

NOTICE OF PROJECT CHANGE



Submitted Pursuant to Article 80A-6 of the Boston Zoning Code

1480-1486 Tremont Street

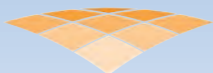
MISSION HILL, BOSTON, MASSACHUSETTS

Submitted to

**Boston Redevelopment Authority
One City Hall Square
Boston, Massachusetts 02201**

Submitted by

**Trellis Group, LLC
1607 Tremont Street, Suite No. 1
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June 28, 2013



June 28, 2013

Peter Meade, Director
Boston Redevelopment Authority
Boston City Hall, 9th Floor
Boston, MA 02201

Re: 1480-1486 Tremont Street, Mission Hill
Notice of Project Change (In accordance with Article 80A-6)

Dear Director Meade,

The Trellis Group LLC is please to submit this second Notice of Project Change for a proposed mixed-use project at 1480-1486 Tremont Street in the Mission Hill neighborhood of Boston. We have been working in the Mission Hill neighborhood for over 10 years and are excited to continue our work at this important site. The proposed project will help further the neighborhood's goals for Tremont Street developing into a vibrant and engaging place with additional housing option for residents, expanded retail alternatives and enhanced urban design. The status of the existing approved project is described below.

In accordance with the Large Project Review requirements of Article 80 of the Boston Zoning Code, on April 24, 2006 The Aspen Group (the "Prior Project Proponent") submitted a Project Notification Form (the "PNF") to the BRA, and on July 20, 2006, the BRA voted to authorize the issuance of a Scoping Determination Waiving Further Review of the PNF Project, and issuing the same on July 27, 2006 to the Prior Project Proponent. On March 22, 2007, the Prior Project Proponent filed an initial NPC ("NPC1") pursuant to Section 80A-6 requesting the BRA's concurrence with a proposed modification from condominium units to rental housing for the PNF Project. The BRA on April 24, 2007 voted to authorize the issuance of a determination under Section 80A-6 finding that the initial NPC adequately described the potential impacts of the PNF Project and provided sufficient mitigation measures to minimize those impacts.

The PNF project, and modified in the NPC1, proposed to demolish the existing structure on the Project Site and construct an approximately 75,000 gross square foot residential building with ground floor retail on Tremont Street. The Project proposed by Trellis Group LLC and outlined in this NPCII consists of the construction of a four-story, mixed-use residential apartment project with sole access and egress from Tremont Street, and includes approximately sixty-six (66) rental units (incorporating one affordable unit), approximately 6,200 gross square feet of commercial and retail space, 60 enclosed garage parking spaces, and 15,708 square feet of usable open space at 1480-1486 Tremont Street.

The NPCII Project generally conforms to the original PNF and the initial NPCI programs while utilizing modified design plans by a new design team, use of the site's topography to enhance integration with abutting structures, an improved parking plan with only



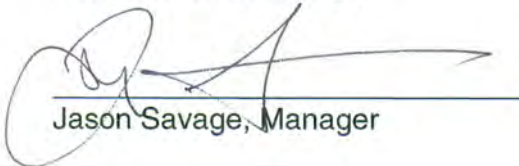
inside garage spaces, and a substantial increase in usable open space for the building's residents.

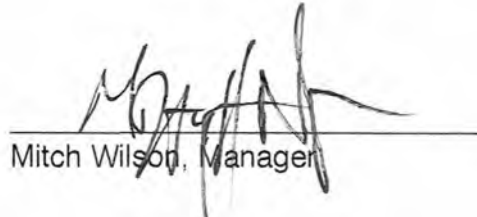
Trellis Group LLC is committed to continuing to meet with abutters and is actively working with neighborhood representatives. The NPCII Project has been previewed with the Mission Hill community which has included outreach to Mission Hill's elected local officials and state representatives, including; Mission Hill Neighborhood Housing Services, Mayor's Office of Neighborhood Services, Community Alliance of Mission Hill, Delle Avenue Abutters, State Representative Jeffrey Sanchez, City Councilor Michael Ross, Mission Hill Main Streets, Tobin Community Center, Mission Main, and various other abutters and interested parties.

Overall, the impacts of the NPCII Project are substantially similar to those of the previously proposed approved residential building. Trellis Group LLC request the BRA for the issuance of a revised Adequacy Determination for the NPCII Project to be supported by the technical studies presented in this NPCII submission.

On behalf of the entire project team, we look forward to working with you and your staff on this Project, which will be a significant addition to Mission Hill, the Tremont Street mixed use neighborhood corridor, and the City of Boston.

Sincerely,
TRELLIS GROUP LLC



Jason Savage, Manager

Mitch Wilson, Manager

Enclosure: Notice of Project Change, 1480-1486 Tremont Street, Mission Hill

cc: Heather Campisano, BRA
Tyler Norod, BRA
Bernard Shadrawy, Jr., Esq.
Russell Preston, Principle Group

TABLE OF CONTENTS

Table of Contents	i
1.0 Project Overview	1-1
1.1 Introduction	1-1
1.2 Project Site and Context.....	1-3
1.3 Detailed Project History and Permitting Review	1-6
1.4 Detailed NPC Project Description.....	1-6
1.5 NPC Building Program and Comparison to Previously Approved PNF Project ..	1-10
1.6 Summary of Changes in Project Impacts and Mitigation	1-12
1.6.1 Urban Design.....	1-12
1.6.2 Transportation Impacts	1-13
1.6.3 Wind	1-14
1.6.4 Shadow.....	1-14
1.6.5 Daylight.....	1-14
1.6.6 Solar Glare	1-15
1.6.7 Air Quality.....	1-15
1.6.8 Noise Impacts.....	1-16
1.6.9 Wetlands/Flood Hazard Zones	1-17
1.6.10 Water Quality/Stormwater Management	1-17
1.6.11 Geotechnical and Groundwater Impacts	1-17
1.6.12 Hazardous and Solid Waste Materials	1-17
1.6.13 Construction Analysis	1-18
1.6.14 Historic Resources Component.....	1-18
1.6.15 Infrastructure Systems Component	1-18
2.0 General Information	2-1
2.1 Proponent Information	2-1
2.1.1 Project Proponent.....	2-1
2.1.2 Project and Team Information	2-1
2.2 Public Benefits	2-6
2.3 Regulatory Controls.....	2-6
2.4 Anticipated Permits and Approvals.....	2-8
2.5 Legal Information	2-8
2.5.1 Legal Judgments or Actions Pending Concerning the Proposed Project	2-8
2.5.2 History of Tax Arrears on Property Owned in Boston by the Applicant	2-9
2.5.3 Evidence of Site Control Over the Project Area	2-9

2.5.4	Nature and Extent of Any and All Public Easements.....	2-9
2.6	NPC Public Review Process	2-11
3.0	Urban Design and Sustainability Component.....	3-1
3.1	Introduction	3-1
3.2	Site Context	3-1
3.3	Building Program	3-2
3.4	Building Design.....	3-2
3.4.1	Design Concept	3-2
3.4.2	Height and Massing.....	3-2
3.4.3	Façade Design, Fenestration, and Building Materials	3-3
3.4.4	Exterior Signage and Lighting	3-4
3.5	Site Design.....	3-4
3.5.1	Open Space and Landscaped Areas.....	3-4
3.5.2	Pedestrian Circulation	3-5
3.5.3	Parking and Vehicular Circulation	3-5
3.6	Sustainable Design	3-5
3.6.1	Introduction.....	3-5
3.6.2	Sustainable Sites.....	3-6
3.6.3	Stormwater	3-6
3.6.4	Water Efficiency.....	3-7
3.6.5	Energy & Atmosphere	3-7
3.6.6	Materials & Resources	3-7
3.6.7	Indoor Environmental Quality	3-8
3.6.8	Innovation & Design	3-8
3.7	Urban Design Submission and Project Drawings.....	3-8
4.0	Environmental Protection Component	4-1
4.1	Wind	4-1
4.2	Shadow	4-1
4.2.1	Methodology	4-1
4.2.2	Vernal Equinox (March 21).....	4-2
4.2.3	Summer Solstice (June 21)	4-2
4.2.4	Autumnal Equinox (September 21)	4-3
4.2.5	Winter Solstice (December 21).....	4-4
4.2.6	Conclusions	4-4
4.3	Air Quality Impacts	4-20
4.3.1	Existing Air Quality	4-20
4.3.2	Impacts from Building Heating System and Parking Garage Ventilation....	4-22
4.3.3	Microscale CO Analysis for Selected Intersections	4-26
4.4	Noise Impacts	4-26

4.4.1	Common Measures of Community Noise	4-27
4.4.2	Noise Regulations	4-28
4.4.3	Pre-Construction Sound Level Measurements	4-30
4.4.4	Reference Data for Acoustic Modeling	4-31
4.4.5	Calculated Future Sound Levels	4-32
4.4.6	Compliance with State and Local Noise Standards.....	4-33
4.4.7	Conclusions	4-34
4.5	Water Quality/Stormwater Management	4-34
4.6	Geotechnical/Groundwater Impacts.....	4-34
4.6.1	Previous Investigations.....	4-35
4.6.2	Recent Subsurface Explorations	4-35
4.6.3	Subsurface Conditions	4-35
4.6.4	Groundwater Conditions.....	4-36
4.6.5	Foundation Support.....	4-36
4.6.6	Floor Slab	4-36
4.6.7	Seismic Parameters for Design	4-36
4.6.8	Design Groundwater Levels	4-36
4.6.9	Foundation Drainage	4-37
4.6.10	Lateral Earth Pressures on Foundation Walls	4-37
4.7	Solid and Hazardous Materials	4-37
4.7.1	PNF Project	4-37
4.7.2	NPC Project.....	4-38
4.8	Construction Impacts	4-39
4.8.1	Demolition.....	4-40
4.8.2	Construction Methodology.....	4-40
4.8.3	Construction Schedule	4-41
4.8.4	Construction Staging	4-41
4.8.5	Construction Employment and Worker Transportation.....	4-42
4.8.6	Construction Noise	4-42
4.8.7	Construction Air Quality.....	4-43
4.8.8	Construction Waste	4-43
4.9	Rodent Control	4-43
4.10	Utilities and Coordination with Other Projects.....	4-44
5.0	Transportation Component	5-1
5.1	Project Notification Form	5-1
5.2	Notice of Project Change	5-1
5.2.1	Trip Generation.....	5-3
5.2.2	Vehicular Access and Circulation	5-5
5.2.3	Parking Management	5-6
5.2.4	Pedestrian Access.....	5-6
5.2.5	Bicycle Storage.....	5-6

5.2.6	Loading and Service Access	5-6
5.2.7	Transportation Mitigation Measures	5-7
5.2.8	Transportation Access Plan Agreement (TAPA)	5-7
5.2.9	Evaluation of Short-Term Construction Impacts	5-8
6.0	Historic and Archaeological Resources	6-1
6.1	Historic Resources	6-1
6.1.1	Historic Resources Within the Project Site	6-2
6.1.2	Historic Resources Within the Vicinity of the Project Site.....	6-2
6.1.3	Archaeological Resources.....	6-2
6.2	Potential Impacts	6-2
6.2.1	Demolition.....	6-3
6.2.2	Shadow Impacts	6-3
6.2.3	Visual Impacts	6-4
7.0	Infrastructure Systems Component.....	7-1
7.1	Introduction	7-1
7.2	Sewage System	7-1
7.3	Water Supply System	7-3
7.4	Stormwater	7-3
7.5	Coordination with BWSC.....	7-5
7.6	Anticipated Energy Requirements	7-5
7.6.1	Electrical Requirements.....	7-5
7.6.2	Natural Gas Requirements	7-5
7.6.3	Steam	7-5
7.6.4	Telephone Systems.....	7-6
7.6.5	Cable Systems	7-6
7.7	Protection of Utilities	7-6
8.0	Coordination with Government Agencies	8-1
8.1	Architectural Access Board Requirements	8-1
8.2	Massachusetts Environmental Policy Act	8-1
8.3	Boston Civic Design Commission.....	8-1
8.4	Boston Parks Commission	8-1
9.0	Project Certification	9-1

APPENDICES

Appendix A	Rental Occupancy Restriction
Appendix B	Letter of Intent to File NPC, June 4, 2013
Appendix C	Air Quality Appendix
Appendix D	Noise Appendix
Appendix E	Trip Generation Calculations
Appendix F	Historic Resources Figure from PNF
Appendix G	Correspondence and Letters of Support

LIST OF TABLES

Table 1-1	Approximate Dimensions and Building Program	1-10
Table 1-2	Comparison of Building Programs - PNF and NPC Projects	1-11
Table 2-2	Zoning Chart: 1480-1486 Tremont Street.....	2-7
Table 2-3	Anticipated Permits and Approvals	2-8
Table 4.3-1	Massachusetts and National Ambient Air Quality Standards (NAAQS).....	4-21
Table 4.3-2	Representative Existing Air Quality in the Project Area	4-22
Table 4.3-3	Peak-Hour Garage Traffic Volumes.....	4-23
Table 4.3-4	Peak Predicted Building Heating System and Parking Garage Air Quality Impacts	4-26
Table 4.4-1	Subjective Effects of Changes in Sound Pressure Levels	4-27
Table 4.4-2	Common Indoor and Outdoor Sound Levels	4-29
Table 4.4-3	Maximum Allowable Sound Pressure Levels (dB).....	4-30
Table 4.4-4	Nighttime Baseline Sound Levels	4-31
Table 4.8-1	Proposed Construction Schedule	4-41
Table 5-1	Building Program Comparisons at 1480-1486 Tremont Street, Mission Hill.....	5-3
Table 5-2	Vehicle Trip Generation Comparison.....	5-4
Table 5-3	Transit Trip Generation Comparison	5-5
Table 5-4	Walk/Bike Trip Generation Comparison	5-5
Table 6.1	Historic Resources in the Vicinity of the Project Site	6-1
Table 7-1	Comparison of Sewage Flow	7-1

LIST OF FIGURES

Figure 1-1	Project Locus (USGS Map)	1-4
Figure 1-2	Project Aerial	1-5
Figure 1-3	Site Plan Comparison	1-7
Figure 1-4	Elevation Comparison	1-8
Figure 1-5	Building Section Comparison	1-9
Figure 2-1	Existing Conditions Plan	2-10
Figure 3-1	Site Aerial	3-10
Figure 3-2	Site Context Images	3-11
Figure 3-3	Site Context Images	3-12
Figure 3-4	Proposed Site Plan	3-13
Figure 3-5	Proposed Ground Floor Plan	3-14
Figure 3-6	Proposed Second Floor Plan	3-15
Figure 3-7	Proposed Third Floor Plan	3-16
Figure 3-8	Proposed Fourth Floor Plan	3-17
Figure 3-9	Proposed Roof Plan	3-18
Figure 3-10	Elevations	3-19
Figure 3-11	Elevations	3-20
Figure 3-12	Courtyard Sections	3-21
Figure 3-13	Tremont Street View from East	3-22
Figure 3-14	Tremont Street View from West	3-23
Figure 3-15	Rear View of Southwest Corner	3-24
Figure 3-16	Aerial View through Courtyard	3-25
Figure 3-17	Courtyard View to Tremont Street	3-26
Figure 3-18	LEED for New Construction and Major Renovations, 2009	3-27
Figures 4.2-1	Shadow Study: March 21, 9:00 AM	4-5
Figures 4.2-2	Shadow Study: March 21, 12:00 PM	4-6
Figures 4.2-3	Shadow Study: March 21, 3:00 PM	4-7
Figures 4.2-4	Shadow Study: March 21, 6:00 PM	4-8
Figures 4.2-5	Shadow Study: June 21, 9:00 AM	4-9
Figures 4.2-6	Shadow Study: June 21, 12:00 PM	4-10
Figures 4.2-7	Shadow Study: June 21, 3:00 PM	4-11
Figures 4.2-8	Shadow Study: June 21, 6:00 PM	4-12
Figures 4.2-9	Shadow Study: September 21, 9:00 AM	4-13
Figures 4.2-10	Shadow Study: September 21, 12:00 PM	4-14
Figures 4.2-11	Shadow Study: September 21, 3:00 PM	4-15
Figures 4.2-12	Shadow Study: September 21, 6:00 PM	4-16
Figures 4.2-13	Shadow Study: December 21, 9:00 AM	4-17
Figures 4.2-14	Shadow Study: December 21, 12:00 PM	4-18
Figures 4.2-15	Shadow Study: December 21, 3:00 PM	4-19
Figure 5-1	Site Plan	5-2
Figure 7.1	Existing Sewers and Drains	7-2
Figure 7.2	Existing Water System	7-4

1.0 PROJECT OVERVIEW

1.1 Introduction

This Notice of Project Change (NPC Project) is being submitted by Trellis Group, LLC, (Proponent) in accordance with Article 80A-6 of the Boston Zoning Code (Code) for the proposed development of 1480 -1486 Tremont Street in Boston's Mission Hill neighborhood. The NPC Project involves the demolition of the existing structure on the site and the construction of an approximately 75,000 gross square foot residential building with 6,200+/- gross square feet of ground floor storefront commercial space on Tremont Street. The NPC Project will result in the development of a four-story, multifamily residential building with parking and retail spaces on the first floor and three floors of residential above the parking for a total of 66 rental housing units.

Of the NPC Project's 66 housing units, there will be approximately 21 studios, 28 one-bedroom, and 17 two-bedroom residential units, totaling up to 83 bedrooms. The units will range in size from 550 square feet to 1,200 square feet. The building will have 60 parking spaces, all within an enclosed garage. The NPC Project will have two restrictive covenants. One will dedicate one (1) affordable studio unit. The second will restrict the occupancy of the building to not allow full time undergraduate students per the Rental Occupancy Restriction contained in **Appendix A** that is consistent with the community's goals to continue to improve the quality of life and vitality of Mission Hill. Vehicles will access and egress the site via Tremont Street.

The residential uses will provide much-needed rental housing to the City. With two+ commercial units totaling approximately 6,200+/- gross square feet of ground floor retail space on Tremont Street, the NPC Project will not only increase the City's tax base, but will also contribute to maintaining the vitality of this section of the neighborhood by creating further commercial variety and attracting more pedestrian traffic to the area. At 45 feet, the building height of the NPC Project is within the City of Boston zoning height limitation for the Project site.

On July 20, 2006, the Aspen Group (the "Prior Proponent"), received approval from the Boston Redevelopment Authority ("BRA") to construct the original development program, based on a Project Notification Form filed on March 29, 2006, as presented below, and on April 24, 2007, received a subsequent approval based on a request submitted in a Notice of Project Change, dated March 22, 2007, to modify the PNF Project from condominiums to rental housing with a restrictive covenant placed upon the title, while maintaining the same building program proposed in the PNF Project.

The original development program, proposed by the Prior Proponent, was for the construction of an approximately 75,000 square foot residential building with two small commercial units totaling 2,300+/- gross square feet of storefront commercial space on Tremont Street (PNF Project). The PNF Project would have resulted in the development of a five-story, multifamily residential building with parking and commercial spaces on the first floor and four floors of residential uses above the parking for a total of 66

housing units, including 3 studios, 32 one-bedroom, and 31 two-bedroom residential units, totaling 97 bedrooms. The PNF Project units ranged in size from 735 square feet to 1,133 square feet. The PNF building was approved at 72 parking spaces, of which 51 would have been within an enclosed garage, and 21 as outdoor paved spaces at the building's rear. The PNF Project also had one affordable studio residential unit.

The NPC Project Proponent gained control of the site in 2011 and commenced planning for the NPC project. One of the Proponents was a member of the PNF Project's original Impact Advisory Group ("IAG"). Using the information from this process, the NPC Project team started work in the fall of 2011 on a redesign of the project that would take better advantage of the topography found on the site in order to better relate the development to the surrounding existing structures and to the scale of the other mixed-use blocks along Tremont Street.

In April 2012, initial meetings were commenced with abutters and neighbors to discuss the modified design for the project. Over the course of 2012 and onto 2013, the Proponent has conducted outreach to City agencies, neighborhood representatives, elected officials, and other interested parties on this modified proposal, and will continue to do so throughout the NPC public review process. Based on the development philosophy of the Proponent, as well as its long term interest in the neighborhood, the feedback gained through these discussions with neighbors, such as Mission Hill Neighborhood Housing Services (MHNHS), the Mayor's Office of Neighborhood Services, the Community Alliance of Mission Hill (CAMH), the Delle Avenue Association, State Representative Jeffrey Sanchez, City Councilor Michael Ross, Mission Hill Main Streets, and the Tobin Community Center has helped shape this modified NPC proposal.

A Letter of Intent to File an NPC, dated June 4, 2013, (see **Appendix B**) was subsequently submitted to the BRA.

This NPC presents both an overview of the NPC Project and specific analyses of changes relative to transportation, environmental protection, infrastructure, and other categories of potential project impacts that are evaluated through the Article 80B Large Project Review process. As detailed below, most Article 80B review components will see no, or little, measurable changes due to the proposed revisions, as the NPC Project's proposed changes are minor with regard to potential project impacts.

Section 80A-6 of the Code provides that "[i]n the event of a material change in a Proposed Project . . . the [BRA] Director . . . shall determine whether the . . . change . . . significantly increases those impacts of the Proposed Project . . . that are within the scope of the required review, and whether such increased impacts warrant resubmission of the PNF." We believe that the information included in this NPC submission indicates that the NPC Project will result in no "significant increases" to any studied impacts, and respectfully request an adequacy determination waiving further review of the NPC Project.

1.2 Project Site and Context

Located at 1480-1486 Tremont Street (see **Figure 1-1**, Project Locus (USGS Map) and **Figure 1-2**, Project Aerial), the NPC Project includes two adjoining parcels totaling approximately 37,674 square feet and is located on the south side of Tremont Street in Mission Hill across the street from the Tobin Community Center. The NPC Project Site is located between the intersections of Tremont Street and Burney Street to the west and Tremont Street and Sewall Street to the east. The Project site's frontage is on Tremont Street.

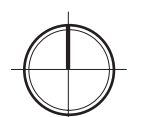
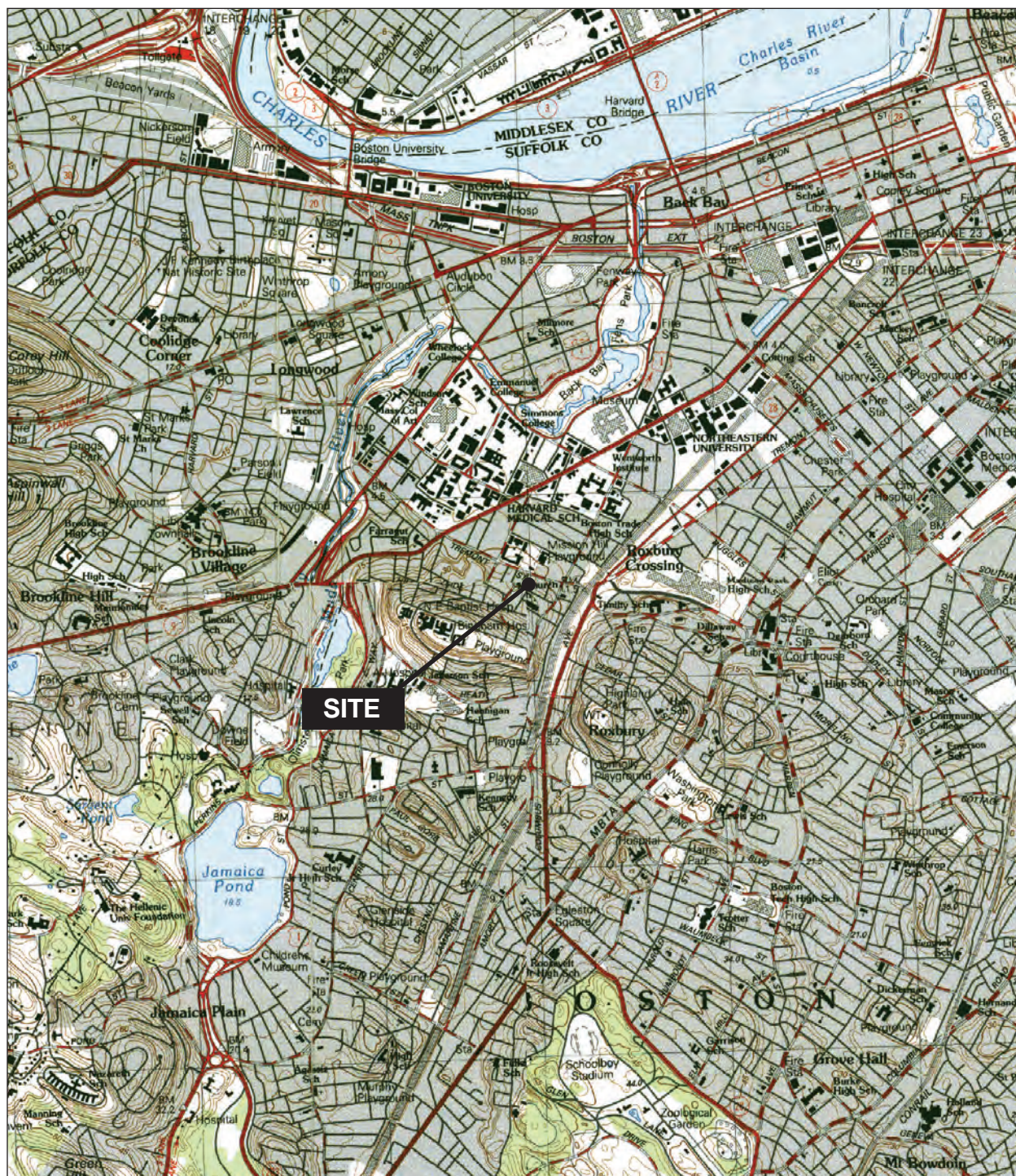
Properties and land uses surrounding the Project site include some mixed commercial-residential uses along Tremont Street, as well as single-, two-, and multi-family residential buildings, institutional buildings (i.e., Mission Church, the Tobin School (K-8), the Tobin Community Center, and the Parker Hill Public Library branch), and an open space (Mission Hill Playground / Sheehy Park).

The NPC Project site currently contains a single-story 6,800 square foot commercial brick and block building on the northwestern portion of the site. The building is occupied by Boston Clutch Works, an automotive replacement parts distributor and retailer, and an associated parking lot. The building contains retail, office, warehouse, and workshop space. However, no vehicle repair is currently performed at the premises. The current parking lot and building is in a state of disrepair. The building will be demolished as part of the construction of the NPC Project.

Buildings have been located on this site since the 1880's and have included storage sheds, stables, and a three-story building. All of these buildings were demolished in 1938. Prior uses during this period included a textile shop, wood shop, paint shop, and a bottling facility. In the 1940s, the current one-story building was constructed as a supermarket. The current use, Boston Clutch Works, has been located at the site since 1975.

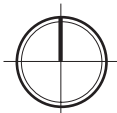
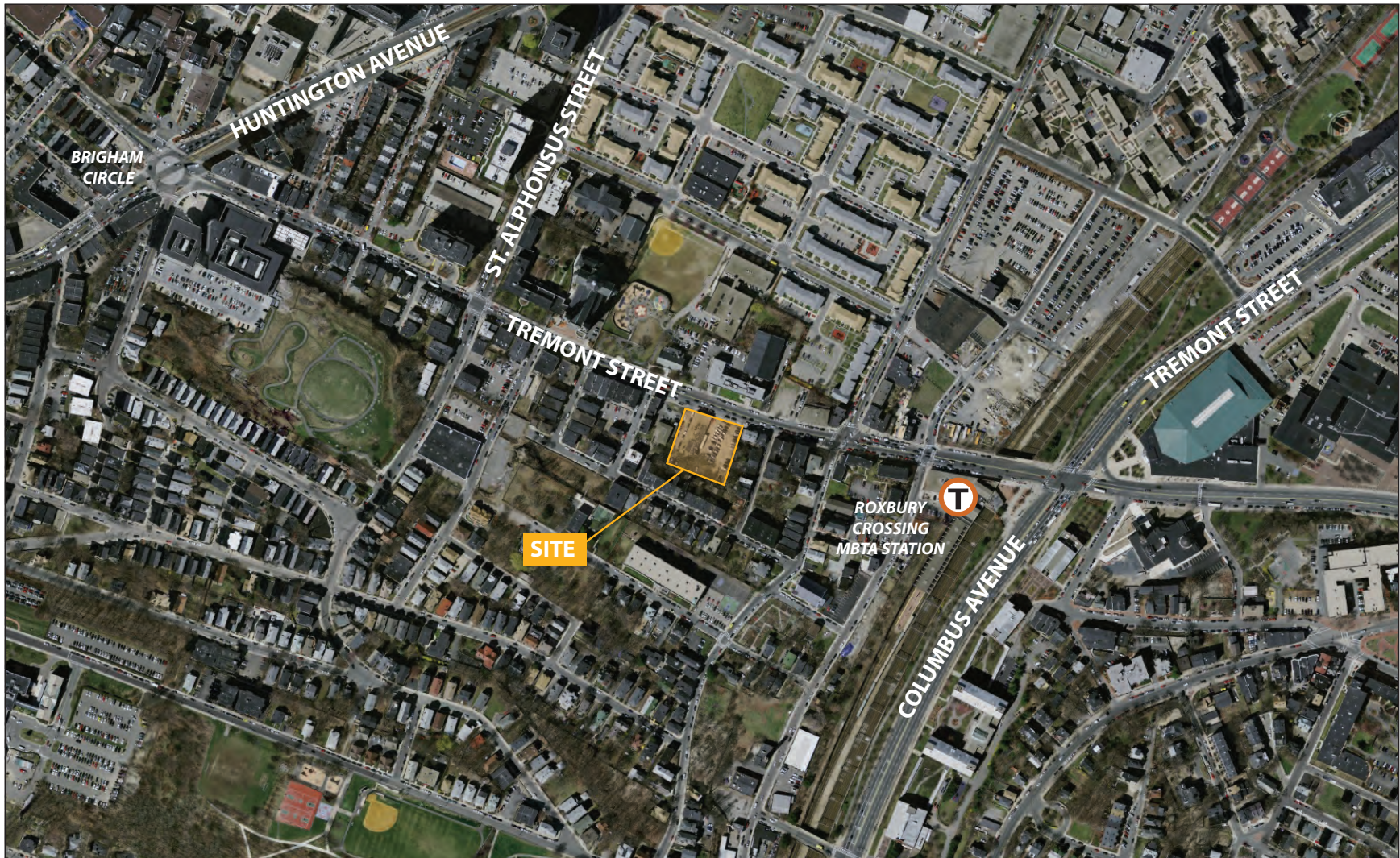
The building is in poor condition and graffiti covers many of the exterior walls. In addition to the parking requirement of Boston Clutch, the site is also used to park cars during the day. The site has no landscaping and the paving is in disrepair throughout much of the site. In addition, concrete walls that surround the site on three sides are also in very poor condition.

The site is poorly lit at night resulting in an unsafe condition. As a result, the neighborhood is concerned that the site has attracted numerous undesirable activities after dark. Therefore, the current use and condition of the property is no longer compatible with the surrounding Mission Hill neighborhood and community.



Not to scale.

Figure 1-1.
Project Locus (USGS Map): 1480-1486 Tremont Street



Not to scale.

Figure 1-2
Project Aerial: 1480-1486 Tremont Street

1.3 Detailed Project History and Permitting Review

In accordance with the Large Project Review requirements of Article 80 of the Boston Zoning Code, on April 24, 2006, The Aspen Group (Prior Proponent) submitted a Project Notification Form (PNF) to the BRA, and on July 20, 2006, the BRA voted to authorize the issuance of a Scoping Determination Waiving Further Review of the PNF Project, and issuing the same on July 27, 2006 to the Prior Proponent.

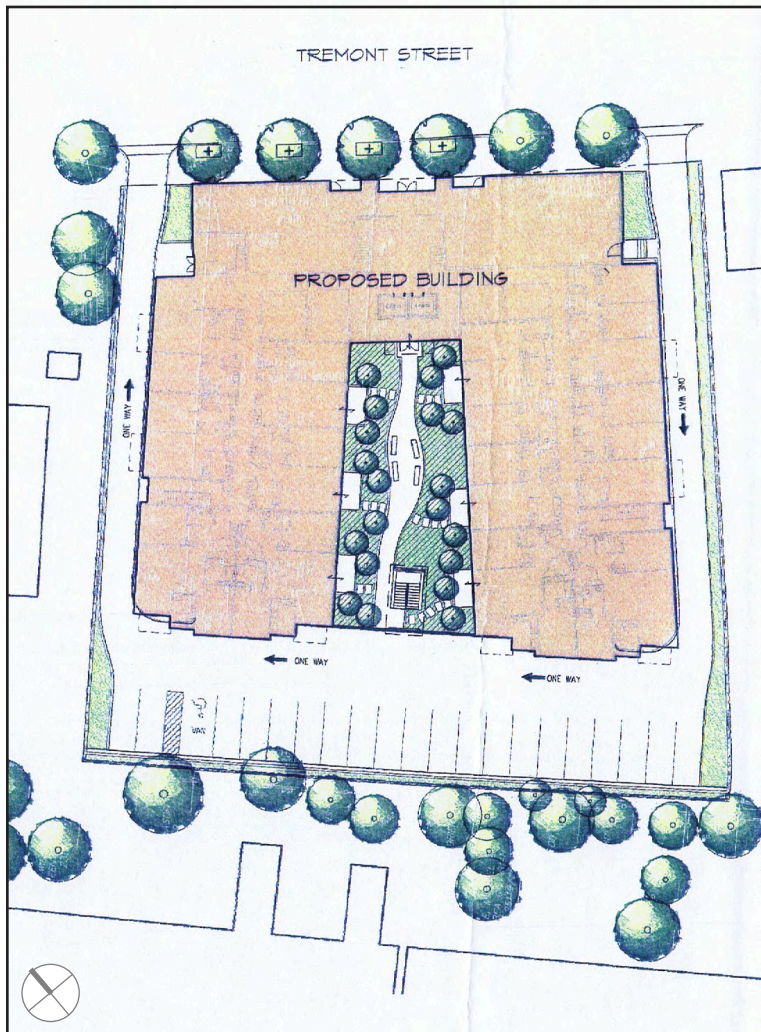
On March 22, 2007, the Prior Proponent also filed an NPC pursuant to Section 80A-6 requesting the BRA's concurrence with a proposed modification from condominium units to rental housing for the PNF Project. The BRA on April 24, 2007 voted to authorize the issuance of a determination under Section 80A-6 finding that this initial NPC adequately described the potential impacts of the Project and provided sufficient mitigation measures to minimize those impacts.

