Expanded Project Notification Form

100 Arlington Street
Boston, Massachusetts

SUBMITTED TO
Boston Redevelopment Authority

SUBMITTED BY
Arlington CFII, LP
C/O The Congress Group Inc.

PREPARED BY
VHB *Vanasse Hangen Brustlin, Inc.*

In association with:
Elkus Manfredi Architects
DLA Piper US LLP
Brown Rudnick
Cosentini Associates Inc.
Haley & Aldrich, Inc.
Goldstein-Milano LLC
Gunther Engineering/DGT

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100 Arlington Street Project

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Submitted by
Arlington CFII, LP
C/O The Congress Group, Inc.

Prepared by
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July 1, 2010

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Executive Summary

Arlington CFII, LP (the "Proponent"), a joint-venture between affiliates of The Congress Group, Inc. and AREA Property Partners, intends to reuse the existing building at 100 Arlington Street in Boston when its current use as a charter school ends. The site is located near the Park Plaza Hotel and is bounded by Arlington Street, Stuart Street, and Piedmont Street. The site has been owned and utilized by the Boston Renaissance Charter Public School in recent years. The Renaissance School is relocating to a new facility in Hyde Park that has been financed, in part, by the Proponent's acquisition of 100 Arlington. The Proponent plans to convert 100 Arlington from its current use as a school to a multi-family residential building with approximately 128 apartment units. The repurposing will include extensive measures to modernize the building, including HVAC, life safety, electrical, plumbing and elevator system improvements, replacement of the roof and all windows, sidewalk improvements, and repairs to the existing building façade. There will be no change in the current building envelope. The proposed project will establish 13 floors of residential apartments and building amenity space above the ground floor. The ground level of the building will include the residential lobby and will activate the pedestrian environment through introduction of new retail space at the street level. The remainder of the renovated building basement and sub-basement space will consist of service, storage and mechanical space supporting the building as a whole. As a result of these improvements, there will be no increase in zoning square footage.

The 100 Arlington Street Project (the "Project") responds to the site's zoning which calls for development in areas accessible to public transit while protecting and enhancing the existing character of the downtown area. Furthermore, the underlying zoning allows multi-family residential uses along with accessory services for the apartment residents.

Minor updates to the building façade and windows will support the renewed retail and apartments. This Project will help to link the Back Bay and Theatre District and represents an important investment which is needed to support and encourage the continued renewal of the Stuart Street corridor. The Proponent will work with the Boston Redevelopment Authority (BRA), city agencies and the public through the Article 80 process, to provide a project that will result in a benefit to the City and the immediate neighborhood.

100 Arlington Street
Expanded Project Notification Form

This "Expanded" Project Notification Form (PNF) responds to the Transportation, Environmental Protection, Urban Design, Historic Resources and Infrastructure components of the City's requirements under Article 80 Large Project Review as well as preliminary comments received from city officials.

Project Proponent

Arlington CFII, LP
c/o The Congress Group, Inc.
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Project Site

100 Arlington Street is located between Boston's Theater District and Back Bay neighborhoods and adjacent to Bay Village. The existing building is located on 0.36 acres (the "Project Site") and is currently used as an elementary school. The site has frontage on Arlington Street, Stuart Street and Piedmont Street. The area surrounding the site includes office space, hotels, and various small retail establishments and restaurants catering to the local workforce, neighbors, and tourists.

The Project Site is located within the Bay Village Neighborhood District ("Bay Village"). Boston Zoning Code (the "Zoning Code"), Article 63. Within Bay Village, the project site is in the Subdistrict NS (Neighborhood Shopping). The Project Site is also located within the Columbus Avenue Neighborhood Design Overlay District pursuant to Article 63-18 of the Code and the Groundwater Conservation Overlay District, pursuant to Article 32 of the Code.

Project Description

The Proponent intends to update 100 Arlington Street to reposition it for residential use and conversion of a portion of the ground floor space to retail. The newly renovated residential space will provide approximately 128 rental apartment units. The Project proposes approximately 10,250 square feet of retail space with the majority centered on the Arlington Street frontage. To accommodate the new retail space, the Proponent will improve the existing building entry and windows to enliven the façade, and provide a design that respects and integrates with the renaissance revival style of the building face.

The Proponent also envisions rebuilding existing sidewalks along both Stuart and Arlington Streets. No on-site parking will be provided in connection with the project. The Project's building program is provided in Table 1-1.

Table 1-1
Project Summary and Comparison to Existing Uses

Land Use	Existing	Proposed	Net New
School Space (sf)	165,690	0	-165,690
Retail Space (sf)	0	10,250	10,250
Residential Space (sf)	0	155,440	155,440
Gross Floor Space (sf)	165,690	165,690	0

Project Status

The Proponent has submitted a Letter of Intent to the BRA Director to begin the Project Article 80 process. The Proponent is committed to engaging local business owners and neighborhood groups and soliciting their input during the public review process which follows the submission of this PNF to the BRA.

Community Outreach

The Proponent, working with the BRA, has had preliminary meetings with interested neighborhood groups and will continue to consult with them as part of the public review process. Given the Project's location, we anticipate participation in the Article 80 process which will include adjacent property owners, Bay Village Neighborhood Association, Boston Preservation Alliance, Back Bay Association, Park Plaza CAC, and Neighborhood Association of the Back Bay.

Summary of Project Impacts

The Project is expected to have minimal impacts on the public environment and adjacent properties because there will be no changes to the existing building envelope.

As a result, it is not anticipated that the permanent changes to the building will have any impact related to wind, shadow, traffic, daylight and solar glare as defined by the City's Large Project Review process.

Improvements to the building will need to adhere to the City's standards as stated in Article 80B. The following is a summary of the Project's anticipated impacts and related mitigation. Further information can be found in Chapter 5, *Environmental Protection*, of this document.

■

Urban Design

The Project represents an important opportunity for creating new links within the urban fabric of Boston's Back Bay and Bay Village neighborhoods. Converting the building from an elementary school to a residential building will strengthen the edge and enhance the identity of a vibrant urban residential neighborhood. By providing retail space on the ground floor, the Project will become an active participant in the surrounding neighborhood.

■

Transportation

The primary finding of the transportation analysis is that the transportation impacts generated by the project will be minimal. A series of actions have been developed to reduce the impact of the project on neighborhood streets and generally improve the pedestrian access realm surrounding the project site. Actions will be taken by the proponent to limit the amount of on-street parking demand generated by the Project. Finally, the proponent will explore proactive Transportation Demand Management measures (TDM) and supporting amenities to encourage and support the use of mass transit, walking, and cycling.

A summary of key findings of the transportation analysis for the project is as follows:

- Vehicle trips produced by the project will decrease substantially from current conditions. Existing traffic generated by the site will be reduced by over 90 percent during the morning peak hour and by 85 percent during the evening peak hour.
- The project is anticipated to generate only 5 entering and 13 exiting vehicle trips during the morning peak hour. During the evening peak hour, the project will generate only 18 entering and 12 exiting vehicle trips.
- Under current conditions, the Renaissance Charter School generates a substantial amount of drop-off/pick-up activity on both Stuart Street and Arlington Street by both parents in automobiles as well as by school buses. These activities slow traffic operations at the intersection of Arlington St/Stuart St/Columbus Ave, create vehicle queues and idling. Under future conditions, these activities will be completely eliminated.
- The existing site is extremely well served by multiple modes of transportation. Apart from being a short walk to Back Bay Station, one of

Boston's transportation hubs, it is also easily accessible to the Arlington MBTA station, Interstate 93, and the Massachusetts Turnpike. Back Bay Station provides access to the Orange subway line, Commuter Rail, and multiple bus routes. The Arlington Street MBTA station serves the Green Line subway lines.

- The project will not provide on-site parking for tenants. Multiple off-street parking facilities are located within a one-quarter mile of the site. The Proponent has arranged to have available to its residential tenants up to 200 parking spaces at the nearby 200 Stuart Street parking garage.
- In addition to the residents that utilize the 200 Stuart Street parking garage, a percentage of the residents will find other available off-street parking spaces and available on-street parking. The Proponent is committed to working with the BTD on potential strategies to limit impacts on residential parking zones where parking spaces are in the greatest demand.
- A program of Transportation Demand Management (TDM) strategies will be implemented to promote alternative modes of transportation and discourage single-occupancy vehicle trips. This program will build upon the Project's locational advantages for pedestrian, bicycle and transit access to maximize its contribution to the enhancement of the overall transportation network.

The assessment in Chapter 4, *Transportation*, provides an evaluation of expected project transportation impacts, and addresses vehicular traffic, parking, loading and servicing, pedestrian activity, bicycle amenities, and public transportation at the Project site and in the surrounding area.

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Wind

The proposed project is not expected to generate changes in wind impacts on adjacent buildings or open space since the project will not make any changes to the height or size of the existing building. The proposed project only makes minor changes to the entryways and windows. To support the new ground floor retail uses, a new overhead canopy and awnings may be installed; however it is anticipated that this will have minimal impact on the wind environment at the public sidewalk.

■

Shadow

Given that the massing of the building is not changing, the proposed project will not produce new shadow impacts on any nearby commercial, residential, or pedestrian areas. For more information see Chapter 5, *Environmental Protection.*

■

Daylight

Daylight quality, as defined by the Large Project Review guidelines, relates to the amount of the "skydome" that will be obstructed by new building elements when viewed from the adjacent public way. The proposed project will not have an impact on the currently visible sky plane and therefore will not impact the public pedestrian environment or adjacent properties. For more information see Chapter 5, *Environmental Protection.*

■

Solar Glare

Solar glare impacts occur when the sun is reflected onto the public way creating a nuisance condition or causing excessive heat gain. This is especially critical for southern facing building facades and predominantly glass surfaces. The existing building is primarily masonry with punched windows. Any glass replacement will be low-e, clear glass. The proposed improvements will not result in any significant solar glare impacts to the public right of way or adjacent buildings.

■

Air Quality

The predominant source of air pollution anticipated from the Project is emissions from project-related motor vehicle traffic, which directly emit carbon monoxide. The Project is expected to generate significantly fewer vehicle trips to the site than the existing use which will result in less overall impact to the existing ambient air quality. Based on this, the Project is not expected to result in violations of the NAAQS for carbon monoxide and particulate matter, or increase the frequency or severity of existing carbon monoxide and particulate matter violations, or delay attainment of related NAAQS due to the decrease in project vehicle trips. For more information see Chapter 5, *Environmental Protection.*

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Noise

Future (post-construction) sound levels from the Project are expected to be lower than existing levels since vehicle traffic levels and idling will be significantly reduced. New rooftop mechanical equipment, including new variable speed fans where possible, will reduce abutter impact compared to the existing equipment. All new rooftop mechanical equipment is expected to be completely hidden by the building's existing 15 foot parapet – which will help to visually shield these elements and dampen their noise generating potential compared to the existing equipment.

The Project is not anticipated to result in a change in the local noise characteristics. For more information see Chapter 5, *Environmental Protection.*

■

Solid and Hazardous Waste

The Project Site is a developed, urban location. The Project includes the demolition of interior portions of the existing building. Solid waste and demolition debris will be characterized at the site to determine whether there is any need for special handling and disposal. The Proponent will manage any regulated materials that may be identified during the demolition work, which involves the proper documentation, handling, and removal of the materials to maintain site compliance with the Massachusetts Contingency Plan (MCP).

■

Geotechnical/Groundwater

The Project anticipates little interaction with site soils and groundwater. The building rehabilitation will occur within the existing building footprint. Construction of the proposed project is not expected to have adverse short or long-term impact on groundwater conditions. The Proponent is committed to working with the BWSC and Boston Groundwater Trust to determine the most appropriate strategy to recharge one inch of roof runoff to the surrounding groundwater system as required under Section 32 of the Zoning Code.

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Water Quality

The Project Site is located in a highly urbanized area. There is no drinking water supply in the area of the site. Under existing conditions, the site is almost entirely covered by impervious surface and stormwater runoff from the Project Site is typical of runoff from urban area surfaces. Site stormwater is routed to the existing Boston Water and Sewer Commission (BWSC) collection system.

The proposed site also lies within the City's Groundwater Conservation Overlay District (GCOD) which establishes performance standards for infiltration of roof runoff for certain proposed projects. The proponent will work with the BRA, BWSC and the Boston Groundwater Trust to develop a design approach for the project which addresses the GCOD requirements.

See Chapter 6, *Infrastructure Systems*, for further information.

The Project is a renovation to an existing building. The Project proposes no new stormwater connections or outfalls. The Project is not anticipated to have any negative effects on water quality at the Project Site.

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Construction

The nature of the Project as a rehabilitation of an existing building will limit construction impacts. Despite this, the Proponent will need to develop an action plan following the City construction management requirements.

Some level of noise, dust, traffic and other impacts are the inevitable consequences of any construction project. The Proponent will require its contractors to develop construction protocols to control these impacts. Chapter 4, *Transportation,* describes the anticipated impacts of the construction of the Project and related infrastructure improvements. Traffic maintenance during construction will be addressed in a transportation access plan developed in consultation with and approved by the Boston Transportation Department (BTD). During construction the Proponent will require its contractors to provide notice of utility relocations and to maintain utility services, if necessary.

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Sustainable Design

The overall project approach is sustainable as it proposes to adaptively re-use an existing building to meet the current market needs.

The Proponent understands the importance of the Mayor's Policy on Sustainable Design and the City's efforts to make green design a reality. The Proponent also recognizes the benefits to the community at large of planning and building for sustainable value in the form of diminished energy use and expenses and more reliable and durable building systems. In accordance with Section 37 of the Zoning Code, the Project will be certifiable under the LEED 2009 Rating System for New Construction and Major Renovation.

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Rodent Control

The City has established guidelines for control of rodents during construction activities. The Project will comply with these requirements through development of and adherence to a rodent control program.

■

Historic Resources

The existing Building is in the Massachusetts Historical Commission Inventory of Historic and Archaeological Assets of the Commonwealth, both as an individually inventoried property and as part of the Park Square/Stuart Street area, which has been determined eligible for the National Register of Historic Places. However, no State or National Historic District has been created due to objections by property owners within the district's boundaries. The 100 Arlington Street Building was identified as a "contributory building" in the report prepared for consideration of the potential Park Square/Stuart Street Historic District. The planned building improvements and modifications will not affect the historic appearance of the building as described in Chapter 3*, Urban Design.*

The Proponent does not plan to make use of state and federal tax credits as a source of Project equity. For further information please see Chapter 5, *Environmental Protection* for the Historic Resources section.

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Infrastructure

As discussed in Chapter 6, *Infrastructure Systems*, the existing building is well served by public and private utility systems given its location in the urban core. Given that the proposed improvements will maintain, or likely decrease, building occupancy, it is anticipated that the utility demands related to water and sewer will decrease commensurately. In addition, improvements to building systems and facilities which will use sustainable principles as a guideline, are expected to reduce overall utility system demands even further. This document includes a review of the existing utility systems serving the site.

Summary of Project Benefits

The Project will provide substantial benefits to the City and its residents, including new job creation, urban design improvements, and additional tax revenues. The Project will substantially contribute to improving the pedestrian and retail vitality. Specific public benefits include:

- Increase to the City's housing supply by providing 128 rental units on a parcel for which alternate, non-residential uses are allowed;
- Creation of new job opportunities;
- Improvements to the urban design characteristics and aesthetic character for the development site and its surroundings.
- Introducing new retail space which adds to an important pedestrian corridor providing an activated street environment; and
- Reconstructing sidewalks and streetscape adjacent to the new retail and lobby areas.

0 50 100 Feet

Figure 1-1
Project Area Context Map

VHB Vanasse Hangen Brustlin, Inc.

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General Information

Applicant Information

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Development Team

The Proponent has assembled a development team with exceptional experience dealing with the City's substantive requirements and approval processes.

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■

Prior Development Experience

The owner and developer of the 100 Arlington Street Project is Arlington CFII, LP (the Proponent), a joint-venture between affiliates of The Congress Group, Inc. and AREA Property Partners.

