Project. The street landscape creates a unified and cohesive vocabulary that responds to the differing scale and activity along Bremen Street, and the landscape design along the Greenway will complement the existing pathway system and landscape treatment. The central courtyard is a valuable feature to the design of the project's landscape. The courtyard restores the previously developed habitat, functions as a green roof to the lower garage floors, and helps control stormwater runoff at grade.

3.8 Urban Design Drawings and LEED Checklist

The Proposed Project's urban design drawings and perspectives, and the LEED Checklist are contained in the following section and include:

Figure 3.1-1: Schematic Design - Cover Sheet
Figure 3.1-2: Schematic Design - Site Plan
Figure 3.1-2A: Schematic Design - Landscape Plan
Figure 3.1-3: Schematic Design - Neighborhood Context
Figure 3.1-4: Schematic Design - View of the Proposed Building from Porter/Bremen Streets
Figure 3.1-5: Schematic Design - View of the Proposed Building from Porter/Bremen Streets
Figure 3.1-6: Schematic Design - View of Proposed Building From East Boston Greenway
Figure 3.1-7: Schematic Design - Garage Lower Level
Figure 3.1-8: Schematic Design - Garage Upper Level
Figure 3.1-9: Schematic Design - First Residential Floor
Figure 3.1-10: Schematic Design - Second Residential Floor
Figure 3.1-11: Schematic Design - Third Residential Floor
Figure 3.1-12: Schematic Design - Fourth Residential Floor
Figure 3.1-13: Schematic Design - Fifth Residential Floor
Figure 3.1-14: Schematic Design - Typical Section
Figure 3.1-15: Schematic Design - Bremen Street Elevation
Figure 3.1-16: Schematic Design - Porter Street Elevation
Figure 3.1-17: Schematic Design - Greenway Elevation
Figure 3.1-18: LEED 2009 Checklist for New Construction and Major Renovations

LOCUS

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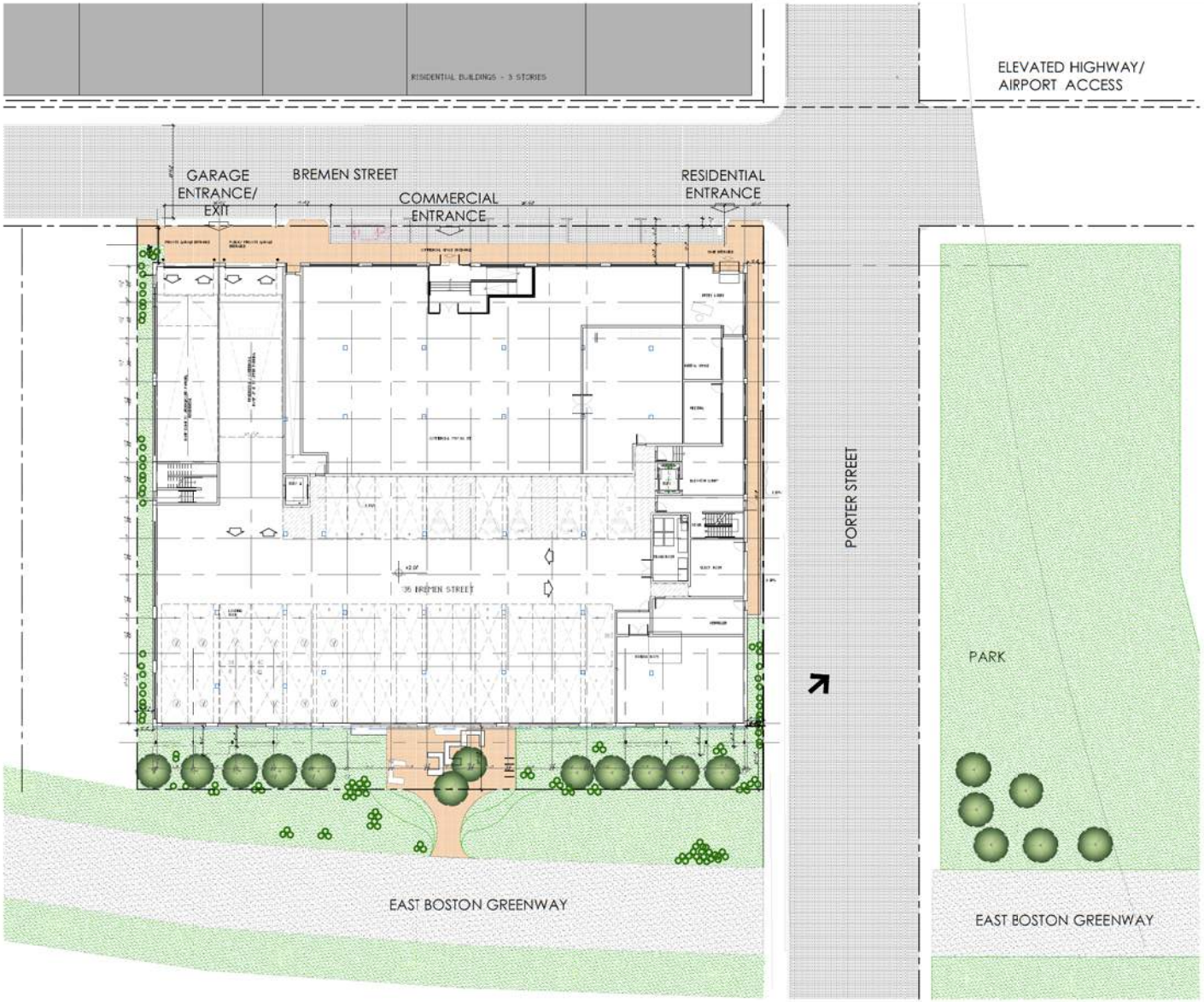
135 BREMEN STREET
EAST BOSTON, MA

SCHEMATIC DESIGN
COVER SHEET

FIGURE
3.1-1



PROJECT SUMMARY

135 BREMEN STREET
EAST BOSTON
CORNER BREMEN AND PORTER STREET
MAIN ENTRANCE AT PORTER STREET

PROPOSED MIXED USE BUILDING

LOT AREA 35,998.43 S.F.
BUILDING 126,189 S.F.

OFF STREET PARKING

GARAGE UPPER LEVEL - 42 INCLUDING 5 HC
GARAGE LOWER LEVEL - 85
TOTAL - 126

BIKE RACKS - 100 SPACES

COMMERCIAL SPACE 7790 S.F.

RESIDENTIAL

94 UNITS

5	-	STUDIOS	@ 444 S.F. EA.
10	-	1 BDR	@ 675 S.F. EA.
5	-	1 BDR + DEN	@ 732 S.F. EA.
54	-	TWO BDR	@ 1030 S.F. EA.
15	-	2 BDR + DEN	@ 1035 S.F. EA.
5	-	3 BDR	@ 1468 S.F. EA.

TYPICAL RESIDENTIAL FLOOR 23,956 S.F.

TYPICAL FLOOR TO FLOOR HEIGHT 10'-6" @ RESIDENTIAL AREA

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135 BREMEN STREET
EAST BOSTON, MA

SCHEMATIC DESIGN
SITE PLAN
1/16"=1'-0"

FIGURE
3.1-2

PLANT LIST:

SYM	QTY	LATIN NAME	COMMON NAME	SIZE	NOTES
TREES					
AG	3	Amelanchier grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2.5-3" CAL	B&B
ML	3	Magnolia x loebneri 'Leonard Messel'	Leonard Messel Magnolia	6-8' HT	B&B
MS	6	Magnolia stellata 'Waterlily'	Waterlily Star Magnolia	6-8' HT	B&B
PS	3	Prunus serrulata 'Kwanzan'	Kwanzan Cherry	3-3.5" CAL	B&B
TO	15	Thuja occidentalis 'Smaragd'	Emerald Green Arborvitae	5-6' HT	B&B or POT
SHRUBS					
BMJ	31	Buxus microphylla 'Julia Jane'	Julia Jane Boxwood	2.5-3' HT	POT or B&B
CSAC	10	Cornus sericea 'Allemani's Compacta'	Allemani's Compact Redtwig Dogwood	2' HT	POT
CSAS	9	Cornus sanguinea 'Arctic Sun'	Arctic Sun Dogwood	2' HT	POT
FGT	13	Forsythia 'Gold Tide'	Gold Tide Forsythia	#3 POT	
HQSD	10	Hydrangea quercifolia 'Sikes Dwarf'	Sikes Dwarf Oakleaf Hydrangea	2.5-3' HT	POT or B&B
IG	18	Ilex glabra 'Shamrock'	Shamrock Inkberry	2-3' HT	POT
JS	8	Juniperus sabina 'Broadmoor'	Broadmoor Juniper	#3 POT	
RYP	6	Rhododendron 'Yaku Prince'	Yaku Prince Rhododendron	2.5-3' HT	POT or B&B
PERENNIALS					
ABI	21	Amsonia 'Blue Ice'	Blue Ice Bluestar	#1 POT	
AC	31	Asarum canadense	Wild Ginger	1 QT. POT	
AD	27	Astilbe 'Deutschland'	Deutschland Astilbe	#1 POT	
EP	18	Echinacea purpurea 'Magnus'	Purple Coneflower	#1 POT	
HS	6	Hosta sieboldiana 'Elegans'	Elegans Hosta	#2 POT	
PAH	23	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	#2 POT	

PLANTING NOTES:

1. The Landscape Contractor shall protect all utilities prior to starting construction.
2. The Contractor shall supply all plant materials in quantities sufficient to complete all planting shown on these drawings.
3. All plant materials to conform to guidelines established by the American Standard for Nursery Stock published by the American Assn. of Nurserymen.
4. All plant materials to be selected by the Landscape Architect with the Contractor at the nursery.
5. All plants to be located on the site for approval of the Landscape Architect prior to installation.
6. If the plant list does not agree with the planting plan, the plan shall be followed.
7. The Contractor shall guarantee all plant materials and lawn for one year following installation.
8. All plant beds to receive 3" shredded bark mulch; supply sample for approval of Landscape Architect.
9. All planting beds to have a minimum 12" depth of topsoil; all lawn areas to have a minimum 6" depth of topsoil, and to be sod.
10. No substitution of plant materials shall be allowed without approval of Landscape Architect.

IRRIGATION NOTES:

1. Irrigation system to be design/build. Irrigation company and design to be approved by Landscape Architect; provide plan for approval, before installation begins.
2. Control box and clock to be approved and shall be sized to provide 100% coverage of all proposed planting beds.
3. 'Pop-up' spray heads for use in lawn areas and trees. 'Drip' system for use in all perennial and shrub beds. Drip for the shrub beds shall not be installed until after plants are installed.
4. Irrigation system to be guaranteed for one (1) year following installation. Contractor to provide first winterization and spring start up.
5. Contractor to provide irrigation sleeves under paved areas. Seal all pipe ends and joints tightly.
6. Contractor to provide an "As-Built Plan", which includes sleeve locations, zone information and Operation Instructions.
7. Location of rain gauge to be determined in field with Landscape Architect and Owner's Representative.

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135 BREMEN STREET
EAST BOSTON, MA

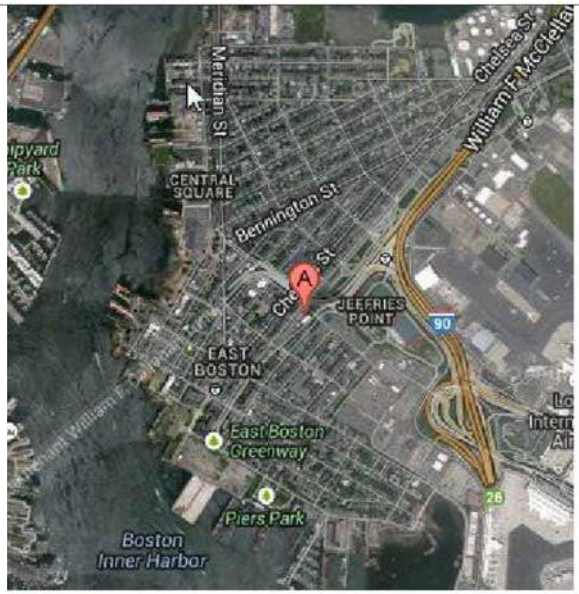
SCHEMATIC DESIGN
LANDSCAPE PLAN
1/16"=1'-0"

FIGURE
3.1-2A

BREMEN STREET TOWARD PORTER STREET

THE SITE VIEW FROM BREMEN STREET

THE SITE VIEW FROM BREMEN STREET

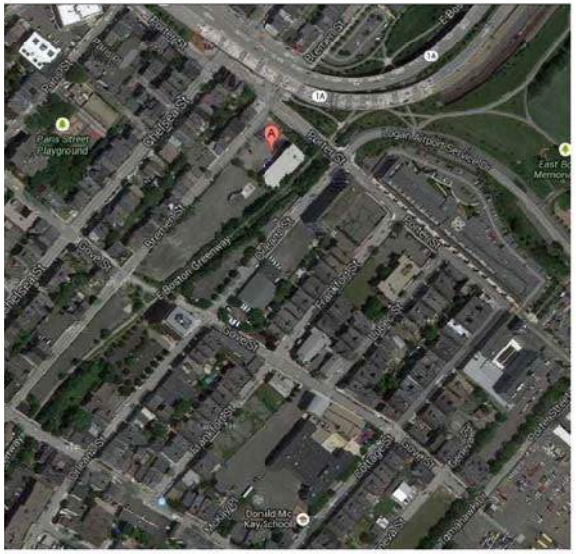


LOCUS AT EAST BOSTON OVERALL

BREMEN STREET FROM PORTER STREET

BILLBOARDS AT PORTER STREET

CORNER AT PORTER STREET AND ORLEANS STREET



LOCUS AT BREMEN STREET

VIEW AT ORLEANS STREET FROM PORTER STREET

EAST BOSTON GREENWAY

BILLBOARDS AT PORTER STREET

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135 BREMEN STREET
EAST BOSTON, MA

SCHEMATIC DESIGN
NEIGHBORHOOD CONTEXT

FIGURE
3.1-3

VIEW OF PROPOSED BUILDING FROM THE CORNER OF PORTER AND BREMEN STREETS

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135 BREMEN STREET
EAST BOSTON, MA

SCHEMATIC DESIGN
VIEW OF PROPOSED BUILDING FROM THE CORNER OF PORTER AND BREMEN STREETS

FIGURE
3.1-4

VIEW OF PROPOSED BUILDING FROM THE CORNER OF PORTER AND BREMEN STREETS

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135 BREMEN STREET
EAST BOSTON, MA

SCHEMATIC DESIGN
VIEW OF PROPOSED BUILDING FROM THE CORNER OF PORTER AND BREMEN STREETS

FIGURE
3.1-5

VIEW OF PROPOSED BUILDING FROM EAST BOSTON GREENWAY

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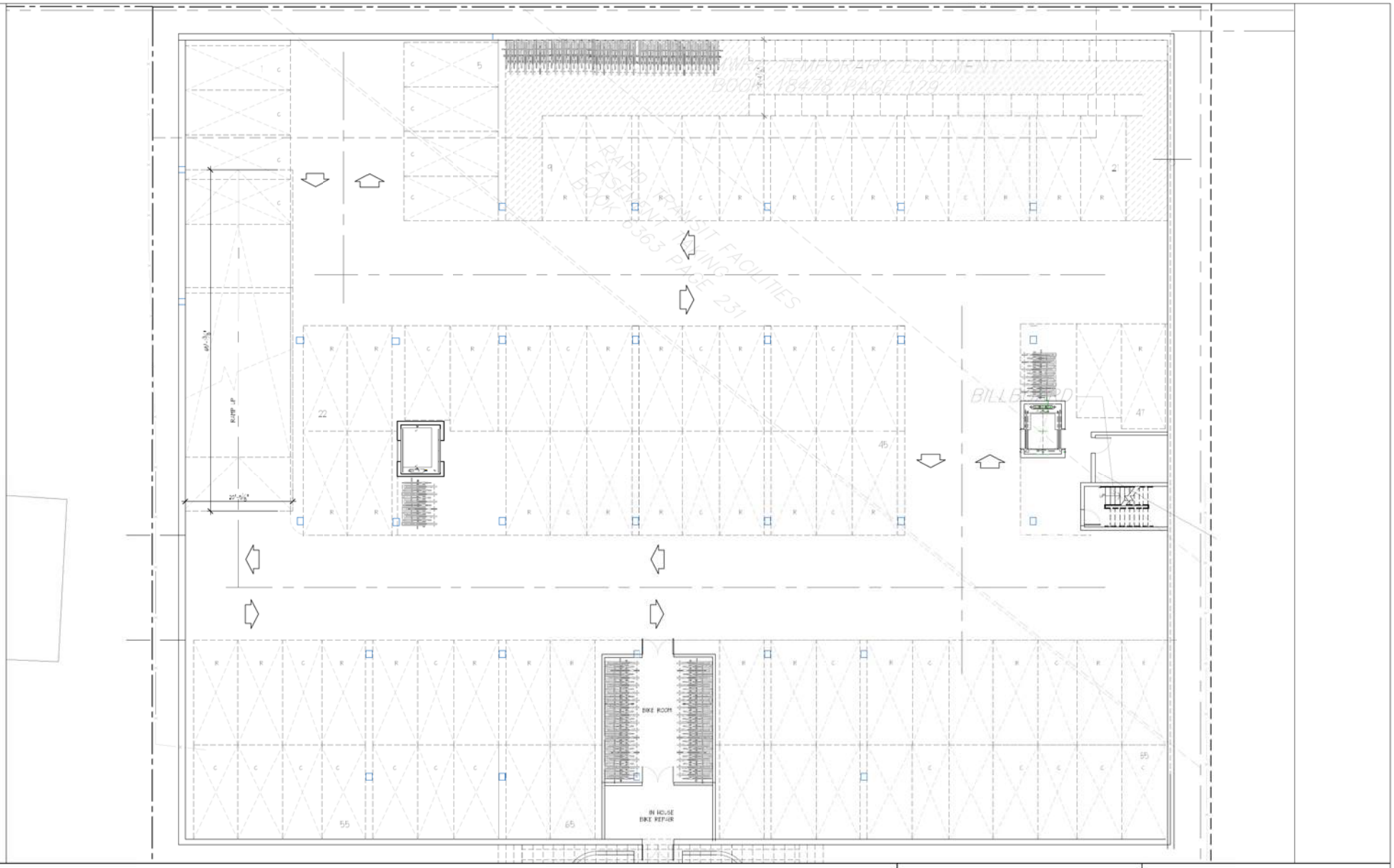
135 BREMEN STREET
EAST BOSTON, MA

SCHEMATIC DESIGN
VIEW OF PROPOSED BUILDING FROM EAST BOSTON GREENWAY

FIGURE
3.1-6



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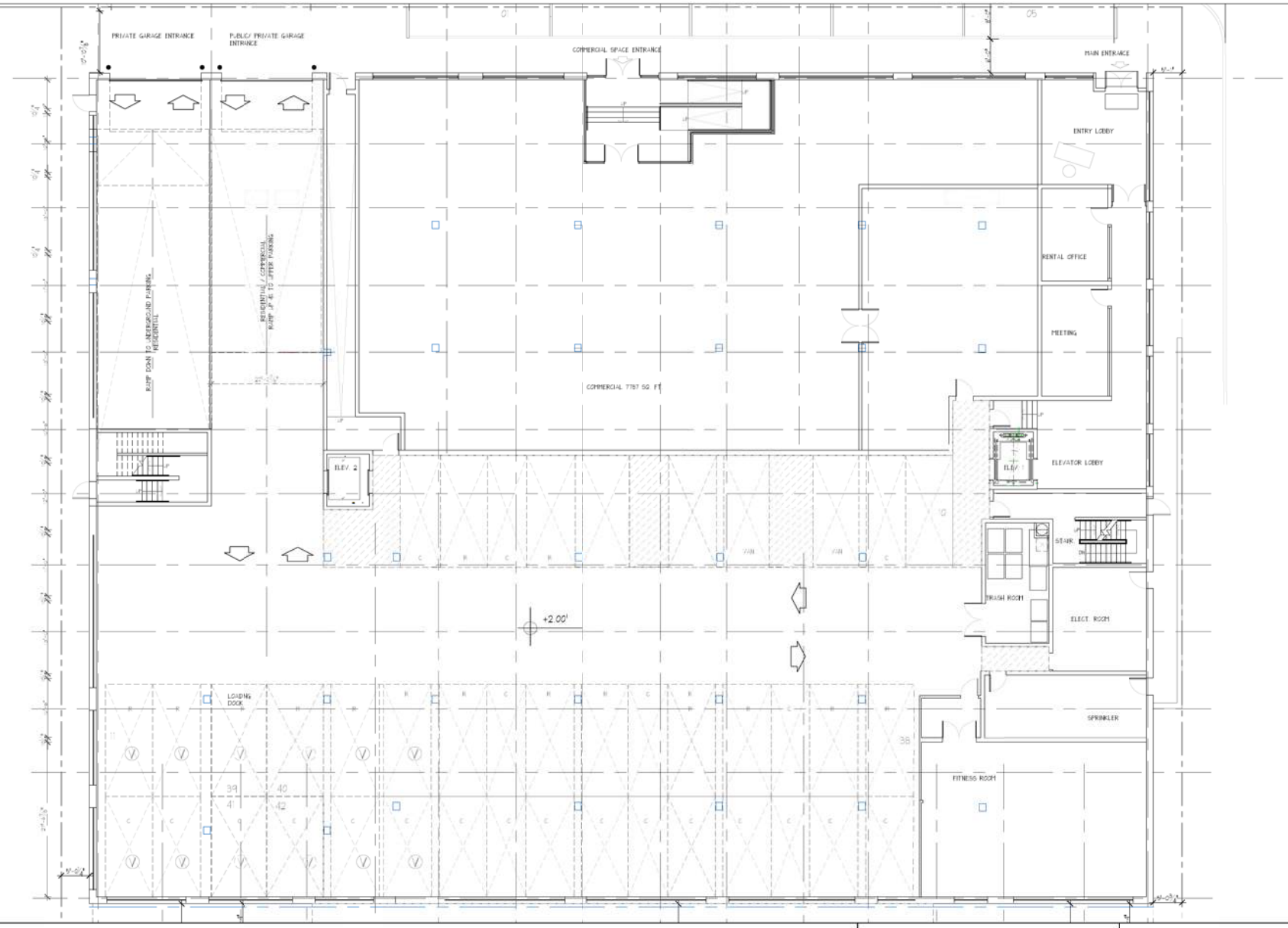
135 BREMEN STREET
EAST BOSTON, MA

SCHEMATIC DESIGN
GARAGE LOWER LEVEL
1/8"=1'-0"

FIGURE
3.1-7



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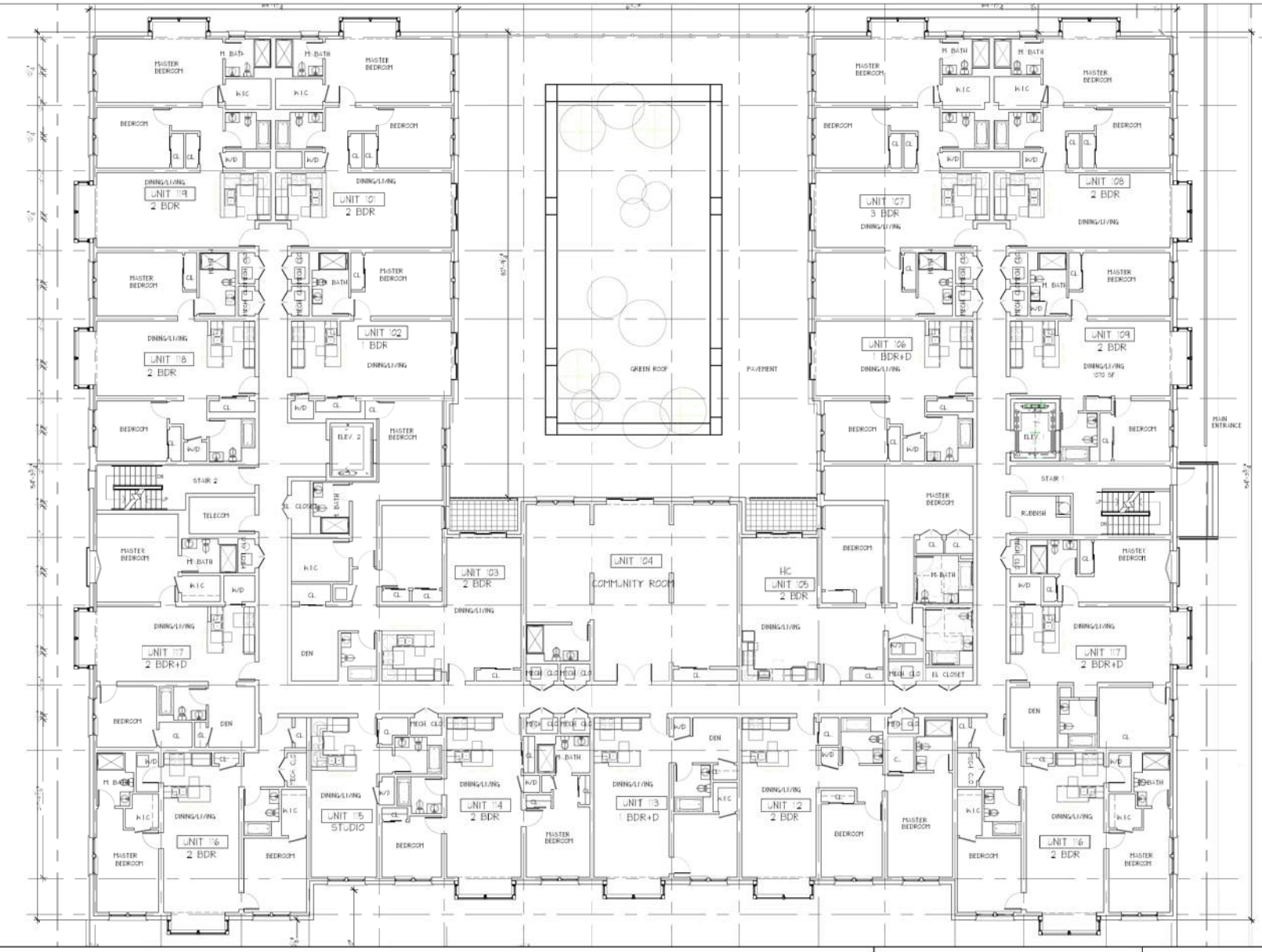
SCHEMATIC DESIGN
GARAGE UPPER LEVEL
1/8"=1'-0"

FIGURE
3.1-8



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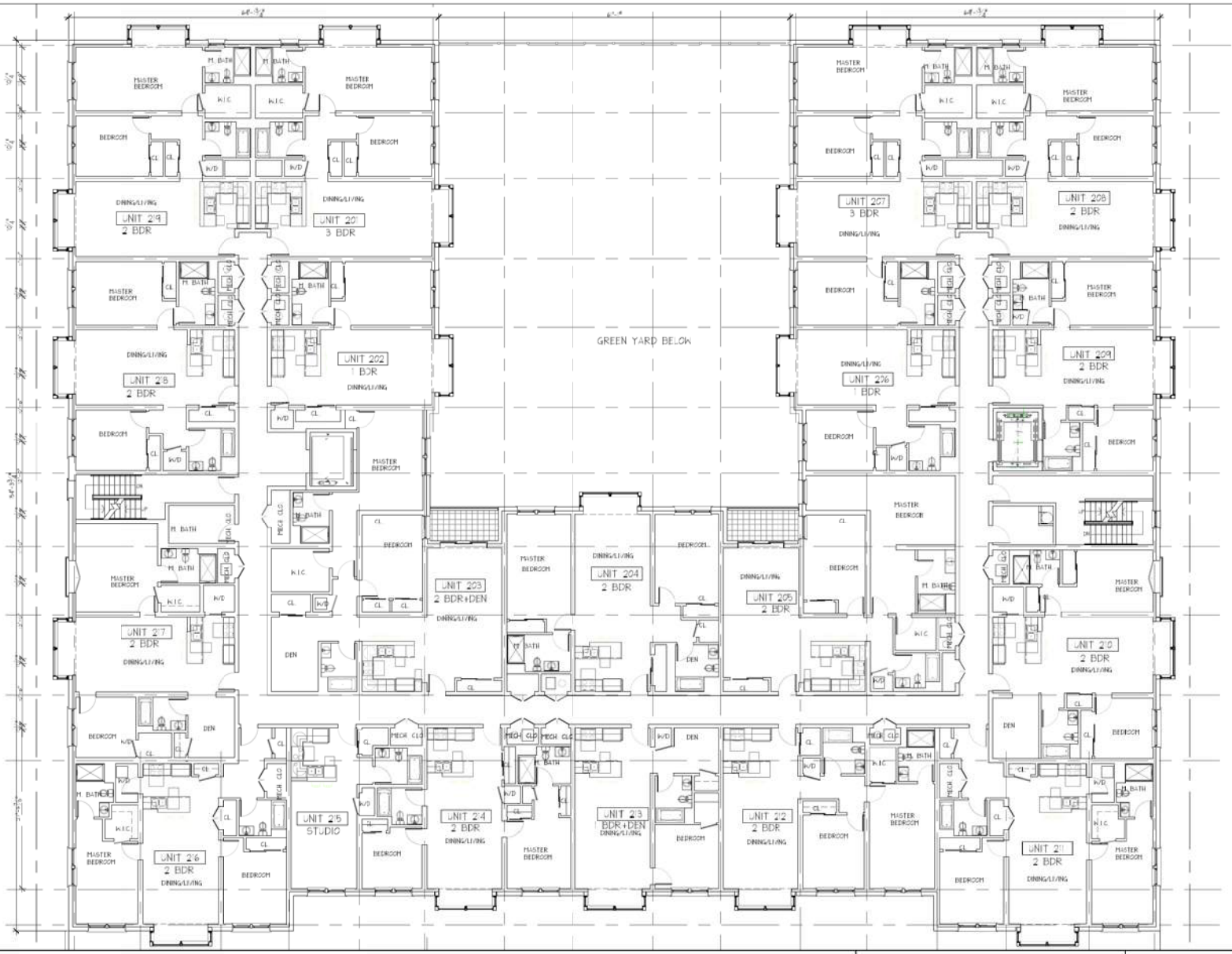
SCHEMATIC DESIGN
FIRST RESIDENTIAL FLOOR
1/8"=1'-0"

FIGURE
3.1-9



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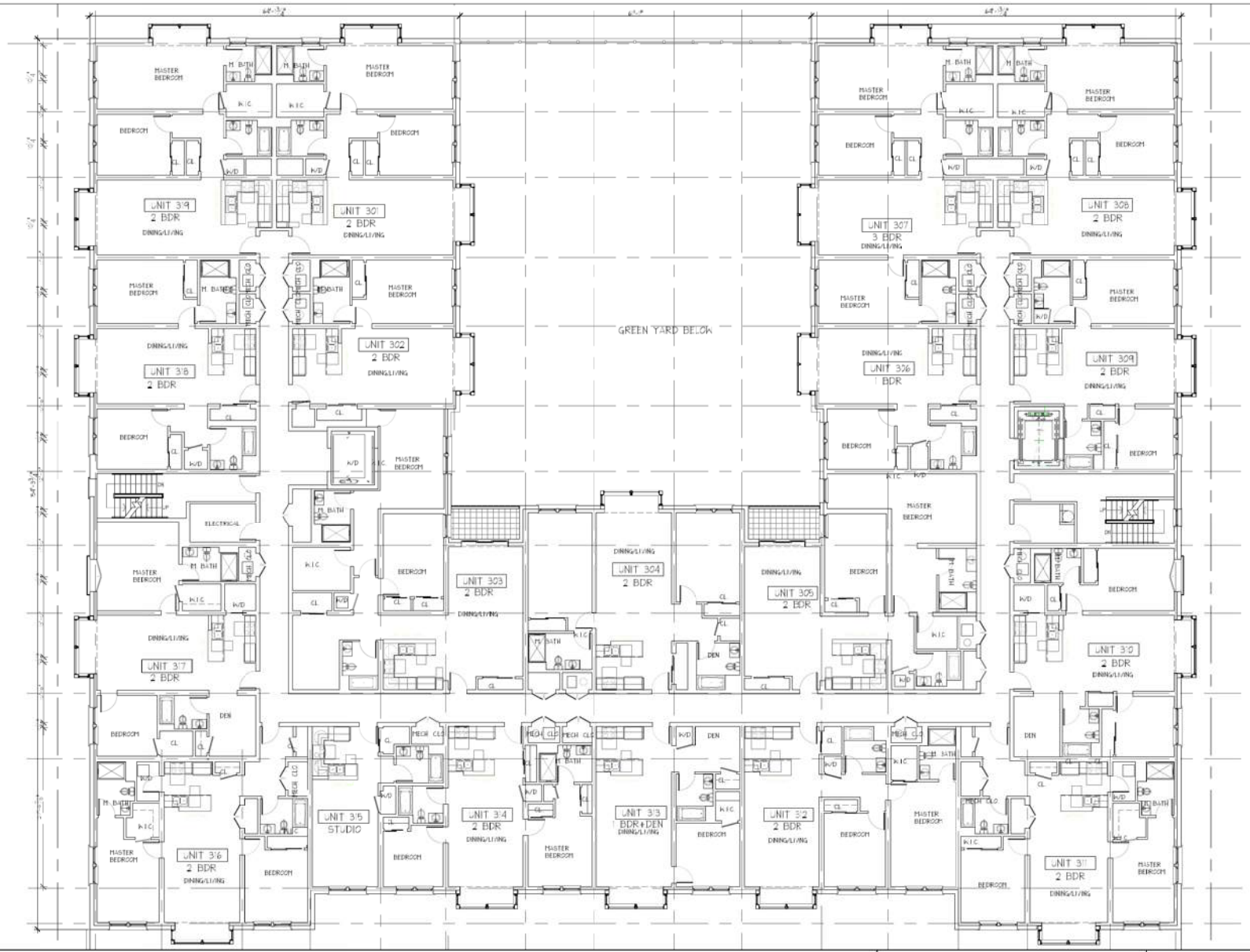
EAST BOSTON, MA

SCHEMATIC DESIGN
SECOND RESIDENTIAL FLOOR
1/8"=1'-0"

FIGURE
3.1-10



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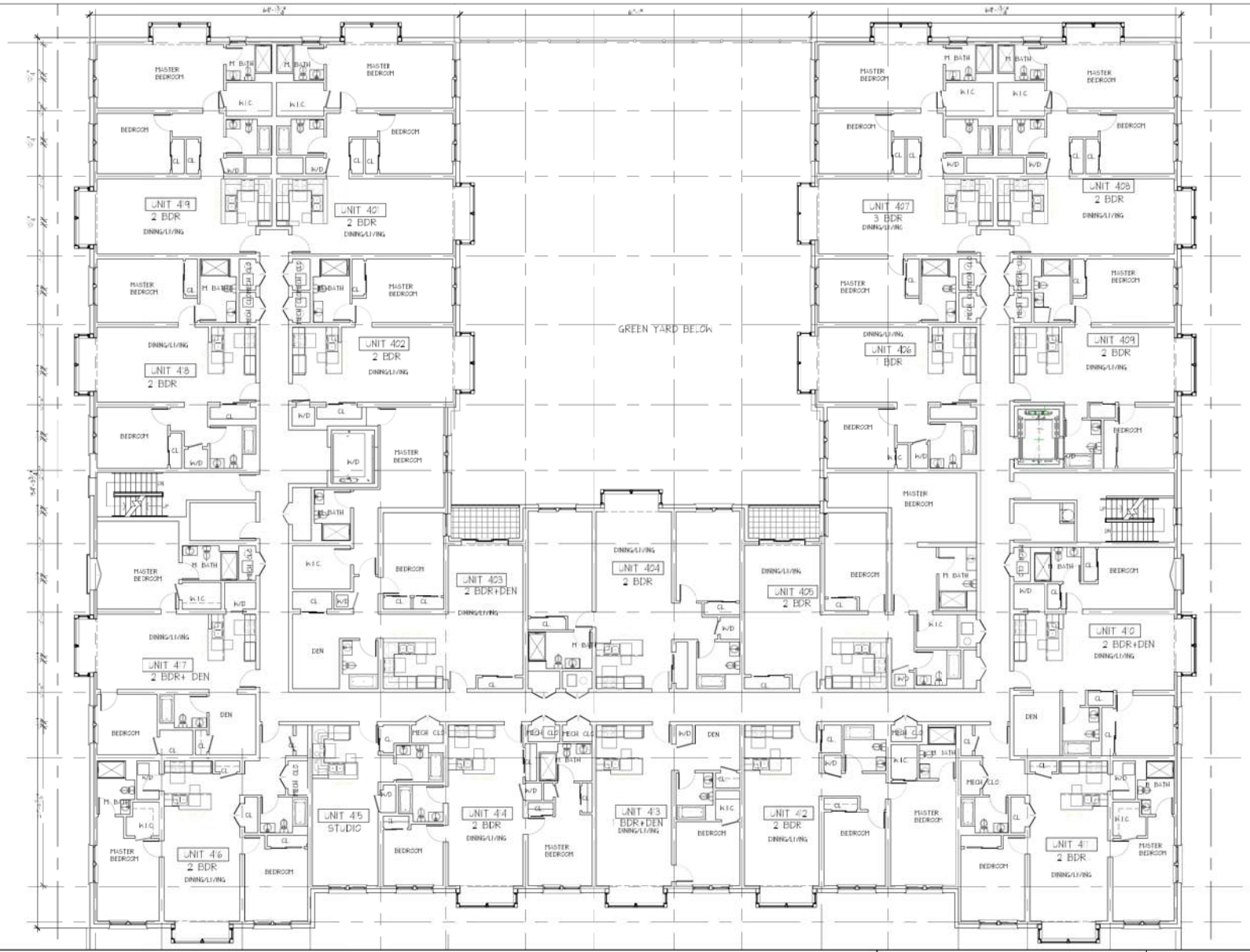
EAST BOSTON, MA

SCHEMATIC DESIGN
THIRD RESID. FLOOR
1/8"=1'-0"