The project as described in the prior PNF, and modified in the prior NPC, proposed to demolish the existing structure on the Project Site and construct an approximately 75,000 gross square foot residential building with ground/first floor retail on Tremont Street. The prior Project resulted in the development of a five-story (45 feet in height to the top of the highest occupiable floor), multi-family residential rental building with parking on the first floor with four floors of residential above the parking for a total of sixty-six units, 72 parking spaces (of which 51 were within an enclosed garage and 21 outdoor spaces at the building's rear), and two commercial units totaling 2,300+/- gross square feet of commercial space.

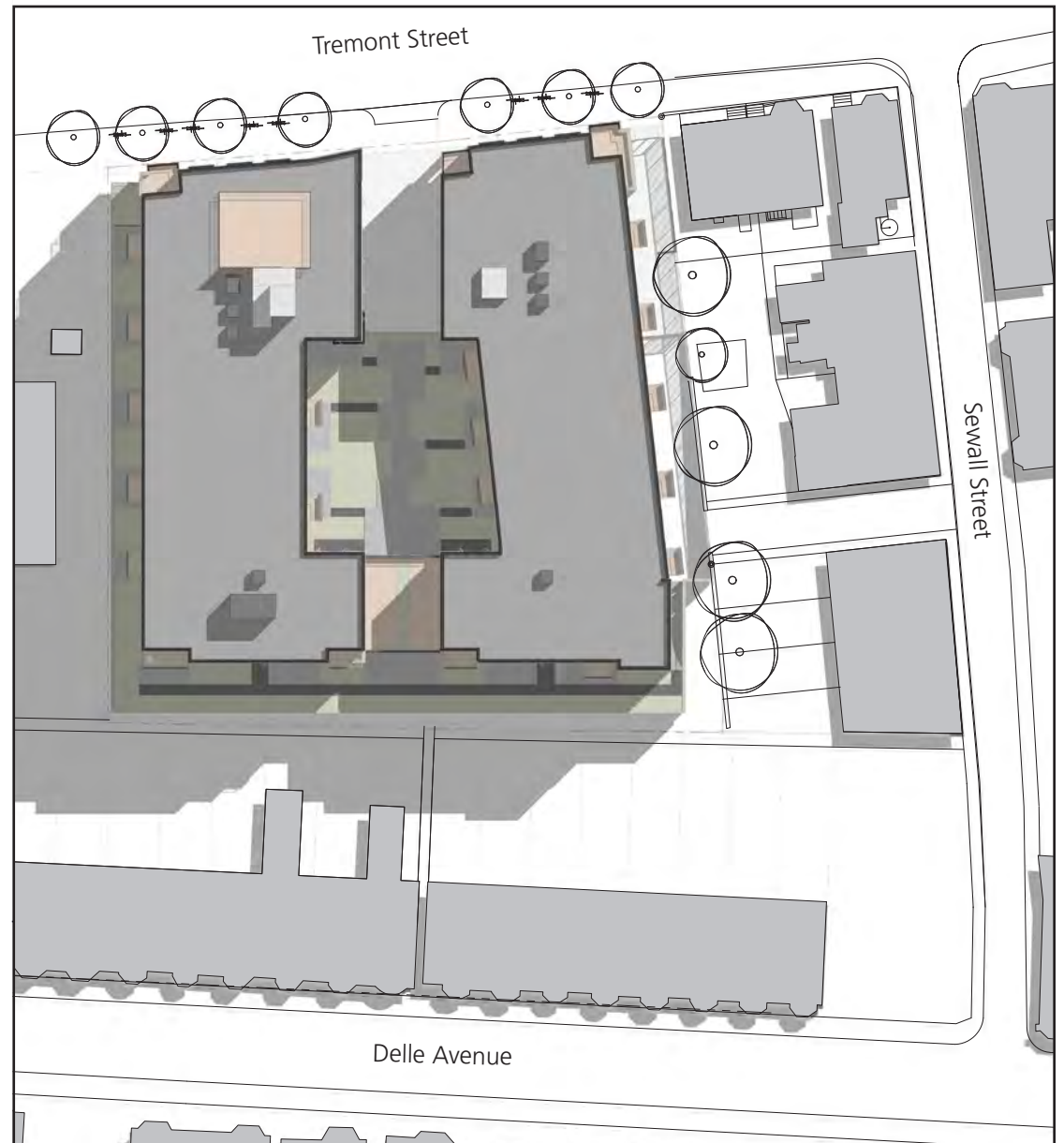
1.4 Detailed NPC Project Description

The NPC Project, located at 1480-1486 Tremont Street, provides a unique opportunity for catalytic improvement to Mission Hill by creating a thoughtful, context sensitive infill development that will attract new residents and help further establish the neighborhood as an exciting, unique, and convenient place in which to live. By adding 66 new residential units, covered garage parking, approximately 6,200 gross square feet of new ground floor commercial storefront space, and usable outdoor space to this section of Tremont Street, the project builds on existing, but disconnected parts of this mixed-use corridor, and transforms a now underutilized parcel into a pedestrian friendly area that promotes destination points and local business activity(See **Figures 1-3, 1-4, and 1-5** for site plan, elevation and building section comparisons between the PNF and NPC Projects).

Dividing its program into two distinct building volumes, the project simultaneously defines a continuous street wall and breaks down its long block at a scale appropriate to the neighboring blocks along Tremont Street. The architecture of each building and the introduction of a range of outdoor spaces seamlessly integrate this NPC Project into the neighborhood, by responding to the scale, materiality, and topography of the surrounding context.



Prior PNF Project



Proposed NPC Project

Figure 1-3.
Site Plan Comparison

1480-1486 Tremont Street NPC



Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



Figure 1-4.
Elevation Comparison

1480-1486 Tremont Street NPC



Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118

1.5 NPC Building Program and Comparison to Previously Approved PNF Project

Table 1-1 below lists the Approximate Dimensions and Building program of the NPC Project and **Table 1-2** that follows compares the dimensional aspects of the NPC and PNF/Prior NPC Projects.

Table 1-1 Approximate Dimensions and Building Program			
Lot Area (square feet):		37,674 sf *	
Number of Residential Units:		66	
FAR Floor Area ¹ :		Not to exceed 75,348 gsf	
Building Height ² :		45 ft.	
Floor Area Ratio:		Up to 2.0	
Level	Gross Retail gsf	Gross Residential gsf	FAR Floor Area gsf
Basement:	0	0	0
First Floor:	6,214	1,956	8,170
Second Floor:	0	22,628	22,628
Third Floor:	0	21,897	21,897
Fourth Floor:	0	21,164	21,164
Enclosed Roof Penthouses:	0	250	250
Total:	6,214 gsf	67,895 gsf	Not to exceed 75,348 gsf

¹ FAR Floor Area as defined by the Boston Zoning Code.

² As measured by the Boston Zoning Code, and not including the mechanical equipment on the roof which will extend approximately six feet higher on a portion of the rooftop.

Table 1-2 Comparison of Building Programs - PNF and NPC Projects

	Approved PNF / Prior Project	Proposed NPC Project
Lot Area (square feet)	37,538 sf	37,674*
Building Height ¹	45 ft.	45 ft.
Number of Floors	5-floors	4-floors
Open Space	52 sf/dwelling unit.	238 sf/dwelling unit
Garage Parking	51 spaces	60 spaces (including two electric charging stations)
Outdoor Parking	20 spaces	0
Bicycle Accommodations	37 bikes	88 bikes
Residential Gross s.f.	NA	Approx. 67,895 gsf
Retail Gross s.f.	2,300 gsf	Approx. 6,200 gsf
Total Gross Floor Area (F.A.R.) ²	75,000 gsf	Not to Exceed 75,348 gsf
Floor Area Ratio (F.A.R.) ²	2.0 (75,000 gsf/37,538 sf)	Up to 2.0

¹ As measured to the top of the highest proposed occupiable floor.

² F.A.R. Floor Area as defined by Boston Zoning Code.
N.A. = Not Available

*As shown on survey dated 12/25/12 by Precision Land Survey, Inc.

1.6 Summary of Changes in Project Impacts and Mitigation

1.6.1 Urban Design

PNF Project

The prior PNF Project was designed as a five story building in a c-shaped plan configuration, with a single long façade along Tremont Street. The building height measured 45' from mean grade to the top of the highest roof beam, as per the Boston Zoning Code, and not including the height of rooftop mechanical equipment, head houses, and parapets. The building was surrounded by a driveway to access parking under and at the rear of the building, essentially creating a “moat” around the structure due to the rise in topography from Tremont Street toward the south end of the site. The building created a continuous street wall along Tremont Street, with two curb cuts for vehicular access at either end of the Tremont Street side of the site. The building’s single residential entrance was located at the center of the Tremont Street façade, with two flanking retail spaces—one at each side.

NPC Project

The NPC Project, similar to the PNF Project, will significantly enhance the character of the existing site and neighborhood by creating a mixed-use infill building comprised of 66 residential units with ground floor parking and commercial storefront space. The proposed building height is also 45 feet as per the Boston Zoning Code—the same as the PNF project. Screened mechanical equipment and a common roof deck are set back from the building perimeter to minimize visibility from the street and surrounding properties. The proposed building height and massing appropriately fit within the surrounding neighborhood.

The design breaks down the block with two structures that relate to the scale of adjacent blocks, and it introduces a mid-block opening, allowing through-block light, air, and views, similar to the condition created by the rhythm of the parallel side streets off of Tremont. Covered parking access and loading occurs off of Tremont Street through a single curb cut at the center of the site.

The NPC Project also creates useable private outdoor space on the site and a more generous sidewalk width because building facades have been set back along Tremont Street. This sidewalk width, along with an adjacent patio at the east side of the building, allows for the possibility of outdoor restaurant seating. A raised landscaped terrace sits above the parking at the center of the site. This and second floor private terraces at the south and west sides of the building relate to the elevated topography at the south side of the site, eliminating the “moat” condition of the prior PNF project.

1.6.2 Transportation Impacts

PNF Project

The PNF Project would have added up to 350 vehicle trips on a daily basis, including 175 vehicles entering and 175 vehicles exiting; 5 entering and 14 exiting during the a.m. peak hour, and 16 entering and 10 exiting during the p.m. peak hour. The existing, No-Build, and Build conditions were analyzed at four study area intersection locations (Tremont Street/St. Alphonsus Street, Tremont Street/Parker Street, Tremont Street/West Site Driveway, and Tremont Street/East Site Driveway) during the PNF review. Due to the negligible volume of traffic generated by the Project, the LOS was not expected to change at any of the study area intersections. A Transportation Access Plan Agreement (TAPA) between the former Proponent and the City of Boston was not prepared or finalized for the PNF.

NPC Project

Section 5.0 of this NPC Project details the transportation impacts associated with the proposed 66 residential apartment units and approximately 6,200 gsf of ground floor commercial storefront space, including trip generation, vehicular access and circulation, parking management, pedestrian access, bicycle storage, loading and service, and transportation mitigation measures.

When compared to the PNF Project, the NPC Project would result in only one more vehicle trip (2 additional entering and 1 fewer exiting) during the weekday morning peak hour and 13 more vehicle trips (5 additional entering and 8 additional exiting) during the evening peak hour – a negligible change. Furthermore, this trip generation does not account for existing uses on-site, the former auto part retail store and existing commercial parking, totaling approximately 60 spaces, which will no longer be on the roadway. The NPC Project will have an imperceptible impact on vehicular conditions in the area.

The NPC Project will provide 60 parking spaces, including approximately 54 spaces for the 66 residential units and up to 6 spaces for the approximately 6,200 sf of ground floor commercial spaces. Parking provisions are consistent with the BTG guidelines. In addition, the NPC Project proposes to provide a total of 88 bike spaces including 72 secure covered bicycle storage spaces within the parking garage for residents, retailers and 16 bicycle racks outside the building frontage on Tremont Street for retail patrons and guests.

All loading and service activity associated with the Project will be accommodated on-site within the proposed driveway located along Tremont Street.

The Proponent is committed to implementing a Transportation Demand Management (“TDM”) program that supports the City’s efforts to reduce dependency on the automobile by encouraging alternatives to driving alone, especially during peak travel periods. TDM will be facilitated by the Project’s site’s convenient location with respect to area educational and medical institutions and non-auto alternatives including MBTA public transportation (Green and Orange Line, local

bus, etc.), Zipcar (16 cars within a quarter mile), and Hubway bicycle share (two stations within a quarter mile: at Roxbury Crossing Station and Brigham Circle/Huntington Avenue).

1.6.3 Wind

PNF and NPC Projects

As with the PNF Project, the NPC Project does not exceed the zoning height of 45 feet; no additional pedestrian level wind impacts are expected.

1.6.4 Shadow

PNF Project

The PNF provided a shadow analysis describing and graphically depicting the anticipated shadow impacts from the PNF Project for the No Build and Build conditions.

The PNF Project replaced a single story building surrounded by an undeveloped paved lot that largely casts no shadow with a new building, 45-feet in height. Any construction on the Project Site will result in new shadows compared to the No Build condition.

In the morning, new shadows from the PNF Project were cast across toward the adjacent property to the west and toward Tremont Street to the north. By 12:00 Noon, new shadows extended northward across Tremont Street and east toward the adjacent houses on Tremont and Sewall Streets, and the extent of these shadows increased in the later afternoon hours. No new shadows were cast on the Parker Hill Branch Library and Tobin Community Center across Tremont Street to the north. Similarly, no new shadows were cast on the properties on Delle Avenue to the South.

NPC Project

A new shadow analysis has been completed for the NPC Project (See **Section 4.2**). This shadow analysis graphically depicts the anticipated shadows in the same manner and graphics as the PNF Project submission. As noted, the NPC Project has a building height of 45' to the roof structure, the same as the previous PNF Project. The division of the NPC Project into two building volumes and the extension of these toward the south end of the site, results in some minor changes to shadows, compared to the previous PNF Project, as portrayed in the figures presented in **Section 4.2**.

1.6.5 Daylight

PNF Project

Although the PNF Project would have caused an increase in daylight obstruction when compared to the existing conditions at the site, the PNF Project was designed to be of a similar height and

massing as those buildings along Tremont Street. The PNF Project would have reached a maximum of 45 feet in height, which was in keeping with the height of buildings along Tremont Street as well as the existing zoning. As a result, daylight obstruction values from the PNF Project were expected to be typical of the surrounding neighborhood.

NPC Project

It is expected that with the same footprint, with the similar massing to the PNF Project, that the minimal daylight obstruction for the NPC Project will be similar.

1.6.6 Solar Glare

PNF and NPC Projects

Neither the PNF Project nor NPC Project includes the use of reflective glass or other reflective materials on the building facades that would result in adverse impacts from reflected solar glare.

1.6.7 Air Quality

PNF Project

The PNF Project qualitatively evaluated the potential long-term air quality impacts from building mechanical equipment and pollutant emissions from vehicular traffic generated by the PNF Project. The PNF Project concluded that project generated traffic operations were projected to be insignificant, thus the future condition air quality is expected to be in conformance with the Massachusetts Ambient Air Quality Standards.

A microscale air quality analysis was not performed for the PNF Project due to its extremely small motor vehicle trip generation. The PNF Project referenced the microscale air quality analysis for the nearby Basilica Court project from February 4, 2005, in which the study concluded that the Tremont Street/Parker Street and Parker Street/Smith Street intersections would be well below the 1-hour and 8-hour National Ambient Air Quality Standards (“NAAQS”).

NPC Project

For the NPC project, the MassDEP air monitoring data, considered to be representative of the project area, was updated for the most recent available, complete, three-year period (2009-2011). The existing air quality in the project area is generally much better than the National Ambient Air Quality Standards (NAAQS) to protect the public health and welfare in ambient air, with a margin for safety.

Tech Environmental, Inc., air quality consultants, updated the air quality modeling analysis using AERMOD model in screening mode. Worst-case concentrations of CO from the Project’s fuel combustion equipment and garage ventilation were predicted for locations around the building.

The maximum predicted total CO concentrations (fuel combustion and garage ventilation exhausts impacts plus background) are safely in compliance with the NAAQS. This analysis demonstrates that the operation of the fuel combustion equipment will not have an adverse impact on air quality.

Similar to the PNF Project, a microscale air quality analysis was not performed for the NPC Project due to its extremely small motor vehicle trip generation, which will not have a significant impact on the delays or the level of service at the local intersections. Therefore, the air quality in the Project area will remain safely in compliance with the NAAQS for CO after the NPC Project is completed.

See **Section 4.3** for the completed NPC air quality analysis.

1.6.8 Noise Impacts

PNF Project

The PNF Project presented the results of a noise study designed to determine whether the operation of the PNF Project will comply with the Massachusetts DEP Noise Policy, City of Boston Noise Regulations, and Housing and Urban Development (HUD) Residential Site Acceptability Standards.

Existing ambient noise conditions were based on typical background noise levels at street receptors, as measured for a similar project at Basilica Court nearby on Smith Street, and would be expected to be in the 50 dBA range during the day and 45 dBA range at night for locations on Delle Avenue and Sewall Street, with levels of 60-65 dBA in the Tremont Street area.

The potential significant sources of exterior sound from the PNF Project were identified to be condensers located on the roof and their impacts were modeled at seven sensitive locations. The modeling showed that the PNF Project, with a minimal amount of mitigation, would not have an adverse impact on noise levels and would be designed to comply with City of Boston and Massachusetts DEP noise regulations and HUD Standards.

NPC Project

The NPC Project design is further along than the one presented in the PNF Project. The NPC Project noise analysis included the following significant mechanical equipment: HVAC units, makeup air handling units, exhaust fans, garage ventilation, a cooling tower and energy recovery units. Therefore, the maximum projected noise level impacts at the nearest residences are equal to or slightly higher than those presented for the PNF Project.

The NPC Project is predicted to produce only a 0-2 dBA change in the background sound levels at all modeled locations. Therefore, the Project's worst-case sound level impacts during the quietest nighttime periods will be in compliance with the Massachusetts DEP allowed noise increase of 10 dBA. The noise predictions for each octave band indicate that the mechanical

equipment will not create a pure tone condition at any location. (See **Section 4.4** for the completed NPC noise analysis).

The NPC Project is not expected to create a noise nuisance condition and will be designed to fully comply with the most stringent sound level limits set by the Massachusetts DEP Noise Policy and the City of Boston Noise Regulations.

1.6.9 Wetlands/Flood Hazard Zones

PNF and NPC Projects

The Federal Emergency Management Agency (“FEMA”) Flood Insurance Rate Map (“FIRM”) indicates the FEMA Flood Zone Designations for the site (City of Boston, Community-Panel Number 250286 0009 C, April 1, 1982). The map for the site shows that the Project site is located in a Zone C, Area of Minimal Flooding.

The Project site does not contain any wetlands.

1.6.10 Water Quality/Stormwater Management

PNF and NPC Projects

No negative impacts to water quality were anticipated from the development of the PNF Project. The existing site is paved, and therefore the construction of the PNF building and associated paved surfaces was not anticipated to result in substantial changes in site permeability or the amount of stormwater runoff. The same result is expected with the NPC Project.

The NPC Project design will meet the applicable Massachusetts Department of Environmental Protection’s October 2011 Stormwater Management Standards to the maximum extent practicable.

1.6.11 Geotechnical and Groundwater Impacts

PNF and NPC Projects

No major changes are anticipated between the PNF Project and NPC Project relating to geotechnical or groundwater issues. See **Section 4.6** for a summary of the new geotechnical analysis completed for the NPC Project.

1.6.12 Hazardous and Solid Waste Materials

PNF and NPC Projects

The Proponent will implement measures to handle the anticipated generation, storage, and disposal of solid waste generated by the Project. Operational measures have been considered that will be employed to promote waste reduction and recycling. The NPC Project, like the PNF

Project will accommodate recycling measures meeting or exceeding the City’s recycling guidelines. In addition, the disposal and construction contracts for the NPC Project will include specific language to ensure the contractor’s compliance with City and State regulations. Demolition and construction debris will be recycled to the maximum extent possible.

1.6.13 Construction Analysis

PNF and NPC Projects

The Proponent will comply with all applicable state and local regulations governing construction of the proposed Project. The Proponent will require that the general contractor comply with the Construction Management Plan (“CMP”), developed in consultation with and approved by the Boston Transportation Department (“BTD”), prior to the commencement of construction.

The Proponent will employ a construction manager that will be responsible for developing a construction phasing and staging plan and for coordinating construction activities with all appropriate regulatory agencies. The Project’s geotechnical consultant will provide consulting services associated with foundation design recommendations, prepare geotechnical specifications, and review the construction contractor's proposed procedures. In addition, the geotechnical consultant will monitor vibration during construction as added protection for abutting structures.

The NPC Project construction period is estimated to extend approximately 16 months. Construction management and scheduling will aim to minimize impacts on the surrounding environment. Construction methodologies that ensure public safety throughout the Project Site will be employed.

1.6.14 Historic Resources Component

PNF and NPC Projects

As with the PNF Project, the Proponent will consult with the Boston Landmarks Commission and the Massachusetts Historical Commission staff regarding review of the NPC Project.

1.6.15 Infrastructure Systems Component

PNF and NPC Projects

During the PNF Project review, the Previous Proponent and its consultants initiated contact with the Boston Water and Sewer Commission (“BWSC”) to understand and evaluate the water, storm drain, and sanitary sewer systems, and to design the Project to prevent disruption of utility services. Further meetings and discussions will be scheduled as building design and permitting progresses.

The proposed connections to the water, storm drain, and sanitary sewer systems will be designed in conformance with the BWSC’s design standards, Water Distribution System and Sewer Use

Regulations, Requirements for Site Plans and Groundwater District Requirements. Separate sanitary sewer and storm drain connections will be provided. The Proponent will submit a site plan to the BWSC's Engineering Services Division for review and approval when the design of the Project is 50% complete. A General Service Application will be obtained prior to construction. The site plan will show the location of water, storm drain, and sanitary sewer systems which serve the site and the location of existing and proposed water, storm drain, sanitary sewer connections and groundwater recharge / stormwater infiltration facilities.

A Massachusetts Department of Environmental Protection (DEP) sewer connection permit (Compliance Certification BRP WP 73 for sanitary connection greater than 15,000 gpd but less than or equal to 50,000 gpd) will not be required, based on the anticipated total sewage flow.

See **Section 7.0** for the completed NPC Infrastructure Systems Component.

2.0 GENERAL INFORMATION

2.1 Proponent Information

2.1.1 Project Proponent

The Proponent is Trellis Group, LLC, a Boston based developer, focused on creating exceptionally designed mixed-use places through the preservation and reuse of historic properties or through the construction of new context sensitive buildings. The principals of Trellis Group, LLC have been working in the Mission Hill neighborhood for thirteen years. They have restored a number of the neighborhood's historic structures, and have constructed several new infill projects, as well. As a company, Trellis Group, LLC is committed to implementing the principle of New Urbanism, which promotes the creation of walkable, human scaled places that enhance local economies, improve public health, and build stronger communities.

2.1.2 Project and Team Information

Table 2-1 Project and Team Information

Project Name:	1480-1486 Tremont Street-Clutch Works Project
Project Location:	1480-1486 Tremont Street, Mission Hill (Boston), MA
Property Owner:	The Project Site is owned by Pressman Family Realty, LLC, which entered into a purchase and sale agreement with the Project Proponent on June 30, 2011.
Project Proponent/Developer:	Trellis Group LLC 1607 Tremont Street, Suite No. 1 Boston, MA 02120 Phone: (617) 713-4444 <u>Contacts:</u> Jason Savage Melanie Savage Mitch Wilson

Development Consultant:	<p>Principle Group 791 Tremont Street Studio W513 Boston, MA 02118 Phone: (786) 361-5285 Website: http://www.principleplaces.com</p> <p><u>Contact:</u> Russell Preston, LEED AP BD+C</p>
Legal:	<p>Bernard F. Shadrawy, Jr., Esq. PC Shadrawy & Rabinovitz 31 State Street, 5th Floor Boston, MA 02109 Phone: (617) 523-3333</p> <p><u>Contact:</u> Bud Shadrawy</p>
Architect:	<p>Hacin & Associates, Inc. 112 Shawmut Avenue Studio 5A Boston, MA 02118 Phone: (617) 426-0077 Website: http://www.hacin.com/</p> <p><u>Contacts:</u> David Hacin, Principal David Tabenken, Senior Associate</p>
Landscape Architect:	<p>Brown Richardson + Rowe 3 Post Office Square 3rd Floor Boston MA 02110 Phone: (617) 542-8552</p> <p>Website: http://www.brownrowe.com</p> <p><u>Contact:</u> Alison Richardson, Principal</p>

LEED/Sustainability Consultant:	<p>Soden Sustainability Consulting 19 Richardson Street Winchester, MA 01890 Phone: (617) 372-7857</p> <p><u>Contact:</u> Colleen Soden, Director</p>
Permitting Consultant:	<p>Mitchell L. Fischman Consulting LLC 41 Brush Hill Road Newton, MA 02461 Phone: (781) 760-1726 Website: http://www.bostonpermitting.com</p> <p><u>Contact:</u> Mitchell Fischman, AICP, Principal Margit Liander, Project Manager</p>
Transportation Consultant:	<p>Howard/Stein-Hudson Associates, Inc. 38 Chauncy Street 9th Floor Boston, MA 02111 Phone: (617) 482-7080 Website: http://www.hshassoc.com</p> <p><u>Contacts:</u> Joe SanClemente, P.E., AICP Skye Levin, P.E.</p>
Outreach Consultant:	<p>The Strategy Group 40 Court Street 11th Floor Boston, MA 02108 Phone: (617) 263-3333 Website: http://www.strategygroupinc.com</p> <p><u>Contacts:</u> Susan Tracy David Newman</p>

Air Quality/Noise Consultant:	<p>Tech Environmental, Inc. 303 Wyman Street Suite 295 Waltham, MA 02451 Phone: (781) 890-2220 Website: http://www.techenv.com</p> <p><u>Contact:</u> Marc Wallace</p>
Civil Engineer:	<p>Howard/Stein-Hudson Associates, Inc. 38 Chauncy Street 9th Floor Boston, MA 02111 Phone: (617) 482-7080 Website: http://www.hshassoc.com</p> <p><u>Contacts:</u> Rick Latini, P.E. Hillary Holmes</p>
Geotechnical Consultant:	<p>Geotechnical Services Inc. 30 Newbury Street Boston, MA 02116 Phone: (617) 455-4248 Website: http://www.geotechserve.com/</p> <p><u>Contact:</u> Harry Wetherbee</p>
Pre-Construction Manager:	<p>Hamilton Construction Management Corporation 39 Brighton Avenue Allston, MA 02134 Phone: (617) 783-0039 Website: http://www.hcmcorp.com</p> <p><u>Contacts:</u> Steve Weinig David Starr Ted Leavitt</p>

Structural Engineer:	<p>Souza True & Partners, Inc. 265 Winter Street Third Floor Waltham, MA 02451 Phone: (617) 926-6100 Website: http://www.souzatrue.com</p> <p><u>Contact:</u> Terry Louderback, P.E.</p>
MEP/FP Engineer:	<p>Allied Consulting Engineers 215 Boston Post Road Sudbury, MA 01776 Phone: (978) 443-7888 Website: http://www.alliedconsulting.net</p> <p><u>Contacts:</u> John Wood, P.E. John Alfeo (Electrical)</p>
Code Consultant:	<p>C3 - Commercial Construction Consulting, Inc. 313 Congress Street Boston, MA 02210 Phone: (617) 330-9390 Website: http://www.c3boston.com</p> <p><u>Contact</u> Douglas Anderson</p>
Specifications Consultant:	<p>Kalin Associates 1121 Washington Street Newton, MA 02465 Phone: (617) 964-5477 Website: http://www.kalinassociates.com</p> <p><u>Contact:</u> Mark Kalin, President</p>
Estimated Construction Commencement:	4 th Quarter 2013
Estimated Construction Completion:	1st Quarter 2015
Approximate Construction Cost:	\$15.5 million
Status of Project Design:	Schematic

2.2 Public Benefits

The NPC Project will result in a number of public benefits for the Mission Hill community, as well as for the City of Boston. These benefits include:

- Creating much-needed residential rental housing;
- Improving the existing streetscape by removing an old building in disrepair and continuing the retail along Tremont Street;
- Improving neighborhood safety by eliminating questionable and illegal activities, that the property currently attracts, particularly at night;
- Developing a project that is consistent with community planning and zoning objectives;
- Providing additional property tax revenue to the city;
- Creating construction-related employment opportunities;
- Creating retail-related and building management employment opportunities; and
- Upholding a rental occupancy restriction (See **Appendix A**), similar to that approved for the Prior Proponent's Notice of Project Change, prohibiting rental to full time undergraduate students at post-secondary institutions in order to address community concern about the impact of undergraduate students residing in Mission Hill.

2.3 Regulatory Controls

The NPC Project, to be located on a site containing 37,674 SF, consists of a 45ft, 4-story building with approximately 75,348 SF of gross floor area designed for 66 dwelling units, two+ commercial storefront spaces of 6,200+/- SF and 60 parking spaces at 1480-1486 Tremont Street within the Neighborhood Shopping (NS) subdistrict of the Mission Hill Neighborhood District, Article 59 of the Boston Zoning Code. All of the Project uses and the location of such uses on the various floors of the building (residential on floors 2, 3 and 4, and retail and accessory parking on the first floor) are Allowed Uses with the NS subdistrict in accordance with Section 59-15, Table B of the Code.

The proposed building has been designed to have a Floor Area Ratio (FAR) of up to 2.0 (75,348 SF / 37,674 SF) in conformity with the underlying 2.0 FAR limit. It has a height of 45 feet in conformity with the underlying height limit. The open space provided of approximately 15,183 SF exceeds the open space requirement of 50 feet per dwelling unit (only 52 feet per unit was proposed in the PNF). The 20-foot rear yard setback is also in conformity with the minimum allowed under the existing zoning. Overall, the NPC Project has been designed to be in conformity with dimensional requirements of Section 59-16, Table G of the Code, and as detailed in **Table 2-2**.

The NPC Project proposes a total of 60 parking spaces, allocated for the residential and commercial users of the project. The BTDC has established parking space guidelines throughout the City to ensure that the proper parking capacity is provided with new projects. BTDC's maximum parking ratio guidelines for this area of the City is 0.50 –1.0 parking spaces per residential unit. The NPC project falls within these limits. The site plan shows a layout of the 60 parking spaces on the first floor of the building. Off-street loading is normally restricted to commercial uses, but under neighborhood zoning requirements it applies also to

residential uses. It should also be noted that in accordance with Section 59-37 of the Code, the off-street loading and parking requirements will be determined through the Article 80 Large Project Review process.

Based on the foregoing, the Project continues to not require Zoning Relief from the Board of Appeal or the Zoning Commission, which is similar to the PNF Project

Table 2-2 Zoning Chart: 1480-1486 Tremont Street

Category	Code Requirement	NPC Project Uses and Dimensions
Use Regulations Section 59-15, Table B	Multi-family 2nd floor and above	Residential – 66 dwelling units, floors 2,3 and 4
	General retail use allowed on first floor	Commercial- Approximately 6,200 SF Retail, Restaurant Uses, first floor
	Parking allowed in basement and first floor	Accessory Parking – 60 spaces, first floor
Dimensional Regulations Section 59-16, Table G		
Maximum Floor Area Ratio (FAR)	2.0	up to 2.0
Maximum Building Height	45 ft	45 ft
Minimum Lot Size	None	37,674 SF
Minimum Lot Area per Dwelling Unit	N/A	N/A
Minimum Useable Open Space per Dwelling Unit	50 SF/dwelling unit (66 units x 50 SF = 3,300 SF)	238 SF/dwelling unit (15,742 SF total)
Minimum Lot Width	None	184 ft
Minimum Lot Frontage	None	184 ft
Minimum Front Yard	None	None
Minimum Side Yard	None	<u>NW side:</u> 0 ft. <u>SE side:</u> 0 ft.
Minimum Rear Yard	20 ft	20 ft @ 2 nd floor [1 st floor is below grade]

2.4 Anticipated Permits and Approvals

The public approvals expected to be required for the NPC Project are listed in **Table 2-3**.

The NPC like the PNF Project is subject to requirements of Section 80B-1, Large Project Review, since it is located within a neighborhood district (the Mission Hill Neighborhood District) and consists of a building of more than 50,000 square feet.

Table 2-3 Anticipated Permits and Approvals

AGENCY NAME	PERMITS AND APPROVALS
STATE	
Massachusetts Department of Environmental Protection, Division of Air Quality Control	Notice of Commencement of Construction
LOCAL	
Boston Landmarks Commission	Article 85 (Demolition Delay)
Boston Public Improvements Commission	Permits for street occupancy, alteration, and sidewalk alteration (if necessary)
Boston Redevelopment Authority	NPC Approval; Section 80B-6 Certificate of Compliance; and Article 80 Agreements
Boston Transportation Department	Construction Management Plan Transportation Access Plan Agreement
Boston Water and Sewer Commission	Construction Dewatering Discharge Permit; Water and Sewer Connection Permit
Boston Fire Department	Approval of fire safety equipment
Boston Department of Public Works Public Improvements Commission	Permits for street occupancy and opening permit (if necessary); possible Vertical and Subsurface Discontinuances; marquee license
Boston Department of Inspectional Services	Building Permit(s) Flammable Storage Permit/ License for Garage Certificate(s) of Occupancy

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

2.5 Legal Information

2.5.1 Legal Judgments or Actions Pending Concerning the Proposed Project

The Project Proponent is not aware of any legal judgments or other actions pending which involve the Project.

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

The Proponent has no additional property in Boston on which real estate tax payments are in arrears.

2.5.3 Evidence of Site Control Over the Project Area

The Project Site is owned by Pressman Family Realty, LLC, which entered into a purchase and sale agreement with the Project Proponent on June 30, 2011.