Founded in 1980, The Congress Group has developed and managed a diverse portfolio of investments in all major real estate sectors including historic rehabs, commercial office space, residential, hotel and retail projects. All aspects of its projects are managed directly, from initial assessment and development through construction, management and eventual disposition.

The Congress Group has successfully developed over 6.5 million square feet of real estate valued at over $1.5 billion, including 33 Arch Street in downtown Boston, the Embassy Suites Hotel at Logan Airport, and Museum Towers in East Cambridge.

AREA Property Partners is a leading international real estate fund manager that has been investing in the United States since 1993 and globally since 1995. Headquartered in New York City, with offices in Atlanta, London, Los Angeles, Luxembourg and Mumbai, AREA has a team of more than 60 investment professionals focused on generating returns for its investors. AREA pursues a range of real estate investments that offer the opportunity for highly attractive risk-adjusted returns, whether through its opportunity funds, value-added funds or its lending business. AREA's investors consist of leading global government and corporate pension funds, sovereign wealth funds, insurance companies, foundations, endowments and high net worth families.

Legal Information

Legal Judgments or Actions Pending Concerning the Proposed Project

None. There are no legal judgments or actions pending concerning the proposed Project.

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

None. There is no history of tax arrears on property owned by the Proponent in the City of Boston.

Evidence of Site Control over the Project Area:

In 2008, the Proponent entered into a Purchase and Sale Agreement with the Boston Renaissance Charter School (BRCS) to acquire 100 Arlington Street. Under the Purchase and Sale Agreement, the Proponent has permission to seek the necessary permits and approvals for redevelopment of the site.

Nature and Extent of Any and All Public Easements

The Property is subject to an easement area along the western edge (Arlington Street) of approximately 4076 square feet, granted to the City of Boston dated December 30, 1927 and recorded in the Registry at Book 4963, Page 281.

Financial Information

The Proponent will submit the Project's financial information under separate cover to the BRA, if requested.

Project Area

100 Arlington Street is a 14-story, 165,690 gross square foot building that is located near Park Plaza between Boston's Theater and Back Bay neighborhoods. The existing building was originally constructed for office use in 1927 by the Boston Consolidated Gas Company and served as their corporate headquarters. In the early 1960's the University of Massachusetts acquired the building, converted it to educational use and incorporated it into their Boston Campus. The building is currently occupied by the Boston Renaissance Charter School, which plans on relocating from 100 Arlington Street to a new facility in the Hyde Park neighborhood, anticipated for Fall of 2010.

The Project Site consists of a single parcel containing approximately 15,797 square feet (0.36 ± acres) bounded by 108.39' along Stuart Street to the north, 128.36' along Piedmont Street to the south, 135.97' along Arlington Street to the west, and 162.21' along the adjacent Bradford Towers and Piedmont Parking to the east. The *Aerial Location Plan* is shown in **Figures 2-1**.

Regulatory Controls and Permits

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Zoning Controls and Permits

The Project Site is located within the Bay Village Neighborhood District ("Bay Village"). Boston Zoning Code (the "Zoning Code"), Article 63. Within Bay Village, the project site is in the Subdistrict NS (Neighborhood Shopping). The Project Site is also located within the Columbus Avenue Neighborhood Design Overlay District pursuant to Article 63-18 of the Code and the Groundwater Conservation Overlay District, pursuant to Article 32 of the Code.

The proposed Project includes conversion of a K-6 school to multi-family residential and retail spaces, façade work, and related utility work within 100 Arlington Street.

Uses

Pursuant to Section 63-30, Table A of the Code, multi-family residential uses along with accessory services for the apartment residents are "allowed" uses in the Neighborhood Shopping District. Local retail business and certain other retail uses are permitted within the district. General retail and restaurant uses require a Conditional Use Permit.

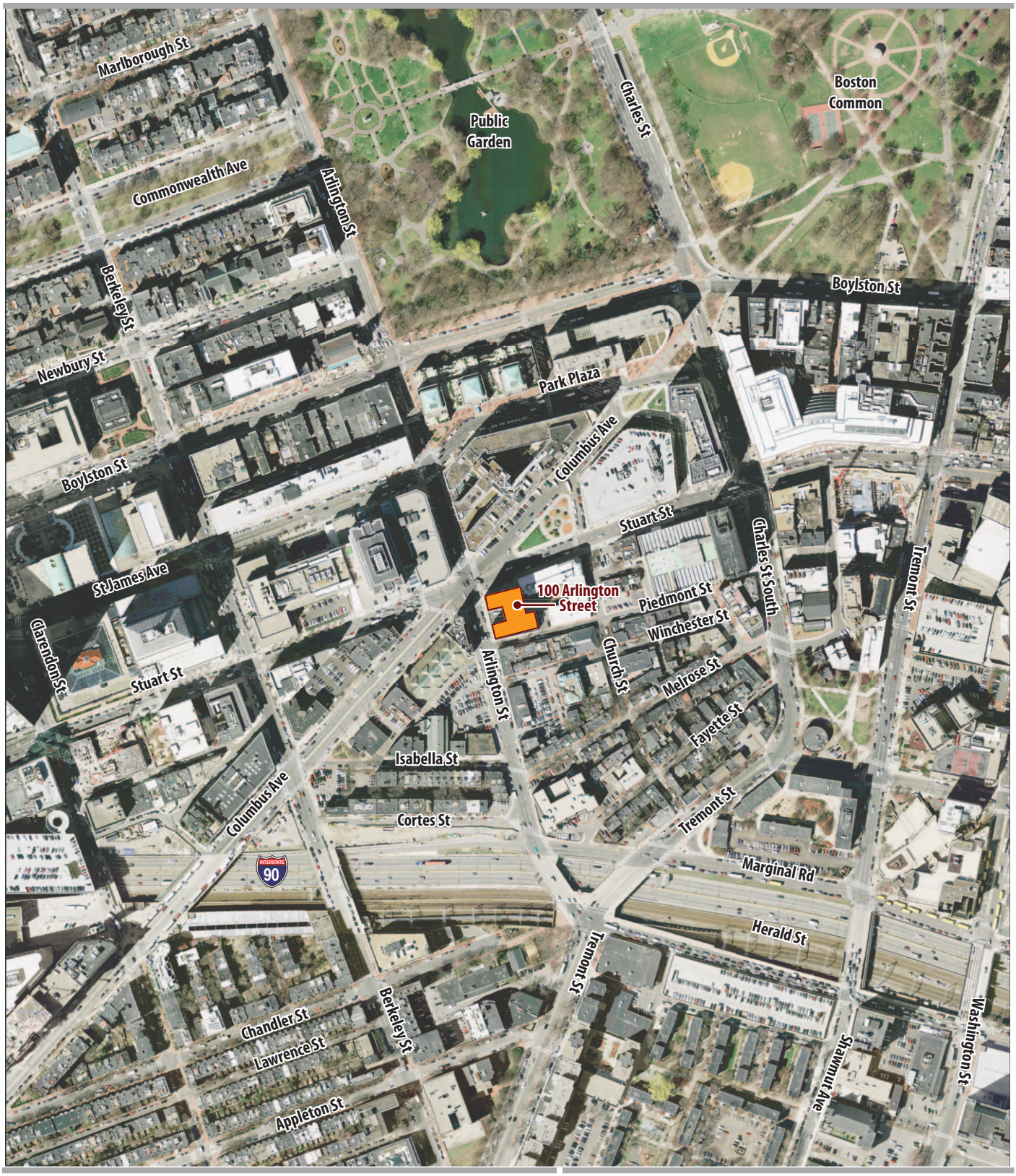
Dimensional

A breakdown of the dimensional zoning requirements applicable to the Project Site is included in **Table 2-1** below.

Table 2-1:
Zoning Code Dimensional Regulations

Applicable Requirements	NS Subdistrict	Existing Building	Project
Maximum Floor Area Ratio	6.0	11.0	No Change
Maximum Building Height	65 feet	154' 5-3/4"	No Change
Rear Yard	12 feet	None	No Change
Minimum Lot Area	None	15,797 SF	No Change
Frontage	None	None	No Change
Minimum Usable Open Space (per unit)	150 SF	None	No Change

The Property is grandfathered from the existing dimensional requirements under Section 13-3 of the Zoning Code, which provides that a building existing prior to the effective date of the Zoning Code that does not comply with applicable dimensional requirements may nevertheless be altered so long as the non-conformity is not increased.



0 50 100 Feet

Figure 2-1
Aerial Location Map

VHB Vanasse Hangen Brustlin, Inc.

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Article 80 Review

The Proponent plans to convert 100 Arlington from its current use as a school to a multi-family residential building with approximately 128 rental apartment units. The redevelopment will include a complete modernization of the building, including HVAC, life safety, electrical, plumbing and elevator system improvements, replacement of the roof and all windows, sidewalk improvements, and repairs to the building façade. The renovated building will include a basement and sub-basement level consisting primarily of service, storage and mechanical space, ground and basement level retail space, a ground level lobby, building amenity space, 13 floors of residential apartments, and a rooftop mechanical penthouse. As a result of these improvements, there will be no increase in the zoning square footage that is currently provided.

This Project Notification Form (PNF) for the 100 Arlington Street Project initiates Large Project Review under Article 80 of the Boston Zoning Code.

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State and Local Permits or Other Approvals Anticipated

The anticipated start of construction is 2011. The Proponent will seek the following permits or actions in the months prior to obtaining a Building Permit.

Table 2-2
Anticipated Permits and Approvals

Agency Name	Permit or Action*
Commonwealth of Massachusetts	
Massachusetts Dept. of Environmental Protection: Division of Air Quality Control	Notice of Commencement of Demolition and Construction; Notice of Asbestos Removal, if applicable
City of Boston	
Boston Redevelopment Authority	Article 80 Large Project Review-Final Adequacy Determination;
Boston Transportation Department	Transportation Access Plan Agreement; Construction Management Plan
Boston Department of Public Works	Street Opening Permit; Street/ Sidewalk Occupancy Permit
Public Improvements Commission	Street Sidewalk Specific Repair Pan; Maintenance Agreement Approval;
Boston Water and Sewer Commission	Local Sewer and Water Tie-in and Site Plan Approval (if required)
Boston Board of Appeals	Groundwater Conservation District Permit
Boston Department of Inspectional Services	Building Permits; Other Construction-Related Permits; Site Cleanliness Permit; Certificates of Occupancy
Boston Parks Commission	Site Plan Approval; Approvals to construct within 100 ft of a Public Park if necessary

*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 or actions may be needed.

Schedule

The following list provides a preliminary assessment of the construction schedule for the proposed Project:

- Project Review, Approval, and Permitting — Summer 2010 – Fall 2010
- Construction Documents/Permitting — Summer 2010 – Late 2010
- Demolition — Fall 2010 – Spring 2011
- Construction — Mid 2011 – Mid 2012
- Facility Opening — Late 2012

3

Urban Design Component

Urban Context

The Project represents an important opportunity for creating new links between the urban fabric of Boston's Back Bay, Theatre District, and Bay Village neighborhoods. Converting the building from an elementary school to a residential building will strengthen the edge and enhance the identity of a vibrant urban residential neighborhood.

By providing retail space on the ground floor, the Project will become an active participant in the surrounding neighborhood. **Figures 3-1** through **3-14** presented at the end of this chapter depict the proposed site's elevation plans, sections, and floor plans.

Design Principles

The original 1927 Renaissance Revival design of 100 Arlington Street is composed of solid geometries, handsome proportions and elegant ornament. The overall effect is of an enduring architecture. The building has the classic tri-partite composition of base, middle and top. At the ground floor, the base is lined with large arched window openings enhancing the sense of visual engagement with the streetscape. The middle is spare in its ornamentation; while the top is differentiated by its rows of columns, arches and bronze relief spandrel panels. The original use of 100 Arlington Street was the office headquarters for the Boston Consolidated Gas Co. This meant the general public once had reason to enter the building. Its grand ground floor spaces were account billing and payment offices and display spaces for the company. The updating of 100 Arlington Street will reposition how this important building once again participates in the public realm.

The redesigned entrance along Stuart Street will provide a new elegant building identity. New entries on Stuart Street and Arlington Street will once again provide the building with retail character.

Three overarching design principles apply to the architecture of the Project:

- To establish a refreshed building identity;
- To respect the integrity of the existing architecture; and
- To provide ground floor retail space to enhance street life.

Height and Massing

The Project will maintain the existing height and building mass. The existing rooftop parapet will remain and will both screen and isolate any additional mechanical equipment needed for the upgraded building systems. Along Piedmont Street, the existing single-story service and loading area will be reused.

Character and Materials

A consistent architectural language will be incorporated into each of the retail and lobby entry elements of the Project. The language of these components will be both respectful of the Classical heritage of the building but clearly of our time. Careful proportioning will be studied for compatibility with the existing façades.

The material palette will draw from the existing, with an emphasis on clear glass, bronze and architectural bronze-tone finishes for exterior metals, and limestone.

Signage

Signage for the Project will be comprised of two primary types, signage for building identity; and signage for the retail tenant identity. Building identity signage and graphics will be located at the residential entry on Stuart Street. Small scale signage identifying service locations will be consistent with building identity graphics.

Ground floor retail will have primary street frontage on both Arlington Street and Stuart Street. High quality signage opportunities will be important to the economic viability of this retail use.

The Project anticipates signage placement within the monumental glazed arched openings. The Project also anticipates the desirability of projecting blade signage and awnings for both retail identity and streetscape activation.

These signage opportunities will establish the framework for retail tenants to construct dynamic identities. The variety of interior and exterior components—projecting and hung, with variety in scale and horizontal/vertical orientation—will create interest to the pedestrian and retail vitality at this location.

Open Space, Pedestrian Ways, and Amenities

The streetscape improvements for the 100 Arlington Street Project include the area between curb and building face along Stuart Street, Arlington Street, and Piedmont Street. The objective of any proposed streetscape improvements will be to create a pleasant and safe pedestrian realm by clearly defining the residential and retail entries, and improving existing elements to meet current codes.

Clear Definition of Public Realm

The current landscape concept contemplates the opportunity for active outdoor use along the Stuart Street building façade adjacent to the retail space, weather permitting. This is allowed by the generous existing building setback.

Landscaping

Landscape Elements

The proposed streetscape improvements will include landscape elements to create a pleasant pedestrian experience. The location of these landscape elements will respond to the adjacent uses and context. Along the wide intersection of Stuart and Columbus Avenue the streetscape will explore the potential to utilize planters and canopies to create a sense of enclosure and pedestrian scale.

Meeting Current Codes

The proposed streetscape improvements will meet all current accessible codes. Any new paving and street improvements will be designed and installed to meet current

codes, and all existing elements and paving to remain shall be modified if required to meet current codes as well.

Vehicle Access and Circulation

The Project Site enjoys excellent vehicular accessibility from both the local and regional roadway networks. However, there is no parking on the site today, and effectively there is no formal vehicular access point that serves the project site. The Proponent has made an arrangement which will make available to residential tenants up to 200 parking spaces at the nearby 200 Stuart Street parking garage. The Project will retain the existing internal loading areas, which will be used to support trash removal from the building. The project site is situated near many public transportation options, and is well supported by rail, subway, express bus, and local bus systems.

0 150 300 Feet

Figure 3-1
Site Plan

VHB Vanasse Hangen Brustlin, Inc.