FIGURE
3.1-11



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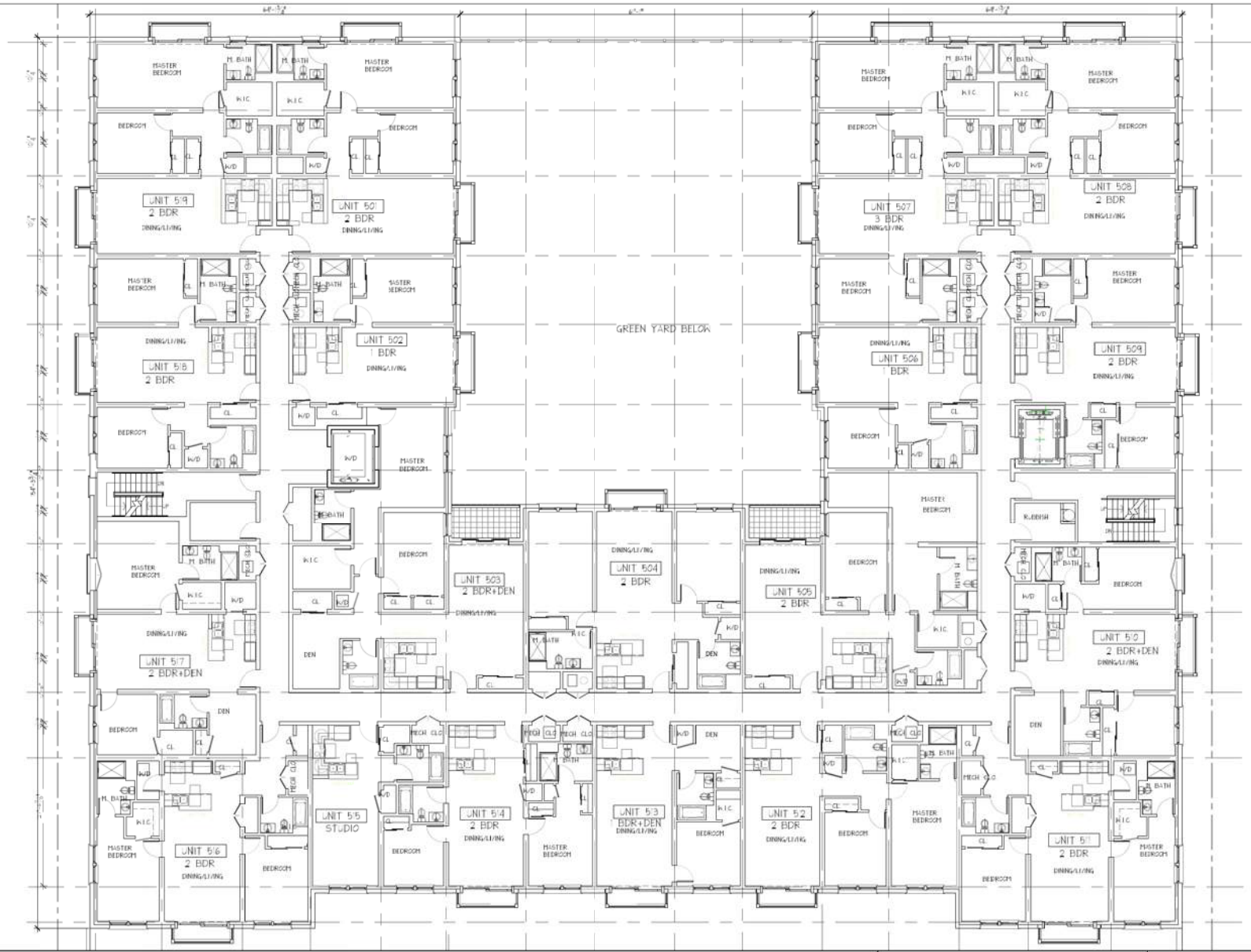
EAST BOSTON, MA

SCHEMATIC DESIGN
FOURTH RESID. FLOOR
1/8"=1'-0"

FIGURE
3.1-12



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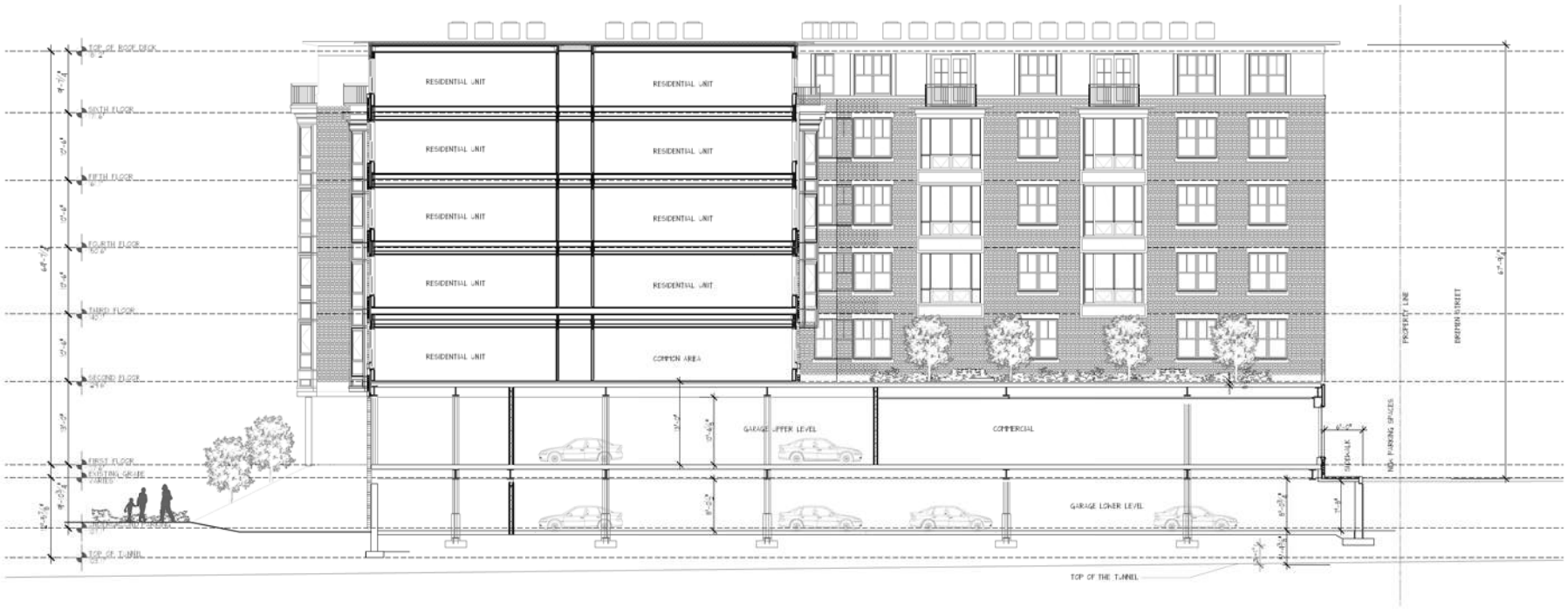
EAST BOSTON, MA

SCHEMATIC DESIGN
FIFTH RESID. FLOOR
1/8"=1'-0"

FIGURE
3.1-13



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135 BREMEN STREET
EAST BOSTON, MA

SCHEMATIC DESIGN
TYP. SECTION
1/8"=1'-0"

FIGURE
3.1-14

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135 BREMEN STREET
EAST BOSTON, MA

SCHEMATIC DESIGN
BREMEN STREET ELEVATION
1/8"=1'-0"

FIGURE
3.1-15

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135 BREMEN STREET
EAST BOSTON, MA

SCHEMATIC DESIGN
PORTER STREET ELEVATION
1/8"=1'-0"

FIGURE
3.1-16

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135 BREMEN STREET
EAST BOSTON, MA

SCHEMATIC DESIGN
GREENWAY ELEVATION
1/8"=1'-0"

FIGURE
3.1-17

LEED 2009 for New Construction and Major Renovations

Project Checklist

135 Bremen Street, Boston, MA

Sustainable Sites — Possible Points: 26

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

Water Efficiency — Possible Points: 10

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

Energy and Atmosphere — Possible Points: 35

Y	?	N			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
7		12	Credit 1	Optimize Energy Performance	1 to 19
		7	Credit 2	On-Site Renewable Energy	1 to 7
	2		Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
	1	2	Credit 5	Measurement and Verification	3
		2	Credit 6	Green Power	2

Materials and Resources — Possible Points: 14

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

Materials and Resources, Continued

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

Indoor Environmental Quality — Possible Points: 15

Y	?	N			
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
1			Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
1			Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
		1	Credit 7.2	Thermal Comfort—Verification	1
1			Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1

Innovation and Design Process — Possible Points: 6

1			Credit 1.1	Innovation in Design: Specific Title	1
1			Credit 1.2	Innovation in Design: Specific Title	1
1			Credit 1.3	Innovation in Design: Specific Title	1
1			Credit 1.4	Innovation in Design: Specific Title	1
		1	Credit 1.5	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1

Regional Priority Credits — Possible Points: 4

1			Credit 1.1	Regional Priority: Specific Credit	1
1			Credit 1.2	Regional Priority: Specific Credit	1
1			Credit 1.3	Regional Priority: Specific Credit	1
		1	Credit 1.4	Regional Priority: Specific Credit	1

Total — Possible Points: 110

67	5	38	Total

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

Figure 3.1 - 18
LEED 2009 Checklist for New Construction and Major Renovations

4.0 ENVIRONMENTAL PROTECTION COMPONENT

4.1 Shadow Impacts Analysis

4.1.1 Introduction

The following shadow study describes and graphically depicts anticipated new shadow impacts from the Proposed Project compared to shadows from existing buildings. The study presents the existing and built conditions for the proposed Project for the hours 9:00 AM, 12:00 Noon, and 3:00 PM for the vernal equinox, summer solstice, autumnal equinox, and winter solstice. In addition, shadows are depicted for 6:00 PM during the summer solstice and autumnal equinox.

4.1.2 Vernal Equinox (March 21)

Figures 4.2-1 through **4.2-3** depict shadows on March 21.

At 9:00 AM, shadows are cast in a northwesterly direction onto portions of Bremen Street and on the façade of some of the residential structures up to the first floor on the opposite side of Bremen Street.

At 12:00 Noon, shadows are cast in the northerly direction onto portions of Bremen and Porter Streets.

At 3:00 PM, shadow from the project is cast northeasterly across Porter Street onto unoccupied land adjacent to the East Boston Greenway.

4.1.3 Summer Solstice (June 21)

Figures 4.2-4 through **4.2-7** depict shadow impacts on June 21.

At 9:00 AM, shadows are cast in a northwesterly direction onto portions of Bremen Street

At 12:00 Noon, shadows are cast in the northwesterly direction onto a portion of Bremen Street and Porter Street.

At 3:00 PM, shadows from the project are cast northeasterly across Porter Street and slightly on the East Boston Greenway.

At 6:00 PM, overall neighborhood shadows are long. New shadows from the project are cast easterly across Porter Street and southerly across the East Boston Greenway onto Orleans Street.

4.1.4 Autumnal Equinox (September 21)

Figures 4.2-8 through **4.2-11** depict shadow impacts on September 21.

At 9:00 AM, shadows are cast in a northwesterly direction onto portions of Bremen Street and onto the façade of some structures up to the first floor on the opposite side of Bremen Street.

At 12:00 Noon, shadows are cast in the northerly direction onto portions of Bremen and Porter Streets.

At 3:00 PM, shadow from the project is cast northeasterly across Porter Street onto unoccupied land adjacent to the East Boston Greenway, and southerly onto a small edge of the Greenway.

At 6:00 PM, new shadows from the project are cast easterly across Porter Street and southerly across the Greenway

4.1.5 Winter Solstice (December 21)

Figures 4.2-12 through **4.2-14** depict shadow impacts on December 21. Winter sun casts the longest shadows of the year.

At 9:00 AM, shadows are cast in a northwesterly direction onto portions of Bremen Street, onto the façades of some structures on the opposite side of Bremen Street, and onto portions of Porter Street to the north of its intersection with Orleans Street.

At 12:00 Noon, shadows are cast in the northerly direction onto portions of Bremen and Porter Streets, and across Porter Street onto the unoccupied concrete areas associated with the underpass to the elevated structure connecting to the Sumner Tunnel.

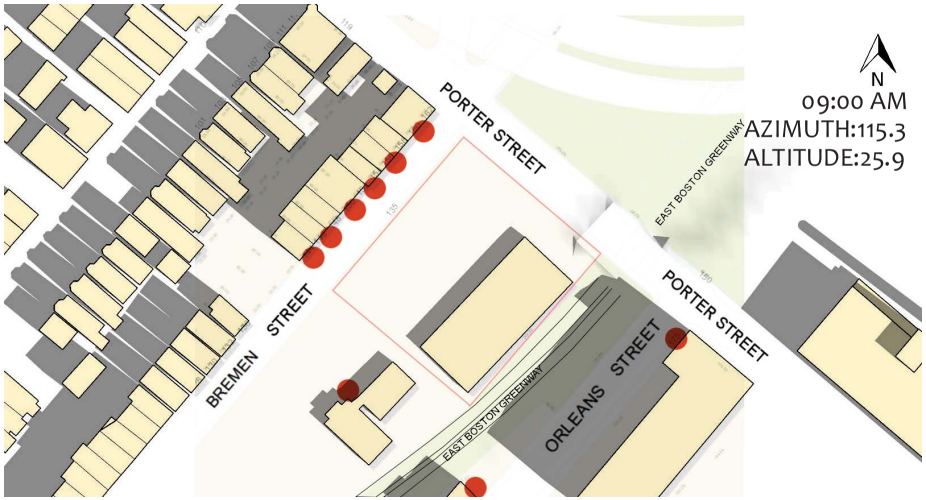
At 3:00 PM, shadow from the project is cast northeasterly across Porter Street onto larger portions of unoccupied land below elevated highway link adjacent to the Greenway.

4.1.6 Summary

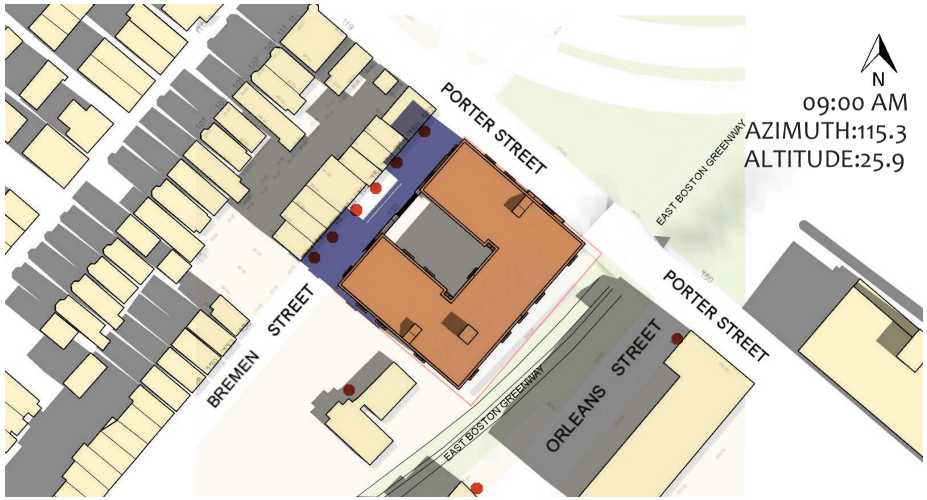
New shadow is generally limited to the streets surrounding the Site. Although late afternoon and evening shadows will extend in a northeasterly direction toward the Sumner Tunnel elevated highway link, but with almost no impact on the East Boston Greenway to the south of the Proposed Project. Overall, the Project's shadow impacts

will be consistent with current patterns and will not adversely impact the Project Site and surrounding areas.

EXISTING



PROPOSED



LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

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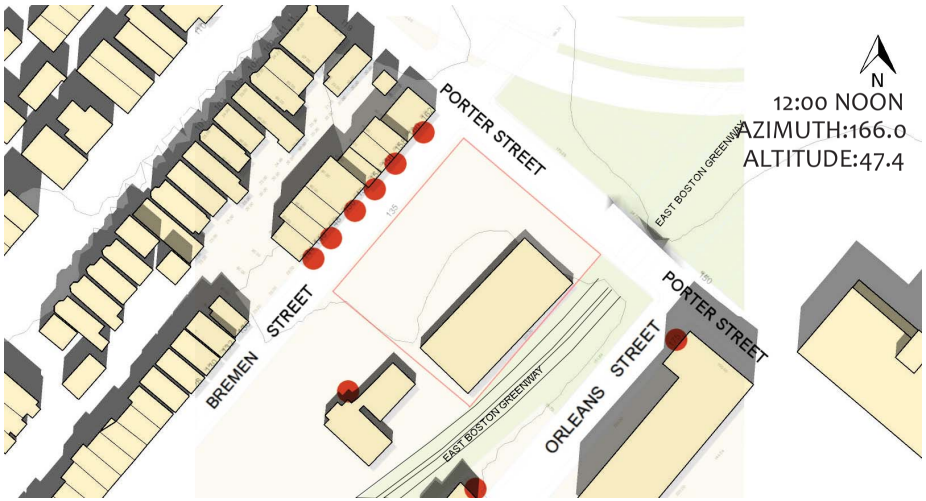
135 BREMEN ST

Drawing Title: 9:00 AM SHADOW STUDY
MARCH 21

Figure

4.2-1

EXISTING



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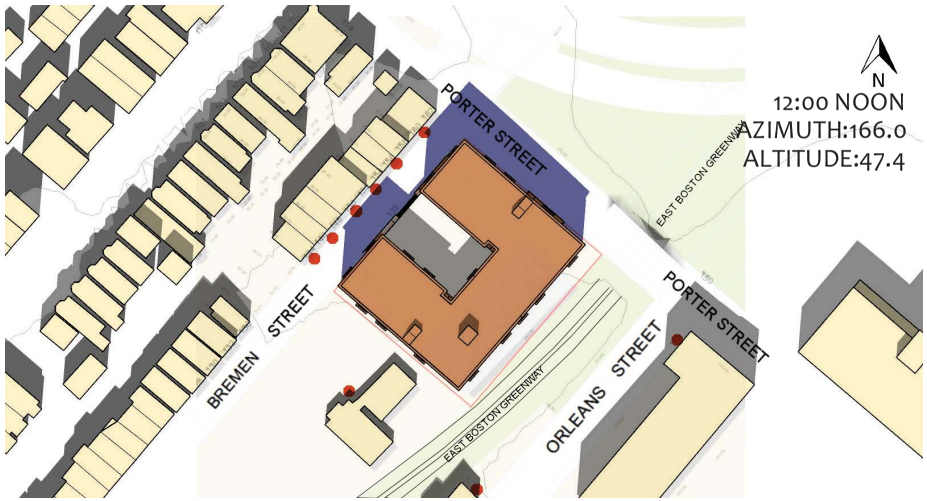

LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

Neshamkin French Architects, Inc.
ARCHITECTS PRESERVATION PLANNERS DEVELOPMENT CONSULTANTS
5 Monument Square
Charlestown, MA. 02129
tel. 617.242.7422
fax 617.242.7424

135 BREMEN ST

Drawing Title: 12:00 NOON SHADOW STUDY
MARCH 21

Figure 4.2-2

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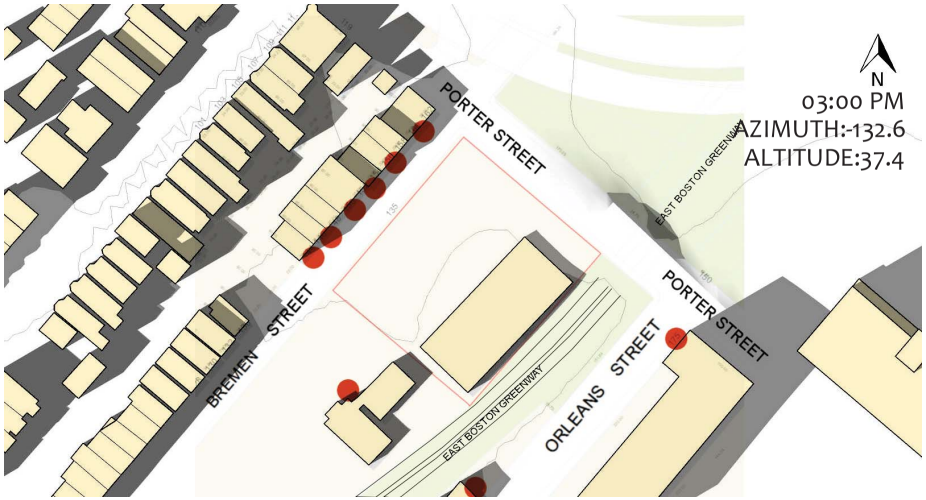

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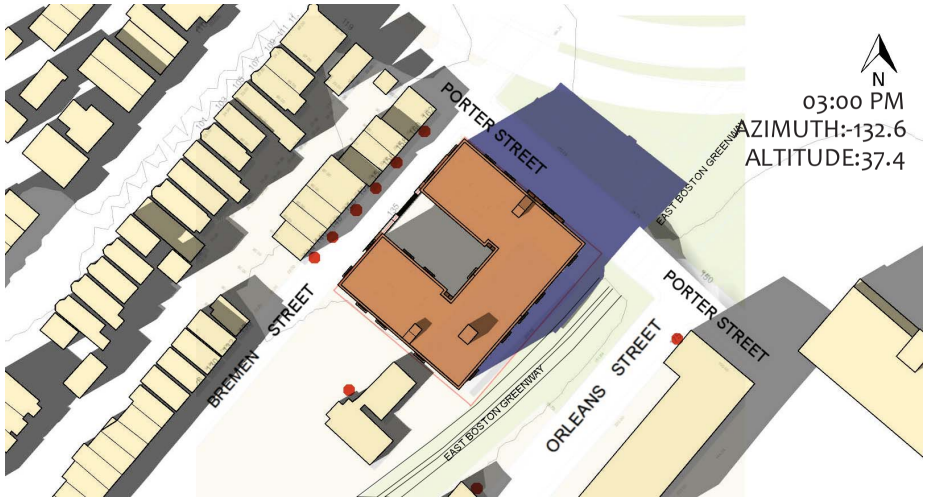

LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

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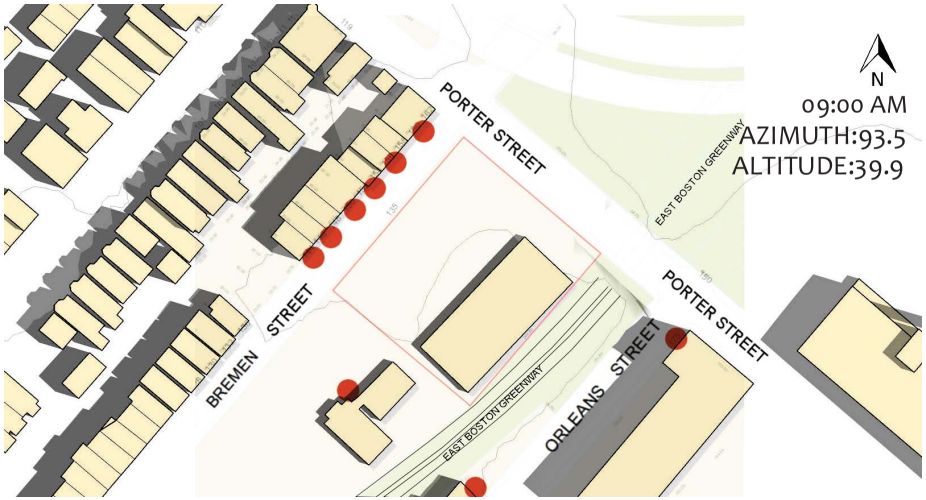
135 BREMEN ST

Drawing Title: 3:00 PM SHADOW STUDY
MARCH 21

Figure 4.2-3

EXISTING



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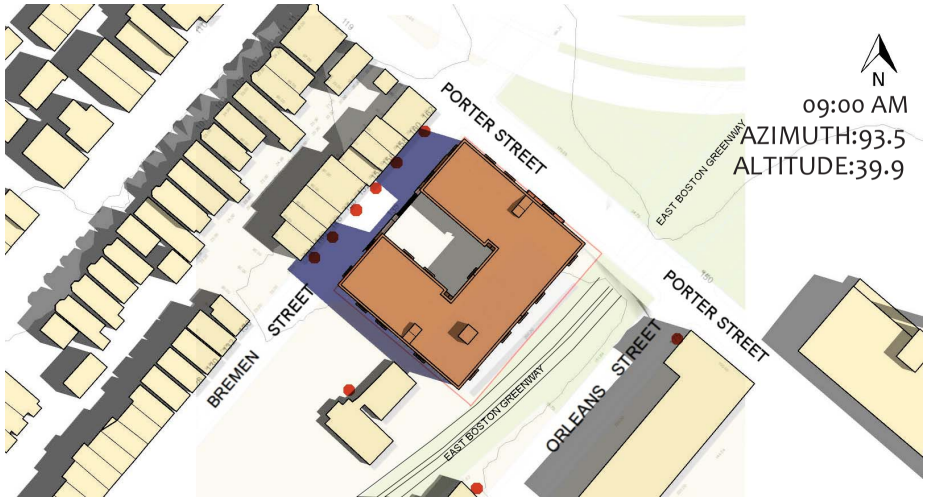

LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

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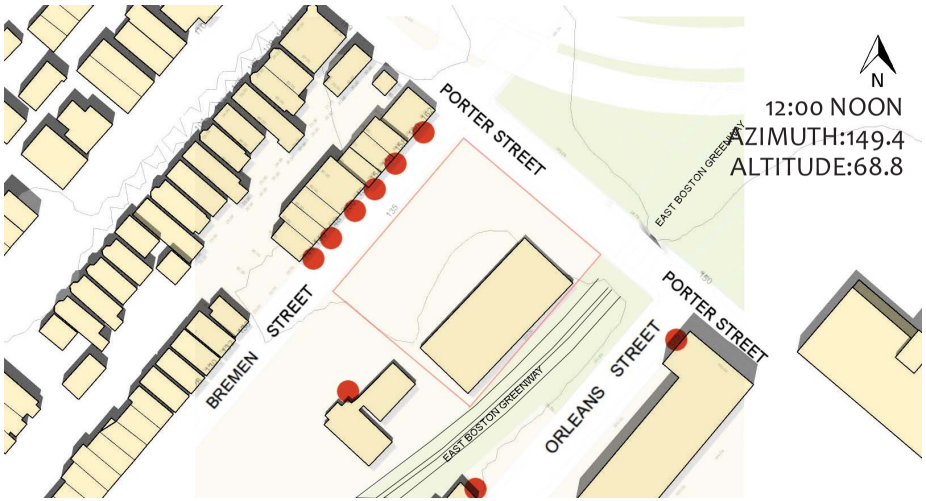
135 BREMEN ST

Drawing Title: 9:00 AM SHADOW STUDY
JUNE 21

Figure 4.2-4

EXISTING



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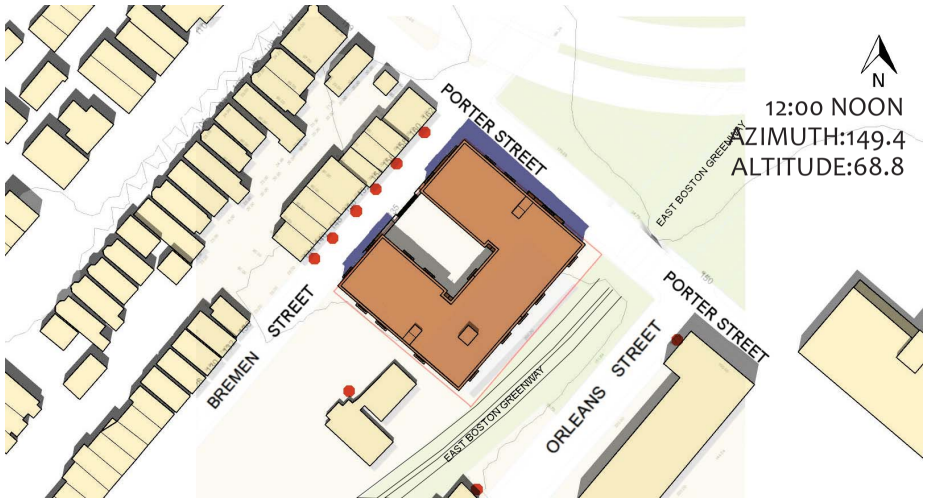

LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

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Drawing Title: 12:00 NOON SHADOW STUDY
JUNE 21

Figure 4.2-5

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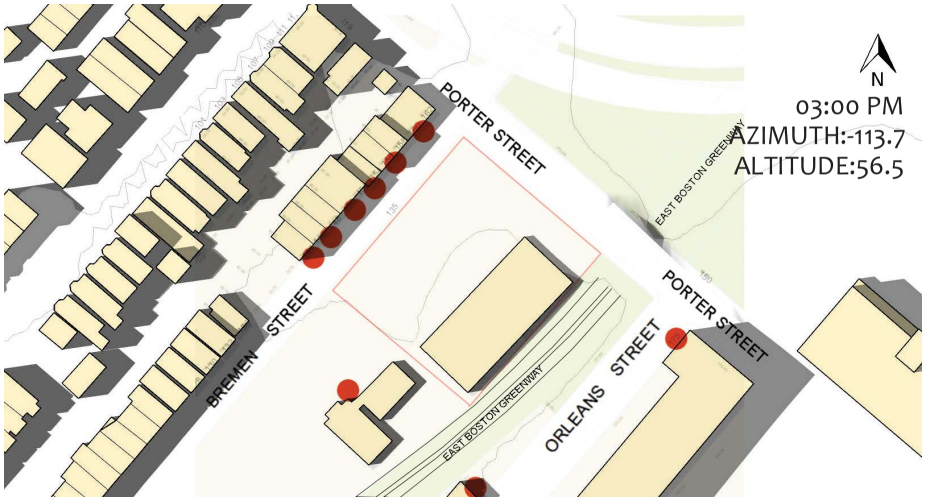

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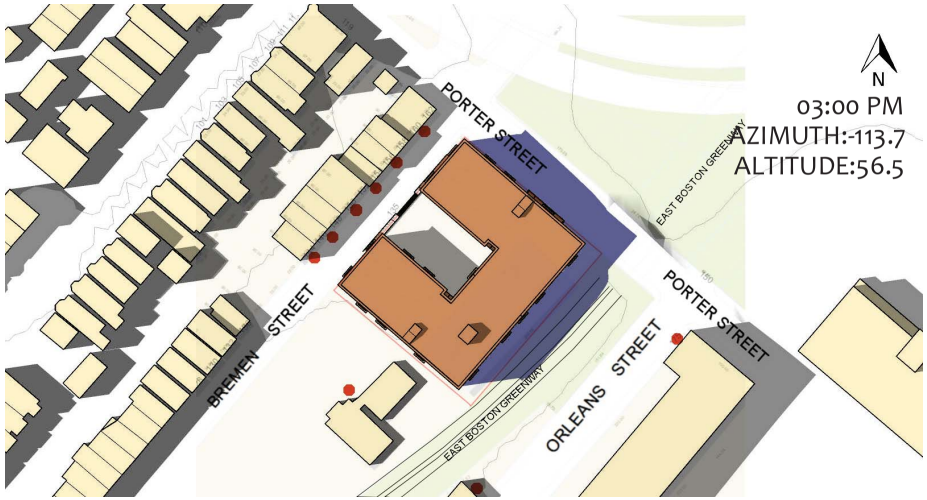

LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

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Drawing Title: 3:00 PM SHADOW STUDY
JUNE 21

Figure 4.2-6

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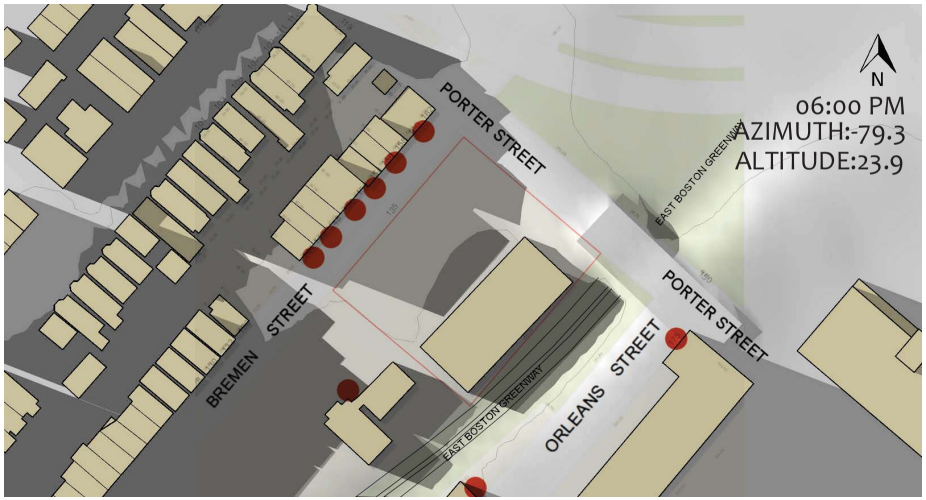

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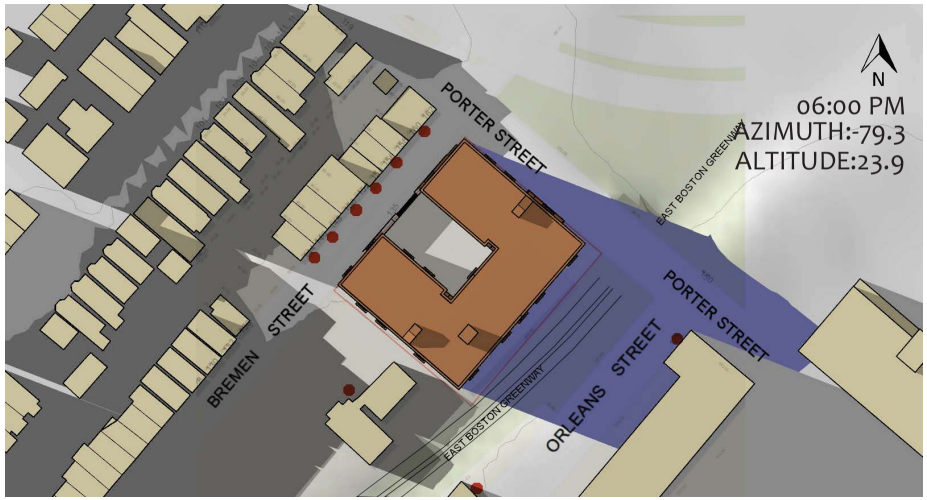

LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

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fax 617.242.7424

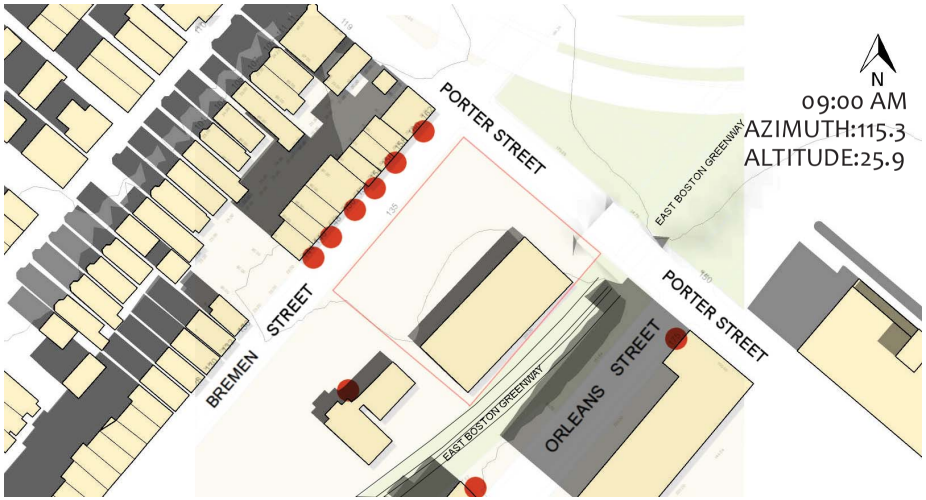
135 BREMEN ST

Drawing Title: 6:00 PM SHADOW STUDY
JUNE 21

Figure

4.2-7

EXISTING



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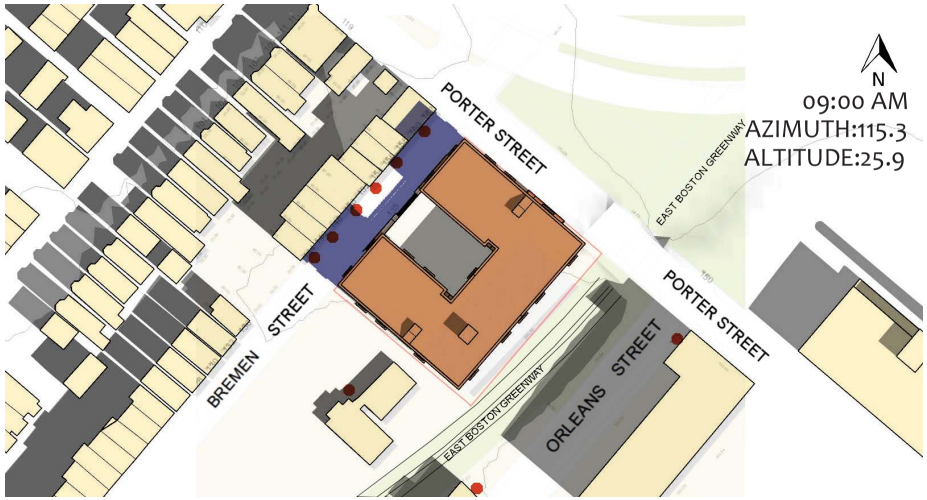

LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

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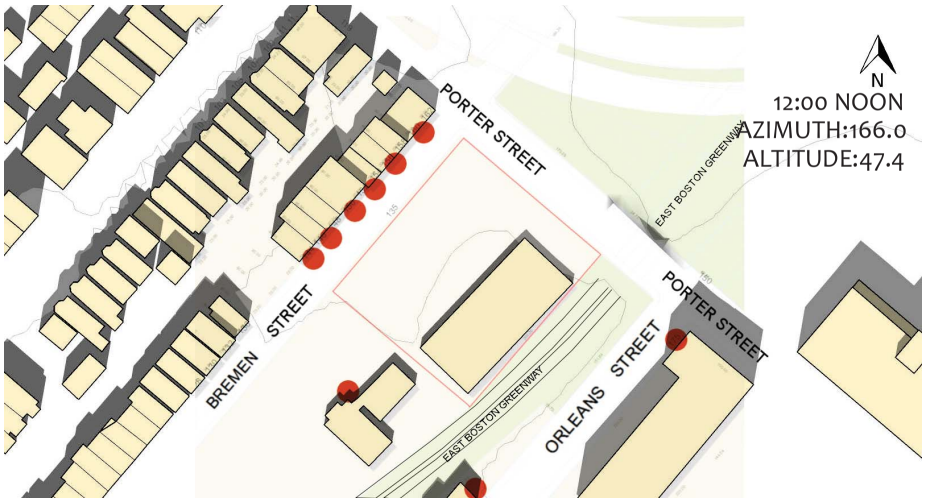
fax 617.242.7424

135 BREMEN ST

Drawing Title: 9:00 AM SHADOW STUDY
SEPTEMBER 21

Figure 4.2-8

EXISTING



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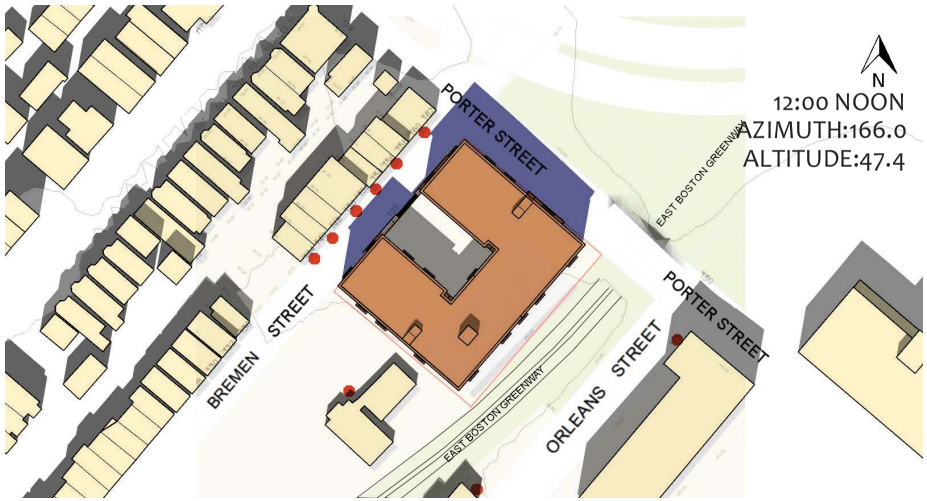

LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

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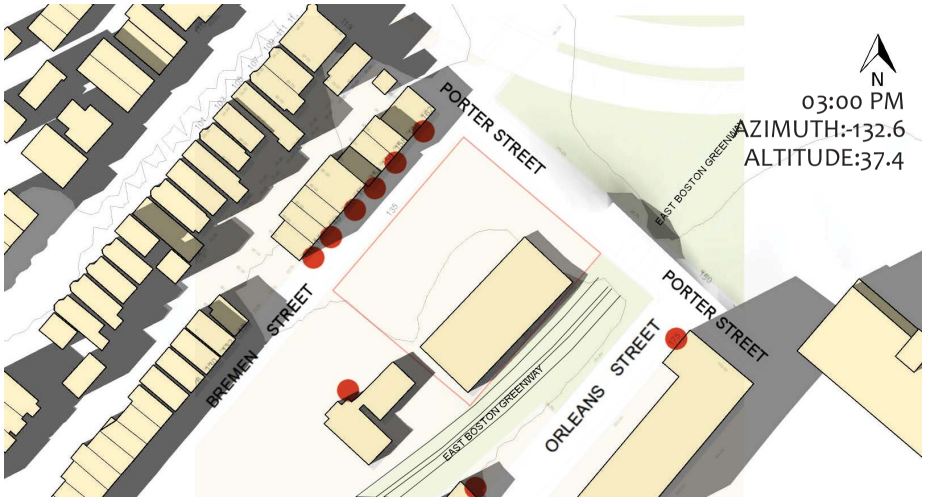
fax 617.242.7424

135 BREMEN ST

Drawing Title: 12:00 NOON SHADOW STUDY
SEPTEMBER 21

Figure 4.2-9

EXISTING



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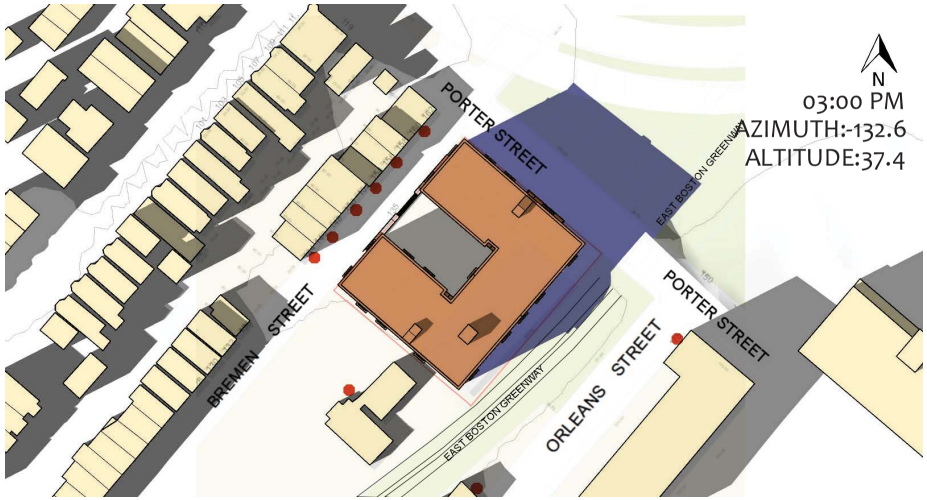

LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

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fax 617.242.7424

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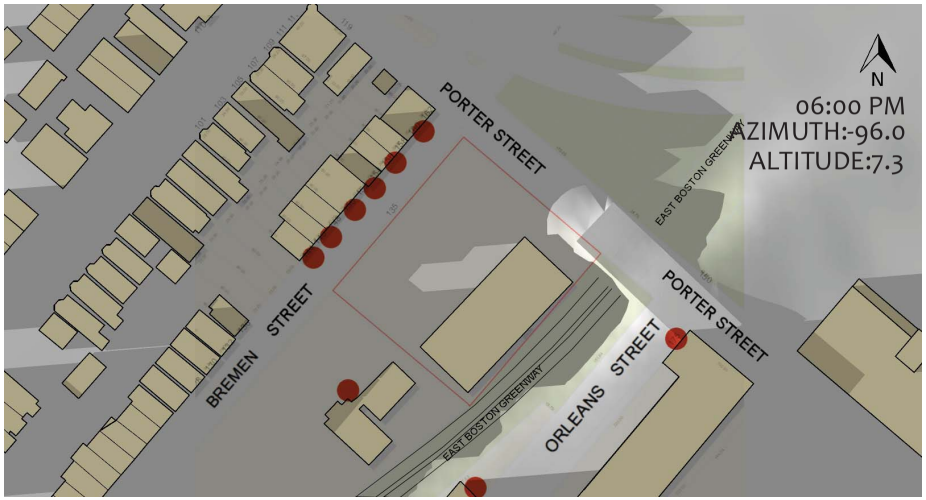
Drawing Title: 3:00 PM SHADOW STUDY
SEPTEMBER 21

Figure 4.2-10

EXISTING



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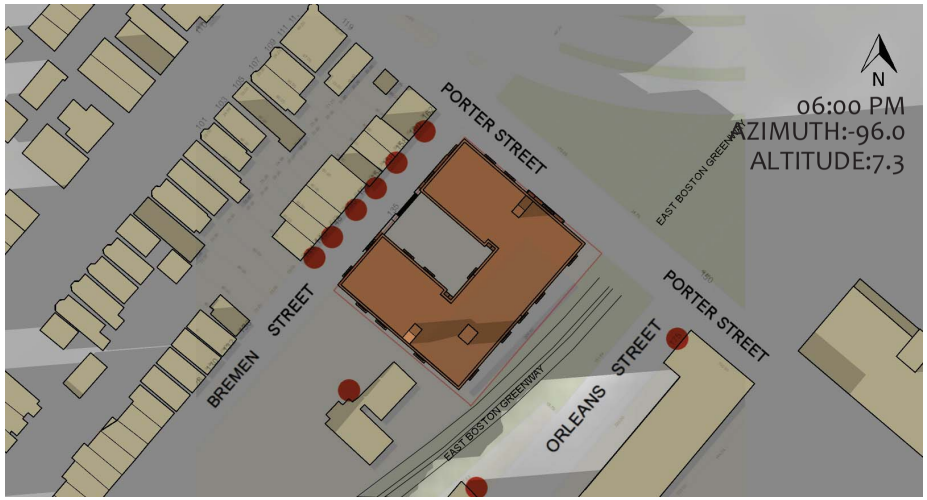

LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

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fax 617.242.7424

135 BREMEN ST

Drawing Title: 6:00 PM SHADOW STUDY
SEPTEMBER 21

Figure 4.2-11

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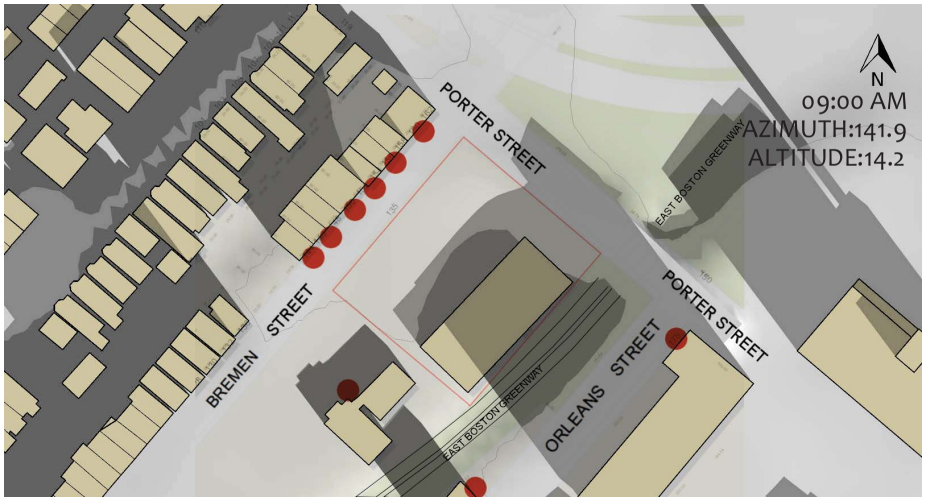

PROPOSED

LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

Neshamkin French Architects, Inc.
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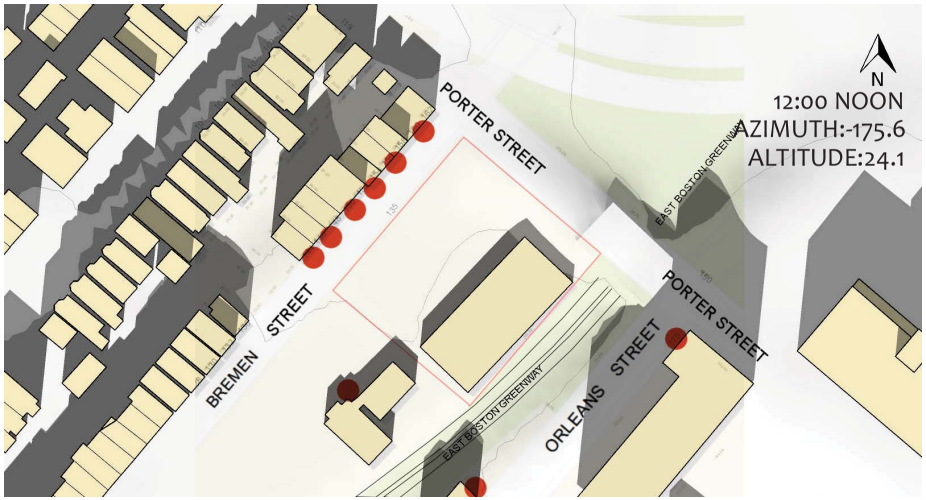
tel. 617.242.7422
fax 617.242.7424

135 BREMEN ST

Drawing Title: 9:00 AM SHADOW STUDY
DECEMBER 21

Figure
4.2-12

EXISTING



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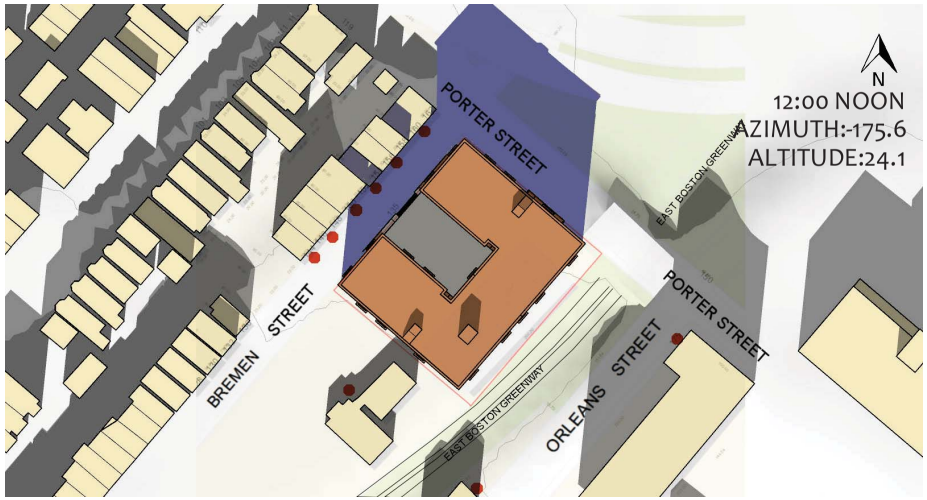


LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

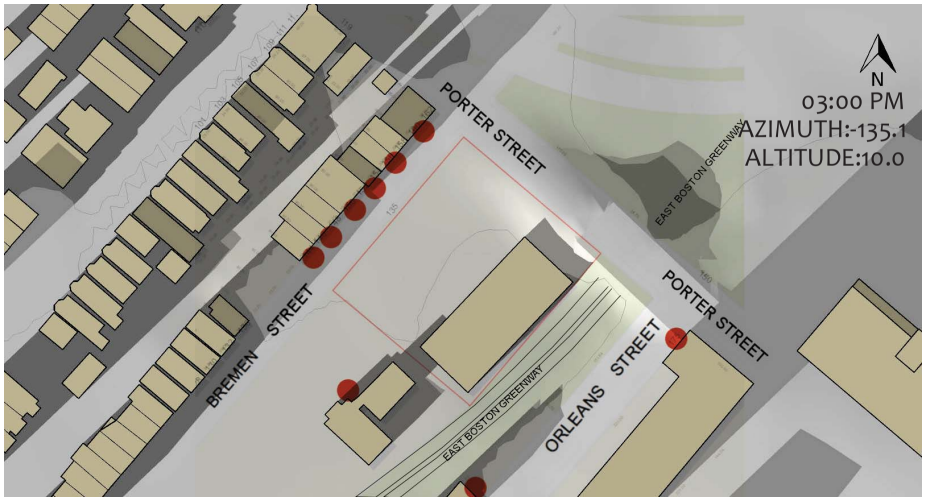
Neshamkin French Architects, Inc.
ARCHITECTS PRESERVATION PLANNERS DEVELOPMENT CONSULTANTS
5 Monument Square
Charlestown, MA. 02129
tel. 617.242.7422
fax 617.242.7424

135 BREMEN ST

Drawing Title: 12:00 NOON SHADOW STUDY
DECEMBER 21

Figure 4.2-13

EXISTING



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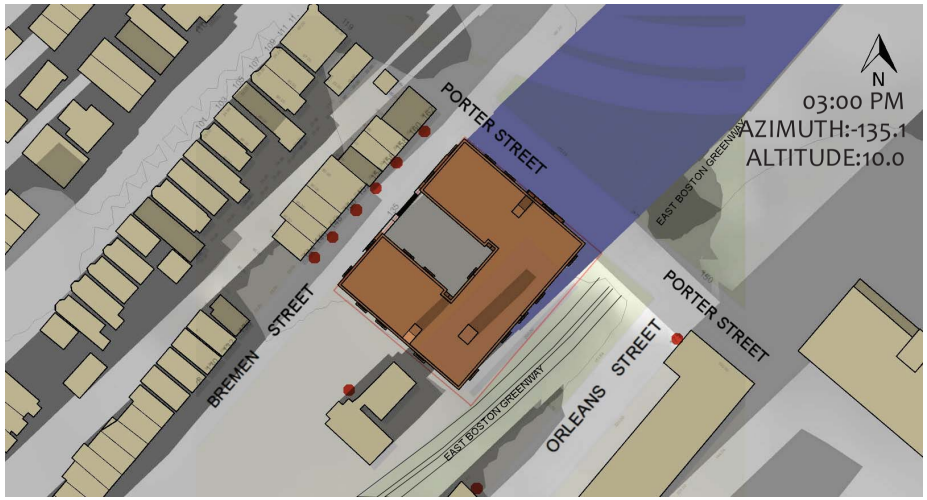

LEGEND

- PROPOSED BUILDING
- EXISTING SHADOW
- NEW BUILDING SHADOW
- BUILDING ENTRANCE

Neshamkin French Architects, Inc.
ARCHITECTS PRESERVATION PLANNERS DEVELOPMENT CONSULTANTS
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135 BREMEN ST

Drawing Title: 3:00 PM SHADOW STUDY
DECEMBER 21

Figure

4.2-14

4.2 Stormwater Management and Water Quality

4.2.1 Stormwater Management

The existing storm drain utility infrastructure surrounding the 135 Bremen Street site appears to be of adequate capacity to service the needs of the project. Best management practices and sustainable design will be incorporated into the Project wherever practical and applicable.

Stormwater management systems will be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS). Utility connections will be designed to minimize impacts to the surrounding area and all appropriate permits and approvals will be acquired prior to construction.

The proposed stormwater management systems will include water quality units and groundwater recharge systems. The Project will not increase the amount of impervious area at the site compared to the existing condition. 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 drainage systems, will be designed so that there will be no increase in the peak rate of stormwater discharge from the Project site in the developed condition compared to the existing condition. In addition, water quality units will be installed to reduce pollutants prior to discharging to the groundwater recharge systems. The groundwater recharge system will be designed to meet all of the City of Boston Stormwater Management Requirements

All improvements and connections to BWSC infrastructure will be reviewed as part of the site plan review process for the Proposed Project. This process includes an in depth design review of the proposed connections, a project demand and system capacity review and the establishment of service accounts.

4.2.2 Water Quality Impact

The Proposed Project will not impact the water quality of nearby water bodies. Erosion and sediment control measures will be implemented during construction to minimize the discharge of site materials off-site and to BWSC systems. Existing catch basins will be fitted with filter fabric, haybales and/or crushed stone to provide sediment removal from runoff. These controls will be maintained throughout construction until all disturbed areas have been stabilized.

All dewatering will be conducted in accordance with all applicable MWRA and BWSC discharge permits. Once completed, the project will be in compliance with all local and state stormwater management policies.

DEP Stormwater Management Policies:

MassDEP Stormwater Management Requirements. The project complies with the following Standards:

Standard 1- No new stormwater conveyances discharge untreated stormwater directly to the waters of the Commonwealth;

Standard 2- Post-Development peak discharge rates are less than pre-development;

Standard 3- The recharge volume required for this project is exceeded.

Standard 4- The catch basins in conjunction with the deep sump manholes provide the 80% average annual post-construction load removal of Total Suspended Solids (TSS).

Standard 5- This project is not associated with Higher Potential Pollutant Loads.

Standard 6- This project will not discharge untreated stormwater to a sensitive or any other Area.

Standard 7- The project is re-development and compliance with the Stormwater Management Standards is required to the maximum extent practicable. The Proposed Project complies with the Stormwater Management Standards applicable for the re-development

Standard 8- Sedimentation and erosion controls will be incorporated into the project.

Standard 9- An Operation and Maintenance Plan and long term BMP will be prepared for the Proposed Project and will assure proper maintenance of the system.

Standard 10- All illicit discharges to the stormwater management system are and will be prohibited.

It is the Civil Engineer's opinion that the Proposed Project complies with the Stormwater Management Standards to the maximum extent practicable. The project as proposed will protect the abutters in the short term through proper construction and erosion protection techniques. It will also protect the abutters from long term impacts due to the increase in vegetative cover and the increase in stormwater flow quality.

Protection During Construction:

All public and private infrastructures located on or adjacent to the Proposed Project will be protected during construction. All work in the public way will be in accordance with BWSC, Boston Public Works, Dig-Safe and other applicable utility companies' requirements. All necessary permits will be obtained prior to the commencement of work.

The Proponent will coordinate with BWSC and all utility companies to ensure a coordinated utility operation throughout construction.

4.3 Solid and Hazardous Waste Materials

4.3.1 Solid Waste

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

Upon completion of construction, the Proposed Project will generate approximately 166 tons of solid waste per year, based on the assumption that each residential unit generates 8 lbs of solid waste per day - translating into 137 tons per year for the residential uses, and retail uses generate .02 lb/sf/day per square feet - translating into approximately 29 tons / year for the retail uses. Residential waste will be handled through a trash chute extending to all floors, and then compacted before being brought to the loading / unloading area. Waste from the retail components will be brought directly to the loading area by their respective staffs.

The project will also include ambitious goals for construction waste management in order to meet the requirements for the LEED™ rating system. This strategy will divert demolition and construction waste by reusing and recycling materials.

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

4.3.2 Hazardous Waste and Materials

A Phase I Environmental Site Assessment was completed at the time of sale for 135 Bremen Street (the "Property") by GEI Consultants, Inc.("GEI") on August 12, 2012. According to GEI, historically, the property (which includes a slab-on-grade, one-story building, comprising vacant office and warehouse space and from City of Boston records

was installed as a pre-fabricated structure circa1984) was covered by railroad tracks and a freight house and platform as part of the Boston and Maine Railroad. There were no records of spills or releases at the Property associated with the railroad. The Property was occupied by ABX Logistics, an air freight company, from the 1970s to 2000s. Detailed records of Property use were not found by GEI, but there are also no records of underground storage tanks (USTs) or of oil and/or hazardous materials (OHM) use at the Property. In summary, based on the information researched, GEI's report did not identify any recognized environmental conditions (RECs), defined by the ASTM as evidence of a past, current, or potential for a release of OHM at the Property. A copy of the full report is available from the Proponent upon request.

As appropriate, the Proponent will provide Licensed Site Professional support services during property redevelopment activities to both maintain compliance with the Massachusetts Contingency Plan (MCP) requirements.

4.4 Geotechnical/Groundwater Impacts Analysis

The site is underlain by approximately 12 to 15-foot thickness of fill and organic material. Successive deposits of sand and gravel and marine clay underlie the fill and organic deposits. Additionally, the MBTA Blue Line tunnel passes diagonally across the site from east to west. The tunnel is about 30 feet wide and 22 feet tall and consists of reinforced concrete. The top of the tunnel varies from about 13 to 14 feet below the existing ground surface.

The proposed foundations will require support on either the natural sand and gravel or marine clay deposits. Two foundation types will be required depending on their plan distance from the MBTA Blue Line Tunnel that runs below the site. To prevent surcharging the tunnel, no footings will have bearing support located above an influence line drawn up and out from the bottom edge of the tunnel mat at a 1.5 horizontal to 1 vertical slope. Therefore, foundations located adjacent to the tunnel will require either a drilled caisson or drilled mini-pile support in the marine clay deposit. The remainder of the footings will consist of conventional footing foundations bearing on the surface of the sand and gravel. The use of long grade beams to distribute loads away from the tunnel to the caissons or grade beams will need to be confirmed during final design planning to confirm that enough space exists between the tunnel roof and the slab subgrade. The lowest-level slab could be constructed as a slab-on-grade provided that the existing fill and organic material be removed to the surface of the sand and gravel deposit. After removal of the fill and organic material, foundation preparation and placement of backfill will be monitored by the geotechnical engineer.

To construct the single level of below-grade parking cross the project site, a temporary earth support system consisting of steel sheet piling around the entire site to provide a groundwater cutoff. Where the earth support crosses over the tunnel (up to approximately a 50-60 foot span), the temporary earth support will need to be designed as an internally braced system with bracing, struts, pin piles and/or rakers, and will be designed to avoid the MBTA Blue Line tunnel. The internally braced system will need to be coordinated for slab and wall penetrations and the proposed building will need to be designed to

accommodate the construction sequence. Deflection of the temporary earth support system and adjacent roadways will be monitored by the geotechnical engineer for movement.

Groundwater at the site is generally between about 11 to 16 feet below the existing ground surface which corresponds to between 2 and 7 feet below the surface of the lowest-level slab. Construction will require temporary dewatering to achieve a stable subgrade during conventional footing excavation. Construction dewatering will be performed under an MWRA or NPDES permit as applicable at the site. After the completion of the construction of the below-grade space, the proposed building is not anticipated to have adverse long-term effects on the regional groundwater levels. The lowest level slab would be provided with underslab and perimeter foundation drainage systems to protect the below-grade parking level from groundwater intrusion due to seasonal fluctuations in the groundwater level. The underslab and perimeter drainage systems would drain by gravity to a centrally located dedicated sump pit equipped with duplex pumps. Underslab drainage would be installed above the observed groundwater levels and would therefore not result in the lowering of the regional groundwater levels.

Additional geotechnical exploration and engineering is expected to be completed as the project design progresses.

4.5 Construction Impact

The following section describes impacts likely to result from the construction of the Proposed Project and the steps that will be taken to avoid or minimize environmental and transportation-related impacts. Construction methodologies and scheduling will aim to minimize impacts on the surrounding environment. The Proponent will insure that the general contractors will be responsible for developing construction phasing and staging plans and for coordinating construction activities with all appropriate regulatory agencies. The Project's geotechnical consultant will also provide consulting services associated with foundation design recommendations, prepare geotechnical specifications, and review the construction contractor's proposed procedures.

4.5.1 Construction Management Plan

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

Construction methodologies that will ensure safety will be employed, signage will include General Contractor contact information with emergency contact numbers.

4.5.2 Proposed Construction Program

Construction Activity Schedule

The construction period for the proposed Project is expected to last approximately 12-16 months, beginning in the 3rd Quarter 2015 and reaching completion in the 3rd- 4th Quarter 2016. The City of Boston Noise and Work Ordinances will dictate the normal work hours, which will be from 7:00 AM to 6:00 PM, Monday through Friday. Saturday work will be only in the event of schedule delay or unusual tasks such as street openings, etc.

Perimeter Protection/Public Safety

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

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

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

4.5.3 Construction Traffic Impacts

Construction Vehicle Routes

Specific truck routes will be established with BTD through the CMPs. These established truck routes will prohibit truck travel on residential side streets. Construction contracts will include clauses restricting truck travel to BTD requirements. Maps showing approved truck routes will be provided to all suppliers, contractors, and subcontractors. It is anticipated that all deliveries will be transported via the major regional highway system including Route 1A directly to the site, passing through residential areas in East Boston as little as possible.

Construction Worker Parking

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

Limited parking in designated areas of the Project Site and lay-down area(s) will be allowed. Parking will be discouraged in the immediate neighborhood. Further, given the Proposed Project's close proximity to transit service (e.g., MBTA Blue Line, as well as bus service) public transit use will be encouraged with the Proponent and general contractor working to ensure the construction workers are informed of the many public transportation options immediately adjacent to this area. Terms and conditions related to worker parking will be written into each subcontractor's contract. The general contractors will provide a weekly orientation with all new personnel to ensure enforcement of this policy.

Pedestrian Traffic

Pedestrian traffic may be temporarily impacted on Porter Street, but not in front of the site on Bremen Street where there is no sidewalk at the present time. The general contractors will minimize the impact the construction of the proposed building will have on the adjacent sidewalks. The general contractors will implement plans that will clearly denote all traffic patterns. Safety measures such as jersey barriers, fencing, and signage will be used to direct pedestrian traffic around the construction site and to secure the work area.

4.5.4 Construction Environmental Impacts and Mitigation

Construction Air Quality

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

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

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

Erosion and sediment control measures will be implemented during construction to minimize the transport of site soils to off-site areas and Boston Water and Sewer ("BWSC") storm drain systems. During construction, existing catch basins will be protected from sediments with filter fabric, silt sacks or hay bale filters.

Construction Noise Impacts

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

- Initiating a proactive program for compliance to the City of Boston's noise limitation requirements;
- Scheduling of work during regular working hours as much as possible;
- Using mufflers on all equipment and ongoing maintenance of intake and exhaust mufflers;
- Muffling enclosures on continuously operating equipment, such as air compressors and power and welding generators;
- Scheduling construction activities so as to avoid the simultaneous operation of the noisiest construction activities;
- Turning off all idling equipment;
- Reminding truck drivers that trucks cannot idle more than five (5) minutes unless the engine is required for operational activity;
- Locating noisy equipment at locations that protect sensitive receptors and neighborhood homes through shielding or distance;
- Installing a site barricade as required;
- Identifying and maintaining truck routes to minimize traffic and noise throughout the project;
- Maintaining all equipment to have proper sound attenuation devices.

4.5.5 Rodent Control

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

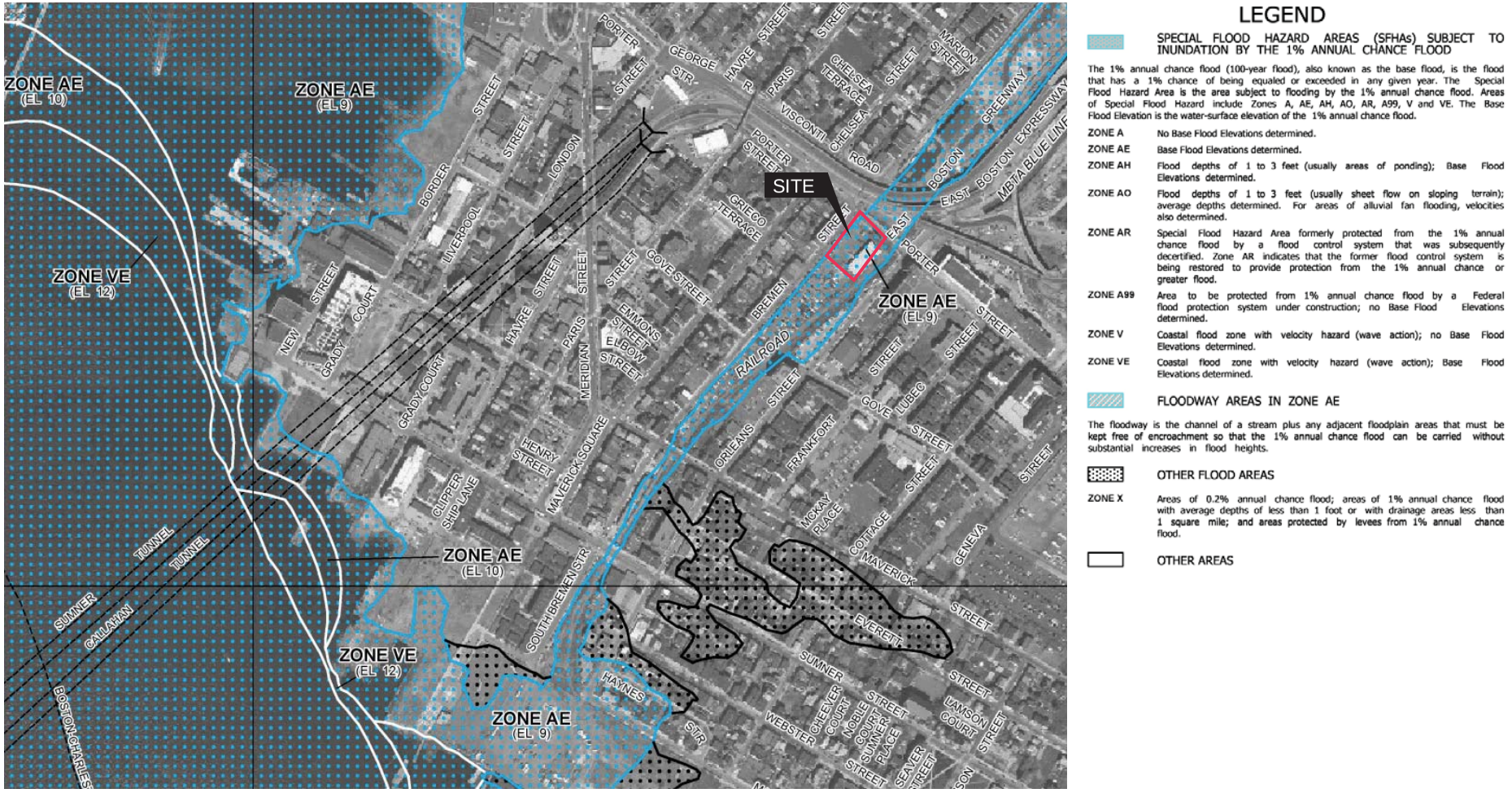
4.5.6 Utility Protection During Construction

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

4.6 Wetlands/Flood Hazard Zones

The existing Project Site is a part of a wetland resource area regulated by the Massachusetts Wetland Protection Act, as described below, and may require review by the Boston Conservation Commission.

Based on the Preliminary Flood Insurance Rate Maps (FIRM) for Suffolk County, the Project site is located in an AE 100-year base flood zone (i.e. the flood has a 1% annual chance of occurring in any given year). The base flood elevation indicated on the FEMA/FIRM for this AE zone is 9 feet (NAVD 88). See **Figure 4.6-.1 Wetlands/Flood Hazards Zones**



Source:
Preliminary Flood Insurance Rate Maps for Suffolk County
https://msc.fema.gov/portal

Figure 4.6 - 1
Wetlands/Flood Hazard Zones

5.0 HISTORIC RESOURCES COMPONENT

The Proposed Project site is located in East Boston. The historic resources within one-quarter-mile radius of the Proposed Project are summarized in **Table 5-1** below.

Table 5.1 Historic Resources in the Vicinity of the Project Site

Key to Historic Resources Figure (Figure 5-1)	Historic Resource	Address
Local Landmark		
6	Street Clock	9 Chelsea Street
Properties included in the Inventory of Historic and Archaeological Assets of the Commonwealth		
1	117-194 Cottage Street	117-194 Cottage Street
2	36-71 Frankfort Street	36-71 Frankfort Street
3	James Corsano Apartment Block	142 Gove Street
4	55-85 Lubec Street	55-85 Lubec Street
5	Boston & Albany Railroad Engine House	215 Bremen Street
7	Donald McKay School	122 Cottage Street
8	Our Lady of Mount Carmel Roman Catholic Church Complex	49 Frankfort Street, 71 Frankfort Street, 134 Gove Street
9	Our Lady of Mount Carmel Roman Catholic School	48 Frankfort Street
10	Joseph Lambiase Building	58 Lubec Street
11	Anthony Carbone Building	64 Lubec Street
12	East Boston Savings Bank	10-16 Meridian Street
13	Columbia Trust Company Building	18-20 Meridian Street
14	East Boston Police Station & Court House	35-39 Meridian Street
15	Cox Confectionary Company Building	150 Orleans Street
16	Engel-Cone Shoe Company Building	183 Orleans Street
17	Lyman School	10 Gove Street

5.1.1 Historic Resources Within the Project Site

The current site was used as a trucking terminal in the past and also houses two billboards on the corner of Bremen and Porter Street.

5.1.2 Historic Resources Within the Vicinity of the Project Site

The Proposed Project is located on approximately 36,000 square feet of underutilized commercial land along the Bremen Street corridor. It is located within a ¼ mile of numerous historic churches, schools, residential areas, and commercial properties, including one local landmark, the street clock on Chelsea Street. There are not expected to be any impacts to these properties with the proposed new construction. See **Figure 5-1 Historic Resources.**

5.1.3 Archaeological Resources

No known archaeological resources were located within the Project site during the review of Massachusetts Historic Commission files and MACRIS, therefore no impacts to archaeological resources are anticipated.

= Project Site

= 1/4 mile buffer

= Property on Inventory of Historic Places

= Local Landmark

1 117 - 194 Cottage Street
2 36-71 Frankfort Street
3 James Corsano Apartment Block
4 55-85 Lubec Street
5 Boston & Albany Railroad Engine House
6 Street Clock
7 Donald McKay School
8 Our Lady of Mount Carmel Roman Catholic Church Complex
9 Our Lady of Mount Carmel Roman Catholic School
10 Joseph Lambiase Building
11 Anthony Carbone Building
12 East Boston Savings Bank
13 Columbia Trust Company Building
14 East Boston Police Station & Court House
15 Cox Confectionary Company Building
16 Engel-Cone Shoe Company Building
17 Lyman School

Figure 5 - 1
Historic Resources

6.0 INFRASTRUCTURE SYSTEMS COMPONENT

This chapter of the PNF outlines the existing utilities servicing the Proposed Project site, the proposed connections required to provide service to the new structure, and any impacts on the existing utility systems that may result from the construction of the Proposed Project. The following systems are discussed herein:

- Sewer
- Domestic water
- Fire protection
- Drainage
- Natural gas
- Electricity
- Telecommunications

The Proposed Project includes the demolition of a majority of the existing warehouse building and the construction of a six-story mixed use building with an underground parking garage and associated site improvements.

6.1 Sewer Infrastructure

There are existing Boston Water & Sewer Commission (BWSC) sanitary sewer mains located in Bremen Street. (See **Figure 6-1 BWSC Sewer System Map**). There is an 18 inch BWSC sanitary sewer main and a 32x48 Combined system in Bremen Street. The 32 inch x 48 inch line connects to a 72 inch by 76 inch main in Porter Street. This discharge is ultimately conveyed to the MWRA Deer Island Waste Water Treatment Plant for treatment and disposal.

All existing sanitary connections will be cut and capped prior to any demolition of the existing structure.

6.1.1 Wastewater Generation:

Sanitary sewage generated from the Proposed Project will be connected to the 18 inch main in Bremen Street. The connection will be reviewed and approved by the BWSC Engineering Department as part of the design process and BWSC site plan approval.

The Proposed Project's sewage generation rates were estimated using the Massachusetts Division of Water Pollution Control Sewer System Extension and Connection Permit Program – 310 CMR 15.00. 310 CMR 15.0 lists the typical generation values for specific uses. These values are generally conservative for estimating sewage flow for new construction.

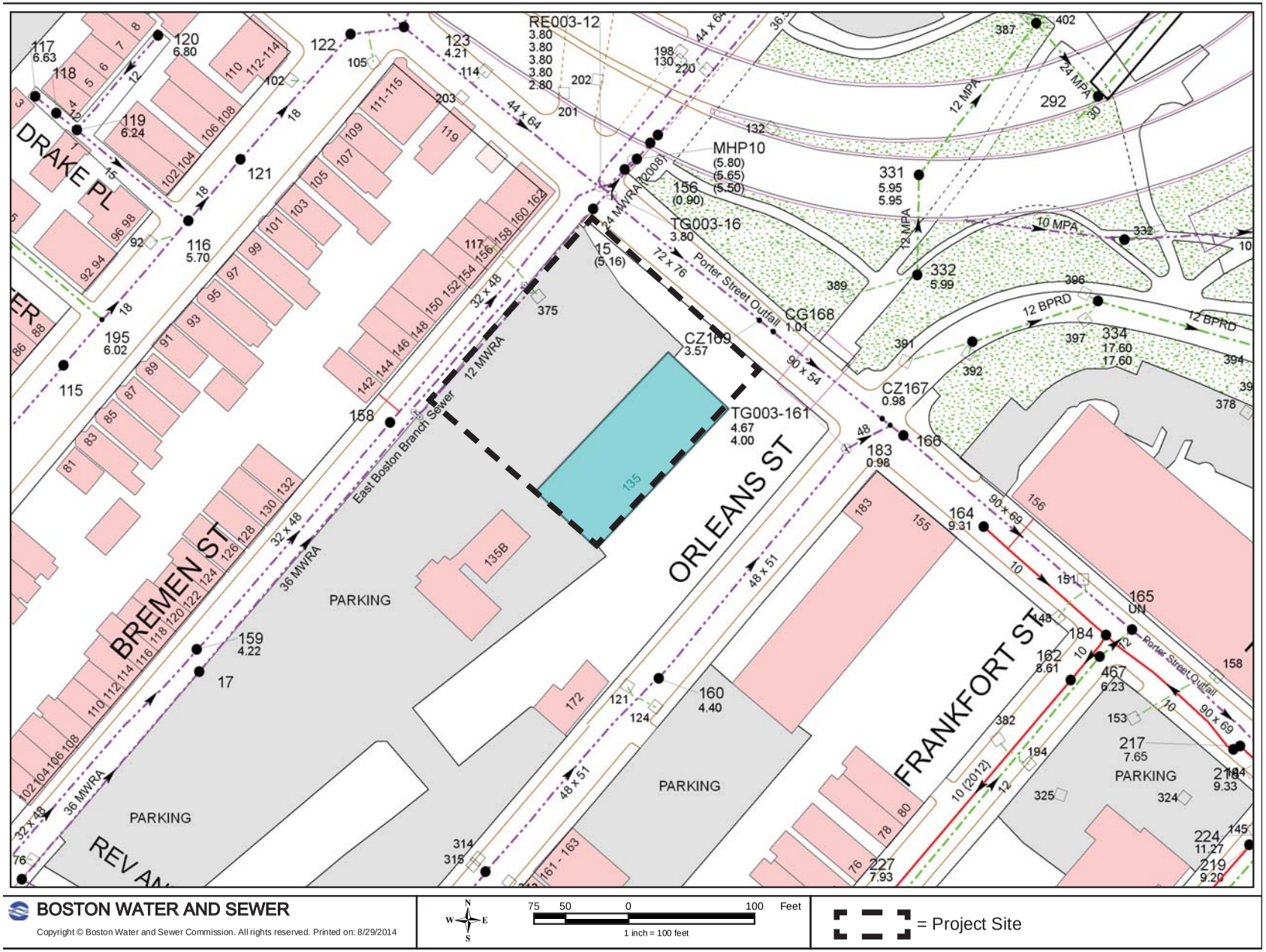


Figure 6 - 1
BWSC Sewer System Map

6.1.2 Proposed Sewage Usage

The Project will generate an estimated 19,754 gallons per day (gpd) based on design sewer flows provided in 314 CMR 7.00-Sewer System Extension and Connection Permit Program as summarized in **Table 6-1 Projected Sanitary Sewer Flows.** The 314 CMR 07.00 sewage generation values are used to evaluate new sewage flows or an increase in flows to existing connections. Typical generation values are conservative values. The existing site is an empty building with intermittent pavement and does not produce any sewage flows. Based on 314 CMR 07.00 for residential, retail, community and office space, the Proposed Project is expected to generate approximately 19,750 gallons per day (gpd).

