Notice of Project Change

Copley Place Retail Expansion and Residential Addition

Submitted to:
BOSTON REDEVELOPMENT AUTHORITY
One City Hall Square
Boston, MA 02201

Submitted by:
COPLEY PLACE ASSOCIATES, LLC
C/O SIMON PROPERTY GROUP
225 W. Washington Street
Indianapolis, IN 46204

Prepared by:
COLLABORATIVE PARTNERS, INC.
330 Congress Street
Boston, MA 02210

In Association with:
Elkus-Manfredi Architects
Howard/Stein-Hudson Associates
Rackemann, Sawyer & Brewster
Epsilon Associates, Inc.
Haley & Aldrich
Parsons Brinckerhoff
McNamara / Salvia
Vanderweil Engineers
Carol R. Johnson Associates

July 17, 2013

SIMON® | PROPERTY GROUP, INC.

July 16, 2013

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

Re: Copley Place Retail Expansion and Residential Addition; Notice of Project Change

Dear Director Meade:

Simon Property Group is submitting the enclosed Notice of Project Change ("NPC") pursuant to Article 80A-6 of the Boston Zoning Code (the "Code") to apprise the Boston Redevelopment Authority ("BRA") of changes to the Copley Place Residential Addition and Retail Expansion Project (the "Project"), which was approved by the BRA Board on November 17, 2011. We respectfully request your confirmation that the changes described in the NPC will not increase the impacts of the Project and that no further review is required under Article 80B of the code.

Please do not hesitate to contact me should you have any questions regarding the Project.

Thank you for your time and attention.

Very truly yours,

SIMON PROPERTY GROUP

Patrick M. Peterman
Vice President Development & Asset Intensification

225 West Washington Street
Indianapolis, IN 46204
317.636.1600 | www.simon.com

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Chapter 1

Project Summary

1 Project Summary

1.1 Introduction

Simon Property Group is submitting this Notice of Project Change in connection with the Article 80B approval of the Draft Project Impact Report and Article 80C approval of the Planned Development Area No.84 Development Plan, both granted by the Boston Redevelopment Authority ("BRA") on November 17, 2011 for the Project known as Copley Place Retail Expansion and Residential Addition.

History of Project Approvals

On March 19, 2008, Simon Property Group filed a Letter of Intent in accordance with the BRA's policy regarding Provision of Mitigation by Development Projects in Boston. Subsequently, and in accordance with the MOU, nominations were solicited from neighborhood community organizations and constituencies for the purpose of forming a Citizens Advisory Committee ("CAC"). Nomination request letters were sent in April 2008 and in May 2008, the Mayor appointed an eleven (11)-member CAC.

On June 23, 2008, Simon Property Group filed a Project Notification Form ("PNF") for Large Project Review under Article 80 of the Code for the Project. On August 25, 2008, The BRA issued a Scoping Determination setting forth the submission requirement for a Draft Project Impact Report ("DPIR"). In response to the Scoping Determination, Simon Property Group filed a Draft Project Impact Report ("DPIR") on August 15, 2011. On November 17, 2011, the BRA voted authorization for the Director to issue a Preliminary Adequacy Determination waiving the requirement for further review and to make the following findings: that the DPIR adequately describes potential impacts arising for the Copley Place Retail Expansion and Residential Addition and provides sufficient mitigation measures to minimize these impacts, and waives further review and that the Project successfully completed the Article 80B process subject to continuing design review by the BRA. The BRA also authorized the Director to issue a Certification of Compliance upon successful completion of the Article 80 process, and enter into various agreements, including a Cooperation Agreement, an Affordable Housing Agreement, a Boston Residents Construction Employment Plan and any and all other agreements and documents which the Director deems appropriate and necessary in connection with the Proposed Project and Development Plan.

Additionally, on September 16, 2011, Simon Property Group filed a Development Plan for Planned Development Area No. 84, the Copley Place Retail Expansion and Residential Addition Project (the "PDA Plan"). Notice of receipt by BRA of the PDA Plan was published in the Boston Herald on September 16, 2011, which initiated a 45-day public comment period with a closing date of October 31, 2011. On November 17, 2011, the BRA approved the Development Plan and recommended to the Zoning Commission the approval of the Copley Place Retail Expansion and Residential Addition

Development Plan and the designation of Planned Development Area No. 84. On December 14, 2011, The Zoning Commission approved the Copley Place Retail Expansion and Residential Addition Development Plan and the designation of Planned Development Area No. 84.

1.2 Summary of Prior Project

The prior Project consisted of two central features: a retail base extension into the plaza at Stuart and Dartmouth Streets and a residential building positioned atop the retail base. The Project included:

- 115,000 square feet of renovations to the existing Neiman Marcus;
- 115,000 square feet of new retail; and
- 670,000 square feet of new residential use and associated support areas

The Project's retail component was proposed to be constructed directly adjacent to the existing Neiman Marcus location and included the renovation and expansion of the existing Neiman Marcus space, creating a more significant presence for the store, and the addition of retail and restaurant programming at Street Level, Mezzanine Level, Gallery Level 1, and Gallery Level 2 of Copley Place. The Project also included a new four-season gathering space for the public to enjoy and associated support areas.

