Boston Redevelopment Authority

Boston's Planning & Economic Development Office Thomas M. Menino, *Mayor* Clarence J. Jones, *Chairman* Peter Meade, *Director*

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Memorandum

To:

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BRA - Jeff Hampton, Zoning Department

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Parks & Recreation Department - Ken Crasco

Boston Disability Commission - John Kelly

State Senator Jack Hart

State Representative Nick Collins

State Representative Brian P. Wallace

Cc:

BRA - Executive Director/Secretary's Office

From:

BRA - Erico Lopez, Project Assistant

Date:

Monday, October 5, 2011

Re:

621 East First Street - South Boston

The purpose of this memorandum is to convey to you that the Small Project Review Application for the <u>621 East Second First Street</u> development in South Boston, is undergoing Small Project Review pursuant to Article 80 of the Boston Zoning Code. Mr. M.G.J. 621 East First Street, LLC, (the "Proponent") intends renovate the existing masonry building and expand it with the addition of four stories on top of the current structure. The project will create twenty-eight (28) residential loft-style units and include fifty-three (53) garaged parking spaces.

The purpose of Small Project Review is to provide a concise procedure for reviewing the design of projects that do not require Large Project Review but can be expected to affect the surrounding area and the public realm because of their size or location. Small Project Review determines whether a project is consistent with the design guidelines and site plan standards established for the project location and for the City as a whole.

All public agency comments must be received by the BRA no later than Friday, November 4, 2011.

If you need clarification, or additional information, please contact Erico Lopez at 617.918.4429 or at erico.lopez.bra@cityofboston.gov.

621 East First Street

South Boston, MA 02127 Article 80 Small Project Review

M.G.J. 621 East First Street, LLC 339 Dorhcester Street, South Boston, MA 02127 Tel: (617) 269-8008 | Fax: (617) 269-9481

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1.1 Project Summary

The proposed development consists of the redevelopment of a .28 acre site with substantial renovation and expansion to the existing masonry building at 621 East First Street, to include renovation of the existing building and the addition of four stories on top of the existing building, which will provide 28 residential units including 15% affordable units and 53 garage parking spaces with two separate entrances (the "Project"). The Project will provide a unique opportunity to create affordable and market-rate new housing units in a development that integrates successfully new construction with adaptive reuse within an existing residential neighborhood.

1.2 Applicant Information

The Project Applicant:

M.G.J. 621 East First Street, LLC 339 Dorchester Street South Boston, MA 02127 Tel: 617-269-8008

Fax: 617-269-9481

| Project Name and Location: | 621 East First Street, South Boston |
|----------------------------|--|
| Project Applicant: | M.G.J. 621 East First Street, LLC 339 Dorchester Street South Boston, MA 02127 Tel: 617-269-8008 Fax: 617-269-9481 |
| Architect: | Choo & Company One Billings Road Quincy, MA 02171 Tel: 617-786-7727 Fax: 617-786-7715 Arthur Choo arthur@choo-design.com |
| Design Consultant: | Choo & Company One Billings Road Quincy, MA 02171 Tel: 617-786-7727 Fax: 617-786-7715 Arthur Choo arthur@choo-design.com |
| Permitting Consultant: | G.A. Donovan Management Consulting Corp. Tel: 617-269-8008 Fax: 617-269-9481 |
| Legal Counsel: | Mark C. Murphy, PC 472 West Broadway South Boston, MA 02127 Tel: 617-269-3700 Fax: 617-269-3270 Mark C. Murphy markcmurphypc@yahoo.com |

| Surveyor: | BSC Group 15 Elkins St. Boston, MA 02127 Tel: 617/896-4365 Fax: 617/896-4301 James Peterson, PLS jeterson@bscgroup.com |
|--------------------------------|--|
| Environmental Consultant | Hub Environmental Services, Inc. 339 Dorchester Street South Boston, MA 02127 Tel: 617-269-4489 Cara Donovan cara@hubenvironmental.com |
| Structural Engineer: | Choo & Company One Billings Road Quincy, MA 02171 Tel: 617-786-7727 Fax: 617-786-7715 Arthur Choo arthur@choo-design.com |
| Geotechnical Engineers: | Geotechnical Consultants, Inc. 201 Boston Rd. Marlborough, MA 01752 Tel: 508/229-0900 Fax: 508/229-2279 Richard Pizzi, P.E. |
| Construction Manager: | G.A. Donovan Management Consulting Tel: 617-269-8008 Fax: 617-269-9481 |
| Construction Commencement: | March 2012 |
| Construction Completion: | July 2013 |
| Approximate Construction Cost: | \$5,000,000.00 |

1.3 Community Benefits

The Project will offer many public benefits to South Boston and the City of Boston, including:

 New construction and adaptive reuse of a vacant industrial building for residential units, and transforming an underutilized industrial building and unattractive/underutilized vacant land into an attractive, well-designed residential development;

- Providing 28 new residences with 53 off street parking spaces in the City of Boston including compliance with the Mayor's Executive Order relative to Affordable Housing, dated February 29, 2000, which establishes the need to establish at least 15% of the units as affordable;
- Streetscape improvements, including new plantings and site landscaping, where
 possible, on East First Street to complement the new residential units along this
 portion of the Project Site;
- Improvement of neighborhood security and safety by creating pedestrian circulation;
- Compliment & support the City of Boston's vision for residential units on the southside of First Street, from Summer Street to Farragut Road;
- Generating approximately \$100,000.00 in tax revenue annually (at stabilization) to the City of Boston through the increase of property values anticipated as a result of this Project; and
- Creating approximately 150 construction jobs over the full extent of the Project.

1.4 City of Boston, Zoning Code

621 East First Street, South Boston, Massachusetts (the "Site") is located in the First Street Neighborhood Development Area ("First St. NDA") of the South Boston Neighborhood District, as designated by Article 68 of the City of Boston Zoning Code and Map 4F (the "Zoning Code"). The portion of the Site located on East First Street is located in a First St. NDA subdistrct, and the portion of the Site located on East Second Street is located in an H-1-50 zoning district, both as designated by Maps 4 & 4F of the Zoning Code.

THE FOLLOWING IS A LIST OF USE AND DIMENSIONAL ZONING REQUIREMENTS SET FORTH IN THE ZONING CODE THAT PERTAINS TO THE SITE:

| Applicable Zoning Requirements | East First Street: First Street Neighborhood Development Area (NDA District Pursuant to Underlying Zoning Code) ¹ | Project (with new construction) |
|---|--|---------------------------------|
| Multi-family Use | Allowed | Proposed |
| Accessory Parking Use (underground) | Allowed | Proposed |
| Maximum Floor Area Ratio (FAR): | 2.0 | 3.48 |
| Maximum Building Height: | 45 feet | 55.0 feet |
| Minimum Lot Size: | None | 12,400 square feet |
| Minimum Lot Area for each Additional Dwelling Unit: | N/A | N/A |
| Minimum Usable Open Space Per Dwelling Unit: | 200 | None |
| Minimum Lot Width: | None | 93 feet |
| Minimum Lot Frontage: | None | 93 feet |
| Minimum Front Yard Setback: | 5 feet | None |
| Minimum Side Yard Setback ² : | 3 feet | None |

¹ For East First Street, the dimensional requirements assume construction of a building with a total of 28 dwelling units.

| Minimum Rear Yard Setback: | 20 feet | 3 feet |
|----------------------------|---|------------------------------|
| Off-Street Parking: | 1 per unit (market rate) .7 per affordable unit | 53 total spaces 1.9 per unit |
| Off-Street Loading: | None | None |
| | | |

2.1 Project Description

The Project Site includes 12,400 square feet ("s.f.") of land area, comprised of 1 parcel on 621 East First Street (the "Site") and includes approximately .28 acres of land improved with an approximately 11,000± square foot concrete building (see Figure 1-1 Site Locus and Figure 1-2 Project Aerial Photograph).

According to information obtained from the City of Boston Assessor's Office, the Site includes one (1) parcel of land: 621 East First Street, and is identified as Ward 06, Parcels 0603612000. The parcel was previously owned by Six 21 E First St, LLC, 718 E Eighth St #2, South Boston, Massachusetts. (See Figure 10 City of Boston Assessing map/information). However, the Applicant has since purchased the Site from Six 21 E First St, LLC on April 8th, 2011.

The Site has been utilized for commercial purposes since at least the late 1880s. Former uses of the Site have included: office space, warehousing, lamp manufacturing, automobile garage [early 1900s], cotton cloth manufacturing [1950s and 1960s] and a machine shop from the late 1960s through circa 1982.