Residential
94 Residential Units – 176 Bedrooms – Rate 110 GPD / bedroom:
Total Proposed Flow: 19,360 GPD

Commercial/Retail
7,790 s.f.–50 GPD per 1,000 S.F
Total Proposed Flow: 390 GPD

Existing Sewage Usage: Estimated
Warehouse: 9,048 s.f.–5GPD/100 SF
Total Existing Flow (With Prior Use): 515 GPD

Net Increase in Sewage Flow: 19,235 GPD

Table 6-1. Projected Sanitary Sewer Flows

Use*	GSF	Size	314 CMR Value (gpd/unit)	Estimated Maximum Daily Flow (gpd)
Commercial/Retail	7,790 s.f.	7,790 s.f.	50 /1,000 s.f.	390 gal
Residential	119,470 s.f.	176 bedrooms	110 /bedroom	19,360 gal
			Total:	

Proposed Sewer Flows (gpd):	19,750 gal

*Uses identified are preliminary and subject to change in the final plans.

6.1.3 Sewer Capacity and Impacts

No sewer capacity issues are anticipated as a result of the Proposed Project

6.1.4 Proposed Conditions

The Proponent will coordinate with the BWSC on the design and capacity of the proposed connections to the sewer system. The Proposed project is expected to generate 19,754 GPD which will only require BWSC approval and no approvals from Massachusetts Department of Environmental Protection.

The sewer services will connect to the 18 inch main in Bremen Street.

All improvements and connections to BWSC infrastructure will be reviewed as part of the site plan review process for the Proposed Project. This process includes an in depth design review of the proposed connections, a project demand and system capacity review and the establishment of service accounts.

6.2 Water Infrastructure

Water to the site is provided by the BWSC. There is an 18" main in Bremen Street (See **Figure 6-2 BWSC Water System Map**). The existing building is serviced by this main and all services to the building will be cut and capped prior to any demolition of the existing structure.

6.2.1 Water Consumption

The Proposed Project's water demand estimate for domestic services is based on the Proposed Project's estimated sewage generation, described above. Using a conservative additive factor of 10% to the sewage flows the estimated daily water demand for the Proposed Project is 21,725 GPD. This water will be supplied by the BWSC. All efforts to reduce water consumption from the Proposed Project will be made. Aeration Fixtures and appliances will be utilized to maximize water conservation. Sensor operated faucets and toilets will be utilized in all public areas.

Water services will be installed in accordance with all applicable Local, State and Federal codes and standards. Backflow preventers will be installed on both domestic and fire protection service connections. New meters will be installed with Meter Transmitter Units (MTU's) as part of the BWSC Automatic Meter Reading (AMR) system.

6.2.2 Proposed Project

Domestic and fire protection service connections shall meet applicable City and State codes and standards. Compliance will be part of the BWSC Site Plan Review process. This review includes, but is not limited to, sizing of domestic and fire protection services,

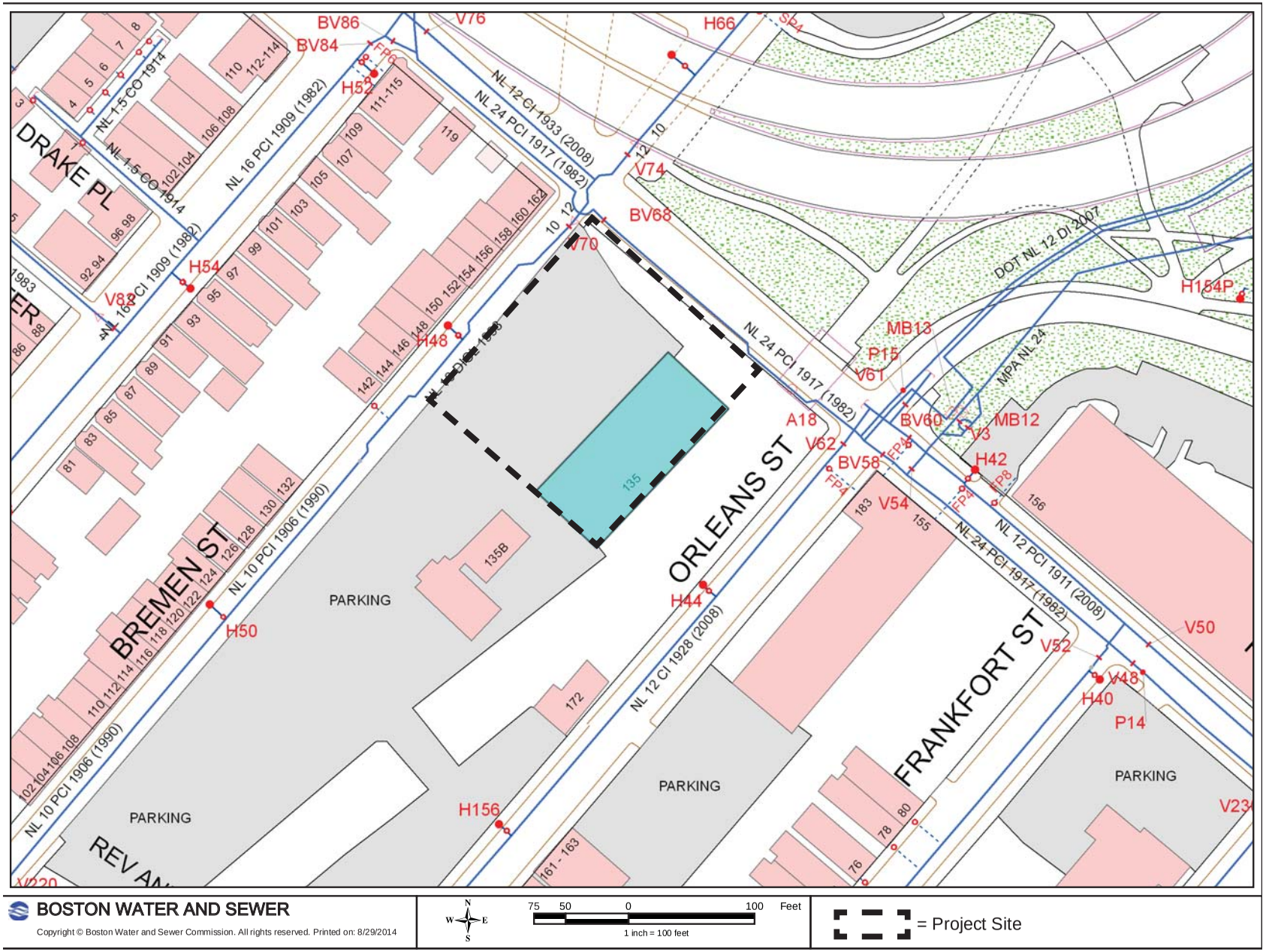


Figure 6 - 2
BWSC Water System Map

meter sizing, backflow prevention design and fire protection location design that conforms to BWSC and Boston Fire Department requirements.

6.2.3 Proposed Impacts

No water capacity issues are anticipated as a result of the Proposed Project.

Conservation of Resources:

State Building Code requires water conserving fixtures. Low flow toilets and restricted flow faucets will help in reducing the domestic water demand on the existing distribution system. Sensor operated sinks with water conserving aerators and sensor operated toilets in all restrooms will be incorporated into the design of the building.

6.3 Stormwater

There is an existing 32x48 combined system in Bremen Street that starts as a 15 inch main that discharges into a 72x76 main in Porter Street. The stormwater ultimately drains to Boston Harbor. For the Proposed Project, all roof runoff, paved and landscape areas will be treated and recharged into an under slab groundwater recharge field. This field will have an overflow connected to the 32x48 main of the BWSC system. The existing site is 100% impervious and the Proposed Project will actually reduce the impervious area. The project will maintain or reduce the existing peak rates and volumes of runoff. No significant rate or volume mitigation is anticipate

6.4 Electric Systems

NSTAR provides electric service in the city of Boston. It is expected that electrical service can be provided by NSTAR. Electric power supply design, and any upgrades that may be required, will be further coordinated with NSTAR as the design for each phase progresses.

The Proponent will work the City of Boston's Public Works Department, Street Lighting Section to determine the adequacy of street lighting in the area, and coordinate any temporary or permanent relocations of the street lighting.

6.5 Natural Gas Requirements

National Grid provides natural gas in the Project Area. It is expected that there is adequate supply of natural gas in the area. To the extent possible, energy-saving measures will be incorporated into the building design and construction. The Proponent's engineer will discuss proposed connections with National Grid prior to developing final hook-up plans for the Proposed Project.

6.6 Telephone and Cable Systems

Verizon and Comcast provide telephone service in the Project Area. There is overhead telephone service in the area. It is anticipated that telephone service can be provide by Verizon. Any upgrades will be coordinated with Verizon.

Comcast and RCN provide cable service in the Project Area. Cable lines already exist on the overhead wires and in the underground services in the Project Area. It is expected that Comcast and/or RCN can provide services to the Project site via underground facilities. Any upgrade required to the service(s) will be coordinated with the services provider(s).

6.7 Steam Systems

The Proposed Project is not expected to require steam service.

6.8 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.

7.0 TRANSPORTATION COMPONENT

7.1 Introduction

7.2 Purpose of the Transportation Component

The purpose of this report is to evaluate the transportation impacts of the proposed 135 Bremen Street mixed-use development in East Boston per the requirements of the Boston Redevelopment Authority's (BRA) Article 80 zoning process. The 135 Bremen project is located along the East Boston Greenway, just south of Route 1A, on Bremen Street. It is proximate to many East Boston centers of activity including Maverick Square, Central Square and Airport Station. The Proposed Project will continue the revitalization of East Boston as it converts former industrial property into a mixed-use development that will contain 94 apartments with ground level retail neighborhood oriented space of approximately 7,790 square feet.

The 135 Bremen Street development and proposed nearby developments will continue to enhance the primarily residential, yet mixed use character of this East Boston neighborhood, through the revitalization of existing abandoned parcels and buildings. With nearby developments such as 245 Sumner Street and 70 Bremen Street to the south, the 135 Bremen Street project will continue to transform this area of East Boston into an attractive, dense, and walkable neighborhood anchored by retail attractions for local residents. In addition to nearby proposed developments, recent initiatives such as the proposed Central Square reconstruction and recent Maverick and Airport Station renovations and the improvements to the East Boston Greenway will continue to enliven this East Boston neighborhood and provide better multimodal connections throughout for all users (see **Figure 7-1 Bremen Site Area Map**).

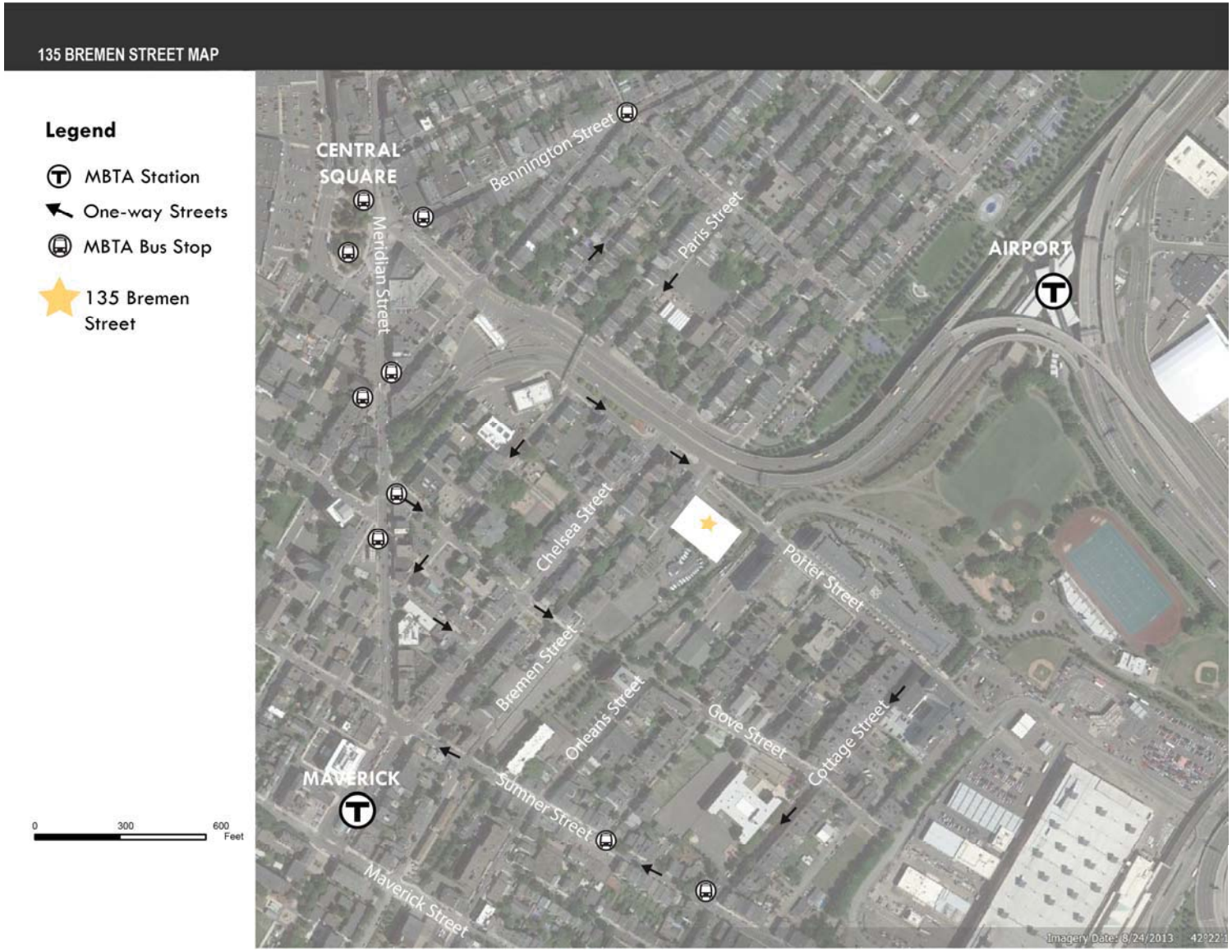
7.1.2 Project Description

The Proposed Project will have a mixture of unit type and sizes, which will accommodate East Boston's diverse and growing population, including 5 studio units, 10 one bedroom units, 5 one bedroom plus/den units, 54 two bedroom units, 15 two bedroom/plus den units, and 5 three bedroom units. The Proponent understands that parking is always a concern to neighborhood residents, and is proposing an underground parking facility that with 126 parking spaces and 100 bike racks for both residents and commercial patrons (See **Table 7-1**).

Table 7-1 - 135 Bremen Street Project Program

Project Component	Units/Square Feet/Spaces
Residential	94 apartment units
Retail/Restaurant	7,790 square feet
Parking/Bike Spaces	126 auto/100 bike rack spaces

Figure 7-1 Bremen Site Area Map



7.1.3 Study Area

As **Figure 7-1 Bremen Site Area** Map highlights, the Site is located in a dense residential and mixed-use neighborhood with proximity to the East Boston's commercial centers, Maverick and Central Squares. The Site is situated on a former industrial property bounded by Porter Street to the north, the East Boston Neighborhood Health Center commuter parking to the south, Bremen Street to the west and the East Boston Greenway to the east. The area includes residential and commercial neighborhoods along Chelsea Street to the east, and office and industrial uses to the west.

The proposed development will begin to create a residential fabric along the eastern edge of Bremen Street and provide a neighborhood oriented retail space for the surrounding neighborhood. The Site will continue the neighborhood's dense and walkable pattern and increase access to the East Boston Greenway. The property will be set back off Bremen Street to allow for on-street parking and a sidewalk to be built along the Site frontage. Nearby access to the MBTA Blue Line stations at Airport and Maverick, and local bus routes provide various multimodal options for project residents, tenants and visitors. These various transportation options, in addition to the primarily residential nature of this development, will reduce the overall transportation impacts on the surrounding neighborhood.

This analysis presents an overview and evaluation of the transportation issues and analysis related to the proposed 135 Bremen Street development. It looks primarily at adjacent intersections and streets, but also includes a broader evaluation of existing conditions within the area surrounding the Site. This Scope was developed in coordination with the Boston Transportation Department and follows the guidelines for the completion of a Transportation Access Plan under the Article 80 review process. The specific intersections included for capacity analysis include:

<u>Signalized Intersections</u>

- Chelsea Street/ Visconti Road
- Porter Street/ Chelsea Street
- Porter Street/ Orleans Street

<u>Unsignalized Intersections</u>

- Porter Street/ Bremen Street
- Bremen Street/ Visconti Road
- Bremen Street/ Gove Street
- Bremen Street/Site Driveway (Build Only)

7.2 Existing Transportation Conditions

The 135 Bremen Street site is bounded by Bremen, Orleans, Porter, and Gove Streets, all of which are classified as either local connectors or minor arterials. Each carries relatively low vehicle volumes and thru traffic as they primarily provide local neighborhood connections. Orleans and Gove Streets do not provide regional connectivity, however they feed into larger neighborhood collectors such as Meridian Street. Chelsea and Bremen Street are higher volume collector streets providing north to south access within this East Boston neighborhood with more direct regional access through Route 1A / Sumner Tunnel and Callahan Tunnel. The Site is ideally situated, providing local neighborhood connections and ease of and regional access in and around Boston. The following is a brief description of the principal study area roadways and intersections evaluated as part of this analysis.

7.2.1 Existing Roadway Conditions

Bremen Street abuts the western side of the project Site between Porter Street and Gove Street. Bremen is classified as an Urban Minor Arterial and runs in a north to south direction between Bennington Street to the north and to Marginal Street to the south. The street allows for two-way travel and contains one lane in each direction, throughout the entirety of the street. Near the Site, on-street parking is provided on both sides of the street and parking regulations allow for both two-hour parking time limits, as well as residential parking only. North of Route 1A, sidewalks line the entirety of Bremen Street. However, adjacent to the Site and south past Gove Street, there is a sidewalk on the west side adjacent to the housing, while the eastern portion of the street is lacking a sidewalk from Porter to Gove. Instead on-street parking, partially on private property lines the street against a private property fence. Near the vicinity of the Site, Bremen Street has a right-of-way of approximately 44.5 feet, with an eight foot sidewalk on the western edge, 22-feet for two lanes of travel, and a seven foot parking lane on the eastern edge. Observations indicate that parking is currently allowed along the eastern edge of Bremen, however a detailed field survey indicates that on-street parking is encroaching on private property.

Gove Street is a local connector that runs east to west from Meridian Street to Geneva Street. Gove Street is not a continuous street, with dead ends at the intersection of Gove and Bremen Street, allowing only for pedestrian and bicycle entry to the East Boston Greenway. Similarly, pedestrian and bicyclists are only allowed entry at the Gove and Orleans Street intersections, except for vehicles pulling into the East Boston Neighborhood Health Center parking lot. The street allows for one-way travel from Meridian to Chelsea Street, and two- way travel from Bremen Street to Geneva to the east. Parking is allowed on both sides of the street and is generally regulated as two-hour parking except for residential permit holders. Near the site, Gove Street is two-way and allows for residential parking only on the north side and two-hour parking except for resident permit holders on the south side. Sidewalks are present on both sides of the

street. Gove Street has a right of way width of approximately 50 feet, accommodating 10-foot sidewalks and parking and travel lanes on both sides of the road, with no markings or double yellow line divider.

Porter Street is an urban local arterial that runs northwest to southeast, just north of the Bremen Street Site. Porter Street begins to the west at the 1A North Ramp and extends over to Cottage Street, where Porter then continues as a private access road over to Transportation Road and Harborside Drive. From the 1A Ramp to Bremen Street, Porter serves as a one-way street, with one travel lane, for eastbound traffic, however converts to two-way from Porter to Cottage Street, with two travel lanes. Parking along the one-way stretch of Porter is generally limited to the south side and is unregulated. Parking on Porter Street adjacent to the site is not allowed on either side of the road, however two sided parking begins past Orleans Street, with regulations for two-hour parking except for resident permit holders. Sidewalks are present along the majority of the stretch, with the exception at the beginning of Porter Street when exiting the 1A North Ramp, and from Paris to Chelsea Streets. Near the vicinity of the site, Porter Street has a right of way width of approximately 49.5 feet, with approximately eight-foot sidewalks on both sides and approximately two 17 foot travel lanes in each direction separated by a double yellow line. Porter Street also bridges over the East Boston Greenway, with parts of the superstructure adjacent to the Site.

Orleans Street is classified as an urban local arterial that abuts the back of the Bremen Street Site. Orleans Street is a two-way street that runs from the northeast from Logan Airport Access Road to Marginal Street to the southwest. Two-hour parking except for resident permit holders is allowed on both sides of the road from Logan Airport Access Road to Sumner Street, however south of Sumner, parking is limited to the eastern half of the street. Near the vicinity of the site from Gove to Porter, Orleans has a right of way of approximately 48 feet, accommodating a six-foot sidewalk on the western edge and eight-foot sidewalk on the east, two eight-foot parking lanes, and two nine foot travel lanes in each direction.

7.2.2 Existing Intersection Conditions

Signalized Intersections

Chelsea Street at Visconti Road is a signalized four-way intersection with three approaches. The intersection contains one northbound and southbound approach along Chelsea, one westbound approach along Visconti and the fourth leg of the intersection along Visconti is a westbound receiving lane. The north and southbound Chelsea Street approaches contain two travel lanes, one each direction, however travel along Visconti Street is restricted to westbound traffic. Each approach to the intersection consists of one lane that serves as a through/right/ and left turn lane. A five-phase signal controls the Chelsea Street/Porter Street/ Visconti Road intersection on a maximum 80 second cycle,

with the Chelsea Street eastbound and westbound approaches operating concurrently during the first phase. The Chelsea Street approaches then have a clearance phase as the second phase. The third phase is an all pedestrian phase. The Porter Street and Visconti Road approaches operate during the fourth phase allowing for all movements. The final phase allows Porter Street movement a protected clearance phase primarily for eastbound traffic along Chelsea Street.

Parking is restricted along the westbound and eastbound receiving legs of the intersection, however parking is allowed on both sides of the street along the Chelsea Street approaches. Bicycle lanes are present and continue through the northbound and southbound Chelsea Street approaches. Sidewalks are present on all legs of the intersection and international style crosswalks are present and in good condition, with the exception of a missing sidewalk along the southbound approach. Although there are pedestrian ramps on all legs of the intersection, there is only one located on each leg and they do not align with the existing crosswalks or receiving pedestrian ramps. Existing ramps measure less than four-feet in width and do not appear to be ADA accessible.

Chelsea Street at Porter Street is a signalized intersection with three approaches. The intersection contains one northbound and southbound approach along Chelsea Street, and one eastbound approach on Porter and westbound receiving leg on Porter. The northbound and southbound Chelsea Street approaches contain two lanes of travel separated by a double yellow line, while there is one lane of travel on the eastbound approach on Porter. A five-phase signal controls the Chelsea Street/Porter Street/ Visconti Road intersection on a maximum 80 second cycle, with the Chelsea Street eastbound and westbound approaches operating concurrently during the first phase. The Chelsea Street approaches then have a clearance phase as the second phase. The third phase is an all pedestrian phase. The Porter Street and Visconti Road approaches operate during the fourth phase allowing for all movements. The final phase allows Porter Street movement a protected clearance phase primarily for eastbound traffic along Chelsea Street.

Parking is allowed on the northbound and southbound legs as well as westbound receiving leg, however parking is restricted to the southern edge along the eastbound approach on Porter. Sidewalks are present at all legs of the intersection and international style crosswalks are present on all legs with the exception of the southbound leg. Bicycle lanes are present on both sides of the Chelsea Street and run through the intersection on the northbound and southbound approaches. Pedestrian ramps are present at most legs with the exception of the northwestern leg, which contains a driveway curb cut that serves as a pedestrian ramp. Crosswalks generally align with curb cuts on the other legs with the exception of southwestern leg. The northeastern curb ramp has a width of approximately four-feet and is no handicap accessible.

Porter Street at Orleans Street is a signalized four-way intersection located at the northwestern edge of the Bremen Street site. All approaches contain one lane in each direction. Parking is allowed on both sides of the northbound approach on Orleans and westbound approach on Porter, and prohibited on the Logan Airport Access Road and eastbound Porter Street approach. It is a semi-actuated, isolated signal with a basic two-phase operation. The Porter Street eastbound and westbound approaches operate concurrently during the first phase. The Orleans Street northbound and southbound approaches operate during the second phase. The pedestrian movements operate concurrently with the first and second vehicular phases. There is not a camera at this location, but the intersection does have loop detectors installed.

Sidewalks and international style crosswalks are present at all approaches, however the conditions of the sidewalks are deteriorating. Recent changes added a double yellow lane line on Orleans Street with minor changes to parking regulations for clearance. In addition to ADA accessible curb ramps and rumble strips, pedestrian signal heads are present at all legs of the intersection.

Unsignalized Intersections

Bremen Street at Visconti Road is an unsignalized T intersection with two approaches. The intersection contains one northbound and southbound approach along Bremen Street, and a westbound receiving lane on Visconti. Both the north and southbound approaches are uncontrolled movements and do not have stop signs or stop bars, however vehicles turning left at the northbound approach would need to yield to vehicles traveling southbound through the intersection. Parking is allowed at the southbound approach on both sides of the road but is prohibited on the northbound and westbound receiving approaches. Sidewalks are present along all legs of the intersection and international crosswalks are present on the southbound and westbound receiving leg of the intersection, however there is a missing sidewalk on the northbound approach. The intersection contains a curb extension on the northeastern leg as well as a curb cut and rumble strip on the northwestern leg. There are no curb ramps on the other legs of the intersection.

Porter Street at Bremen Street is an unsignalized and stop controlled, five-way intersection at the northwest corner of the Bremen Street site. The intersection contains four approaches: a northbound and southbound approach along Bremen Street and a westbound and eastbound approach on Porter Street, as well as a one-way receiving lane, Porter Place, that connects to Visconti Road. There is a stop sign and stop bar at each approach of the intersection, with the exception of the Bremen Street northbound approach which is missing a stop bar. Each approach contains one travel lane in each direction, with the exception of the Porter Street eastbound approach, which only carries one lane of one-way travel and the Porter Place which carries one lane of travel northwest to Visconti Road. Parking is allowed on both sides of the Porter Street eastbound

approach and on the northbound Bremen Street approach. Sidewalks are present at all legs of the intersection with the exception of the southeast Bremen Street leg, which has a small receiving sidewalk, however it is not continuous along the eastern side of Bremen Street. International style crosswalks are located at the northbound, eastbound, and westbound approaches, however they are in poor condition. Pedestrian ramps are located at the southwest, southeast, and northeast legs of the intersection, however they are not ADA accessible.

Bremen Street at Gove Street is an unsignalized T-intersection located at the southwest intersection of the proposed Bremen Street site. The northbound and southbound approaches along Bremen are uncontrolled movements and contain two travel lanes for north and southbound travel. Both approaches do not contain a stop sign, however northbound vehicles turning left need to yield to vehicles traveling southbound. The eastbound approach on Gove is also uncontrolled and does not contain a stop sign, however field observations indicate that the this approach typically functions as a one way stop as vehicles stop before turning left or right on Bremen from Gove. There is no westbound approach at Gove Street, however there is a pedestrian and bicycle entrance into the East Boston Greenway. Parking is allowed on the western side of the northbound approach and both sides along the southbound and westbound approaches. Sidewalks are present on all legs of the intersection and international style crosswalks are present however the facilities are deteriorating. Curb ramps are present at all intersection legs with the exception of the southeast sidewalk, where a driveway curb cut serves as the pedestrian ramp.

7.2.3 Existing Traffic Conditions

After coordination with the Boston Transportation Department, and in order to document existing traffic patterns and levels, vehicle, pedestrian, and bicycle turning movement counts (TMC's) were conducted on Thursday August 7th, 2014. These were taken at the six study area intersections surrounding the proposed 135 Bremen Street site in East Boston. Counts included heavy vehicles and cars, pedestrians and bicyclists. Turning movement counts and volumes were collected from 7:00 to 9:00am and 4:00 to 6:00pm. Peak hour volumes are depicted in **Figure 7-2- Autos, Figure 7-3- Pedestrians, and**

Figure 7-4- **Bicycles.** Detailed count information is also included in **Appendix B Transportation Appendix** of this report. The analysis herein documents patterns in volumes and turning movement counts on at study intersections directly adjacent to the project site. The existing conditions network was then used as baseline to create the 2019 No-Build scenario and Build scenarios also documented herein.

7.2.4 Existing Traffic Volumes

Vehicles

Porter Street and Visconti Road are primary collector roadways which provide connections to/from the East Boston neighborhood to the Sumner Tunnel and the Massachusetts Turnpike. As shown in **Figure 7-2**, the higher volumes on Porter Street come from the north during peak morning and evening hours and the major movement is the left-turn onto Chelsea Street. Visconti Road serves as the counter movement to Porter Street providing northbound access to the regional routes with high volumes during both peak periods. Despite providing this access, all of the streets in the study area carry relatively low volumes of vehicular traffic.

Pedestrians

Peak hour pedestrian counts were recorded as part of the transportation observations conducted on August 7, 2014. Pedestrian volumes in the area adjacent to the Site indicate that PM peak activity is consistently higher than the AM peak hour. The most active pedestrian route is the east to west direction along Bremen Street and Chelsea Street connecting to the Maverick subway station. **Figure 7-3** shows pedestrian volumes by intersection for the AM and PM peak hours in the Existing Condition.

Bicycles

Peak hour bicycle volumes were also observed and recorded as described above. The counts showed low overall bicycle activity within the study area. The small numbers of bicycle volumes are mainly concentrated along Chelsea Street, which has the only on-street bicycle facility within the vicinity of the site.

Figure 7-4 shows bicycle volumes by intersection for the morning and evening peak hours in the Existing Condition.

7.2.5 Existing Traffic Capacity

To assess the quality of existing traffic flow at intersections, turning movement counts and volumes were compiled and evaluated utilizing the procedures outlined by the 2010 Highway Capacity Manual (HCM). Each intersection within the study area was analyzed for level-of-service (LOS), reporting the quality of traffic with a letter grade A to F, volume to capacity ratio (V/C), the stop time delay in seconds and the 95th percentile queue lengths. The intersection capacity analysis worksheets are provided in **Appendix B** of this report. A summary chart of the results of this analysis is shown in **Table 7-2** below. Traffic operations in the existing conditions at all study area intersections operate at LOS C or better, with minimal delay and queue lengths.

Figure 7-2 Existing Peak Hour Vehicle Volumes

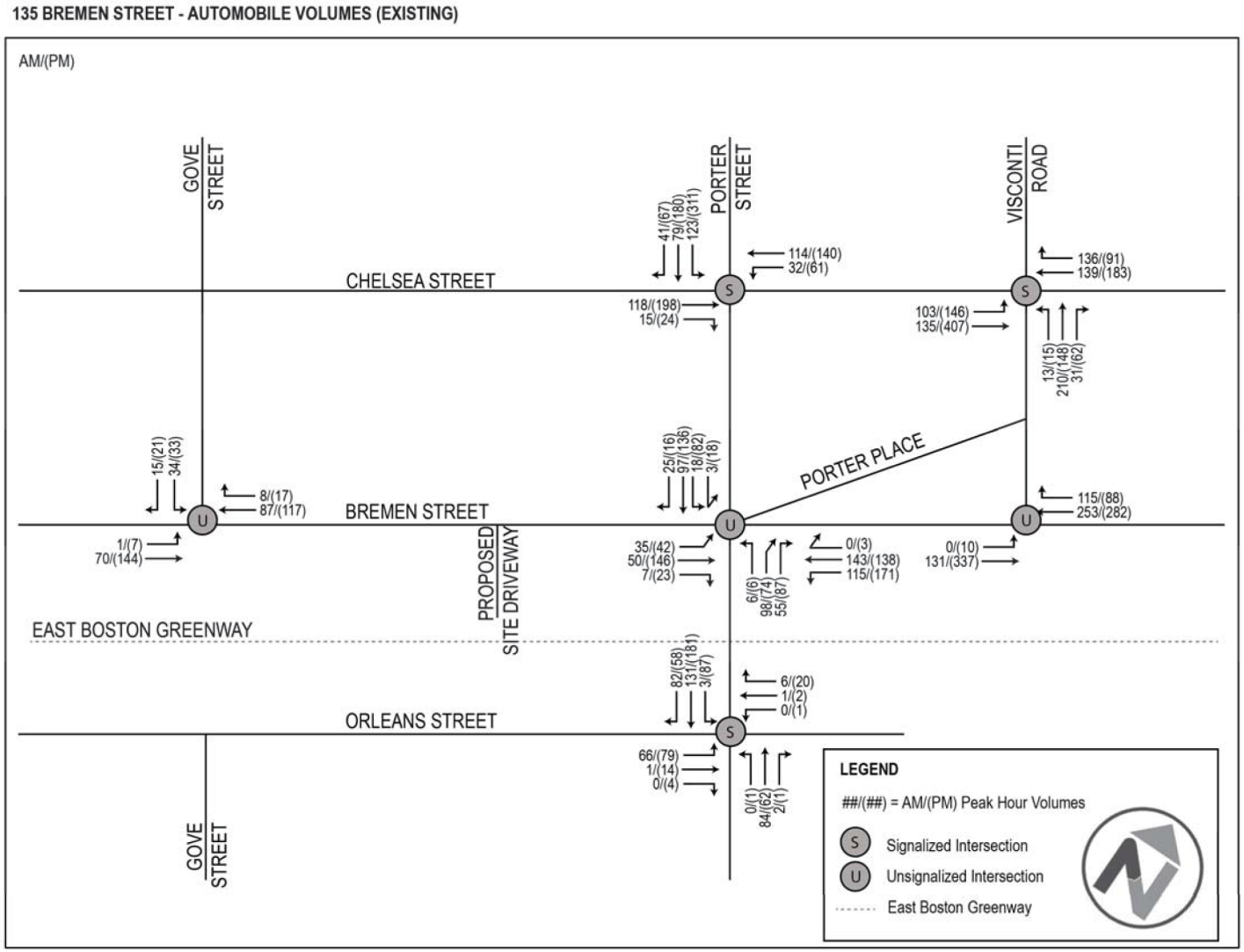


Figure 7-3 Existing Peak Hour Pedestrian Volumes

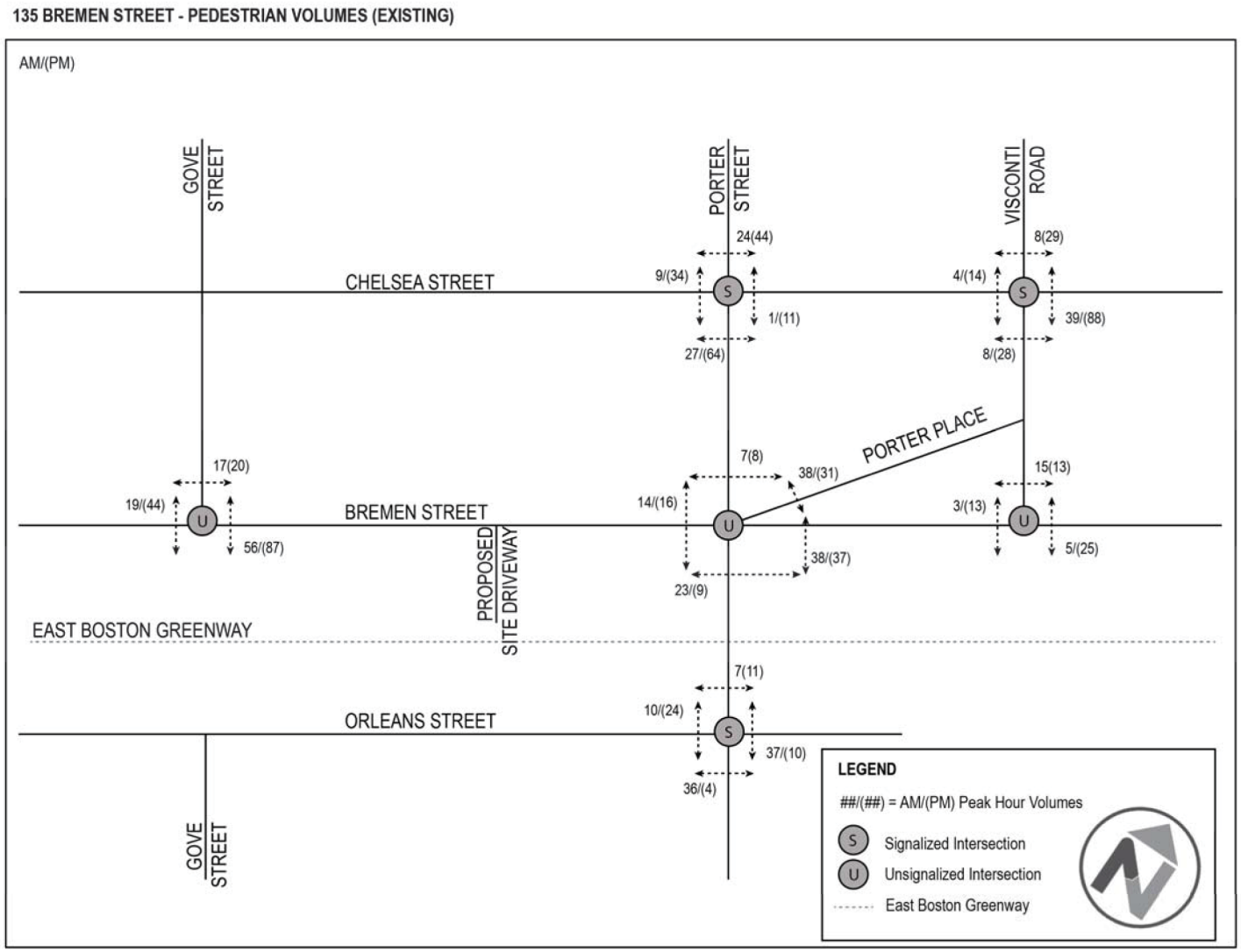


Figure 7-4 Existing Peak Hour Bicycle Volumes

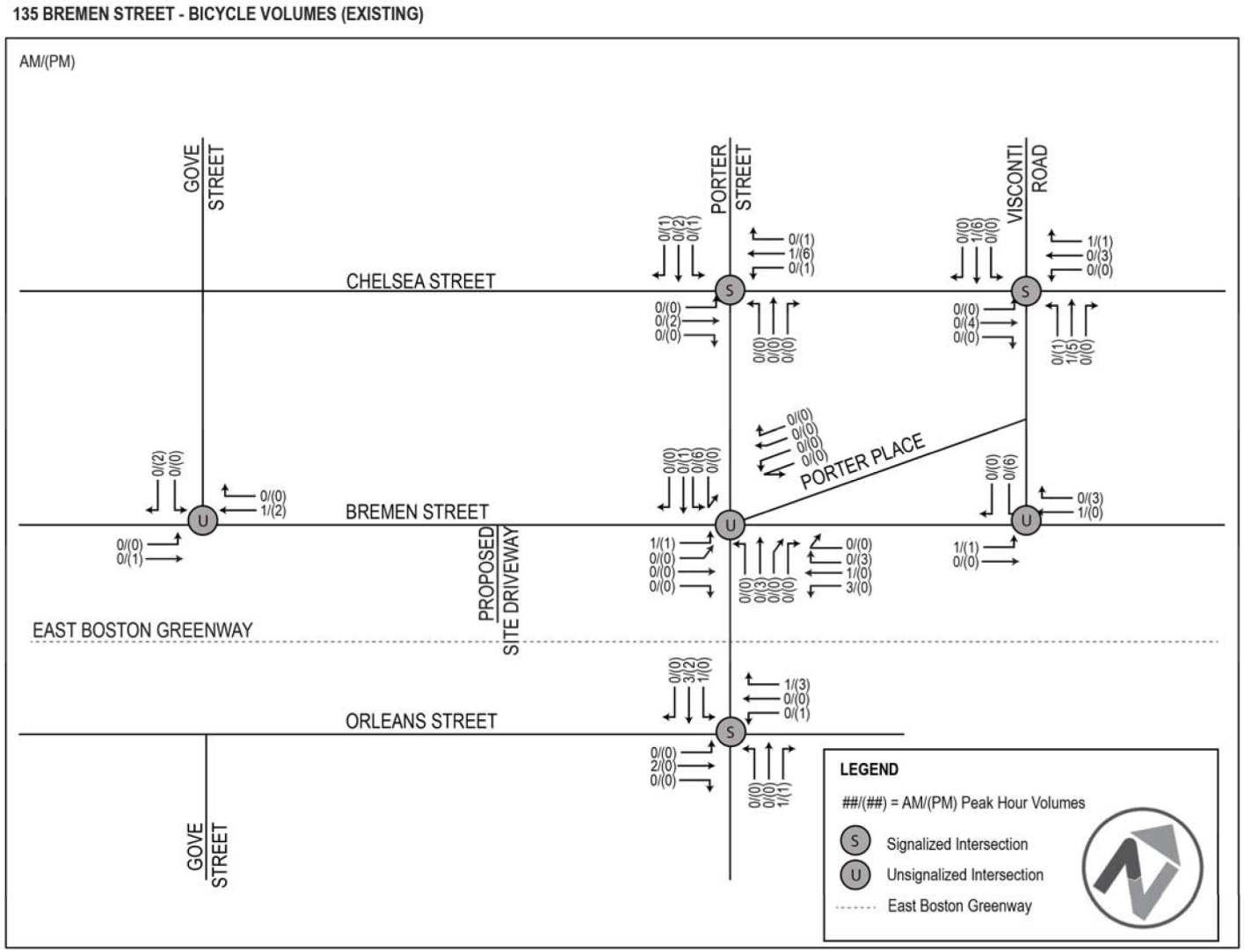


Table 7-2 - Existing Level of Service Summary

Intersection	AM Peak Hour				PM Peak Hour			
	LOS	Delay	V/C	95th % Queue	LOS	Delay	V/C	95th % Queue
Porter/Orleans (Signalized)								
SB Porter L/T/R	A	3.0	0.18	45	A	6.9	0.34	118
NB Porter L/T/R	A	3.7	0.08	24	A	5.9	0.07	27
EB Orleans L/T/R	C	29.3	0.43	51	C	31.9	0.65	91
WB Orleans L/T/R	B	18.9	0.05	8	A	9.0	0.09	16
Porter/Chelsea (Signalized)								
SB Porter L	A	8.0	0.23	44	B	10.3	0.41	114
SB Porter T/R	A	5.9	0.21	34	A	7.8	0.31	76
WB Chelsea L/T	B	13.3	0.30	54	B	17.8	0.57	79
EB Chelsea T/R	B	11.4	0.22	48	B	13.9	0.46	79
Visconti/Chelsea (Signalized)								
NB Visconti L/T/R	B	13.9	0.37	47	B	11.9	0.37	38
EB Chelsea L/T	A	6.6	0.32	65	B	15.0	0.73	#257
WB Chelsea T/R	A	3.6	0.28	45	A	4.9	0.31	59
Porter/Bremen/Porter Place (Stop-Controlled)								
SB Porter L/T/R	A	4.7	N/A	72	A	7.9	N/A	78
NB Porter L/T/R	B	11.5	N/A	85	A	6.5	N/A	90
EB Bremen L/T/R	A	7.1	N/A	53	B	10.8	N/A	94
WB Bremen L/T/R	A	4.7	N/A	67	A	6.5	N/A	26
Gove/Bremen (Stop-Controlled)								
SB Gove L/R	B	10.4	0.08	7	B	11.9	0.1	9
EB Bremen L/T	A	0	0.01	0	A	0.4	0.01	1
WB Bremen T/R	A	0	0.0	0	A	0.0	0.09	0
Visconti/Bremen (Yield-Controlled)								
EB Bremen L/T	A	9.9	0.17	16	B	13.2	0.50	71
WB Bremen T/R	B	11.8	0.45	58	B	12.1	0.45	60