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Figure 3-2
Arlington Street Elevation

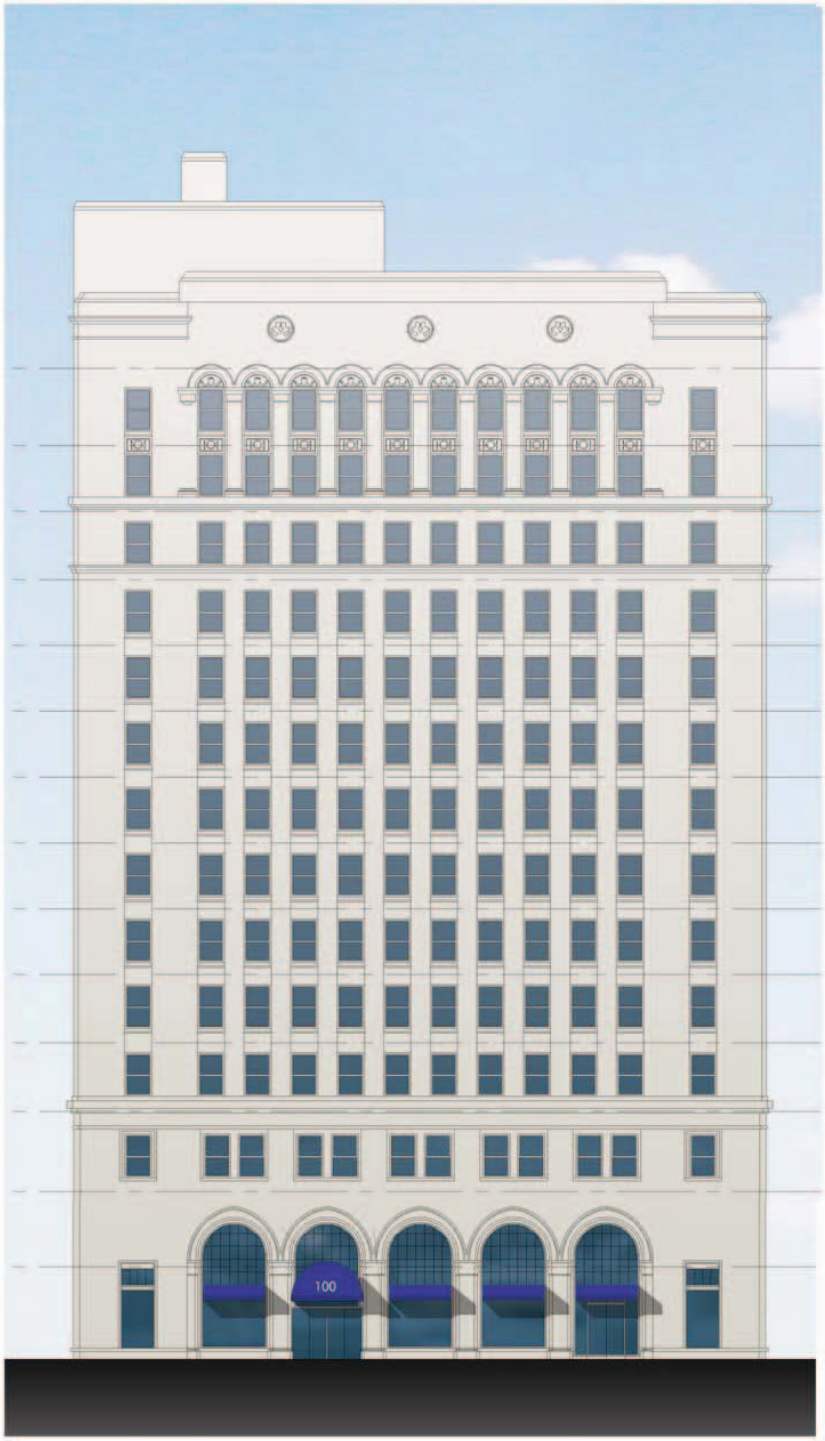
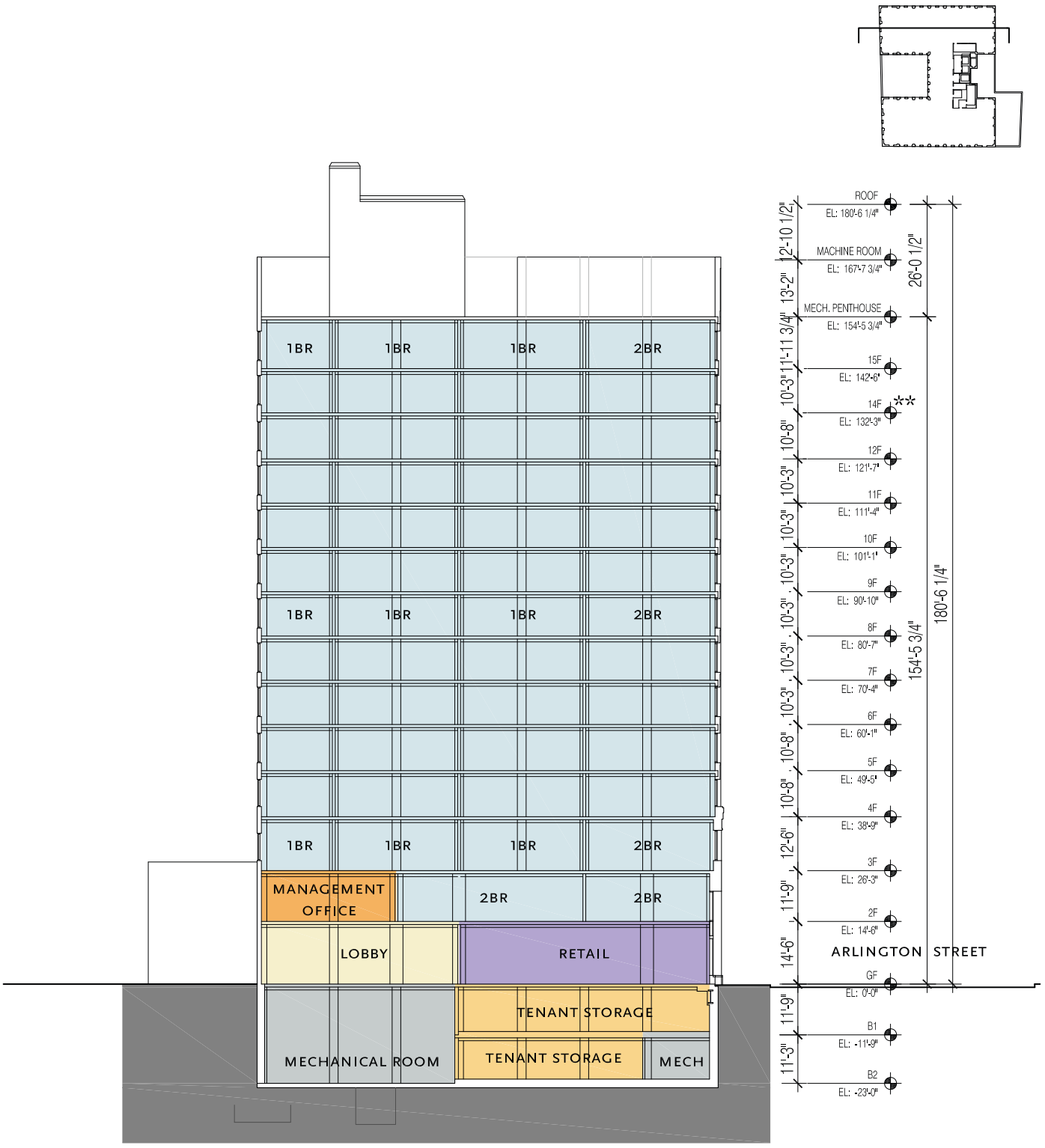


Figure 3-3
Stuart Street Elevation

Figure 3-4
Piedmont Street Elevation

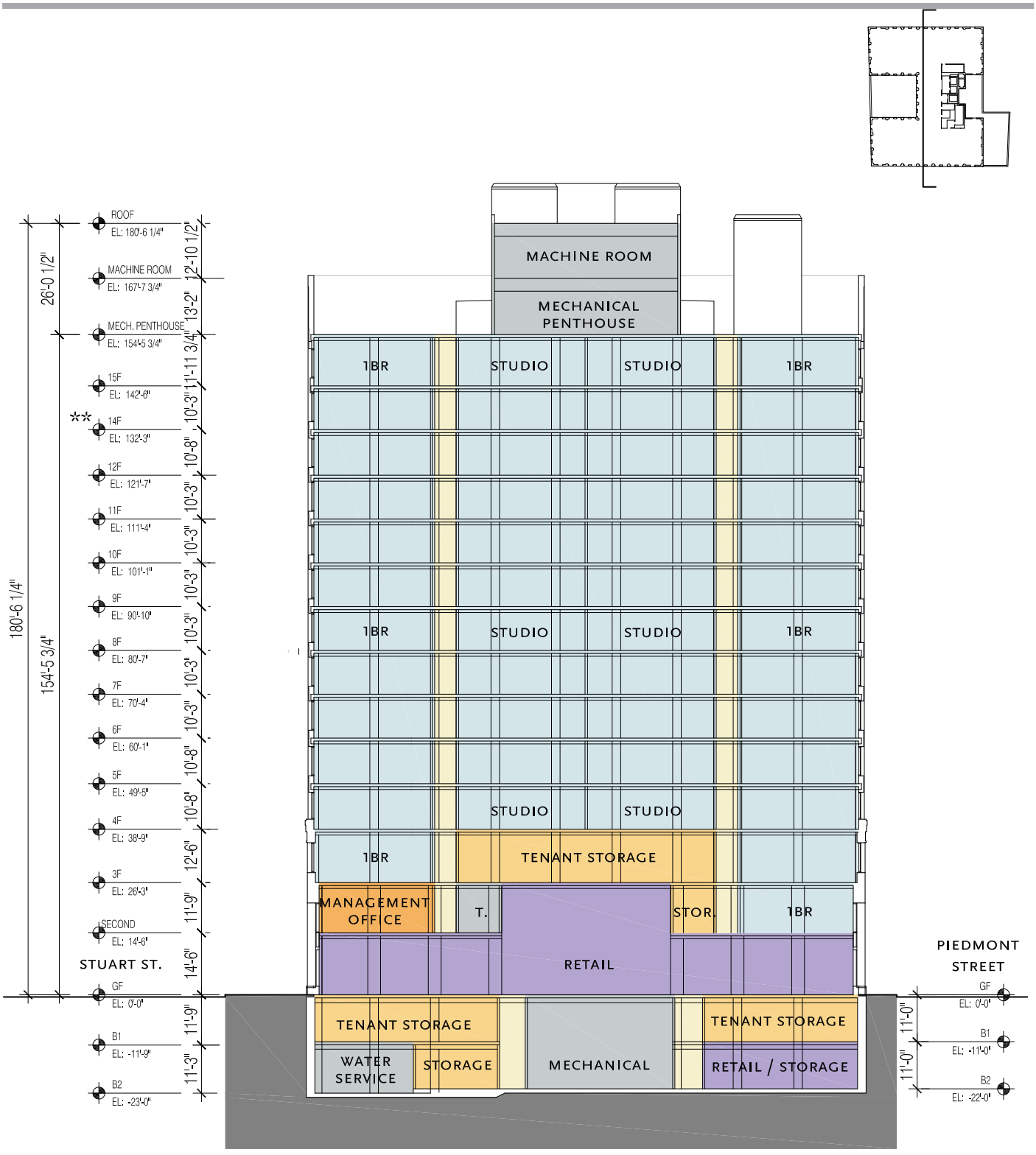


** NOTE: 13TH FLOOR DESIGNATION ELIMINATED

Figure 3-5
Building Section

Vanasse Hangen Brustlin, Inc.

ELKUS | MANFREDI ARCHITECTS



** NOTE: 13TH FLOOR DESIGNATION ELIMINATED

Figure 3-6
Building Section

Vanasse Hangen Brustlin, Inc.

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0 12.5 25 Feet

Figure 3-7
Sub Basement Floor Plan

VHB Vanasse Hangen Brustlin, Inc.

ELKUS | MANFREDI ARCHITECTS

0 12.5 25 Feet

Figure 3-8
Basement Floor Plan

Vanasse Hangen Brustlin, Inc.

ELKUS | MANFREDI
ARCHITECTS

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Figure 3-9
Ground Floor Plan

Vanasse Hangen Brustlin, Inc.

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Figure 3-10
Second Floor Plan

VHB Vanasse Hangen Brustlin, Inc.

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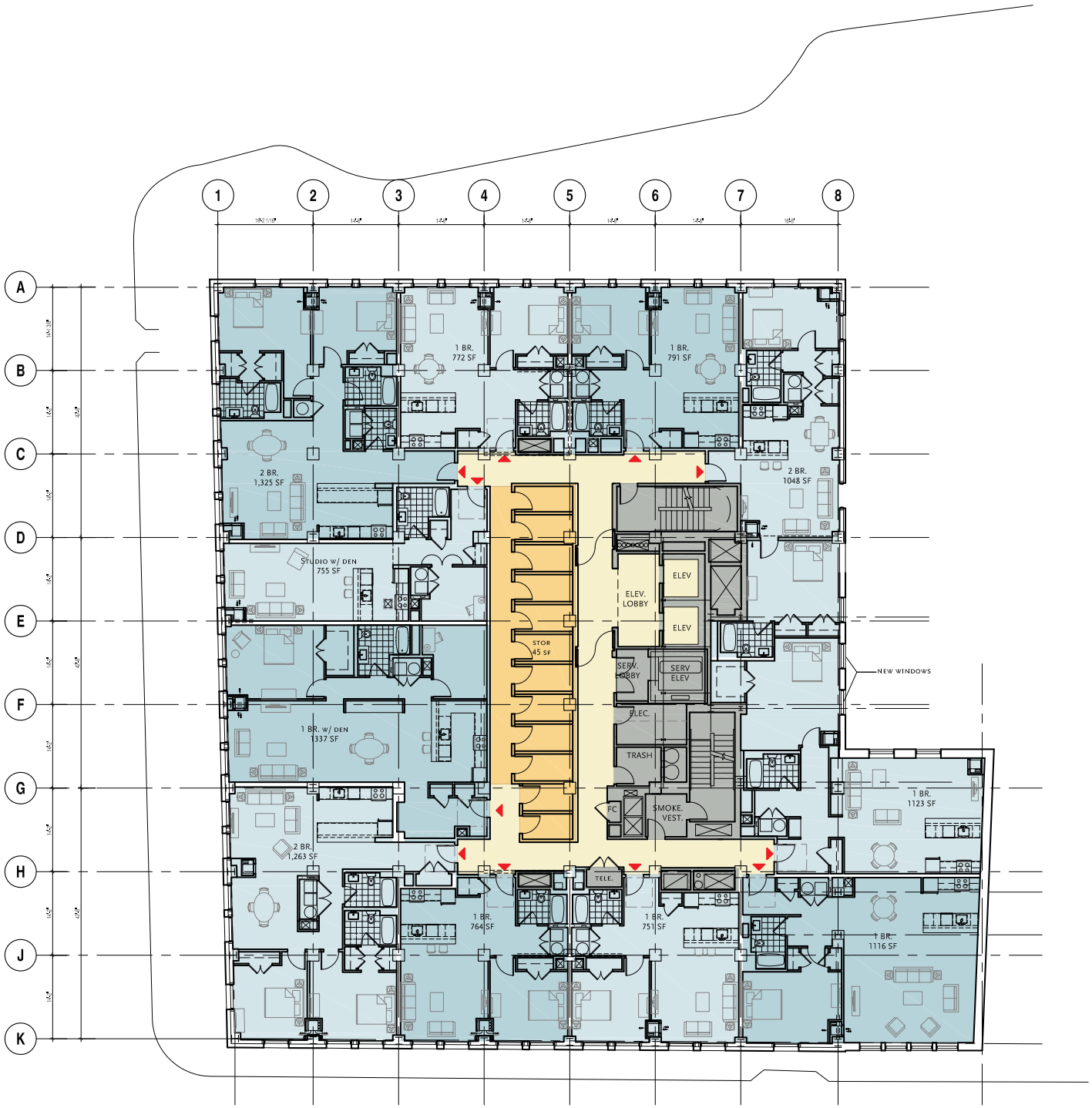

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Figure 3-11
Third Floor Plan

Vanasse Hangen Brustlin, Inc.