Since the late 1980s, the Site has been vacant, being utilized for storage purposes only. In fact, Boston Edison, the Site's owner, proposed to industrially expand beyond its uses of the property for equipment and supplies and was unsuccessful in this endeavor. The current owner, Convention Properties, Inc., purchased the Site in 1996 from the Boston Edison Company. According to a representative of Convention Properties, Inc., the purpose of that acquisition was to expand the owner's existing business, Height for Hire, into the tool rental business, Tools for Hire. The current owner was, like Boston Edison prior to it, unsuccessful in procuring necessary permits for an industrial expansion because of neighborhood opposition and the local community position that the best reuse of the Site would be for housing.

In response to the neighborhood's preference for residential reuse, M.G.J. 621 East First Street, LLC, has and will continue to work with the community, its civic leaders and its elected officials to implement a residential proposal for the Site.

The existing 621 East First Street structure is proposed to have a new four-story, vertical masonry addition matching the existing masonry building, with the expansion not exceeding a total height of fifty-five (55) feet. The addition will contain twenty eight (28) loft style units. The parking garage appurtenant thereto will contain approximately fifty-three (53) spaces.

2.2 Proposed Project Program Data and Dimensions

| Table 0-1: Approximate Dimensions | | | | |
|--|--------------------|--|--|--|
| Lot Area (in square feet): | $12,400 \pm s.f.$ | | | |
| Building Height/Stories: | 55 feet (5 floors) | | | |
| Residential Gross Floor Area (in square feet): | | | | |
| Existing Renovated Building: | $2,700 \pm s.f.$ | | | |
| New Building Construction: | $44,000 \pm s.f.$ | | | |
| Number of Residential Units: | 28 ± units | | | |
| Parking Spaces: | | | | |
| | 53 spaces | | | |
| Floor Area Ratio: | 3.48 | | | |

2.3 Urban Design Approach - Context, Massing. Material & Other Design Issues

The project Site is located at 621 East First Street, in a well-established South Boston neighborhood. The site lies approximately one hundred and fifty feet (150) from Summer Street and across the street from the South Boston power plant. At present, the Site is a warehouse with a footprint of approximately eleven thousand (11,000) square feet.

The project is a four-story addition to the existing building at 621 East First Street. The addition will contain twenty-eight (28) loft styled units. The parking garage will contain approximately fifty-three (53) spaces. This building's exterior will be comprised of Hardy Panels and exposed metal. The final elevation studies will be reviewed by the BRA as the design process evolves. Windows will be a combination of operable and fixed sashes, with window openings reflecting both the scale and shape of the existing adjacent buildings. The proposed height will not exceed (55) feet. The adjacent Cahill Building has a maximum height of approximately forty-five (45) feet at the Summer Street entrance, its height to the top of the head-house on East First Street side being approximately fifty-four (54) feet mean grade, very similar to the height of the proposed

building. Given the height and length of the adjacent Cahill Building, and the height and outsize mass of the power plant building, the designer feels the building's massing and material are appropriate.

The existing building façade will be replaced with a more pedestrian friendly design. A pedestrian entry with canopy and clear visual connection between the building interior and the sidewalk will be constructed. The building façade will be enriched with design elements such as sconce style lighting on the building exterior and a façade with more human scale elements.

Building Design and Construction

Structural materials for the loft-building project include re-use concrete foundations and below-grade parking structural columns. New wood structural fame and wood decks will be used above grade. Exterior materials include precast panels with Hardy Panel exterior, glass and metal wall systems. The building's material will be of conventional wood frame construction.

The most important sustainable design feature of the project is the adaptive re-use of the existing industrial building. At present the existing building is under-utilized, however after the renovation this structure will serve the local community in providing both affordable housing and market rate units and to remove local street parking congestion by adding garage parking spaces.

A significant portion of building's energy consumption goes to cooling and lighting. Orientation-specific, energy efficient glazing systems, including Low-E, will be used to reduce heat gain and increase light transmission. Other energy conservation measures being evaluated include the introduction of new energy-efficient lighting and mechanical systems.

The large windows and glass bays incorporated into all of the project's buildings will account for a maximum amount of interior daylight and will incorporate operating sash to provide natural ventilation within all the units. Passive solar gain will be achieved through these glazed areas. The HVAC and lighting systems will be energy efficient and will be regulated by individual unit owners. All appliances and other electrical equipment will be "Energy Star" program participants.

Water consumption will be minimized through several water conversation measures, such as water saving plumbing fixtures throughout the project. Recycling space will be located in the building. Within these spaces, bins for the various categories of material will be provided and collected and deposited into trash holding areas for pickup by a recycling company.

2.4 Urban Design Submission Drawings and Photographs

Design drawings and renderings depicting the Project are provided at the end of this section.

Figure 1: Existing conditions aerial photo
Figure 2: Locus Map

Figure 3: Existing site photos

3a: East facing view on East 1st Street

3b: West facing view on East 1st Street

3c: Front face of building

3d: Eastern face
3e: Western face

3e: Western face
Figure 4: Front of 3D, word

Figure 4: Front of 3D - render

Figure 5: Rear of 3D - render
Figure 6: East facing - 3D rend

Figure 6: East facing – 3D render Figure 7: West facing – 3D render

Figure 8: Angle view – 3D render

Figure 9: Neighborhood Building Heights

9a: M Street from East 2nd

9b: Rear of East 2nd Street

9c: Edison Plant, East 1st Street

9d: 881 East 1st Street

Figure 10: City of Boston Assessing map/information

Figure 11: Existing conditions site plan

Figure 12: Proposed site plan by BSC Group Surveyors

Figure 13: Loft-style building elevation

Figure 14: Loft-style building basement plan
Figure 15: Loft-style building first floor plan