95th percentile volumes exceeds capacity

7.2.6 Existing Parking

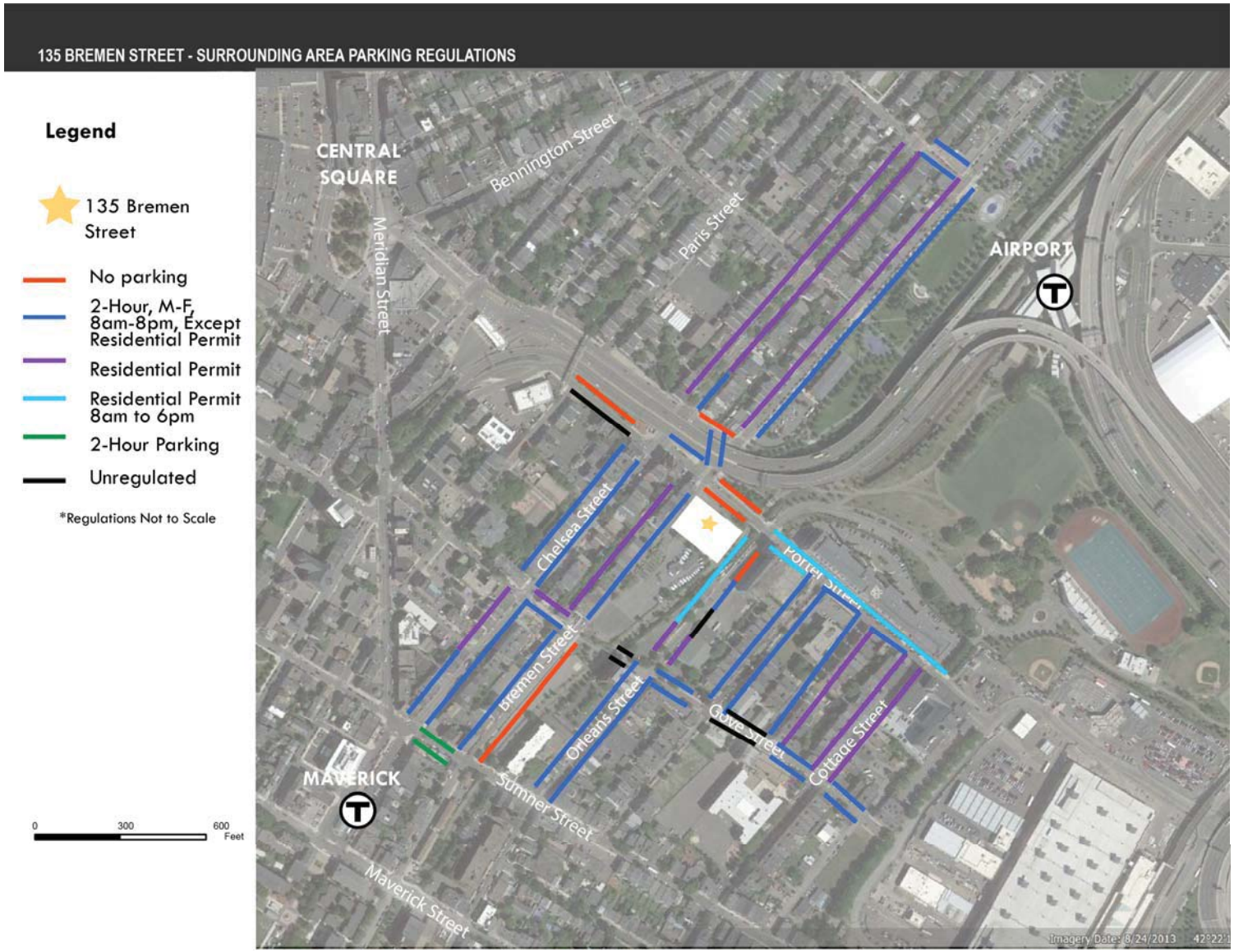
Per the Transportation Access Plan guidelines, parking supply within a quarter mile radius, or five minute walk from the project site, was analyzed to determine existing parking supply, regulation, and utilization. As shown in **Figure 7-5**, there is on-street parking on most block faces surrounding the project site, with varying regulations on a block by block basis.

Most parking within the 5-minute walk radius is regulated as residential permit parking. Within these zones though, there are pockets of special regulations with a 2-hour time limit for visitors and customers to park. Directly adjacent to the site on Bremen Street, parking is regulated this way, with 2-hour parking, except for residential permits, on the east side of the street and strictly residential parking along the west side. No parking is allowed along Porter Street, adjacent to the site. Residential parking exists on both sides of Orleans and parking is unregulated along Gove Street, just south of the site.

Although parking is currently allowed on the east side of Bremen Street in front of the proposed site, on-street parking straddles the public right of way and private property. More detailed measurements of on-street parking were recorded on these streets abutting the proposed development. There are approximately, 94 existing parking spaces. A weekday afternoon peak hour count indicated that about 60% of these parking spaces were utilized. A peak hour count was also conducted within 5-minute walk, which indicated that approximately 50% of spaces within a quarter mile were utilized.

Generally, there are no public off-street lots within a quarter mile from the study area. Most off-street parking is accessory parking for businesses and commercial spaces within the neighborhood. There are a number of off-street parking lots owned and operated by the East Boston Neighborhood Health Center, along Bremen Street and just south of the proposed site and on Orleans Street, adjacent to the site. Field observations indicated that these lots were about 80% full, and serve as commuter lots for health center employees. Other large parking facilities within the neighborhood include off-street parking along Logan Airport Service Drive, the East Boston YMCA, and Donald McKay School, all of which were well used at the mid-day peak hour.

Figure 7-5 On-Street Parking



7.2.7 Existing Public Transportation

135 Bremen Street is ideally situated in the heart of East Boston, and enjoys a walkable and dense residential fabric and neighboring transit alternatives. The Site is within easy walking distance from the both the MBTA Airport and Maverick Blue Line Stations, which provide frequent, direct, and high speed access to downtown Boston (to the south) and Revere (to the north). Local bus service at these stations and along Maverick, Meridian, and Bennington Streets provide local and regional access for residents, visitors, and customers alike **Table 7-3 Public Transportation** shows the adjacent MBTA bus routes and scheduled frequency.

Figure 7-4 **Existing Peak Hour Bicycle Volumes** shows boardings at the adjacent Maverick and Airport Stations on the MBTA Blue Line.

MBTA Blue Line Rapid Transit

The MBTA's Blue Line is a rapid transit line that provides frequent and direct service from Downtown Boston, to East Boston, and the City of Revere. As shown in Figure 7-6 the Blue Line connects these communities with Boston's employment center, providing direct stops at Downtown's Aquarium, State Street, Government Center, and Bowdoin Stations as well as access to Boston's Logan Airport, at Airport Station. State Street (Orange Line) and Government Center (Blue Line) provide transfers to alternative MBTA subway routes. The Blue Line provides high frequency service, with approximately four minute headways during weekday peak-hours, mid-day headways of approximately nine minutes, late night headways of about 13 minutes, and weekend frequency of about 10 minutes.

In 2013, the MBTA announced a two-year closure of the Government Center Station for the station's modernization project, which will help to bring the station up to compliance with ADA standards and reconstruct parts of City Hall Plaza. Due to this, Blue Line service has been suspended at Government Center, rerouting passengers to transfer at State Street Station or using a temporary bus route servicing Government Center, Haymarket, and State Street Stations. Within East Boston, the Blue Line Modernization project has significantly improved service for both Airport and Maverick Stations. The Blue Line Modernization project has renovated stations to increase the length of trains from four to six cars, allowing larger passenger capacity and accessibility improvements for wheelchairs. Renovations at Maverick Station have improved accessibility and aesthetics for station users. In addition to constructing a new head-house at Maverick Station that provides on-street access, the station has upgraded elevators and escalators to provide on-street access. Overall the pedestrian environment and connections to and between bus services have also improved greatly.

Table 7-3 Public Transportation

Route	Origin- Destination	Weekday Peak/ Off Peak	Weekend
MBTA Bus Routes			
Route 114	Maverick Square (East Boston)- Bellingham Square (Chelsea)	Limited service/ 50 minutes	No service
Route 116	Maverick Square–Wonderland Station via Revere Street;	10-15 minutes/20-30 minutes	30-35 minutes
Route 117	Wonderland Station - Maverick Station via Beach St	20 minutes/ 30 minutes	30- 35 minutes
Route 120	Orient Heights Station - Maverick Station via Bennington St., Jeffries Point & Waldemar Loop	15-20 minutes/ 20 minutes	30-55 minutes
Route 121	Wood Island Station- Maverick Station via Lexington Street	15-20 minutes/20 minutes	30-50 minutes

Table 7-4 MBTA Ridership Statistics 2014

MBTA Station	Ridership (Weekday Entries)
Maverick Station	10,106
Airport Station	7,429

Source: MBTA Ridership and Service Statistics, 14th Edition 2014

MBTA Buses

In addition to frequent and high-speed subway service to Downtown Boston, the Site is in close proximity to local bus routes that provide both local and regional connections. In addition to providing Blue Line service, Maverick Station serves as the terminus for five MBTA bus routes. These routes also run and provide stops along Maverick Street, just south of the Site, Meridian Street to the west, and Bennington Street to the north, all of which is about a 5-minute walk from the project site. To the north, bus service for Route 120, is provided on Bennington Street. Most MBTA bus routes run at frequencies that range from 10-15 minutes during weekday peaks hours, while off-peak headways range from 30-35 minutes.

MBTA Silver Line

The MBTA Silver Line provides service between the Logan Airport terminals and South Boston using 60' articulated buses. While not directly accessible from the Project, free Massport shuttles link Airport Station to the terminals. MassDOT is slated to begin construction on the Silver Line Gateway project in 2015. This project will provide a direct connection to Airport Station and an extension of service to Chelsea where it will operate in a dedicated right-of-way and connect as far as the Mystic Mall. It will continue to provide service to South Station as well.

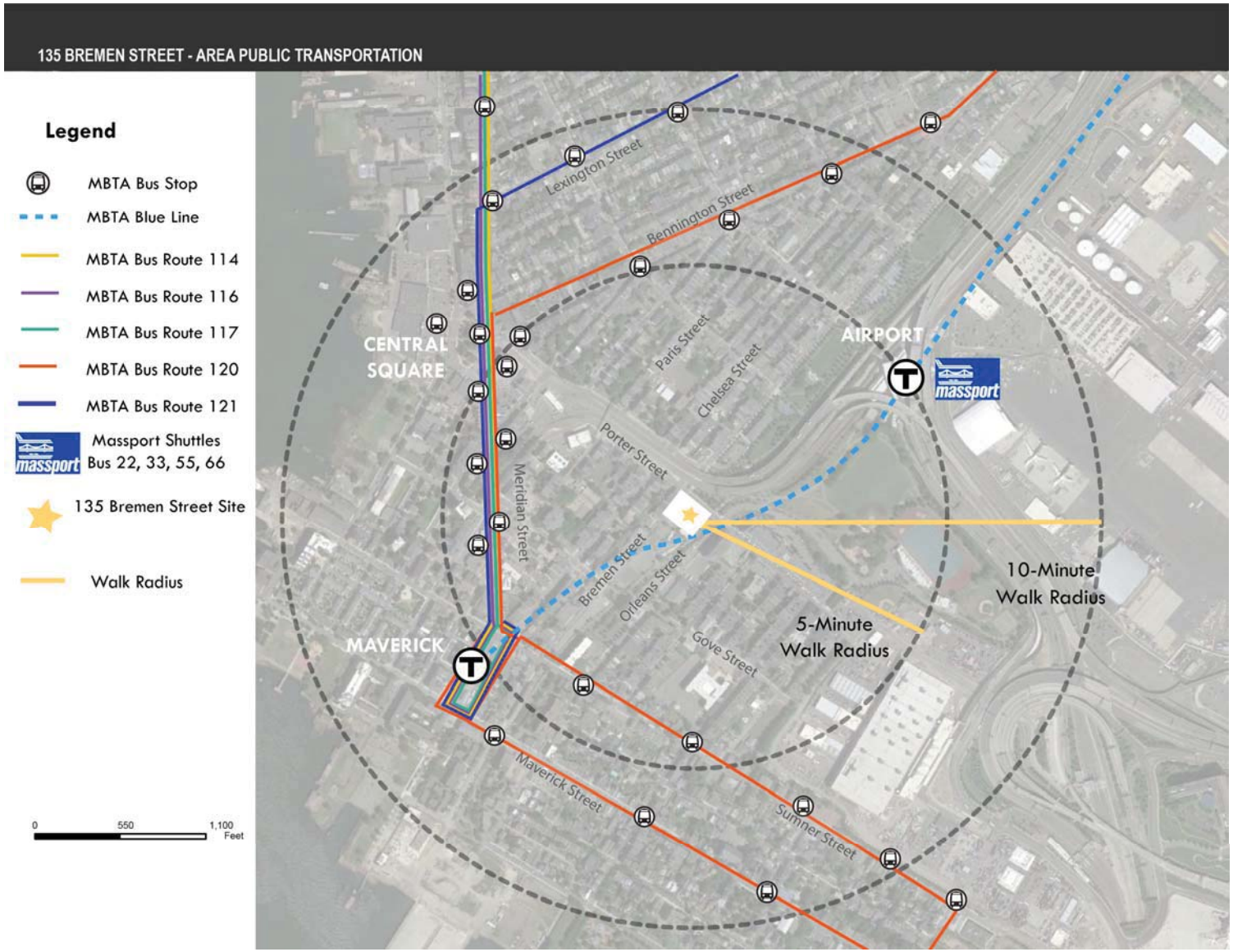
Massport Shuttles

Massport provides free shuttle service between the MBTA Airport Station and all airline terminals at Logan Airport. Shuttles generally run at a frequency of 5-minutes from the MBTA Airport Station. There are four shuttle routes that service the MBTA station, including Bus 22, Bus 33, Bus 55, and Bus 66, which provide direct connections to Rental Car Center, airport terminals, and the Water Transportation Dock.

Water Transportation

Water transportation services are currently limited to a small section in East Boston. The MBTA provides Harbor Express commuter boat/ ferry service from the Boston Harbor to Logan Airport. Similarly water taxis provided by City Water Taxi provide various stops around the harbor including Logan Airport as well as East Boston's Harbor's Shipyard and Marina.

Figure 7-6 Public Transportation



7.2.8 Car Sharing Services

Car sharing services, such as ZipCar, provides a valuable transportation alternative for those seeking quick, easy access, and short term vehicular transportation throughout the metro Boston region. Car share provides customers with the flexibility of renting a car when needed on an hourly or daily basis, during which all associated vehicle costs, such as gas, insurance, highway tolls, are covered. ZipCar and other carsharing opportunities throughout the Boston region have grown tremendously and serve as a great alternative to owning a vehicle or complementing transit, bike, and other multimodal transportation options.

Within East Boston, ZipCar has two locations, both of which are located within a 5-minute walk from the proposed project site. Two ZipCar vehicles are located at Orleans and Gove Street and 13 vehicles are available for rent on Maverick Street between Orleans and Cottage.

7.2.9 Pedestrian Connections

The 135 Bremen Street Site is ideally situated in a dense, walkable, and mixed-use neighborhood that is well-served by various multimodal transportation options. Overall, pedestrian facilities throughout the neighborhood are in good condition, helping to create a comfortable and safe walking environment for residents, visitors, and customers alike. However, as a result of the former industrial use of the building, pedestrian facilities, such as sidewalks and defined curbs are lacking adjacent to the Site, making it an unpleasant experience for pedestrian attempting to walk or cross along Bremen Street.

The Site itself is lacking a sidewalk on the eastern side of Bremen Street, which extends from Porter to Orleans Streets. There is a four-foot sidewalk on eastern edge of the Bremen and Porter intersection, however the sidewalk barely extends to serve as a ADA accessible ramp. On the four streets surrounding the site, sidewalks and crosswalks are present at most if not all intersections, however pedestrian ramps are often not ADA accessible at most of these intersections with the exception of Porter and Orleans.

Generally, most streets within a quarter mile radius provide continuous sidewalks on both sides of the road that are in fair condition with good to fair pedestrian curb ramps and crossings, especially near commercial centers like Chelsea Street and Maverick Square. The East Boston Greenway, which abuts the Bremen Street Site, provides a dedicated multiuse path exclusively for pedestrians and bicyclists. This connection is an important asset, providing direct connections to key destinations within the neighborhood such as the MBTA Airport Station and the East Boston's southern waterfront.

7.2.10 Existing Bicycle Facilities

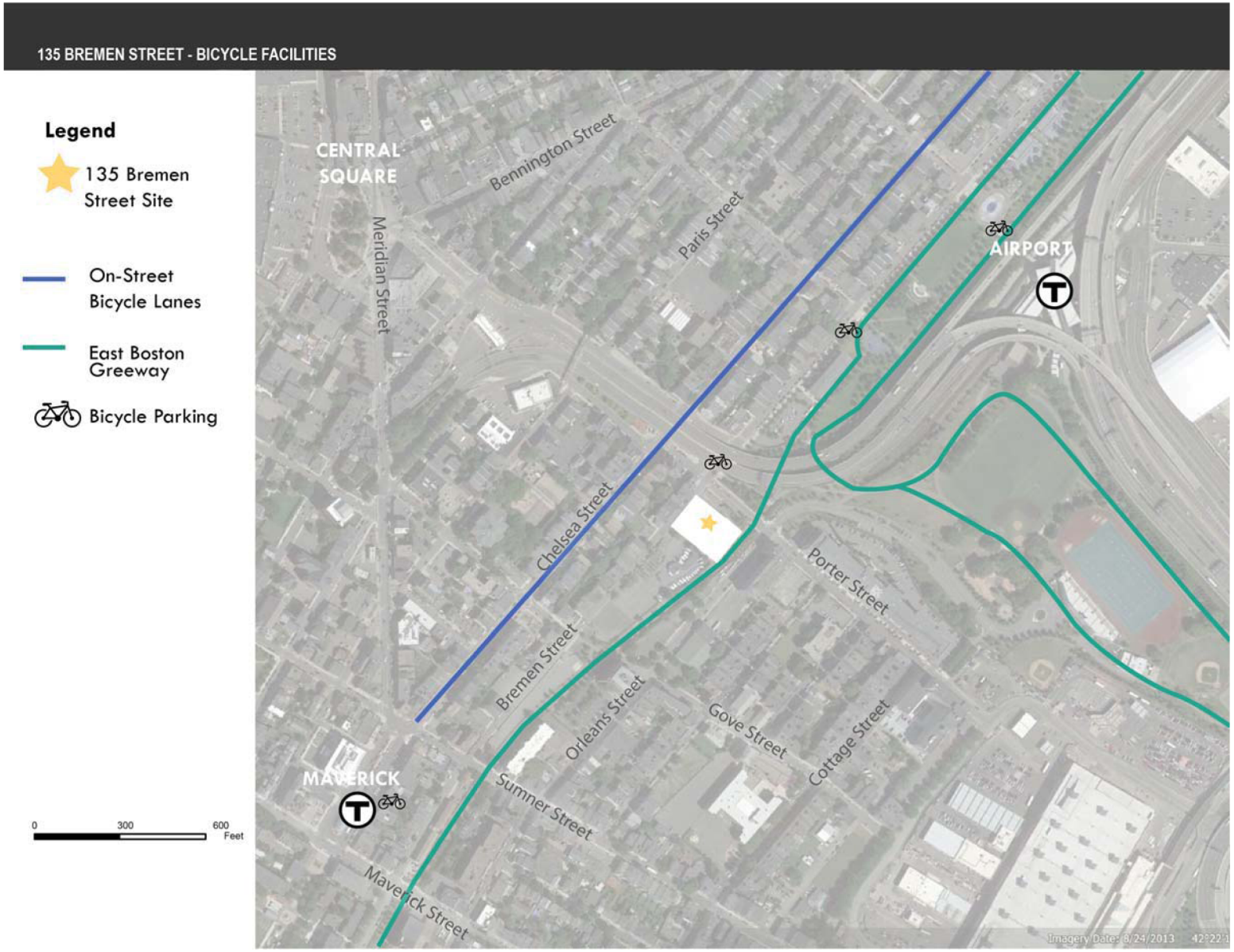
A number of bicycle facilities exist within a short distance from the 135 Bremen Street Site. Chelsea Street, northwest of the Site, contains dedicated on-street bicycle lanes from Maverick Street to the south to Prescott Street to the north. Based off of field observations and peak vehicle volume counts, the relatively low volume street conditions allow for shared travel space on the road for both vehicles and cyclists on Bremen Street and within the surrounding neighborhood. In addition to existing on-street facilities, the Site abuts the East Boston Greenway, which serves as an important multiuse corridor connecting the East Boston Waterfront on Marginal Street north to Day Square through the Bremen Street Park, helping to connect residents to various local destinations. Plans call for the eventual connection of the East Boston Greenway north of Day Square to the Revere Line.

Within the vicinity of the site, there are not short term bicycle parking for cyclists, as most of the area is private residences, private off-street parking or semi-industrial. Well used bicycle racks are present in the commercial areas of Maverick as well as on Meridian Street. Chelsea Street, one of the nearest commercial corridors is lacking in terms of bicycle parking infrastructure. During field observation it was noted that there was a single bicycle rack located under the 1A North underpass along Bremen Street. Hubway, Boston's bicycle sharing program, does not presently have any stations in East Boston. Figure 7-7, below, shows a map of existing bicycle facilities in and around the existing 135 Bremen Street Site.

7.2.11 Loading and Service Uses

The existing building on the site is vacant and there is no active loading or service.

Figure 7-7 Existing Bicycle Facilities



7.3 Future Conditions

7.3.1 No Build Conditions (2019)

To provide a baseline comparison for the project impacts of the proposed 135 Bremen Street development, a future "no-build" analysis was conducted. This process entailed creating a forecast network for the year 2019 that builds upon the existing traffic conditions as outlined previously. Following BTD's guidelines for the development of a No Build scenario, this analysis takes into account other permitted area developments, planned infrastructure changes and a background growth rate. Working closely with BTD, it was agreed to include two additional specific background projects that are within the study area, as well as an annual background growth rate.

Adjacent Developments

As a transitioning area, the East Boston neighborhood has seen the completion recently of several developments with a number of other projects that are in the process of obtaining their development permits. We have included two specific projects for analysis due to their proximity to the Site. We note that these projects did not include traffic information in their filings. Therefore, as part of the background growth, this report created trip generation and distribution for the proposed program for these developments[1]. These were added directly to the study network. For this analysis, these projects are 70 Bremen Street and 245 Sumner Street as more fully described in **Table 7-5**.

[1] We note that a letter of intent was filed for a project at Porter and Orleans subsequent to the letter of intent for 135 Bremen, However, in coordination with BTD, no specific analysis of that project is included here as it is ill defined in program and timeframe.

Table 7-5 Adjacent Developments

Project Name	Project Type	Building Size	Land Sq. Feet	Project Description
70 Bremen Street	Residential	29,700 sq ft	9,840 sq ft	32 residential units, 2 ground floor commercial units and 32 parking spaces.
245 Sumner Street	Residential Retail	42,435 sq ft	16,000 sq ft	Four-story building with 34 rental units, 2.257 SF of ground floor commercial space and 34 parking spaces.

Analysis

In addition to the developments and changes described above, the No Build analysis included an annual compound growth rate of 0.25%, which is consistent with similar proposed project developments nearby and concurred by the Boston Transportation Department. For the No Build (2019) condition, traffic impacts were evaluated at the following intersections:

Signalized Intersections

- Porter Street/Chelsea Street
- Chelsea Street/Visconti Road
- Porter Street/Orleans Street

Unsignalized Intersections

- Bremen Street/Porter Street
- Bremen Street/Visconti Road
- Bremen Street/Gove Street

7.2.1 Future No-Build (2019) Volumes

Expected project generated trips from the developments described above were added to create the Future No-Build volumes. Figure 7-**8 Future No Build (2019) Vehicle Volumes** indicates peak hour vehicle traffic volumes for the forecasted 2019 No Build. Volume growth from both 75 Bremen Street and 245 Sumner is focused along Bremen

Street and Porter Street providing access to the regional roadways. Most other volume growth in the No Build is associated with the background growth rate, which reflects this area's growing activity.

7.2.2 Future No-Build (2019) Traffic Capacity

The future No Build vehicle volumes were added to the Existing Conditions network, and again analyzed to assess the expected transportation system for the No Build scenario. Each intersection within the study area was analyzed for level-of-service (LOS), reporting the quality of traffic with a letter grade A to F, volume to capacity ratio (V/C), the stop time delay in seconds and the 95th percentile queue lengths. The intersection capacity analysis worksheets are provided in Appendix of this report. A summary chart of the results of this analysis is shown in **Table 7-6** below. Traffic operations in the Future No-Build conditions at study area intersections continue to operate at LOS C or better, with minimal delay and queue lengths.

Figure 7-8 Future No Build (2019) Vehicle Volumes

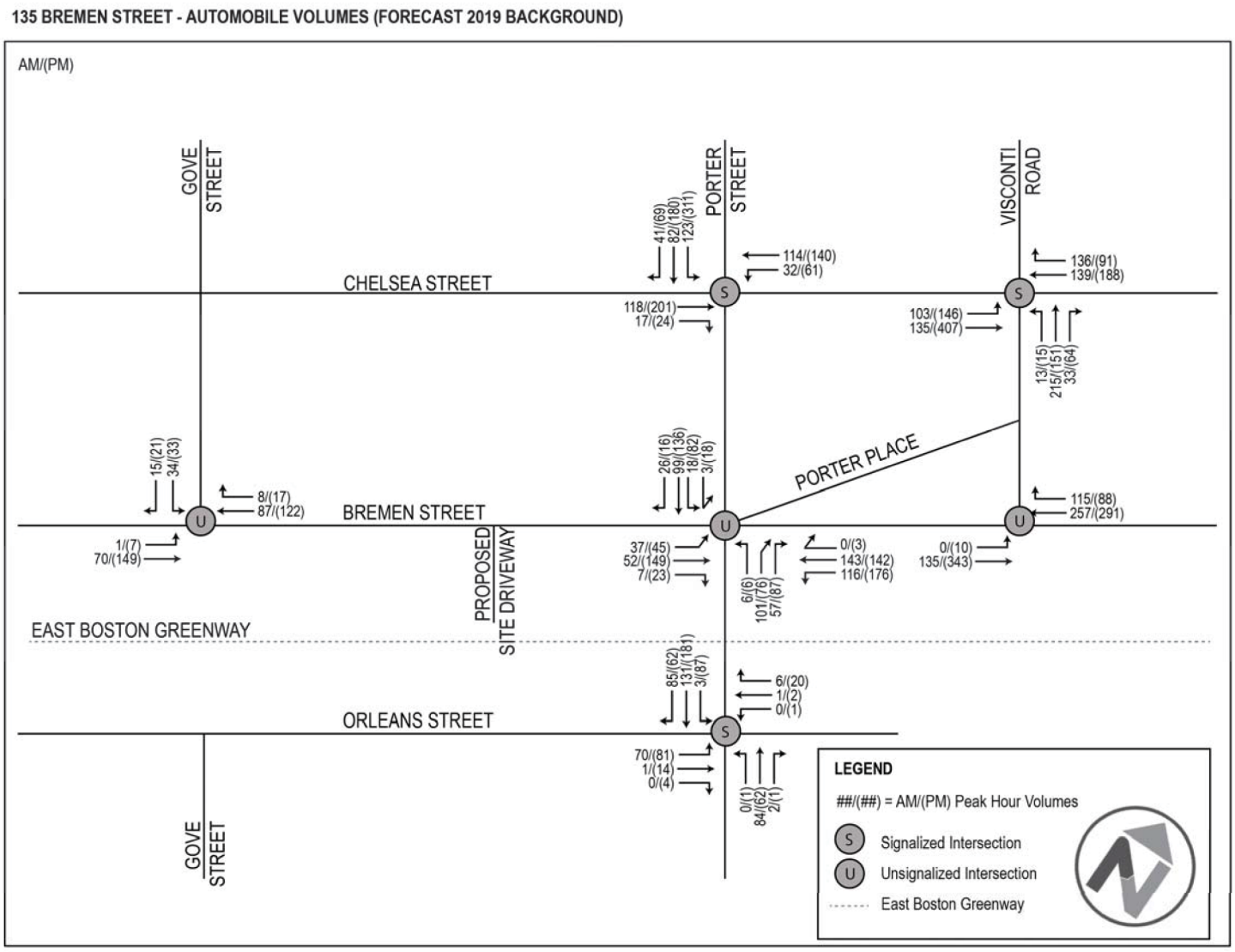


Table 7-6 Future No Build (2019) Traffic Operations Summary

Intersection	AM Peak Hour				PM Peak Hour			
	LOS	Delay	V/C	95th % Queue	LOS	Delay	V/C	95th % Queue
Porter/Orleans (Signalized)								
SB Porter L/T/R	A	3.1	0.19	47	A	7.1	0.35	123
NB Porter L/T/R	A	3.8	0.08	25	A	6.0	0.07	27
EB Orleans L/T/R	C	29.5	0.45	54	C	32.3	0.66	94
WB Orleans L/T/R	B	18.6	0.05	8	A	9.2	0.09	16
Porter/Chelsea (Signalized)								
SB Porter L	A	8.1	0.23	46	B	10.5	0.42	117
SB Porter T/R	A	6.0	0.22	35	A	8.0	0.32	78
WB Chelsea L/T	B	13.3	0.30	55	B	18.0	0.58	82
EB Chelsea T/R	B	11.4	0.23	48	B	13.9	0.47	81
Visconti/Chelsea (Signalized)								
NB Visconti L/T/R	B	13.9	0.38	48	B	11.9	0.38	38
EB Chelsea L/T	A	6.7	0.33	67	B	16.2	0.76	#267
WB Chelsea T/R	A	3.7	0.29	47	A	5.0	0.32	62
Porter/Bremen/Porter Place (Stop-Controlled)								
SB Porter L/T/R	A	6.2	N/A	50	B	10.8	N/A	72
NB Porter L/T/R	C	15.3	N/A	94	B	12.4	N/A	104
EB Bremen L/T/R	B	10.5	N/A	146	C	16.9	N/A	139
WB Bremen L/T/R	A	5.3	N/A	71	A	6.3	N/A	53
Gove/Bremen (Stop-Controlled)								
SB Gove L/R	B	10.4	0.09	7	B	12.1	0.11	9
EB Bremen L/T	A	0.1	0.00	0	A	0.4	0.01	1
WB Bremen T/R	A	0.0	0.00	0	A	0.0	0.1	0
Visconti/Bremen (Yield-Controlled)								
EB Bremen L/T	A	10.0	0.18	16	B	13.4	0.51	75
WB Bremen T/R	B	12.0	0.46	61	B	12.3	0.47	63

95th percentile volumes exceeds capacity

7.4 Build Conditions

7.4.1 Site Access and Circulation

The existing site is partially occupied by a vacant former industrial building and an uneven, unused surface parking lot. The area is fenced off on all sides, with no access to the East Boston Greenway and a gate that could provide access to Bremen Street. On the Bremen Street frontage, there is no sidewalk, though parking is allowed along the fenceline of the property. Though signed as public parking, parked cars are partially on the Bremen Street right-of-way and partially on Site property.

The 135 Bremen project will substantially improve the overall Site for all users. The building will front Bremen and Porter Streets, providing a sidewalk, streetwall, and curbside parking along Bremen Street. As shown on the Site Plan on **Figure 3.1-2** in **Section 3.0**, the building will be set back on the Site, to establish a sidewalk and curbside parking. These facilities will be on 135 Bremen Street property, and the project will work with the City to establish these as accessible to the public. Two-way traffic on Bremen Street will be preserved and the sidewalk will be widened at the Porter Street intersection to provide better pedestrian connections.

Driveway access to the internal parking will be provided from Bremen Street at the south end of the property. Separate full access driveways will have access respectively to the lower and ground level internal parking facilities. The sidewalk will be continued across the driveways to the edge of the Site. Delivery access to an internal loading facility will be created through the northern driveway on the surface level internal parking. As currently proposed the south driveway, will provide access to the lower, private (residential), level of parking. The north driveway access to surface level interior parking will have both public and private parking.

Ground level retail will be created with pedestrian entries on Bremen Street. The goal is to create a strong residential presence while restoring the neighborhood tradition of first floor restaurant/commercial uses. Five (5) parking spaces will be created on Bremen Street to serve the Site, the commercial uses and the neighborhood at large. A pedestrian entry will be created connecting Bremen Street to the interior parking and loading facility, and to an internal service elevator

Pedestrian entries to the residential lobby are shown both from Bremen Street and Porter Street. By siting the main residential entrance on Porter Street, the design team hopes to improve the safety and user perception of this portion of the street. These will connect to the residential entry, elevators, and parking facility. These multiple entries will help provide convenient pedestrian access to the Site and to the surrounding neighborhood.

New or improved sidewalks will be a benefit not just to the 135 Bremen project, but to the neighborhood at large.

Additionally, the 135 Bremen project will provide a fully accessible, and direct entry and connection along the east side of the property along the East Boston Greenway. Project residents and visitors will have easy access to this neighborhood amenity, and fast, direct connections along the Greenway to other neighborhood destinations.

Project Program

The Proposed Project consists of construction of a new 6 story building with interior parking comprising a total gross floor area of over 127,000 sq.ft. The building will contain 94 residential apartment units, 126 parking spaces on-site in a two level garage. The first floor along Bremen Street will contain approximately 7,790 SF commercial space. **Table 7-7** shows the details of the overall project program used in the development of projected trips.

7.4.2 Trip Generation

To estimate the number of vehicle, transit, walk, and bicycle trips associated with the proposed 135 Bremen Street development, trip generation analysis and estimates were developed based on the most recent data presented in the ITE Trip Generation Manual, 8th Edition to determine trip generation rates for the proposed development. Because the project consists of a mix of uses, trip generation was developed using the following assessments per BTD guidelines. For the 94 residential units, trip estimates were based on the ITE trip rates for Land Use 220 (Apartment). As the retail space is at yet untenanted, a combination of the ITE trip rates for Land Use 820 (Shopping Center), and Land Use 932 (High-Turnover Site-Down Restaurant). The three ITE land use categories and their corresponding trip rates used for analysis are shown in **Table 7-7** below:

Table 7-7 ITE Trip Generation Rates

ITE Class	Apartment (220)	Shopping Center (820)	High Turnover (Sit-Down) Restaurant (932)
	Trips per Dwelling Unit	Trips per 1,000 SF GFA	Trips per 1,000 SF GFA
Weekday	6.65	42.7	127.15
Saturday	6.39	49.97	158.37
AM Peak Hr*	0.51	0.96	11.52
PM Peak Hr*	0.62	3.71	11.15

*Peak hour of adjacent street traffic

As compared to the standard development used in ITE analyses, the study area has a very low driving rate. In keeping with City analysis standards, the build analysis uses Boston Transportation Department Area 7 mode split assumptions to accurately reflect the number of trips amongst the various modes of travel. Furthermore, the analysis also uses the 2010 average vehicle occupancy for Boston per the 2010 American Community Survey to convert vehicle trips to person trips.

7.4.3 Trip Distribution and Assignment

A Trip Distribution was developed - characterizing the overall split of person trips by mode and then assigning the vehicle trips to the network. These assumptions were then assigned to the study area roadway network. As shown in **Table 7-8**, the majority of site generated trips for all uses and time periods are essentially person trips (including bicycle trips as the BTD mode share data assumes both categories). A significant number of trips are transit trips, which also within the Study Area are essentially pedestrian trips, as people would need to walk to access nearby bus stop locations or Airport and/or Maverick Station.