ELKUS | MANFREDI ARCHITECTS

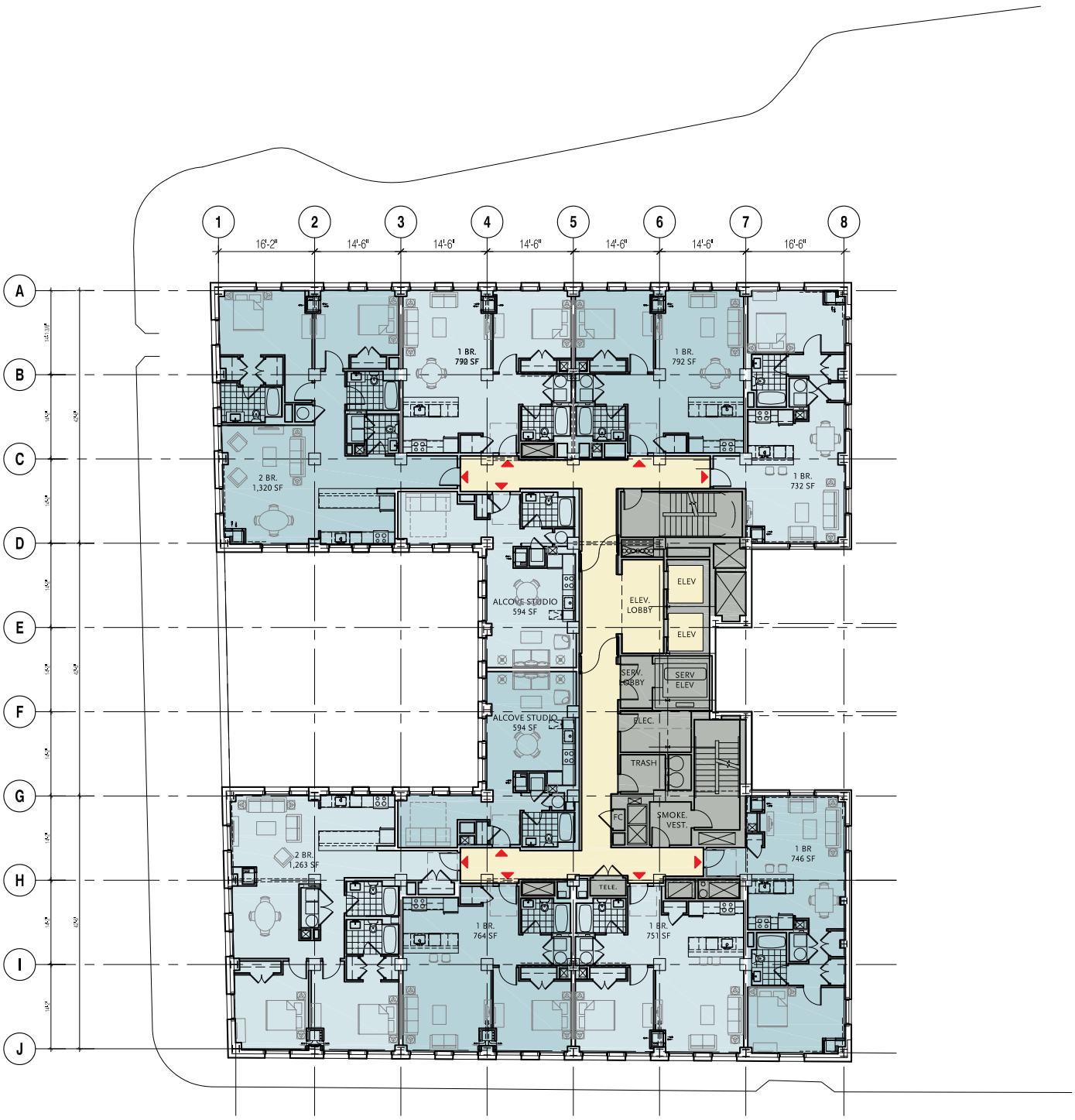

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Figure 3-12
Typical Floor Plan

Vanasse Hangen Brustlin, Inc.

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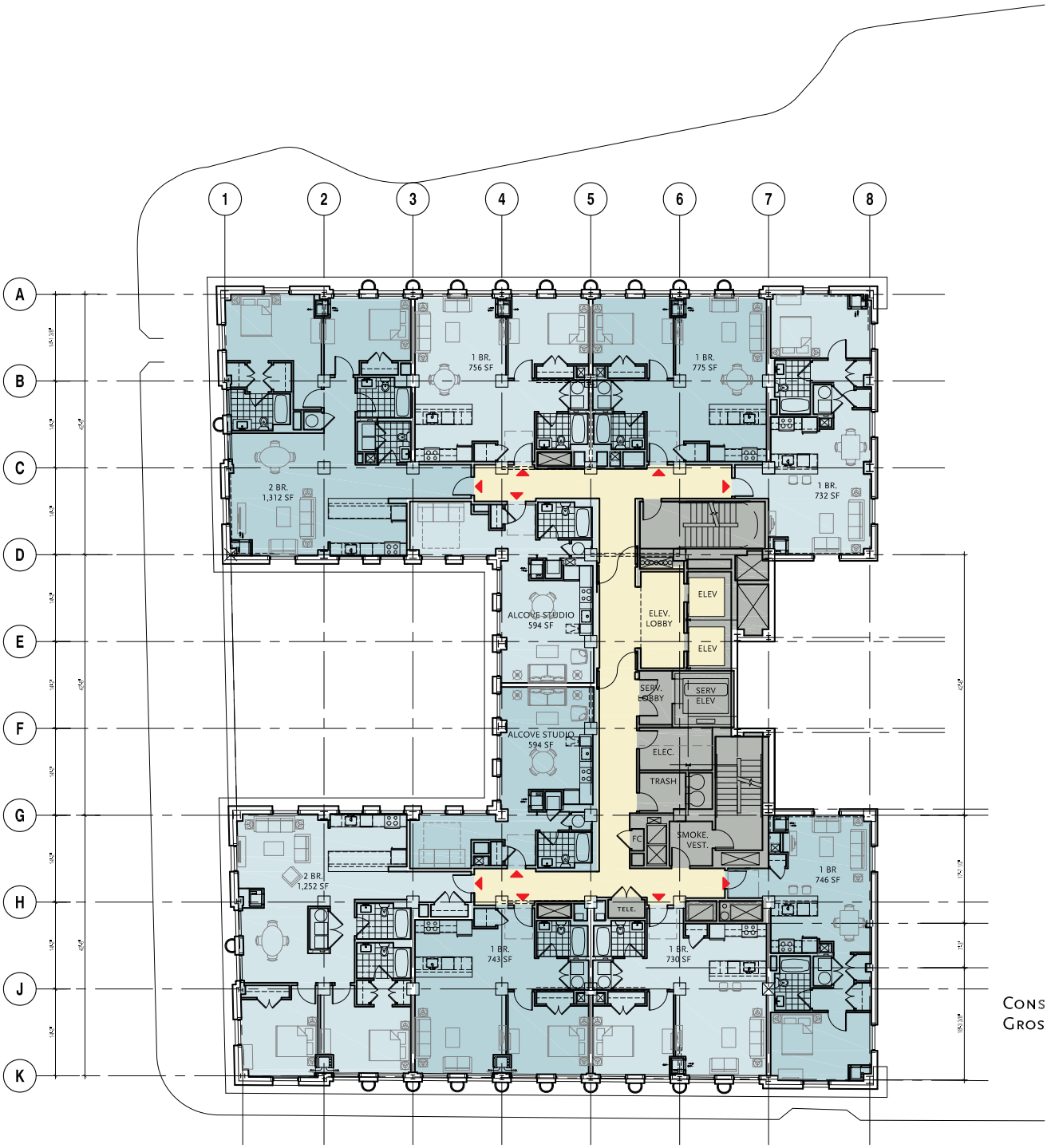

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Figure 3-13
14th and 15th Floor Plan

Vanasse Hangen Brustlin, Inc.

ELKUS | MANFREDI ARCHITECTS

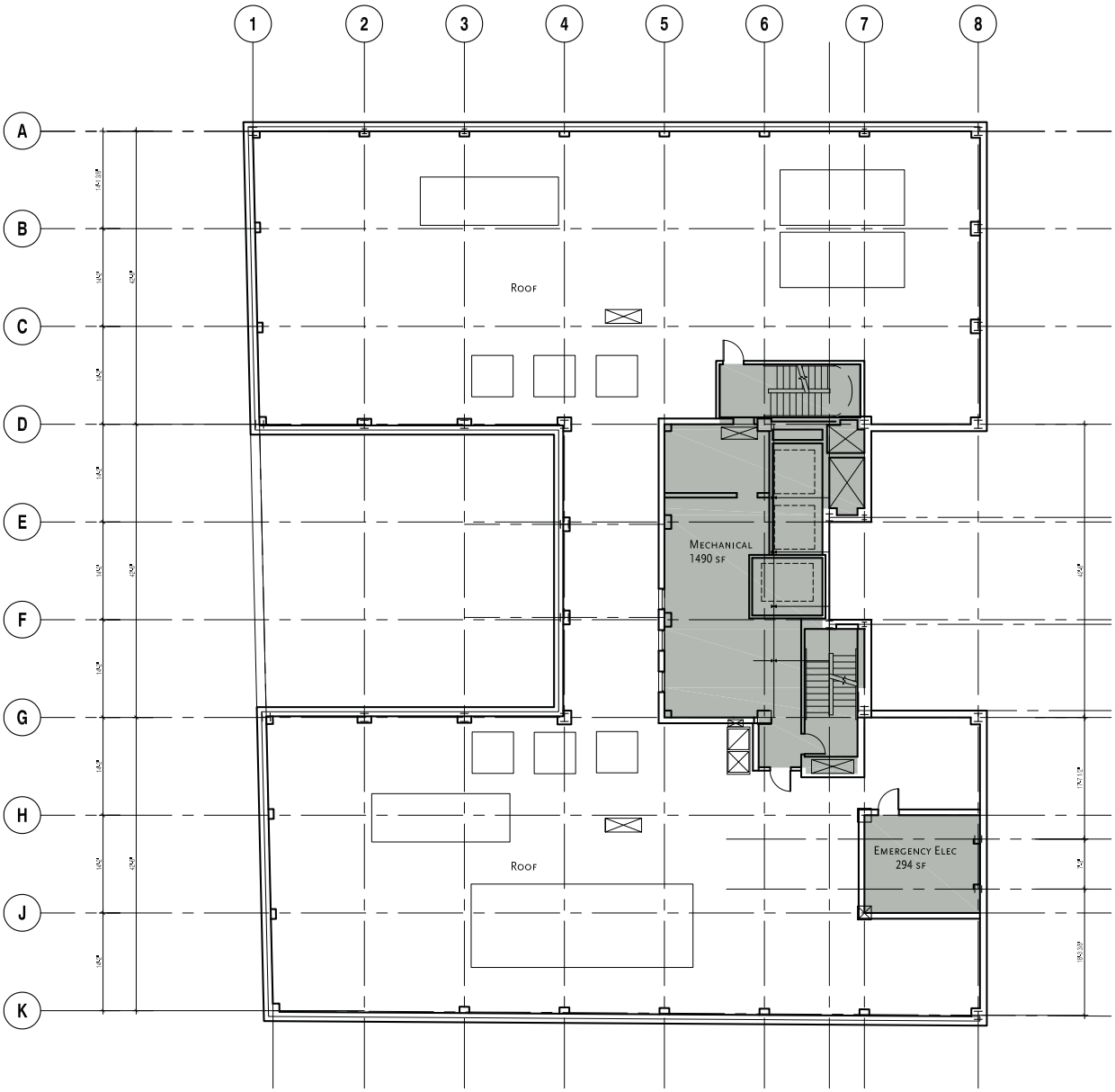

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Figure 3-14
Penthouse Plan

Vanasse Hangen Brustlin, Inc.

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4

Transportation

Transportation Overview

This chapter presents an evaluation and summary of existing and future transportation conditions that are expected relative to the 100 Arlington Street Project. This transportation study has been developed in order to understand the transportation impacts of the project and to develop appropriate transportation infrastructure improvements to the surrounding study area if any are required to mitigate the impacts of the proposed project as required by Article 80B of the City of Boston Zoning Code.

The transportation study includes an analysis of the following existing conditions:

- Parking conditions;
- Loading and service activities;
- Pedestrian activities; and
- Public transportation services.

In addition, this chapter quantifies and assesses the transportation impacts that are expected under future conditions. The purposes of these analyses are to:

- Define and quantify transportation conditions relative to the building's existing occupant, the Boston Renaissance Charter Public School;
- Estimate the transportation impacts that will be generated under future conditions based on anticipated traffic activities generated by the proposed project; and
- Develop a set of mitigation strategies and improvement measures, which will help to lessen the transportation effects of future project generated trips, parking impacts, and to provide improvements to the transportation infrastructure in the area.

The following sections provide an overview of the project and a discussion of the study methodology. Subsequent sections provide detailed discussions of existing

and future transportation conditions expected with the proposed project in place. The final sections of the chapter present a summary of transportation mitigation and improvement actions that the proponent is committed to implementing in connection with the project, and the expected construction impacts and related mitigation.

Project Description

The location of the project site and the surrounding transportation network are depicted in **Figure 4-1**.

The project site is bounded by Stuart Street to the north, Arlington Street to the west, Piedmont Street to the south and an existing residential building to the east. Each of the surrounding roadways provides one-way traffic flow.

The proposed project includes only a change in building use, without any measurable changes to the existing building envelope. The existing 14-story building is the current home to the Boston Renaissance Charter Public School – a K-6 educational facility with 1,200 students and 210 faculty and staff. The school is planned to close at this location after the 2009-2010 school year and move to their new facility – which is being constructed in Hyde Park. After they vacate the property, the proponent intends to renovate the building from its current school use and convert the building into residential apartments. As currently planned, the building would accommodate 128 residential units on Floors 2 through 14. The first floor would accommodate about 10,250 square feet of retail space. The renovation entails no additions to the current square footage on the property. Some changes are anticipated to accommodate identified utility and mechanical needs. The proponent also envisions rebuilding existing sidewalks along both Stuart and Arlington Streets. No on-site parking will be provided in connection with the project.

Study Methodology

The transportation analysis provides an evaluation of anticipated impacts of the Project on the surrounding transportation environment. This analysis was conducted in two phases. The first phase involved quantifying the existing transportation conditions generated by the Boston Renaissance Charter Public School - the current occupant of the 100 Arlington Street building.

The second phase of the study estimated the traffic and parking demands to be generated by the Project. The future trips have been compared to the existing trips to determine what impacts, if any, the project will have on the surrounding transportation infrastructure.