The Project's residential component, approximately 670,000 square feet, included the construction of a 47-story residential building consisting of a Sky Lobby with residential amenities, support programming, and up to 318 residential condominium units, including 42 on-site affordable units.

The Project included improvements to Southwest Corridor Park between Harcourt & Dartmouth Street, improvements for pedestrian access and ADA accessibility, and improvements to the Stuart Street/Dartmouth Street intersection.

1.3 Proposed Project Change

This Notice of Project Change is being filed in connection with certain modifications to the unit composition of the residential building as well as minor refinements to the building design.

Simon Property Group remains the Project Proponent. The Project site continues to be located at the southwest corner of Stuart and Dartmouth Streets on a site that is integral to the original Copley Place Development built in the 1980s. It is immediately adjacent to office, commercial and residential uses, and has immediate access to a variety of mass transit and vehicular transportation systems.

See Figure 1-1 Locus Map

In recent months, the Simon Property Group team and development advisors have further studied the residential program and the evolving residential housing market to

ensure that when completed, this Project successfully meets the needs of Boston and its residents. In response to the market dynamics, the refined plans now propose to increase the residential units and adjust the composition to include both condominium and apartment residences by reconfiguring the interior space and floor plans, within the approved building height of 569'. The residences will now include approximately 109 condominiums and approximately 433 residential apartments. The advancement of the building design and construction systems also allows for incorporation of 5 additional floors within the approved building height, with a slight reduction in the overall massing of the building.

The Proponent conducted shadow, wind, transportation and parking studies to analyze any potential environmental impacts as a result of the Project refinements. In all studies the Project refinements show no greater environmental impacts than the previously approved Project and in some areas, such as shadow, the studies show a reduction in the overall impact.

See Chapter Three, Transportation, and Chapter Four, Environmental Protection, for more information.

Simon Property Group is committed to providing the following public benefits:

- 71 on-site units of affordable housing;
- Contribution to support the City's Public Art initiative of up to $1,000,000;
- A $250,0000 contribution to the Southwest Corridor Park Conservancy;
- A $250,000 contribution to the Friends of Copley Square;
- Improvements to Southwest Corridor Park between Harcourt & Dartmouth Street, including a landscape plan that will provide unobstructed sight lines to community retail space on both sides of the Southwest Corridor. The improvements will include active uses in the landscape to further attract pedestrian uses and incorporate elements identifying the Southwest Corridor Park;
- Improvements to the public realm surrounding the site including increased transparency of the proposed façade, improved visual connections between the interior and exterior, enhanced public realm amenities and landscaping, and new street-level retail and restaurant destinations;
- Improvements to the Stuart Street/Dartmouth Street intersection;
- Improvements for pedestrian access and ADA accessibility;
- Supporting the growing trend of cycling for commuting and fun by allocating indoor secure bicycle storage per residential unit and incorporating additional bicycle racks into the external spaces;

- Design and construction using sustainable principles, supporting energy-efficiency;
- The creation of approximately 1,700 construction jobs and 250-270 permanent jobs;
- The generation of approximately $7.2 million in annual property tax revenues to the City of Boston; and
- The generation of approximately $1,023,100 in housing linkage funds and $204,100 in jobs linkage.

1.3.1 Project Dimensions

Project Element	Approved Approximate Dimension	Proposed Approximate Dimension
A. Existing Conditions		
Project Site – Entire Central Area	6.08 acres (264,950 sf)	6.08 acres (264,950 sf)
Existing Retail, Office & Parking within Central Area	1,696,950 sf	1,696,950 sf
B. New Project Components		
New Residential Component	670,000 sf ▪ Approximately 318 units. ▪ Library and Fitness Spa ▪ Supporting Functions	680,000 sf ▪ Approximately 542 units. ▪ Library and Fitness Spa ▪ Supporting Functions
New Retail Component	115,000 sf ▪ 41,000 sf Neiman Marcus expansion ▪ 74,000 sf other retail, restaurants, Atrium	115,000 sf ▪ 45,000 sf Neiman Marcus expansion ▪ 70,000 sf other retail, restaurants, Atrium
Existing Neiman Marcus Retail to be Renovated	115,000 sf	115,000 sf
C. Existing + New Project		
Floor Area Ratio – Entire Central Area with Proposed Project	9.5*	9.5*
Building Height	47 Stories / 569 feet **	52 Stories / 569 feet **

* FAR of 9.5 includes parking; excluding parking, the FAR is approximately 7.05
** 625 feet including mechanical penthouse

1.3.2 Measures to Minimize Impacts

Since the Article 80 Project Review and Approval process in 2011, the Simon Property Group team has comprehensively studied the Project program and design. The progression of the design responds directly to the comments made by the CAC and public agency during the DPIR process and incorporates additional measures to minimize environmental impacts. The following improvements to the Project are addressed here in the Notice of Project Change:

- Reduction of the residential tower footprint and building setback from Dartmouth Street.
- Revisions to the building massing at the retail levels and street level entries.
- Improvement to the atrium accessibility by elimination of exterior stairs and ramps.
- Re-grading of the interior public space to allow a more seamless transition between interior and exterior spaces.
- Re-grading of external space for improved accessibility and addition of community uses and amenities such as additional greenery, improved lighting, gaming tables, bicycle racks and a variety of seating choices.
- Provisions for public art and animation of the atrium space.
- Public realm and landscape improvements surrounding the site and pedestrian entries.