To determine auto trips, person trips by automobile were re-calculated into vehicle trips using the same vehicle occupancy rate used to derive overall person trips. These auto trips were then assigned to the network using the directional distribution shown in **Figure 7-9**. This vehicle distribution was derived from BTD's trip distribution guidelines for Area 7 (East Boston) and show vehicle trip percentages between East Boston and the Boston region. All site generated exiting trips for 135 Bremen Street are assumed to use the drive located on Bremen Street. From here, a majority of vehicles would be heading northbound on Bremen Street to Visconti Road to access the Sumner Tunnel or 1A /I-90. Vehicles entering the site are assumed to be utilizing the same entrance driveway on Bremen Street, with a majority of trips entering the network through Porter Street from the north and from Chelsea Street from the south and east. **Figure 7-10** displays these proposed trips on the network.

7.4.4 Future Build Volumes

Using the 2019 No Build as a basis, the 2019 Build network incorporates the proposed site plan and resulting project generated traffic volumes into a new network for the AM and PM peak hours. **Figure 7-11** highlights the resulting traffic volumes on the network for the 2019 build year. All project trips are assumed to be using the site driveway located on Bremen Street.

Figure 7-8 Trips Entering and Exiting by Percentages

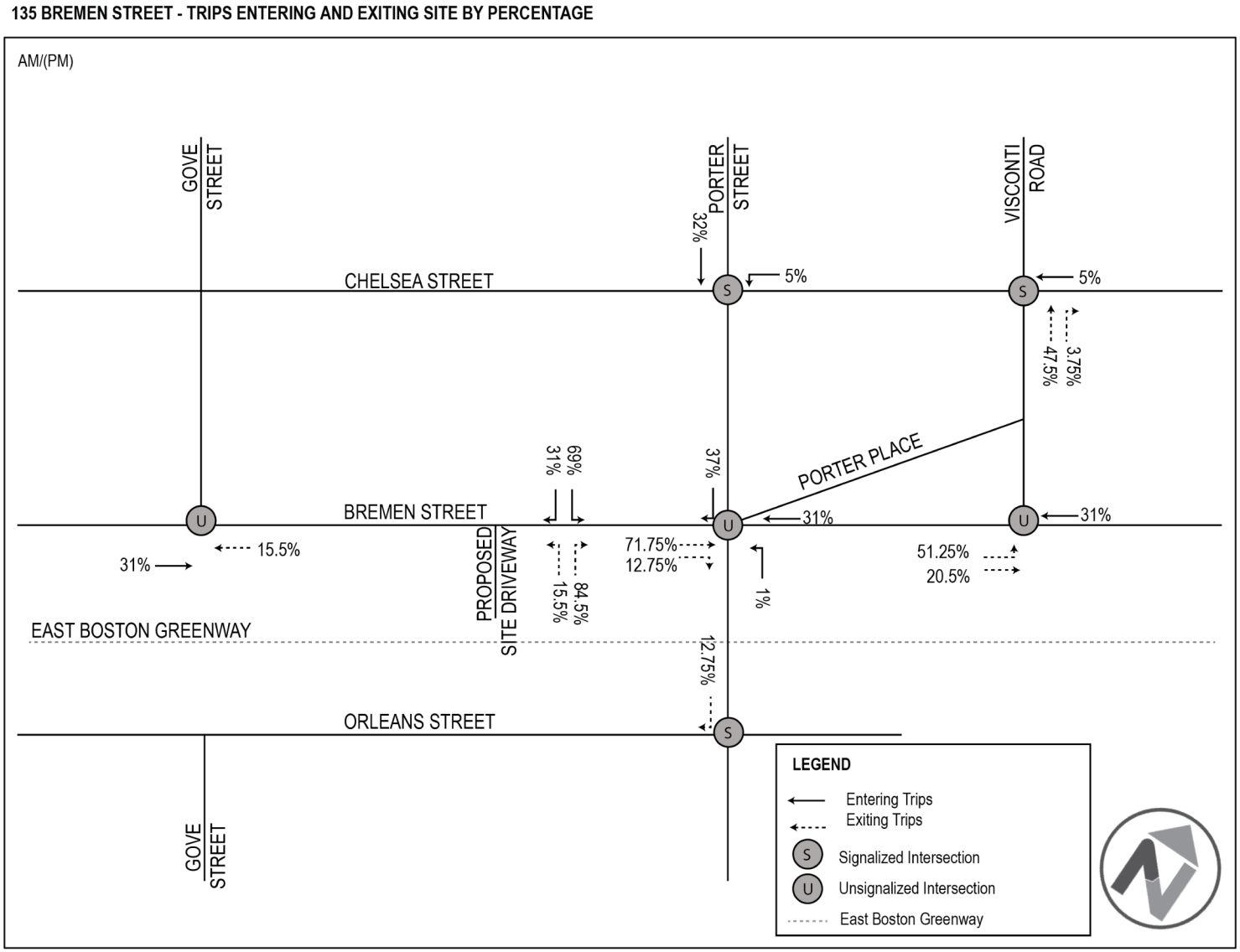


Figure 7-9 Trips Entering and Exiting by Percentages

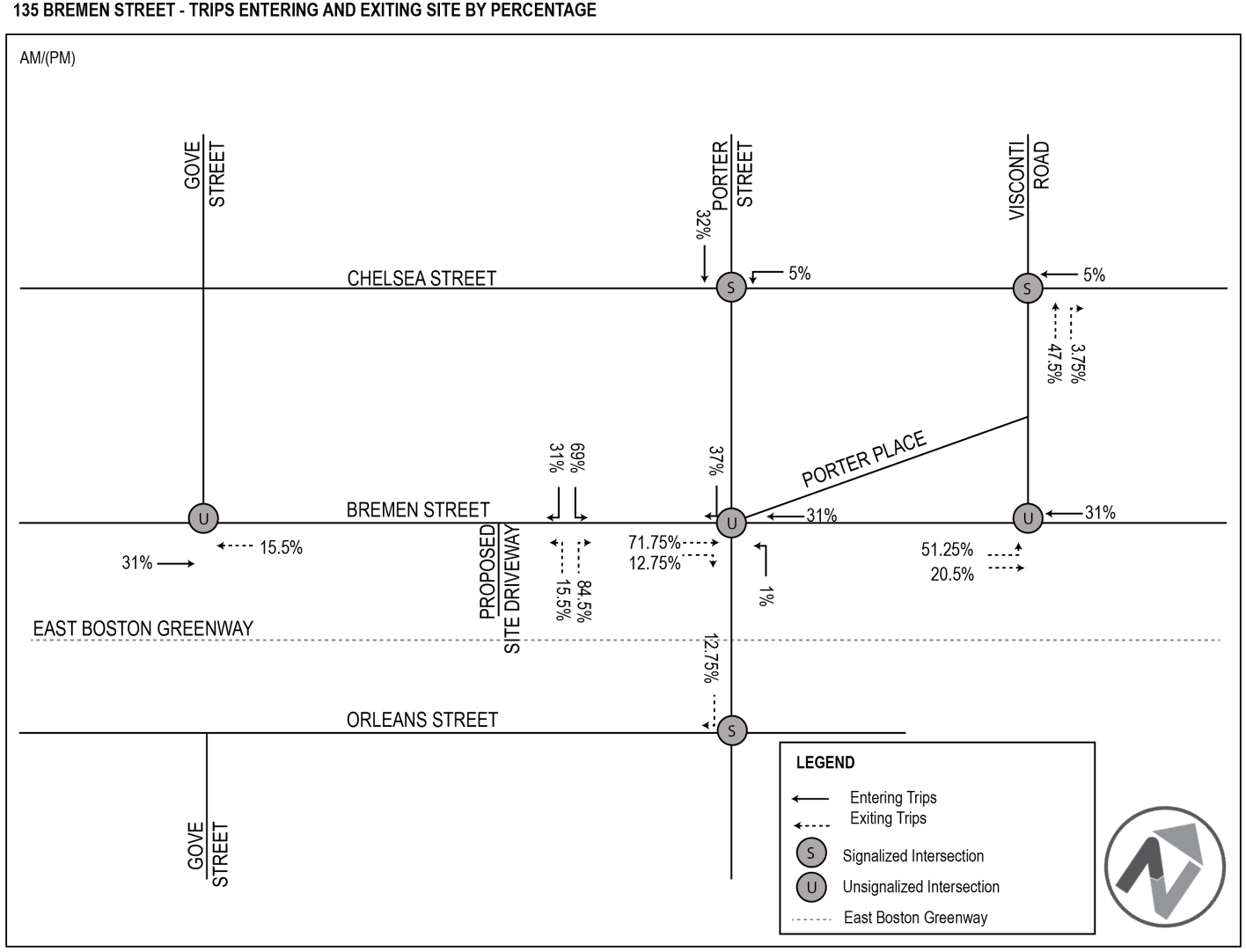


Figure 7-10 Site Generated Vehicle Trips

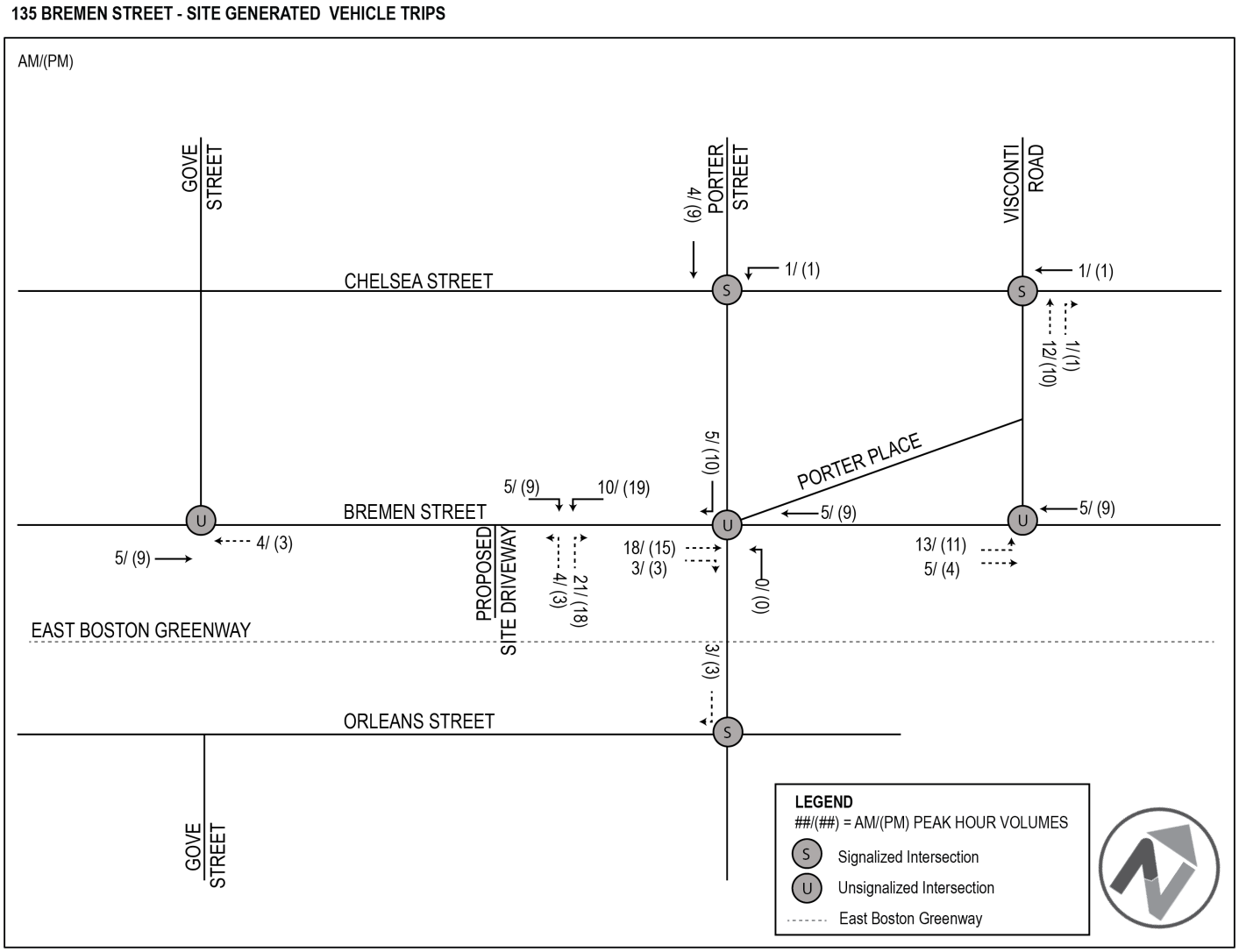


Figure 7-11 Future Build Vehicle Volumes

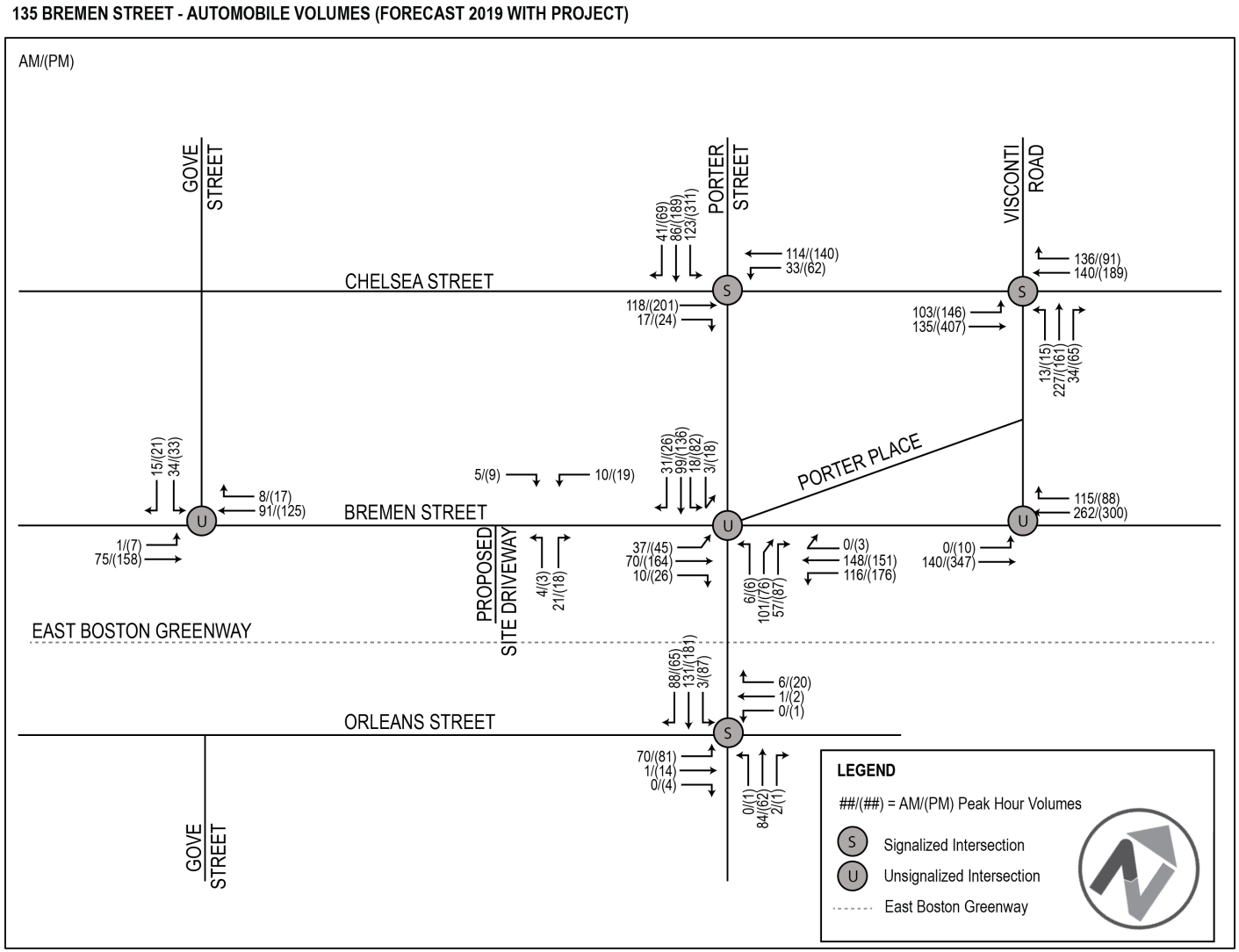


Table 7-8 Site Generated Person and Vehicle Trips

	Entering			Exiting			Total Person Trips by Mode
	Home	Other (Retail)	Total Person Trips	Home	Other (Retail)	Total Person Trips	
Daily Avg. Mode Shares							
Auto	186	154	340	186	154	340	680
Transit	58	22	81	58	22	81	161
Walk	100	191	291	100	191	291	582
AM Peak Mode Shares							
Auto	5	11	16	19	9	28	44
Transit	2	1	3	11	2	13	16
Walk	4	17	20	13	14	27	47
PM Peak Mode Shares							
Auto	19	12	31	11	11	23	53
Transit	10	3	13	3	2	5	18
Walk	13	19	31	8	18	25	57
Saturday Mode Shares							
Auto	178	194	372	198	189	388	760
Transit	56	27	83	40	27	67	150
Walk	96	230	326	93	235	327	653

* Note that Auto trips show the number of vehicle trips, derived by converting person trips to vehicle trips utilizing the average vehicle occupancy in Boston from the most recent American Community Survey.

7.4.5 Future Build Capacity Analysis

The 2019 Future Build network was completed by adding the Site generated vehicle trips to the 2019 No Build network described above. The Future Build condition analysis also includes the proposed Site Driveway intersection with Bremen Street. Each intersection within the study area was again analyzed for level-of-service (LOS), reporting the quality of traffic with a letter grade A to F, volume to capacity ratio (V/C), the stop time delay in seconds and the 95th percentile queue lengths. The intersection capacity analysis worksheets are provided in Appendix of this report. A summary chart of the results of this analysis is shown in **Table 7-9** below. Traffic operations in the Future Build conditions at study area intersections continue to operate at LOS C or better, with minimal delay and queue lengths. With the added Project trips, no approach at any intersection shows a degradation in LOS, with only minimal changes in other measurable. In the Future Build analysis, the proposed driveway and its intersection with Bremen Street operate at LOS A in both the AM and PM peaks.

Table 7-9 Future Build Capacity Analysis

Intersection	AM Peak Hour				PM Peak Hour			
	LOS	Delay	V/C	95th % Queue	LOS	Delay	V/C	95th % Queue
Porter/Orleans (Signalized)								
SB Porter L/T/R	A	3.1	0.19	48	A	7.1	0.35	123
NB Porter L/T/R	A	3.8	0.08	25	A	6.0	0.07	27
EB Orleans L/T/R	C	29.5	0.45	54	C	32.3	0.66	94
WB Orleans L/T/R	B	18.6	0.05	8	A	9.2	0.09	16
Porter/Chelsea (Signalized)								
SB Porter L	A	8.1	0.23	46	B	10.5	0.42	117
SB Porter T/R	A	6.0	0.23	36	A	8.2	0.34	82
WB Chelsea L/T	B	13.3	0.30	55	B	18.1	0.58	82
EB Chelsea T/R	B	11.4	0.23	48	B	13.9	0.47	81
Visconti/Chelsea (Signalized)								
NB Visconti L/T/R	B	13.9	0.39	50	B	12.0	0.39	40
EB Chelsea L/T	A	6.8	0.33	68	B	16.5	0.76	#269
WB Chelsea T/R	A	3.8	0.29	48	A	5.1	0.32	63
Porter/Bremen/Porter Place (Stop-Controlled)								
SB Porter L/T/R	A	6.0	N/A	51	A	9.6	N/A	80
NB Porter L/T/R	A	4.9	N/A	64	B	10.2	N/A	94
EB Bremen L/T/R	B	10.4	N/A	88	B	12.2	N/A	78
WB Bremen L/T/R	A	5.3	N/A	27	A	7.7	N/A	93
Gove/Bremen (Stop-Controlled)								
SB Gove L/R	B	10.5	0.09	7	B	12.2	0.11	9
EB Bremen L/T	A	0.1	0.10	0	A	0.4	0.01	1
WB Bremen T/R	A	0.0	0.07	0	A	0.0	0.1	0
Visconti/Bremen (Yield-Controlled)								
EB Bremen L/T	B	10.0	0.18	17	B	13.4	0.51	75
WB Bremen T/R	B	12.0	0.46	62	B	12.5	0.48	66
Bremen/Site Access (Stop-Controlled)								
NB Site Access L/R	A	9.0	0.03	2	A	9.5	0.03	2
WB Bremen L/T	A	0.7	0.01	1	A	1.0	0.02	1
EB Bremen T/R	A	0.0	0.05	0	A	0.0	0.10	0

Based on the traffic operations analysis presented in Table 7-9**,** above, the Project is not expected to have a significant impact upon traffic operations at the study area intersections. The existing roadway infrastructure will accommodate the minor increases in traffic volumes at the study area intersections expected to be generated by the Project. No additional capacity or operational improvements are necessary at the study area intersections to accommodate the Project-generated traffic volumes.

7.4.6 Parking Supply and Demand

The proposed 135 Bremen Street project is mostly residential, with ground level retail. 126 total parking spaces are proposed in two garage levels. 81 will be on the lower level, which will be essentially private parking, and accessed from the southern site driveway. An additional 45 spaces will be available on the ground (upper) level, accessed from the northern driveway, which will include parking to serve the project's commercial space.

The proposed parking supply is intended to provide an adequate amount of parking for the Project's uses, with additional, excess parking made available for lease to other neighborhood residents. While, the overall project goal is to contribute to this mixed-use, dense, walkable neighborhood, the Project recognizes the need to provide for its own demands onsite and contribute to overall neighborhood parking solutions.

BTD's off-street parking guidelines recommend a parking ratio of between 0.75 & 1.25 spaces per residential unit or 1,000 sq ft of non-residential development. The proposed 135 Bremen Street development corresponds to about 1.2 spaces per unit for the 94 units, and 0.77 space per thousand square feet of commercial retail space. These ratios for the development are shown in **Table 7-10** below.

Table 7-10 135 Bremen Street Parking Ratio Table

Use	Units/Sq.Ft	Parking Spaces	Parking Ratio	BTD Parking Ratio Guidelines
Residential	94	120	1.28 sp/unit	0.75 - 1.25 spaces/unit
Commercial	7,790	6	0.77 sp/ksf	0.75 - 1.25 spaces ksf
Total		**126**		

It is expected that spaces not leased to building residents, will be made available to the neighborhood residents for lease. Additional unleased parking may also serve as parking for customers for the commercial space. In addition, the 135 Bremen project is being designed to

create 5 parking spaces along the Bremen Street frontage. While parking is allowed today on Bremen Street adjacent to the Site, these spaces are partly on Site property, and are against a fence with no sidewalk. When complete these spaces will be adjacent to the Site with an accessible sidewalk.

7.4.7 Service and Loading

The proposed development will provide for an off-street loading area in the interior of the Site. The ground level parking, accessed from the northern driveway, will serve as access to the designated loading area, and will be designed with all appropriate clearances. The loading area will provide access to the commercial spaces and to a service elevator that can serve all residential needs. The loading facility will be managed by the building's transportation manager, who often will also be staffing the building lobby. A separate trash room will be located within the building serving overall project uses. Trash pickup for the commercial and residential uses will occur by private hauler through the internal driveway.

7.4.8 Bicycle Accommodations

The Bremen Street project is dedicated to supporting multi-modal alternatives throughout this East Boston neighborhood. With the site's close proximity to the East Boston Greenway, neighborhood retail and commercial district, access to jobs and transit, bicycling has the potential to become an important component of this area's mobility needs. Direct access to the East Boston Greenway and other bicycle facilities nearby on Chelsea Street, provides opportunities to help support non-auto transportation options in a neighborhood that is well-suited to benefit from these initiatives. The redevelopment of this existing parcel will help to reactivate the urban environment surrounding the East Boston Greenway, and provide enhanced pedestrian and bicycle facilities for East Boston residents and visitors.

The Proposed Project is committed to providing storage and other accommodations for bicyclists to meet the level of demand. The site will enhance the existing facilities along the Greenway for pedestrian and bicyclists, by providing a stop area with benches, trash receptacles, bicycle parking, and other facilities. The Project's commitment to create on-site and short term bicycle parking will drastically improve existing bicycle parking facilities within the neighborhood. Currently, there are only public parking facilities at the nearby YMCA, a few along the Greenway and Airport and Maverick Stations. Secure and protected bicycles space is being created for all uses within the Site's garage.

The Proposed Project is committed to meeting the city of Boston's Bicycle Parking Requirements, shown in **Table 7-11**, which are intended to encourage bicycling, promote physical exercise, and reduce energy use and emissions in keeping with overall City bicycling goals. The development further supports Hubway, the city of Boston's bicycle sharing program and will advocate for its expansion to East Boston.

Table 7-11 City of Boston Bicycle Parking Requirements

Use	BTD Requirement	Estimated Bicycle Parking Required
Apartments	1 secure/covered space per unit 1 outdoor/covered or outdoor/open space per 5 units	94 secure/covered 18 outdoor
Retail	0.3 secure/covered spaces per ksf (min. 2 spaces) for employees 1 outdoor/covered or outdoor/open space per 5,000 sq ft (min. 2 spaces) for patrons	2 secure/covered 2 outdoor
TOTAL		116 (Although the plans show 100 bike spaces there is sufficient space in the garage for 116 spaces)

7.5 Transportation Mitigation Measures

The 135 Bremen Street project will continue the transformation of this section of East Boston into a vibrant neighborhood that is primarily residential, but contains a mix of complementary uses. The project will add to this evolving district by replacing vacant, formerly industrial space, with a lively pedestrian oriented mixed –use development with neighborhood serving retail. The Project is being sited in a way that allows for the creation of a sidewalk and legal parking on its Bremen Street frontage, where today none exists. The Project will also have direct entry onto the East Boston Greenway, an amenity to trail goers, neighborhood residents and building tenants alike. It will take advantage of and contribute to the neighborhood's walkability, superior transit access, and nearby shops, restaurants and services.

Specific on-site improvements include:

- Removal of a vacant, former industrial space into a vibrant neighborhood oriented space;
- Providing a new sidewalk and pedestrian connections along Bremen Street, by moving the building footprint back to create an accessible sidewalk;
- Adding commercial space to the Bremen Street frontage that will be neighborhood oriented;
- Adding five (5) legal parking spaces along Bremen Street by moving the building footprint;
- Providing multiple residential entries to contribute to the neighborhood's pedestrian oriented environment;
- Creating an accessible pedestrian entry on the East Boston Greenway providing "eyes" on the Greenway and an amenity for all users;
- Enhancing the Greenway corridor by creating a small sitting area and bike repair station on-site with 24-7 access for residents and visitors
- Creating on-site secure, weather protected bicycle parking and outdoor parking for use by visitors;
- Providing sufficient parking for the Project's uses onsite;
- Encouraging unused parking spaces to be made available for lease to neighborhood residents;
- Providing for off-street loading and trash service for the apartments and commercial space;
- Improving the character of Bremen Street, by creating a vibrant frontage with accessible sidewalks and parking.
- Providing electric and smart car parking on-site

7.5.1 Transportation Demand Management

Travel Demand Management (TDM) comprises a variety of strategies designed to reduce single-occupancy vehicle (SOV) travel and encourage "alternate modes" of transportation (public transit, walking, bicycling). As a primarily residential Project with units targeted a mix of potential tenants and owners, the Project is likely to attract residents and tenants seeking to live in a mixed use, urban environment with proximate transit access. As with current neighborhood residents, many tenants will likely rely primarily on non-auto travel for work, errands, and recreation. Nevertheless, the implementation of TDM programs is critical to helping ensure that residents, visitors and customers can meet their mobility needs using the variety of transportation options available in the surrounding neighborhood. The Project intends to work with the City to

explore the adoption of the following measures and programs to benefit their residents, and the surrounding neighborhood, while reducing vehicular traffic and potential environmental impacts.

Programmatic

- Provide information on travel alternatives onsite and with lease information;
- Designate an on-site transportation coordinator;
- Encourage the use of non-auto modes for residents, employees and visitors;
- Work with area developments on transportation issues including investigating joining the Transportation Management Association (TMA); and
- Post signs and enforce idling laws at all loading facilities.

Parking

- Provide space for an electric vehicle charging station in the garage as needed;
- Encourage tenants to carpool/vanpool; and
- Allow neighborhood users to lease excess parking spaces.

Public Transportation

- Provide a free monthly MBTA pass for the first month for each new lease; and
- Work with the MBTA to enroll tenants and employees in monthly pass programs.

Pedestrian/Bicycle

- Provide free, secure, weather protected, on-site bicycle parking for residents, employees and visitors;
- Provide an attractive sidewalk along all Site frontages to improve and enhance the area's walkability;
- Provide a direct connection to the East Boston Greenway;
- Support Hubway, the city of Boston's bicycle sharing program and advocate for its expansion to East Boston; and
- Provide on street bicycle spaces, located near the restaurant, consistent with current City standards.

8.0 COORDINATION WITH GOVERNMENTAL AGENCIES

8.1 Architectural Access Board Requirements

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

8.2 Boston Parks Commission

The Proposed Project is within 100 feet of the East Boston Greenway and requires review pursuant to Boston Parks Commission regulations.

8.2 Massachusetts Environmental Policy Act

Based on information currently available, development of the Proposed Project is not expected to meet a review threshold that will require review by the MEPA Office of the Executive Office of Energy and Environmental Affairs.

8.3 Boston Civic Design Commission

The Proposed Project will be reviewed by the Boston Civic Design Commission as the build out exceeds the 100,000 gross square feet size threshold requirement for review.

9.0 PROJECT CERTIFICATION

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

135 Bremen Street, LLC

Signature of Proponent

10/7/14
Date

Mitchell L. Fischman Consulting LLC

Signature of Preparer
Mitchell L. Fischman, AICP

10/07/14
Date

APPENDIX A – LETTER OF INTENT TO FILE PNF

Law offices of

JEFFREY R. DRAGO

ATTORNEY AT LAW

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BOSTON, MASSACHUSETTS 02110
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CELL PHONE 617.406-8575

June 7, 2014

By Hand Delivery

Mr. Brian Golden, *Acting Director*
Boston Redevelopment Authority
One City Hall Plaza, 9th Floor
Boston, MA 02201

Re: 135 Bremen Street Development, 135 Bremen Street, East Boston

Dear Acting Director Golden:

On behalf of my client, the 135 Bremen Street, LLC, I am pleased to submit this Letter of Intent in connection with the proposed 135 Bremen Street Development Project (the "Proposed Project") in the East Boston neighborhood of Boston. The submission is being made in accordance with the Mayor's Executive Order dated October 10, 2000, Relative to the Provision of Mitigation by Development Projects in Boston, as amended.

The 135 Bremen Street, LLC is comprised of two local real estate developers and investors, Mr. Joseph Ricupero and Mr. Michael Merullo. Both of the developers have purchased and developed both large and small projects around the East Boston Neighborhood, and also own a local business that services Boston and surrounding municipalities in Suffolk County.

The Proposed Project is approximately 36,000 square feet of underutilized commercial land along the Bremen Street corridor that lies within a Corridor Enhancement Zoning Sub district. The current site was used as a trucking terminal in the past and also houses two billboards on the corner of Bremen and Porter Street. As part of the community benefits related to this Project, the old commercial building will be demolished and the billboards will be removed from the site.

The Proposed Project will be constructed as a five-story residential market rate development with ground floor commercial space. The Proposed Project is ideally situated within close proximity to Airport and Maverick Square MBTA stations' and the Sumner, Callahan, and Ted Williams Tunnels', making it convenient for future resident commuters. The Proposed Project will be in close proximity to the East Boston Greenway connector and Bremen Street Park, giving residents plenty of open space and green space to utilize. The Project is also walking distance to both Maverick and Central Squares, offering many neighborhood shops and restaurants to service the new residents of the development. The Developers are proposing a project that would include both residential units and neighborhood commercial space that will revitalize an otherwise abandoned location, and will utilize its central location and proximity to public transportation.

The Developers are proposing a mixed use project that will include ninety three residential units and 6,734 square feet of commercial space along the ground floor of the building. The units will have a mixture of different sizes, which will accommodate East Boston's diverse and growing population. The units will be comprised of five studio units, ten one bedroom units, fifty-five two bedroom units, eighteen two bedroom/plus den units, and five three bedroom units. The Developers understand that parking is always a concern to the neighborhood residents, and are proposing an underground parking facility that will house one hundred forty eight parking spaces and sixty-six bike racks for both residents and commercial patrons at 135 Bremen Street. The Proposed Project is unique to the community because it provides such a high number of private parking spaces for residents, and is within walking distance to two MBTA stations, which will minimalize community impact from resident/patron parking from the Proposed Project.

The second component of the Proposed Project will include 6,734 square feet of commercial retail space. The retail space will accommodate the needs of East Boston's growing population. The space will include at least one local neighborhood restaurant/retail space that allows for residents to walk to the establishment from their house or from one of the busy MBTA stations. The East Boston community has been looking to add more commercial retail/restaurant space to new projects, to ensure that residents can both live and shop within the community.

The Proposed Project is subject to Large Project Review under Article 80B of the Boston Zoning Code. In parallel with this application, the Proposed Project will seek zoning relief from the Boston Zoning Code at the Boston Zoning Board of Appeal related to the size and change of use of the land and structures that currently sit on them.

The Proposed Project will completely revitalize this section of Bremen and Porter Street, and will bring necessary residential housing to an underutilized corridor. The site is attractive due to its close proximity to the Greenway, Bremen Street Park, train stations, and all of the many shops and restaurants in Central and Maverick Squares'.

On behalf of the entire development team, we look forward to working with you, BRA staff, the City of Boston, and the East Boston community in furtherance of this investment in the City of Boston.

Yours very truly,

Jeffrey R, Drago, *Esq.*
Legal Counsel

APPENDIX B – TRANSPORTATION APPENDIX

APPENDIX B is available on request

APPENDIX C – RESPONSE TO CLIMATE CHANGE QUESTIONNAIRE

Climate Change Preparedness and Resiliency Checklist for New Construction

In November 2013, in conformance with the Mayor's 2011 Climate Action Leadership Committee's recommendations, the Boston Redevelopment Authority adopted policy for all development projects subject to Boston Zoning Article 80 Small and Large Project Review, including all Institutional Master Plan modifications and updates, are to complete the following checklist and provide any necessary responses regarding project resiliency, preparedness, and to mitigate any identified adverse impacts that might arise under future climate conditions.

For more information about the City of Boston's climate policies and practices, and the 2011 update of the climate action plan, *A Climate of Progress*, please see the City's climate action web pages at http://www.cityofboston.gov/climate

In advance we thank you for your time and assistance in advancing best practices in Boston.

Climate Change Analysis and Information Sources:

1. Northeast Climate Impacts Assessment (www.climatechoices.org/ne/)
2. USGCRP 2009 (http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/)
3. Army Corps of Engineers guidance on sea level rise (http://planning.usace.army.mil/toolbox/library/ECs/EC11652212Nov2011.pdf)
4. Proceeding of the National Academy of Science, "Global sea level rise linked to global temperature", Vermeer and Rahmstorf, 2009 (http://www.pnas.org/content/early/2009/12/04/0907765106.full.pdf)
5. "Hotspot of accelerated sea-level rise on the Atlantic coast of North America", Asbury H. Sallenger Jr*, Kara S. Doran and Peter A. Howd, 2012 (http://www.bostonredevelopmentauthority.org/planning/Hotspot of Accelerated Sea-level Rise 2012.pdf)
6. "Building Resilience in Boston": Best Practices for Climate Change Adaptation and Resilience for Existing Buildings, Linnean Solutions, The Built Environment Coalition, The Resilient Design Institute, 2103 (http://www.greenribboncommission.org/downloads/Building_Resilience_in_Boston_SML.pdf)

Checklist

Please respond to all of the checklist questions to the fullest extent possible. For projects that respond "Yes" to any of the D.1 – Sea-Level Rise and Storms, Location Description and Classification questions, please respond to all of the remaining Section D questions.

Checklist responses are due at the time of initial project filing or Notice of Project Change and final filings just prior seeking Final BRA Approval. A PDF of your response to the Checklist should be submitted to the Boston Redevelopment Authority via your project manager.

Please Note: When initiating a new project, please visit the BRA web site for the most current Climate Change Preparedness & Resiliency Checklist.

A.1 - Project Information

Project Name:	135 Bremen Street
Project Address Primary:	135 Bremen Street, East Boston, MA 02128
Project Address Additional:	
Project Contact (name / Title / Company / email / phone):	John W. French,President, Neshamkin French Architects, Inc Jwfrench@ndarchitects.com 617-242-7422

A.2 - Team Description

Owner / Developer:	135 Bremen Street LLC
Architect:	Neshamkin French Architects Inc.
Engineer (building systems):	Sergio Siani, Norian Siani Engineering
Sustainability / LEED:	Jillian Wiedenmayer, LEED AP+
Permitting:	Jeffrey Drago, Attorney
Construction Management:	
Climate Change Expert:	

A.3 - Project Permitting and Phase

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

PNF / Expanded PNF Submission	Draft / Final Project Impact Report Submission	BRA Board Approved	Notice of Project Change
Planned Development Area	BRA Final Design Approved	Under Construction	Construction just completed:

A.4 - Building Classification and Description

List the principal Building Uses:	*Multi-Unit Residence*
List the First Floor Uses:	*Accessory Retail Space, Parking on Bremen Street, Residential entrance on Porter Street. At rear of building is East Boston Greenway and sitting area and free bicycle repair as part of the complex.*

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

Wood Frame	Masonry	***Steel Frame***	Concrete

Describe the building?

Site Area:	*35,998 SF*	Building Area:	*126, 189 SF*
Building Height:	*68' – 7"*	Number of Stories:	*5 with Garage area at first and Basement floors. (6 floors total)*
First Floor Elevation (reference Boston City Base):	*117.6'*	Are there below grade spaces/levels, if yes how many:	***Yes*** */No*

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:	***No***	Certified:	***No***

A.6 - Building Energy

****A building energy model associated with this project has not been completed yet.***

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

Electric:	*(kW)*	Heating:	*(MMBtu/hr)*
What is the planned building Energy Use Intensity:	*(kbut/SF or kWh/SF)*	Cooling:	*(Tons/hr)*

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

Electric:	*(kW)*	Heating:	*(MMBtu/hr)*
		Cooling:	*(Tons/hr)*

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

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

B - Extreme Weather and Heat Events

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

B.1 - Analysis

What is the full expected life of the project?

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

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

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

What time span of future Climate Conditions was considered?

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

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

8°F / 90°F

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

90°F	*1.5 Days*	*3 Events / yr.*

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

14 Days	*1 Event / yr.*

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

48 Inches/yr	*6.6 Inches*	*2 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?

3 second gust at 33 feet above ground	*Every 3 Seconds*	*50 Year Storm*

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:	*25%*
How is performance determined:	**Energy Model**

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

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

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

Roof:	*R = 30*	Walls / Curtain Wall Assembly:	*R = 20*
Foundation:	*R = N/A*	Basement / Slab:	*R =15*
Windows:	*R = 4 / U =0.25*	Doors:	*R = 2 / U = 0.5*

What specific measures will the project employ to reduce building energy demands on the utilities and infrastructure?