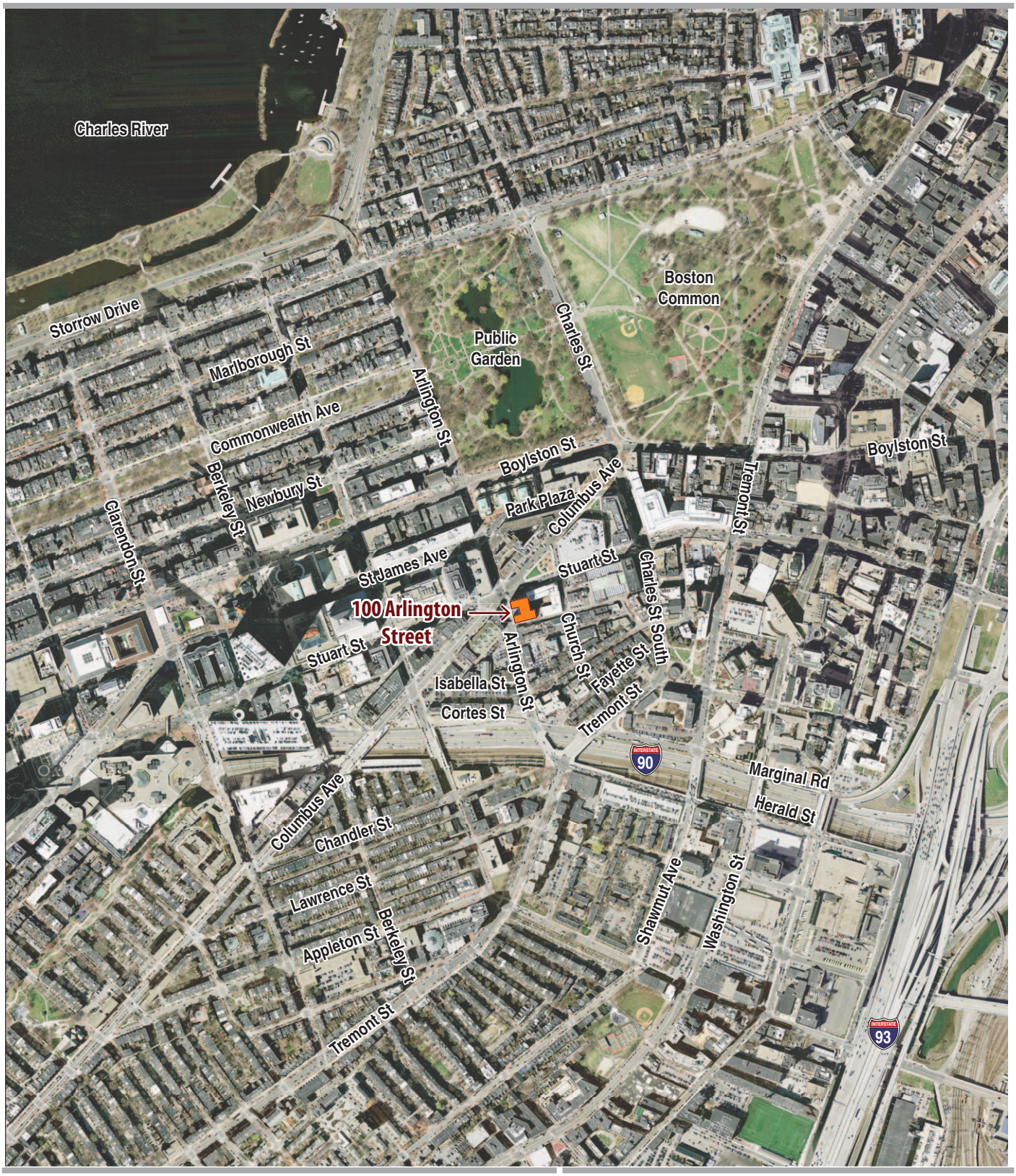

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Figure 4-1
Project Site

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Existing Conditions

This section describes the existing site in its transportation context, including pedestrian, bicycle, public transportation, vehicular access, parking and loading activities. The existing site plan is presented in **Figure 4-2**.

Pedestrian Environment

In general, the sidewalks along Stuart Street and Arlington Street abutting the existing building are in fair condition and are constructed of city standard materials (concrete and granite curb). Sidewalk width along Arlington Street is approximately 11 feet. Along Stuart Street, the sidewalk width varies from 15 feet up to 36 feet. The sidewalk on Piedmont Street is composed of brick and a minimal width (only 3 to 4 feet) that is interrupted by existing light posts.

Pedestrian access to the existing building is provided on both Arlington Street and Stuart Street. Access on Piedmont Street is limited to the existing loading dock and trash room doors.

Bicycle Access

As is typical in downtown Boston, there are no specific on-street bicycle accommodations, and bicyclists must ride in general purpose travel lanes on the streets surrounding the project site. The BTD did recently install a shared bicycle lane on Columbus Avenue near the project site. Adjacent bicycle parking facilities are limited to a bicycle rack located on Stuart Street, just east of the building, which can accommodate up to 4 bicycles.

Public Transportation

The project site is situated near many public transportation options, and is well supported by rail, subway, express bus, and local bus systems. The public transportation system in the vicinity of the site is illustrated in **Figure 4-3**, and the individual transit services and frequencies are summarized in **Tables 4-1** and **4-2**.

Table 4-1
Study Area Public Transportation Services: Rail

Line	Destination	Closest Stop	Peak Headway (minutes)	Off-Peak Headway (minutes)
Green Line	Lechmere- BC, Cleveland Cir, Riverside, Brigham Cir	Arlington Station	6-7	8-14
Orange Line	Oak Grove – Forest Hills	Back Bay	5	8-13
Commuter Rail	Framingham/Worcester	Back Bay	15-40	45-160
	Franklin	Back Bay	20-30	80-120
	Needham	Back Bay	28-45	60-120
	Providence	Back Bay	18-50	100-119
	Stoughton	Back Bay	25-52	60-220
Amtrak	Inter-city	Back Bay	Various	Various

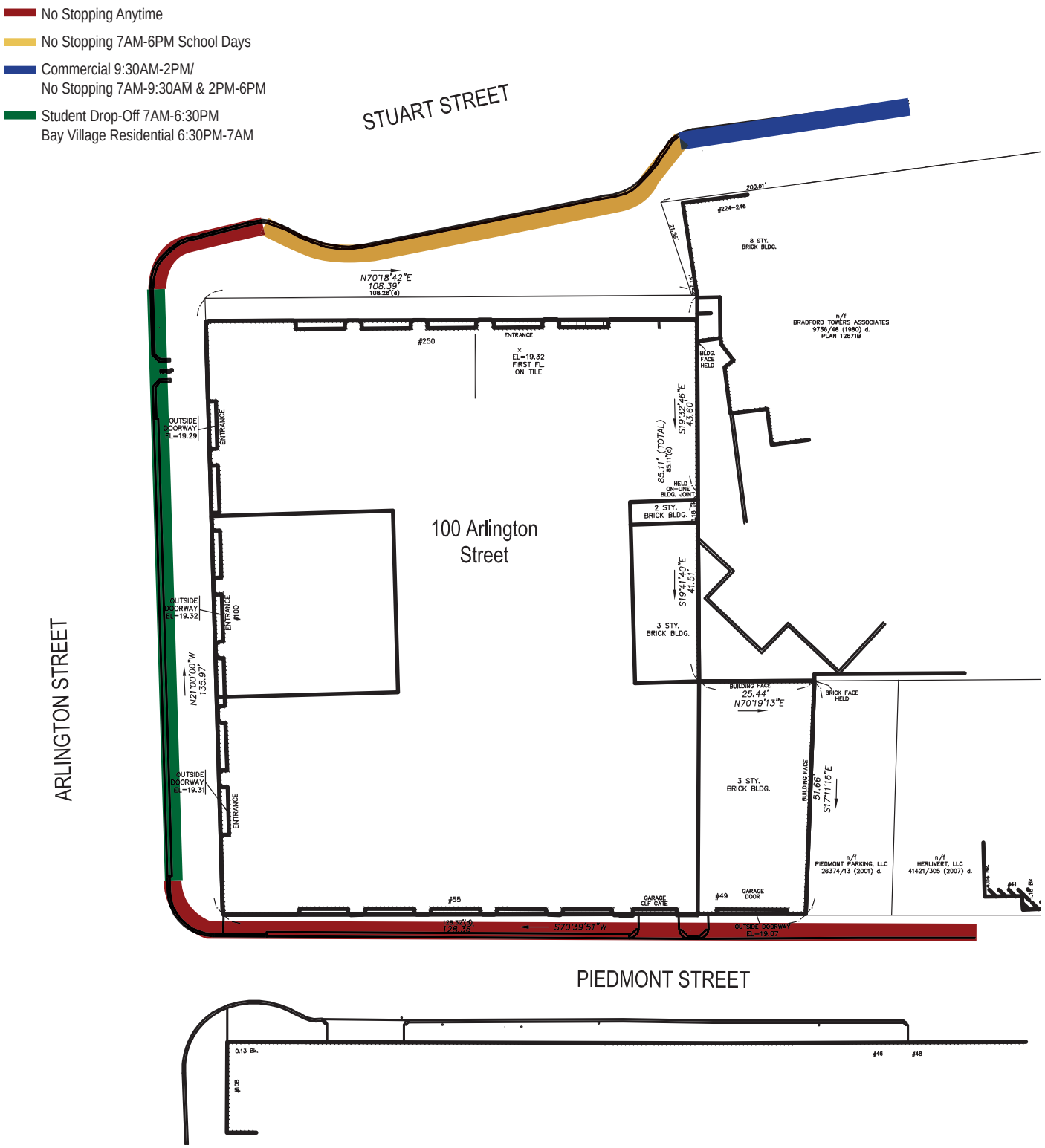

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Figure 4-2
Existing Site Plan

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0 300 600 Feet

Figure 4-3
Public Transportation

Vanasse Hangen Brustlin, Inc.

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Table 4-2
Study Area Public Transportation Services: Bus

MBTA Service	Destination	Closest Stop	Peak Headway (minutes)	Off-Peak Headway (minutes)
Local # 9	City Point – Copley Square via Broadway Sta.	Berkley at Columbus	10	12-25
Local # 10	City Point – Copley Square via Andrew Sta. & BU Med.	Back Bay	20-24	25-35
Local # 39	Forest Hills Sta.– Back Bay Sta via Huntington Ave	Back Bay	6-7	6-12
Local # 43	Ruggles Sta. – Park & Tremont Stations	Charles St at Stuart St	10-12	20
Local # 55	Jersey & Queensbury – Copley Sq. or Park & Tremont Stations	Boylston St at Berkley St	17-30	30
Local # 57	Sullivan Square - Downtown	Devonshire, Franklin, & Summer	8	20
Express # 502	Watertown Yard – Copley Square	Stuart St at Dartmouth St	6-12	n/a
Express # 503	Brighton Center – Copley Sq via Oak Sq & Mass Turnpike	Stuart St at Dartmouth St	5-8	n/a
Express # 504	Watertown Square - Downtown	Stuart St at Dartmouth St	8-10	30
Express # 555	Riverside -Downtown	Franklin at Federal	Limited	n/a

As can be seen in **Figure 4-1**, the project site is located within a 10-minute walk of Back Bay Station, one of Boston's main public transportation hubs. Commuter rail, Orange Line subway, and Amtrak are available at Back Bay Station. Several local (Routes 10 & 39) and express bus (Routes 502, 503, & 504) stop outside the station itself.

The Green Line subway is available at Arlington Station within a one-quarter mile of the site. The Green Line provides access to Cambridge as well as Brighton, Brookline, and Newton via four different lines (B, C, D, and E).

The density of public transportation service within easy reach of the project site is a primary factor for the occupants of the Building in choosing transit as their day-to-day mode of travel.

■

Vehicular Access

Roadway access to the Project Site was described previously in this chapter of the PNF. However, there is minimal parking on the site today, and effectively there is no formal vehicular access point that serves the project site.

■

Parking

On-Street Parking

On-street parking and curb use regulations for a one-quarter mile walking distance are shown in **Figure 4-4**. Adjacent to the site, the parking regulations have been put in place to support the school's pick-up and drop-off operations. On Arlington Street and Stuart Street, time regulations are applied to the Bay Village Residential and the commercial parking zones to accommodate the existing building's peak hour trips. Additionally, a drop-off zone has been physically put in place along Stuart Street to allow school buses to pull off of the street and minimize their impact to ongoing traffic operations.

To the south of the site is primarily Bay Village Residential Permit parking. Throughout the Park Plaza area and the one-quarter mile radius walking distance, the parking regulations vary between metered spaces, no parking, commercial, and valet parking.

The residential and metered parking spaces in the study area were observed on May 12, 2010 during the overnight time period. The observations were used to better understand the amount of available on-street parking in the area under typical weekday, overnight conditions. It was found that 121 spaces were unoccupied in the entire one-quarter mile radius on May 11, 2010 and 144 spaces on May 13, 2010. **Figure 4-5** and **Table 4-3** depict the unoccupied spaces by residential area.

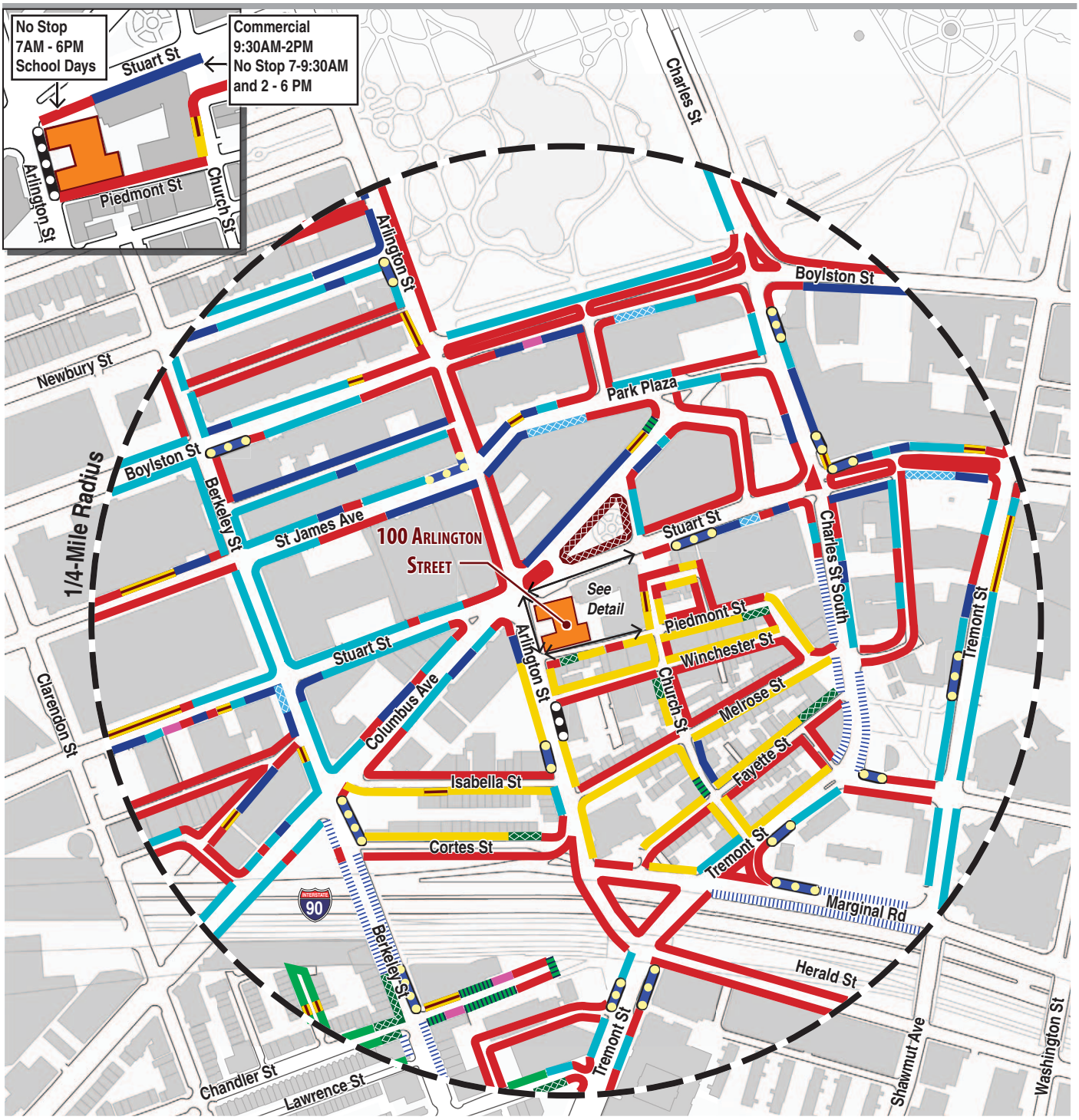

Figure 4-4
On-Street Parking

Vanasse Hangen Brustlin, Inc.