The direct result of these improvements to the building envelope is a further reduction in the shadow footprint throughout all seasons and a continued improvement in the wind impacts at the pedestrian level.

1.4 Agency and Community Review Process

Throughout the Project review process including presentation of the proposed Project refinements, the Proponent and the Proponent Team have met with community groups and public agencies. The Proponent is committed to an open and inclusive public review process and will continue to seek input from interested and affected parties.

The Project is being reviewed by a Citizens Advisory Committee ("CAC"). The CAC is comprised of 11 members who were appointed by the Mayor in 2008. A total of 21 meetings have been held with the CAC and one CAC subcommittee meeting was held focusing on Public Art. The Proponent will continue to meet with the CAC following the submission of this Notice of Project Change, as well as the Public Art Subcommittee and Traffic Subcommittee.

1.5 Summary of Project Benefits

The Copley Place Retail Expansion and Residential Addition will:

- **Fortify Economic Development.** Expanding and renovating this in-town retail anchor and adding new retail, restaurant, and residential uses will draw customers to other stores, restaurants, services, and historic sites in the area.
- **Advance Smart Growth Principles.** Focusing density into areas supported by existing infrastructure promotes and reinforces community vitality.
- **Promote Transit-Oriented Design.** Maximizing residential development in an area with new and expanded transit access minimizes automobile use and the potential impacts on surrounding roadways.
- **Balance a Mixed-Use Environment.** Introducing residential uses as part of a predominantly commercial development increases variety and activity for a greater number of hours during the day and into the evening making Copley a more dynamic focal point to add vitality to the neighborhood. This, in turn, enhances the overall safety and comfort for users.
- **Improve the Pedestrian Environment.** Filling the "hole" in the urban fabric at the Stuart and Dartmouth Street intersection, expanding sidewalk widths, channeling pedestrian-friendly traffic, and increasing façade transparency refines this block's link to its surroundings.
- **Improve Access To and Through Copley Place.** Creating new and improved entries from the Stuart and Dartmouth Street intersection and the Southwest Corridor enhances access to Copley Place and between other area destinations.
- **Improve Accessibility.** Re-grading of external and internal areas, removing barriers to create a seamless path of travel.
- **Create a Distinctive Architectural Design.** Capitalizing on the challenges of building above air rights, the proposed Project design is a dynamic addition to Boston's urban fabric. The Copley Place Retail Expansion and Residential Addition reflects quality design standards and is contextual with the tall neighboring buildings.
- **Advance Sustainable Design/Green Building Goals.** Complying with the requirements of Article 37 of the Boston Zoning Code and striving for "Silver" ratings under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) system for Core and Shell and New Construction results in an environmentally sensitive design.
- **Enhance Open Space.** Consulting with neighbors, the City of Boston, and non-profit organizations results in a collaborative approach for improving open spaces on the site.
- **Promote Boston's Affordable Housing Objectives.** Complying with the City's Inclusionary Development Policy advances the City's affordable housing goals and objectives.
- **Increase Employment Opportunities.** Approximately 1,700 construction jobs and 250-270 permanent jobs will be created.
- **Enhance Property Tax Revenue.** Approximately $7.2 million in new annual property taxes will be generated.
- **Provide Linkage Funds to the City.** Approximately $1,023,000 in housing linkage and approximately $204,000 in jobs linkage will be paid.

1.6 Project Team

Proponent	Copley Place Associates, LLC c/o Simon Property Group 225 W. Washington Street Indianapolis, IN 46204	
	Primary contacts:	Patrick Peterman Gaylon Melton
Development Consultant	Collaborative Partners, Inc. 330 Congress Street Boston, MA 02210 617-778-0900	
	Primary contacts:	Jack Hobbs Donna Camiolo
Architect	Elkus Manfredi Architects 300 A Street Boston, MA 02210 617-426-1300	
	Primary contacts:	Howard Elkus Rob Halter
Environmental Consultant	Epsilon Associates, Inc. 3 Clock Tower Place, Suite 250 Maynard, MA 01754 978- 897-7100	
	Primary contact:	Elizabeth Grob
Transportation and Parking Consultant	Howard/Stein – Hudson, Inc. 38 Chauncy Street, 9th Floor Boston, MA 02111 617- 482-7080	
	Primary contacts:	Guy Busa Michael Santos