	On-site clean energy / CHP system(s)	Building-wide power dimming	Thermal energy storage systems	Ground source heat pump
	On-site Solar PV	On-site Solar Thermal	Wind power	***None***
Describe any added measures:				

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

Select all appropriate:	Connected to local	Building will be	Connected to	Distributed

distributed electrical	Smart Grid ready	distributed steam, hot, chilled water	thermal energy ready

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

	Yes	If yes, for how long:	***24 hours***
If Yes, is building "Islandable?	***No***		
If Yes, describe strategies:			

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

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

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

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

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

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

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

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

C - Sea-Level Rise and Storms

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

C.1 - Location Description and Classification:

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

*Yes / **No***

Describe site conditions?

Site Elevation – Low/High Points:	***106.5/120 Ft.*** (*Boston City Base)
Building Proximity to Water:	***2112 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?

0 Ft.

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

C - Sea-Level Rise and Storms

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

C.2 - Analysis

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

Sea Level Rise:	***6 Ft.***	Frequency of storms:	***30 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:	***115.45 Ft.*** (*Boston City Base)	First Floor Elevation:	***117.6 Ft.*** (*Boston City Base

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:	***2.15 Ft.*** (*Boston City Base)

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:	***24 hours***

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

C.4 - Building Resilience and Adaptability

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

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

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

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

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

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

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

Thank you for completing the Boston Climate Change Resilience and Preparedness Checklist!
For questions or comments about this checklist or Climate Change Resiliency and Preparedness best practices, please contact: John.Dalzell.BRA@cityofboston.gov

APPENDIX D – RESPONSE TO ACCESSIBILITY GUIDELINES

Accessibility Checklist

(to be added to the BRA Development Review Guidelines)

In 2009, a nine-member Advisory Board was appointed to the Commission for Persons with Disabilities in an effort to reduce architectural, procedural, attitudinal, and communication barriers affecting persons with disabilities in the City of Boston. These efforts were instituted to work toward creating universal access in the built environment.

In line with these priorities, the Accessibility Checklist aims to support the inclusion of people with disabilities. In order to complete the Checklist, you must provide specific detail, including descriptions, diagrams and data, of the universal access elements that will ensure all individuals have an equal experience that includes full participation in the built environment throughout the proposed buildings and open space.

In conformance with this directive, all development projects subject to Boston Zoning Article 80 Small and Large Project Review, including all Institutional Master Plan modifications and updates, are to complete the following checklist and provide any necessary responses regarding the following:

- improvements for pedestrian and vehicular circulation and access;
- encourage new buildings and public spaces to be designed to enhance and preserve Boston's system of parks, squares, walkways, and active shopping streets;
- ensure that persons with disabilities have full access to buildings open to the public;
- afford such persons the educational, employment, and recreational opportunities available to all citizens; and
- preserve and increase the supply of living space accessible to persons with disabilities.

We would like to thank you in advance for your time and effort in advancing best practices and progressive approaches to expand accessibility throughout Boston's built environment.

Accessibility Analysis Information Sources:

1. Americans with Disabilities Act – 2010 ADA Standards for Accessible Design
    a. http://www.ada.gov/2010ADAstandards_index.htm
2. Massachusetts Architectural Access Board 521 CMR
    a. http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/aab/aab-rules-and-regulations-pdf.html
3. Boston Complete Street Guidelines
    a. http://bostoncompletestreets.org/
4. City of Boston Mayors Commission for Persons with Disabilities Advisory Board
    a. http://www.cityofboston.gov/Disability
5. City of Boston – Public Works Sidewalk Reconstruction Policy
    a. http://www.cityofboston.gov/images_documents/sidewalk%20policy%200114_tcm3-41668.pdf
6. Massachusetts Office On Disability Accessible Parking Requirements
    a. www.mass.gov/anf/docs/mod/hp-parking-regulations-mod.doc
7. MBTA Fixed Route Accessible Transit Stations
    a. http://www.mbta.com/about_the_mbta/accessibility/

Project Information

Project Name:	135 Bremen Street
Project Address Primary:	135 Bremen Street East Boston, Mass.
Project Address Additional:	
Project Contact (name / Title / Company / email / phone):	Jeffrey Drago Esquire C/O Law offices of Jeffrey Drago, 62B Commercial Street, Boston MA 02210

Team Description

Owner / Developer:	135 Bremen Street LLC
Architect:	Neshamkin French Architects Inc 5 Monument Square, Charlestown MA 02129
Engineer (building systems):	Sergio Siani Norian Siani Engineering
Sustainability / LEED:	Jillian Wiedenmayer, LEED AP+
Permitting:	Office of Jeffrey Drago, Attorney
Construction Management:	NA

Project Permitting and Phase

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

☑ PNF / Expanded PNF	Draft / Final Project Impact Report	

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)	*Accessory Retail Space, Parking on Bremen Street, Residential entrance on Porter Street. At rear of building is East Boston Greenway and sitting area and free bicycle repair as part of the complex.*			

What is the Construction Type – select most appropriate type?

	Wood Frame	Masonry	***Steel Frame***	Concrete

Describe the building?

Site Area:	35,998 SF	Building Area:	Approx. 126,189 GSF
Building Height:	66 feet at Bremen Street	Number of Stories:	5 with Garage area on first and Basement floors.
First Floor Elevation:	117.6.	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.	135 Bremen Street is located in East Boston, off the East Boston Greenway and across Bremen Street from a strip of 3 - 4 story existing residences. The urban context that surrounds the site is a mix of residential and commercial. The majority of buildings range from 3 to 8 stories. The East Boston Greenway is a linear park located along the old railroad right-of-way, connecting neglected portions of East Boston's historic waterfront to Piers Park, the Boston Park's stadium and two urban marshes.
List the surrounding ADA	**Affordable/Public Housing:** Woodbury Cunard Apts./ Victory Gardens/Shore Plaza/Noble House/Lewis Mall

compliant MBTA transit lines and the proximity to the development site: Commuter rail, subway, bus, etc. The surrounding institutions: hospitals, public housing and elderly and disabled housing developments, educational facilities, etc.	Apts./Landfall West Apts./Barnes School Elderly/Brandywine Village/ Orient Point Public Housing **YMCA East Boston Branch** **School:** E Boston Montessori/Patrick J Kennedy School/E Boston Early Education/Sam Adams Elementary/Umana Academy/E Boston Central Catholic/Curtis Guild Elementary/East Boston HS **Public Library:** East Boston Public Library Branch365 Bremen, **Community Center:** East Boston Neighborhood Social Centers Center/Crossroads Center **Police:** District Station East Boston. 69 Paris Street **Fire:** 4 Stations Engine 5, Saratoga Street/ Engine 56 Ashley Street/ Engine 9, Sumner Street Massport Harborside Drive **Hospitals:** East Boston Neighborhood Health Center, 10 Gove Street
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.	Site is located adjacent (0.35 miles) to the Maverick MBTA Station that links the site to major Boston public facilities. It also has access (.25miles) to The Logan Airport MBTA stop. Both are accessible. Bus routes: 114 Bellingham Square/116Wonderland Beach Street/120 Orient Heights/121/Wood Island

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, an existing sidewalk abuts the project site on Porter Street. The existing sidewalk includes pedestrian ramps.
If yes above, list the existing sidewalk and pedestrian ramp materials and physical condition at the development site.	The existing sidewalk material is concrete with granite curbing. The physical condition of the existing concrete sidewalk and pedestrian ramps is fair.
Are the sidewalks and pedestrian ramps existing-to-remain? If yes,	Yes, sidewalks and ramps at street crossings.

have the sidewalks and pedestrian ramps been verified as compliant? If yes, please provide surveyors report.	
Is the development site within a historic district? If yes, please identify.	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	No
If yes above, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, and Boulevard.	
What is the total width of the proposed sidewalk? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone.	The sidewalk width varies from approximately 5 feet to 14 feet (including the curb) depending on the location in the project. The majority of the project has a pedestrian zone adjacent to a planted area. Existing street furnishing including street lights sit within the existing pedestrian zone. There are no exiting sidewalks on the Project side of Bremen Street
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?	The paving material for the pedestrian zone will be poured in place concrete. The majority of the pedestrian zone will reuse the existing concrete sidewalk and is in the City of Boston right-of-way. A portion of the walkway in front of the apartment building will be within private property.
If the pedestrian right-of-way is on private property, will the proponent seek a pedestrian easement with the City of Boston Public	No

Improvement Commission?	
Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way?	NA
If yes above, what are the proposed dimensions of the sidewalk café or furnishings and what will the right-of-way clearance be?	NA

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?	126 spaces
What is the total number of accessible spaces provided at the development site?	5 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?	Accessible parking is located across the street on Bremen Street.
Has a drop-off area been identified? **If yes,** will it be accessible?	Yes, there is an accessible loading and drop off area at the Main entrance on Bremen Street.
Include a diagram of the accessible routes to and from the accessible parking lot/garage and drop-off areas to the development entry	See attached drawings

locations. Please include route distances.	

Circulation and Accessible Routes:

The primary objective in designing smooth and continuous paths of travel is to accommodate persons of all abilities that allow for universal access to entryways, common spaces and the visit-ability* of neighbors.

**Visit-ability – Neighbors ability to access and visit with neighbors without architectural barrier limitations*

Provide a diagram of the accessible route connections through the site.	See attached drawings.
Describe accessibility at each entryway: Flush Condition, Stairs, and Ramp Elevator.	Flush Condition at all entryway locations. This will enable access and promote "Visit-ability". The apartment building is serviced by an elevator and flush condition at the entryway. All common areas are accessible and all units will have good "Visit-ability".
Are the accessible entrance and the standard entrance integrated?	Yes
If no above, what is the reason?	
Will there be a roof deck or outdoor courtyard space? If yes, include diagram of the accessible route.	Yes, the outdoor courtyard on first floor will be accessible. See attached drawing.
Has an accessible routes way-finding and signage package been developed? If yes, please describe.	None are in place currently. All future way finding signage will be developed to meet Building Code and Accessibility Board Requirements

Accessible Units: (If applicable)

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

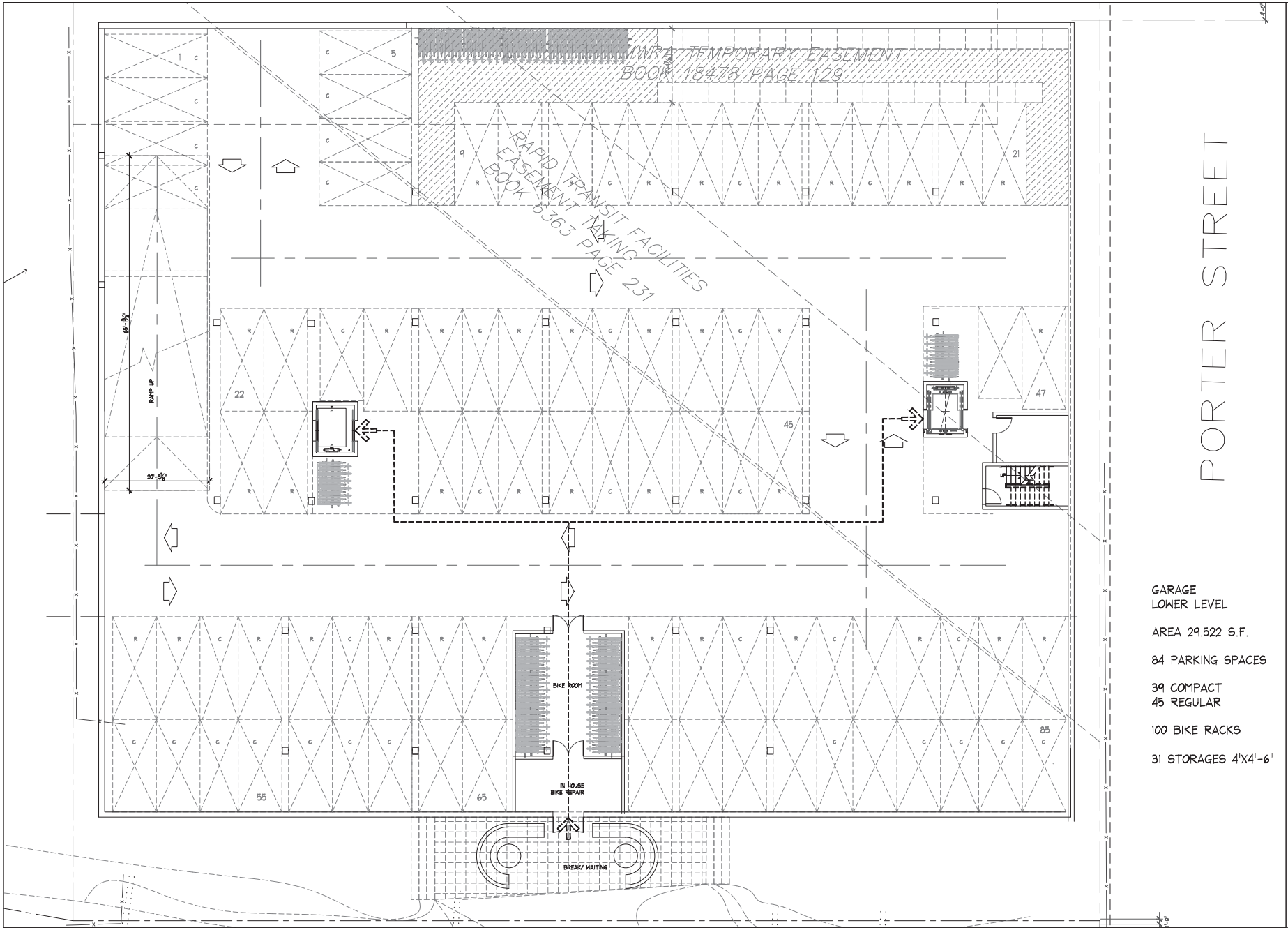
What is the total number of proposed units for the development?	94 units
How many units are for sale; how many are for rent? What is the market value vs. affordable	94 rentals

breakdown?	
How many accessible units are being proposed?	5
Please provide plan and diagram of the accessible units.	See attached drawing,
How many accessible units will also be affordable? If none, please describe reason.	2
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.	No
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?	

Thank you for completing the Accessibility Checklist!

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

kathryn.quigley@boston.gov | Mayors Commission for Persons with Disabilities



GARAGE
LOWER LEVEL

AREA 29.522 S.F.

84 PARKING SPACES

39 COMPACT
45 REGULAR

100 BIKE RACKS

31 STORAGES 4'X4'-6"

135 BREMEN ST.

BOSTON, MA

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5 Monument Square tel.617.242.7400
Charlestown, MA. 02129 fax.617.242.7424

PROGRESS
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Drawn By:	
Checked By:	
Date:	03/06/14

Revisions

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File Name:	

Drawing Title:
GARAGE
LOWER LEVEL

Sheet No. A-100

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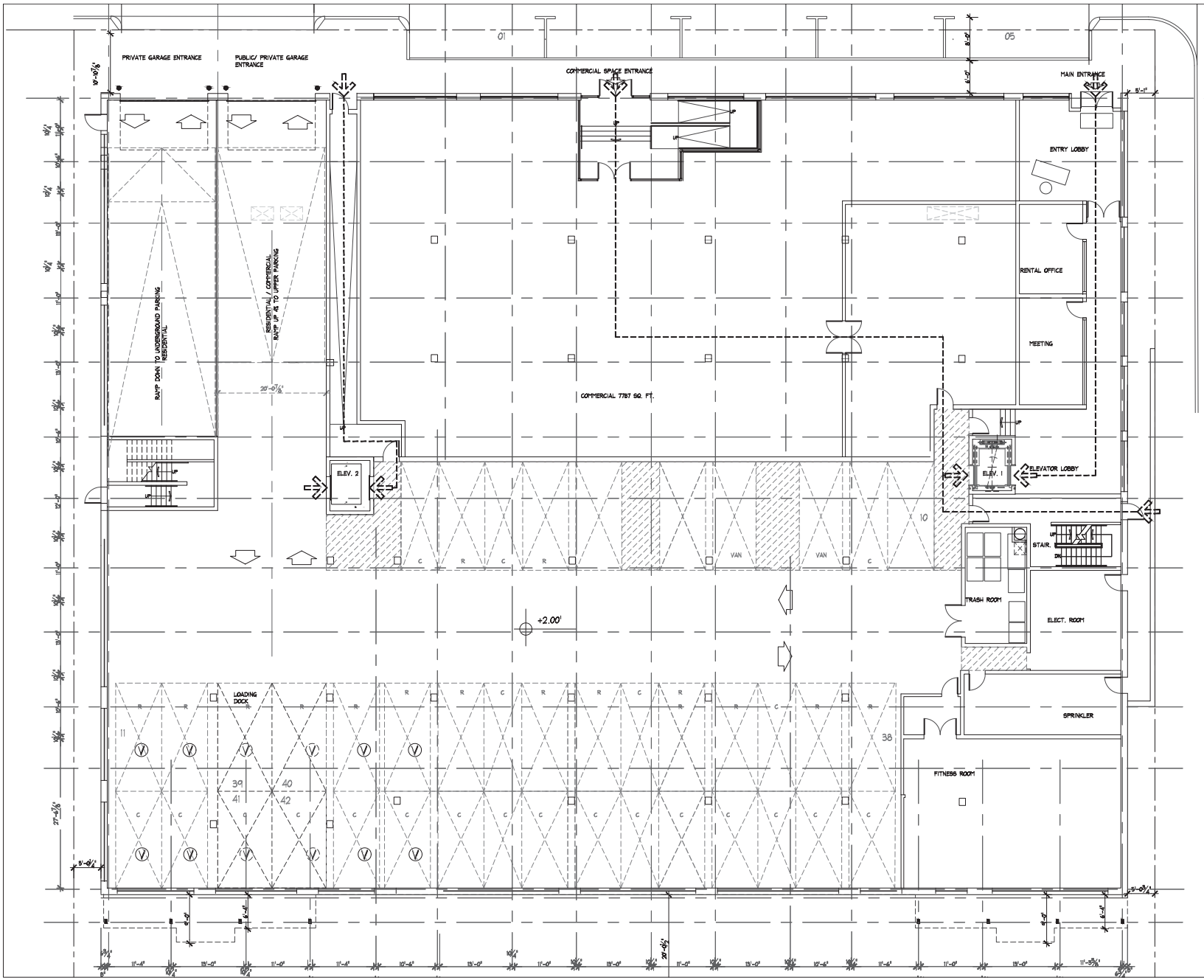

GARAGE

UPPER LEVEL
AREA 29,230 S.F.

COMMERCIAL 8350 S.F
.
38 PARKING SPACES
RESIDENTIAL/
COMMERCIAL
SEPARATE ENTRANCE

20 COMPACT
17 REGULAR
5 HC
(12 VALET SPACES
INCLUDED)

FITNESS ROOM W/
STORAGE -1700 S.F.

MEETING ROOM-
385 S.F.

135 BREMEN ST.

BOSTON, MA

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File Name:	

Drawing Title:

GARAGE
UPPER LEVEL

Sheet No. A-101A

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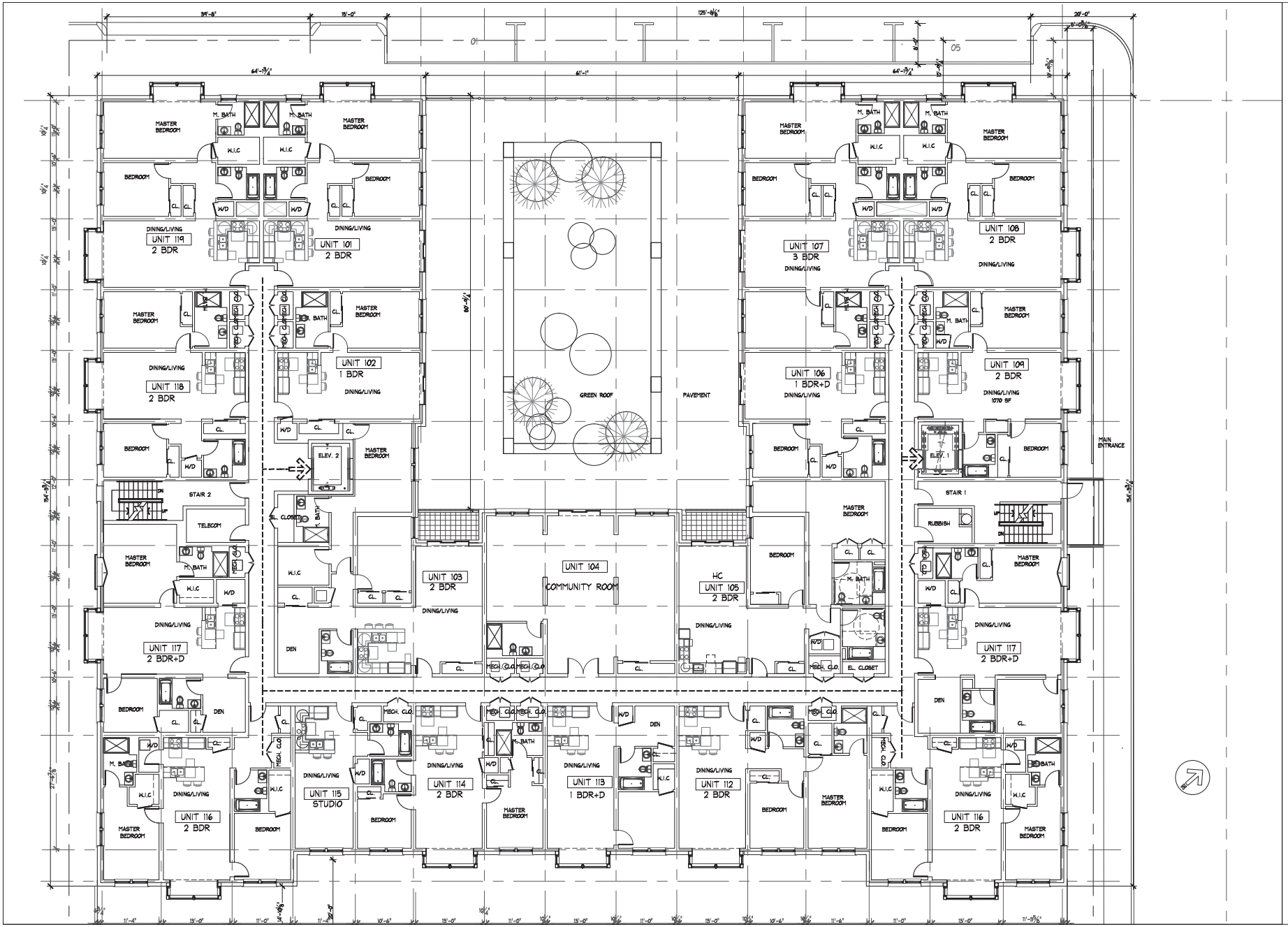

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Project No.	1309
File Name:	

Drawing Title:

FIRST RESIDENTIAL FLOOR

Sheet No. A-101

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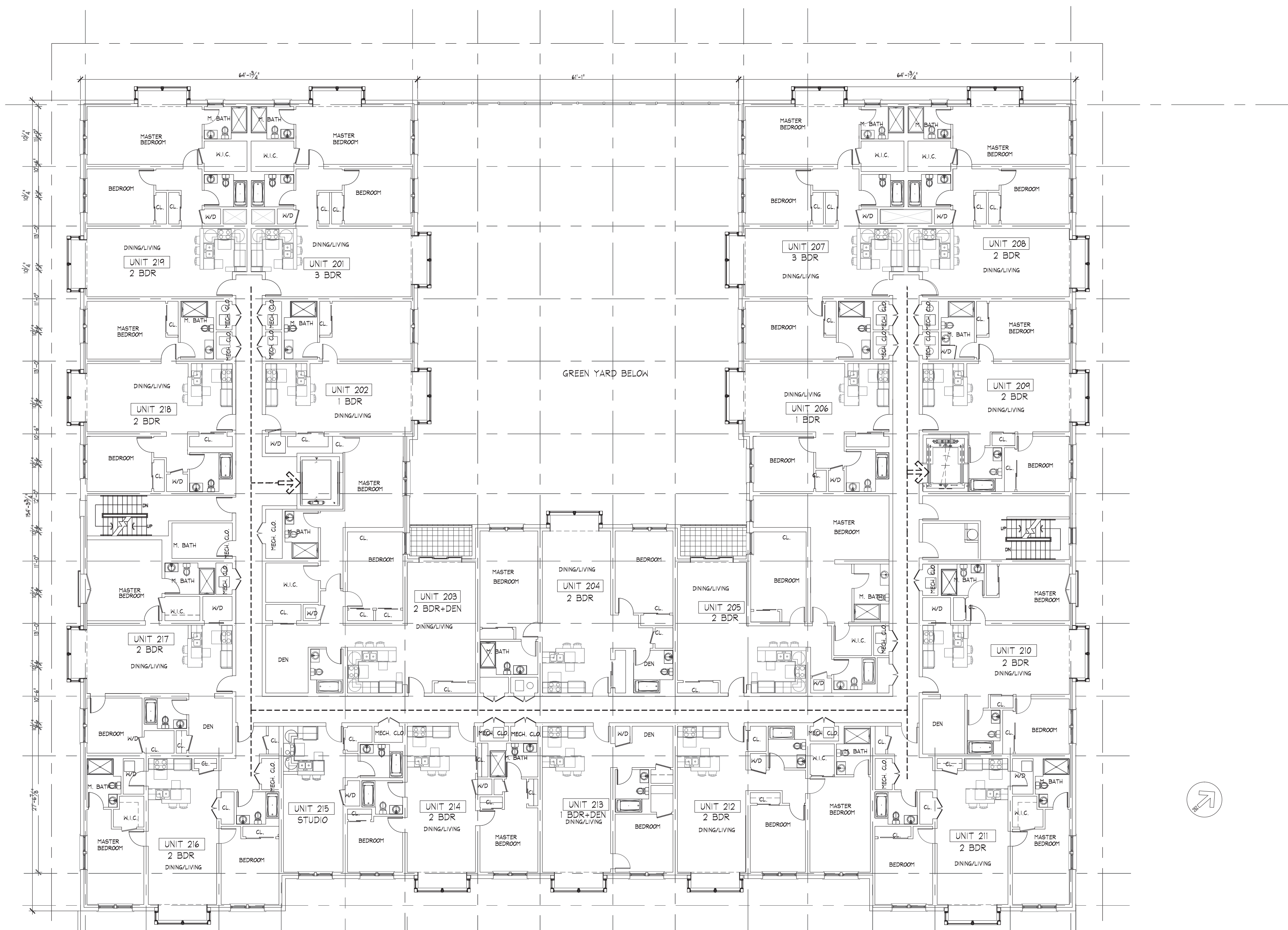

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Date: 03/06/14

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Project No. 1309

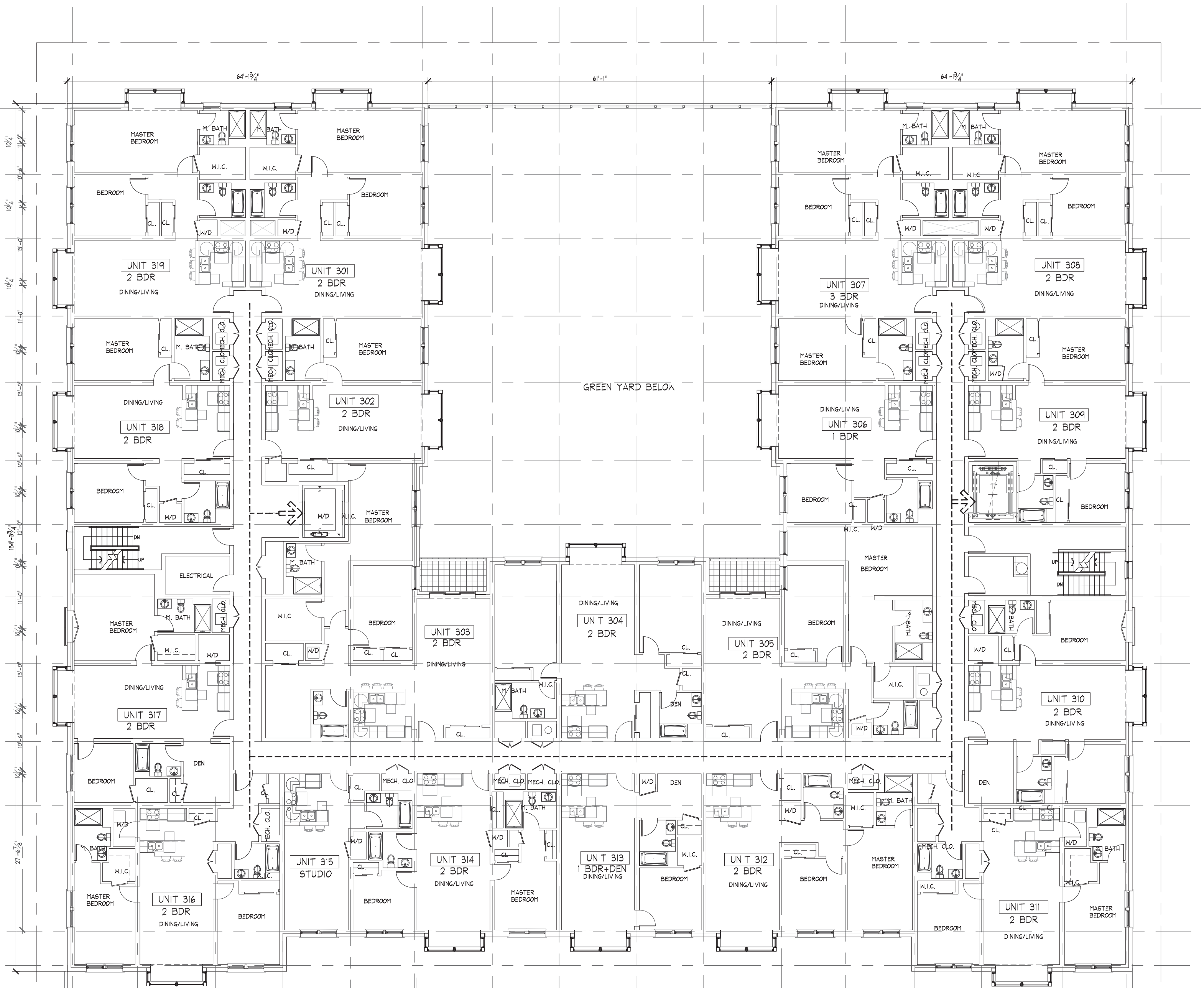
File Name:

Drawing Title:

SECOND RESIDENTIAL FLOOR

Sheet No. A-102

Scale:



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Date: 03/06/14
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Project No. 1309
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Drawing Title: THIRD RESIDENTIAL FLOOR

Sheet No. A-103
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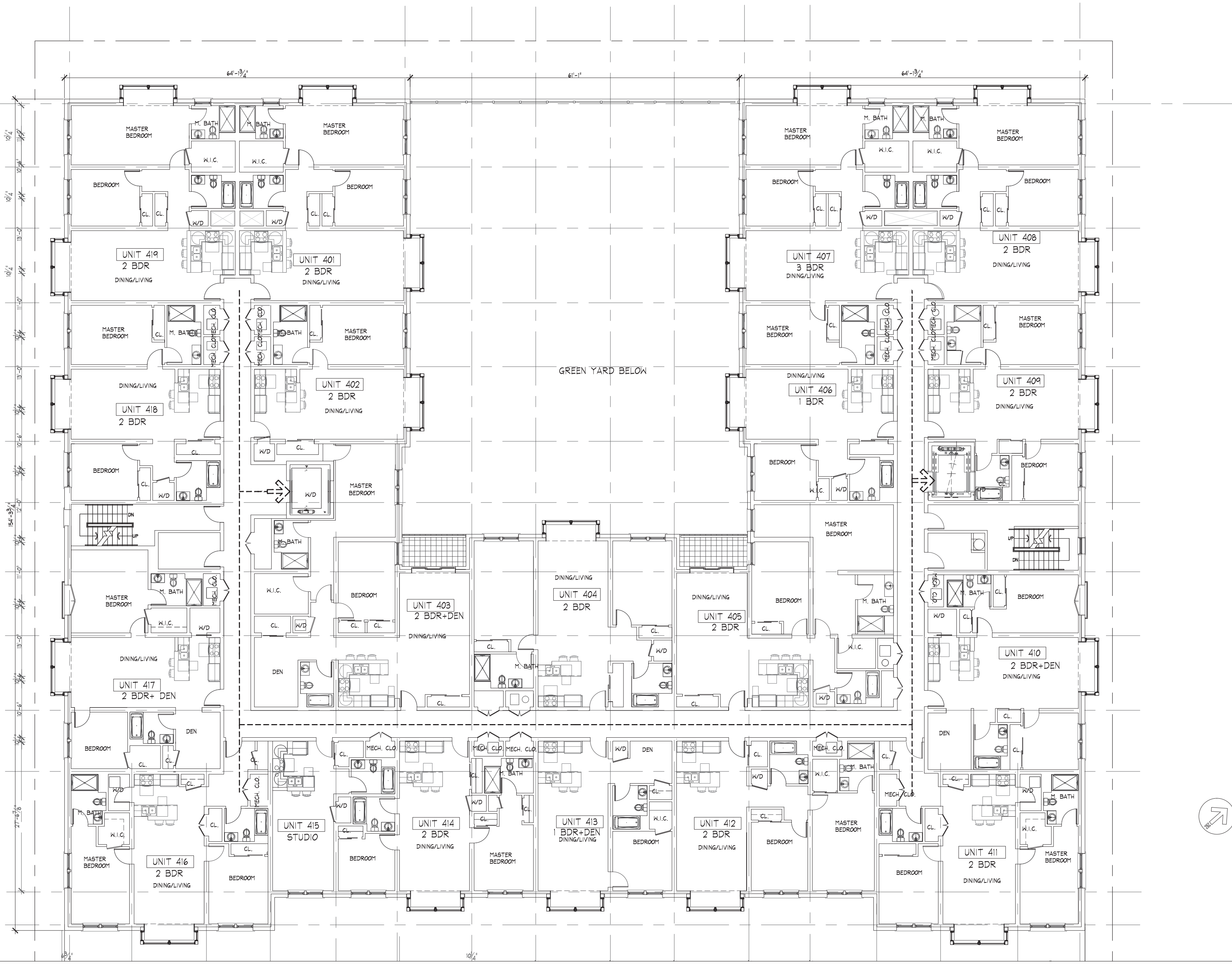

135 BREMEN ST.

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Project No. 1309
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Drawing Title: FOURTH RESIDENTIAL FLOOR

Sheet No. A-104
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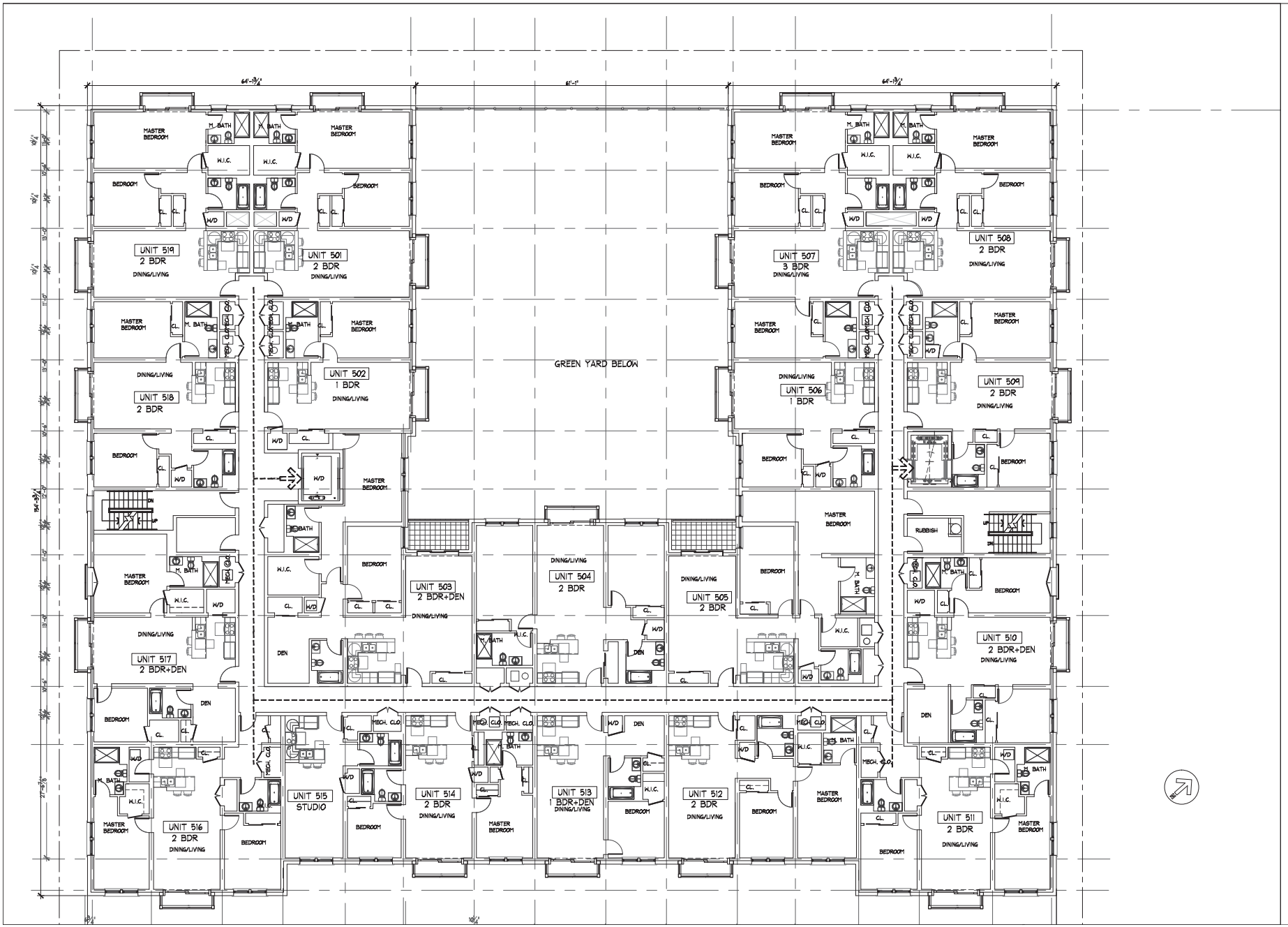

135 BREMEN ST.

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Drawing Title:

FIFTH RESIDENTIAL FLOOR

Sheet No. A-105
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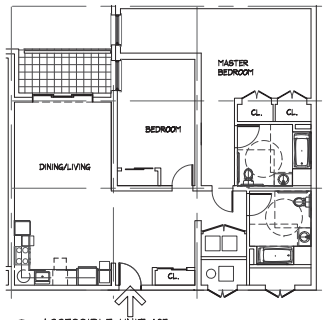

1 ACCESSIBLE UNIT 105
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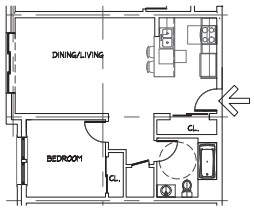

2 ACCESSIBLE UNIT 106
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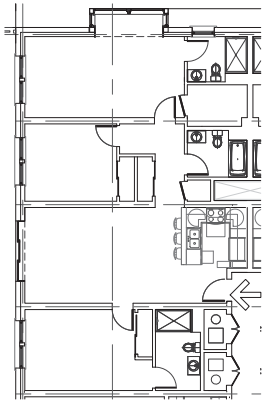

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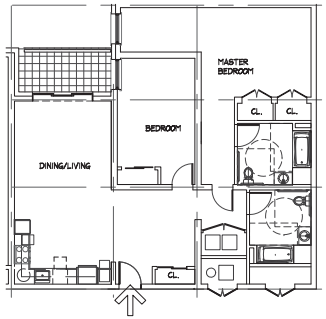

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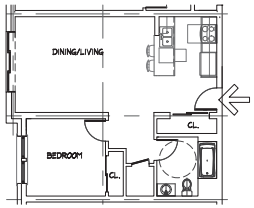

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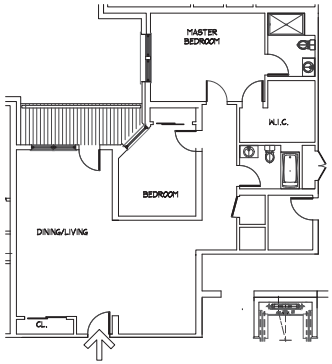
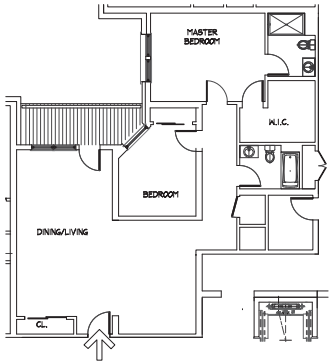


6 H.I. ACCESSIBLE UNIT 306
SCALE: 1/8" = 1'-0"



7 H.I. ACCESSIBLE UNIT 405
SCALE: 1/8" = 1'-0"

135 BREMEN ST.

BOSTON, MA

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ACCESSIBLE UNITS

Sheet No.