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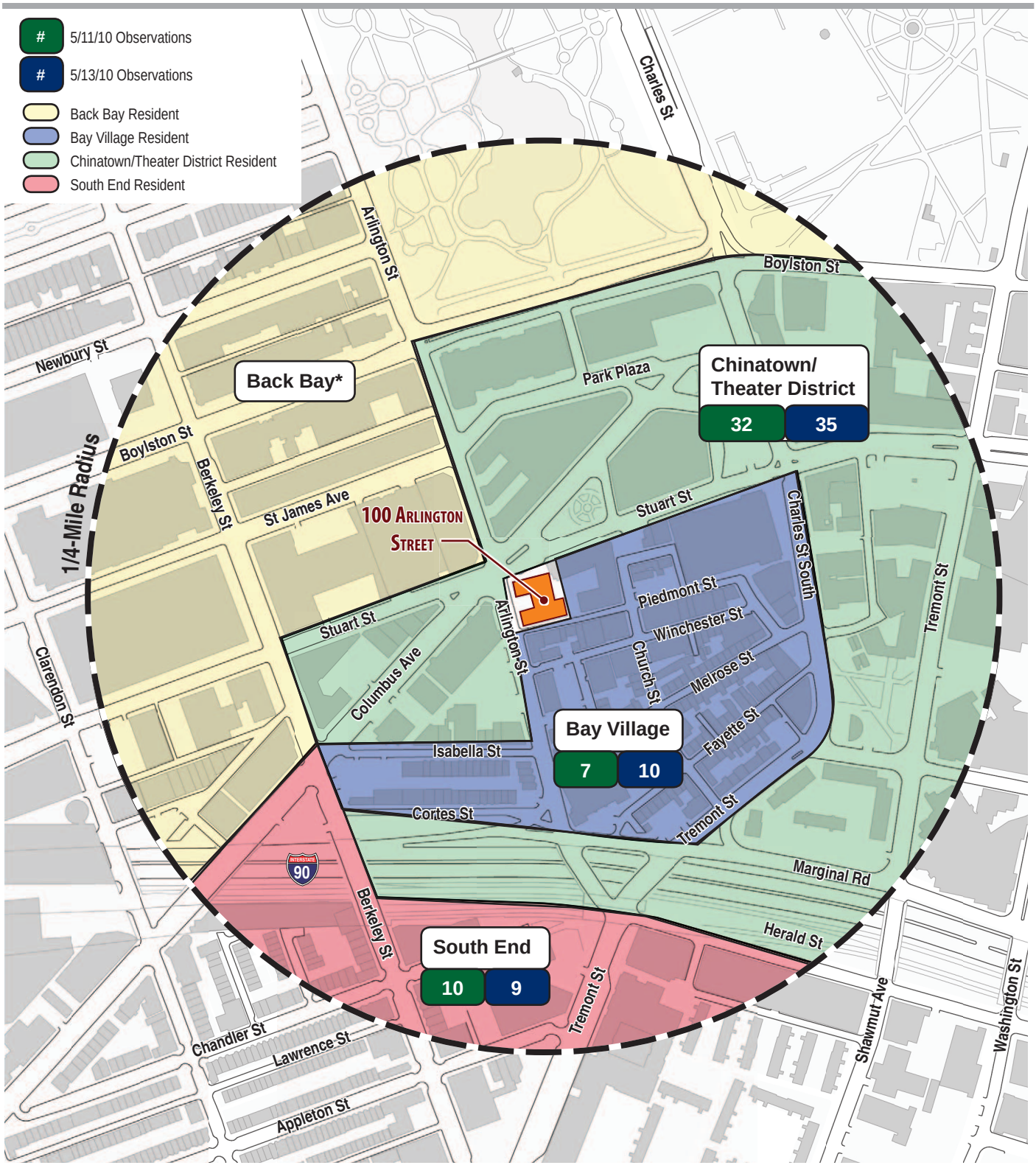

* Observations indicated there to be at least 70 metered/commercial spaces available within a quarter mile of the Project Site

0 200 400 Feet

Figure 4-5
Overnight On-Street Parking Availability

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Table 4-3
Unoccupied On-Street Parking Spaces

	May 11th	May 13th
Bay Village Residential Zone	7	10
Chinatown/Theater Residential Zone	32	35
South End Residential Zone	10	9
Back Bay Residential Zone	72	90
Total	121	144

Off-Street Parking

As shown in **Figure 4-6,** there is off-street parking available in the nearby Theater District, South End, and Back Bay neighborhoods, although the amount of overnight, residential permit parking is limited in some areas. **Table 4-3** depicts the capacity and rates at which the surrounding parking garages operate.

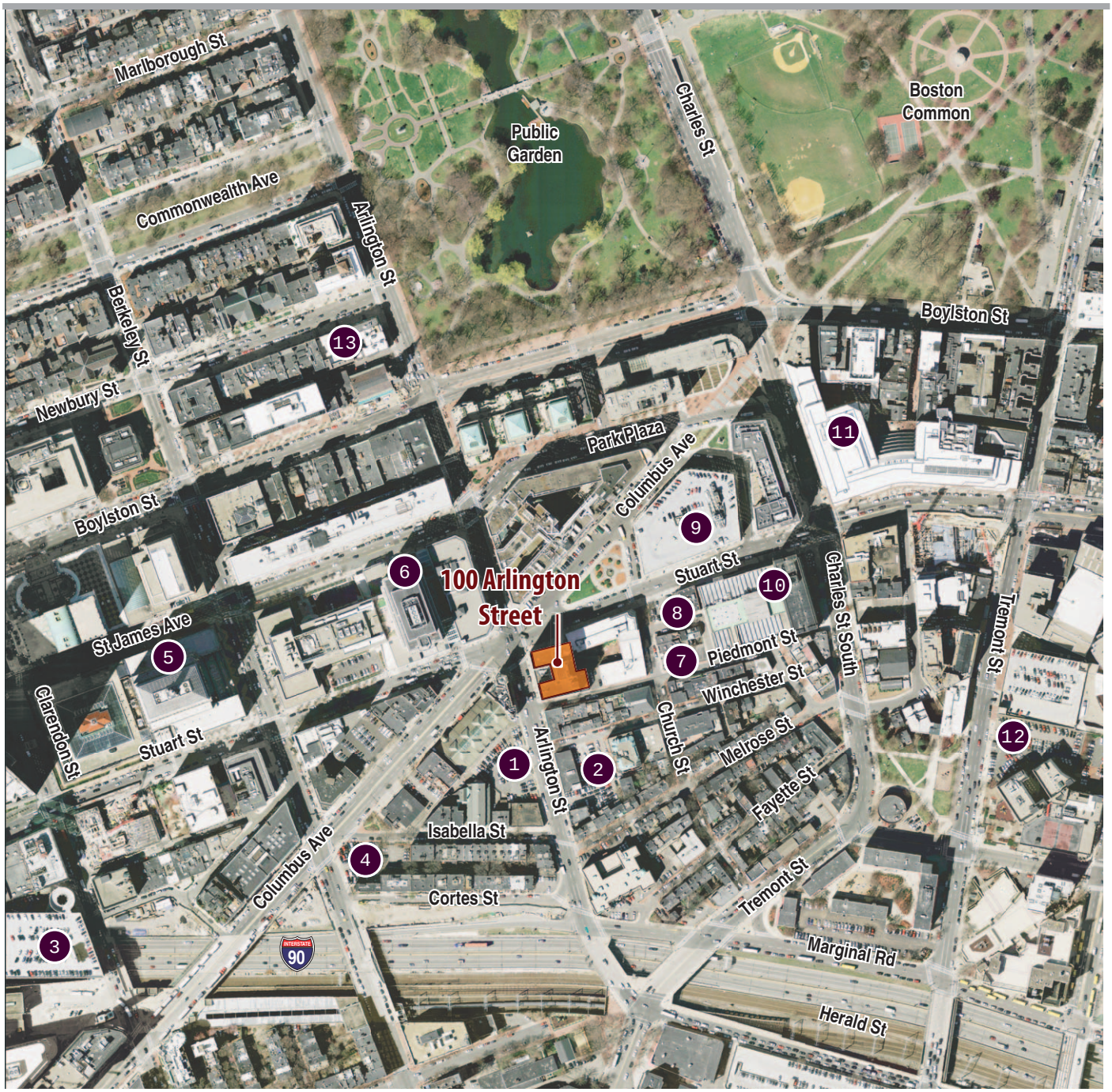
Table 4-4
Public Off-Street Parking Facilities

Garage	Location	Capacity (Spaces)	Price per Hour	Monthly Rate
General Trading Co.	107 Arlington Street	84	$12	N/A
PinStripe Parking	130 Arlington Street	71	$14	$300
VPNE Garage	100 Clarendon Street	2,000	$10	$370
General Trading Co.	121 Berkeley Street	52	$10	N/A
Central Back Bay	87 St James Ave	1,000	$19	$430
Central 10 James Ave	10 St James Ave	170	$19	$410
Stanhope	61 Church Street	17	$10	N/A
Billy's Parking	222 Stuart Street	20	$10	N/A
MotoMart	201 Stuart Street	1050	$8	$320
LAZ Radisson Hotel	200 Stuart Street	750	$10	$310
Pilgrim City Place	40 Charles Street	275	$7	N/A
Standard Tremont St Autopark	290 Tremont Street	100	$14	N/A
Interpark Taj Hotel	4 Newbury Street	130	$10	$300

■

Loading

The existing site is primarily accessed via on-street loading along Stuart Street. A loading dock is provided at the rear of the site on Piedmont Street; however it is generally not utilized for this purpose. The loading dock is currently used by only smaller trucks and passenger size vehicles, as well as for regular trash collection. The garbage dumpsters are currently rolled from the loading dock into the street when picked-up by trash collection. Use of the existing loading dock by larger trucks is constrained by on-street Resident Permit Parking along Piedmont Street.



1. General Trading Co. ....84 spaces
2. PinStripe Parking.....71 spaces
3. VPNE Garage.....2,000 spaces
4. General Trading Co. ....52 spaces
5. Central Back Bay.....1,000 spaces
6. Central 10 James Ave .....170 spaces
7. Stanhope .....17 spaces
8. Billy's Parking .....20 spaces
9. MotoMart .....1,050 spaces
10. LAZ Radisson Hotel.....750 spaces
11. Pilgrim City Place ..... 275 spaces
12. Standard Tremont St Autopark ..... 100 spaces
13. Interpark Taj Hotel ..... 130 spaces

0 200 400 Feet

Figure 4-6
Off-Street Parking

VHB Vanasse Hangen Brustlin, Inc.

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Proposed Project

As mentioned previously, the proposed project includes only a change in building use, without any changes to the existing building envelope. The renovation entails no additions to the current square footage on the property. Some changes are anticipated to accommodate identified utility and mechanical needs. The proponent also envisions rebuilding existing sidewalks along both Stuart and Arlington Streets. No on-site parking will be provided in connection with the project.

Pedestrian Access

In order to enliven the pedestrian environment around the site, the sidewalks, ramps, and some landscaping (if feasible) will be updated in connection with planned building renovations. Pedestrian accommodations, including accessible ramps to any adjacent crosswalks, will be redesigned and constructed to comply with AAB/ADA provisions. The apartment lobby will be accessible from Stuart Street while the proposed retail will be accessible from both Stuart Street and Arlington Street.

Bicycle Access

The project includes a 767 square foot storage area on the first basement level with space to accommodate up to 80 bicycles.

Parking

The project will not provide on-site parking for tenants. As illustrated in **Figure 4-6**, multiple off-street parking facilities are located within a one-quarter mile of the site. The Proponent has an arrangement to make available to its residential tenants up to 200 parking spaces at the nearby 200 Stuart Street parking garage, (Garage #10 in **Figure 4-6)**.

In addition to the residents that utilize the 200 Stuart Street parking garage, a percentage of these residents will find other available off-street parking spaces and available on-street parking. The Proponent is committed to working with the BTD on potential strategies to limit impacts on residential parking zones where parking spaces are in the greatest demand.

The project site's central business district location is not expected to have a high rate of vehicle ownership. According to *Access Boston* on Boston Transportation Department's website, Chinatown/Theater District has close to the lowest vehicle ownership percentage in the city. The Back Bay and Chinatown/Theater District indicate a vehicle ownership of less than 50 percent. Based on these rates of area wide automobile ownership, and ownership rates that have been polled for other similar types of downtown, urban apartment buildings, we have assumed that auto ownership at 100 Arlington Street could approach a rate of 0.70 cars per unit. This a conservative rate (i.e. higher than what will likely occur), and has been applied to assess the worst case for overnight parking demands that could potentially be generated by the Project.

With 128 proposed units in the building, it is estimated that 90 vehicles will require parking in the area. It is assumed that 70 percent of the residents with vehicles will utilize the 200 Stuart Street parking garage. The remaining residential parkers are expected to either find a different off-street parking arrangement, or will be utilizing on-street parking in the area. **Table 4-5** provides a summary of anticipated breakdowns of parking usage in the area.

Table 4-5
Future Residential Parking

Parking Type	Percent Vehicles	Number Vehicles
200 Stuart Street	70%	63
Other Off-Street Facilities	12%	11
On-Street Parking	18%	16
Total	100%	90

As previously discussed, an overnight occupancy study was conducted on May 11 and 13, 2010 relating to the on-street residential permit parking and unrestricted metered parking in the one-quarter mile radius from the site. As shown previously in **Figure 4-5** and **Table 4-3**, that analysis indicates that there is available Resident Permit on-street parking to accommodate the demands that would be generated by the project.

In addition to available residential spaces, more than fifty unrestricted metered spaces were noted to be available within a reasonable walking distance to the site, and combined with the residential parking spaces, can easily accommodate the on-street parking demand that would be generated by the Project. The Proponent is committed to working with the BTD on potential strategies to limit impacts on residential parking zones where parking spaces are in the greatest demand.

■

Loading and Service

The loading dock at the rear of the building will continue to be utilized by smaller trucks and passenger vehicles due to the space limitations on Piedmont Street and the need to maintain Resident Permit parking along that corridor for Bay Village residents. This location will continue to be used to house refuse in roll-out dumpsters, which will continue to be positioned into Piedmont Street when trash is scheduled to be removed from the building. Loading needs for first floor retail will be accommodated in a defined loading zone to be located along Arlington Street. Finally, residential move-in/move-out activity will also be accommodated within either a defined Stuart Street and/or Arlington Street loading zone, or via a temporary BTD Parking Permit**.** The Proponent is committed to working with the BRA, the BTD, and others to determine the most appropriate way to accommodate loading and service needs for the Project.

Project Travel Characteristics and Trip Generation

The overall travel characteristics (travel mode) of occupants and visitors of the proposed project will be similar to most other locations in downtown Boston. Peak hour trip generation is dominated by travel to work trips, and therefore the number of trips by each mode is largely a function of the employees' choice of mode to travel to and from work.

To assess the impacts of the proposed project, trip estimates were based on standard Institute of Transportation Engineers (ITE) trip rates published in ITE's Trip Generation manual (8th Edition). The appropriate ITE land use codes are shown below in **Table 4-6**.

Table 4-6
Trip Generation Land Use Codes

Use Components	Building Size	ITE Land Use Code (LUC)
Apartments	128 Units	LUC 220
Shopping Center (Retail)	10,250 GSF	LUC 820

Source: ITE Trip Generation, 8th Edition

Table 4-7 summarizes the total number of unadjusted (raw ITE) vehicle trips to be generated for an average weekday and during commuter peak hours. Person trips, number of persons in vehicles, are also provided. The peak-hour person trip estimate assumes 1.2 persons per vehicle for residential use and 1.8 persons per vehicle for retail use based on the *Transportation Energy Data Book: Edition 23, 2003* that estimates the average number of persons per vehicle by trip purpose. These trips results do not account for alternative modes of transportation.

Table 4-7
Trip Generation - Unadjusted Project Trips

	Unadjusted ITE Vehicle Trips	Person Trips
Daily Total	1,291	1,814
AM Peak Hour		
Entering	20	27
Exiting	56	70
Total	76	97
PM Peak Hour		
Entering	71	96
Exiting	47	68
Total	118	164

Source: ITE Trip Generation, 8th Edition

As shown, the project is anticipated to generate 1,291 daily unadjusted vehicle trips. The project is expected to generate 76 and 118 unadjusted vehicle trips, respectively, during the morning and evening peak hours.

To account for alternative modes of transportation, mode splits were applied to the person trip results presented in **Table 4-8.** The project site is located in the Boston Transportations Department's (BTD's) Transportation Zone 3, for which the following residential and retail mode shares prevail:

Table 4-8
BTD Zone 3 Mode Share

Mode	Residential	Retail
Automobile	22%	33%
Public Transit	13%	40%
Walk/Bike/Other	65%	27%

Source: BTD Guidelines, Zone 3

These mode shares reflect the close proximity of the project site to both downtown Boston and the surrounding public transportation system with the majority of the trips utilizing walking, bicycling, and other non transit/auto type modes of transportation.