Legal Counsel	Rackemann, Sawyer & Brewster 160 Federal Street Boston, MA 02110 617-542-2300	
	Primary contacts:	Louis C. Miller Johanna W. Schneider
Geotechnical Consultant	Haley & Aldrich 465 Medford Street, Suite 200 Boston, MA 02129 617-886-7400	
	Primary contact:	Marya Gorczyca
Civil Engineer	Parsons Brinkerhoff 75 Arlington Street, 9th Floor Boston, MA 02116 617-426-7330	
	Primary contact:	Andrew Boyd
Structural Engineer	McNamara /Salvia 160 Federal Street, 5th Floor Boston, MA 02110 617-737-0040	
	Primary contact:	Adam McCarthy
MEP Engineer	Vanderweil Engineers 274 Summer Street Boston, MA 02210 617-423-7423	
	Primary contact:	Alex Vanderweil
Landscape Architect	Carol R Johnson Associates 115 Broad Street Boston, MA 02210 617-896-2500	
	Primary contact:	Chris Jones

Figure 1-1 Locus Map

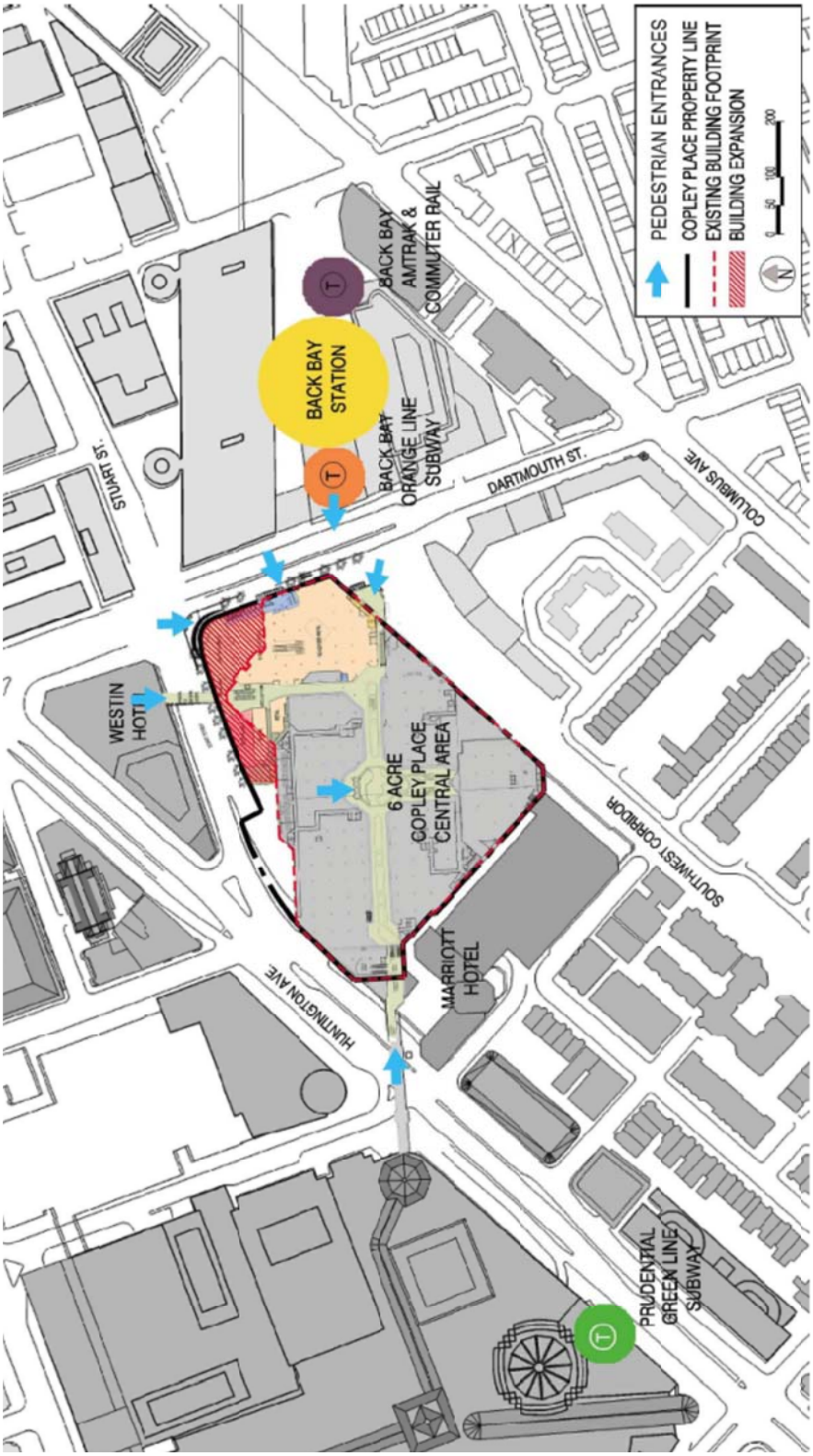

Figure 1-2 Aerial View Looking South

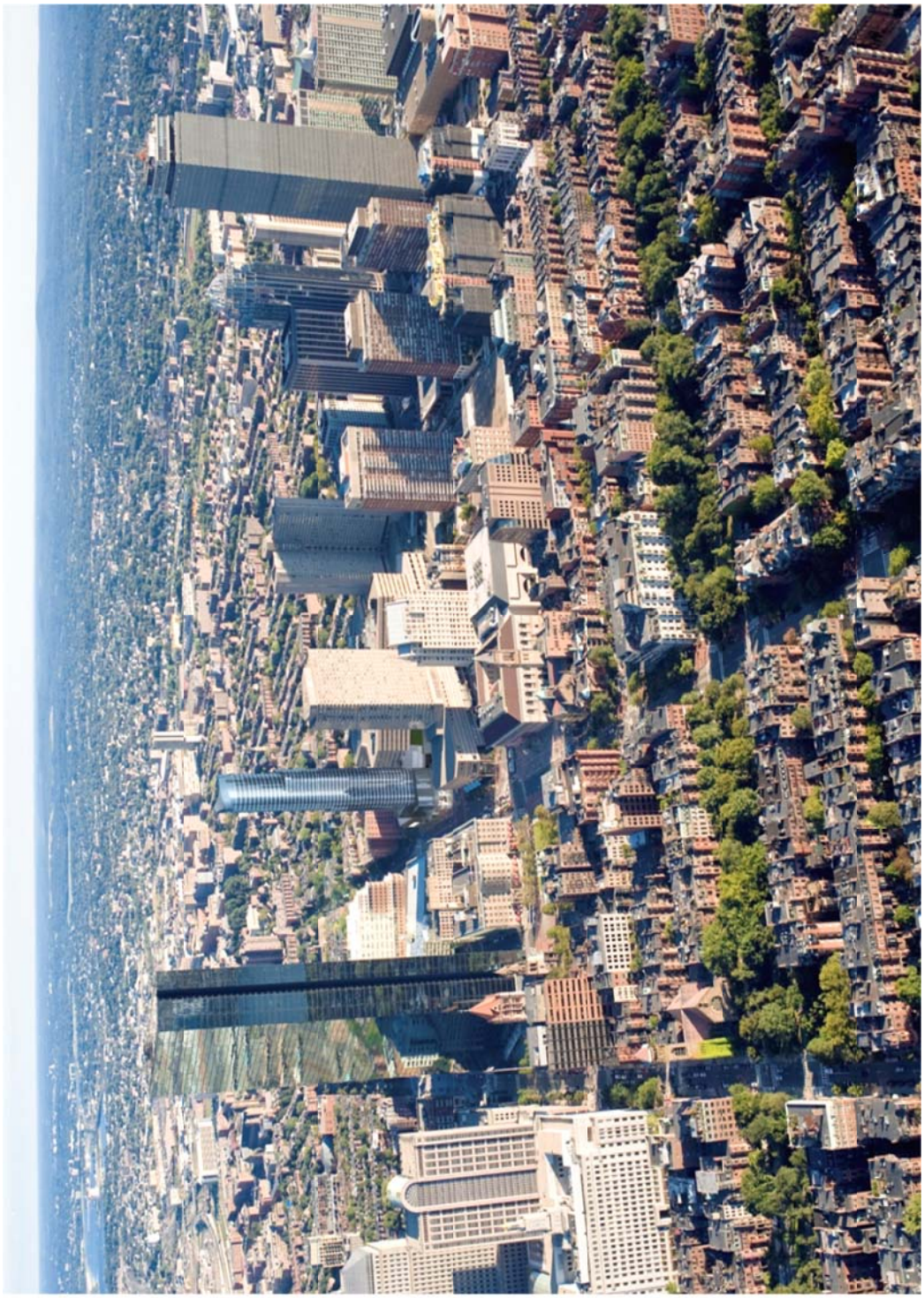

Figure 1-3 Aerial View over the Turnpike

Chapter 2

Urban Design

2 Urban Design

2.1 Introduction

This chapter outlines the Project's design progression and provides details regarding the urban context, design development, height and massing, characters and materials, landscaping, open spaces, pedestrian ways and amenities. With the proposed Project refinements, the Project team created a contextually appropriate design solution for the Copley Retail Expansion and Residential Addition that complements the urban character of not only the Back Bay neighborhood, but also the City of Boston. The development of the Project site at the northeastern corner of the existing Copley Place also reconnects the South End and Back Bay neighborhoods, building a more consistent flow for an important location within the City.

2.2 Urban Context for Copley Place Retail Expansion and Residential Addition

The retail expansion and residential programming are an ideal combination of uses that will dramatically improve the site's character, refine the overall pedestrian experience, and support the desired sustainable design goals. The proposed Project will be located in an urban setting where the existing infrastructure is readily accessible and easily adapted for the new construction.