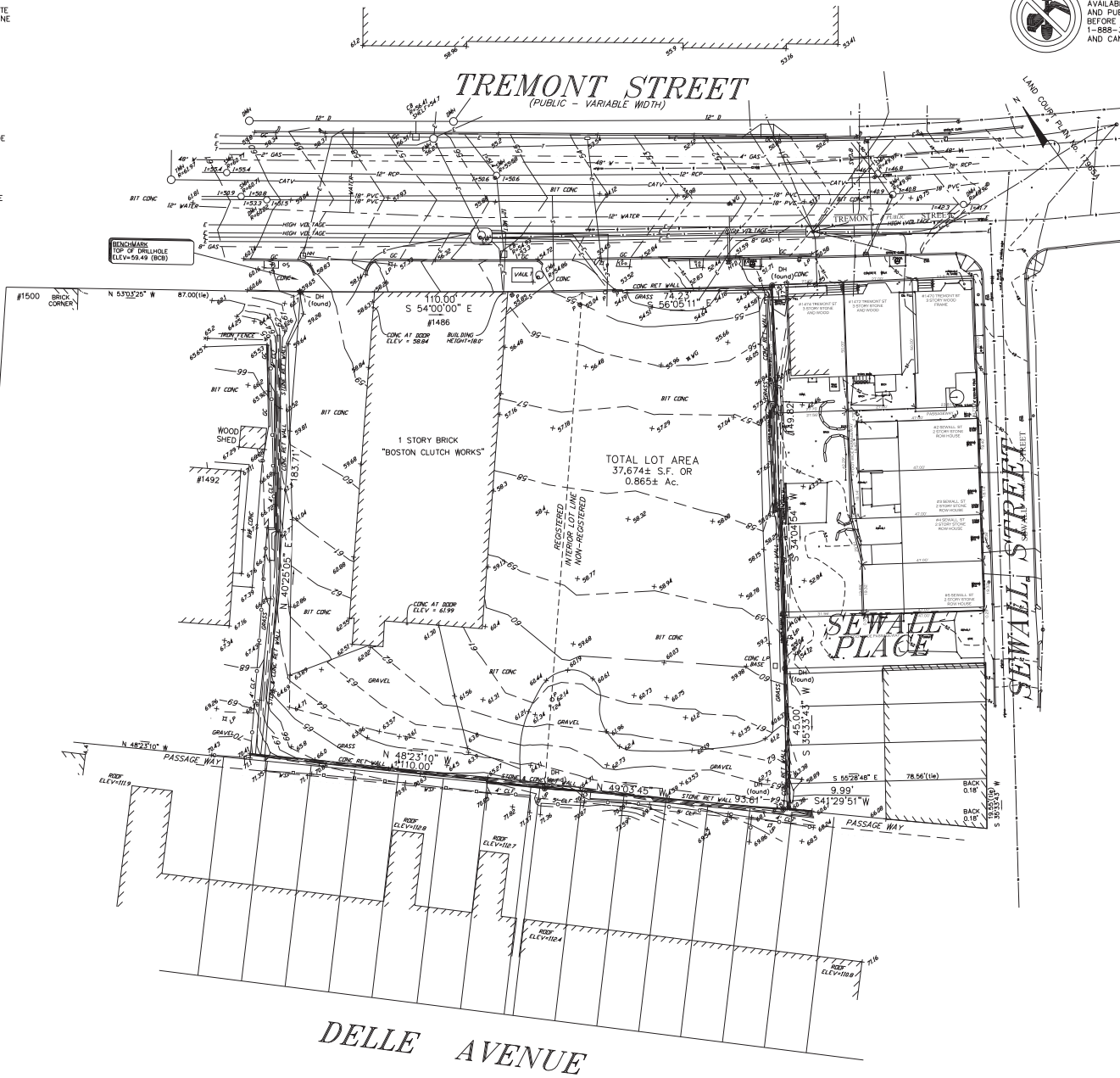
2.5.4 Nature and Extent of Any and All Public Easements

The Project Site is subject to no public easements.

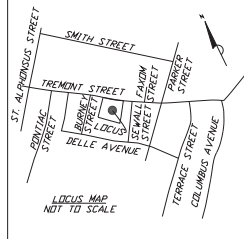
Please refer to **Figure 2-1** for the Existing Conditions Plan

LEGEND
 BIT CONC
 CATV
 CLF
 CONC
 -D-
 DMH
 -E-
 EMH
 GC
 HH
 LP
 P
 PVC
 R
 RET
 S
 SMH
 -T-
 T2
 TMH
 UP

BURNEY STREET



UNDERGROUND UTILITIES WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY. BEFORE DESIGN AND CONSTRUCTION CALL "DIG SAFE" 1-888-344-7233. SOME DATA IS CONFLICTING AND CAN ONLY BE VERIFIED BY EXCAVATION.



- NOTES
- ELEVATIONS REFER TO BOSTON CITY BASE. BENCHMARK USED: IN BROOKLINE, MASSACHUSETTS GEODETIC SURVEY DISK 89C, ON THE EAST SIDE OF HARVARD STREET, AT THE HARVARD STREET ENTRANCE TO SAINT MARY'S CHURCH. ON THE SOUTH PARAPET AT THE TOP OF THE LANDING ELEVATION = 45.92 (NGVD 1929) OR 51.57 (BOSTON CITY BASE).
 - ZONING DISTRICT: RESTRICTED MANUFACTURING M-2
 MIN. LOT SIZE = NONE
 MIN. LOT AREA = NONE
 MIN. LOT WIDTH = NONE
 MAX. FAR = 2.0
 MAX. HEIGHT = NONE
 MAX. STORIES = NONE
 MIN. USEABLE OPEN SPACE = NONE
 MIN. FRONT YARD = NONE
 MIN. SIDE YARD = NONE
 MIN. REAR YARD = 12 FEET
 - OWNER: PRESSMAN FAMILY REALTY, LLC
 LAND COURT DOC. No. 669005
 DEED BOOK 33085 PAGE 175

REFERENCES
 SUFFOLK COUNTY REGISTRY OF DEEDS
 LAND COURT DOCUMENT No. 669005 (LOCUS DEED)
 LAND COURT PLAN No. 17955A (LOCUS PLAN)
 - - - - 35408A
 - - - - 21067A
 - - - - 15063A
 - - - - 9891A
 PLAN IN DEED BOOK 1498 PAGE 293
 - - - - 1034 - 28

CITY OF BOSTON DEPARTMENT OF PUBLIC WORKS
 PLAN No. L-10599
 PLAN No. L-1259
 PLAN No. K-485
 PLAN No. K-325C
 FIELD BOOK 1357 PAGE 74-77
 - - - - 1509 - 150-155
 - - - - 1263 - 136-137
 - - - - 840 - 115-117
 - - - - 361 - 65

VERIZON
 TREMONT STREET PLAT No. 346-347

KEYSPAN ENERGY DELIVERY
 PLAN No. ROX 124

BOSTON WATER AND SEWER COMMISSION
 PLAN No. 19H

NSTAR ELECTRIC
 CADIMAGE PROJECT TREMONT STREET 10/28/2003

#1486 TREMONT STREET

EXISTING CONDITIONS PLAN
 IN
 BOSTON, MA
 ROXBURY DISTRICT
 (SUFFOLK COUNTY)

SCALE: 1"= 20' DATE: JANUARY 25, 2012

0 20 40 60 80 ft
 Precision Land Surveying, Inc
 32 Turnpike Road
 Southborough, Massachusetts 01772
 TELE NO: (508) 460-1789 FAX NO: (508) 970-0096
 330301TP1.DWG

Figure 2-1.
 Existing Conditions Plan

1480-1486 Tremont Street NPC

2.6 NPC Public Review Process

The Proponent has been meeting with various neighborhood groups, particularly the Delle Avenue Association, for more than a year. In general, the community has expressed great interest in the project and has overall given helpful feedback regarding the modified NPC Project design. A listing of individuals and groups we have engaged include:

Elected Officials

Office of City Councilor Michael Ross
Office of State Representative Jeffrey Sanchez

City Agencies

Mayor's Office of Neighborhood Services
Mission Hill Main Streets
Tobin Community Center

Community Organizations

Mission Hill Neighborhood Housing Services
Community Alliance of Mission Hill
Delle Avenue Association
Roxbury Knights of Columbus Council 123

Abutters

Various Delle Avenue and Sewall Street residents

The Proponent's development team will continue to outreach and attend meetings with neighborhood, community, and business leaders regarding the NPC Project during the Article 80 review process, including discussions/meetings with city agencies, as may be required by the required permits, including:

- Boston Transportation Department
- Boston Environment Department
- Boston Department of Public Works
- Boston Landmarks Commission
- Boston Water and Sewer Commission
- Mayor's Office of Neighborhood Services

Based on early review with neighbors and abutters, attached in **Appendix G** are copies of correspondence and support letters received to date on the NPC Project proposal. These letters are from the following individuals:

- James Farrow, 49 Delle Avenue
- Elizabeth & Bill Commerford, 47 Delle Avenue
- John Toner, 53 Delle Avenue
- Chad Rosner, 43 Delle Avenue #3
- Robert Francey, 40 Delle Avenue

- Anthony Macchi, 30 Delle Avenue
- Kaitlin McCutcheon, 30 Delle Avenue
- Richard Rouse,
Executive Director, Mission Hill Main Streets
- Lois Regestein, 6 Worthington Street,
Chairman, Mission Hill Triangle Architectural District Commission
- Michel Soltani, 1575 Tremont Street,
Owner of the Mission Bar and Grill, 724 Huntington Avenue
- Matthew Postal,
Owner of Lilly's Gourmet Pasta Express, 1528 Tremont Street

3.0 URBAN DESIGN AND SUSTAINABILITY COMPONENT

3.1 Introduction

The NPC Project is a mixed-use development, located at 1480-1486 Tremont Street in Mission Hill, which will be comprised of approximately 66 residential apartments, approximately 6,000 square feet of commercial storefront space, covered parking for 60 vehicles, 88 bike racks, and new useable outdoor space. Discussion of urban design and sustainability elements for the proposed new building is provided in the sections below, and is illustrated on the plans, perspectives, photographs, and LEED checklist that are included at the end of the Urban Design Component (see **Figures 3.1** through **3.18**).

3.2 Site Context

The NPC Project site at 1480-1486 Tremont Street lies on the south side of the street, between Brigham Circle and the Green Line MBTA to the west, and Roxbury Crossing and the Orange Line MBTA to the east. This neighborhood corridor is characterized by a range of building types at different scales, with a mix of residential, commercial and institutional uses and a range of architectural styles and materials.

Directly across Tremont Street to the north is the Tobin Community Center, a 4-story mid-20th century Art Deco building set back from the street. Immediately adjacent to the site to the east on Tremont are a pair of 3-story stone townhouses with a mansard roof and projecting wood bay windows, and beyond that a 3-story wood clapboard triple-decker, typical of the neighborhood residential structures. Further along Tremont Street across Sewall Street are 3 and 4-story masonry multi-family residential buildings. Immediately to the west of the site on Tremont Street, a 2-story wood clapboard residential building is set back from the street with a raised paved parking lot abutting the sidewalk. Further down Tremont Street to the west is a 3-story wood clapboard building with retail on the ground floor and residences above. The next block across Burney Street is lined with 3-story masonry buildings, with ground floor retail storefronts and residences above. The east side of the property abuts the rear yards of a series of 2 and 3-story masonry townhouses along Sewall Street. To the south, the property abuts the rear yards of a continuous block of 3-story masonry townhouses along Delle Avenue. Because of the topography change, the rears of these houses are 4-stories in height.

3.3 Building Program

The NPC Project development program will include approximately 6,200+/- gross square feet of storefront commercial space, two residential lobbies, a 60 space covered parking garage at the ground floor, and 66 residential apartments on the upper three floors. At the second floor, the building also contains a common fitness room for building residents. The total FAR gross floor area is up to 2.0, which is 75,000± gross square feet. Building mechanical spaces will be housed at the ground floor, and on the roof. The program also includes a common outdoor space for building residents at the second floor, and a series of private outdoor spaces for each residential unit, including terraces and balconies.

3.4 Building Design

3.4.1 Design Concept

The NPC Project's urban design goal is to significantly enhance this Mission Hill mixed-used corridor along Tremont Street by creating a pedestrian friendly environment and providing new housing, commercial storefronts, parking, and useable outdoor space. The design concept aims to infill the project's site with a structure that is in harmony with the street wall found on Tremont and is consistent with the character of the neighborhood.. The project breaks down its long block with the appearance of two separate buildings fronting Tremont Street, appropriately scaled to relate to existing buildings on the street, creating a mid-block opening between that provides access to covered parking and a visual connection through the site. The design takes advantage of the existing topography to create a building that is also appropriately scaled on each side, with the rear of the site having a three-story façade facing the back yards of the Delle Avenue abutters.

The NPC Project's two residential entrances are located flanking the central driveway at the north side of the building. There are two highly visible retail spaces with expansive storefront glass along the Project's sidewalk frontage, where the façade is held back a few feet from the property line to align with the adjacent houses and allow space for sidewalk café seating. Loading and service is provided off Tremont Street in the driveway between the two separate building entrances. The width of this driveway allows for a truck to be parked for loading/service and resident automobiles to enter and exit the covered parking garage.

The NPC Project's design integrates the building with the scale and materiality of existing neighborhood structures, with a modern architectural language that responds to and enhances the surrounding historic context.

3.4.2 Height and Massing

The NPC Project will be one building but have the appearance of two buildings. Building heights along Tremont Street will be 4-stories with up to a maximum height of 45 feet above mean grade, per the Zoning Code. At the top floor, a series of set-backs are incorporated to break-down the

apparent height of the buildings and relate to the abutting structures, while the corner of the western-most building adjacent to the central driveway will emphasize its height by being expressed as a narrow 4-story element. This corner piece refers to the similar corner bays/turrets along Tremont Street and provides a focal point for the block. At the rear of the site facing the back yards of the Delle Avenue abutters, the topography is used to make the proposed building volumes 3-stories high, with upper floor corner setbacks to further reduce the building mass. This significantly reduces the apparent height of the building compared to the PNF Project, which was previously 5-stories in height facing Delle Avenue. The NPC's revised site plan also eliminates the significant grade change at the rear of the property that created a tall retaining wall "moat" with the outdoor paved parking along the property line with the Delle Avenue abutting buildings.

As identified, the NPC Project's building height and massing meets the Zoning Code's maximum requirements and will fit appropriately into the surrounding neighborhood. Compared to the PNF Project, the NPC Project is expected to have a reduced impact on the neighborhood, due to its division into two separate building volumes and its improved integration into the site topography. The NPC Project's facades are also more appropriate along Tremont Street and Delle Avenue. Its two building volumes break down the scale of the block and allow a through-block visual connection. The NPC design also increases the usable open space substantially from the PNF Project while also removing the "moat" that enables the project to fit in more seamlessly with the surrounding buildings.

3.4.3 *Façade Design, Fenestration, and Building Materials*

Along Tremont Street, the most prominent face of the building is conceived as a single composition, with two separate facades that are closely related but incorporate some subtle variation to respond to their differing dimensional characteristics and the change in topography along the street. The two building facades are composed with a repetitive rhythm of bays with vertically proportioned windows, in keeping with many of the existing historic structures throughout the neighborhood. At the center of this composition is a projecting corner "tower" with a vertical expression that relates to projecting corner bays on numerous buildings along the street. At the east and west ends of each façade are two projecting angled bay windows, which punctuate the façade and provide a counterpoint to the larger scale corner bay.

The building facades are defined with a traditional division of "base, middle, and top" and are articulated with brick and precast cladding, rain screen panels, and aluminum glazing. Wider expanses of glazing occur at the retail storefront and residential entrances along Tremont Street, with smaller scale punched openings at the floors above. The masonry base zone along Tremont transforms at the east and west sides of each building to become retaining walls that define second floor terraces above. These garden walls then disappear as the topography rises toward the south of the site.

At the north and south sides of the building, masonry facades are expressed with a regular rhythm of window openings. The fourth floor is clad with panel system, creating an “attic” story that relates to the upper mansard story of adjacent buildings. At the east and west sides, facades are clad with a fiber cement panel system, bracketed by the masonry volumes at each end. Projecting balconies and top floor corner terraces further animate the facades and reduce the apparent scale of the building. The courtyard facades are defined with the same fiber cement panel system, punched glazed openings and projecting balconies, creating a distinct space at the center of the site.

3.4.4 Exterior Signage and Lighting

The NPC Project will allow for the integration of appropriately scaled retail signage above retail storefronts and entrances by future retail tenants. Building address signage will be incorporated at each of the two residential entrances. Any necessary exterior way finding signage related to the garage entrance and adjacent mechanical and trash rooms will be designed to be compatible with exterior building materials and the graphic identity of the NPC Project.

Exterior lighting, where used, will be primarily indirect LED lighting to illuminate building entrances, ground surfaces, and pedestrian pathways, with particular attention paid to limiting ambient light on site.

3.5 Site Design

3.5.1 Open Space and Landscaped Areas

The Tremont Street facades of the NPC Project are held back a few feet from the sidewalk property line, to align with the adjacent houses and to allow space for sidewalk café seating along the retail storefront. At the east side of the retail, a patio with decorative paving allows for outdoor dining for a restaurant.

At the center of the site, a paved drive provides pedestrian and automobile access to the resident parking garage, with adequate space for service and loading to occur without impeding access to the garage. This drive is spatially connected to an elevated central courtyard, which allows for light, air, and views penetrating the block. This courtyard combines private terraces for the adjacent residential units with common space and landscaping to provide an amenity for building residents and enhance views through the site.

At the west side of the NPC Project, a second floor terrace provides private outdoor space for adjacent residential units, with planter boxes to provide a privacy between units and integrate the building edge into the green surroundings. At the south side, the second floor terrace meets the grade of the rear yards of Delle Avenue townhouses, eliminating the “moat” condition created by the prior PNF Project. At the southeast corner of the site, the second floor terrace grade slopes down adjacent to an exterior egress stair to meet grade on the east side of the building, at the

ground floor retail terrace. Open space for upper floor units is provided with numerous balconies and terraces.

Overall, the NPC Project eliminates any view of parking by completely submerging it below its second floor terrace, greatly increasing the amount of usable and planted open space and seamlessly fitting the building into the surrounding context.

3.5.2 Pedestrian Circulation

New sidewalks are proposed along Tremont Street, with the building facades setback slightly from the property line to allow for outdoor seating for future restaurants. The addition of at least two retail entrances and two residential entrances will help enliven this portion of Tremont Street and bring new life to this block.

3.5.3 Parking and Vehicular Circulation

A covered parking garage will be accessed through the drive at the center of the site. The parking will be exclusively for occupants. Off street trash pickup and off street loading for retail and for residents will occur within the central driveway, with direct access through the garage to the residential lobbies and to retail service areas.

3.6 Sustainable Design

3.6.1 Introduction

Sustainability informs every design decision. Enduring and efficient buildings conserve embodied energy and preserve natural resources. The Project is working to minimize energy use as much as possible by evaluating every possible efficiency measures.

The NPC Project embraces the opportunity to positively influence the urban environment. Its urban location takes advantage of existing infrastructure while convenient access to mass transportation will reduce dependence on single occupant vehicle trips and minimize transportation impacts. Bicycle storage will be provided on-site along with many nearby transportation alternatives.

The NPC Project is using the LEED for New Construction 2009 rating systems and intends to meet certification as presented in accompanying **Figure 3-18**. The LEED rating system tracks the sustainable features of the project by achieving points in following categories: Sustainable Sites; Water Efficiency; Energy & Atmosphere; Materials and Resources; Indoor Environmental Quality; and Innovation & Design Process.

3.6.2 Sustainable Sites

The development of sustainable sites is at the core of sustainable design. The sustainable sites category seeks to steer development toward sites that minimize the impact of construction on the natural environment. Strategies for the development of sustainable sites include: siting new construction on previously developed sites; developing on sites that are located to take advantage of existing infrastructure; selecting sites that are proximate to mass transportation and basic services in the community; and developing sites that require remediation of environmental contaminants.

The current design documents for the NPC Project contain an erosion and sedimentation plan that conforms to local codes and the EPA Construction General Permit (Phase I and Phase II) of the National Pollution Discharge Elimination System Program (NPDES).

The NPC Project performed a Phase I and a Phase II inspection and found asbestos within the existing building that is being demolished. Asbestos and other non-soil contamination in an existing structure may also qualify for brownfield redevelopment, per LEED Interpretation 5/9/2011 ID#10001. An asbestos plan will be developed and documented according to EPA and state regulations. The NPC Project performed a Phase II inspection and found asbestos within the building. The asbestos will be remediated per NESHAPS standards.

The previously developed site features connectivity to basic services in the community and is located in an urban setting that is well served by the existing utility infrastructure. The site's adjacency to basic services in the community and the development density of its urban context enable the project to satisfy both available approaches to the Development Density and Community Connectivity credit. The project also achieves all of the Alternative Transportation credits through its access to public transportation and by providing bicycle storage facilities.

The project is providing preferred parking, two electric vehicle charging stations, and less parking than the local zoning requirement recommends.

3.6.3 Stormwater

The project team is looking at a decentralized approach to stormwater that takes advantage of proposed landscape elements on the ground and roof planes.

To achieve both Heat Island Effect credits and minimize the project's impact on the creation of urban heat islands, a combination of high-albedo roofing membrane and planted areas will be included to maximize solar reflectance and minimize heat gain. The planted roof areas are located adjacent to rooftop terrace spaces that also serve as an amenity to occupants. All of the parking is covered and within the existing garage that minimized the development footprint substantially, while also meeting the Urban Heat island non roof criteria.

3.6.4 Water Efficiency

Conservation of water preserves a natural resource while reducing the amount of energy and chemicals used for sewage treatment. To satisfy the requirements of the Water Use Reduction Prerequisite and credit, the project will incorporate water conservation strategies that include low flow plumbing fixtures for water closets and faucets. Furthermore, drought tolerant plant species will be specified in landscaped areas to eliminate the requirement for irrigation in most areas and satisfy the requirements for the Water Efficient Landscaping credit. All water conservation measures are being considered. All fixtures will be provided with water conserving features. We are anticipating a water use reduction of 30%.

3.6.5 Energy & Atmosphere

Careful consideration of all energy using elements of the building were analyzed. Variations of HVAC system design, along with detailed assessments of assumptions for energy use, addition to occupancy behavior and interface with the proposed systems. While these systems focus on reducing energy the other goals of maintaining optimal space conditions and thermal comfort were also part of the decision making. The project will exceed the ASHRAE 90.1-2007 standard for Minimum Energy Performance through a variety of measures explained below.

In addition to energy conservation technologies, Fundamental Commissioning of Building Energy Systems will be performed to ensure that systems are operating at peak efficiency. Furthermore, no chlorofluorocarbon (CFC) based refrigerants will be used in the project to reduce ozone depletion in the atmosphere and satisfy the Fundamental Refrigeration Management prerequisite.

The project team is currently evaluating the viability of a solar array on-site.

3.6.6 Materials & Resources

The materials that are used in the construction of buildings have a profound impact on the amount of virgin materials that are harvested and also the amount of waste products that are generated. Recycling diverts material waste products from landfills and reduces the demand for virgin materials. In addition, the extraction, processing, and transportation of materials to project sites consume energy and contribute to carbon dioxide emissions. Additionally, the use of locally extracted and processed materials stimulates the local economy.

The NPC project includes recycling facilities within the building for the convenience of the occupants in accordance with the requirements of the Storage & Collection of Recyclables prerequisite. A Demolition and Construction Waste Management Plan will be implemented to divert at least 75% of the construction waste material from landfills per the Construction Waste Management credit. Building materials will be specified based on their recycled content and proximity of extraction and manufacturing locations to the project site such that at least one point will be achieved in each of the Recycled Content and Regional Materials credits.

3.6.7 Indoor Environmental Quality

Safeguarding the comfort and well being of the occupants is a fundamental obligation. The quality of indoor air, and specifically the reduction of airborne pollutants, is known to minimize occurrences of asthma, allergies, and other health ailments. Irritating off gassing, caused by the presence of volatile organic compounds (VOCs) in interior finishes, can be avoided by using products that release fewer and less harmful chemical compounds. To reduce the presence of VOCs, low-emitting adhesives and sealants, paints, and carpet systems will be specified throughout the project.

The project shall be designed to meet or exceed the rates as per ASHRAE 62.1-2007 “Ventilation for Acceptable Indoor Air Quality”.

Occupants will also have control over lighting and their thermal environment. During construction, an indoor air quality management plan will be implemented to prevent contamination of mechanical systems and absorptive materials.

3.6.8 Innovation & Design

Energy Star appliances will be installed in the building. The project team also anticipates earning at least two Exemplary performance credits. Additional innovation credits will be determined later in the design process.

3.7 Urban Design Submission and Project Drawings

Figures 3-1 through 3-18, more fully illustrate the Urban Design and Sustainability narrative and include the following figures and photographs:

- Figure 3-1 Site Aerial**
- Figure 3-2 Site Context Images**
- Figure 3-3 Site Context Images**
- Figure 3-4 Proposed Site Plan**
- Figure 3-5 Proposed Ground Floor Plan**
- Figure 3-6 Proposed Second Floor Plan**
- Figure 3-7 Proposed Third Floor Plan**
- Figure 3-8 Proposed Fourth Floor Plan**
- Figure 3-9 Proposed Roof Plan**
- Figure 3-10 Elevations**
- Figure 3-11 Elevations**
- Figure 3-12 Courtyard Sections**
- Figure 3-13 Tremont Street View from East**
- Figure 3-14 Tremont Street View from West**
- Figure 3-15 Rear View of Southwest Corner**

- Figure 3-16** Aerial View through Courtyard
Figure 3-17 Courtyard View to Tremont Street
Figure 3-18 LEED for New Construction and Major Renovations, 2009



Figure 3-1.
Site Aerial

1480-1486 Tremont Street NPC



Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118





Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118

Figure 3-3.
Site Context Images

1480-1486 Tremont Street NPC

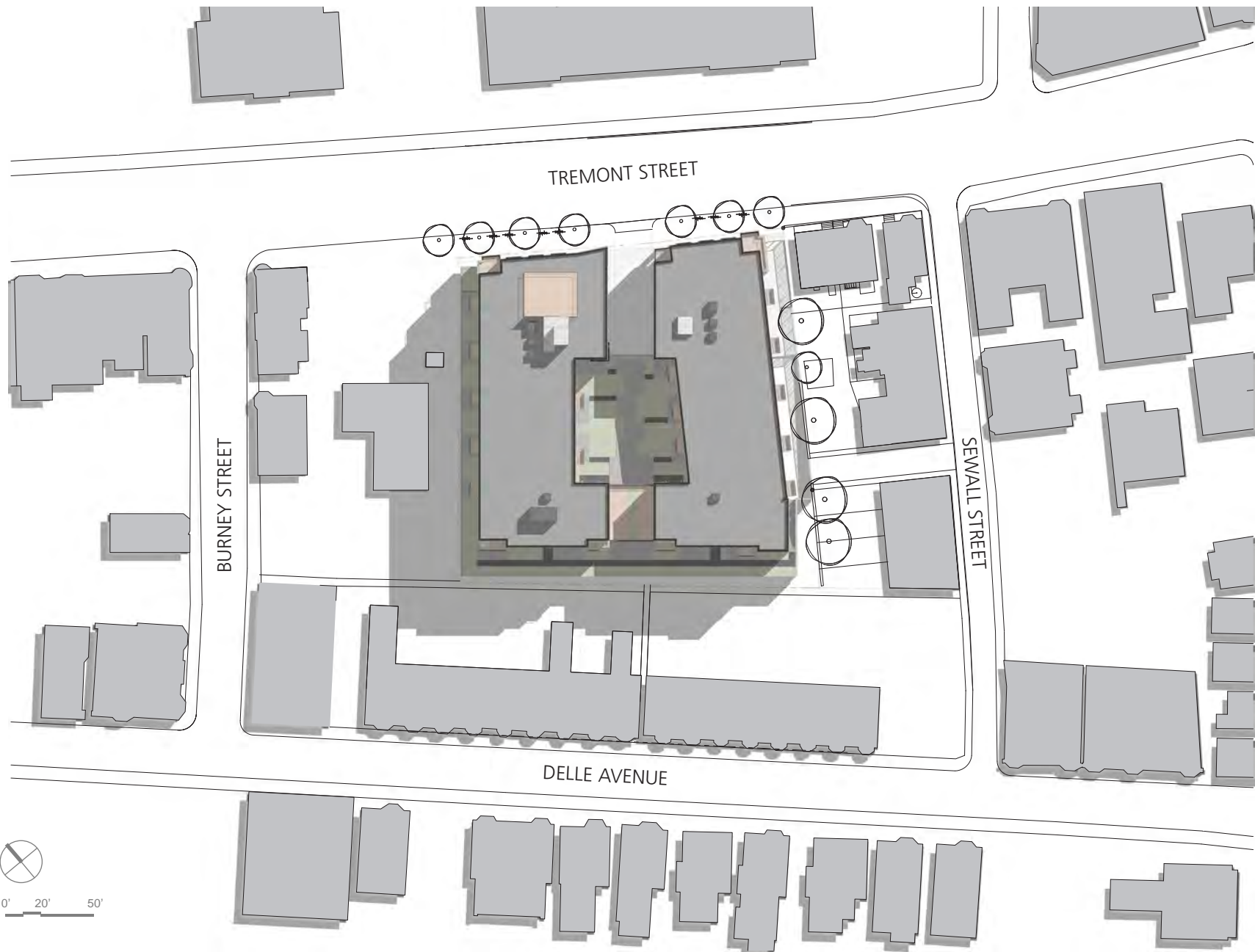


Figure 3-4.
Proposed Site Plan

1480-1486 Tremont Street NPC



Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



Figure 3-5.
Proposed Ground Floor Plan

1480-1486 Tremont Street NPC



Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118

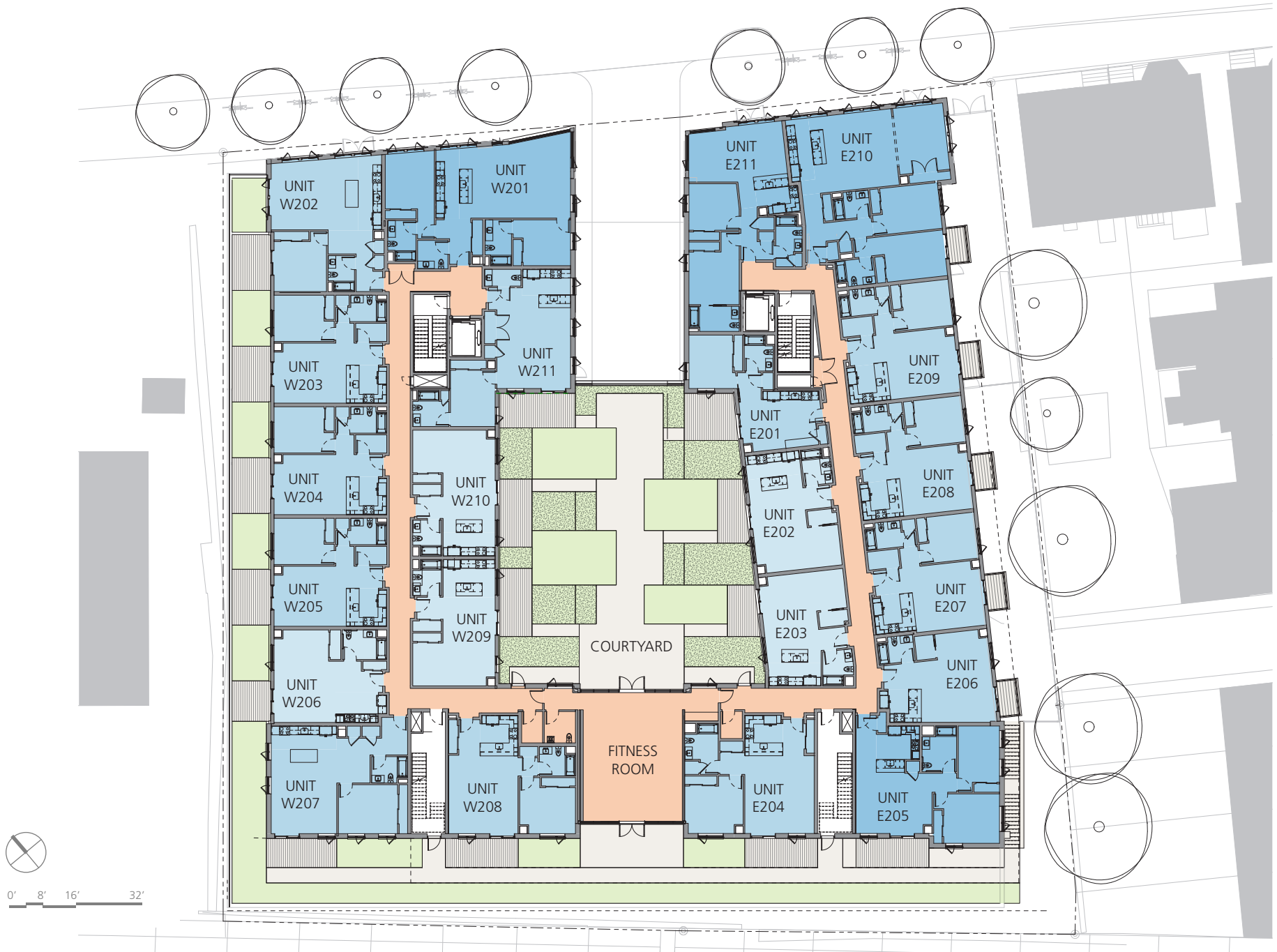


Figure 3-6.
Proposed Second Floor Plan

1480-1486 Tremont Street NPC





Figure 3-7.
Proposed Third Floor Plan

1480-1486 Tremont Street NPC





Figure 3-8.
Proposed Fourth Floor Plan

1480-1486 Tremont Street NPC



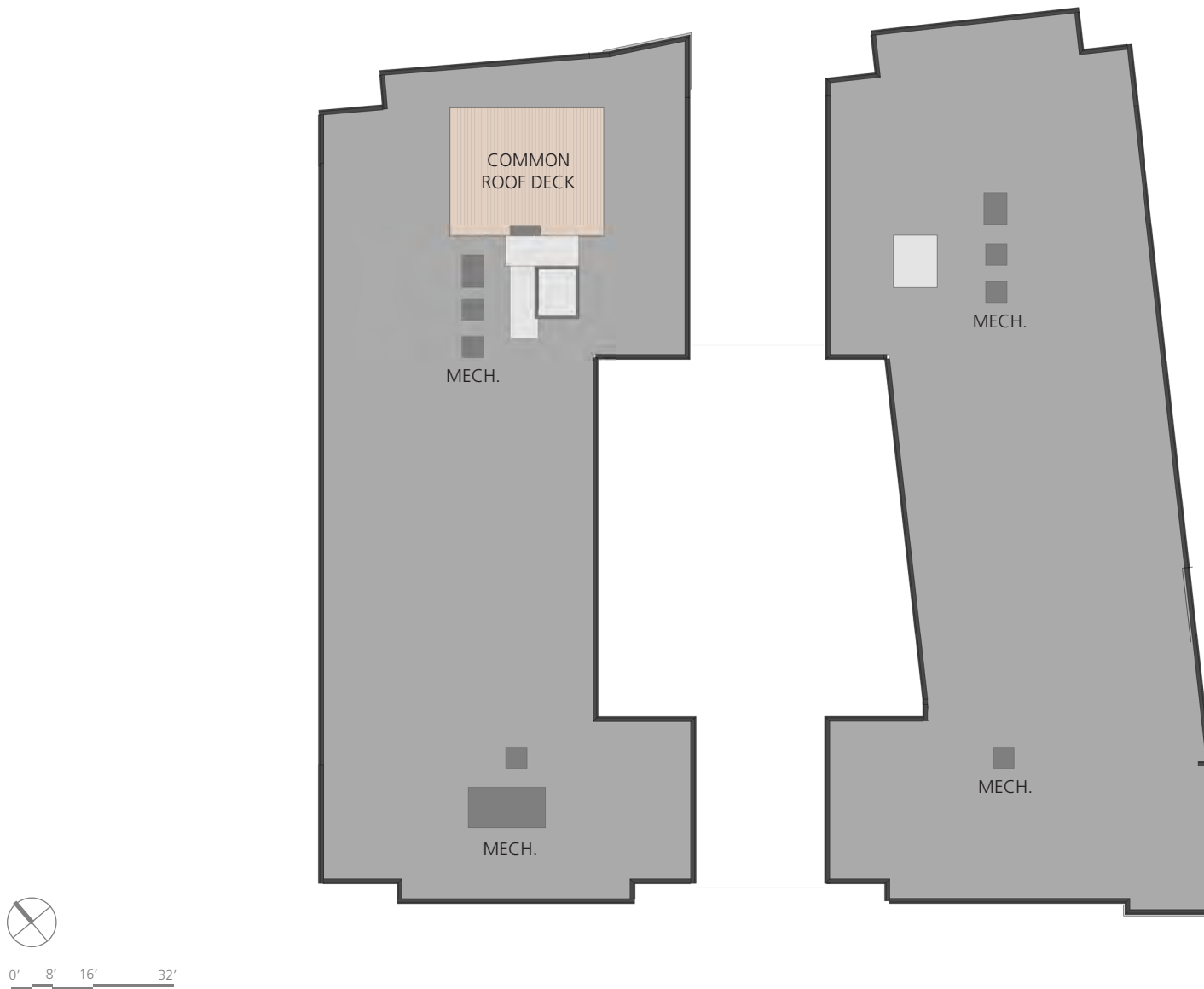


Figure 3-9.
Proposed Roof Plan

1480-1486 Tremont Street NPC



NORTH



WEST



Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118

Figure 3-10.
Elevations

1480-1486 Tremont Street NPC



SOUTH



EAST



Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118

Figure 3-11.
Elevations

1480-1486 Tremont Street NPC



EAST



WEST

Figure 3-12.
Courtyard Sections

1480-1486 Tremont Street NPC



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112 Shawmut Avenue, Studio 5A, Boston, MA 02118