Results of the walk/bike, public transportation, and vehicle trip generation estimate are shown in **Table 4-9**. Again, a 1.2 average vehicle occupancy (AVO) for residential land uses and 1.8 AVO for retail uses were assumed in the estimate.

Table 4-9
100 Arlington Project Trip Generation

	Walk/Bike/Other	Public Transportation	Vehicle
Daily Total			
Entering	400	206	217
Exiting	400	206	217
Total	800	412	434
AM Peak Hour			
Entering	13	7	5
Exiting	13	11	13
Total	56	18	18
PM Peak Hour			
Entering	49	22	18
Exiting	31	18	12
Total	80	40	30

Source: ITE Trip Generation, 8th Edition

As shown in **Table 4-9,** the project is anticipated to generate 5 entering and 13 exiting vehicle trips during the morning peak hour. In addition to these trips, the project will also generate approximately 56 walk/bike trips and 18 transit trips during the morning peak hour. During the evening peak hour, the project will generate 18 entering and 12 exiting vehicle trips. The walk/bike mode of travel will account for approximately 80 trips and public transit will total approximately 40 trips during the evening peak hour.

■

Trip Generation Comparison

The existing building is currently utilized by the Boston Renaissance Charter Public School, which generates approximately 244 morning peak hour vehicle trips and 198 evening peak hour vehicle trips. These trip generation estimates were calculated based on field counts, observations, and other supporting analyses that were developed in connection with the BRCPS transportation study that was submitted and approved by the BRA and the BTD in connection with their impending move to Hyde Park (*Expanded Project Notification Form: Boston Renaissance Charter Public School, 2008*). As shown in **Table 4-10**, the proposed project generates substantially less vehicle trips than the Renaissance Charter School.

Table 4-10
Peak Hour Vehicle Trip Generation Comparison

	AM Peak Hour			PM Peak Hour		
	Existing	Proposed	Net New	Existing	Proposed	Net New
Inbound	123	5	(-118)	98	18	(-80)
Outbound	121	13	(-108)	100	12	(-88)
Total	244	18	(-226)	198	30	(-168)

As seen in **Table 4-9**, the vehicle trips produced by the project will decrease substantially from current conditions. Existing traffic generated by the site will be reduced by over 90 percent during the morning peak hour and by 85 percent during the evening peak hour. Under current conditions, the School generates a substantial amount of drop-off/pick-up activity on both Stuart Street and Arlington Street by both parents in automobiles as well as by school buses. These activities can have the tendency to slow traffic operations at the intersection of Arlington St/Stuart St/Columbus Ave, create vehicle queues and idling. Under future conditions, these activities get completely eliminated at this location. It should also be noted that in addition to the significant decrease in trips, the proposed site does not have on-site parking, and therefore, the 18 morning and 30 evening peak hour trips will actually be dispersed throughout the local traffic network traveling to/from a range of garages and on-street parking locations in proximity to the project site.

Transportation Demand Management

Transportation demand management (TDM) comprises a variety of strategies designed to reduce single-occupancy vehicle (SOV) travel and encourage "alternate modes" of transportation such as public transportation, walking, and bicycling. TDM programs are typically oriented toward employees, but also have applicability for residential uses. For 100 Arlington Street, consideration has been given to providing secured bicycle storage on-site and to providing transit and other TDM information (e.g., safe bicycling brochures) at a designated location within the site. The MBTA and BTD have information available for this purpose.

Active participation in a Transportation Management Association (TMA) has been an effective way to increase ride-sharing and transit use. TMAs, which are private non-profit organizations that provide a wide variety of TDM elements to their members. These services include ridematching for car and vanpools, vanpool coordination services, guaranteed ride home services, and alternative transportation marketing. By making these services readily available, tenants of the area will be more likely to implement elements of the TDM program.

The Proponent will designate an on-site Employee Transportation Coordinator, and will become a member of the ABC (A Better City) Transportation Management Association (TMA). In addition, the Proponent will work with its tenants and employers in the building to implement a package of TDM strategies, including the following:

- Marketing information including MBTA and local ZipCar services
- Ridematching
- Vanpool programs
- Secure, indoor bicycle storage
- Investigate the potential for on-site Zipcar membership opportunities.

The Proponent of the proposed Project will join the ABC TMA to provide these TDM programs and to coordinate with the neighboring buildings and tenants in the area.

■

Transportation Access Plan Agreement

As required under the Article 80 process, the Proponent will prepare and submit a Transportation Access Plan Agreement (TAPA) for execution by the Proponent and the BTD. In addition, a Construction Management Plan (CMP) will be prepared for review by the BTD and other City of Boston agencies.

Construction Impacts

If properly managed, construction workers and construction trucks are not expected to have significant impacts on traffic conditions on surrounding streets during construction. The Proponent will work with the BTD to develop a site specific Construction Management Plan.

- Typical work hours for construction personnel are from 7:00 AM to 6:00 PM and most workers would not travel during peak traffic periods. In addition, because no free parking would be provided on-site and the Project Site is well served by transit, a large percentage of workers will be encouraged to carpool or use transit.
- The impact of construction trucks on the evening peak hour is expected to be insignificant because most deliveries would be completed before the end of the workday. Morning impacts would be slightly greater, but deliveries are spread uniformly during the workday.
- Routes would be designated for trucks, which would keep them on main thoroughfares, and out of residential areas. Further requirements will be presented in the Transportation Access Plan Agreement (TAPA) that will be established between the Proponent and BTD.

■

Construction Management Plan

The following elements are typically addressed in the Construction Management Plan, a term or condition to be established in the TAPA:

- Designation of truck routes for deliveries
- Protection of pedestrian walkways
- Location and sizing of staging areas for on-site storage of construction materials
- Definition of worker parking parameters and measures to maximize related use of public transportation
- Identification of truck waiting areas
- Police officer traffic management
- Construction graphics program
- Interim traffic operation improvements
- Definition of street and sidewalk occupancies
- Definition of work hours

5 Environmental Protection

This chapter presents information on the environmental conditions in the vicinity of the Project. In accordance with Article 80 of the Boston Zoning Code, this Expanded Project Notification Form (PNF) considers the potential for the Project to impact the following environmental resources:

- Wind
- Shadow
- Daylight
- Solar Glare
- Air Quality
- Noise
- Solid & Hazardous Waste
- Geotechnical and Groundwater
- Construction Impacts
- Sustainable Design
- Water Quality
- Wetlands & Flood Hazard
- Rodent Control
- Wildlife Habitat
- Historic Resources

A detailed analysis of Transportation, Infrastructure and Urban Design are presented in other chapters included within this PNF.

Wind

The BRA's criteria for assessing wind environment changes focuses on impacts to the pedestrian environment resulting from changes in building massing. The proposed Project contemplates reuse of an existing building; therefore, the Project will not cause any changes to wind impacts on the neighborhood or open space areas. At the

ground floor, overhead canopies may be used by the new retail tenants. It is anticipated that this change will result in minimal impact on the wind environment that occurs under current conditions.

Shadow

Shadow, similar to wind, is reliant upon building massing. The proposed project includes only a change in building use, without any changes to the existing building envelope. A shadow analysis was not completed, as the Project would not result in an increase in shadow to the surrounding area.

Daylight

No daylight obstruction will occur on streets and pedestrian areas in the immediate vicinity of the redevelopment area due to unaltered building heights and setbacks of the building from the adjacent sidewalks and roadways.

Solar Glare

Solar glare impacts occur when the sun is reflected onto the public way creating a nuisance condition or causing excessive heat gain. This is especially critical for southern facing building facades and predominantly glass surfaces. The existing building is primarily masonry with punched windows. Any glass replacement will be low-e, clear glass. The proposed improvements will not result in any significant solar glare impacts to the public right of way or adjacent buildings.

Air Quality

The 1990 Clean Air Act Amendments (CAAA) and the Massachusetts State Implementation Plan (SIP) requires that a Project not cause any new violation of the National Ambient Air Quality Standards (NAAQS) for pollutants of concern, or increase the frequency or severity of any existing violations, or delay attainment of any NAAQS.

The predominant source of air pollution anticipated from the Project is emissions from project-related motor vehicle traffic, which directly emit carbon monoxide. The Project is expected to generate significantly fewer vehicle trips to the site which will result in less overall impact to the existing ambient air quality. As discussed in detail in Chapter 4, Transportation, existing traffic generated by the site will be reduced by

over 90 percent during the morning peak hour and by 85 percent during the evening peak hour. Based on this, the Project is not expected to result in violations of the NAAQS for carbon monoxide and particulate matter, or increase the frequency or severity of existing carbon monoxide and particulate matter violations, or delay attainment of related NAAQS due to this substantial decrease in project vehicle trips.

■

Construction-Related Impacts

Air quality in the study area will not be substantially affected by Project construction because of the temporary nature of site development construction and the confines of the construction area. Emissions from the operation of construction machinery (carbon monoxide, oxides of nitrogen, particulate matter, sulfur oxides, and volatile organic compounds) are short-term and not expected to be significant. Further, nearly all impacts will be contained to the interior of the existing building envelope.

During construction, measures to mitigate dust emissions will be implemented. These measures will include wetting and stabilization to suppress dust generation, cleaning paved roadways, and scheduling construction activities as necessary.

Noise

Future (post-construction) sound levels from the Project are expected to be lower than existing levels since vehicle traffic levels and idling will be significantly reduced (again, as discussed in detail in Chapter 4, Transportation). New rooftop mechanical equipment, including new variable speed fans where possible, will reduce abutter impact. All new rooftop mechanical equipment is expected to be almost completely hidden by the building's existing 15 foot parapet – which will help to visually shield these amenities and dampen their noise generating potential.

City of Boston Criteria

The City of Boston has established regulations for evaluating sound levels from proposed developments. These regulations establish maximum allowable sound levels based upon the land use of the proposed development. If the proposed development is located in a residential/industrial zoning district, the maximum noise level affecting residential uses shall not exceed the Residential-Industrial Noise Standard. The Residential-Industrial land use noise standard is 65 dBA for Daytime conditions (7:00 AM to 6:00 PM) and 55 dBA for Nighttime conditions (6:00 PM to 7:00 AM). The Business land use noise standard is 65 dBA for both Daytime and Nighttime conditions. These criteria are applicable to building facility noise sources,

such as mechanical equipment, and do not apply to operation of any motor vehicle on any public way.

Massachusetts DEP Criteria

The Department of Environmental Protection (DEP) has established a policy (DEP Policy 90-001) for implementing its noise regulations (310 CMR 7.10). This policy states that a source of sound will be considered in violation of the Department's noise regulation under the following conditions:

- If the source increases the broad band sound level by more than 10dBA above ambient (normally defined as L90 or the noise level exceeded 90 percent of the time during the hours of noise source operation), or
- If the source produces a "pure tone" condition.

The DEP Noise Policy applies to mechanical equipment and not motor vehicles.

Noise Mitigation

Primary noise sources from the proposed Project will be the mechanical equipment to support the heating, ventilation, and air conditioning (HVAC), which control the climate within the building. The anticipated noise levels are expected to fall well below the City of Boston regulation limit. However, the Proponent is committed to the following noise attenuation measures and to complying with the Regulations for the Control of Noise in the City of Boston and the DEP Noise Regulation:

- Using HVAC equipment with new variable speed fans.
- Locating equipment to achieve sound level reduction (i.e. behind the existing parapet).
- Controlling noise from back-up beepers, opening and closing of vehicle and loading dock doors, emptying of dumpsters, and movement of goods.
- Scheduling deliveries, trash/recycling removal, and use of facilities to be compatible with noise attenuation objectives.
- Installing permanent "No Idling" signs at loading/receiving areas.

Construction Period Noise

Construction activity associated with the Project may temporarily increase nearby sound levels due to the use of heavy machinery. Heavy machinery will be used only

to a limited extent during the proposed Project's construction, since most work will be conducted within the building.

Regulation 3 of the City of Boston Code, Ordinances, Title 7, Section 50, includes specific construction noise limits by land use. The relevant criterion for the Project is based on residential or institutional land use. The construction noise at the property line for residential or institutional land use is limited to a maximum level of 86 dBA, with a limit of 75 dBA for the construction noise level exceeded 10 percent of the time (L10). In addition, the City of Boston Code, Ordinances, Title 14, Chapter 11, Section 354 (titled "Unreasonable Noise") also applies to construction activities. This ordinance establishes a noise limit of 55 dBA for construction noise measured at residential lot lines between 6:00 PM and 7:00 AM.

The Project will implement mitigation measures to reduce or minimize noise from construction activities and to maintain compliance with the City's noise ordinances. A Construction Management Program (CMP) will be developed with input from City of Boston agencies. The CMP will address noise impacts and mitigation.

Specific mitigation measures may include:

- Use of construction equipment with properly operating appropriate noise muffler systems.
- Construction vehicles and equipment being required to maintain their original engine noise control equipment.
- Appropriate traffic management techniques being implemented during the construction period to mitigate roadway traffic noise impacts (if applicable to this project).
- Proper operation and maintenance, and prohibition of excessive idling of construction equipment engines, being implemented as required by DEP regulation 310 CMR 7.11.
- Work areas being surrounded by safety fencing (where applicable) to provide site security, as well as to mitigate construction noise and dust.
- Work hours and relevant noise generating activities will be reviewed further with the City of Boston to outline those construction activities which may occur prior to 7:00 AM and after 6:00 PM, Monday through Friday, as well as those activities which may occur during weekend hours.
- Quieter-type (manually adjustable or ambient-sensitive) backup alarms on construction vehicles being required.
- Additional noise control options being evaluated during the design process for effectiveness and feasibility.
- Appropriate operational specifications and performance standards being incorporated into the construction contract documents.

Solid and Hazardous Waste

The Project Site is a developed, urban location. Solid waste and demolition debris will be characterized at the site to determine whether there is any need for special handling and disposal. The Proponent will manage any regulated materials that may be identified during the demolition work, which involves the proper documentation, handling, and removal of the materials to maintain site compliance with the Massachusetts Contingency Plan (MCP).

Geotechnical and Groundwater Analysis

The Project anticipates little interaction with site soils and groundwater. Planned building rehabilitation will occur within the existing building footprint. Construction of the proposed project is not expected to have adverse short or long-term impact on groundwater conditions. The Proponent is committed to working with the BWSC and Boston Groundwater Trust to determine the most appropriate strategy to infiltrate one inch of roof runoff to the groundwater as required under Section 32 of the Zoning Code.

Sustainable Design

The overall project approach is sustainable as it proposes to adaptively re-use an existing building to meet the current market needs.

The Proponent understands the importance of the Mayor's Policy on Sustainable Design and the City's efforts to make green design a reality. The Proponent also recognizes the benefits to the community at large of planning and building for sustainable value in the form of diminished energy use and expenses and more reliable and durable building systems. Accordingly, the Proponent has developed a sustainable design approach documented in a LEED® checklist and highlighted in certain features that will be implemented as part of the Project. The Project will be certifiable under the LEED 2009 Rating System for New Construction and Major Renovation. The preliminary checklist is shown in **Figure 5-1**.

LEED 2009 for New Construction and Major Renovation

Project Checklist

100 Arlington Street

June 2 2010

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

Energy and Atmosphere — Possible Points: 35

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

Materials and Resources — Possible Points: 14

Y			Prereq 1	Storage and Collection of Recyclables	
2	1		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
1	1		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			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

54	48	8	**Total**	Possible Points: **110**

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

0 50 100 Feet

Figure 5-1
LEED Checklist

Vanasse Hangen Brustlin, Inc.

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The design team will continue to evaluate the sustainable options available as the Project design is developed.

Water Quality

The Project Site is located in a highly urbanized area. There is no drinking water supply in the area of the site. Under existing conditions, the site is almost entirely covered by impervious surface and stormwater runoff from the Project Site is typical of runoff from urban area surfaces. Site stormwater is routed to the existing Boston and Water Sewer Commission (BWSC) collection system. See Chapter 6, *Infrastructure Systems*, for further information.

The Project is a renovation to an existing building. The Project proposes no new stormwater connections or outfalls. The Project is not anticipated to have any negative effects on water quality at the Project Site.