The new residential use also promotes urban living and reduces the number of commuters in single use vehicles. Located directly across from Back Bay Station, one of the City's busiest transit hubs, the residents and users of the retail facility will have direct access to multiple subway lines, commuter rail lines, and regional train service. This connectivity to mass transit will minimize impacts to traffic and reinforce the use of public transportation. In addition to the multiple rail services, the Project is also immediately accessible to the Southwest Corridor Park and its bike paths and the many City bus lines.

2.3 Height, Massing, Character and Materials

The proposed retail expansion and residential addition is located on the northeastern portion of the existing Copley Place site at the intersection of Stuart Street and Dartmouth Street. The proposed site, currently an underutilized brick-paved plaza, is bounded by the existing turnpike off-ramp and turnpike exhaust vents to the west, the Westin Hotel to the north, the 100 Clarendon (John Hancock) Garage to the east, and the existing precast concrete façade of Copley Place and the Neiman Marcus anchor store to the south.

See Figure 1-1 for a Locus Map of the Project site.

Two distinct massing zones, the retail podium and residential building, and the unitized curtain wall glazing will enforce the contextual design of the proposed Copley Place Retail Expansion and Residential Addition Project. At the street level, pedestrians will observe the podium's scale is similar to other building bases in the surrounding area. This will establish a singular horizontal datum line just above eye-level as pedestrians walk along the street. This, in turn, will help "break down" the overall massing and scale of the proposed Project and correlate directly to the visual hierarchy already present in the area. Transparent glazing will provide views into the interior storefronts and Atrium.

See figures 2-1 to 2-2 depicting the podium façade design

The refinements to the previously approved Project focus mainly on the program composition. By splitting the residential program into apartment and condominium uses, the largest portion of the tower footprint has been reduced to accommodate the smaller more efficient apartment layouts. By eliminating the need for deeper condominium units from the sky lobby level up to the 26th floor we have reduced the curving facing Dartmouth Street and terminated the lower tower form at the Sky Lobby level. The middle and upper portions of the graduated tower form have also become more slender at each tier producing an overall improvement to the environmental impacts while maintaining the stepping design approach of the building form.

Within the previously approved zoning height of 569', the overall number of building stories has increased from 47 stories to 52 stories. The height was maintained by reducing the floor to floor dimensions of the apartments and condominiums from an average 11' to an average 10'.

The overall results include a further reduction of the already slender building shadow and improved pedestrian wind conditions. The urban realm aspects of the Project are also improved by the increased setback of the tower from Dartmouth Street and the expansion of the Dartmouth Street view corridor between the Back Bay and South End neighborhoods.

See Figures 2-4 through 2-8 for skyline images of the refined residential building within its urban context.

See Figures 2-9 and 2-10 for elevations of the proposed Project.