Figure 3-13.
Tremont Street View from East

1480-1486 Tremont Street NPC



Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



Figure 3-14.
Tremont Street View from West

1480-1486 Tremont Street NPC



Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



Figure 3-15.
Rear View of Southwest Corner

1480-1486 Tremont Street NPC



Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



Figure 3-16.
Aerial View through Courtyard

1480-1486 Tremont Street NPC



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112 Shawmut Avenue, Studio 5A, Boston, MA 02118



Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118

Figure 3-17.
Courtyard View to Tremont Street

1480-1486 Tremont Street NPC



LEED 2009 for New Construction and Major Renovations Project Checklist

1486 Tremont Street - 4/30/2013

20 5 1 Sustainable Sites Possible Points: 26

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

4 4 2 Water Efficiency Possible Points: 10

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

5 11 19 Energy and Atmosphere Possible Points: 35

Y	?	N			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	0
Y			Prereq 3	Fundamental Refrigerant Management	
5	4	10	Credit 1	Optimize Energy Performance	1 to 19
	3	4	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

2 3 9 Materials and Resources Possible Points: 14

Y	?	N			
Y			Prereq 1	Storage and Collection of Recyclables	0
		3	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
		1	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2
		2	Credit 3	Materials Reuse	1 to 2

Materials and Resources, Continued

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

6 5 4 Indoor Environmental Quality Possible Points: 15

Y	?	N			
Y			Prereq 1	Minimum Indoor Air Quality Performance	0
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	0
		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

3 3 0 Innovation and Design Process Possible Points: 6

Y	?	N			
1			Credit 1.1	Innovation in Design: Open Space	1
1			Credit 1.2	Innovation in Design: Energy Star Appliances	1
	1		Credit 1.3	Innovation in Design: Water Use	1
	1		Credit 1.4	Innovation in Design: TBD	1
	1		Credit 1.5	Innovation in Design: Integrated Pest Management	1
1			Credit 2	LEED Accredited Professional	1

3 1 0 Regional Priority Credits Possible Points: 4

Y	?	N			
	1		Credit 1.1	Regional Priority: SS c6.1	1
1			Credit 1.2	Regional Priority: SS c7.1	1
1			Credit 1.3	Regional Priority: SS c7.2	1
1			Credit 1.4	Regional Priority: Specific Credit	1

43 32 35 Total Possible Points: 110

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

4.0 ENVIRONMENTAL PROTECTION COMPONENT

4.1 Wind

The NPC, like the PNF, Project is not expected to impact pedestrian level winds in the Project's vicinity. The NPC Project is of similar scale to the buildings along Tremont Street and the surrounding area. With a maximum building height of 45 feet along Tremont Street, the wind environment should be unaffected by the NPC Project's structure which are within the maximum height allowed under the existing zoning for the district.

4.2 Shadow

An analysis of existing and future shadow conditions was conducted for the NPC Project as typically required under Article 80 of the Boston Zoning Code. This analysis was then compared to the shadow study conducted for the prior PNF Project.

The NPC Project's shadow study included an analysis of impacts to the area surrounding the Project site. Results of the analysis of the Project's shadow impacts to the area indicate that the Project will not cause substantial impacts to the surrounding area, and the Project's shadow impacts are nearly identical to those of the PNF Project.

In general, the NPC Project impacts will be primarily to the immediate surrounding public ways and pedestrian sidewalks. Limited shadows will be cast on some surrounding rooftops, some of which will already be in existing partial shadow during these periods. The longest shadows that will be cast by the Project will occur in the morning (9:00 AM) and afternoon (3:00 PM) during the Winter Solstice, and at 6:00 PM during the Vernal Equinox, Summer Solstice, and Autumnal Equinox.

However, the NPC Project will have no adverse impacts to any of the public open spaces in the Project vicinity (i.e., the Gibbons Playground, Mission Hill Playground / Sheehy Park, the Tobin Community Center Garden, and the Alleghany Street Urban Wild).

Results of the shadow impact study are discussed in the following sections, and are supported by a series of figures that illustrate the shadows resulting from the NPC Project.

4.2.1 Methodology

The NPC shadow analysis examines existing and build condition shadow impacts for the 9:00 AM, 12:00 PM, and 3:00 PM hours during the Vernal Equinox (March 21), Summer Solstice (June 21), Autumnal Equinox (September 21), and the Winter Solstice (December 21). Impacts at 6:00 PM during the spring, summer, and autumn were also examined. It should be noted that due to the time differences (daylight savings vs. standard), the autumnal shadows are not the same as the vernal equinox shadows, and therefore require separate studies.

The NPC analysis focuses in particular on public open spaces and major pedestrian areas, as well as the sidewalks and plazas adjacent to and in the vicinity of the Project site.

The shadow analysis presents net new shadow from the NPC Project, as well as the existing shadow and illustrates the incremental impact of the NPC Project. For the purposes of clarity, new shadow is shown in a black, so as to be distinguishable from the dark gray existing shadows.

4.2.2 Vernal Equinox (March 21)

Net new shadows for the NPC Project during the Vernal Equinox will fall to the west, north and east of the Project site. Overall, there will be limited impacts to the sidewalks of the adjacent Tremont Street in front of the Project site, and to some of the abutting parcels. **Figures 4.2-1 through 4.2-4** illustrate shadow impacts from the NPC Project on the Vernal Equinox.

At 9:00 AM, minimal new shadows will be cast onto portions of the southern sidewalk along Tremont Street in front of the Project site. New shadow will also be cast onto a portion of the space and sidewalk in front of the two-story residential building that is abutting the Project site immediately to the west, and onto that building's southeastern façade.

By noon, new shadows from the Project will be cast mainly to the north onto Tremont Street and the southern sidewalk along Tremont Street in front of the Project site. New shadow from the Project will also be cast to the west, although within the Project site boundaries.

At 3:00 PM during the Vernal Equinox, new shadow from the NPC Project will be cast northeast across Tremont Street and will cover a portion of the southern sidewalk in front of the Project site. New shadow will also be cast onto portions of the backyards of parcels abutting the Project site immediately to the east.

By 6:00 PM during the Vernal Equinox, the sun is lower in the sky, and much of the area is in existing shadow. New shadow from the NPC Project will be cast in a diagonal fashion across Tremont Street to the east onto a portion of the northern sidewalk of Tremont Street that extends between the Tobin Community Center and Faxon Street. The new shadow will then continue in a diagonal fashion over portions of the rooftops of the buildings at 1457 Tremont Street, 695 Parker Street, and over a minimal portion of the eastern sidewalk on Parker Street. New shadow from the NPC Project will also be cast onto the rooftops of some of the abutting properties immediately to the east of the Project site along Tremont and Sewall Streets.

4.2.3 Summer Solstice (June 21)

As with the Vernal Equinox, net new shadows during the summer will be cast to the west, north and east of the NPC Project. New shadows cast by the NPC Project during the Summer Solstice generally will be limited to the immediate surroundings of the Project site and to some sidewalks. There will be some new shadow cast onto portions of the rooftops of buildings abutting the Project site to the east in the evening. **Figures 4.2-5 through 4.2-8** illustrate shadow impacts from the NPC Project during the summer solstice.

At 9:00 AM during the Summer Solstice net new shadow will fall mostly within the Project site. However, new shadow from the NPC Project will be cast to the west onto a small portion of the abutting two-story residential building and the space in front of it.

At noon, new shadows from the NPC Project will fall mostly within the Project site boundaries. However, new shadow from the Project will fall on a portion of the southern sidewalk of Tremont Street in front of the Project site.

In the afternoon (3:00 PM), new shadow will extend northeast and east from the Project. Net new shadow from the NPC Project will fall on the southern sidewalk in front of the Project, as well as to the east, although largely within the Project site boundaries.

By 6:00 PM in the summer, much of the area is in existing shadow. New shadow from the NPC Project will be cast onto a portion of the southern sidewalk of Tremont Street that extends between the Project site and Sewall Street. New shadow will also be cast to the east onto portions of the backyards and rooftops of the existing buildings on the abutting parcels at 1472 Tremont Street and at 2-5 Sewall Street. Narrow shadow will be cast across Sewall Street and will cover minimal portions of its sidewalks.

4.2.4 Autumnal Equinox (September 21)

Shadow impacts from the NPC Project during the Autumnal Equinox will be cast to the northwest, north, and northeast of the Project site. Shadow impacts to the area during this time period are illustrated in **Figures 4.2-9 through 4.2-12**.

At 9:00 AM during the Autumnal Equinox, the NPC Project will cast new shadow northwest onto the abutting parcel that contains the two-story residential building, and onto the space in front of it. New shadow will also be cast onto a small portion of the southern sidewalk along Tremont Street between the eastern boundary of the Project site and Burney Street.

By noon, the sun has risen higher in the sky, and the NPC Project will cast shorter shadows that fall to the north and to the west. Net new shadow from the NPC Project will fall on the sidewalk and portion of Tremont Street immediately to the north of the building. New shadow from the NPC Project will also be cast to the west, although largely within the Project site's boundaries.

By 3:00 PM, the sun has moved west in the sky, and new shadows will be cast northeast of the Project site. Net new shadow from the NPC Project will be cast across Tremont Street in a northeasterly direction and onto the southern sidewalk in front of the Project site and small portions of the backyards of the parcels abutting the Project site to the east.

By 6:00 PM in the fall, the sun is low in the sky, and much of the area is in existing shadow. New shadow from the NPC Project will be cast in a diagonal fashion across Tremont Street to the northeast onto a portion of the northern sidewalk of Tremont Street that extends between the Tobin Community Center and Faxon Street. The new shadow will then continue in a diagonal fashion over portions of the rooftops of the buildings at 1457 Tremont Street, 695 Parker Street,

and over a minimal portion of the eastern sidewalk on Parker Street. New shadow from the NPC Project will also be cast onto the rooftops of some of the abutting properties immediately to the east of the Project site along Tremont and Sewall Streets.

4.2.5 Winter Solstice (December 21)

The Winter Solstice creates the least favorable conditions for sunlight in New England. The sun angle during the winter is lower than in any other season causing the shadows to elongate and creating considerable shadow in the area. **Figures 4.2-13 through 4.2-15** illustrate impacts from the NPC Project.

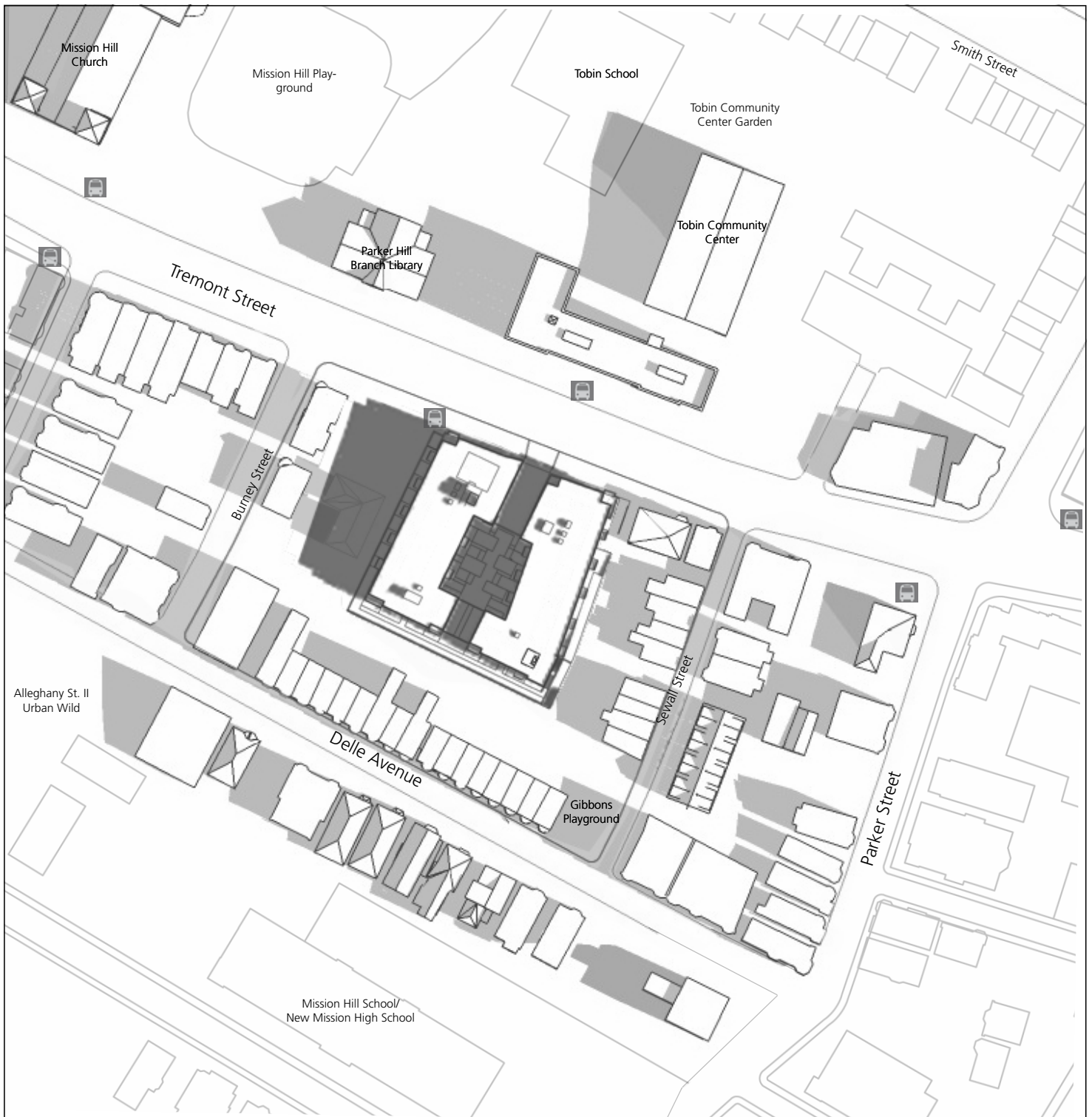
At 9:00 AM, the morning sun will cast new shadows from the NPC Project northwest onto portions of the sidewalks along both sides of Tremont Street between the Project site and Burney Street. New shadow from the Project will also be cast over a portion of the rooftop of the abutting two-story residential building and the space in front of it immediately to the west of the Project site.

By noon, the sun has moved and the shadows will fall north and west of the NPC Project. Net new shadow from the NPC Project will extend northward and will cover portions of the sidewalks along Tremont Street in front of the Project site. To the west, new shadow will fall largely within the Project site, although minimal shadow will be cast over a portion of the parcel abutting the Project site.

As the sun sinks lower in the sky, 3:00 PM shadows once again become elongated, falling northeast of the NPC Project. Net new shadow from the Project will be cast over portions of the sidewalks on both sides of Tremont Street in front of the Project site. A shadow will be cast over portions of the two parking lots that abut the Tobin Community Center to the east. New shadow will also be cast over a portion of the rooftop of the abutting property at 1472 Tremont Street.

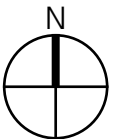
4.2.6 Conclusions

The shadow study analysis performed for the NPC Project provides insight into potential impacts to the streets, sidewalks, and open spaces in the Project site's vicinity. The NPC study included an analysis of impacts to the area surrounding the Project site. Results indicate that for a large part of the year, the NPC Project will not cause substantial impacts to the surrounding area. The NPC Project will have no adverse impact on public open spaces in the Project site's vicinity. In general, impacts from the NPC Project are primarily to the immediate surrounding public ways and sidewalks with fleeting shadow on adjacent buildings. Overall, the NPC Project's shadow impacts are very similar to those of the PNF Project.



New Shadow
Existing Shadow

Altitude: 33.2°
Azimuth: 125.6° E of N



1486 Tremont Street
Boston, Massachusetts

Shadow Study
March 21, 9:00 AM
Figure 4.2-1

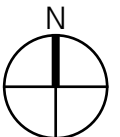


Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow
Existing Shadow

Altitude: 48.1°
Azimuth: 183.2° E of N

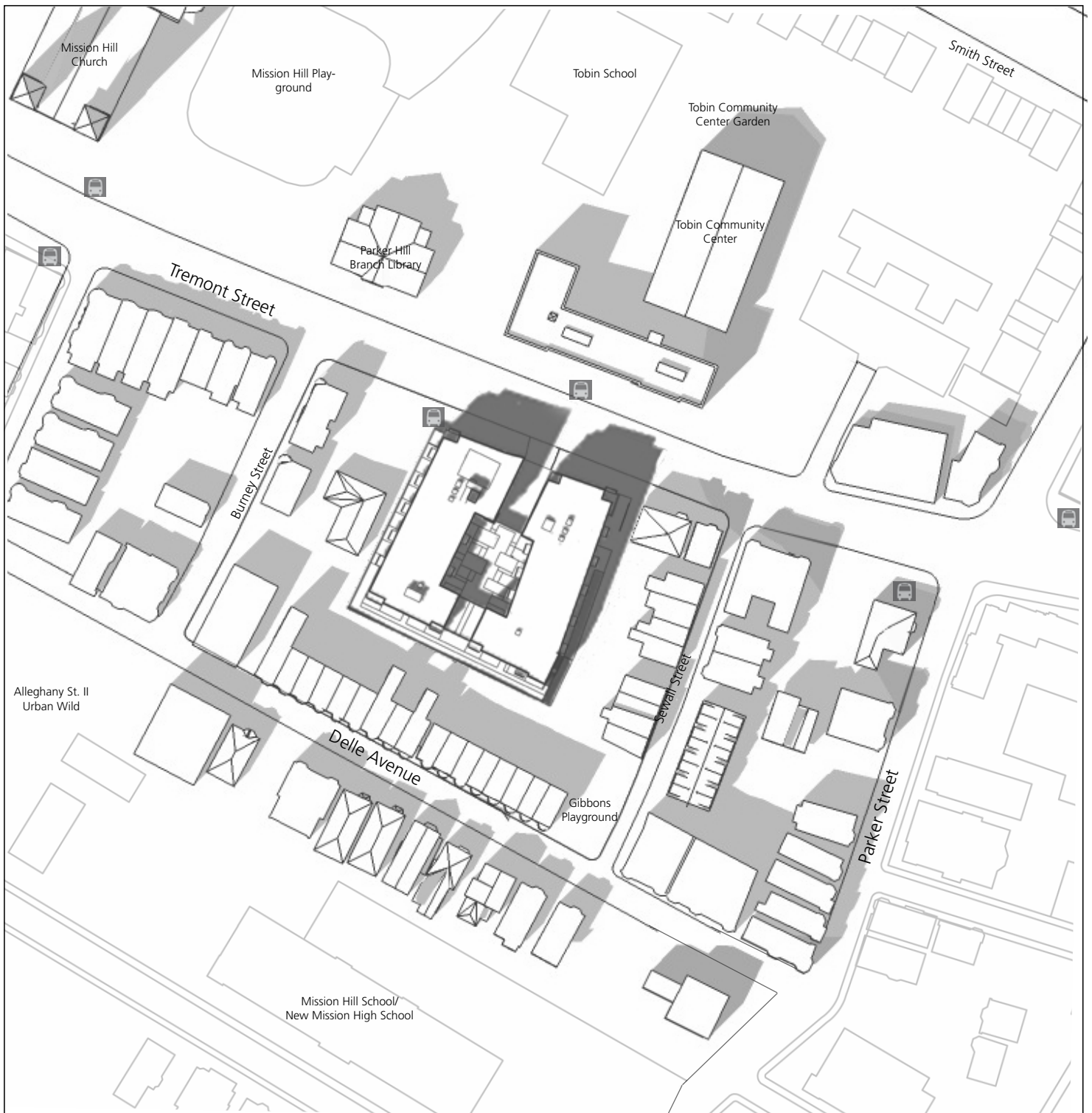


1486 Tremont Street
Boston, Massachusetts

Shadow Study
March 21, 12:00 PM
Figure 4.2-2

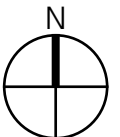


Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow
Existing Shadow

Altitude: 30.6°
Azimuth: 238.4° E of N



1486 Tremont Street
Boston, Massachusetts

Shadow Study
March 21, 3:00 PM
Figure 4.2-3

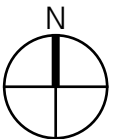


Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow
 Existing Shadow

Altitude: -1.2°
 Azimuth: 271.9° E of N

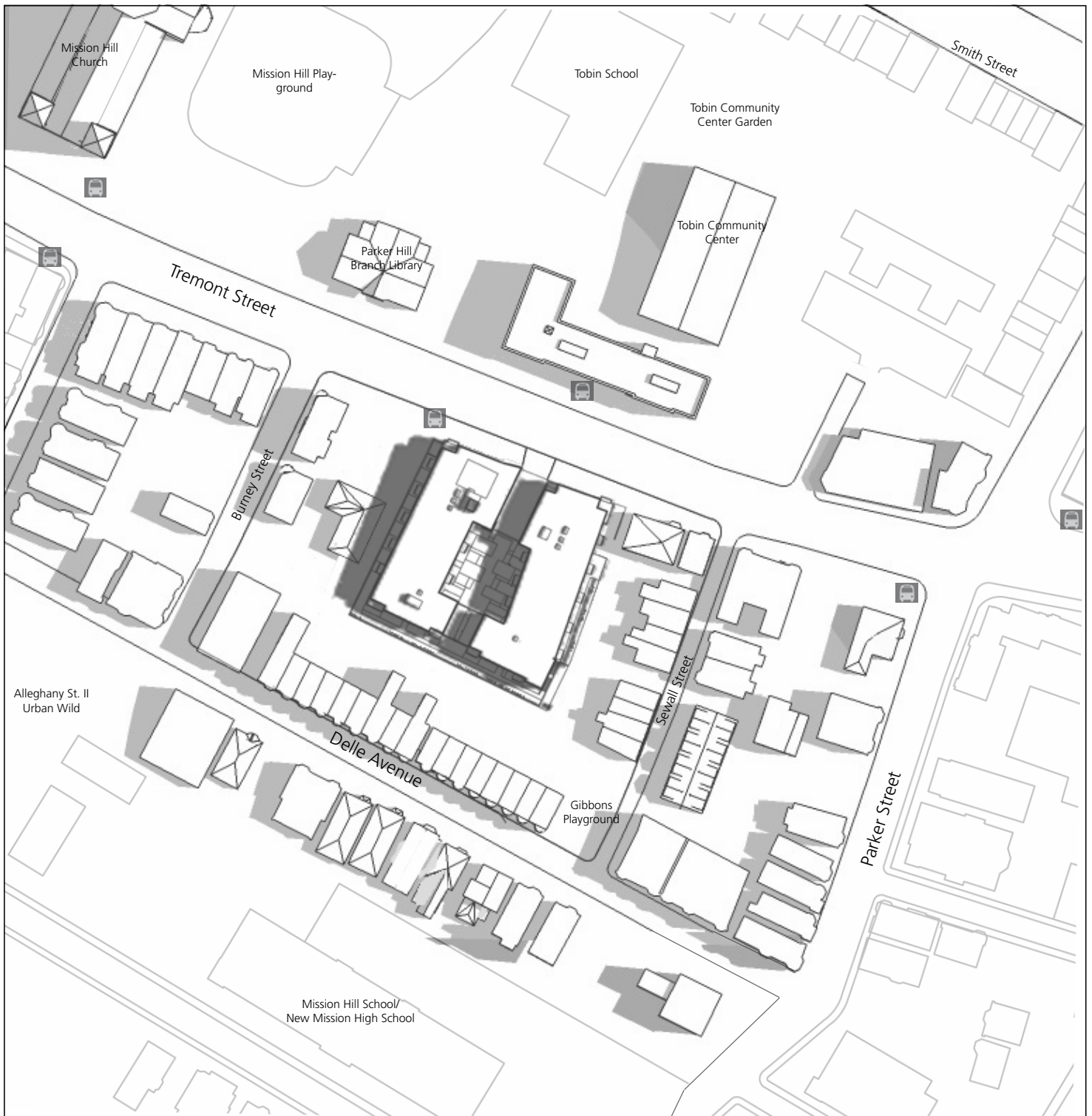


1486 Tremont Street
 Boston, Massachusetts

Shadow Study
 March 21, 6:00 PM
Figure 4.2-4

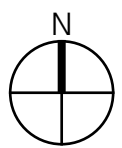


Hacin + Associates [architecture + design]
 112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow
 Existing Shadow

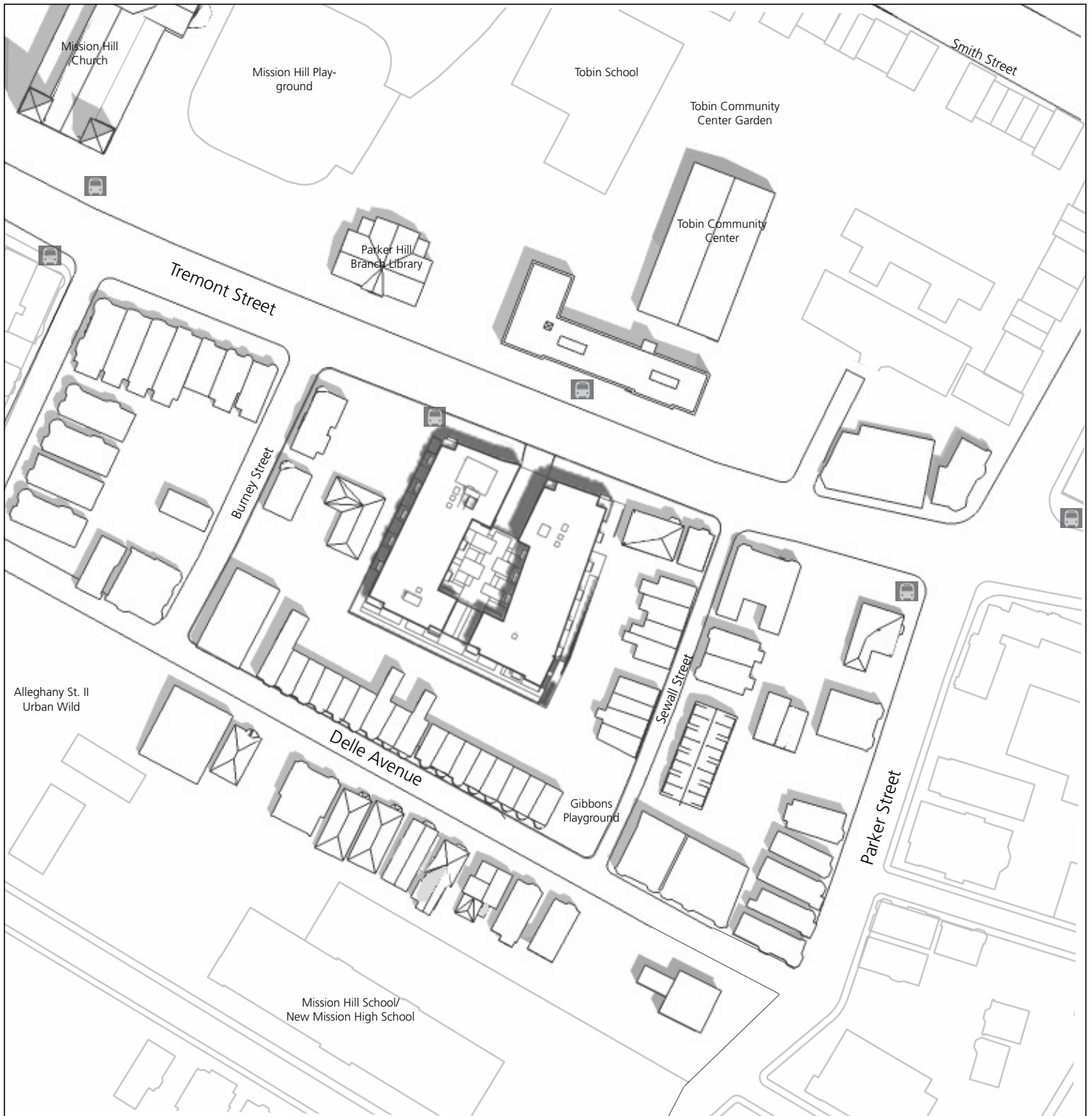
Altitude: 50.9°
 Azimuth: 105.5° E of N





1486 Tremont Street
 Boston, Massachusetts

Shadow Study
 June 21, 9:00 AM
Figure 4.2-5

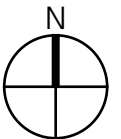
H+A
 Hacin + Associates [architecture + design]
 112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow 

Existing Shadow 

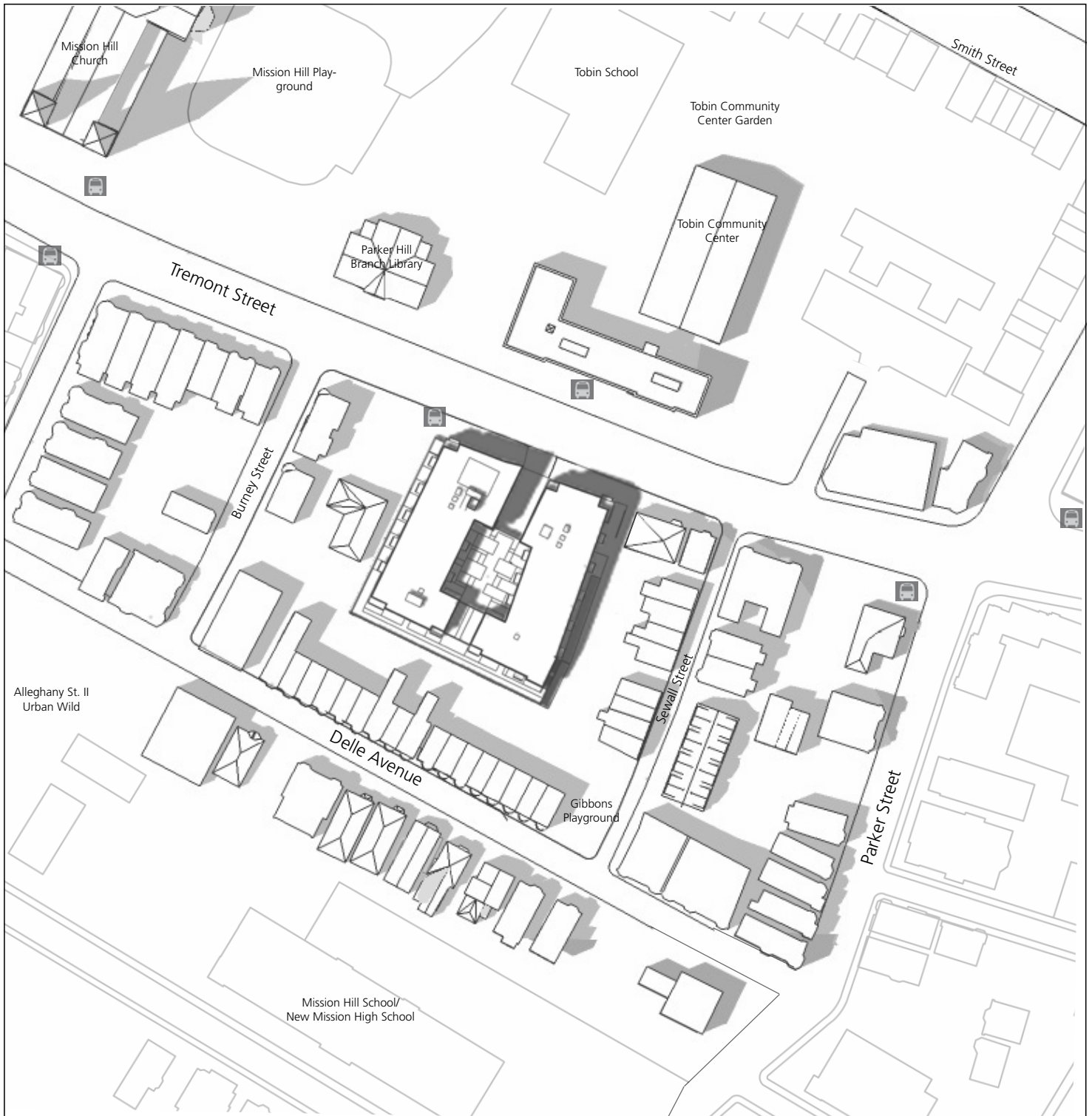
Altitude: 70.9°
Azimuth: 189.7° E of N



1486 Tremont Street
Boston, Massachusetts

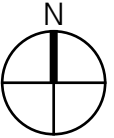
Shadow Study
June 21, 12:00 PM
Figure 4.2-6