Figure 16: Loft-style building typical upper floor plan

Figure 17: Proposed East First Street & West side elevations

Figure 18: Proposed rear building elevation & East side elevations

Figure 19: Proposed lower level/garage floor plan

Figure 20: Proposed first floor garage & second floor plan

Figure 21: Proposed third floor & fourth floor plans

Figure 22: Proposed fifth floor & roof plans





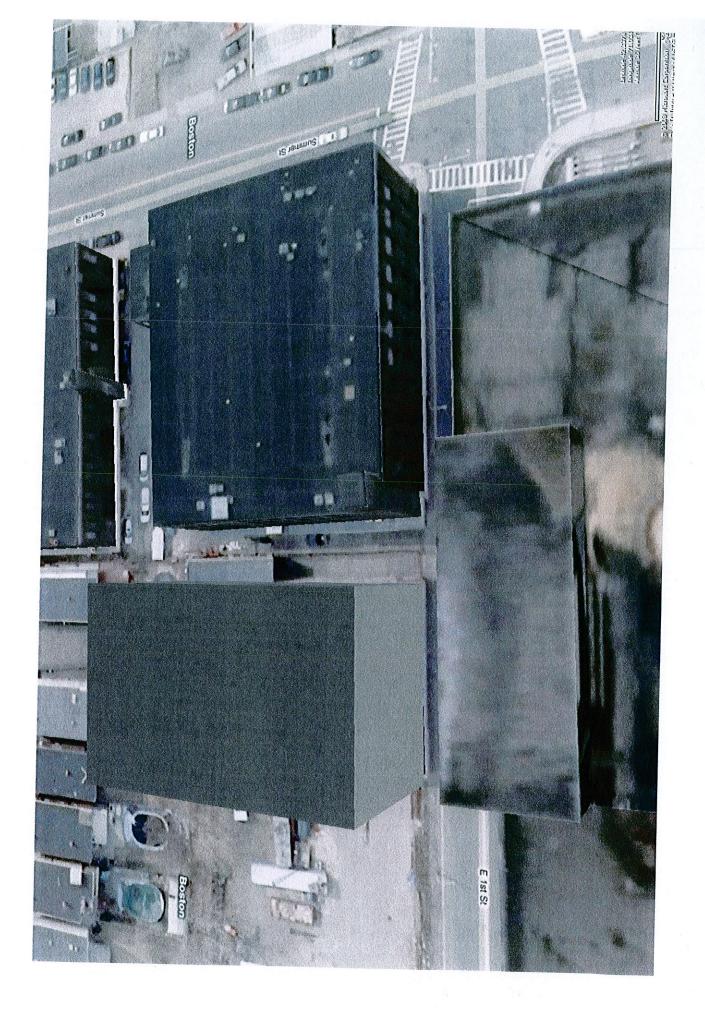


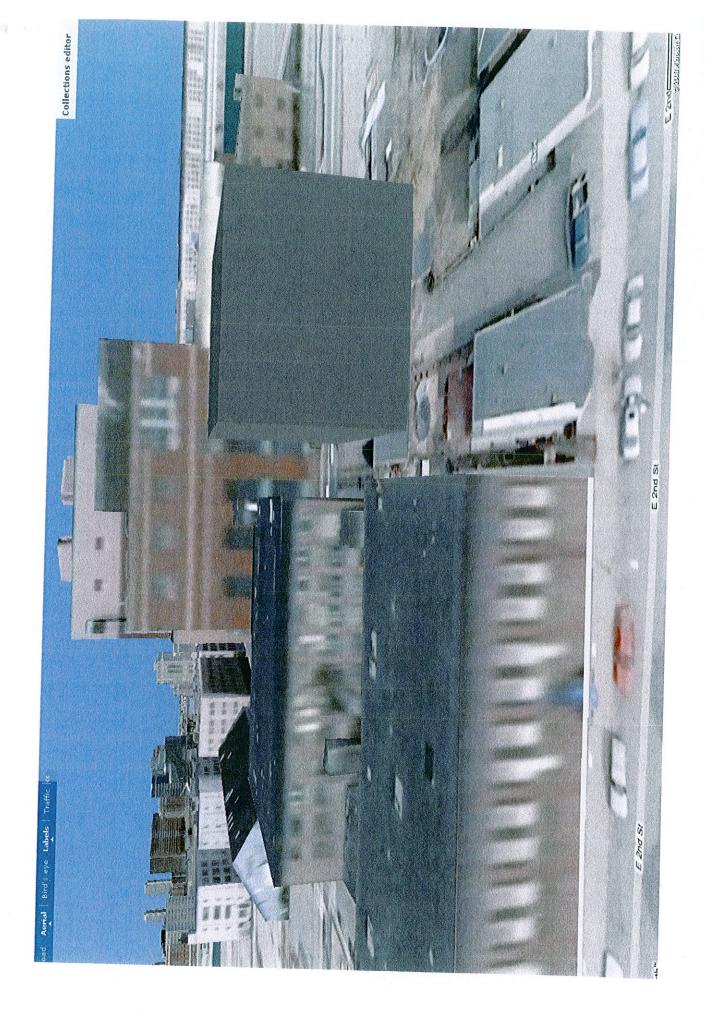


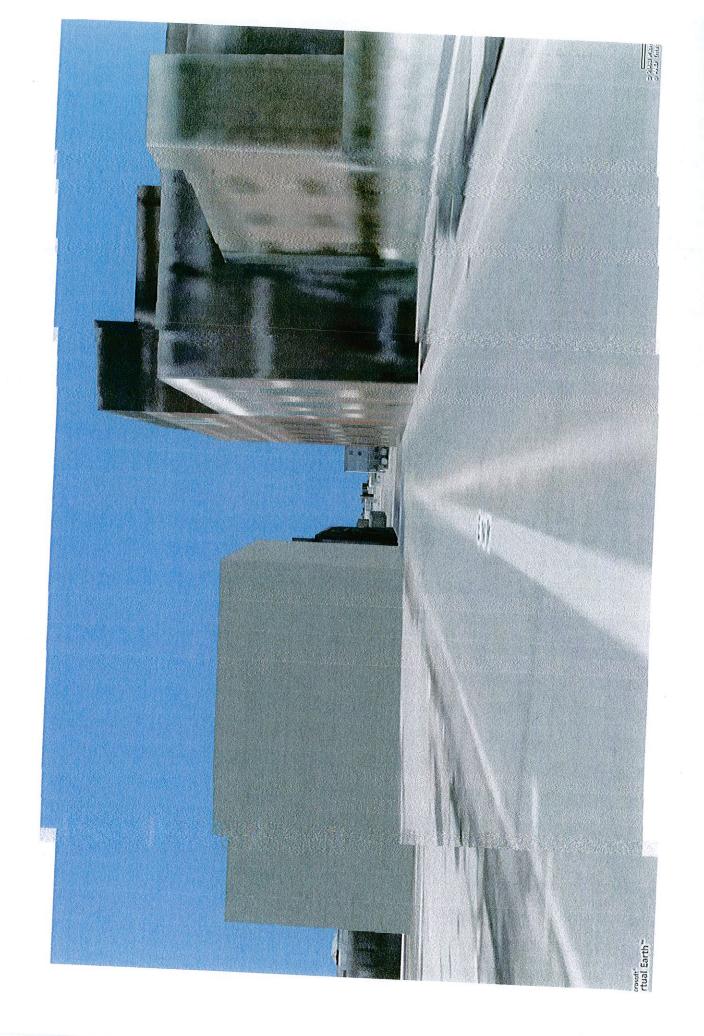


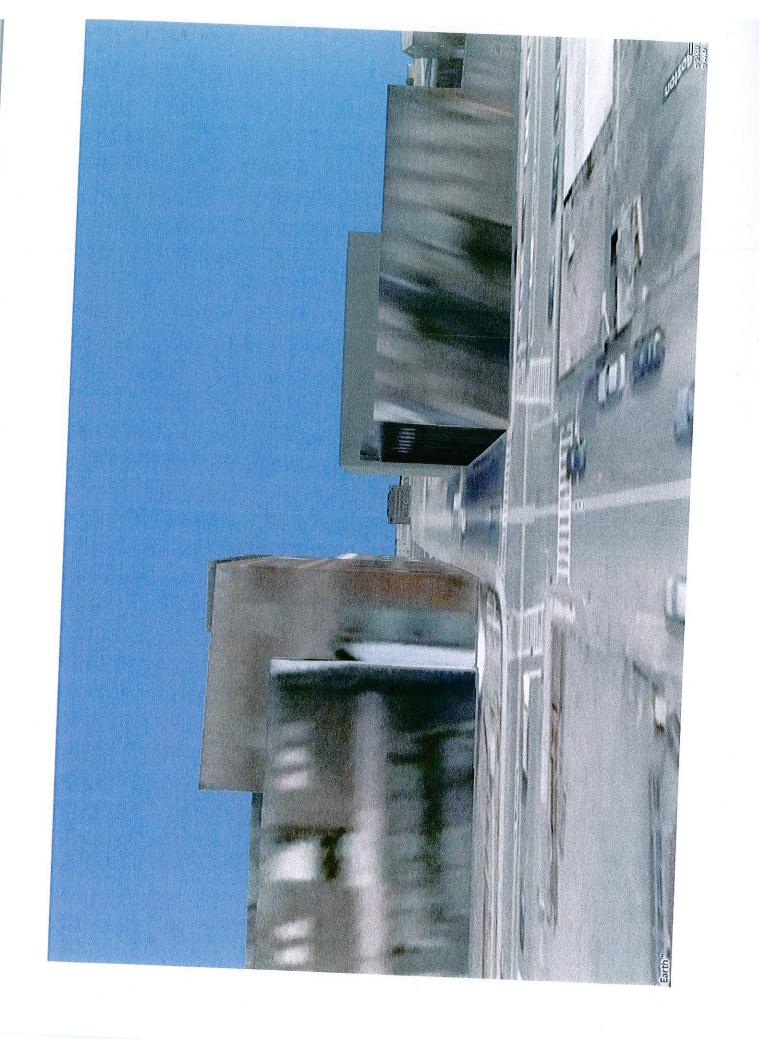


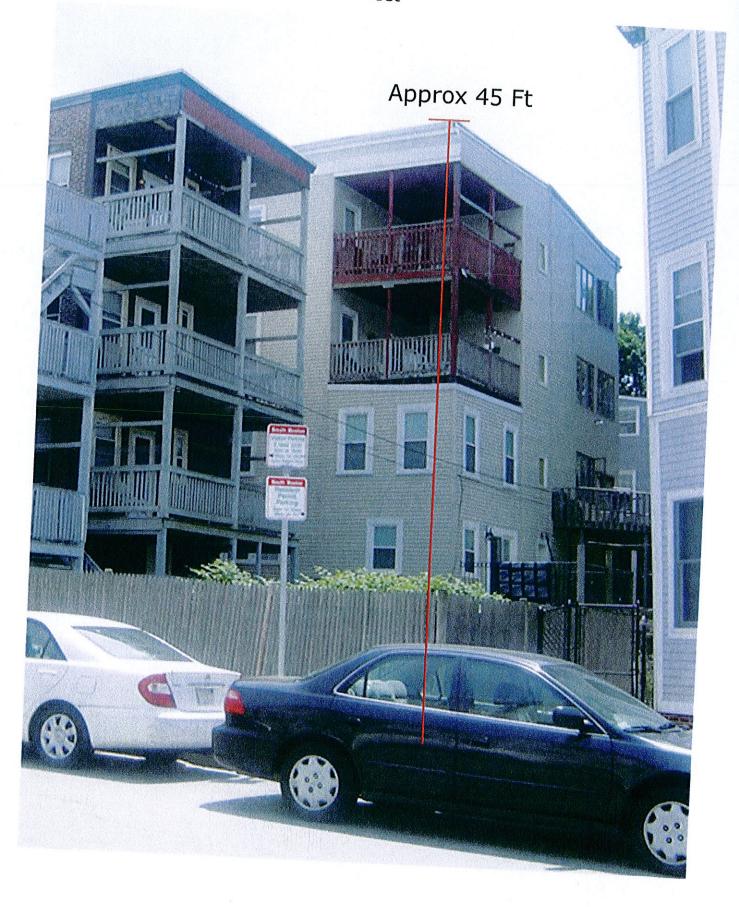






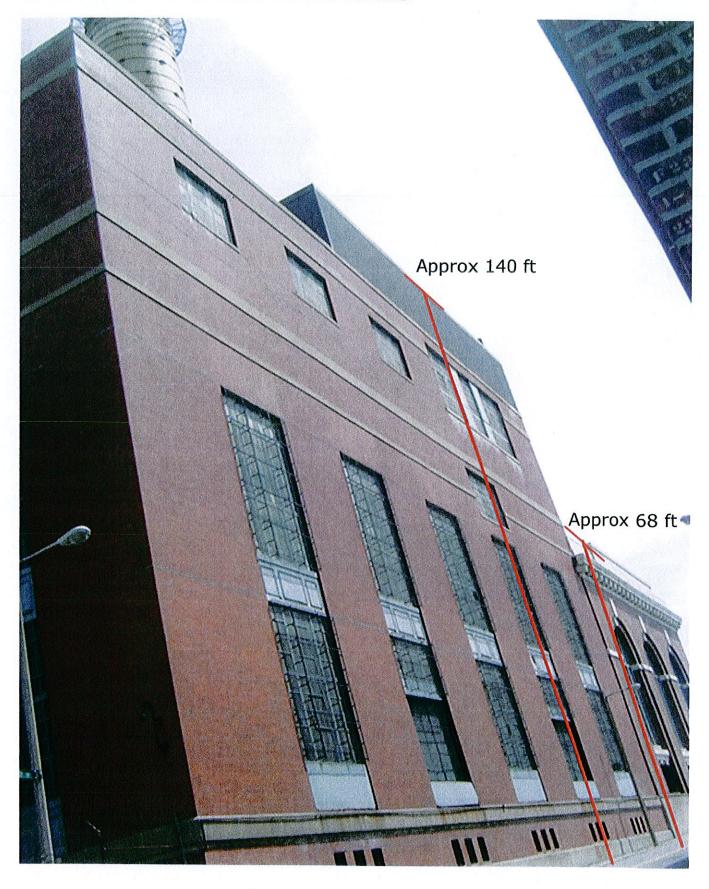




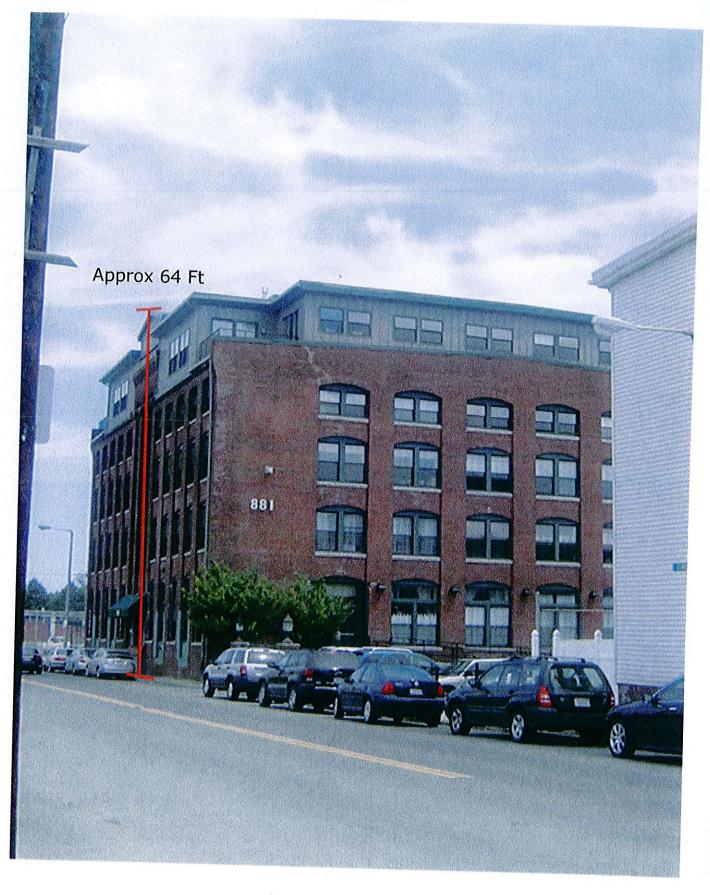


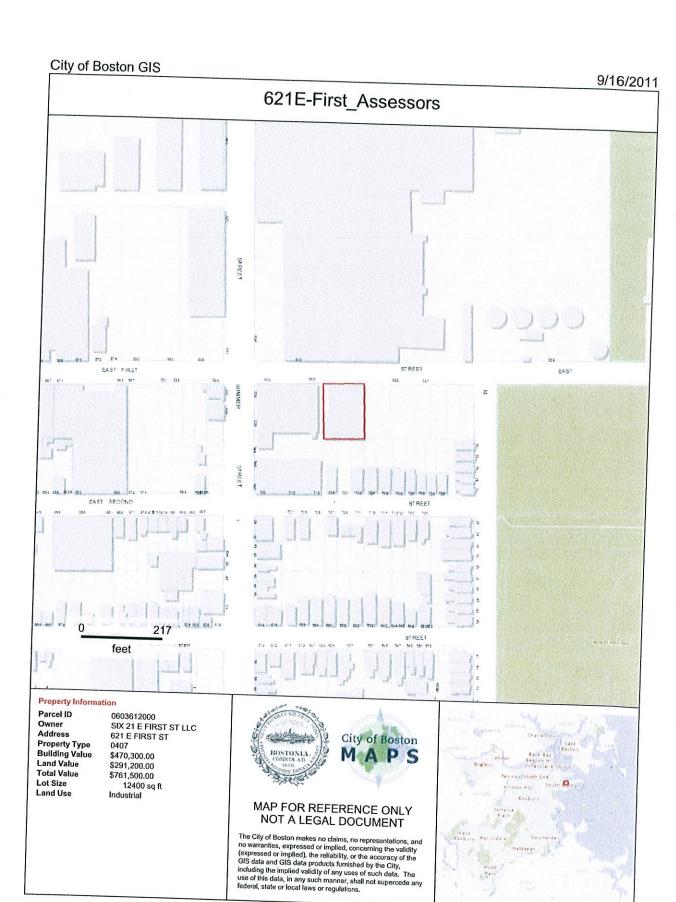


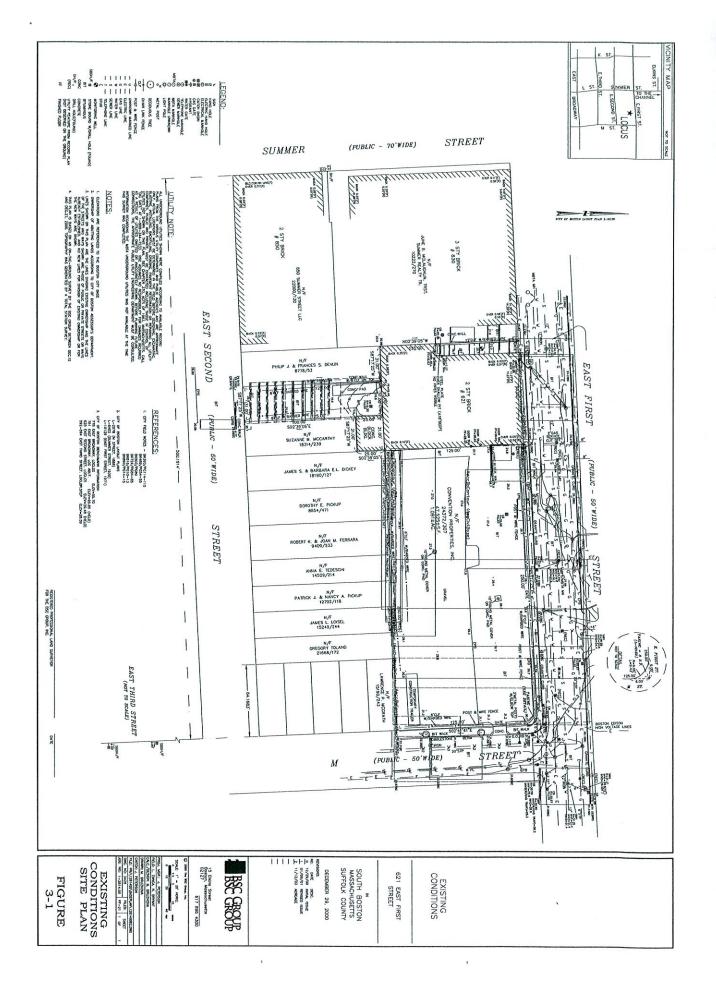
Edison Power Plant on East 1st and Summer