Figure 2-1 View from Stuart and Dartmouth Street

Figure 2-2 View from corner of Stuart Street and Dartmouth Street

Figure 2-3 Boston Skyline – View from Charles River

Figure 2-4 View from Mass Pike East

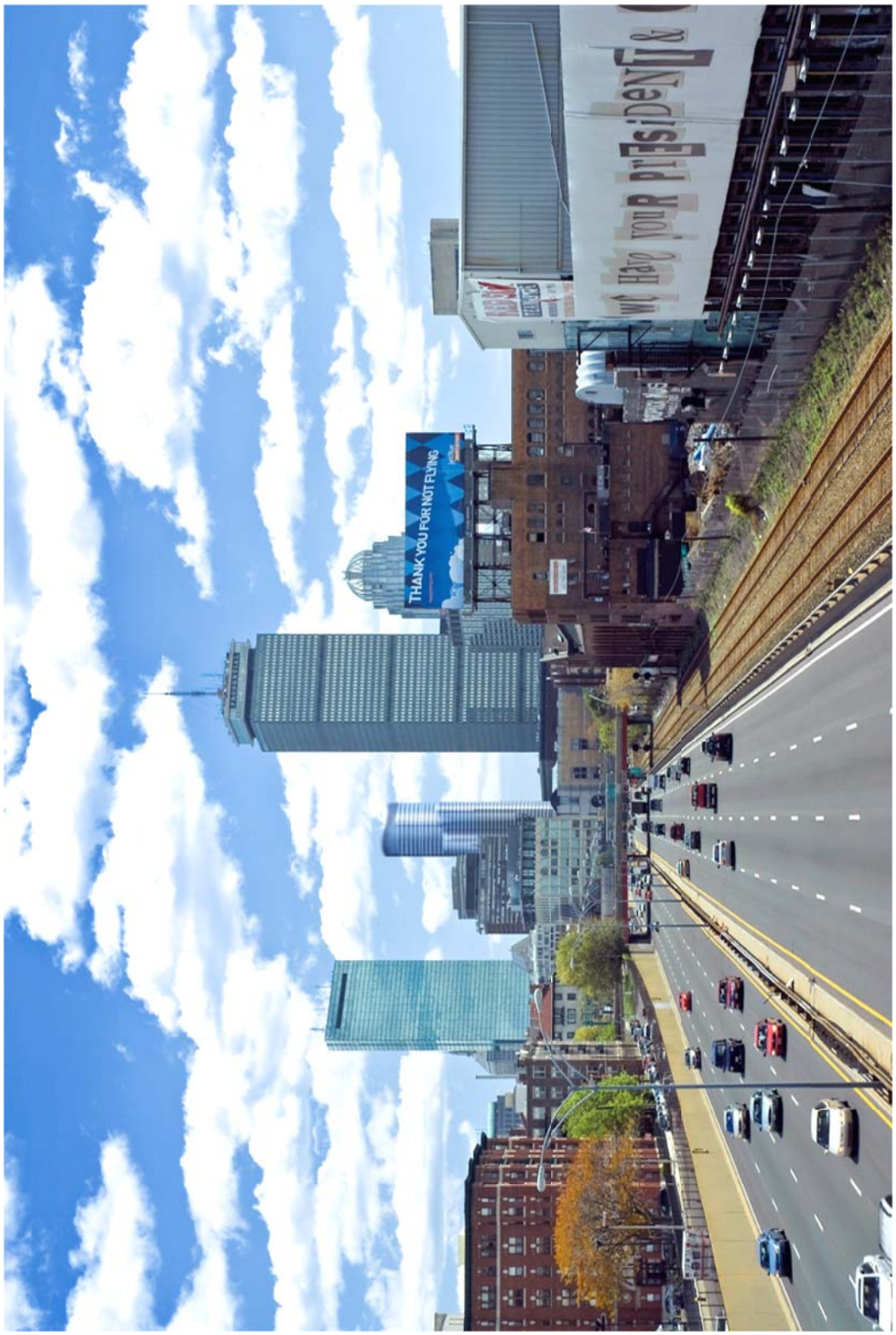

Figure 2-5 View from Southeast Expressway North