H+A
Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow
Existing Shadow

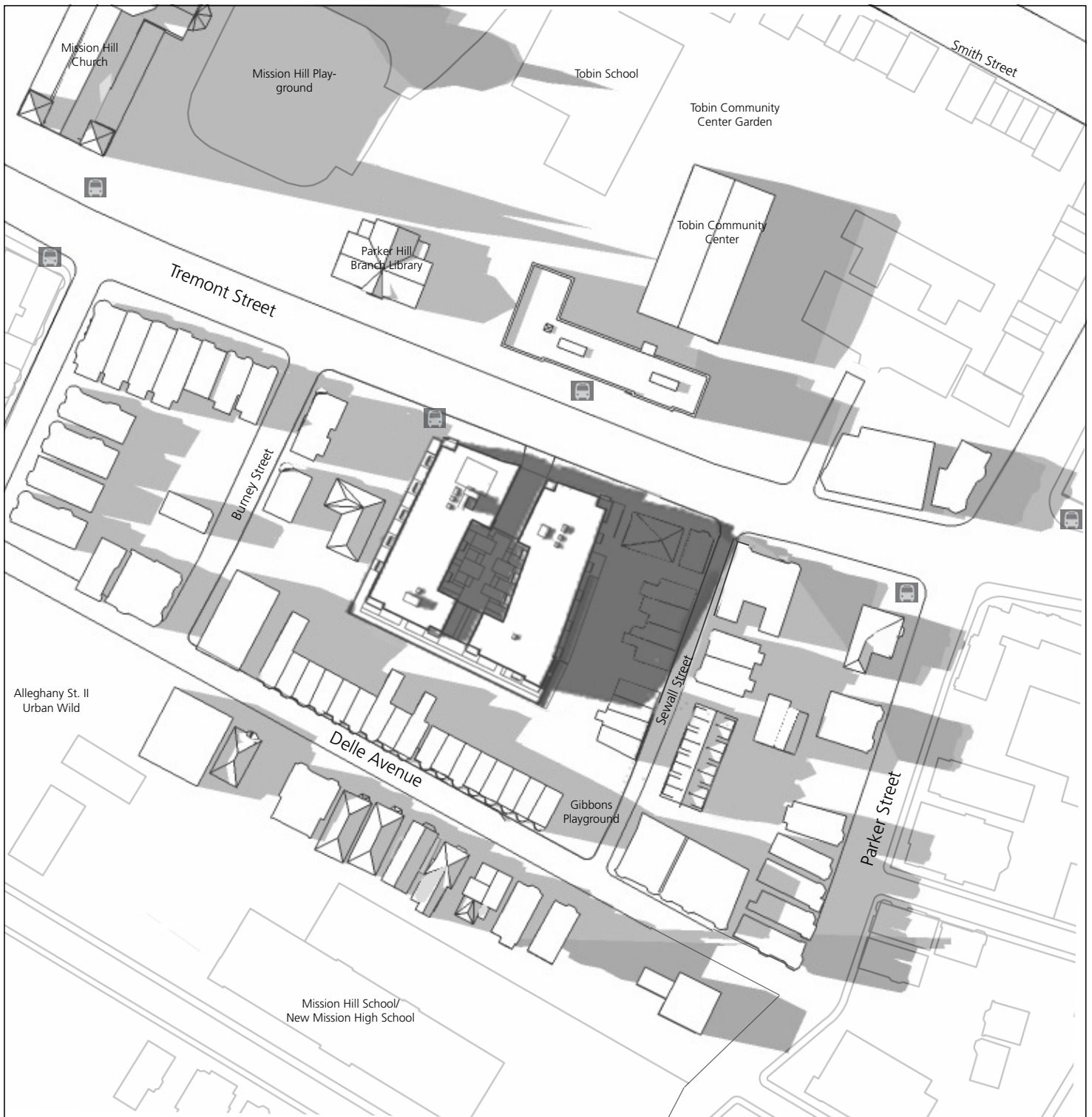
Altitude: 45.9°
Azimuth: 260.4° E of N



1486 Tremont Street
Boston, Massachusetts

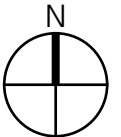
Shadow Study
June 21, 3:00 PM
Figure 4.2-7

H+A
Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow
Existing Shadow

Altitude: 13.2°
Azimuth: 289.9° E of N

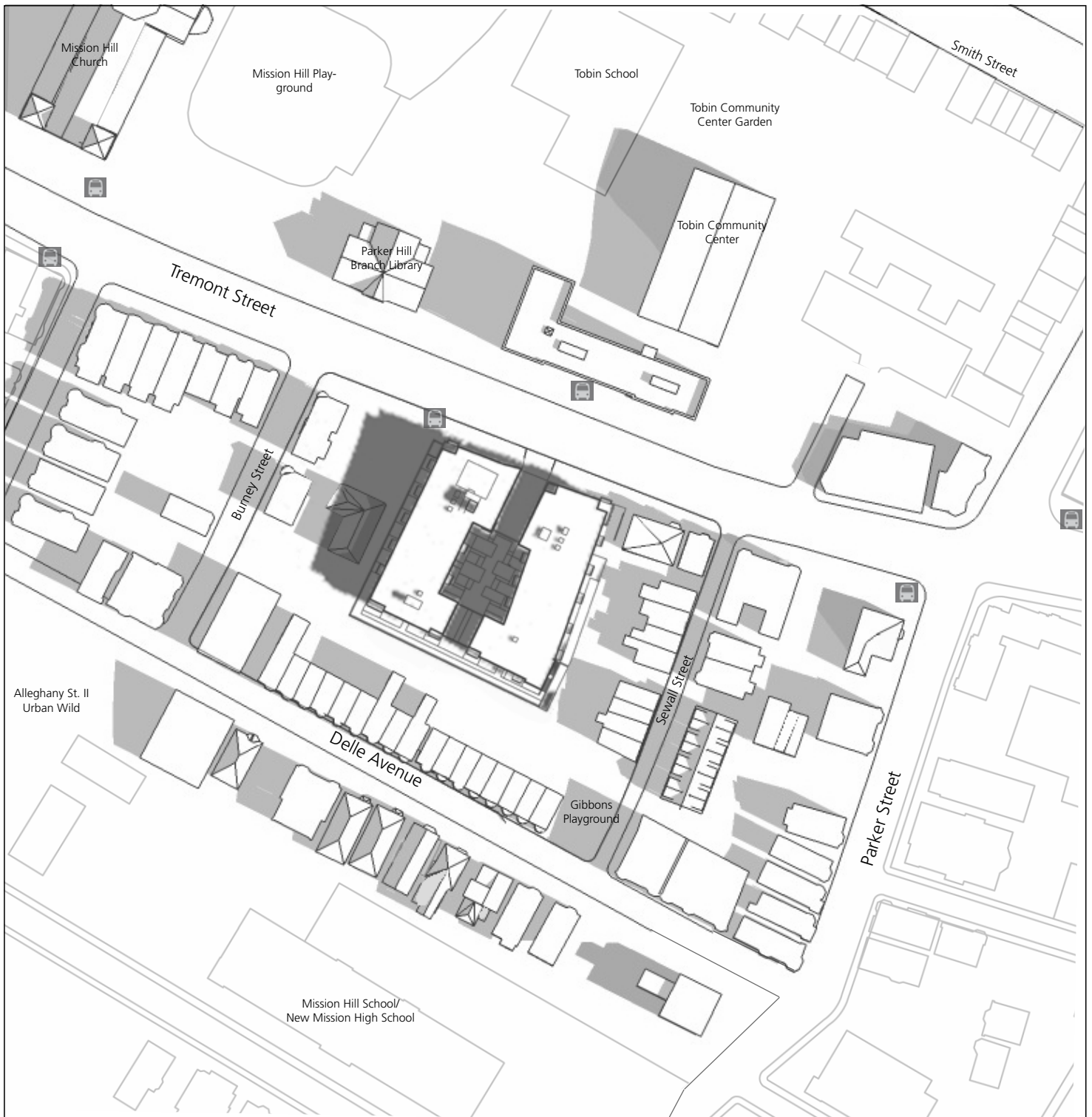


1486 Tremont Street
Boston, Massachusetts

Shadow Study
June 21, 6:00 PM
Figure 4.2-8

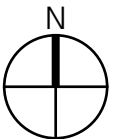


Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow
Existing Shadow

Altitude: 35.3°
Azimuth: 129.1° E of N



1486 Tremont Street
Boston, Massachusetts

Shadow Study
Sept. 21, 9:00 AM
Figure 4.2-9

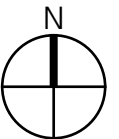


Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow
Existing Shadow

Altitude: 47.8°
Azimuth: 188.5° E of N



1486 Tremont Street
Boston, Massachusetts

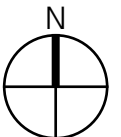
Shadow Study
Sept. 21, 12:00 PM
Figure 4.2-10

H+A
Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow
Existing Shadow

Altitude: 28.3°
Azimuth: 241.4° E of N





1486 Tremont Street
Boston, Massachusetts

Shadow Study
Sept. 21, 3:00 PM
Figure 4.2-11

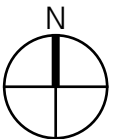
H+A
Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow 

Existing Shadow 

Altitude: -4.0°
Azimuth: 274.1° E of N




1486 Tremont Street
Boston, Massachusetts


Shadow Study
Sept. 21, 6:00 PM
Figure 4.2-12



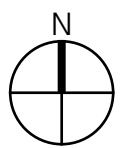
Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow 

Existing Shadow 

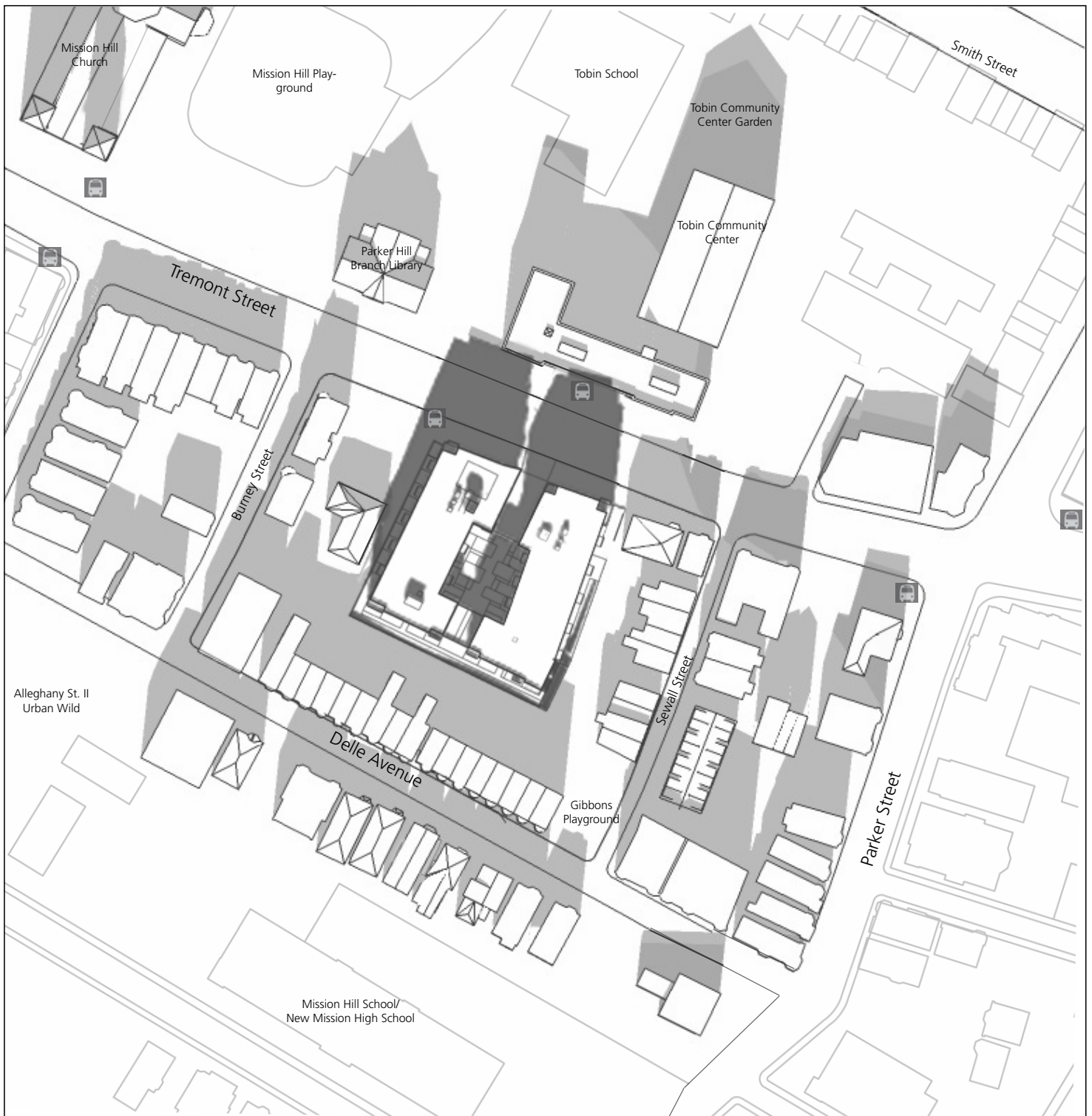
Altitude: 14.4°
Azimuth: 141.9° E of N



1486 Tremont Street
Boston, Massachusetts

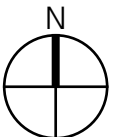
Shadow Study
Dec. 21, 9:00 AM
Figure 4.2-13

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112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow
Existing Shadow

Altitude: 24.2°
Azimuth: 184.4° E of N



1486 Tremont Street
Boston, Massachusetts

Shadow Study
Dec. 21, 12:00 PM
Figure 4.2-14

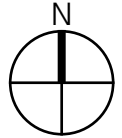


Hacin + Associates [architecture + design]
112 Shawmut Avenue, Studio 5A, Boston, MA 02118



New Shadow
Existing Shadow

Altitude: 10.1°
Azimuth: 225.0° E of N



1486 Tremont Street
Boston, Massachusetts

Shadow Study
Dec. 21, 3:00 PM
Figure 4.2-15

H+A
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112 Shawmut Avenue, Studio 5A, Boston, MA 02118

4.3 Air Quality Impacts

Tech Environmental, Inc. performed air quality analyses for the NPC Project. These analyses consisted of: 1) an evaluation of existing air quality; 2) an evaluation of potential carbon monoxide (CO) impacts from the operation of the Project's indoor parking garage ventilation, and 3) a qualitative CO analysis for intersections in the Project area.

4.3.1 Existing Air Quality

The City of Boston is currently classified as being in attainment of the Massachusetts and National Ambient Air Quality Standards ("NAAQS") for all of the criteria air pollutants except ozone (see **Table 4.3-1**). These air quality standards have been established to protect the public health and welfare in ambient air, with a margin for safety.

The Massachusetts Department of Environmental Protection ("DEP") currently operates air monitors in various locations throughout the city. The closest, most representative, DEP monitors for carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), fine particulate matter (PM_{2.5}), coarse particulate matter (PM₁₀), and lead are located at Kenmore Square. The closest, most representative, DEP monitor for ozone is located at Dudley Square (Harrison Avenue).

Table 4.3-2 summarizes the DEP air monitoring data, for the most recent available, complete, three-year period (2009-2011), that are considered to be representative of the project area. **Table 4.3-2** shows that the existing air quality in the Project area is generally much better than the NAAQS. The highest impacts relative to a NAAQS are for ozone and PM_{2.5}. Ozone is a regional air pollutant on which the small amount of additional traffic generated by this Project will have an insignificant impact. The Project's operations will not have a significant impact on local PM_{2.5} concentrations.

Table 4.3-1 Massachusetts and National Ambient Air Quality Standards (NAAQS)

Pollutant	Averaging Time	NAAQS ($\mu\text{g}/\text{m}^3$)
SO ₂	1-hour ^P 24-hour ^P Annual ^P (Arithmetic Mean)	196 ^a 365 ^b 80
CO	1-hour ^P 8-hour ^P	40,000 ^b 10,000 ^b
NO ₂	1-hour ^P Annual ^{P/S} (Arithmetic Mean)	188 ^c 100
PM ₁₀	24-hour ^{P/S}	150
PM _{2.5}	24-hour ^{P/S} Annual ^{P/S} (Arithmetic Mean)	35 ^d 12 ^{e, f}
O ₃	8-hour ^{P/S}	147 ^g
Pb	Rolling 3-Month Avg. ^{P/S} Calendar Quarter ^{P/S} (Arithmetic Mean)	0.15 1.5

P = primary standard; S = secondary standard.

^a 99th percentile 1-hour concentrations in a year (average over three years).

^b One exceedance per year is allowed.

^c 98th percentile 1-hour concentrations in a year (average over three years).

^d 98th percentile 24-hour concentrations in a year (average over three years).

^e Three-year average of annual arithmetic means.

^f As of March 18, 2013, the U.S. EPA lowered the PM_{2.5} annual standard from 15 $\mu\text{g}/\text{m}^3$ to 12 $\mu\text{g}/\text{m}^3$.

^g Three-year average of the annual 4th-highest daily maximum 8-hour ozone concentration must not exceed 0.075 ppm (147 $\mu\text{g}/\text{m}^3$) (effective May 27, 2008) and the annual PM₁₀ standard was revoked in 2006.

Table 4.3-2 Representative Existing Air Quality in the Project Area

Pollutant, Averaging Period	Monitor Location	Value ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)	Percent of NAAQS
CO, 1-hour	Kenmore Square, Boston	2,061	40,000	5%
CO, 8-hour	Kenmore Square, Boston	1,718	10,000	17%
NO ₂ , 1-hour	Kenmore Square, Boston	99.3	188	53%
NO ₂ , Annual	Kenmore Square, Boston	38.3	100	38%
Ozone, 8-hour	Harrison Avenue, Boston	123	147	84%
PM ₁₀ , 24-hour	Kenmore Square, Boston	43	150	29%
PM _{2.5} , 24-hour	Kenmore Square, Boston	20.1	35	57%
PM _{2.5} , Annual	Kenmore Square, Boston	9.2	12	77%
Lead, Quarterly	Kenmore Square, Boston	0.015	1.5	1%
SO ₂ , 1-hour	Kenmore Square, Boston	55.2	196	28%
SO ₂ , 24-hour	Kenmore Square, Boston	24.6	365	7%
SO ₂ , Annual	Kenmore Square, Boston	6.5	80	8%

Source: MassDEP, <http://www.mass.gov/dep/air/priorities/aqreports.htm>., downloaded February 4, 2013.

Notes:

(1) Annual averages are highest measured during the most recent three-year period for which data are available (2009 - 2011). Values for periods of 24-hours or less are highest, second-highest over the three-year period unless otherwise noted.

(2) The eight-hour ozone value is the 3-year average of the annual fourth-highest values, the 24-hour PM_{2.5} value is the 3-year average of the 98th percentile values, the annual PM_{2.5} value is the 3-year average of the annual values – these are the values used to determine compliance with the NAAQS for these air pollutants.

(3) The one-hour NO₂ value is the -year average of the 98th percentile values and the one-hour SO₂ value is the -year average of the 99th percentile values

(4) The one-hour ozone standard was revoked by the US EPA in 2005; the annual PM₁₀ standard was revoked in 2006 and the 3-hour SO₂ standard was revoked by the US EPA in 2010.

4.3.2 Impacts from Building Heating System and Parking Garage Ventilation

The NPC Project includes a parking garage, located at ground level, designed to provide parking spaces for 60 vehicles. An analysis of the worst-case air quality impacts from the proposed parking garage was performed (see **Appendix C**). The procedures used for this analysis are consistent with U.S. EPA's Volume 9 guidance.³ The objective of this analysis was to determine the maximum CO concentrations inside the garage and at the closest sensitive receptors surrounding the NPC Project. These closest sensitive receptors include: air intakes located on the

³ US EPA, "Guidelines for Air Quality Maintenance Planning and Analysis Volume 9 (Revised): Evaluating Indirect Sources," EPA-450/4-78-001, September 1978.

proposed building and nearby existing buildings, and pedestrians at ground level anywhere near the NPC Project. CO emissions from motor vehicles operating inside the garage were calculated and the CO concentrations inside the garage and surrounding the NPC Project were based on morning and afternoon peak traffic periods. The garage exhaust CO emissions were modeled using an U.S. EPA-approved air model.

Garage Ventilation System

The proposed underground parking garage will require mechanical ventilation. The garage ventilation system will be designed to provide adequate dilution of the motor vehicle emissions before they are vented outside. The design of the garage ventilation system will meet all building code requirements. Full ventilation of the garage will require fans that will supply a maximum flow of approximately 16,700 cubic feet per minute (cfm) of fresh air. This quantity of air is designed to meet the building code and will be more than adequate to dilute the emissions inside the parking garage to safe levels before they are vented outside. The garage ventilation exhausts will likely be located at two rooftop vents.

Peak Garage Traffic Volumes

The garage will have one access/egress point, onto Tremont Street and located on the northern end of the site. The peak morning and afternoon one-hour entering and exiting traffic volumes for the garage are shown in **Table 4.3-3**.

Table 4.3-3 Peak-Hour Garage Traffic Volumes			
Period	Entering (vehicles/hour)	Exiting (vehicles/hour)	Total (vehicles/hour)
Morning Peak Hour	7	13	20
Afternoon Peak Hour	21	18	39

Source: Howard-Stein Hudson, Inc.

Motor Vehicle Emission Rates

The U.S. Environmental Protection Agency (EPA) MOBILE6.2 emission factor model was used to calculate single vehicle CO emissions rates, for a vehicle speed of 5 mph. The inputs to the MOBILE6.2 model followed the latest guidance from the Massachusetts Department of Environmental Protection (DEP) and were performed for the earliest possible Project completion year of 2013. This represents the worst case, since the MOBILE6.2 model predicts decreasing

CO emissions rates in future years due to more stringent emission control requirements for new motor vehicles. The CO emission rate calculated by MOBILE6.2, for a speed of 5 mph, was 7.62 grams per mile (gpm) for each entering and exiting vehicle. These emission rates apply to wintertime conditions when motor vehicle CO emissions are greatest due to cold temperatures. MOBILE6.2 model output is provided in the **Appendix C**.

To determine the maximum one-hour CO emissions inside the garage, it was necessary to estimate the amount of time each motor vehicle will be in the parking garage with its engine running. To be conservative, it was assumed that every car entering the garage will travel to the farthest parking spot, and that the vehicles leaving the garage will have to travel the same distance from inside the garage to the exit. The calculations in **Appendix C** show how long each vehicle was calculated to travel in the garage for both the morning and afternoon peak periods.

Peak Garage CO Emission Rate and CO Concentration Inside the Garage

The peak one-hour CO emission rate for the parking garage was calculated to be 0.24 grams per minute for the morning peak hour and 0.47 grams per minute for the afternoon peak hour. Applying the maximum volumetric garage ventilation flow rate for the parking garage, the peak one-hour CO concentration inside the garage was calculated to be 0.44 parts of CO per million parts of air (ppm) for the morning peak hour and 0.86 ppm for the afternoon peak hour. Therefore, the peak one-hour CO concentration inside the garage will be 0.86 ppm with a peak one-hour emission rate of 0.47 grams/minute (0.0078 grams/second), corresponding to the afternoon peak period. These predictions represent conservative estimates of the peak garage CO emissions and concentrations.

Building Heating CO Emission Rate

The NPC Project will include fuel combustion equipment that will emit air pollutants to the atmosphere when operating. Fuel combustion equipment for the Project will include gas-fired hot water boilers for space heating system.

EPA's AP-42 document was used to determine the uncontrolled CO emission rate for the gas-fired equipment. The total equipment heat input capacity for the two buildings was conservatively estimated to be approximately 3.6 million Btu per hour (MMBtu/hour). Using a CO emission factor of 0.084 lb/MMBtu,⁴ the maximum total CO emissions from the Project's heating equipment will be 0.30 lb/hour (0.037 gram/sec). This calculation conservatively assumes that all of the gas-fired fuel combustion equipment is operating simultaneously at its full design capacity.

Peak Ambient CO Concentration

Worst-case concentrations of CO from the building heating system and parking garage were predicted for locations around the building with using AERMOD model (Version 12345) in

⁴ US EPA, "Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition Volume I: Stationary Point and Area Sources", Table 1.4-1, January 1995 (revised July 1998).

screening-mode. The results of the air quality analysis for locations outside and around the building are summarized in **Table 4.3-4**. The results in **Table 4.3-4** represent all outside locations on and near the NPC Project Site, including nearby building air intakes and nearby residences. **Appendix B** contains the AERMOD model output.

The AERMOD model in screening-mode was used to predict the maximum concentration of CO by modeling the garage and building heating systems emissions as a volume source with aerodynamic building downwash using worst-case meteorological conditions for an urban area. The screening-mode option simulates modeling results predicted by AERSCREEN. AERMOD was used to predict the total maximum concentration of CO by modeling the fuel combustion equipment and garage emissions as one volume source with the total peak morning CO emissions (0.045 grams/sec). The predicted concentrations presented here represent the worst-case air quality impacts from the building heating system and garage at all locations on and around the Project. AERMOD predicted one-hour average concentrations of air pollutants.

AERMOD predicted that the maximum one-hour CO concentration from the building heating system and garage exhaust will be 0.033 ppm (38 $\mu\text{g}/\text{m}^3$). This concentration represents the maximum CO concentration at any location surrounding the Project.

The maximum predicted eight-hour CO concentration at any ambient (outside) location will be significantly smaller than the one-hour prediction. This is because: 1) the average number of vehicles entering and exiting the garage over the peak eight-hour period will be significantly less than the peak one-hour values used to predict the peak one-hour CO impact, and 2) the worst-case meteorological conditions used to predict the peak one-hour impact will not persist for eight consecutive hours. AERSCREEN guidance allows the maximum eight-hour CO impact to be conservatively estimated by multiplying the maximum one-hour impact by a factor of 0.9 (i.e. the eight-hour impact is 90% of the one-hour impact). The maximum predicted eight-hour CO concentration was determined to be approximately 0.03 ppm (0.033 ppm x 0.9).

The U.S. EPA has established National Ambient Air Quality Standards (NAAQS) to protect the public health and welfare in ambient air, with a margin for safety. The NAAQS for CO are 35 ppm for a one-hour average and 9 ppm for an eight-hour average. The Commonwealth of Massachusetts has established the same standards for CO. Conservative, urban CO background values of 1.8 ppm for a one-hour period and 1.5 ppm for an eight-hour period were added to the maximum predicted garage ambient impacts to represent the CO contribution from other, more distant, sources. With the conservative background concentration added, the peak, total, one-hour and eight-hour CO impacts from the garage, at any location around the building, will be no larger than 1.53 ppm and 1.83 ppm, respectively. These maximum predicted total CO concentrations (garage exhaust impacts plus background) are safely in compliance with the NAAQS. This analysis demonstrates that the operation of the parking garage will not have an adverse impact on air quality.

Conclusions

A conservative air quality analysis demonstrates that there will be no adverse air quality impacts from the operation of the NPC Project's building heating system and parking garage.

Table 4.3-4 Peak Predicted Building Heating System and Parking Garage Air Quality Impacts				
Location	Peak Predicted One-Hour Impact (ppm)	One-Hour NAAQS (ppm)	Peak Predicted Eight-Hour Impact (ppm)	Eight-Hour NAAQS (ppm)
Outside – Surrounding the Building* (Parking Garage)	1.83**	35 (NAAQS)	1.53**	9 (NAAQS)

NAAQS = Massachusetts and National Ambient Air Quality Standards for CO (ppm = parts per million)

* Representative of maximum CO impact at all nearby residences, buildings, and sidewalks.

** Includes background concentrations of 1.8 ppm for the one-hour period and 1.5 ppm for the eight-hour period.

4.3.3 Microscale CO Analysis for Selected Intersections

The Boston Redevelopment Authority (BRA) requires a microscale air quality analysis for any intersection in the Project study area where intersections or roadways existing level of service ("LOS") operates at D, E or F or the project contributes to a reduction in LOS to D, E or F and the proposed project causes a 10% increase in traffic on nearby roadways or 3) the project will generate 3,000 or more new average daily trips. For such intersections, a microscale air quality analysis is required to examine the CO concentrations at sensitive receptors near the intersection.

The NPC Project at 1480-1486 Tremont Street will generate daily traffic volumes of 532 vehicles per day. This slight increase in traffic volumes will have a minimal impact on the existing transportation infrastructure. Therefore, a microscale CO air quality analysis is not warranted and the NPC Project will not have a significant impact on air quality.

Conclusions

The traffic generated by the NPC Project will have an insignificant impact on the peak-hour traffic volumes at local intersections. Therefore, the NPC Project will have an insignificant impact on the local air quality. The air quality in the NPC Project area will remain safely in compliance with the NAAQS for CO after the NPC Project is completed.

4.4 Noise Impacts

Tech Environmental, Inc., performed a noise study to determine whether the operation of the NPC Project will comply with the City of Boston Noise Regulations and the Massachusetts Department of Environmental Protection ("DEP") Noise Policy.

4.4.1 Common Measures of Community Noise

The unit of sound pressure is the decibel (dB). The decibel scale is logarithmic to accommodate the wide range of sound intensities to which the human ear is subjected. A property of the decibel scale is that the sound pressure levels of two separate sounds are not directly additive. For example, if a sound of 70 dB is added to another sound of 70 dB, the total is only a 3-decibel increase (or 73 dB), not a doubling to 140 dB. Thus, every 3 dB increase represents a doubling of sound energy. For broadband sounds, a 3 dB change is the minimum change perceptible to the human ear. **Table 4.4-1** gives the perceived change in loudness of different changes in sound pressure levels.⁵

Table 4.4-1 Subjective Effects of Changes in Sound Pressure Levels	
Change in Sound Level	Apparent Change in Loudness
3 dB	Just perceptible
5 dB	Noticeable
10 dB	Twice (or half) as loud

Non-steady noise exposure in a community is commonly expressed in terms of the A-weighted sound level (dBA); A-weighting approximates the frequency response of the human ear. Levels of many sounds change from moment to moment. Some are sharp impulses lasting 1 second or less, while others rise and fall over much longer periods of time. There are various measures of sound pressure designed for different purposes. To establish the background ambient sound level in an area, the L_{90} metric, which is the sound level exceeded 90 percent of the time, is typically used. The L_{90} can also be thought of as the level representing the quietest 10 percent of any time period. Similarly, the L_{10} can also be thought of as the level representing the quietest 90 percent of any time period. The L_{10} and L_{90} are broadband sound pressure measures, i.e., they include sounds at all frequencies.

Sound level measurements typically include an analysis of the sound spectrum into its various frequency components to determine tonal characteristics. The unit of frequency is Hertz (Hz), measuring the cycles per second of the sound pressure waves, and typically the frequency analysis examines nine octave bands from 32 Hz to 8,000 Hz. A source is said to create a pure tone if acoustic energy is concentrated in a narrow frequency range and one octave band has a sound level 3 dB greater than both adjacent octave bands.

The acoustic environment in an urban area such as the Project area results from numerous sources. Observations show that major contributors to the background sound level in the NPC Project area include motor vehicle traffic on local and distant streets, aircraft over-flights, mechanical equipment on nearby buildings, and general city noises such as street sweepers and

⁵ American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc., 1989 ASHRAE Handbook--Fundamentals (I-P) Edition, Atlanta, GA, 1989.

police/fire sirens. Typical sound levels associated with various activities and environments are presented in **Table 4.4-2**.

4.4.2 Noise Regulations

Commonwealth Noise Policy

The DEP regulates noise through 310 CMR 7.00, “Air Pollution Control.” In these regulations “air contaminant” is defined to include sound and a condition of “air pollution” includes the presence of an air contaminant in such concentration and duration as to “cause a nuisance” or “unreasonably interfere with the comfortable enjoyment of life and property.”

Regulation 7.10 prohibits “unnecessary emissions” of noise. The DEP DAQC Policy Statement 90-001 (February 1, 1990) interprets a violation of this noise regulation to have occurred if the noise source causes either:

1. An increase in the broadband sound pressure level of more than 10 dBA above the ambient level; or
2. A “pure tone” condition.

The ambient background level is defined as the L_{90} level as measured during equipment operating hours. A “pure tone” condition occurs when any octave band sound pressure level exceeds both of the two adjacent octave band sound pressure levels by 3 dB or more.

The DEP does not regulate noise from motor vehicles accessing a site or the equipment backup notification alarms. Therefore, the provisions described above only apply to a portion of the sources that may generate sound following construction of the NPC Project.