Scale:

APPENDIX E – DRAFT OF BOSTON GREEN BUILDING REPORT

Green Building Report

Submitted Pursuant to Article 37 of the Boston Zoning Code

135 BREMEN STREET

Boston, MA 02128

Submitted to:

BOSTON REDEVELOPMENT AUTHORITY
One City Hall Square
Boston, MA 02201

Submitted by:

Neshamkin French Architects

1.0 Project Introduction

The 135 Bremen Street Building is located off of the East Boston Greenway on Bremen Street between Gove Street and Porter Street on a 35,998 square foot site. The East Boston Greenway is a linear park planned along the old railroad right-of-way, connecting neglected portions of East Boston's historic waterfront to the Piers Park, the Boston Parks stadium and two Urban Marshes

Our team is committed to incorporating environmentally sensitive, sustainable design elements into the 135 Bremen Street Building. These elements will improve the quality of life for the residents of this project as well as the neighborhood, while helping to protect the global environment. Ultimately they will also reduce operating costs while increasing value of the project, improving its business viability.

The proponent has set proactive goals to ensure an undertaking that is LEED Silver certifiable, at a minimum, and satisfies the requirements of the City of Boston Environment Department, and has assembled an architectural and engineering team familiar with implementing these goals. Neshamkin French Architects, Inc.'s own LEED accredited personnel is working in concert with innovative LEED accredited engineers (mechanical, electrical and plumbing engineers.) to meet these goals. In addition, the team will actively involve the selected contractor in turning this commitment into reality.

The Owner and Project Team are seeking to comply with the requirements of Article 37 of the Boston Zoning Code and Article 80 Development Review and Approval.

2.0 Project Information

Site	35,998 SF
Residential Space	94 Units
Commercial Space	7.790 SF
Commercial Space Percentage	.6%
Building Footprint	29,638 SF
Gross Square Footage	126,189 SF
Bike Racks	100 (1 per unit)

3.0 LEED 2009 Checklist for New Construction and Major Renovations

See attached sheet.

4.0 Explanatory Narrative for 135 Bremen Street Building

Sustainable Sites

SS Prerequisite 1.0 – Construction Activity Pollution Prevention ***Required***

Create and implement an erosion and sediment control plan for all construction activities associated with the project. The plan must conform to the erosion and sedimentation requirements of the 2003 EPA Construction General Permit OR local standards and codes, whichever is more stringent. The plan must describe the measures implemented to accomplish the following objectives:

- Prevent loss of soil during construction by stormwater runoff and/or wind erosion, including protecting topsoil by stockpiling for reuse.
- Prevent sedimentation of storm sewers or receiving streams.
- Prevent pollution of the air with dust and particulate matter.

The project will meet the NPDES requirements and will provide an erosion control plan in the permit submission.

SS Credit 1.0 - Site Selection ***1 pt***

Do not develop buildings, hardscape, roads or parking areas on portions of sites that meet any of the following criteria:

- Prime farmland as defined by the U.S. Department of Agriculture, Citation 7CFR657.5.
- Previously undeveloped land whose elevation is lower than 5 feet above the elevation of 100-year flood as defined by FEMA.
- Land specifically identified as habitat for any species on federal or state threatened or endangered lists.
- Land within 100 feet of any wetlands as defined by the U.S. code of Federal Regulations.
- Previously undeveloped land that is within 50 feet of a water body, as consistent with the terminology of the Clean Water Act.
- Land that prior to acquisition for the project was public parkland.

The project will meet the above requirements. The development does not propose to build in any of the above locations.

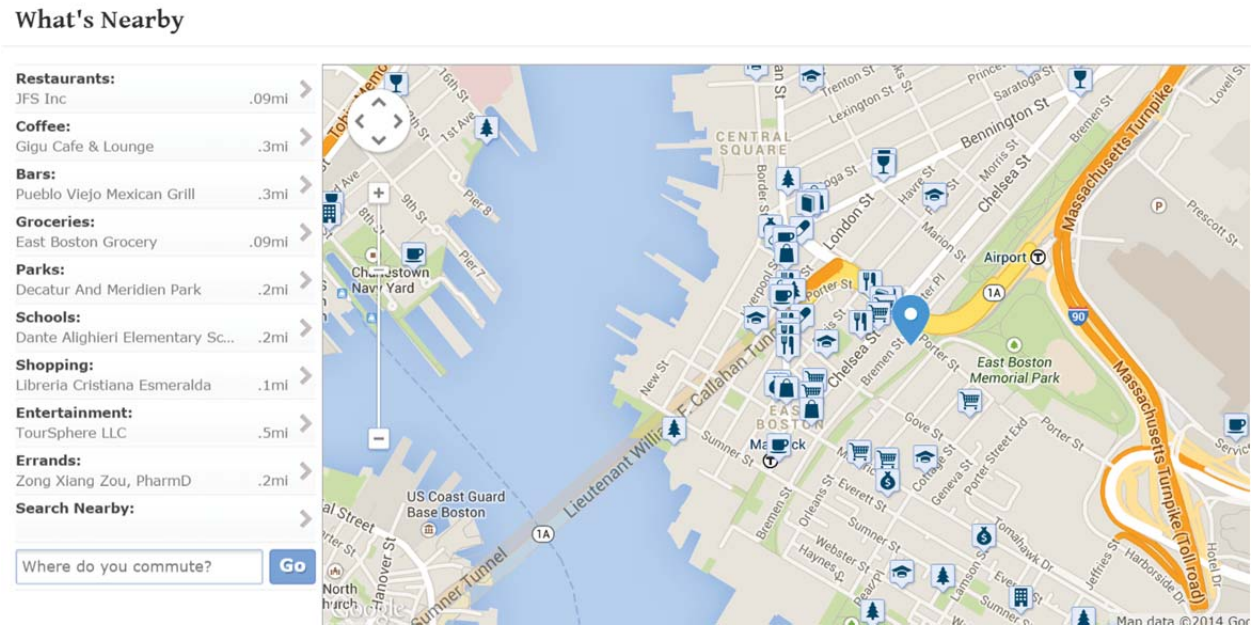
SS Credit 2.0 – Development Density and Community Connectivity ***5 pts***

OPTION 2: Community Connectivity

Construct or renovate a building on a site that channels development to urban areas with existing infrastructure, protects greenfields, and preserves habitat and natural resources.

The project will meet the above requirements. The development meets the following criteria:

- *Is located on a previously developed site*
- *Is within ½ mile of a residential area*



- *Is within ½ mile of 10 basic services*
- *Has pedestrian access between building and services*

SS Credit 3.0 – Brownfield Redevelopment ***0 pts***

Rehabilitate damaged sites where development is complicated by environmental contamination and to reduce pressure on undeveloped land.

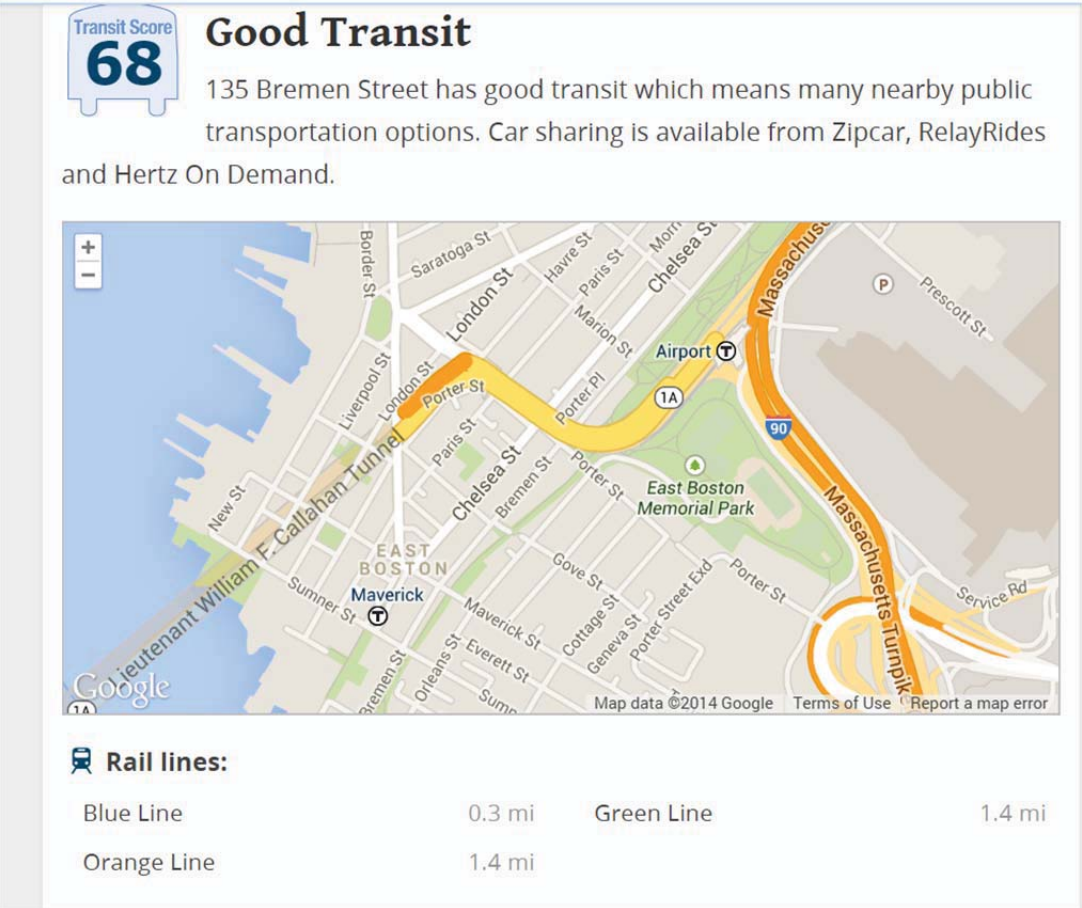
The project will not be able to meet the requirements of this credit. Site is not a brownfield.

SS Credit 4.1 – Alternative Transportation – Public Transportation Access ***6pts***

OPTION 2: Bus Stop Proximity

Reduce pollution and land development impacts from automobile use by locating project within close proximity to public transportation systems.

The project will meet the requirements of this credit. The development is located less than ½ mile walking distance from the Airport T Stop on the Blue Line.



SS Credit 4.2 – Alternative Transportation – Bicycle Storage and Changing Rooms ***1 pt***

CASE 2: Residential Projects
Provide covered storage facilities for securing bicycles for 15% of more of building occupants.

The project will meet the requirements of this credit. Building contains space for 178 residents and underground storage space for 100 bicycles. Therefore providing bicycle storage for 56% of inhabitants.

SS Credit 4.3 – Alternative Transportation – Low-Emitting and Fuel-Efficient Vehicles **3 *pt***

Provide preferred parking for low-emitting and fuel efficient vehicles for 5% of the total vehicle parking capacity of the site.

The project will meet the requirements of this credit. Underground parking for building will contain 126 spots total. There will be 7 preferred parking spots for low-emitting and fuel efficient vehicles that will be places adjacent to handicap spots.

SS Credit 4.4 – Alternative Transportation – Parking Capacity **2 *pts***

CASE 2, OPTION 1:
Size parking capacity to meet but not exceed local zoning requirements. Provide infrastructure and support programs to facilitate shared vehicle use such as carpool drop-off areas, designated parking for vanpools, car-share services, ride boards and shuttle services to mass transit.

Current zoning requires 126 parking spaces. The project will meet these above requirements in addition to implementing programs to encourage carpooling, such as rideshare matching services, preferred parking for carpools, reduced parking costs for carpool, and commute awards programs.

SS Credit 5.1 – Site Development – Protect and Restore Habitat ***1 pt***

CASE 2: Previously Developed Areas or Graded Sites
Restore or protect a minimum of 50% of the site (excluding building footprint) or 20% of the total site area, whichever is greater, with native or adaptive vegetation. Projects earning SS Credit 2: Development Density and Community Connectivity may include vegetated roof surface in this calculation if the plans are native or adapted, provide habitat, and promote biodiversity.

The project will meet the above requirements.

Site (excluding project footprint):	*6360 SF*
Restored Greenspace on site:	*5915 SF*
Vegetated Roof surface:	*1734 SF*
Total percentage or restored habitat:	*120%*

SS Credit 5.2 – Site Development – Maximize Open Space ***0 pts***

CASE 1: Sites with Local Zoning Open Space Requirements

Reduce the development footprint and/or provide vegetation open space within the project boundary such that the amount of open space exceeds local zoning requirements by 25%.

Local zoning of Subdistrict CE in East Boston currently requires a only minimum rear yard size of 20 ft. The project meets this requirement by providing20ft and 3994 sq ft in the rear yard of the building. It also provides an additional 3655 sq ft of open space on the site – exceeding requirement by 90%.

SS Credit 6.1 – Storm Water Design – Quality Control ***1 pt***

CASE 1: Sites with Existing Imperviousness 50% or less

Implement a stormwater management plan that prevents the post development peak discharge rate and quantity from exceeding the predevelopment peak discharge rate and quantity for the 1-year and 2-year 24 hour design storms.

The project will meet the above requirements by providing a stormwater management plan that maintains natural stormwater flows and promotes infiltration. This will be accomplished by specifying roofs, pervious paving and other measures to minimized impervious surfaces.

SS Credit 6.2 – Storm Water Design – Quality Control ***1 pt***

Implement a stormwater management plan that reduces impervious cover, promotes infiltration and captures and treats the stormwater runoff from 90% of the average annual rainfall using acceptable best management practices.

The project will meet the above requirements by implementing a stormwater management plan that reduces stormwater runoff from 90% of the average annual rainfall. The stormwater management plan will use alternatives surfaces and nonstructural techniques to reduce imperviousness and promote infiltration, as well as use sustainable design strategies to treat stormwater runoff.

SS Credit 7.1 – Heat Island Effect – Non-Roof ***1 pt***

OPTION 2: Place a minimum of 50% or parking spaces under cover. Any roof used to shade or cover parking must have an SRI of at least 29, be a vegetated green roof or be covered by solar panels that produce energy used to offset some nonrenewable resource use.

The project will meet the requirements above by placing 100% of parking spaces underground. Parking roof will be covered by either vegetated roof or a structure with an SRI of at least 29. Manufacturer's cut sheets showing SRI value will be included in the construction submission.

SS Credit 7.2 – Heat Island Effect – Roof ***1 pt***

Use roofing materials with a SRI equal to or greater than 29 for a minimum of 75% of the roof surface.

The project will meet the requirements above. 5% of the roof surface will be dedicated to vegetation, while the rest will use roofing materials with an SRI equal or greater than 29. Manufacturer's cut sheets showing SRI value will be included in the construction submission.

SS Credit 8.0 – Light Pollution Reduction ***1 pt***

Project teams must comply with interior and exterior lighting requirements to minimize light trespass from the building and site, reduce sky-glow to increase night sky access, improve nighttime visibility through glare reduction and reduce development impact from lighting on nocturnal environments.

The development proposes to meet credit requirements by implementing the following strategies:
Interior Lighting: The project will reduce the input power of all nonemergency interior luminaries with direct line of site to any openings in the envelope by at least 50% between 11p.m. and 5 a.m.
Exterior Lighting: The project will design exterior lighting so that all site and building mounted luminaires produce a maximum initial luminance value no greater than 0.10 horizontal and vertical foot candles at the site boundary and no greater than 0.10 horizontal foot candles 10 feet beyond the site boundary. Document no more than 2% of the total initial design fixture lumens (sun total of all fixtures on site) are emitted at an angle of 90 degrees of higher from nadir.

WATER EFFICIENCY

WE Prerequisite 1.0 – Water use Reduction – 20% Reduction ***Required***

Employ strategies that in aggregate use 20% less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements.

The project will meet the requirements above by using all low-flow fixtures and fittings. In comparison to the baseline water fixtures (2006 International Plumbing Code, Fixture Performance), using a .5 GPM lavatory sink, 1.5 GPM shower, 1.0 GPM kitchen sink and 1.28 GPF for water closet, the project is calculated to achieve a 48% reduction in water usage.

WE Credit 1.0 – Water Efficient Landscaping ***2 pts***

OPTION 1:

Reduce potable water consumption for irrigation by 50% from a calculated midsummer baseline case. Reductions must be attributed to any combination of the following items:

- Plant species, density, and microclimate factor
- Irrigation efficiency
- Use of captured rainwater
- Use of recycled wastewater
- Use of water treated and conveyed by a public agency specifically for nonpotable uses

The project will meet the above requirements above through high-efficiency drip irrigation.

WE Credit 2.0 – Innovative Wastewater Technologies **2 pts**

Reduce wastewater generation and potable water demand while increasing the local aquifer recharge.

OPTION 1

Reduce potable water use for building sewage conveyance by 50% through the use of water conserving fixtures (e.g. water closets, urinals) or nonpotable water (e.g. captured rainwater, recycled graywater, on-site or municipally treated wastewater).

The project will meet the requirements of this credit by specifying high-efficiency fixtures to reduce wastewater volumes.

WE Credit 3.0 – Water Use Reduction **4 pts**

Employ strategies that in aggregate use less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements.

The project will meet the above requirements. The 135 Bremen Street Building will be designed to accomplish at least a 40% reduction in water use from the baseline. In comparison to the baseline water fixtures (2006 International Plumbing Code, Fixture Performance), using a .5 GPM lavatory sink, 1.5 GPM shower, 1.0 GPM kitchen sink and 1.28 GPF for water closet, the project is calculated to achieve a 48% reduction in water usage.

ENERGY AND ATMOSPHERE

E&A Prerequisite 1.0 – Fundamental Commissioning of Building Energy Systems **Required**

Verify that the project's energy-related systems are installed, and calibrated to perform according to the owner's project requirements, basis of design and construction documents.

1.) Designate an individual as the commissioning authority (CxA) to lead, review and oversee the completion of the commissioning process activities.

- The CxA must report results, findings and recommendations directly to the Owner.

- For projects smaller than 50,000 gross square feet, the CxA may include qualified persons on the design or construction teams who have the required experience.

2.) The Owner must document the Owner's Project Requirements (OPR). The design team must develop the Basis of Design (BOD). The CxA must review these documents for clarity and completeness. The Owner and design team must be responsible for updates to their respective documents.

3.) Develop and incorporate commissioning requirements into the construction documents.

4.) Develop and implement a commissioning plan.

5.) Verify the installation and performance of the systems to be commissioned.

6.) Complete a summary commissioning report.

The project will meet the above requirements. Commissioning process activities will be completed for the following energy-related systems, at a minimum:

- Heating, ventilating, air conditioning and refrigeration (HVAC&R) systems (mechanical and passive) and associated controls.

- Lighting and daylighting controls.

- Domestic hot water systems.

(Renewable energy systems do not apply for this project)

E&A Prerequisite 2.0 – Minimum Energy Performance ***Required***

Demonstrate a 10% percentage improvement in the proposed building performance rating compared with the baseline building performance rating. Calculate the baseline building performance according to Appendix G of ANSI/ASHRAE/IESNA Standard 90.1-2007 (with errata but without addenda) using a computer simulation model for the whole building project.

The project is targeting a minimum of 25% reduction per ASHRAE 90.1-2007, an energy model will be run in DD along with an utility incentive analysis to determine exact savings.

E&A Prerequisite 3.0 – Fundamental Refrigerant Management ***Required***

Zero use of CFC-based refrigerants in new base building HVAC&R and fire suppression systems. When reusing existing base building HVAC equipment, complete a comprehensive CFC phase-out conversion prior to project completion. Phase-out plans extending beyond the project completion date will be considered on their merits.

The project will meet the above requirements. The project is designed to use low emitting refrigerants that do not contain a CFC-base.

E&A Credit 1.0 – Optimize Energy Performance **7 *pts***

Demonstrate a percentage improvement in the proposed building performance rating compared with the baseline building performance rating. Calculate the baseline building performance according to Appendix G of ANSI/ASHRAE/IESNA Standard 90.1-2007 (with

errata but without addenda) using a computer simulation model for the whole building project.

The project is targeting a minimum of 25% reduction per ASHRAE 90.1-2007, an energy model will be run in DD along with an utility incentive analysis to determine exact savings.

E&A Credit 2.0 – On-Site Renewable Energy ***0 pts***

Use on-site renewable energy systems to offset building energy costs. Calculate project performance by expressing the energy produced by the renewable systems as a percentage of the building's annual energy cost.

The project will evaluate the ability to incorporate solar into the project.

E&A Credit 3.0 – Enhanced Commissioning ***0 pts***

Implement, or have a contract in place to implement, the commissioning process early in the design process and execute additional activities after systems performance verification is complete.

The project will meet the perquisite commissioning to this credit. Further analysis will be need to verify that project is able to meet the enhanced commissioning requirements.

E&A Credit 4.0 – Enhanced Refrigerant Management ***2 pts***

OPTION 2
Select refrigerants and HVAC equipment that minimizes the emission of compounds that contribute to ozone depletion and climate change. The base building HVAC&R equipment must comply with the following formula, which sets a maximum threshold for the combined contributions to ozone depletion and global warming potential:

- LCGWP + LCODP X 10^5 </= 100

The project will use low-emitting refrigerants and high-efficiency HVAC equipment that meets the above requirements

E&A Credit 5.0 – Measure and Verification ***0 pts***

Provide for the ongoing accountability of building energy consumption over time. Measurement and verification period must cover at least 1 year of post-construction occupancy. Provide a process for a corrective action if the results of the measurement and verification plan indicate that energy savings are not being achieved.

Project will measure and document energy data. Further analysis will be required to verify that project is able to meet credit requirements.

E&A Credit 6.0 – Green Power ***0 pts***

Engage in at least a 2-year renewable energy contract to provide at least 35% of the building's electricity from renewable sources, as defined by the Center for Resource Solutions' Green Energy product certification requirements.

The project is not pursuing this credit.

MATERIALS AND RESOURCES

M&R Prerequisite 1.0 – Storage and Collection of Recyclables ***Required***

Provide an easily accessible area that serves the entire building and is dedicated to the collection and storage of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics and metals.

The project will meet the above requirements. The 135 Bremen Street Building will have a dedicated recycling area as a part of the trash collection for the building. The project at a minimum is collecting paper, corrugated cardboard, glass, plastics and metals.

M&R Credit 1.1 – Building Reuse – Maintain Existing walls, Floors & Roof ***0 pts***

Maintain the existing building structure (including structural floor and roof decking) and envelope (exterior skin and framing).

The project will not be able to meet the requirements of this credit.

M&R Credit 1.2 – Maintain 50% of Interior Non-Structural Elements ***0 pts***

Use existing interior non structural elements in at least 50% (by area) of the completed building, including additions.

The project will not be able to meet the requirements of this credit.

M&R Credit 2.0 – Construction Waste Management ***2 pts***

Recycle and/or salvage at least 50% of non-hazardous construction and demolition debris. Develop and implement a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials will be sorted on-site or co-mingled. Excavated soil and land-clearing debris do not contribute to this credit. Calculations can be done by weight or volume, but must be consistent throughout.

The project will meet the above requirements. The project will develop and implement a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials will be sorted on-site or co-mingled. The project is targeting a minimum of 75% diversion from landfill and incineration facilities.

M&R Credit 3.0 – Materials Reuse **0** ***pts***

Use salvaged, refurbished or reused materials, the sum of which constitutes at least 5% or 10%, based on cost, of the total value of materials on the project. Mechanical, electrical and plumbing components and specialty items such as elevators and equipment cannot be included in this calculation. Only include materials permanently installed in the project. Furniture may be included if it is included consistently in MR Credits 3–7.

The project will not be able to meet the requirements of this credit.

M&R Credit 4.0 – Recycled Content ***1 pts***

Use materials with recycled content such that the sum of post-consumer recycled content plus one half of the pre-consumer content constitutes at least 10% or 20%, based on cost, of the total value of the materials in the project. The recycled content value of a material assembly must be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value. Mechanical, electrical and plumbing components and specialty

items such as elevators must not be included in this calculation. Only include materials permanently installed in the project. Furniture may be included if it is included consistently in MR Credits 3–7.

The project will meet the above requirements. The 135 Bremen Street Building plans to use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% based on cost, of the total value of the materials in the project. Total materials cost and manufacturer's cut sheets showing recycled content will be included in the construction submission.

M&R Credit 5.0 – Regional Materials **1 *pt***

Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10%, based on cost, of the total materials value. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) must contribute to the regional value. Mechanical, electrical and plumbing components and specialty items such as elevators and equipment must not be included in this calculation. Only include materials permanently installed in the project. Furniture may be included, providing it is included consistently in MR Credits 3–7.

The project will meet the above requirements. The 135 Bremen Street Building plans to use building materials or products that have been extracted, harvested or recovered, and manufactured, within 500 miles of the project site, for at least 10% of the total materials value.

M&R Credit 6.0 – Rapidly Renewable Materials ***0 pt***

Use rapidly renewable building materials and products for 2.5% of the total value of all building materials and products used in the project, based on cost. Rapidly renewable building materials and products are made from agricultural products that are typically harvested within a 10-year or shorter cycle.

The project plans to use bamboo, marmoleum and agrifiber products for 2.5% of the materials used by the 135 Bremen Street Building. Further analysis will be needed to verify if project will be able to meet the requirements of this credit. If possible, cut sheets or project specs demonstrating compliance will be included in the construction submission.

M&R Credit 7.0 – Certified Wood ***0 pts***

Use a minimum of 50% (based on cost) of wood-based materials and products that are certified in accordance with the Forest Stewardship Council's principles and criteria, for wood building components. These components include at a minimum, structural framing and general dimensional framing, flooring, sub-flooring, wood doors and finishes.

The project is not pursuing this credit.

INDOOR ENVIRONMENTAL QUALITY

IEQ Prerequisite 1.0 – Minimum Indoor Air Quality Performance ***Required***

Meet the minimum requirements of Sections 4 through 7 of ASHRAE 62.1-2007.

CASE 1: Mechanical ventilation systems must be designed using the Ventilation Rate Procedure or the applicable local code, whichever is more stringent.

The project will meet the above requirements by designing mechanical systems mixed mode ventilation systems that meet or exceed the minimum outdoor air ventilation rates as described in the ASHRAE standard.

IEQ Prerequisite 2.0 – Environmental Tobacco Smoke (ETS) Control ***Required***

OPTION 1
Prohibit smoking in the building. Locate any exterior designated smoking areas at least 25 feet away from entries, outdoor air intakes and operable windows. Provide signage to allow smoking in designated areas. *Smoking is not permitted in any part of the building. There are no exterior smoking areas*

The project will meet the requirements above.

IEQ Credit 1.0 – Outdoor Air Delivery Monitoring **1 *pt***

Install permanent monitoring systems to ensure that ventilation systems maintain design minimum requirements. Configure all monitoring equipment to generate an alarm when airflow values or carbon dioxide (CO2) levels vary by 10% or more from the design values via either a building automation system alarm to the building operator or a visual or audible alert to the building occupants.

The project will install permanent monitoring systems to meet the requirements above.

IEQ Credit 2.0 – Increased Ventilation ***1 pt***

CASE 1: Mechanically Ventilated Spaces

Increase breathing zone outdoor air ventilation rates to all occupied spaces by at least 30% above the minimum rates required by ASHRAE Standard 62.1-2007 (with errata but without addenda1) as determined by IEQ Prerequisite 1: Minimum Indoor Air Quality Performance.

The project will meet the requirements above.

IEQ Credit 3.1 – Construction IAQ Management Plan- During Construction ***1 pt***

Develop and implement an Indoor Air Quality (IAQ) Management Plan for the construction and preoccupancy phases of the building as follows:

- During construction meet or exceed the recommended Control Measures of the SMACNA IAQ Guidelines for Occupied Buildings under Construction, 2nd edition 2007, ANSI/SMACNA 008-2008 (chapter 3).
- Protect stored on-site or installed absorptive materials from moisture damage.
- If permanently installed air handlers are used during construction, filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 must be used at each return air grille, as determined by ASHRAE 52.2-1999. Replace all filtration media immediately prior to occupancy.

The project will meet the above requirements. The 135 Bremen Street Building will follow all of the above requirements for implementing and documentation of SMACNA, and installation and replacement of filtration media prior to occupancy.

IEQ Credit 3.2 – Construction IAQ Management Plan- Before Occupancy ***1 pt***

Develop an IAQ management plan and implement it after all finishes have been installed and the building has been completely cleaned before occupancy.

OPTION 1, PATH 1

Flushout: Install new filtration media and supply a total air volume of 14,000 cubic feet of outdoor air per square foot of floor area while maintaining an internal temperature of at least 60°F and relative humidity no higher than 60%

The project will meet the requirements above. The project intends to perform a flush-out prior to occupancy.

IEQ Credit 4.1 – Low-Emitting Materials-Adhesive Sealants ***1 pt***

Adhesives and sealants used on the interior of the building (i.e. inside of the weatherproofing system and applied on-site) must comply with the following criteria:

- Adhesives, sealants and sealant primers must comply with the South Coast Air Quality Management District (SCAQMD) Rule #1168. VOC limits must be conforming to those listed in Reference Guide table.
- Aerosol Adhesives must comply with standards of Green Seal Standard for Commercial Adhesives, listed in Reference Guide table.

The project will meet the requirements above.

IEQ Credit 4.2 – Low-Emitting Materials-Paints and Coatings ***1 pt***

Paints and coatings used on the interior of the building (i.e. inside of the weatherproofing system and applied on-site) must comply with the following criteria:

- Architectural paints and coatings applied to interior walls and ceilings must not exceed the VOC content limits established in Green Seal Standard GS-11 Paints, 1st edition.
- Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates must not exceed the VOC content limit of 250 g/L established in Green Seal Standard GC-03, Anti-Corrosive Paints, 2nd edition.
- Clear wood finishes, floor coatings, stains, primers, and shellacs applied to interior elements must not exceed the VOC content limits established in South Coast Air Quality Management District (SCAQMD) Rule 113, Architectural Coatings.

The project will meet the requirements above.

IEQ Credit 4.3 – Low-Emitting Materials- Flooring Systems ***1 pt***

Reduce the quantity of indoor air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of installers and occupants.

The project will meet the requirements above.

IEQ Credit 4.4 – Low-Emitting Materials- Composite Wood and Agrifiber Products ***1 pt***

Composite wood and agrifiber products used in the interior of the building must contain no added urea-formaldehyde resins. Laminating adhesives used to fabricate on-site and shop-applied composite wood and agrifiber assemblies must not contain added urea-formaldehyde resins.

The project will meet the requirements above. The project plans to use agrifiber products and plywood on the 135 Bremen Street Building site. Project specs demonstrating compliance will be included in the construction submission.

IEQ Credit 5.0 – Indoor Chemical and Pollutant Source Control ***1 pt***

Design to minimize and control the entry of pollutants into buildings and later cross-contamination of regularly occupied areas.

- Employ permanent entryway systems at least 10 feet long in the primary direction of travel to capture dir and particles entering the building at regularly used exterior entrances

- Sufficiently exhaust each space where hazardous gases or chemicals may be present or used (e.g. garages, housekeeping and laundry areas, science laboratories, prep rooms, art shops, shops of any kind, and copying and printing rooms) to create negative pressure with respect to adjacent spaces when the doors to the room are closed.

- In mechanically ventilated buildings, install new air filtration media in regularly occupied areas prior to occupancy; these filters must provide a minimum efficiency reporting value (MERV) of 13 or higher. Filtration should be applied to process both return and outside air that is delivered as supply air.

- Provide containment (i.e. a closed container for storage for off-site disposal in a regulatory compliant storage area, preferably outside the building) for appropriate disposal of hazardous liquid wastes in places where water and chemical concentrate mixing occurs (e.g. housekeeping, janitorial and science laboratories).

The project will meet the requirements above by providing walk off mats in all entries of the building, storage area for appropriate disposal of hazardous liquid wastes, and air filtration media that has a value of MERV 13 or higher.

IEQ Credit 6.1 – Controllability of Systems – Lighting ***1 pt***

Provide individual comfort controls for 50% (minimum) of the building occupants to enable adjustments (for workspaces in school projects) to meet individual needs and preferences. Operable windows may be used in lieu of controls for occupants located 20 feet inside and 10 feet to either side of the operable part of a window.

AND

Provide comfort control systems for all shared multi-occupant spaces to enable adjustments that meet group needs and preferences. Conditions for thermal comfort are described in ASHRAE Standard 55- 2004.

The project will provide lighting controls for all the units and for the multi occupant spaces

IEQ Credit 6.2– Controllability of Systems – Thermal Comfort **1** ***pt***

Provide individual lighting controls for 50% (minimum) of the building occupants to enable adjustments to suit individual task needs and preferences.

AND

Provide lighting system controls for all group spaces, such as meeting rooms and fitness centers, to enable adjustments to suit group needs and preferences.

The project will meet the requirements above by providing unit controls to allow adjustments to suit individual needs – as detailed in ASHRAE Standard 55-2004 and ASHRAE Standard 62.1-2007.

IEQ Credit 7.1 – Thermal Comfort – Design ***1 pt***

Design HVAC systems and building envelope to meet the requirements of ASHRAE Standards 55-2004, Thermal Comfort Conditions for Human Occupancy. Demonstrates design compliance in accordance with the Section 6.1.1. documentation.

The project will meet the requirements above by designing the building envelop and systems to meet the comfort criteria established in ASHRAE Standards 55-2004 and will demonstrate compliance by evaluating the building system, air temperature, radiant temperature, air speed and relative humidity.

IEQ Credit 7.2 – Thermal Comfort – Verification ***0 pts***

Achieve EQc7.1. Provide a permanent monitoring system to ensure that building performance meets the desired comfort criteria as determined by IEQc7.1. Conduct a thermal comfort survey of building occupants within 6 to 18 months after occupancy. Develop a corrective action plan based on ASHRAE 55.

The project will not pursue this credit.

IEQ Credit 8.1 – Daylight and Views – Daylight ***1 pt***

OPTION 2. Prescriptive
Use a combination of side-lighting and/or top-lighting to achieve a total daylight zone that is at least 75% of all the regularly occupied spaces.

The project will pursue this credit. Further analysis and calculation will be finalized for construction submission.

IEQ Credit 8.2 – Daylight and Views – Views ***1 pt***

Achieve a direct line of sight to the outdoor environment via vision glazing between 30 inches and 90 inches (between 0.8 meters and 2.3 meters) above the finish floor for building occupants in 90% of all regularly occupied areas.

The project will meet the requirements above. Further evaluation will happen in CD.

INNOVATION IN DESIGN PROCESS

I&DP Credit 1.1 – 1.5 – Innovation in Design: Specific Title **4 *pts***

PATH ONE

Achieve significant, measurable environmental performance using a strategy not addressed in the LEED 2009 for New Construction and Major Renovations Rating System.

PATH TWO
Exemplary Performance
Achieve exemplary performance in an existing LEED 2009 for New Construction and Major Renovations prerequisite or credit that allows exemplary performance as specified in the LEED Reference Guide for Green Building Design & Construction.

SS4.4 Exemplary Performance
Project is located within a ½ mile walking distances from 2 bus/rail lines- Airport T Station and the East Boston Bus Terminal at the Maverick Station.
The project will meet the requirements of this credit.

SS5.1 Exemplary Performance
Restore habitat and impervious surfaces. Keep 75% of the site (excluding building footprint) as native vegetated land.
The project will meet the requirements of this credit.

SS7.1 Exemplary Performance
Place 100% of parking undercover. Any roof used to shade or cover parking must have an SRI of at least 29, be a vegetated green roof or be covered by solar panels that produce energy use to offset some nonrenewable resources use.
The project will meet the requirements of this credit.

I&DP Credit 2 – Innovation In Design: Specific Title ***1 pt***

To achieve this credit, at least one project team member must be a LEED Accredited Professional (LEED AP.)

The project will meet the requirements above. Jillian Wiedenmayer LEED AP EB O&M, is the Sustainable Design Consultant

REGIONAL PRIORITY CREDITS

RP Credit 1.1 -1.4 ***3 pts***

Regional priority credits are an addition incentive to achieve credits that address geographically specific environmental priorities. The regional priority credits listed for Boston zip code 02128 are as follows [http://www.usgbc.org/rpc/LEED-NC/v2009/US/02128]:

- On-site renewable energy
- Building Reuse
- Brownfield Redevelopment
- Stormwater design – quantity control
- Heat Island – nonroof
- Heat Island – roof

Stormwater design – quantity control (1pt)

The project will provide a stormwater management plan that maintains natural stormwater flows and promotes infiltration. This will be accomplished by specifying roofs, pervious paving and other measures to minimized impervious surfaces.

Heat Island – nonroof (1pt)

The project will meet the requirements above by placing 100% of parking spaces underground. Parking roof will be covered by either vegetated roof or a structure with an SRI of at least 29. Manufacturer's cut sheets showing SRI value will be included in the construction submission.

Head Island – roof (1pt)

The project will meet the requirements above. 5% of the roof surface will be dedicated to vegetation, while the rest will use roofing materials with an SRI equal or greater than 29. Manufacturer's cut sheets showing SRI value will be included in the construction submission.

LEED 2009 for New Construction and Major Renovations

Project Checklist

135 Bremen Street, Boston, MA

Sustainable Sites — Possible Points: 26

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

Water Efficiency — Possible Points: 10

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

Energy and Atmosphere — Possible Points: 35

Y	?	N			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
7		12	Credit 1	Optimize Energy Performance	1 to 19
		7	Credit 2	On-Site Renewable Energy	1 to 7
	2		Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
	1	2	Credit 5	Measurement and Verification	3
		2	Credit 6	Green Power	2

Materials and Resources — Possible Points: 14

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

Materials and Resources, Continued

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

Indoor Environmental Quality — Possible Points: 15

Y	?	N			
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
1			Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
1			Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
		1	Credit 7.2	Thermal Comfort—Verification	1
1			Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1

Innovation and Design Process — Possible Points: 6

Y	?	N			
1			Credit 1.1	Innovation in Design: Specific Title	1
1			Credit 1.2	Innovation in Design: Specific Title	1
1			Credit 1.3	Innovation in Design: Specific Title	1
1			Credit 1.4	Innovation in Design: Specific Title	1
		1	Credit 1.5	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1

Regional Priority Credits — Possible Points: 4

Y	?	N			
1			Credit 1.1	Regional Priority: Specific Credit	1
1			Credit 1.2	Regional Priority: Specific Credit	1
1			Credit 1.3	Regional Priority: Specific Credit	1
		1	Credit 1.4	Regional Priority: Specific Credit	1

Total — Possible Points: 110

67	5	38

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

Neshamkin French Architects, Inc.
ARCHITECTS PRESERVATION PLANNERS DEVELOPMENT CONSULTANTS

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