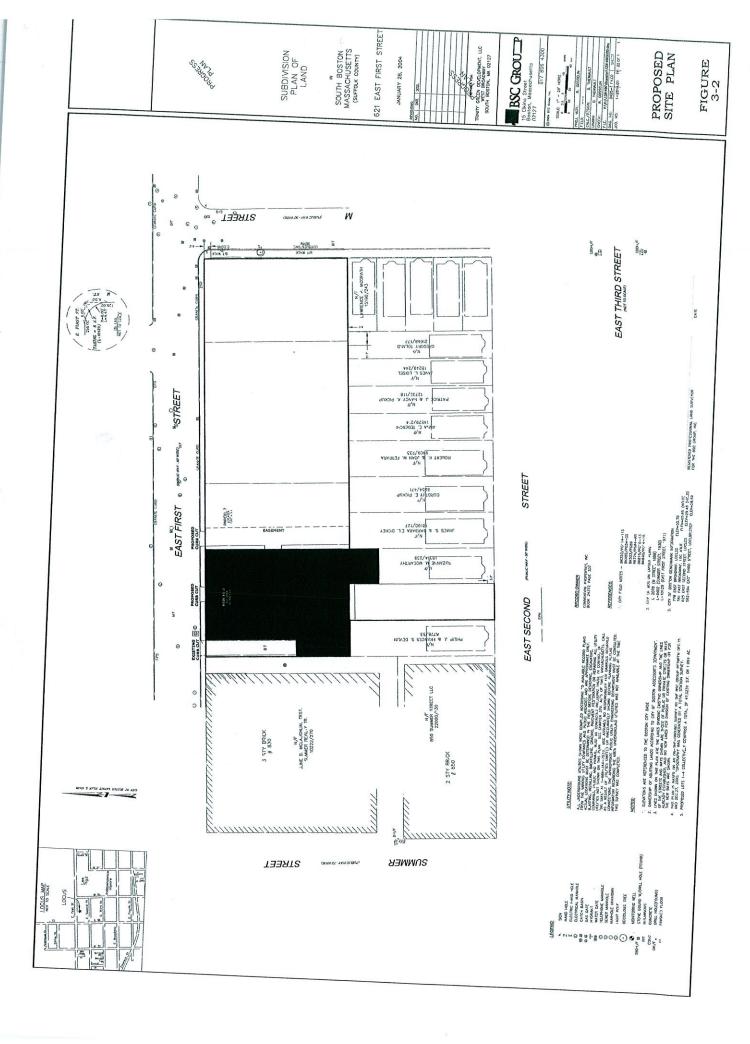


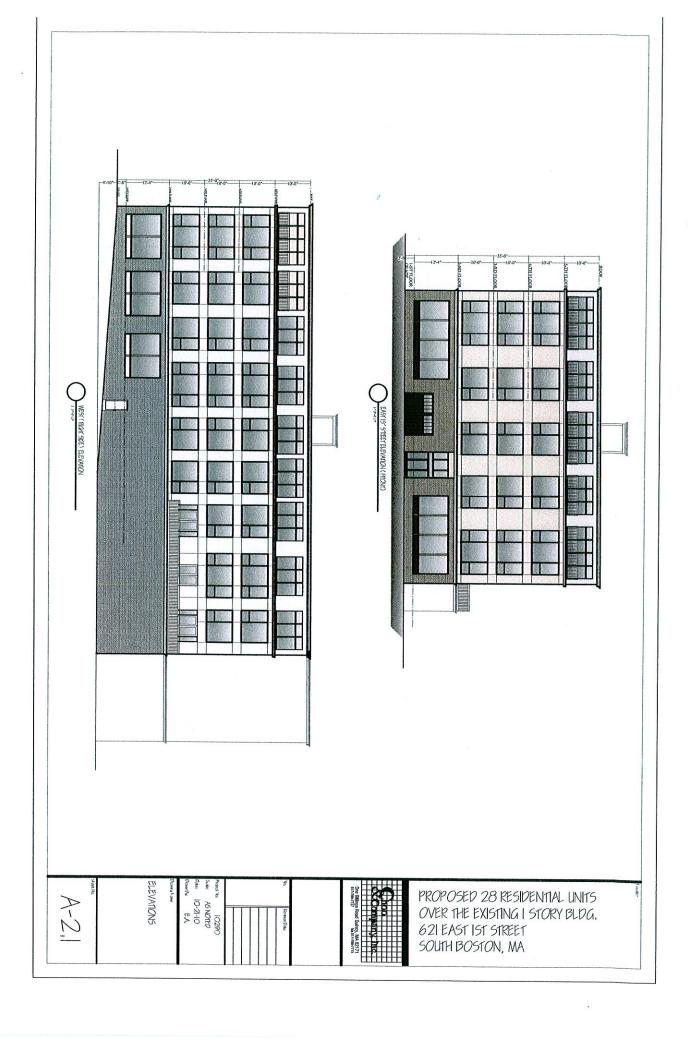
881 East 1st Street, Rehab Condominiums

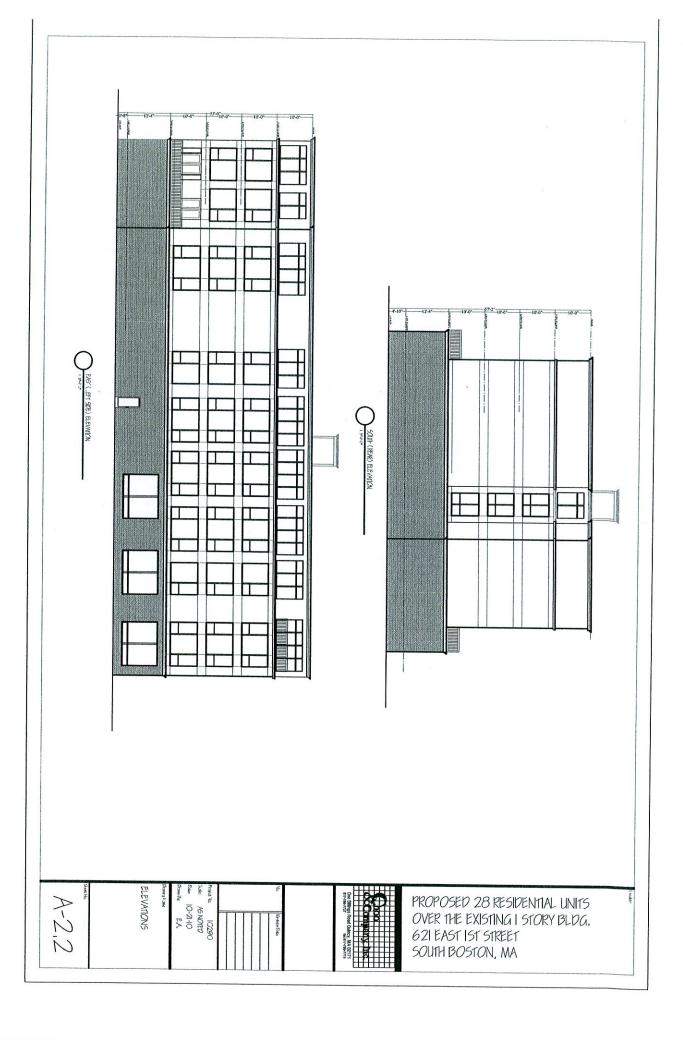








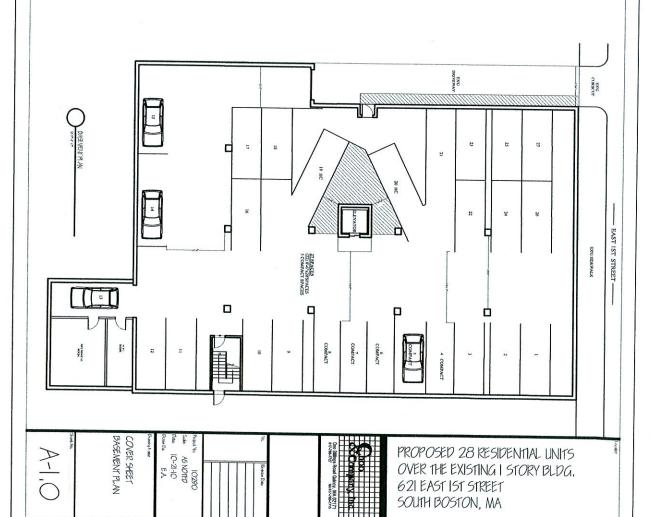


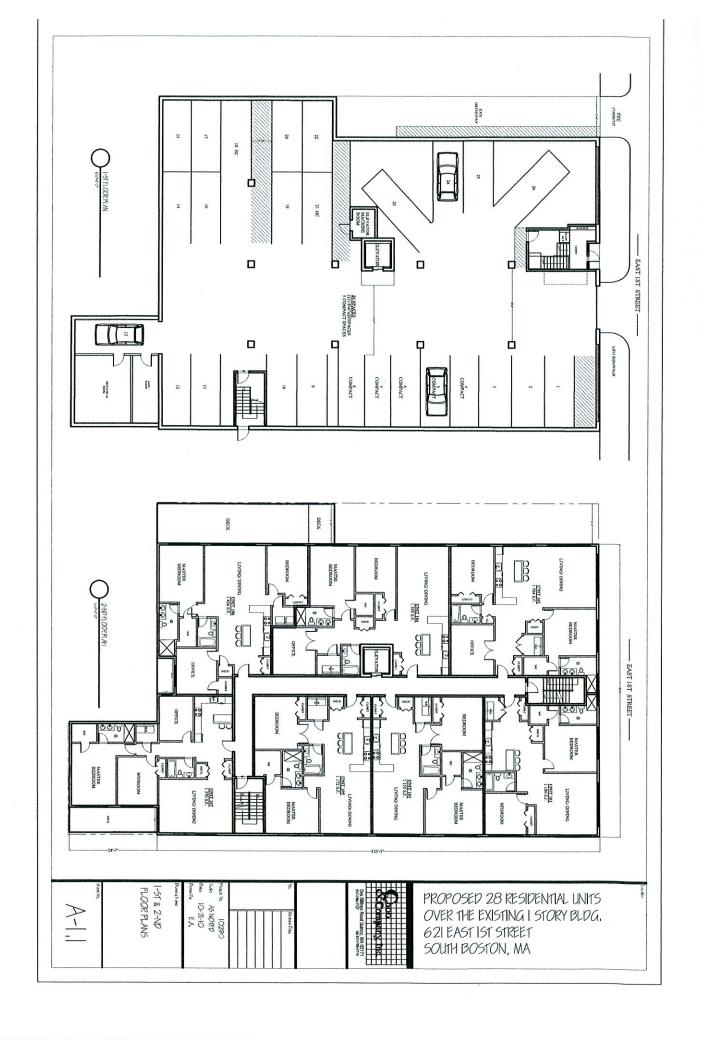


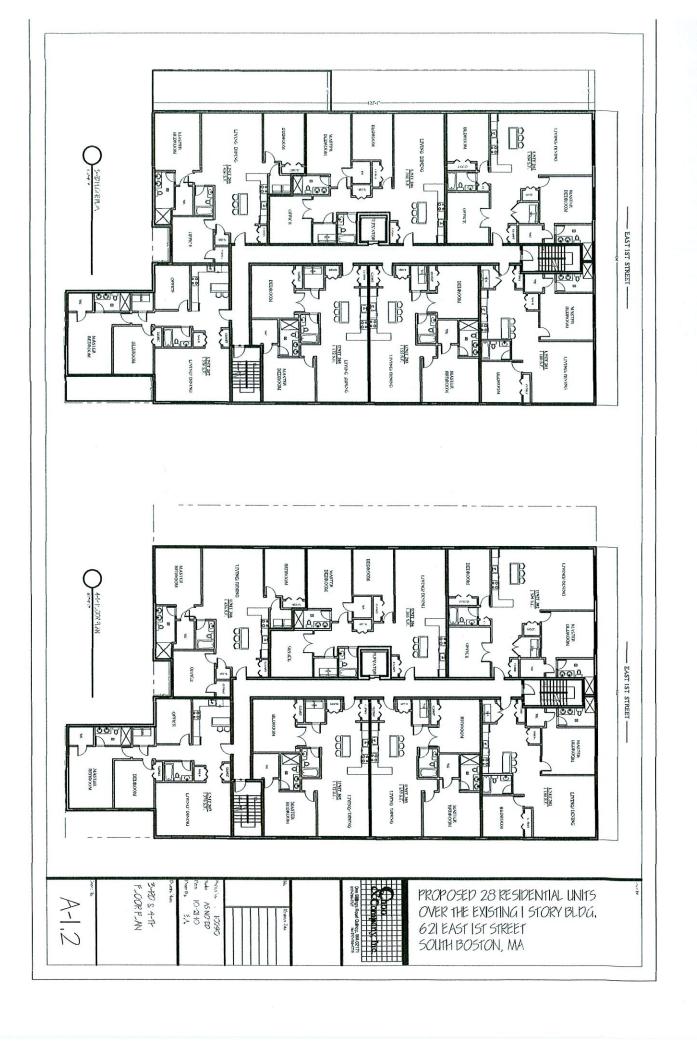
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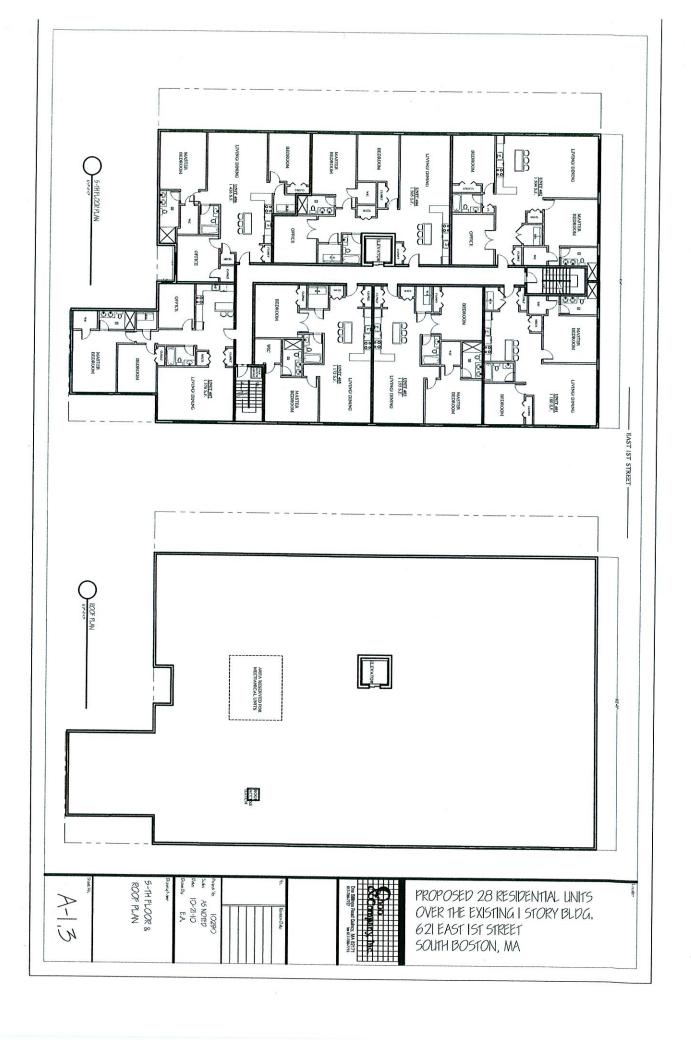
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3.1 Air Quality

HVAC

The building's HVAC equipment is located on the rooftop. Other residential exhaust will be created from conventional bathroom and laundry exhaust fans which are consistent with other residential developments and will meet all mechanical and building code.

Garage Ventilation

The garage will be mechanically ventilated. The garage ventilation systems will be designed to provide adequate dilution of the motor vehicle emissions before they are vented outside. The design of the garage ventilation systems will meet all building code requirements.

3.2 Noise

The HVAC equipment will be small commercial and residential type condensing units with low sound output levels. The HVAC equipment will be located on the rooftop in order to minimize the impact of the already low sound output levels.

3.3 Solid and Hazardous Materials

Construction Period and Operational Waste

During the construction phase, debris will be disposed of into dumpsters which will be located within the footprint of the buildings. To the extent possible, demolition will be conducted so that materials that may be recycled will be segregated from those materials not recyclable to enable disposal at an approved solid waste facility.