Local Regulations

The City of Boston Environment Department regulates noise through the Regulations for the Control of Noise as administered by the Air Pollution Control Commission. The NPC Project is located in an area consisting of commercial and residential uses. The NPC Project will have low-rise residential uses to the west, east, and south. The NPC Project must comply with Regulation 2.2 for noise levels in Residential Zoning Districts at these residential locations. **Table 4.4-3** lists the maximum allowable octave band and broadband sound pressure levels for residential and business districts. Daytime is defined by the City of Boston Noise Regulations as occurring between the hours of 7:00 a.m. and 6:00 p.m. daily except Sunday. Compliance with the most restrictive nighttime residential limits will ensure compliance for other land uses with equal or higher noise limits.

Table 4.4-2 Common Indoor and Outdoor Sound Levels

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

Notes: μPa, or micro-Pascals, describes sound pressure levels (force/area). dBA, or A-weighted decibels, describes sound pressure on a logarithmic scale with respect to 20 μPa (reference pressure level).

Table 4.4-3 Maximum Allowable Sound Pressure Levels (dB)			
Octave Band (Hz)	Zoning District		
	Residential (Daytime) (All Other Times)		Business (anytime)
32 Hz	76	68	79
63 Hz	75	67	78
125 Hz	69	61	73
250 Hz	62	52	68
500 Hz	56	46	62
1000 Hz	50	40	56
2000 Hz	45	33	51
4000 Hz	40	28	47
8000 Hz	38	26	44
Broadband (dBA)	60	50	65

Source: City Of Boston

4.4.3 Pre-Construction Sound Level Measurements

Existing baseline sound levels in the NPC Project area were measured during the quietest overnight period when human activity and street traffic were at a minimum, and when the NPC Project's mechanical rooftop equipment (the principal sound sources) could be operating. Since the NPC Project's mechanical equipment may operate at any time during a 24-hour day, the time period when Project-related sounds may be most noticeable may occur during the nighttime due to the quieter background sound levels. Establishing an existing background (L_{90}) during the quietest hours of the facility operation is a conservative approach for noise impact assessment and is required by the DEP Noise Policy.

The Tremont Street area is a typical urban area, with traffic and commercial activity occurring near the site. Typical nighttime background noise level in an urban setting would be expected to be in the 50 dBA range during the day and 45 dBA range at night for locations on Delle Avenue and Sewall Street, with levels of 60 dBA in the Tremont Street area. Existing noise sources in the vicinity of the Project include: vehicular traffic on the local roadways (including Tremont Street, Delle Avenue, and Sewall Street); HVAC equipment, equipment at the existing auto shop, and truck idling.

Nighttime baseline sound levels were based on sound level measurements taken for other similar BRA projects representative of Tremont Street and an urban residential neighborhood adjacent to a busy arterial roadway. The projected nighttime baseline sound levels are presented in **Table 4.4-4**. A nighttime background L_{90} level was 46 dBA was used to represent nearest residences on Burney Street, Sewall Street and Delle Avenue and 58 dBA at the Community Center on Tremont Street. The octave band sound levels are also presented in **Table 4.4-4**.

Table 4.4-4 Nighttime Baseline Sound Levels

Sound Level Measurement	(Location #1) Burney Street	(Location #2) Tremont Street	(Location #3) Seawall Street	(Location #4) Burney Street
Broadband (dBA)				
Background (L ₉₀)	46	58	46	46
Octave Band L ₉₀ (dB)				
16 Hz	34	57	34	34
32 Hz	43	62	43	43
63 Hz	49	61	49	49
125 Hz	47	59	47	47
250 Hz	44	57	44	44
500 Hz	43	54	43	43
1000 Hz	40	55	40	40
2000 Hz	38	49	38	38
4000 Hz	31	41	31	31
8000 Hz	23	32	23	23
16000 Hz	16	<25	16	16
Pure Tone?	No	No	No	No

4.4.4 Reference Data for Acoustic Modeling

The mechanical systems for the NPC Project are in the early design stage. Typical sound power data for the equipment of the expected size and type for the NPC Project have been used in the acoustic model to represent the Project's mechanical equipment. The sound levels from all potential significant NPC Project noise sources are discussed in this section.

The design for the NPC Project is expected to include the following significant mechanical equipment:

- HVAC units on the building rooftop, to provide air conditioning for the building interior;
- Makeup air handling units on the building rooftop;
- Building rooftop exhaust fans;
- Garage roof top ventilation;
- Cooling tower; and
- Energy recovery supply and exhaust fans.

The equipment listed above, which will be located on the building roof, was included in the noise impact analysis. A parapet wall along the edge of the NPC Project building was included in the model, which shielded sound emitted from the mechanical equipment on the roof. It was also conservatively assumed that the proposed metal meshed enclosure around the mechanical equipment would provide no additional sound attenuation. The NPC Project's traffic was not included in the noise analysis because motor vehicles are exempt under both the City of Boston and Massachusetts DEP noise regulations.

The sound generation profiles for the mechanical equipment noise sources operating concurrently under full-load conditions were used to determine the maximum possible resultant sound levels from the NPC Project Site as a whole, to define a worst-case scenario. To be in compliance with City and DEP regulations, the resultant sound level must not exceed the allowable octave band limits in the City of Boston noise regulation and must be below the allowable incremental noise increase, relative to existing noise levels, as required in the DEP Noise Policy.

This sound level impact analysis was performed using sound generation data for representative equipment to demonstrate compliance with noise regulations. As the building design evolves, the sound generation for the actual equipment selected may differ from the values that were utilized for the analysis.

4.4.5 Calculated Future Sound Levels

Methodology

Future maximum sound levels at the upper floors of all existing residences bordering the NPC Project, and at the nearest residential property lines, were calculated with acoustic modeling software assuming simultaneous operation of all mechanical equipment at their maximum loads.

The Cadna-A computer program, a comprehensive 3-dimensional acoustical modeling software package was used to calculate Project generated sound propagation and attenuation.⁶ The model is based on ISO 9613, an internationally recognized standard specifically developed to ensure the highly accurate calculation of environmental noise in an outdoor environment. ISO 9613 standard incorporates the propagation and attenuation of sound energy due to divergence with distance, surface and building reflections, air and ground absorption, and sound wave diffraction and shielding effects caused by barriers, buildings, and ground topography.

Receptors

The closest/worst-case sensitive (residential) location is to the west of the project area on Burney Street. This location was selected based on the proximity of the equipment (smaller distances correspond to larger noise impacts). This location is expected to receive the largest sound level impacts from the NPC Project's rooftop mechanical equipment. It can be classified as a residential zone.

⁶Cadna-A Computer Aided Noise Abatement Program, Version 3.7.1.

The sound level impacts from the building's mechanical equipment were predicted at the four closest (worst case) sensitive receptors. The receptors would include Burney Street to the west, Community Center on Tremont Street to the north, Sewall Street to the east, and Delle Avenue to the south. For locations below the building roof line on which the equipment is to be located, the higher the elevation of the receptor, the less shielding it will experience from the roofline. Figure 1 in **Appendix D** shows the locations of the modeled noise receptors. Noise impacts at other nearby noise-sensitive locations (residences, parks, etc.) farther from the NPC Project Site will be less than those predicted for these receptors.

4.4.6 Compliance with State and Local Noise Standards

The City of Boston and DEP noise standards apply to the operation of the mechanical equipment at the NPC Project. The details of the noise predictions are presented in **Tables 4.4-6 through 4.4-9**. The sound impact analysis includes the simultaneous operation of the NPC Project's rooftop mechanical and HVAC equipment. The predicted sound levels are worst-case predictions that represent all hours of the day, as the analysis assumes full operation of the mechanical equipment 24-hours a day. The typical sound level impacts from the mechanical equipment will likely be lower than what is presented here, since most of the mechanical equipment will operate at full-load only during certain times of the day and during the warmer months of the year, it is not likely that all of the mechanical equipment will operate at the same time. Sound level impacts at locations farther from the NPC Project (e.g. other residences, etc.) will be lower than those presented in this report.

City of Boston Noise Standards

The noise impact analysis results, presented in **Tables 4.4-6 through 4.4-9**, reveal that the sound level impacts will be between 41 and 44 dBA. The smallest sound level impact of 41 dBA is predicted to occur at the eastern property line (Sewall Street). The largest sound level impact of 44 dBA is predicted to occur at the Community Center on Tremont Street. Noise impacts predicted at all locations are in compliance with the City of Boston's nighttime noise limit (50 dBA) for a residential area. Note that sound levels from the NPC Project will be below the residential nighttime limits at all times. The results also demonstrate compliance with the City of Boston, residential, non-daytime, octave band noise limits at all locations.

The City of Boston noise limits for business areas are significantly higher than the nighttime noise limits for residential areas (see **Table 4.4-3**). The NPC Project will also easily comply with the City of Boston business area noise limits at all surrounding commercial properties.

Massachusetts DEP Noise Regulations

The predicted sound level impacts at the worst-case property line and the worst-case residential locations were added to the measured L_{90} value of the quietest daily hour to test compliance with DEP's noise criteria. Assuming the NPC Project's mechanical noise is constant throughout the day, the Project will cause the largest increase in sound levels during the period when the lowest

background noise occurs. Minimum background sound levels (diurnal) typically occur between 12:00 a.m. and 5:00 a.m.

The predicted sound level impacts at the worst-case property line and the closest residences were added to the L_{90} values measured during the period with the least amount of background noise to test compliance with DEP's noise criteria. The predicted noise impacts at the property line and the closest residences were added to the most-representative measured L_{90} values to determine the largest possible increase in the sound level at each location during the quietest hour at the NPC Project Site.

As shown in **Tables 4.4-6** through **4.4-9**, the NPC Project is predicted to produce only a 0-2 dBA change in the background sound levels at all modeled locations. Therefore, the NPC Project's worst-case sound level impacts during the quietest nighttime periods will be in compliance with the Massachusetts DEP allowed noise increase of 10 dBA. The noise predictions for each octave band indicate that the mechanical equipment will not create a pure tone condition at any location.

4.4.7 Conclusions

Sound levels at all nearby sensitive locations and at all property lines will fully comply with the most stringent City of Boston and DEP daytime and nighttime sound level limits.

This acoustic analysis demonstrates that the NPC Project's design will meet the applicable acoustic criteria.

4.5 Water Quality/Stormwater Management

Stormwater runoff from the NPC Project site will be separated from the sanitary sewage and will connect to the Boston Water and Sewer Commission ("BWSC") system in Tremont Street.

Stormwater runoff from the NPC Project site currently sheets towards Tremont Street. There is no existing stormwater collection or management system on the NPC Project site.

Additional information on stormwater management is included in **Section 7.0**, Infrastructure System Component.

4.6 Geotechnical/Groundwater Impacts

A NPC geotechnical study was commissioned by the Proponent with Geotechnical Services Inc. ("GSI") under the direction of Harry Wetherbee, P.E., for the NPC Project located at 1480-1486 Tremont Street. The completed analysis is summarized in the paragraphs below. *(More detailed information and a copy of this study are available upon request.)*

4.6.1 Previous Investigations

Fifteen borings, designated borings were drilled by the geoprobe technique on April 5, 2003 by Vanasse Hangen Brustlin, Inc. (“VHB”) and presented in the PNF Project. The geoprobes were advanced to depths ranging from 1-ft to 12-ft below the existing grade. The current geotechnical consultant understands that all VHB probes were advanced to the top of bedrock.

In addition, five test borings were drilled at the site during the period of November 21 to 23, 2005 by New Hampshire Boring, Inc. of Londonderry, NH, drilled to depths ranging from 11.5 to 17 feet.

4.6.2 Recent Subsurface Explorations

The most recent series of seven test borings were advanced on February 2, 2013 for the purpose of further expanding the nature and character of the site subsurface geology. These explorations classified the on-site soils according to their color, grain size, and other material properties. The test boring program was conducted by New Hampshire Boring, Inc. of Derry, New Hampshire, utilizing a Diedrich D-50 truck mounted drill rig turning 2.25 inch inside diameter augers. Test borings were advanced to termination depths of between 3.5 and 10.5 feet below existing surface grades.

Soil samples were obtained at the surface and at five-foot intervals with a 1⅜ inch diameter split-spoon sampler. Standard Penetration Tests (SPTs) were performed at the sampling intervals in accordance with ASTM D1586. Field descriptions and penetration resistance of the soils encountered, observed depth to groundwater while drilling when observed, and other pertinent observations are contained in the attached test boring logs.

4.6.3 Subsurface Conditions

Based on the results of the subsurface investigations, the following generalized soil stratum was reported to underlie the site in order of increasing depth below ground surface:

Asphalt Pavement: Asphalt pavement was generally 2 to 3 inches in thickness.

Anthropogenic Fill: Test borings were advanced within an existing parking area and therefore, approximately two to three inches of asphalt pavement was retrieved at the ground surface at all test boring locations. The asphalt will be removed prior to site development. Underlying the asphalt pavement was an urban fill of varied composition, which could be described as a non-uniform mix of silty to clayey fine sand with varying amounts of gravel, bricks, glass, coal, and coal ash.

Bedrock: Auger and/or split-spoon refusal was encountered in all soil borings drilled on the site depths varying from 3 to 5 feet. Auger refusal is defined as the inability of the hollow stem augers to advance despite increasing torque and downward pressure applied by the drill rig.

Auger refusal may be caused by nested cobbles, very dense soils, boulders, obstructions, or bedrock. Split spoon refusal is defined as either 100 blows or more required to drive the split spoon sampler 12 inches with a 140 lb. hammer falling 30 inches; 50 blows for less than 6 inches of advancement; or 10 blows with no discernible, vertical movement of the split spoon sampler. In the GSI 2005 study, Bedrock was cored in test borings B-103, B-104, and B-105. The bedrock was observed to be fresh, gray to purple, fine to very coarse grained conglomerate commonly referred to as “Pudding Stone.” The Rock Quality Designation (RQD) was estimated to be between 73 to 98 percent, which indicates that the rock mass quality is good to excellent.

4.6.4 Groundwater Conditions

Groundwater was not directly observed in the soil borings upon their completion; however, damp and wet soil samples were retrieved at most test boring locations suggesting groundwater may be encountered during excavation work. It is assumed that the water noted during the test boring program could be perched water and that actual groundwater flow travels through fractures in the weathered bedrock. Groundwater levels within a monitoring well on site were measured at 13.1 feet below grade during the earlier 2005 study. It should be noted that groundwater conditions can vary depending upon factors such as temperature, season, precipitation, and other unknowns that may be different from those at the time these explorations were made. Groundwater levels at other times, therefore, may differ from those observed and described in this analysis.

4.6.5 Foundation Support

Based on the planned development and the subsurface soils and rock conditions, the analysis recommends that the foundations for the new structure be designed to bear upon spread footings founded within the weathered rock or Structural Fill, and any existing foundations or underground structures removed prior to construction of the NPC Project.

4.6.6 Floor Slab

The ground floor may be designed and constructed using typical slab-on-grade construction, bearing on a minimum 8-in. thick layer of compacted Structural Fill after subgrade preparation.

4.6.7 Seismic Parameters for Design

The subsurface conditions were not deemed susceptible to earthquake induced “liquefaction”.

4.6.8 Design Groundwater Levels

The groundwater reading was measured at a depth of 13.1 feet within an existing well at the site in the GSI 2005 study. The groundwater may be subject to fluctuations over time. It was recommended that additional reading be made in the groundwater monitoring well to determine the present level.

4.6.9 Foundation Drainage

The proposed lowest ground floor elevations for the NPC Project were above the recommended design groundwater level. However, it was recommended that a perimeter foundation drainage system be provided to collect and drain any infiltrating surface or seepage water which might otherwise become trapped against below-grade walls and seep into the building or exert hydrostatic pressures on the walls. It was recommended that perimeter drainage be provided along all foundation walls acting as a retaining wall where the adjacent floor slab is 3-ft or deeper below the adjacent exterior finished grade.

In addition, it was recommended that emergency sump pits be constructed in the garage floor at strategic locations in the event that the groundwater is subject to unforeseen rise or if the area is flooded. Underslab drainage systems were thought to be not required.

4.6.10 Lateral Earth Pressures on Foundation Walls

The current analysis recommended that below grade foundations walls act as retaining walls and designed for a static lateral earth pressure of soil using an equivalent fluid unit weight of soil equal to 60 pcf, assuming drainage is provided as recommended.

4.7 Solid and Hazardous Materials

4.7.1 PNF Project

Existing Hazardous Waste/Conditions

An American Society for Testing and Materials (“ASTM”) Phase I Environmental Site Assessment and Limited Phase II Subsurface Investigation was completed in June, 2003 and reported in the PNF. The Phase I Environmental Site Assessment included an evaluation of current soil and groundwater conditions at the Project site with respect to historical uses of the site (i.e., textile industry, a paint shop, a bottling plant, and a supermarket, and currently an auto shop). Five soil borings were installed at the site to evaluate the soils throughout the site with regard to its former uses. Based on the findings of Phase I, a Phase II assessment – Limited Subsurface Investigation - was conducted on April 5, 2003 by Vanasse Hangen Brustlin, Inc. (“VHB”). As part of Phase II, fifteen borings were installed across the Project site using a track-mounted GeoProbe drill rig. The following results were found during the two-phase investigation: Soil conditions at the site consist of one to 12 feet of sand and gravel/urban fill materials above bedrock. Urban fill from the site was found to contain coal, coal ash, wood ash, asphalt, brick, glass, slag, and wood. Visual and/or olfactory indications of petroleum products were not exhibited by any samples. No Volatile Organic Compounds (“VOCs”) were detected above laboratory method detection limits in a soil sample taken in the degreaser area, and no VOCs or extractable petroleum hydrocarbon (“EPH”) compounds were detected in the soil sample taken in the machine shop area. Elevated concentrations of lead, mercury, and PAHs were detected in the soil analysis in urban fill samples collected at the site. These elevated concentrations are associated with the presence of coal, coal ash, asphalt, and wood ash observed

in the soil borings. However, based on the provisions in 310 CMR 40.0317(9) of the MCP, which states that “release of oil and/or hazardous materials related to coal, coal ash or wood ash” do not require notification, this release is not reportable to the Department of Environmental Protection (“DEP”) under the MCP.

Potential Remediation

The PNF reported that urban fill soil was identified throughout the site and did not require DEP reporting (i.e., coal, coal ash) but may still represent a potential environmental issue during the redevelopment of the site. Additionally, certain soil management and procedures were thought to possibly be required during soil excavation to reduce premium costs associated with the off-site management and to reduce the potential exposure to site contractors. It was anticipated that the majority of the site soil will be removed and disposed of off-site. Therefore, the remaining urban fill materials (if any) would be isolated under the footprint or pavement.

Operational Solid Waste

The PNF reported that solid waste generated by the Project would be collected and disposed of off-site by a licensed contractor. The PNF Project would be designed to allow at-source separation of recyclables including paper, metal, glass and plastics. In addition, the PNF building would include space for recycling and the loading/receiving area would include space for the storage and pick-up of recyclable materials.

Operational Hazardous Waste

With the exception of "household hazardous wastes" typical of residential developments (e.g., cleaning fluids and paint), the PNF Project would not involve the generation, use, transportation, storage, release or disposal of potentially hazardous materials.

4.7.2 NPC Project

Additional Environmental Site Assessment Review

The Proponent contracted ENSTRAT (Strategic Environmental Services) to conduct a Phase I Site Assessment of the Property located at 1480-1486 Tremont Street in Boston, MA and incorporated this information and analysis in a report to the Proponent, dated December 28, 2012 (*which is available upon request*). ENSTRAT also reviewed the previous ASTM Phase I Site Assessment and Limited Phase II Subsurface Investigation completed by VHB, dated June 2003. At the request of the Proponent, ENSTRAT completed additional soil, soil vapor, and groundwater testing to verify and expand upon the previous testing, as described in the 2012 report. ENSTRAT reported that subsurface material encountered were generally consistent with those reported by VHB including darker soils that appeared to be coal ash, wood ash, brick, glass and soil (fine to medium sand and some gravel). The soil samples were tested and did not exhibit significant volatile organic vapors. Concentrations of polycyclic aromatic hydrocarbons (PAHs) and metals were detected, similarly to what was previously characterized by VHB. The findings

of additional evaluations performed are contained in the December, 2012 report.

Additional subsurface testing of the property was not recommended in the recent Phase I Site Assessment. Similar to the VHB conclusions, during future redevelopment, the current report recommended that the urban soils found on the property should be properly disposed off-Site.

Operational Solid and Hazardous Waste

The NPC Project Proponent will follow the procedures outlined above for the PNF Project.

4.8 Construction Impacts

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

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

Periodic meetings will also be held with neighborhood representatives to describe the ongoing work and to discuss measures that will be taken to minimize impacts on the community. The NPC Project superintendent will contact abutters and close neighbors at least once a week during new phases of work.

During the construction phase of the NPC Project, the Proponent will provide the name, telephone number and address of a contact person to communicate with on issues related to the construction. The construction contact will be a person whose sole responsibility it is to respond to the questions/comments/complaints of the residents of the neighborhoods.

The Proponent intends to follow the guidelines of the City of Boston and the Massachusetts DEP, which direct the evaluation, and mitigation of construction impacts. As part of this process, the Proponent and its construction team will evaluate the mitigation methods employed by the Commonwealth's Clean Air Construction Initiative.

4.8.1 Demolition

The NPC Project, like the PNF Project, will require the demolition of the 6,800+/- square foot single-story brick building on-site. An asbestos survey was conducted by the prior Proponent on both the interior and exterior of the Project site. Asbestos-containing building materials were identified prior to the PNF Project submission in the office space and roof penetrations of the existing building. A lead-based paint survey was conducted by the prior developer as well. Lead based paint was detected in several locations on the building's interior. These identified asbestos and lead-containing materials will be treated as a special waste in accordance with Massachusetts DEP guidelines and addressed and disposed of accordingly. The demolition debris will be disposed of at a properly licensed solid waste disposal facility. Concrete, brick, and asphalt will possibly be separated for crushing and potential re-use on site. During demolition, provisions will be made for the use of water spray to control the generation of dust.

The Proponent will evaluate demolition and construction materials to determine whether any materials can be re-used, recycled, or donated to the Building Materials Resource Center ("BMRC"). As stated in the PNF Project, prior to demolition, the Proponent will contact the BMRC to discuss the potential for reuse of building materials.

4.8.2 Construction Methodology

Construction methodologies that ensure public safety and protect nearby tenants will be employed. Techniques such as barricades and signage will be used, if necessary. Construction management and scheduling will minimize impacts on the surrounding environment. This will include plans for construction worker commuting and parking, routing plans for trucking and deliveries, and control of noise and dust. Construction staging methodology is further described below.

Trucks will enter and exit the site from Tremont Street. All heavy equipment and material deliveries will be contained on-site, and will not be queued on Tremont Street.

4.8.3 Construction Schedule

Construction of the NPC Project is expected to take 16 months, and is anticipated to begin in the 4th quarter of 2013 with expected completion in the 1st quarter of 2015.

Table 4.8-1 Proposed Construction Schedule

Activities	Duration
Abatement/Demolition	1 month
Construction (including Excavation)	15 months

Typical construction hours during construction will be from 7:00 AM to 6:00 PM, Monday through Friday, with occasional work taking place on Saturday. The Proponent understands that City of Boston ordinances do not allow construction on Sundays without a permit; therefore, no construction is expected to take place on Sunday.

The Proponent will retain the services of a Construction Manager who will be responsible for coordinating construction activities during all phases of construction with the City of Boston agencies in order to minimize potential scheduling and construction conflicts with other ongoing construction projects in the area.

4.8.4 Construction Staging

The NPC Project's proposed construction staging plan will be designed to isolate the construction while providing safe access for pedestrians and vehicles during normal day-to-day activity and emergencies. The staging areas will be secured by chain-link fencing to protect pedestrians from entering these areas.

Although specific construction and staging details have not been finalized, the Proponent will work with the construction contractor and the City of Boston to ensure that staging areas will be located to minimize impact to pedestrian and vehicular flow. Secure fencing and barricades will be used to isolate construction areas from pedestrian traffic. In addition, public safety for pedestrians on abutting sidewalks will also include covered pedestrian walkways when appropriate and, as required, the suspension of the use of certain sidewalks during the most hazardous periods of overhead construction activity. As required by the Boston Transportation Department and the Boston Police Department, police details will be provided to facilitate traffic flow. The NPC Project will include debris nets on various levels of the building elevations to protect the public and the abutters. All construction procedures will be designed to meet all OSHA safety standards for specific site construction activities.

4.8.5 Construction Employment and Worker Transportation

The number of workers required during the NPC Project construction period will vary, with an estimated average daily work force ranging from approximately 10 to 20 workers during typical periods to as many as 40 workers during the peak period of construction. Pursuant to the Mayor's Jobs Policy, the Proponent will make reasonable good-faith efforts to ensure at least 50% of the total employee work hours be allotted to Boston residents, at least 25% to minorities and at least 10% to women.

Because the construction workers will arrive and depart prior to peak traffic periods, the construction trips are not expected to impact local traffic conditions. To reduce vehicle trips to and from the construction site, all workers will be strongly encouraged to use public transportation. Space on-site will be made available in an on-site trailer for workers' supplies and tools so they do not have to be brought to the site each day. The contractor will establish a designated drop-off area for workers, tools, and equipment. The established time frame for the drop-off area will be 6:00 AM to 7:00 AM. The drop-off area will include posted "No Idling" signs.

Construction trucks will enter and exit the site from Tremont Street.

4.8.6 Construction Noise

Intermittent increases in noise levels will occur in the short-term during the demolition and construction period. Construction work will comply with the requirements of the City of Boston noise ordinance. Every reasonable effort will be made to minimize the noise impact of construction activities. Mitigation measures are expected to include:

- Using appropriate mufflers on all equipment and providing ongoing maintenance of intake and exhaust mufflers;
- Muffling enclosures on continuously operating equipment, such as air compressors and welding generators with outdoor exposure;
- Replacing specific construction operations and techniques by less noisy ones where feasible;
- Selecting the quietest of alternate items of equipment;
- Scheduling equipment operations to keep average levels low, to synchronize noisiest operations with times of highest ambient levels, and to maintain relatively uniform noise levels; and locating noisy equipment at locations that protect sensitive locations by shielding or distance.

4.8.7 Construction Air Quality

Short-term air quality impacts from fugitive dust from the NPC Project may be expected. However, the construction management plan will include plans for controlling fugitive dust during demolition and construction. The construction contract will provide for a number of strictly enforced measures to be utilized by contractors to reduce potential emissions and minimize impacts. These will include:

- Using wetting agents where needed on a scheduled basis;
- Using covered trucks;
- Minimizing exposed storage debris on-site;
- Providing a wheel wash at all site exits; and
- Cleaning of streets and sidewalks on a regular basis to minimize dust accumulations.

4.8.8 Construction Waste

The Proponent will take an active role with regard to the reprocessing and recycling of construction and building demolition waste for the NPC Project. All demolition materials from buildings and site materials will be removed from the site if not included in the demolition material re-use program for the NPC Project.

The disposal contract will include specific requirements that will ensure that construction procedures allow for the necessary segregation, reprocessing, reuse and recycling of materials. For those materials that cannot be recycled, solid waste will be transported in covered trucks to an approved solid waste facility, per DEP's Regulations for Solid Waste Facilities, 310 CMR 16.00. This requirement will be specified in the disposal contract. Construction will be conducted so that materials that may be recycled are segregated from those materials not recyclable to enable disposal at an approved solid waste facility.

4.9 Rodent Control

A rodent extermination certificate will be filed with the building permit application to the City. Rodent inspection monitoring and treatment will be carried out before, during, and at the completion of all construction work for the NPC Project, in compliance with the City's requirements. Rodent extermination prior to work start-up will consist of treatment of areas throughout the NPC Project site. During the construction process, regular service visits will be made.

4.10 Utilities and Coordination with Other Projects

See **Section 7.0**, Infrastructure Systems Component, for more discussion of utility protection during construction of the NPC Project. The Proponent will also coordinate with other construction projects in the immediate area.

5.0 TRANSPORTATION COMPONENT

5.1 Project Notification Form

The prior PNF Project for 1480-1486 Tremont Street contained a comprehensive transportation analysis prepared by Howard/Stein-Hudson Associates, Inc. (HSH). At that time, the PNF Project proposal was to redevelop the existing 6,800 square foot (sf) auto part retail store and 65 commercial surface parking spaces into 66 residential units (condominiums which were changed to rental units in an initial 2007 NPC), approximately 2,300 gsf of ground floor retail space, and 71 parking spaces. The existing transportation conditions were documented in terms of traffic and pedestrian volumes, transit service and ridership, and on-street and off-street parking availability.

For the transportation section of the PNF Project, HSH used Institute of Transportation Engineers (ITE) standard rates, along with local survey data and other sources, to develop trip generation, trip distribution, vehicle occupancy, and mode use estimates for the proposed development program.

A traffic analysis was conducted for the PNF Project in accordance with the Boston Transportation Department (BTD) *Transportation Access Plan Guidelines (2001)*. The study included an evaluation of traffic operations for the existing conditions; long-term No-Build conditions, including new traffic resulting from general background growth and any identified development projects; and a Build scenario, including specific travel demand forecasts for the PNF Project. Due to the negligible increase in traffic generated by the PNF Project, the level of service (LOS) was not expected to change at any of the study area intersections analyzed in the PNF (Tremont Street / St. Alphonsus Street, Tremont Street / Parker Street, Tremont Street / West Site Driveway, and Tremont Street / East Site Driveway). A Transportation Access Plan Agreement (TAPA) between the former Proponent and the City of Boston was not prepared or finalized.

The PNF Project program is herein referred to as the BRA Approved Project, consisting of 66 residential apartment units and two commercial storefront units totaling approximately 2,300 g.s.f. (As noted, the PNF submission included for sale residential units, which was later changed to rental housing in an initial NPC by the prior Proponent and approved by the BRA in 2007.)

5.2 Notice of Project Change

The Trellis Group, LLC (Proponent) is submitting this NPC Project to redevelop the site with 66 residential units and two+ commercial storefront units totaling approximately 6,200 sf of ground floor retail with 60 parking spaces and accommodations for 88 bicycles. This NPC Project is expected to have a negligible impact on vehicle conditions in the area. The NPC Project site plan calls for the consolidation of the two existing curb cuts on 1480-1486 Tremont Street. The proposed site driveway, centered in the middle of the site, will provide access to the gated garage and on-site service and loading area. The NPC Project site plan is shown in **Figure 5-1**. This section of the NPC addresses



**Figure 5-1.
Site Plan**

transportation issues related to changes under the NPC Project including trip generation, vehicular access and circulation, traffic impacts, parking management, loading and service, bicycle storage, mitigation and transportation demand management (TDM)

The alternate building programs for 1480-1486 Tremont Street are shown and compared in **Table 5-1**, which outlines the BRA Approved PNF Project and the Proposed NPC Project.

Table 5-1 Building Program Comparisons at 1480-1486 Tremont Street, Mission Hill			
Program Description	A	B	C = B minus A
	PNF: BRA Approved Project	NPC: Proposed Project	Change: NPC compared to PNF
Residential (units) ¹	66	66	-
Retail (sf)	2,300	6,200	+3,900
Parking (spaces)	72	60	-12
Secure/ Covered Bicycle Storage (bikes)	37	88	+51

1. The NPC Proposed Project will have 15 to 20% fewer bedrooms than the BRA Approved PNF Project.

5.2.1 Trip Generation

Trip generation estimates for the BRA Approved Project were based on rates derived from ITE's *Trip Generation* (7th edition, 2004) fitted curve equations and average trip rates for land use codes (LUC) 230 – *Residential Condominium/Townhouse* and LUC 820 – *Shopping Center*. The ITE rates produce vehicle trip estimates, which are then converted to person trips using vehicle occupancy rates (VOR) based on 2001 National Household Travel Survey data and other local data. Using appropriate mode split information for this area, the total person trips are then allocated to vehicle, transit, and walk/bike trips.

Since the time of the BRA Approved PNF Project filing, an updated version of the ITE's *Trip Generation* manual (9th edition, 2012) has become the industry standard for estimating trips. For the NPC Proposed Project, the LUC changed for the residential units from LUC 230 – *Residential Condominium/Townhouse* to LUC 220 – *Apartment*, and the updated ITE version was used to estimate trips. A detailed summary of the trip generation calculations is provided in **Appendix E**.

The resulting vehicle trip generation for the BRA Approved PNF Project and the NPC Proposed Project are compared in **Table 5-2**.

Table 5-2 Vehicle Trip Generation Comparison

Period	Direction	A	B	C = B minus A
		PNF: BRA Approved Project	NPC: Proposed Project	Change: NPC compared to PNF
Daily	In	175	266	+91
	Out	175	266	+91
	Total	350	532	+182
a.m. Peak Hour	In	5	7	+2
	Out	14	13	-1
	Total	19	20	+1
p.m. Peak Hour	In	16	21	+5
	Out	10	18	+8
	Total	26	39	+13

As shown in Column C of **Table 5-2**, when compared to the BRA Approved PNF Project, the NPC Proposed Project would result in only one additional vehicle trip (two additional entering and one fewer exiting) during the weekday morning peak hour and thirteen additional vehicle trips (five additional entering and eight additional exiting) during the evening peak hour – a negligible change. Furthermore, this trip generation detailed in **Table 5-2** does not account for existing uses on-site, the former auto part retail store and existing commercial parking, which will no longer be on the roadway.

Table 5-3 shows a similar comparison of transit trip generation for the BRA Approved PNF Project and NPC Proposed Project. As shown in Column C, the difference between the BRA Project and the NPC Project, transit trips would increase by six transit trips (four additional entering and two additional exiting) during the weekday morning peak hour and 23 additional transit trips (nine additional entering and fourteen additional exiting) during the evening peak hour.

Table 5-3 Transit Trip Generation Comparison				
Period	Direction	A	B	C = B minus A
		PNF: BRA Approved Project	NPC: Proposed Project	Change: NPC compared to PNF
Daily	In	105	207	+102
	Out	105	207	+102
	Total	210	414	+204
a.m. Peak Hour	In	5	9	+4
	Out	8	10	+2
	Total	13	19	+6
p.m. Peak Hour	In	13	22	+9
	Out	10	24	+14
	Total	23	46	+23

Table 5-4 similarly shows the walk/bicycle trip generation for alternative programs. As shown in Column C, walk trips would increase by nine additional pedestrian trips (six additional entering and three additional exiting) during the weekday morning peak hour and 38 additional pedestrian trips (22 additional entering and 16 additional exiting) during the evening peak hour.