Wetlands and Flood Hazard

The Project Site is completely developed and contains no wetland areas.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the site, Map Number 25025C0077G, indicates the FEMA Flood Zone Designations for the Project area. The map shows that the Project is located outside the 0.2 percent annual chance floodplain (commonly referred to as the 500 year flood limit) identifying it as an area of minimal flooding.

Rodent Control

The City enforces the requirements established under the Massachusetts State Sanitary Code, Chapter 211, 105 CMR 410.550 and the State Building Code, Section 108.6, to control the rodent population. Policy Number 87-4 (City of Boston) established that preparation of a program for the extermination of rodents shall be required for issuance of permits for demolition, excavation, foundation, and basement rehabilitation. The Proponent will prepare and adhere to a rodent control program.

Wildlife Habitat

The Project Site is located in a densely developed urban Central Business District, as such the Project Site does not include wildlife habitats as shown on the National Heritage and Endangered Species Priority Habitats of Rare Species and Estimated Habitats of Rare Wildlife. The Project is not expected to have and any impact on wildlife.

Historic Resources

This section addresses the historic character of the Building and the surrounding historic resources in the vicinity and evaluates potential impacts of the Project. The existing Building is in the Massachusetts Historical Commission Inventory of Historic and Archaeological Assets of the Commonwealth, both as an individually inventoried property and as part of the Park Square/Stuart Street area, which has been determined eligible for the National Register of Historic Places. However, no State or National Historic District has been created due to objections by property owners within the district's boundaries. The 100 Arlington Street Building was identified as a "contributory building" in the report prepared for consideration of the potential Park Square/Stuart Street Historic District. The planned building improvements and modifications will not affect the historic appearance of the building as described.

A proposed conversion of the building to residential and retail uses will not take advantage of state or federal historic tax credits.

■

The Boston Consolidated Gas Company Building

The Boston Consolidated Gas Company Building is a Classical Revival building with elements of the Moderne style. The H-plan building has a total of 14 stories, including a two-story base and a shaft of twelve stories. In addition to the 14 stories, the building has a two-story mechanical penthouse. A flat roof is hidden from street level by a parapet wall. There are 14 bays on the Arlington Street façade, with 12 bays on the side elevations on Stuart and Piedmont Streets. The structure is steel frame, with walls of limestone-faced brick.

The rusticated base features a series of large arched window openings separated by engaged columns with Corinthian capitals on the Arlington Street and Stuart Street elevations, with multi-pane bronze and iron windows. Paired windows mark the

second story, with a single window at each end. Ornamentation on the base includes embossed stone plaques over the first story with the Roman numeral dates MMCCCXX and MCMXXVII, rectangular plaques with an embossed floral design, and a detailed cornice.

The building shaft has a modified H-plan form, created from the recess of the central six bays from the front and rear elevation. The center six bays are recessed five bays from the façade and two bays on the east (rear) elevation. Fenestration is composed of square-headed windows that are evenly-spaced on all elevations with the exception of the east elevation, which displays more variable placements of windows. Ornamentation on the building shaft is limited to a stringcourse above the 10th story and a modillion band above the 11th story.

The building cap features arched window openings with engaged columns encompassing both top stories in four of the bays on the façade, and on the central 10 bays on the Stuart Street and Piedmont Street side elevations. Decorative features include a frieze below the parapet wall, and metal relief spandrels on the top two floors.

The building was originally built as the headquarters of the Boston Consolidated Gas Company, which was established as the Boston Gas Light Company in the 1820s, and took its current name in 1905 after a series of consolidations in the early 20th century. It was designed in 1926 by the Boston architectural firm Parker, Thomas and Rice. The builders were W.A. and H.A. Root, whose offices were in this building in the 1930s. In the 1960s, the building was purchased by the University of Massachusetts, and is currently occupied by the Boston Renaissance Charter Public School.

■

Building Improvements

The Proponent has committed to working with the BRA Urban Design staff and other City Departments (as necessary)as the specific details of the project design evolve. A detailed description of planned building improvements and modifications is presented in Chapter 3, *Urban Design*.

6

Infrastructure Systems

Introduction

This chapter evaluates the infrastructure systems that will support the 100 Arlington Street Project. The following utility systems are evaluated herein:

- Wastewater
- Domestic water and fire protection
- Stormwater management
- Natural gas
- Electricity
- Telecommunications

The Project design relies on existing utility services and will likely not require any new utility service connections, with the exception of potentially refitting the building with new electric connection via proposed electric vaults below the sidewalk on Arlington Street, per discussions with Nstar. Based on initial investigations and consultations with the appropriate agencies and utility companies, all other existing infrastructure systems are adequately sized to accept the demand associated with the development and operation of the Project.

The final design process for the Project will include all required engineering analyses and will adhere to all applicable protocols and design standards, ensuring that the Project is properly supported by, and in turn suitably designed for incorporation with the City's infrastructure.

The systems discussed below include those owned or managed by the Boston Water and Sewer Commission (BWSC), private utility companies, and on-site infrastructure systems. There will be close coordination among these entities and with the Project

Engineers and Architects during subsequent reviews and throughout the design process. **Figure 6-1** depicts the existing utilities infrastructure.

Regulatory Framework

This section, in addition to a description of the infrastructure serving the Project Site, discusses the regulatory framework of utility connection reviews and standards. All connections will be designed and constructed in accordance with City, State and Federal standards.

- In the City, BWSC is responsible for all water, sewer and stormwater systems.
- The Boston Fire Department will review the Project with respect to fire protection measures such as existing siamese connections and standpipes.
- Design of the remainder of site utilities, if necessary will be coordinated with the respective system owners.
- If street openings are required to support utility work the Project will be coordinated with the Boston Public Works Department during the Project design through the street opening permit process.

Additional information on the regulatory framework for each utility system is included in subsequent sections of this chapter. **Figure 6-1** shows the existing infrastructure at the Project Site.

Water and Wastewater

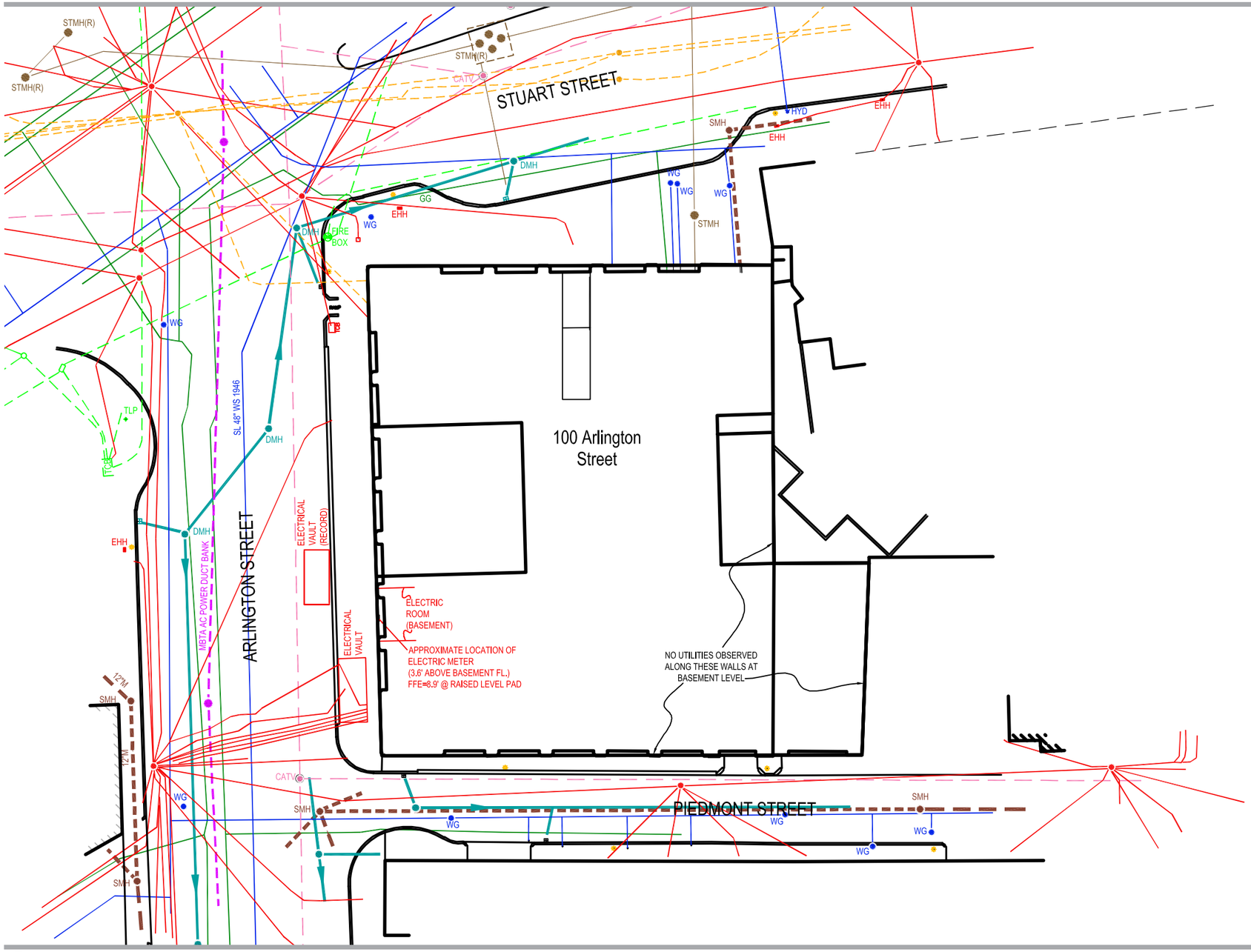
■

Existing Wastewater

Local sanitary sewer service in the City is provided by the BWSC. Sewage generated from the existing building onsite is collected by BWSC's 10-inch sewer in Stuart Street.

The Building currently accommodates approximately 1,240 students and 210 staff. Following completion of the Project, building occupancy is expected to decrease, and as a result, lower the total wastewater generation. The existing sewer service in Stuart Street is well sized and no new building services are required.

The Boston Renaissance Charter Public School today generates more effluent entering the existing BWSC sewer system than the proposed reuse of the building as residential and retail. The aggregate sewer burden for both the existing and the proposed conditions are described below in **Tables 6-1** and **6-2**, with breakdowns



0 50 100 Feet

Source: Alta survey by Gunther Engineering

Figure 6-1

Existing Utility Infrastructure Site Plan

VHB Vanasse Hangen Brustlin, Inc.

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noted by type of use and corresponding design amounts for anticipated flows. The total daily discharge for the proposed project is approximately 17,672 gallons per day (gpd), which represents a net decrease of approximately 11,328 gpd from the existing conditions.

Table 6-1
Existing Estimated Daily Sewage Discharges

Type of Use	Units	Design Load per 314 CMR 7.00 Standards	Daily Flow (gpd)
Elementary School with Cafeteria, Gymnasium and Showers	1,240 students 210 staff	20 gpd / person	29,000
Total			

Table 6-2
Proposed Estimated Daily Sewage Discharges

Type of Use	Units	Design Load per 314 CMR 7.00 Standards	Daily Flow (gpd)
Residential	156 rooms	110 gpd	17,160
Retail	10,250 sf	50 gpd / 1,000 sf	512
Total			17,672

Existing Water Supply System

Water consumption on the proposed site is expected to be 19,439 gallons per day (gpd), based on the project's estimated sewer generation. Similarly, the Project's existing water consumption is approximately 31,900 gpd. To achieve these estimations of water demand, a factor of 1.1 (conservative) is applied to the average daily wastewater flows to estimate average water use on a daily basis. The proposed project expects to decrease the overall water consumption by approximately 12,461 gpd.

Domestic water service is also provided by the BWSC. There is an existing 48-inch service on Arlington Street. The building is serviced from a 7-inch connection on Stuart Street. No changes to the existing water system are proposed for the Project because the domestic water services are capably sized and the water demand will lessen from changes in the building occupancy.

Proposed Conditions

The proposed renovations and improvements may result in limited relocation and reconfiguration of interior fire and domestic services. If new domestic water and fire services are needed, they will be required to connect to the public water main. The location of any necessary connections will be determined in consultation with BWSC.

No changes are proposed for the external connections wastewater or water supply services at this time.

Stormwater Management

Since the Project Site is almost entirely impervious to rainfall percolation, construction of the Project will not produce significant changes in either the pattern of, or rate of, stormwater runoff. The Project will not result in the introduction of any peak flows, pollutants, or sediments that would potentially impact the receiving waters of the local BWSC stormwater drainage system. This Project is committed to capturing one inch volume of roof runoff for recharging into the groundwater system.

Fire Prevention and Control

Updates to the fire protection system for the existing building and updates in renovated spaces will be designed in compliance with the latest Massachusetts Building Code, which refers to the *National Fire Protection Association Handbook*. In addition, the fire protection system will meet all applicable standards and requirements as set forth in the *Boston Fire Prevention Code, the Massachusetts Fire Prevention Regulations* (527 CMR), and the *Massachusetts Fire Prevention Laws* (MGL CH 148).

Compliance with the standards for the fire protection system connections will be reviewed as part of BWSC's Site Plan Review Process, if required.

The existing fire suppression system connects to BWSC's high service system located on Stuart Street. The building is fed with existing fire protection service via a single, 10-inch line from Stuart Street. While not anticipated, any proposed water service connections required by the Project will meet the applicable city and state codes and standards, including cross-connection backflow prevention.

Emergency vehicle site access to the Project Site, including the siamese building connections, is already provided in several locations. If required, the Proponent will seek input from the Boston Fire Department as the project design progresses.

The Proponent will obtain required permits pursuant to the Boston Fire Prevention Code, CMR 527 and MGL Chapter 148.

Anticipated Energy Needs

■

Electrical Service

The building is currently fed with five primary electric services. Several electrical vaults are located within the envelope of the project site. The building and Verizon's telecommunication infrastructure require a large and diverse power supply. Verizon, as a part of the reconfiguration of their facilities, will likely dedicate one of the primary services to serve the telecommunications infrastructure alone or work with Nstar to extend a new dedicated primary service to better support the telecommunications function. The Proponent is committed to working with both Verizon and Nstar to determine the most appropriate course of action to supplying the building with adequate power and communications capacity.

■

Telecommunications

The Proponent will select the telecommunications companies to provide telephone, cable, and data services. Once the service providers are selected, the Proponent will coordinate with the service providers the location, connection points, and infrastructure requirements to service the building.

Protection of Utilities

Existing public and private infrastructure located within the public right-of-way will be protected during construction. The installation of any proposed utilities within the public way will be in accordance with BWSC, Boston Public Works Department, the Dig-Safe Program, and governing utility company requirements. All necessary permits will be obtained before the commencement of work. If new utility connections are required, specific methods for constructing the 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.

Construction Coordination

The Proponent will continue to work and coordinate with the utility companies to assure compliance and integrity to the Project.

Sustainable Design/Energy Conservation

Energy conservation measures will be employed throughout the project design process and those measures will help contribute towards achieving the Project's goal of being LEED® certifiable. Specifically, the Building will employ energy-efficient and water-conservation features for mechanical, electrical, architectural, and structural systems, assemblies, and materials where possible. The base configuration of the proposed building improvements will meet the Massachusetts Energy Code. Additional information on sustainable design is provided in Chapter 5, *Environmental Protection*.

Conclusion

The Project will use the existing water, sewer, storm drain, energy, and telecommunication systems available in the Building. Research and coordination to date indicates that these services are adequately sized to support the demands associated with the development of the Project. The Project is consistent with DEP's Stormwater Management Regulations, and it incorporates a number of sustainable design and energy conservation measures.

7

Project Certification

This Expanded PNF has been submitted to the Boston Redevelopment Authority, as required by Article 80 of the Zoning Code, on the 1st day of July 2010.

Proponent

Arlington CFII, LP, a Delaware Limited Partnership

By: Arlington GP, LLC, a Delaware Limited Liability Company, Its General Partner

By: Congress Fund II Management, LLC, a Delaware Limited Liability Company, Its Manager

By: Dean F. Stratouly

Dean F. Stratouly
Its Manager

Preparer

Vanasse Hangen Brustlin, Inc.

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