After the completion of the Project, the building will have access to residential dumpsters and/or the compactors located in either the enclosed or open parking area. Two enclosed dumpsters will be located at each end of the surface parking area. Each unit will be equipped with a garbage disposal and an area suitable for the storage of recycling containers. The building developer will co-operate with the City of Boston in advancing efforts and solid and hazardous recycling efforts.

Hazardous Materials

Hub Environmental has performed a Phase I Environmental Site Assessment for the Project Site in conformance with the scope and limitations of ASTM Practice E 1527 for the Proponent. The assessment revealed evidence of historical recognized environmental conditions at the Site; however, based upon further assessment activities in March and April 1997, and the preparation of a Method 3 Risk Assessment, a Permanent Solution has been achieved and a level of NO Significant Risk exists at the release site.

Noteworthy issues are summarized as follows:

- Historical uses of the Site resulted in impacts to soil and groundwater.
- HUB generally concurs that the findings of RAM Environmental ("RAM") Class A-2
 RAO and supporting Method 3 Risk Characterization support a Permanent Solution
 and level of No Significant Risk for existing commercial and proposed residential
 uses at the Site. In making this conclusion, HUB has relied on the information
 presented in the RAM and MCA reports.
- At the time of the HUB site reconnaissance activities, suspect Asbestos Containing Material ("ACM") were not specifically noted within the building. However, HUB recommends that a comprehensive asbestos inspection be conducted by a licensed inspector prior to significant renovation or demolition of any site buildings. Should the presence of asbestos be confirmed in building materials, a licensed asbestos contractor will be hired to abate and/or dispose of ACM.
- Oil and/or hazardous materials ("OHM") observed at the Site included gasoline, fuel
 oil, and motor oils stored within contractor equipment stored within the building.
 HUB did not observe OHM to be posing a threat to the environmental conditions of
 the Site during the site reconnaissance activities.

3.4 Geotechnical and Groundwater Analysis

This section addresses the below-grade construction activities anticipated for the Project. It discusses existing soil and groundwater conditions; foundation construction methods and excavation work anticipated for the Project based on recent and previous subsurface investigations and a foundation design study. This section also addresses potential Project impacts and proposed mitigation measures.

Project Site and Subsurface Conditions

The site is located on the corner of East First and M Streets in South Boston. Currently, the property contains a one-story masonry building with a basement level. The existing ground surface across the Project Site is generally flat, level and paved. The site is currently used for storing heavy-duty construction equipment. A chain link fence surrounds the site with an entrance located through a curb cut on East First Street.

Land reclamation activities conducted in the late 19th century resulted in mass filling in the South Boston. Historical records show that land to the north of East First Street was generally created as a result of these aforementioned activities.

Generally, the first ten feet below existing ground surface is comprised of miscellaneous granular fill, which is underlain by medium dense sand. Although the fill soil is predominantly granular, it includes cinders, ashes, brick, and other miscellaneous materials. The natural sand below the fill is medium dense medium to fine sand with trace proportions of silt.

As part of the recent subsurface investigation, one boring was drilled to a depth of about 27 feet below existing grade. Bedrock was not encountered within this or any other recent boring.

Foundation Construction Methodology

Vertical Addition to Existing Building

A four-story steel framed vertical addition is planned for the existing building. It is probable the existing building is founded on conventional spread footings and no additional foundation work may be warranted for this project.

Groundwater Control

All excavation for foundation construction and foundation site preparation are expected to be above the groundwater levels measured from recent boring tests. Therefore, the addition on the existing structure should not impact the groundwater levels at adjacent properties and streets.

Construction dewatering is not applicable because the foundation structure is existing..

Probable Project Impacts and Mitigation Measures

No impact on adjacent buildings and utilities is anticipated. Provisions will be incorporated in the design and construction procedures to limit potential adverse impacts to adjacent structures and utilities. Mitigation measures will be as follows:

- A pre-construction survey will be conducted of abutting and adjacent structures to document existing conditions.
- The design team will conduct studies, prepare designs and specifications, and review contractor's submittals for conformance to the project contract documents with specific attention to protection of nearby structures and facilities;
- The contractor's designs and procedures will be reviewed and accepted by the project design team prior to implementation;
- As part of the contractor's submittal, the contractor will be required to submit contingency plans for remedial measures in the event that unacceptable performance occurs. These measures will be reviewed by the design team prior to construction; and

3.5 Construction Impacts

Construction Management Plan

The Proponent will comply with all applicable state and local regulations governing construction of the Proposed Project. The Proponent will require that the general

contractor 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 construction manager will be bound by the CMP, which will establish the guidelines for the duration of the Project and will include specific mitigation measures and staging plans to minimize impacts on abutters.

Proper pre-construction planning with the neighborhood will be essential to the successful construction of this Project. Construction methodologies that will ensure safety will be employed, signage will include construction manager contact information with emergency contact numbers.

Construction Activity Schedule

The construction period for this project is expected to be approximately 16 months in duration. Typical construction hours will be from 7:00 AM to 5:00 PM Monday through Friday. Weekend and second shift construction activity would be kept to a minimum but may take place to minimize impact of vehicular and pedestrian traffic as well as structural issues with abutters.

Construction Staging Areas

The proposed staging plan is designed to isolate the construction while providing safe access for pedestrians and automobiles during normal day-to-day activities and emergencies.

The Site can generally be described as rectangular in shape, accessible only from East Second Street and M Street with primary access from East First Street.

The sequencing of the project will allow for the vast majority of construction activities be conducted on site with minimal impact to the abutting properties. The first phase of the construction will be the selective demolition of the existing building and the rough grading and excavation of the entire site. After rough grading, excavation and initial foundation work the base coat a temporary parking lot will be constructed at the location of the permanent parking area. This area will serve multiple functions: 1) Staging area for any required large equipment such as steel erection cranes; 2) unloading and storage area for construction materials; 3) storage areas for dumpsters and storage of materials to be recycled; and 4) parking for construction vehicles and construction worker parking.

Gates will be provided at the construction and staging areas to provide both entrance and exit from the Site. All construction activity will be kept within the designated areas approved by the Construction Management program as approved by the Boston Traffic Department.

Heavy trucking, such as during concrete placements, will be controlled so as not to impact the neighborhood around the Site, and stacking of trucks will be kept to a minimum. In the event this does not occur, such as with large concrete pours or structural steel deliveries, trucks will be held away from the site and brought forward by radio

contact. Once the trucks reach the Site, they will be brought onto the staging platform where materials will be off loaded.

A preliminary meeting will be held with BTD to review the proposed taking of the sidewalk East First Street and along M Street during construction. A detailed plan outlining the taking of the sidewalk with associated safety measures also includes proposed trucking routes to and from the site. The following sections provide further information for each phase of the Project and its construction methods.

Demolition Phase

Not applicable.

City of Boston Regulatory Requirements

Regulation 3, "Restrictions of Noise Emitted from Construction Sites" of the Regulations for the control of Noise in the City of Boston, establishes limits for construction noise. The limits are applied at the lot line of the receiving property. In cases where equipment is operated closer than 50 feet to the applicable lot line, the limits are applied at 50 feet from the equipment. The City of Boston regulations do not apply to impact devices such as pile drivers and jack hammers. It is the goal of this project to operate within the criteria set by the Boston Ordinance.

In addition, different maximum limits apply to heavy motor vehicles such as trucks if they have been sold or leased in the City of Boston. The maximum limit for heavy motor vehicles depends upon their date of manufacture and ranges from 88 d.b.a at 50 feet for very old trucks to 80 d.b.a. for the newest trucks. These truck limits are applicable anywhere in the City, but they may be superseded by 40 CFR 202 for trucks engaged in interstate commerce

Construction Noise Mitigation

Every reasonable effort will be made to minimize the noise impact of construction activities. Mitigation measures will include:

- Scheduling of work during daytime hours. Project construction hours are planned to be 7:00 AM to 5:00 PM.
- Using appropriate mufflers on all equipment and providing ongoing maintenance of intake and exhaust mufflers.
- Maintaining muffling enclosures on continuously operating equipment, such as air compressors and welding generators.
- Replacing specific construction operations and techniques by less noisy ones
 where feasible e.g. using vibration pile driving instead of impact driving if
 practical.

- Selecting the quietest practical items of equipment e.g., electric instead of diesel powered equipment.
- Selecting equipment operations to keep average levels low, to synchronize noisiest operations with times of highest ambient levels, and to maintain relatively uniform noise levels.
- Turn off idle equipment.
- Locating noisy equipment at locations that protect sensitive locations by shielding or distance.