Table 5-4 Walk/Bike Trip Generation Comparison				
Period	Direction	A	B	C = B minus A
		PNF: BRA Approved Project	NPC: Proposed Project	Change: NPC compared to PNF
Daily	In	237	454	+217
	Out	237	454	+217
	Total	474	908	+434
a.m. Peak Hour	In	8	14	+6
	Out	20	23	+3
	Total	28	37	+9
p.m. Peak Hour	In	27	49	+22
	Out	21	37	+16
	Total	48	86	+38

5.2.2 Vehicular Access and Circulation

The NPC Project proposes to consolidate the two existing curb cuts on Tremont Street into a single driveway that would provide access to the residential garage and on-site service and loading area.

5.2.3 Parking Management

The BTD has established parking space guidelines throughout the City to ensure that the proper parking capacity is provided with new projects. BTD's maximum parking ratio guidelines for this area of the City are 0.50-1.0 parking spaces per residential unit and 0.75-1.0 parking spaces per 1,000 square feet of non-residential space. The NPC Project is providing 60 parking spaces, including approximately 54 spaces for the 66 residential units and up to 6 spaces for the approximately 6,200 sf of ground floor commercial spaces. Parking provisions are consistent with the BTD guidelines.

Of the 60 parking spaces, two residential spaces will be handicapped-accessible; adjacent to the elevators in the parking garage beneath the building, and two will be dedicated for electric vehicle charging stations.

5.2.4 Pedestrian Access

Pedestrian access to the residential lobbies and retail uses would be provided along Tremont Street. Secondary access would also be provided to the parking garage.

5.2.5 Bicycle Storage

Secure bicycle storage will be made available for building residents and tenants of the proposed building per the *City of Boston Bicycle Parking Guidelines*, which require a minimum of one secure covered bicycle parking space per residential unit as well as additional bicycle racks for workers, visitors, and guests near main entrances of the building. The NPC Project is proposing to provide a total of 88 bicycle spaces including 72 secure covered bicycle storage spaces within the parking garage as well as 16 bicycle racks outside the building frontage on Tremont Street for retail users and guests.

5.2.6 Loading and Service Access

Where possible, all recycling, trash collection, and loading activities will occur on-site from the proposed driveway located along Tremont Street (see **Figure 5-1**). The service and loading area will be able to accommodate a vehicle as large as SU-36 (a box truck 36 feet in length). Trash and recyclables would be collected and stored on-site within a dedicated room inside the building and then either wheeled to the curb for pick-up or collected on-site from the driveway.

Building management will encourage all loading and service activities, including move-in and move-out, to occur during off-peak periods, to the extent possible. The designated loading area will be sufficient to handle the loading demands of the NPC Project. Permanent "No Idling" signs will be posted in the loading and parking areas.

5.2.7 Transportation Mitigation Measures

The NPC Project will have a negligible impact on vehicle conditions in the area. It is anticipated that a good portion of the residents will not own vehicles and will take advantage of the site's convenient location with respect to area educational and medical institutions and non-auto alternatives including MBTA public transportation (Green Line is 0.3 miles away, Orange Line is 0.2 miles away, local bus is less than 100 feet away, etc.), Zipcar (16 cars within a quarter mile); and Hubway bicycle share (two stations within a quarter mile; Roxbury Crossing Station and Brigham Circle/Huntington Avenue). However, in support of the City's efforts to reduce dependency on the automobile, the Proponent will work with the BTM as part of the TAPA process to identify appropriate TDM measures.

TDM measures encourage travelers to use alternatives to driving, especially during peak periods, and will be facilitated by the nature of the NPC Project and its proximity to public transit. The Proponent will emphasize the site's convenient transit and pedestrian access in marketing the NPC Project to future residents and tenants. On-site management will provide transit information (schedules, maps, fare information) in the building lobbies for residents, workers, and visitors. Additional TDM measures may include, but are not limited to, the following:

- **Bicycle Storage** - The Proponent will exceed secure bicycle storage minimum requirements for residents, workers, and visitors in accordance with the *City of Boston Bicycle Parking Guideline*;
- **Constrained Parking** -The NPC Project does not exceed BTM district maximum parking ratios;
- **Electric Vehicle Charging** - The Proponent will provide up to two (2) electric vehicle charging stations on-site within the parking garage;
- **Project Web Site** - The Proponent will include public transportation information for residents and visitors on the NPC Project's Web Site;
- **Tenant and Employee Orientation Packet** - These packets will provide all new tenants with information concerning available TDM programs and public transportation in the area, including route maps, schedules, and fare information; and
- **Transportation Coordinator** - An on-site transportation coordinator will oversee transportation issues, including parking, residential move-in and move-out, and service and loading. The transportation coordinator will also work with residents as they move in to raise awareness of public transportation alternatives.

5.2.8 Transportation Access Plan Agreement (TAPA)

A TAPA between the prior Proponent and the City of Boston was not prepared or finalized for the BRA Approved Project. The NPC Project Proponent will provide a TAPA to the Boston Transportation Department (BTM) for review and approval. The amendment will codify specific mitigation measures, where appropriate, and agreements between the Proponent and BTM.

5.2.9 Evaluation of Short-Term Construction Impacts

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

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

- Construction worker parking will be limited on-site. Workers will be encouraged to use public transportation and/or carpool;
- A subsidy for MBTA passes will be considered for full-time employees;
- Secure spaces will be provided on-site for workers' supplies and tools so they do not have to be brought to the site each day; and
- The Proponent owns several parcels of land near the project site that could be used for construction worker parking and staging which will be detailed further in the CMP.

6.0 HISTORIC AND ARCHAEOLOGICAL RESOURCES

This section describes the historic and archaeological resources within and adjacent to the NPC Project site.

6.1 Historic Resources

The NPC Project is immediately adjacent to the Parker Hill/Mission Hill North Slope Area. The historic resources within a quarter-mile radius of the NPC Project are summarized in **Table 6-1** and illustrated in the Figure from the 2006 PNF in **Appendix F**.

Table 6.1 Historic Resources in the Vicinity of the Project Site

Key to Historic Resources Figure in Appendix F	Historic Resource	Address
State and National Register Listed Properties		
A	Mission Church Complex*	Tremont, St. Alphonsus and Smith Streets
B	Mission Hill Triangle Historic District*	Huntington Avenue, Smith Street, Worthington Street, Wigglesworth Street and Tremont Street
C	Roxbury Highlands Historic District	Centre, Marcella, Washington and New Dudley Streets
Properties included in the Inventory of Historic and Archaeological Assets of the Commonwealth		
1	Parker Hill/Mission Hill North Slope Area	Parker Street, Tremont Street, Burney Street, Delle Avenue, Alleghany Street, Terrace Place, Terrace Street, Folsom Avenue, Hillside Street
2	Tremont Street Area	1500-1540 (even only) Tremont Street
3	Parker Hill Branch, Boston Public Library	1497 Tremont Street
4	Parker Hill/Mission Hill Triple Decker Area	Calumet, Sachem, Oswald, St. Alphonsus, Hillside and Iroquois Streets

*Property also designated as a Boston Landmark

6.1.1 Historic Resources Within the Project Site

The NPC Project, like the PNF Project, includes the demolition of the existing one-story, brick building. The existing building was constructed ca. 1940 and served as a local supermarket and automobile reconditioning facility.

The one-story building fronts along Tremont Street. The yellow brick façade wraps around the sides of the building approximately ten feet. Decorative ornament is limited to cast concrete panel pilasters on each side of the Tremont Street elevation and a central yellow brick entablature defined by cast concrete panels. The existing glass and aluminum storefront system appears to date to the 1950s. The side and rear elevations consist of red brick. A large, multi-colored mural is located on the west elevation, while the rear elevation has been vandalized with graffiti. The east elevation is characterized by several door and window openings.

As discussed in the prior PNF Project, the building was not included in the 1984 Parker Hill/Mission Hill Survey and Planning Report and is not included in the Inventory of Historic and Archaeological Assets of the Commonwealth maintained by the Massachusetts Historical Commission. The PNF Project indicated that the existing building lacked architectural and cultural significance and did not appear to meet the National Register criteria for listing.

6.1.2 Historic Resources Within the Vicinity of the Project Site

The NPC Project is located immediately adjacent to the Parker Hill/Mission Hill North Slope Area, an area primarily characterized by residential development between 1845 and 1910. The NPC Project is also located near the Tremont Street Area and the Parker Hill Branch of the Boston Public Library. Potential impacts to these properties are limited to minor shadow and visual effects associated with the proposed new construction.

Like the PNF Project, the NPC Project is not expected to have effects on the Parker Hill/Mission Hill Triple Decker Area, Mission Church, Mission Hill Triangle Historic District, and the Roxbury Highlands Historic District due to its small scale.

6.1.3 Archaeological Resources

No known archaeological resources were located within the Project site during the PNF review, with the NPC Project to be located on previously disturbed land. No previously identified archaeological resources were located within the NPC Project Site, and therefore no impacts to archaeological resources are anticipated.

6.2 Potential Impacts

Potential impacts associated with the NPC Project, including demolition, shadow, and visual are evaluated in this section.

6.2.1 Demolition

The NPC Project, like the PNF Project, includes the demolition of the existing one-story, brick building. The existing building was constructed ca. 1940, but lacks architectural and cultural significance. An Article 85 Application will be submitted to the Boston Landmarks Commission prior to the application for a demolition permit. No impacts to adjacent historic properties are anticipated.

6.2.2 Shadow Impacts

Due to the relatively narrow side streets, the density of the surrounding area, and the location of existing buildings along the street edge, much of the area is already in shadow during each of the four study periods. The net increase in shadow created by the NPC Project construction is minimal as a result of these existing conditions.

At the Vernal Equinox, net new shadow is limited to the 3:00 PM time period at the side and rear elevations of 1474 Tremont Street. By 6:00 PM, the majority of the area is already in shadow, however, new shadow is cast on the rooftops of 1470-1474 Tremont Street and 2-5 Sewall Street.

During the Summer Solstice, new shadow is also limited to 1474 Tremont Street during the 3:00 PM time period. By 6:00 PM, new shadow is limited to the rear elevations and rooftops of 1470-1474 Tremont Street and 2-5 Sewall Street.

Net new shadows cast during the Autumnal Equinox fall onto the side elevation of 1474 Tremont Street at 3:00 PM. By 6:00 PM, the majority of the area is already in shadow, however, new shadow is cast by the NPC Project on rooftop of properties within the Parker Hill/Mission Hill North Slope Area including 1457, 1464, 1470, 1472, and 1474 Tremont Street, 2-5 and 16 Sewall Street, and 695 Parker Street.

During the Winter Solstice, new shadow from the NPC Project will only be cast on 1470- 1474 Tremont Street at 3:00 PM when the majority of the area is already in shadow.

The shadow study indicates that the NPC Project will not cause substantial impacts to historic buildings in the surrounding area. Shadow impacts throughout the year are limited due to the dense urban setting of area. Although the increased building mass on this parcel results in new shadows, the development of this parcel results in positive benefits to the area by constructing a new structure compatible with the surrounding area and will provide retail continuity and vitality along this portion of Tremont Street.

Due to the small scale and density of the NPC Project, no new shadow will be cast by the NPC Project on the Mission Church Complex, Mission Hill Triangle Historic District, Roxbury Highlands Historic District, Parker Hill Branch Library, Tremont Street Area or the Parker Hill/Mission Hill Triple Decker Area.

6.2.3 Visual Impacts

The NPC, like the PNF, Project intends to replace the existing ca. 1940 building and parking lot with a new four-story building with three floors of residential above ground level retail and garage parking. The south side of Tremont Street currently consists of three and four-story residential and mixed-use buildings and includes properties within the Tremont Street and Parker Hill / Mission Hill North Slope Areas. The proposed size, scale, massing, materials, and use of the NPC Project are compatible with nearby properties.

The existing one-story building and extensive surface parking lot interrupts the street façade along this section of Tremont Street. The NPC Project will create a new visually compelling street facade and eliminate the visibility of surface parking from the Tremont Street Area, Parker Hill Branch of the Boston Public Library, and the Parker Hill / Mission Hill North Slope Area. The NPC Project massing at the interior of the site includes massing through-block open space that allows a visual connection between Tremont Street and the abutting row houses on Delle Avenue. A central second floor courtyard and raised terraces on the east, south and west sides of the building, entirely enclosed ground floor covered parking and altogether eliminate visible surface parking from the site.

The NPC Project massing and facades are articulated by setbacks, balconies, material changes and variations in fenestration. The façade articulation and building height of the NPC Project are compatible with the architectural expression of surrounding areas. In addition, the use of brick, precast concrete, and articulated panels along Tremont Street is also compatible with the surrounding properties, defining facades with traditional “base, middle, and top” zones. At the east, south, and east sides of the NPC building, the second floor terraces create a garden wall and reduce the apparent height of the building to three floors.

As a result of careful study of the surrounding properties, the selective use of materials, and appropriate massing, the NPC Project is expected to be compatible with the setting, scale, proportions, and materials of the surrounding areas including the Parker Hill / Mission Hill North Slope Area, the Tremont Street Area, and the Parker Hill Branch of the Boston Public Library.

7.0 INFRASTRUCTURE SYSTEMS COMPONENT

7.1 Introduction

This section addresses the NPC Project's impact on the capacity and adequacy of existing water, sewage, stormwater, energy, and electrical communications utility systems. Based on the evaluation in the prior PNF Project, the capacity of the water and sewer system is more than adequate to serve the anticipated sewage and water flows. Electric, gas, and telephone and cable service are also available to the Project Site and will be coordinated with the appropriate utility as the design is further advanced.

7.2 Sewage System

The NPC Project's change in number of bedrooms and office and retail square footage results in a decrease in the estimated sanitary sewer flows provided in the prior PNF (see **Table 7-1** below). The NPC Project will have an estimated daily sewage flow of 9,434 gallons per day (gpd). Based on the projected sewage estimates and the fact that the existing 12-inch sewer main in Tremont Street was recently installed in 2003, ample capacity of the wastewater system is expected (see **Figure 7-1**). BWSC does not expect any problems meeting future wastewater collection demands in this area.

The NPC Project does not propose any industrial uses and flows are expected to be under the 15,000 gpd that would require filing with the Massachusetts Department of Environmental Protection for a Sewer Connection Permit or Compliance Certificate.

Table 7-1 Comparison of Sewage Flow		
NPC Project		
<i>Building Use</i>	<i>314 CMR 7.00 Sewage Flow Estimates</i>	<i>Estimated Flow</i>
83 Bedrooms	110 gallons/bedroom	9,110± gpd
6,200± s.f. Retail	50 gpd/1,000 sf	310± gpd
188± sf Office	75 gpd/1,000 sf	14± gpd
TOTAL		9,434± gpd
Prior PNF Project		
<i>Building Use</i>	<i>314 CMR 7.00 Sewage Flow Estimates</i>	<i>Estimated Flow</i>
97 Bedrooms	110 gallons/bedroom	10,670± gpd
2,780 ± sf Retail	50 gpd/1,000 sf	139± gpd
TOTAL		10,809± gpd

7.3 Water Supply System

The water demand for the NPC Project is projected to be 10,377± gpd compared to the 11,890± gpd evaluated and presented in the PNF. The NPC Project's water demand for domestic service has been estimated based on the NPC Project's estimated sewage generation. A conservative factor of 1.1 is applied to the average daily wastewater flows to estimate an average daily water demand to account for system losses, irrigation and consumption.

Similar to the PNF, the NPC Project's new domestic water and fire protection services will connect to the 12-inch water main in Tremont Street (see **Figure 7-2**). The water will be supplied by the BWSC.

7.4 Stormwater

In January 2013 (after the submittal of the prior PNF), BWSC revised its Site Plan requirements and now the first one inch of rainfall, times the impervious area on site, must be infiltrated prior to discharge to a storm drain or combined sewer. At this time, based on geotechnical investigation reports prepared for the site, it appears that bedrock underlies the project site at a relatively shallow depth. Therefore, it is anticipated that infiltration will not be feasible with the NPC Project.

The stormwater management system will remain similar to the design contemplated in the prior PNF Project Approval. Stormwater runoff from the roof of the proposed building will be collected and discharged to the existing 15-inch storm drain in Tremont Street. Runoff from the driveways entering and exiting the site, and from parking areas, will be collected, routed through inlets with water quality filtration to remove debris and sediments prior to being discharged. Without mitigation of the peak rate of runoff, it is anticipated that flow from the proposed site may result in a slight increase during each rainfall event. The drainage system will be designed in accordance with the State Stormwater Policy Handbook.

The contractor will be responsible for erosion and sediment controls, which will be established before the start of construction. The controls are expected to include street sweeping and the use of catch basin filters. The contractor will also control wind and dust. Dust control may include providing stabilized ground cover and sprinkling water on exposed soils. Good housekeeping practices will also be followed including collecting waste materials in covered receptacles, proper use and disposal of materials, and employing spill prevention practices.

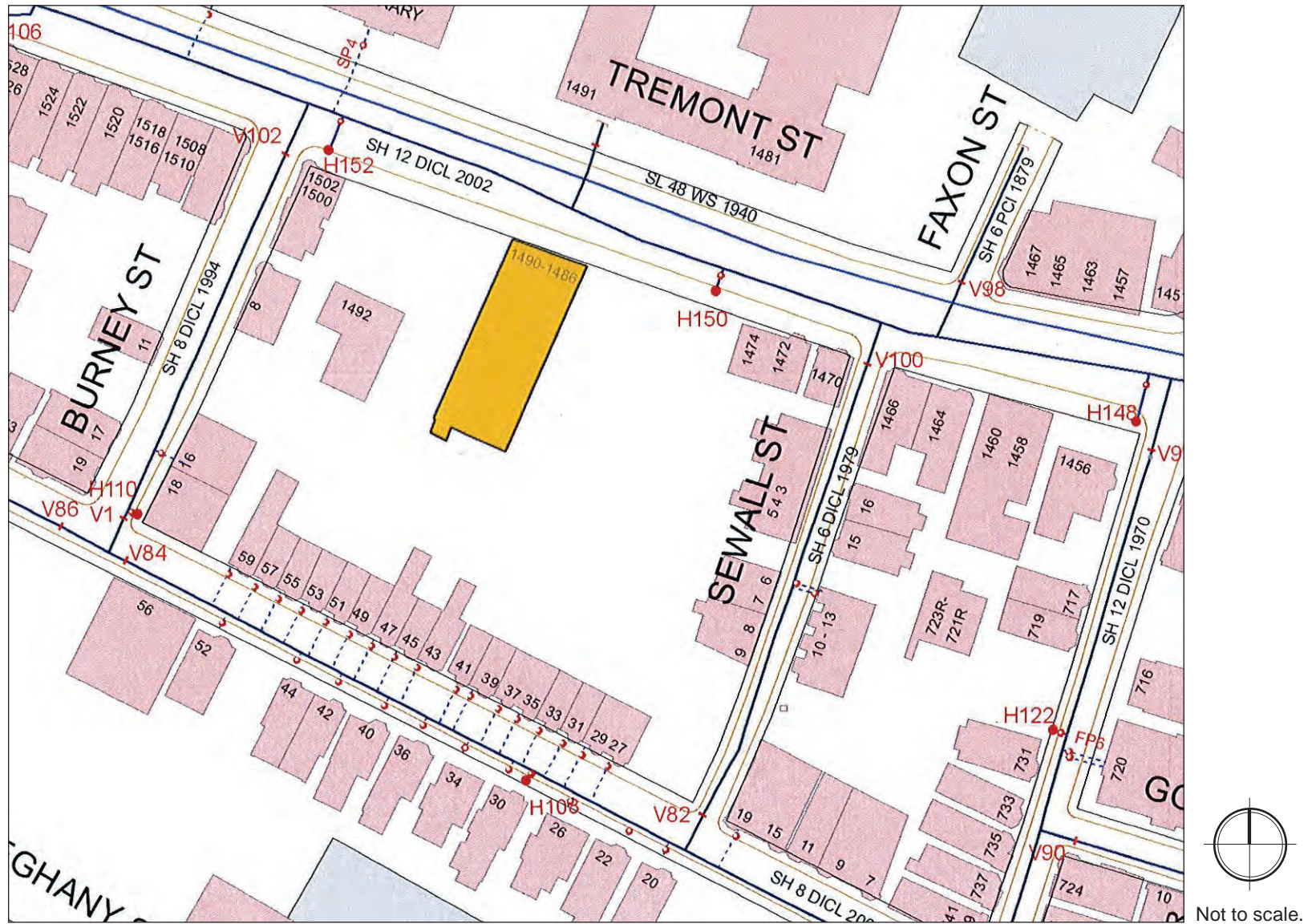


Figure 7-2.
Existing Water System

7.5 Coordination with BWSC

As the design and engineering of the NPC Project continues, the Proponent will meet with BWSC to review the NPC Project. As part of this coordination the Proponent will perform the following:

- ◆ Prior to the start of construction, the Proponent will submit a site plan and a General Service Application to BWSC.
- ◆ All new water and sewer facilities connecting to BWSC's facilities will be designed in accordance with BWSC's Water Distribution System Regulations, Sewer Use Regulations and Requirements for Site Plans.
- ◆ A landscape plan has not yet been completed for the NPC Project; however, the Proponent will design a landscape planting plan that requires minimal watering.
- ◆ The Proponent will provide for a connection to the BWSC's automatic reading system.
- ◆ The NPC Project's sanitary sewer lines and building storm drains will be separated.
- ◆ All drains from the parking lot will include water quality filtration.

7.6 Anticipated Energy Requirements

7.6.1 Electrical Requirements

NSTAR provides electric service in the City of Boston. As noted in the PNF, there is existing overhead and underground service in the Project area. It is anticipated that electric service can be provided by NSTAR. Electric power supply design, and any upgrades that may be required, will be further coordinated with NSTAR as the design progresses.

7.6.2 Natural Gas Requirements

National Grid provides natural gas service in the Project area. According to the BWSC's As-Built Plan, "Installation of Storm Drain, Sanitary Sewer and Water Pipes in Jamaica Plain", dated September 26, 2003 (Plan #Z113-82), there is an existing 4-inch gas line in Tremont Street.

It is anticipated that there is an adequate supply of natural gas in the area. To the extent possible, energy-saving measures will be incorporated into the building design and construction. Any upgrades will be coordinated with National Grid.

7.6.3 Steam

The NPC Project is not expected to use steam.

7.6.4 Telephone Systems

Verizon provides telephone service in the Project area. There is overhead and underground telephone service in the area. It is anticipated that telephone service can be provided by Verizon. Any upgrades will be coordinated with Verizon.

7.6.5 Cable Systems

Comcast and RCN provide cable service in the Project area. Cable lines already exist on the overhead wires and underground service in the Project area.

It is anticipated that Comcast and/or RCN can provide service to the Project site via underground facilities. Any upgrades required to the service will be coordinated with the service provider.

7.7 Protection of Utilities

As described previously, protection of BWSC water, sewer, and drain lines will begin before commencement of site work. The Proponent (or its construction contractor) will request that the locations of all existing water, sewer, and drainage lines be marked by BWSC. Excavation in the area of existing water, sewer, and drain lines will proceed with caution. Hand excavation will take place when excavation in the immediate area of pipe walls is required. BWSC will require additional protection measures if new pipes are to cross existing pipes.

The BWSC will require the Proponent to submit a General Service Application and a site plan for review prior to construction. The site plan must include existing water mains, sanitary sewers, storm drains, and proposed service connections.

8.0 COORDINATION WITH GOVERNMENT AGENCIES

8.1 Architectural Access Board Requirements

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

8.2 Massachusetts Environmental Policy Act

Based on information currently available, development of the NPC Project is not anticipated to exceed a review threshold that would require MEPA review.

8.3 Boston Civic Design Commission

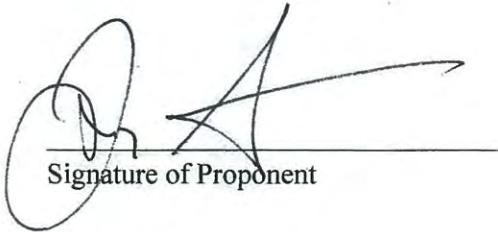
The NPC Project is below the 100,000 gross square foot size threshold requiring automatic referral to the Boston Civic Design Commission for schematic review.

8.4 Boston Parks Commission

As the project is within 100 feet of the Gibbons Playground (23 Delle Avenue), the Proponent is required to consult with the Boston Parks Commission.

9.0 PROJECT CERTIFICATION

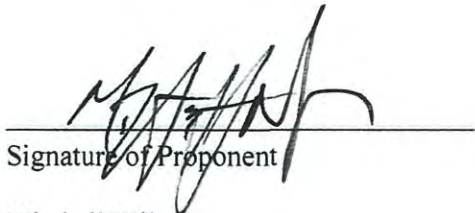
This NPC form has been circulated to the Boston Redevelopment Authority as required by Article 80A-6 of the Boston Zoning Code.



Signature of Proponent

Jason Savage
Trellis Group, LLC

6/28/13
Date



Signature of Proponent

Mitchell Wilson
Trellis Group, LLC

6/25/13
Date



Signature of Proponent's
Representative

Mitchell L. Fischman, AICP
Mitchell L. Fischman Consulting LLC

6/28/13
Date

APPENDIX A - RENTAL OCCUPANCY RESTRICTION

RENTAL/OCCUPANCY RESTRICTIONS

SUBJECT PROPERTY: 1486 TREMONT STREET, MISSION HILL BOSTON

Rental/Occupancy Restrictions

- a. No lessee/occupant of a dwelling unit/apartment shall be enrolled as a full time undergraduate student at a post-secondary educational institution as further defined in the City of Boston Zoning Code Text Amendment number 346 amending Article 2 dated March 13, 2008.
- b. The lessee may not sublet or assign the apartment without the lessor's consent.
- c. The above restriction shall be granted to the BRA as a restrictive covenant upon the title of the subject property and shall be recorded in the chain of title of the subject property in the Suffolk County Registry of Deeds. It is intended that this restriction shall run with the land of the subject property until the building is demolished or is no longer occupied as a residential rental use.
- d. Lessors shall require, prior to occupancy by any lessees, that all lessees (adult occupants) complete a true and correct rental application which shall be attached to and made a part of their lease and which among other matters, shall include:
 - i. The lessee's employment status and related detailed information and/or their educational institution and student status if other than a full time undergraduate student.
 - ii. Written authorization of each lessee authorizing lessor to validate their employment and/or student status at lessee's employer and/or school. In the event that a school will not disclose to lessor any information on lessee, lessee shall provide current written proof of said status as a post undergraduate student as certified from that school.
 - iii. All lessees shall warrant and represent that they are not now nor will they be during the term of the lease a full time undergraduate student at a post secondary educational institution.
- e. Lessors shall insert the above restriction in all leases and make failure to comply with any term thereof a material breach of the lease subject to all legal remedies available to lessor.
- f. Lessor shall provide written notice of the full time, undergraduate student restriction to all rental applicants and lessees.
- g. All leases shall specify limitations or restrictions on behavior/activities in the building. A violation of these limitations or restrictions shall be grounds for termination of tenancy/eviction.

- h. All lessees must sign a minimum twelve (12) month lease.
- i. There shall be one (1) lease or sublease for a unit including all tenants/occupants.
- j. Owner's representative will meet with each lessee before signing lease.
- k. Lessor's/owners shall hire an independent third party property manager or property management company to manage the subject property and administer these restrictions.

APPENDIX B - LETTER OF INTENT TO FILE NPC, JUNE 4, 2013



TRELLIS
GROUP

June 4, 2013

Mr. Peter Meade, Director
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

**Subject: 1480 - 1486 Tremont Street, Mission Hill
Clutch Works Project Development
Intent to File Second Notice of Project Change**

Dear Director Meade:

Please consider this letter as a preliminary notification to you that a new Project Proponent, Trellis Group, LLC ("Trellis") intends to develop the subject property located at 1480-1486 Tremont Street (Mission Hill), Boston ("Project Site") and to submit a second Notice of Project Change ("NPCII") to the Boston Redevelopment Authority ("BRA") pursuant to Section 80A-6 of the Boston Zoning Code (the "Code"). The status of the existing approved project is as described below.

In accordance with the Large Project Review requirements of Article 80 of the Code, on April 24, 2006 The Aspen Group (the "Prior Project Proponent") submitted a Project Notification Form (the "PNF") to the BRA, and on July 20, 2006, the BRA voted to authorize the issuance of a Scoping Determination Waiving Further Review of the PNF Project, and issuing the same on July 27, 2006 to the Prior Project Proponent.

On March 22, 2007, the Prior Project Proponent filed an initial NPC ("NPC1") pursuant to Section 80A-6 requesting the BRA's concurrence with a proposed modification from condominium units to rental housing for the PNF Project. The BRA on April 24, 2007 voted to authorize the issuance of a determination under Section 80A-6 finding that the initial NPC adequately described the potential impacts of the Project and provided sufficient mitigation measures to minimize those impacts.

The existing project as described in the PNF, and modified in the NPC1, proposed to demolish the existing structure on the Project Site and construct an approximately 75,000 square foot residential building with ground/first floor retail on Tremont Street. This Project resulted in the proposed development of a five-story (45 feet in height to the top of the highest occupied floor), multi-family residential rental building with parking on the first floor with four floors of residential units above the parking for a total of sixty-six (66) units (incorporating one affordable unit), 72 parking spaces (of which 51 were within an enclosed garage and 21 outdoor spaces at the building's rear), and approximately 2,300 square feet of retail space.

The Project proposed by Trellis and to be outlined in the NPCII would consist of construction of a four-story, mixed use residential apartment project with sole access and egress from Tremont Street, and include approximately sixty-six (66) rental units (incorporating one affordable unit), approximately 6,000 square feet of commercial and retail space, 60 enclosed garage parking spaces, and 15,116 square feet of usable open space at 1480-1486 Tremont Street. (See **Figure 1. Project Locus.**).

The modified NPCII Project generally conforms to the PNF and the initial NPC1 programs while utilizing modified design plans by a new design team, use of the site's topography to enhance integration with abutting structures, an improved parking plan with only inside garage spaces, and a substantial increase in usable open space for the building's residents.

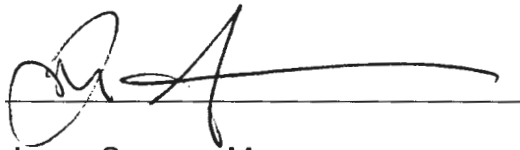
Trellis is committed to continuing to meet with abutters and is actively working with neighborhood representatives. The NPCII Project has been previewed with community leaders and abutters in Mission Hill which has included outreach to Mission Hill's elected local officials and state representatives, including:

- Mission Hill Neighborhood Housing Services
- Shaina Aubourg, Neighborhood Coordinator for Mayor's Office
- Community Alliance of Mission Hill
- Delle Avenue Abutters
- State Representative Jeffrey Sanchez
- City Councilor Michael Ross
- Mission Hill Main Streets
- Tobin Community Center
- Mission Main

Trellis expects that a more formal Notice of Project Change submission will soon be complete and will include detailed Project impact studies, as needed, to support Trellis's understanding that the intensity of use at the Project site will not increase in connection with the modest revisions contained in the NPCII Project. Overall, the impacts of the NPCII Project will be substantially similar to those of the previously proposed approved residential building. Trellis will also request the BRA for the issuance of a revised Adequacy Determination for the NPCII Project to be supported by the technical studies presented in the NPCII submission.

Please contact us with any questions concerning the NPCII Project. On behalf of the entire project team, we look forward to working with you on this Project, which we believe will be a significant addition to Mission Hill, the Tremont Street mixed use neighborhood corridor, and the City of Boston as a whole.

Sincerely,
TRELLIS GROUP LLC

A handwritten signature in dark ink, appearing to be 'JS', written over a horizontal line.

Jason Savage, Manager

A handwritten signature in dark ink, appearing to be 'MW', written over a horizontal line.

Mitch Wilson, Manager

Attachment: **Figure 1. Project Locus, Clutch Works Project**

Cc: James Tierney, Esq., Boston Redevelopment Authority
Melanie Savage, Principal, Trellis Group LLC
Mitch Fischman, Mitchell L. Fischman Consulting LLC
Bud Shadrawy, Shadrawy & Rabinovitz
Russell Preston, Principle Group
David Hacin, Principal, Hacin & Associates
Susan Tracy, The Strategy Group



Not to scale.

**Figure 1-1.
Project Locus**

APPENDIX C - AIR QUALITY APPENDIX

APPENDIX C

AIR QUALITY ANALYSIS APPENDIX NOTICE OF PROJECT CHANGE

1480-1486 TREMONT STREET

<u>Pages</u>	<u>Contents</u>
2 - 3	MOBILE6.2 Output for Garage Analysis (vehicles exiting garage) 2013 CO
4	Garage Emissions Analysis Calculations - AM and PM Peak Hour
5 - 7	AERMOD Model Output

```

*****
* MOBILE6.2.03 (24-Sep-2003) *
* Input file: 3512_13.INP (file 1, run 1). *
*****
* *** Winter 2013 ***

* Reading Registration Distributions from the following external
* data file: 2005_REG.D
M 49 Warning:
      1.00      MYR sum not = 1. (will normalize)
M 49 Warning:
      0.998      MYR sum not = 1. (will normalize)
M 49 Warning:
      0.998      MYR sum not = 1. (will normalize)
M 49 Warning:
      0.998      MYR sum not = 1. (will normalize)
M 49 Warning:
      0.998      MYR sum not = 1. (will normalize)
M 49 Warning:
      1.00      MYR sum not = 1. (will normalize)
M 49 Warning:
      1.00      MYR sum not = 1. (will normalize)
M 49 Warning:
      0.999      MYR sum not = 1. (will normalize)
M 49 Warning:
      0.998      MYR sum not = 1. (will normalize)
M 49 Warning:
      1.00      MYR sum not = 1. (will normalize)
M 49 Warning:
      0.999      MYR sum not = 1. (will normalize)
M 49 Warning:
      1.00      MYR sum not = 1. (will normalize)
M 49 Warning:
      1.00      MYR sum not = 1. (will normalize)
M 49 Warning:
      1.00      MYR sum not = 1. (will normalize)
M 49 Warning:
      1.00      MYR sum not = 1. (will normalize)
M 49 Warning:
      1.00      MYR sum not = 1. (will normalize)

* Reading I/M program description records from the following external
* data file: 09NEWIM.D
* 15 Year Exemption Age
* New Annual OBD Exhaust I/M program for Light Duty MY 1996 through 2007 vehicles <=8,500 lb GVWR
* New Annual OBD Exhaust I/M program for Light Duty and Medium duty MY 2008 and later <=14,000 lb GVWR
* New Annual OBD Evap I/M program for Light Duty MY 1996 through 2007 vehicles <=8,500 lb GVWR
* New Annual OBD Evap I/M program for for Light Duty and Medium duty MY 2008 and later <=14,000 lb GVWR
M601 Comment:
      User has enabled STAGE II REFUELING.

* Reading 94+ LEV IMPLEMENTATION SCHEDULE from the following external
* data file: MA_LEV2.D

Reading User Supplied Tier2 Exhaust bin phase-in fractions

      Data read from file: LEV2EXH.D

Reading User Supplied Tier2 EVAP phase-in fractions

```

Data read from file: LEV2EVAP.D

Reading User Supplied Tier2 50K certification standards

Data read from file: LEV2CERT.D

M616 Comment:

User has supplied post-1999 sulfur levels.

M614 Comment:

User supplied diesel sale fractions.

* #####

* 2013 - Winter at 5 mph

* File 1, Run 1, Scenario 1.

* #####

M583 Warning:

The user supplied arterial average speed of 5.0
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

M112 Warning:

Wintertime Reformulated Gasoline Rules Apply

*** I/M credits for Tech1&2 vehicles were read from the following external
data file: TECH12.D

M 48 Warning:

there are no sales for vehicle class HDGV8b

HDDV DEFEAT DEVICE EFFECTS ARE PRESENT. THE REBUILD FRACTION IS 0.10.

LEV phase-in data read from file MA_LEV2.D

Calendar Year: 2013

Month: Jan.

Altitude: Low

Minimum Temperature: 70.4 (F)

Maximum Temperature: 93.7 (F)

Absolute Humidity: 75. grains/lb

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: Yes

Evap I/M Program: Yes

ATP Program: No

Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All
Veh										
GVWR:		<6000	>6000	(All)						
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-										
VMT Distribution:	0.3030	0.4092	0.1607		0.0364	0.0002	0.0015	0.0852	0.0037	
1.0000										
-										
-										
Composite Emission Factors (g/mi):										
Composite CO :	7.62	6.70	7.39	6.89	22.26	3.089	1.202	3.596	71.30	
7.624										

-

INDOOR GARAGE ANALYSIS PROGRAM

PROJECT: 1480-1486 TREMONT STREET GARAGE PEAK AM HOUR - YEAR: 2013

DISTANCE IN: 75.0 METERS
DISTANCE OUT: 75.0 METERS

NUMBER OF EXIT LANES: 1 LANE(S)
TOTAL EXIT VOLUME: 20 VEH/HOUR

CO RATE: 7.62 GRAMS CO/MILE

SPEED IN GARAGE: 5.0 M.P.H.

VENT CFM: 16,728 CFM

TOTAL CO EMISSIONS = 0.24 GRAMS/MIN = .0040 GRAMS/SEC
TOTAL VENTILATION = 474 CU. M/MIN

PEAK 1-HOUR CO CONCENTRATION FROM VEHICLES: 0.44 PPM

PROJECT: 1480-1486 TREMONT STREET GARAGE PEAK PM HOUR - YEAR: 2013

DISTANCE IN: 75.0 METERS
DISTANCE OUT: 75.0 METERS

NUMBER OF EXIT LANES: 1 LANE(S)
TOTAL EXIT VOLUME: 39 VEH/HOUR

CO RATE: 7.62 GRAMS CO/MILE

SPEED IN GARAGE: 5.0 M.P.H.

VENT CFM: 16,728 CFM

TOTAL CO EMISSIONS = 0.47 GRAMS/MIN = .0078 GRAMS/SEC
TOTAL VENTILATION = 474 CU. M/MIN

PEAK 1-HOUR CO CONCENTRATION FROM VEHICLES: 0.86 PPM

Appendices

DATE											NETWORK	
GROUP ID		AVERAGE CONC		(YYMMDDHH)		RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)				OF TYPE	GRID-ID	

ALL	HIGH	1ST HIGH VALUE IS	38.11913	ON	10010707: AT (227151.81,	899329.91,	0.00,	0.00,	0.00)	GP	POLAR1
	HIGH	2ND HIGH VALUE IS	38.11913	ON	10010807: AT (227151.81,	899329.91,	0.00,	0.00,	0.00)	GP	POLAR1

```

*** RECEPTOR TYPES:  GC = GRIDCART
                        GP = GRIDPOLR
                        DC = DISCCART
                        DP = DISCPOLR

*** AERMOD - VERSION 12345 ***   *** 1480-1486 Tremont Street
                        *** CO Modeling Analysis
***                               *** 02/06/13
***                               *** 14:53:26
***                               PAGE 5

**MODELOPTs:  NonDEFAULT CONC      FLAT      FLGPOL      NOCHKD
SCREEN      NoUrbTran

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of      0 Fatal Error Message(s)
A Total of      0 Warning Message(s)
A Total of      0 Informational Message(s)

A Total of      18504 Hours Were Processed

A Total of      0 Calm Hours Identified

A Total of      0 Missing Hours Identified ( 0.00 Percent)

***** FATAL ERROR MESSAGES *****
*** NONE ***

```

APPENDIX D - NOISE APPENDIX

APPENDIX D
NOISE ANALYSIS APPENDIX
NOTICE OF PROJECT CHANGE

1480-1486 TREMONT STREET

<u>Page</u>	<u>Contents</u>
2	Figure 1: Modeling Receptor Locations
3	Cadna Noise Modeling Results

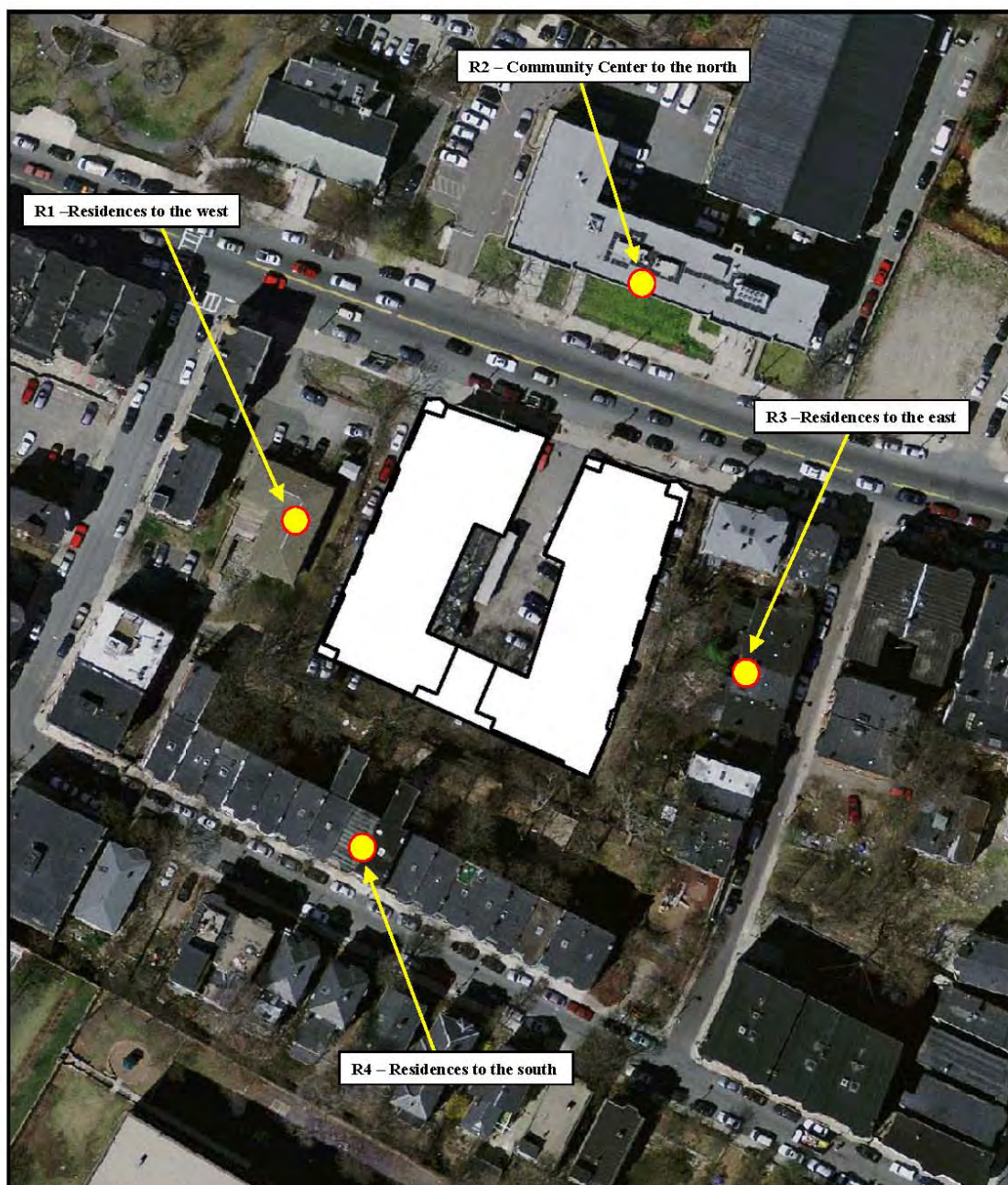


Figure 1
Modeling Receptor Locations
1486 Tremont Street Project
Boston, MA



Cadna Noise Modeling Results

Results with 4' tall parapet wall

	ID	Sound Level (dBA)	Height (m)	Coordinates		
				X (m)	Y (m)	Z (m)
Community Center	Community_Center	43	12.2	233097.2	898047.6	28.19
Row Houses to the South	Delle Avenue	42.3	9.1	233051.5	897947.3	29.93
Residences to the West	Burney Street	40.1	9.1	233036.3	898005.6	28.53
Residences to the East	Sewall Street	38.4	9.1	233119.5	897979.4	23.9

Octave Band Results for Scenario with parapet

Community Center

Frequency	<u>31.5</u>	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>
Level	47.7	47.3	49.2	43.1	42.9	36.5	28.8	22.2	13.9

Row Houses to the South

Frequency	<u>31.5</u>	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>
Level	44.1	44.6	48.5	42.2	41.9	36.2	29.3	22.6	14.5

Residences to the West

Frequency	<u>31.5</u>	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>
Level	45.2	45.5	48.3	40	38.8	34.6	25.8	17.9	12.5

Residences to the East

Frequency	<u>31.5</u>	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>
Level	45.6	44.8	46.8	39.8	38.2	29.7	20.9	13.9	6.2

APPENDIX E - TRIP GENERATION CALCULATIONS

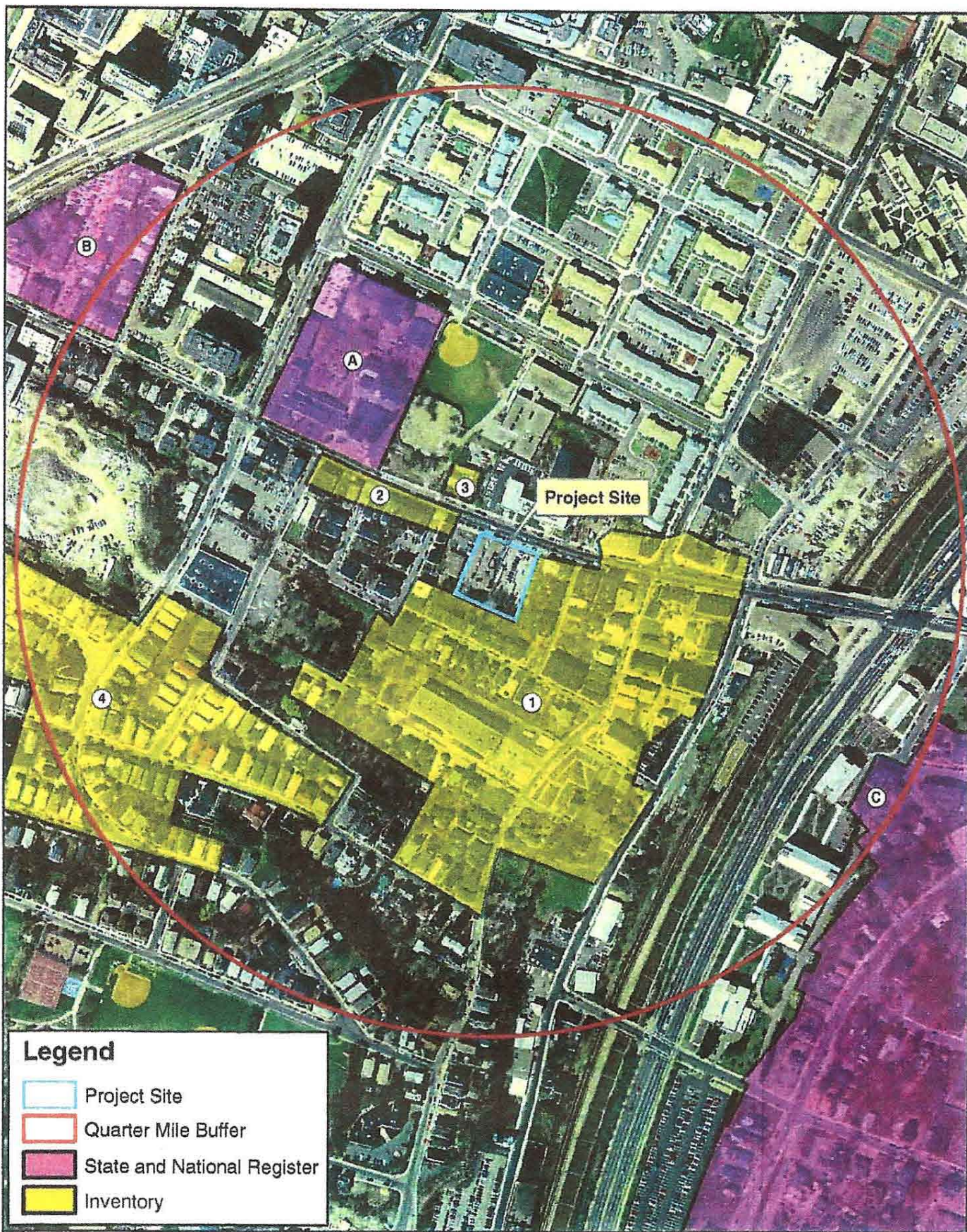
1486 Tremont Street
Detail Trip Generation
Howard/Stein-Hudson Associates

June 24, 2013

Component	Size	Category	Trip Rates (Trips/ksf or unit)	Unadjusted Vehicle Trips	Capture Rate	Less capture trips	Assumed national vehicle occupancy rate ¹	Converted to Person trips	Transit Share ²	Transit Trips	Walk/Bike/ Other Share ²	Walk/ Bike/ Other Trips	Vehicle Share ²	Vehicle Person Trips	Assumed local vehicle occupancy rate ³	Total Adjusted Vehicle Trips
Daily Trip Generation																
Residential - Apartment⁴																
	66	Total	7.93	524		524	1.1	592	15%	89	38%	225	46%	272	1.2	231
	units	In	3.97	262		262	1.1	296	15%	44	38%	112	46%	136	1.2	115
		Out	3.97	262		262	1.1	296	15%	44	38%	112	46%	136	1.2	115
Retail⁵																
	6.5	Total	176.77	1149	25%	862	1.8	1,551	21%	326	44%	683	35%	543	1.8	302
	KSF	In	88.39	575	25%	431	1.8	776	21%	163	44%	341	35%	271	1.8	151
		Out	88.39	575	25%	431	1.8	776	21%	163	44%	341	35%	271	1.8	151
Total		Total		1,673		1,385		2,143		415		907		815		533
		In		836		693		1,071		207		454		408		266
		Out		836		693		1,071		207		454		408		266
AM Peak Hour Trip Generation																
Residential - Apartment⁴																
	66	Total	0.55	36		36	1.1	41		8		18		15	1.2	13
	units	In	0.11	7		7	1.1	8	21%	2	39%	3	39%	3	1.2	3
		Out	0.44	29		29	1.1	33	17%	6	45%	15	37%	12	1.2	10
Retail⁵																
	6.5	Total	4.53	29	25%	22	1.8	40		11		18		11	1.8	7
	KSF	In	2.81	18	25%	14	1.8	25	29%	7	43%	11	28%	7	1.8	4
		Out	1.72	11	25%	8	1.8	15	23%	3	50%	8	27%	4	1.8	3
Total		Total		65		58		80		19		36		26		20
		In		25		21		33		9		14		10		7
		Out		40		37		48		10		23		16		13
PM Peak Hour Trip Generation																
Residential - Apartment⁴																
	66	Total	0.82	54		54	1.1	61		11		26		23	1.2	19
	units	In	0.53	35		35	1.1	40	17%	7	45%	18	37%	15	1.2	12
		Out	0.29	19		19	1.1	21	21%	4	39%	8	39%	8	1.2	7
Retail⁵																
	6.5	Total	14.77	96	25%	72	1.8	130		34		60		36	1.8	20
	KSF	In	7.09	46	25%	35	1.8	62	23%	14	50%	31	27%	17	1.8	9
		Out	7.68	50	25%	37	1.8	67	29%	20	43%	29	28%	19	1.8	10
Total		Total		150		126		191		45		86		59		39
		In		81		70		102		22		49		31		21
		Out		69		56		89		24		37		27		18

- Notes:
1. 2009 National vehicle occupancy rates - 1.1: home to work; 1.8: shopping; 2.2: social and recreation
 2. Mode shares based on 2000 Census Data & BTD Data for Area 5.
 3. Local vehicle occupancy rates based on 2000 Census data.
 4. ITE Trip Generation, 9th Edition, LUC 220 (Apartment), fitted curve equation
 5. ITE Trip Generation, 9th Edition, LUC 820 (Shopping Center), average rate.

APPENDIX F – HISTORIC RESOURCES FIGURE FROM PNF



Legend

- Project Site
- Quarter Mile Buffer
- State and National Register
- Inventory

Scale 1:4,200
1 inch = 350 feet

125 0 125 250


 Feet



Figure 5-1
Historic Resources
1486 Tremont Street
Boston, Massachusetts

Basemap: 2001 Orthophotography, MassGIS

Epsilon
CONSULTING

APPENDIX G – CORRESPONDENCE AND LETTERS OF SUPPORT

- James Farrow, 49 Delle Avenue
- Elizabeth & Bill Commerford, 47 Delle Avenue
- John Toner, 53 Delle Avenue
- Chad Rosner, 43 Delle Avenue #3
- Robert Francey, 40 Delle Avenue
- Anthony Macchi, 30 Delle Avenue
- Kaitlin McCutcheon, 30 Delle Avenue
- Richard Rouse, Executive Director, Mission Hill Main Streets
- Lois Regestein, 6 Worthington Street, Chairman, Mission Hill Triangle Architectural District Commission
- Michel Soltani, 1575 Tremont Street, Owner of The Mission Bar and Grill, 724 Huntington Avenue
- Matthew Postal, Owner of Lilly's Gourmet Pasta Express, 1528 Tremont Street

Peter.Meade.bra@cityofboston.gov

Peter Meade, Director
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

RE: Support for 1480-1486 Tremont Street, Mission Hill

Dear Director Meade:

I own and live at 49 Delle Ave which abuts the 1480-1486 Tremont Street Project in Mission Hill, which we call the "Clutch Works". I have lived at 49 Delle since 1983 and am currently president of the Mission Hill Health Movement and an informal group the Delle Ave Neighborhood Association. I am writing solely as a Mission Hill resident and not in any official capacity.

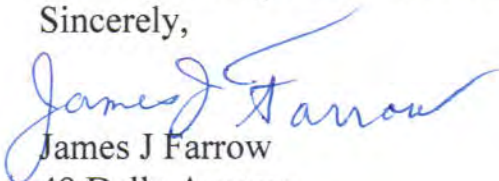
The current proposal submitted by Jason Savage and his associates is a stronger and more thoughtful proposal than the first proposal submitted by a group called Aspen Associates. The proposed project will have a pleasant streetscape which blends and fits the current architecture of the neighborhood. It will also increase the retail space and create a more interesting commercial corridor between Roxbury Crossing and Brigham Circle.

The current developers have sought out the abutters and neighbors and listened to and made efforts to address our concerns. Two of the three meetings I attended were organized for abutter and neighbors, an excellent example of effective outreach for the project. The neighbors rightly have concerns about implementation of the "no student" leasing clause, and the impact of blasting and other construction related disruptions. Given the positive level of outreach and dialogue achieved to date, I feel confident that the developer will continue to be responsive to our concerns and needs.

I support the developer and his proposed changes to this project and urge approval of the permits needed for advancement of this project.

Thank you for your consideration.

Sincerely,


James J Farrow
49 Delle Avenue
Mission Hill, 02120

February 21, 2013

Peter.Meade.bra@cityofboston.gov

Peter Meade, Director
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

RE: Support for 1480-1486 Tremont Street, Mission Hill

Dear Director Meade:

I am a resident owner/abutter to the 1480-1486 Tremont Street Project in Mission Hill, which we call the "Clutch Works" site. Over the years my neighbors and I have made every effort to understand and comment upon the various proposals to develop the site. Beyond the concerns regarding the physical impacts on our residential properties we also have been most concerned that it contribute thoughtfully to the scale of retail and residential revitalization of this section of Tremont Street and our Mission Hill neighborhood. I believe the current proposal responds well to those concerns and we have been assured that a "no student" leasing clause will be adhered to. Given that the developer is local and has reached out to us as he has to date, we look forward to continuing to be active in this process and in monitoring the actual construction impacts.

I support the proposed changes to this project and its advance through the permitting process.

Thank you for your consideration.

Sincerely,
Elizabeth Commerford
47 Delle Avenue
Mission Hill, 02120

POST SCRIPT:

WORKING WITH ASPEN... I EXPRESSED STRONG CONCERN ABOUT THE ABILITY OF THE DELLE AVENUE ABUTTERS TO WITHSTAND THE SHOCKS TO OUR PRE 1875 MORTAR ESPECIALLY WHEN ASPEN'S BORINGS DISCLOSE BED-ROCK CLOSE TO SURFACE ESPECIALLY CLOSE TO THE HIGHER AVENUE NUMBERS, 2 TO 3FT BEHIND MY HOUSES. I APPRECIATE YOUR CONCERN WITH THIS WILL DOCUMENT THIS CONDITION AND I LOOK FORWARD TO YOUR QUALIFIED INSPECTION. *Elizabeth Commerford*



A Note From
John Toner

I AM WRITING IN SUPPORT
OF THE PROJECT AT THE
SITE OF THE FORMER BOSTON
CLUTCH WORKS. I AM A LIFE-
LONG MISSION HILL RESIDENT
AND MY FAMILY HAS OWNED
THE PROPERTY THAT
ABUTTS THE PROJECT
SITE FOR OVER 80 YEARS.
JASON HAS PROVED FROM
HIS PREVIOUS PROJECTS
ON MISSION HILL THAT HE
IS COMMITTED TO A QUALITY
JOB. THANK YOU

 **mspca**
Kindness and Care for Animals
www.mspca.org

John Toner

February 19, 2013

Peter.Meade.bra@cityofboston.gov

Peter Meade, Director
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

RE: Support for 1480-1486 Tremont Street, Mission Hill

Dear Director Meade:

As a resident and condo owner, I write in support of the proposed project at 1480-1486 Tremont Street, the so-called "Clutch Works" building.

Plans for a mixed-use development at the site were approved in 2006, but the project was never built. Local developers, Trellis Group, LLC, acquired the site and have modified the approved plans. The new design proposed by local architects, Hacin and Associates, is more appropriately scaled, will have less impact on abutters than the original approved plans, provides more open space, and creates ground floor retail more in keeping with the neighborhood. Additionally, the developers have agreed to honor the "no student" leasing clause for the development. This transit-oriented housing on Tremont Street, anchored by One Brigham Circle and the proposed Parcel 25, will play a critical role in helping to revitalize Tremont Street.

I urge you to support the proposed changes to this project and allow this project to advance through the permitting process.

Thank you for your consideration.

Sincerely,



Chad Rosner

Feb 19 2013

Peter.Meade.bra@cityofboston.gov

Peter Meade, Director
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

RE: Support for 1480-1486 Tremont Street, Mission Hill

Dear Director Meade:

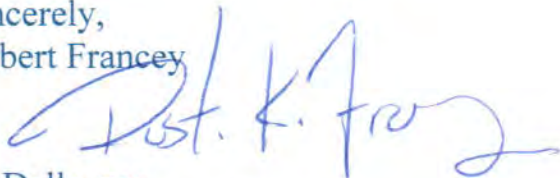
As a lifelong resident and community leader of Mission Hill, I write in support of the proposed project at 1480-1486 Tremont Street, the "Clutch Works" site .

Plans for a mixed-use development at the site were approved in 2006, but the project was never built. Local developers, Trellis Group, LLC, acquired the site and have modified the approved plans. The new design proposed by local architects, Hacin and Associates, will have a slightly modified yet beneficial impact on abutters than the original approved plans, providing more open space, and creates ground floor retail more in keeping with the neighborhood. Additionally, the developers have agreed to honor the "no student" leasing clause for the development. This transit-oriented housing on Tremont Street, anchored by One Brigham Circle and the proposed Parcel 25, will play a critical role in helping to revitalize Tremont Street.

I urge you to support the proposed changes to this project and allow this project to advance through the permitting process.

Thank you for your consideration.

Sincerely,
Robert Francey

A handwritten signature in blue ink, appearing to read "Robt. K. Francey", written over the printed name.

40 Delle ave
Boston, Mass. 02120
617-835-6998

February 10, 2013

Peter Meade, Director
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

RE: Support for 1480-1486 Tremont Street, Mission Hill

Dear Director Meade,

As a resident of Delle Avenue in the Mission Hill neighborhood, I am writing in support of the proposed project at 1480-1486 Tremont Street, the so-called "Clutch Works" building.


Plans for a mixed-use development at the site were approved in 2006 without much community input, luckily the project was never built as designed. It came to my attention several months ago that local developers, Trellis Group, LLC, acquired the site and had modified the approved plans.

The developer reached out to the surrounding community and held several meetings to ask our opinion and incorporate our concerns. The new design presented by the development group was designed by local architects, Hacin and Associates. The design, to my relief, is more appropriately scaled, will have less impact on abutters than the original approved plans, provides more open space, and creates much needed ground floor retail crucial in reinforcing the sense of neighborhood we work so hard to maintain. Proactively, the developers included a "no student" leasing clause for the development. This transit-oriented housing on Tremont Street, anchored by One Brigham Circle and the proposed Parcel 25, will play a critical role in helping to revitalize Tremont Street.

I ask you, like myself, to support the proposed changes to this project and allow this project to advance through the permitting process.

Thank you for your consideration.

Sincerely,



Anthony Macchi
30 Delle Avenue
Boston, MA.

February 21, 2013

Peter Meade, Director
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

RE: Support for 1480-1486 Tremont Street, Mission Hill

Dear Director Meade,

As a resident of Delle Avenue in the Mission Hill neighborhood, I am writing in support of the proposed residential project at 1480-1486 Tremont Street, or as we like to call it, the "Clutch Works" building.

Throughout the process of design, the development group has made a real effort to reach out to our neighborhood. They have held meetings to gather our opinions and concerns and presented us with their progress and updates when necessary. I believe the finalized plan, designed by local architects Hacin and Associates, is more appropriately scaled, will have less impact on abutters than the original approved plans, will provide more open space, and offer a large retail space currently unavailable on this portion of Tremont Street. The developers also included a "no student" leasing clause for the project which, I believe, will assist in sustaining the neighborhood atmosphere. This transit-oriented housing on Tremont Street will play a critical role in helping to revitalize Tremont Street and our community as a whole.

I ask you to support the proposed changes to this project and allow this project to advance through the permitting process.

Thank you for your time and consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Kaitlin McCutcheon", with a long horizontal flourish extending to the right.

Kaitlin McCutcheon
30 Delle Avenue #3
Boston, MA.

MissionHillMainStreets

1534 Tremont Street / Roxbury, Mass. 02120
phone 617.427.7399 / fax 617.427.3003
www.missionhillmainstreets.org

Peter Meade, Director
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

February 19, 2013

Dear Peter,

This is a letter of support for the proposed project at 1480-1486 Tremont Street in Mission Hill commonly referred to as the "Clutch Works" building.

The original plans for this site were approved in 2006 but the project was not built. In the interim, a local development team, Trellis Group, LLC, acquired the site and have made modifications to the original design. This new plan by Hacin and Associates is a much better design with more open space, less impact on abutters and a better overall scale for the area. Trellis Group has agreed to honor the "no student" leasing clause of the original proposal and plans to create ground floor retail for the project. This transit-oriented housing development will greatly enhance and revitalize the appearance of the neighborhood.

I sincerely hope that the BRA will allow this project to advance through the permitting process and I urge your support for these proposed changes. Thanking you for your consideration, I remain

Sincerely yours,



Richard J. Rouse
Executive Director

6 Worthington Street, Boston 02120
February 18, 2013.

Peter.Meade.bra@cityofboston.gov

Peter Meade, Director
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

RE: Support for 1480-1486 Tremont Street, Mission Hill

Dear Director Meade:

As a longtime resident and community leader of Mission Hill, I write in full support of the proposed project at 1480-1486 Tremont Street, where the former A&P and present-day "Clutch Works" is located.

I am quite honestly impressed with the shape of this proposed development. Plans for a mixed-use development at the site were approved in 2006, but the project was never built. Local developers, Trellis Group, LLC, acquired the site and have modified the approved plans with thoughtful changes that demonstrate fully what a committed developer can accomplish.

The new design proposed by local architects, Hacin and Associates, is more appropriately scaled to the site and the neighborhood than the former plan. By dividing the building into two sections with a landscaped driveway between, the new development relates more suitably to other structures on this main street of Mission Hill. Fewer bedrooms, fewer parking spaces (underground and thus not even visible), and more retail space show a profound sensitivity to the needs and wishes of the residents of the area. By reducing the rear wall to three visible stories, reducing the fall-off, and with the "green space" planned for the top of the parking area at the rear, the Delle Avenue abutters have a more pleasing view and a friendlier sense of their new neighbor.

The abutters, and indeed all of Mission Hill, will be pleased by the commitment of the developers to honor the agreement not to lease to undergraduate students, and a further agreement to write this restriction into the deed. Residents of Mission Hill have become traumatized by invading hordes of students from nearby educational institutions where enrollments grow without reasonable limits.

The streetscape will benefit handsomely from a fresh start to a central main-street location that has for years projected more of an industrial look. The new development - street-oriented, pedestrian-friendly, well-proportioned, and built of attractive materials - will give a currently neglected section of the street a vital presence that would make any urban planner proud.

I urge you to support the proposed changes to this project and allow this project to advance through the permitting process. Thank you for your consideration.

Sincerely,



Lois Regestein, Mission Hill resident since 1970
Chairman, Mission Hill Triangle Architectural District Commission
Founding Member, Friends of Historic Mission Hill (FHHM) Advocacy Group

Michel Soltani
1575 Tremont Street
Boston, MA 02120
(617) 438-1512

February 28, 2013

Peter.Meade.bra@cityofboston.gov

Peter Meade, Director
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

RE: Support for 1480-1486 Tremont Street, Mission Hill

Dear Director Meade:

I am a Mission Hill resident and business owner, and have been active in the Mission Hill Community for over 21-years. I am an owner of the Mission Bar and Grill and have owned other businesses in Mission Hill. I write in support of the proposed project at 1480-1486 Tremont Street, the so-called "Clutch Works" building.

Plans for a mixed-use development at the site were approved in 2006, but the project was never built. Local developers, Trellis Group, LLC, acquired the site and have modified the approved plans. The new design proposed by local architects, Hacin and Associates, is more appropriately scaled, will have less impact on abutters than the original approved plans, provides more open space, and creates ground floor retail more in keeping with the neighborhood. As an active business owner in the community, I know this development will make Tremont Street more pedestrian friendly, and will attract more businesses to the neighborhood, and should improve business activity to the businesses currently in the area. Additionally, the developers have agreed to honor the "no student" leasing clause for the development. This transit-oriented housing on Tremont Street, anchored by One Brigham Circle and the proposed Parcel 25, will play a critical role in helping to revitalize Tremont Street.

I urge you to support the proposed changes to this project and allow this project to advance through the permitting process.

Thank you for your consideration.

Sincerely,

Michel Soltani

A handwritten signature in black ink, reading "Michel Soltani", with a large, sweeping flourish underneath.

Matthew Postal
Lilly's Gourmet Pasta Express, Mission Hill
1528 Tremont Street
Boston, MA 02120
(617) 427-8080

March 1, 2013

Peter.Meade.bra@cityofboston.gov

Peter Meade, Director
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

RE: Support for 1480-1486 Tremont Street, Mission Hill

Dear Director Meade:

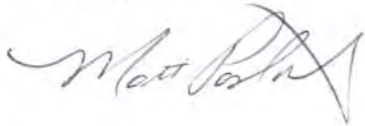
I am a Mission Hill business owner of Lilly's Gourmet Pasta Express, and have been active in the Mission Hill Community for 3-years. My take-out restaurant was awarded "Mission Hill Business of the Year" in 2010 and was also awarded in 2011 "Best Heathiest Food in Mission Hill." I write in support of the proposed project at 1480-1486 Tremont Street, known as the "Clutch Works" site.

At this site, plans for a mixed-use development were approved in 2006, but the project was never built. Local developers, Trellis Group, LLC, have obtained control of the site and have modified the approved plans. The new design is appropriately scaled, will have less impact on abutters than the original approved plans, provides more open space, and creates ground floor retail more in keeping with the neighborhood. I know this developer will do a great job, for they are also my landlord. The previous interior and exterior retail facade of my location was in a total state of disrepair. These developers made things happen by transforming my location to a very appealing corner storefront, which has been an attributing factor to my business's success. This proposed project will make Tremont Street more pedestrian friendly and will promote more business activity in Mission Hill. This transit-oriented housing on Tremont Street, anchored by One Brigham Circle and the proposed Parcel 25, will play a critical role in helping to revitalize Tremont Street.

I urge you to support the proposed changes to this project and allow this project to advance through the permitting process.

Thank you for your consideration.

Sincerely,



Matthew Postal



TRELLIS
GROUP

 **Mitchell L. Fischman**
CONSULTING LLC