Rodent Control

The City of Boston has declared that the infestation of rodents in the City is a serious problem. In order to control this infestation, the City of enforces the requirements established under the Massachusetts State Sanitary Code, Chapter 11, 105 CMR 410.550 and the State Building Code, Section 108.6. Policy Number 87-4 (City of Boston) established that extermination of rodents shall be required for issuance of permits of demolition, excavation, foundation, and basement rehabilitation. The proposed project will develop a rodent control program prior to its construction start. During construction, rodent control service visits will be made by a certified rodent control firm to monitor the situation.

Geotechnical Impacts and Monitoring

The Construction Manager will conduct a pre-construction survey of required abutting structures. This survey will include a detailed examination of interior basements and first floor of each abutting building and exterior visual survey of the property and buildings. Video documentation of the interior and exterior will be taken showing visually evident structural faults.

The construction process should not affect the existing utilities. Connections to the existing services will be performed following approval and survey by the Boston Water and Sewer Commission together with the electrical utility service provider.

Groundwater Impacts

Both historical and recent test borings indicate the ground water is approximately twelve feet below existing grade. If ground water is encountered no significant de-watering is anticipated. If de-watering is required sedimentation filtration devices will be used to filter water before being discharged into existing storm drain pipes. Groundwater contamination, if any, is expected to be localized and will be dealt with on site.

3.6 Water Resources

Wetlands, Waterbodies, and FEMA Floodplain Resources

1 There are no wetlands, waterbodies or Federal Emergency Management Agency ("FEMA") floodplain resources located on the Project Site, nor within 100 feet of the Project Site.

According to the FEMA Flood Insurance Rate Maps ("FIRM"), City of Boston, Suffolk County, Community Panel Number 250286 0017D, the Project Site and areas on or adjacent to the Project Site are classified as Zone C, areas of minimal flooding.

Tidelands

The Project Site does not require review under Chapter 91 of the Massachusetts General Laws. It does not contain flowed tidelands, and is not within a Designated Port Area or within 250 feet of the high water mark of any flowed tidelands.

Stormwater Drainage and Management

The stormwater drainage from the Project will not adversely impact the water quality of nearby surrounding waterbodies. The Project will include a stormwater management program.

4. INFRASTRUCTURE SYSTEMS COMPONENT

4.1 Introduction

The following analysis describes the existing utility systems in the Project area and their ability to service the Project. The analysis also discusses likely project-related impacts on the utilities, and identifies mitigation measures to address these potential impacts.

Coordination has been initiated with the various utility companies to determine the adequacy of the existing infrastructure to accommodate the Project. It is anticipated that the existing utilities within East First Street have adequate capacity to serve the proposed project. Off-site improvements to existing utility infrastructure should not be required. However, the Applicant will continue to work with the utility companies as the design progresses and final utility requirements are identified.

4.2 Sanitary Sewer System

The Boston Water and Sewer Commission ("BWSC") owns, operates, and maintains the sewer system in the vicinity of the Project Site. The sanitary sewer service from the existing, on-site building at 621 East First Street is connected to the existing 12-inch combined sewer in East First Street (see **Figure 11 - Existing Sewer Lines**). Both combined sewers flow westerly to a regulator structure. The regulator structure appears to direct low flows to the Boston Main Drainage Tunnel to the south, which is ultimately connected to the Deer Island Wastewater Treatment Plant. The regulator structure appears to direct overflows to the Reserved Channel to the north.

It is anticipated that the sewer services for the Project will tie into the 12-inch combined sewer in East First Street. The design flow from these buildings will be approximately 10,120 gpd. The capacity of the 12-inch sewer is 3.26 million gallons per day (MGD)±.

Floor drains from the structured parking area will be directed to the sanitary sewer system in East First Street. An oil and grease separator will be installed on the sanitary sewer lateral prior to its connection to the municipal sewer.

The Project is expecting to use water conservation devices such as low-flow toilets and flow-restricting showerheads to help conserve water and reduce the amount of wastewater generated by the Project. A Site Plan will be submitted for BWSC approval. A General Service Application will be filed after Site Plan approval and prior to any off-site sewer work

4.3 Water Service

BWSC currently owns and maintains a 12-inch southern low (SL) ductile iron (DI) water main in East First Street. The main in East First Street is indicated as being installed in 1979 per BWSC's Water System Maps. (see Figure 11 -Existing Water Lines).

It is anticipated that separate domestic water and fire services will be provided via connections to the 12" DI water main in East First Street.

There is an existing hydrant at the corner of East First and M Street and one adjacent to 722 East Second Street. The Applicant will coordinate with the Fire Department to determine if these hydrants are adequate to service the Project.

Water service to the building will be metered in accordance with the BWSC's Site Plan Requirements. The Applicant will provide for the connection of the meter to the BWSC's automatic meter reading system. The Applicant will obtain a meter transmitter unit (MTU) from the BWSC to be mounted near the meter. A backflow preventer will be installed on the fire protection service and approved through BWSC's Cross-Connection Control Department. Water services will be gated so as to minimize public hazard or inconvenience in the event of a water main break. Fire protection connections for the Project will need approval by the Fire Chief. The Applicant will also submit a Site Plan to the BWSC for review and approval.

4.4 Stormwater Management System

Soils Conditions

The Soils Survey for Suffolk County indicates that the Project Site consists of Udorthents, loamy soil. This soil type predominantly consists of gently sloping areas where the original material has been cut or covered with loamy fill material. This soil type is usually dominated by fine sandy loam. The soil varies greatly from location to location with permeability ranging from slow to rapid.

Construction Drainage

The Contractor will be responsible for controlling dust and wind erosion. Dust control may consist of sprinkling water on exposed soils. The Contractor will also control off-site tracking of soil. Measures to control sediment tracking will include a stable construction entrance and/or wash rack for construction vehicles and street sweeping. Disturbed areas to remain exposed for more than 30 days will be mulched or provided with temporary vegetation.

The Project will implement erosion and sediment controls during construction. It is anticipated that hay bales and/or silt fencing will be installed along the downstream perimeter of the site. This will be used to protect the storm drain system in East First Street and the residential properties to the south from potential sedimentation and erosion. The Contractor will keep additional hay bales and silt fence on-site for installation as required. Sediment retained by the hay bales and/or silt fence will be removed and properly disposed when it reaches one-third the height of hay bales and/or silt fence.

Post-Construction Drainage

Stormwater runoff patterns in the developed condition will approximate existing conditions. Runoff that is not infiltrated will be conveyed to the combined sewer in East First Street. It is not anticipated that the Project will result in a noticeable increase in peak discharge rates into either system.

The proposed stormwater management system will meet the Stormwater Management Standards (the "Standards") suggested by the DEP for redevelopment. The DEP suggest that redevelopment projects meet the Standards to the maximum extent possible and should be designed to improve existing conditions.

The Project intends to improve the water quality of the runoff by utilizing deep sump catch basins with hooded outlets. The storm drain system serving the surface parking located off East First Street will be provided with a water quality inlet (e.g. particle separator) upstream of its connection to the municipal system.

All roof runoff will be collected by roof drains and leaders. The Applicant will investigate the feasibility of infiltrating the roof runoff on-site. Overflows from the infiltration system will be directed to the municipal sewer system.

The stormwater management system will be inspected and maintained by the Owner or individual designated by the Owner. The stormwater management system will be maintained properly to assure its continued performance, as follows.

- 1) Quarterly (January, April, July, October):
 - Visually inspect points of discharge (catch basins, water quality inlet, etc.).
- 2) Semi-annually (Spring and Fall)
 - (a) Sweep sediment from roadways.
 - (b) Clean catch basins.
- 3) Annually (between Spring and Fall)
 - (a) Remove sediment from all structures having more than a 3" depth of accumulation.
 - (b) Inspect infiltration system (if constructed) yearly for sediment accumulation. Remove sediment once every five (5) years or as conditions warrant.

4.5 Electrical Systems

NStar provides electrical service to this area and representatives have been contacted to determine electric system capacity in the vicinity of the Project Site. NStar representation indicated that there is adequate electrical capacity to serve the Project. Electric power supply design will be further coordinated with NStar as the design progresses.

4.6 Natural Gas

Keyspan provides natural gas service to the City of Boston. Keyspan records indicate that there is a 20-inch steel gas main in East First. Per Keyspan, there is adequate gas to serve a residential project of this nature.

4.7 Utility Protection During Construction

During construction, infrastructure will be protected using sheeting and shoring, temporary relocations, and construction staging as required. The 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 prior to any work commencing on their utility. Also, in the event a utility cannot be maintained in service during switch over to a temporary or permanent system, the contractor will be required to coordinate the shutdown with the utility owners and Project abutters to minimize impacts and inconveniences accordingly.