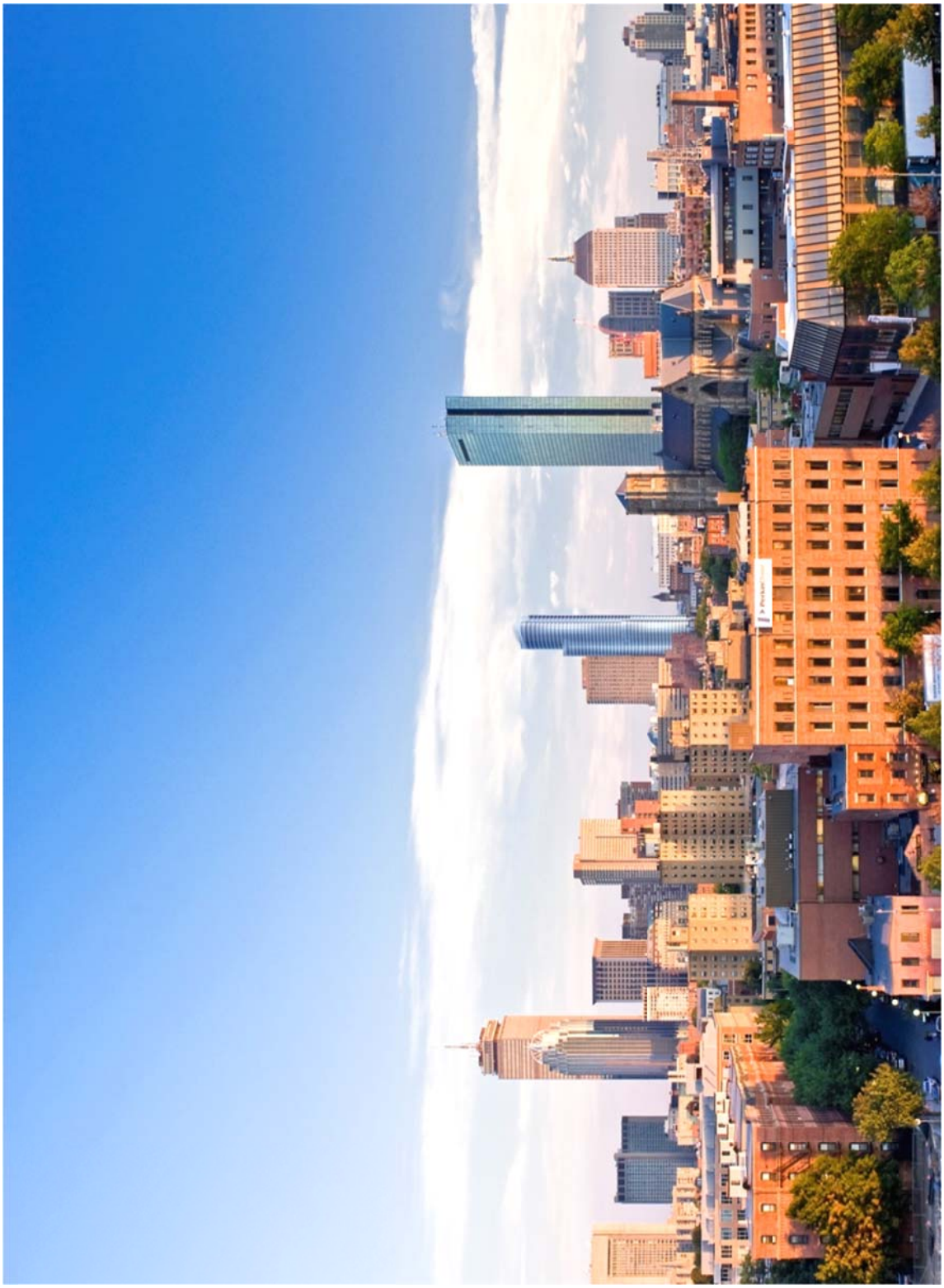

Figure 2-6 View from Dartmouth Street and Commonwealth Avenue

Figure 2-7 View from Southwest Corridor and Massachusetts Avenue

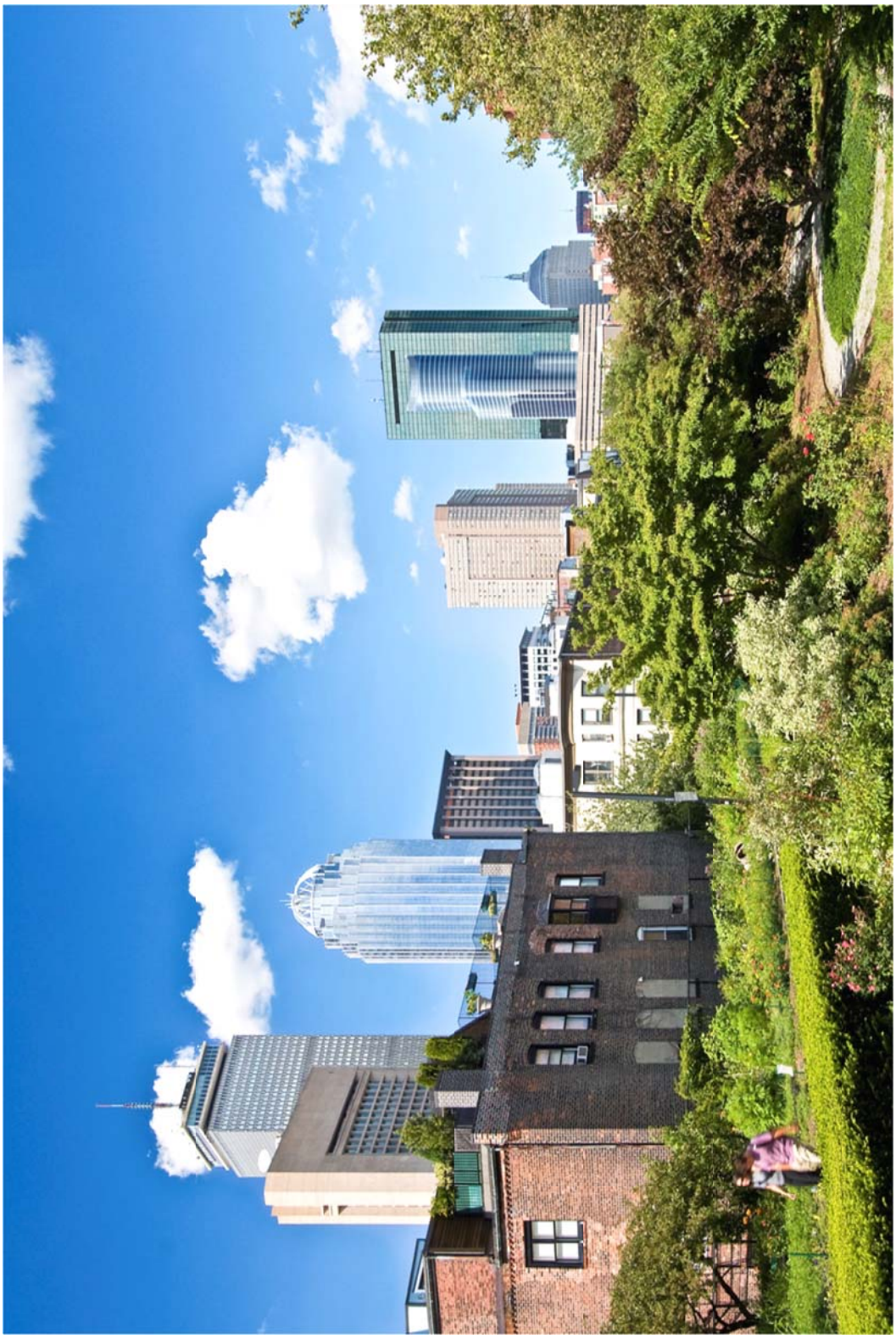

Figure 2-8 View from Dartmouth Street and Warren Avenue

Figure 2-9 East Elevation

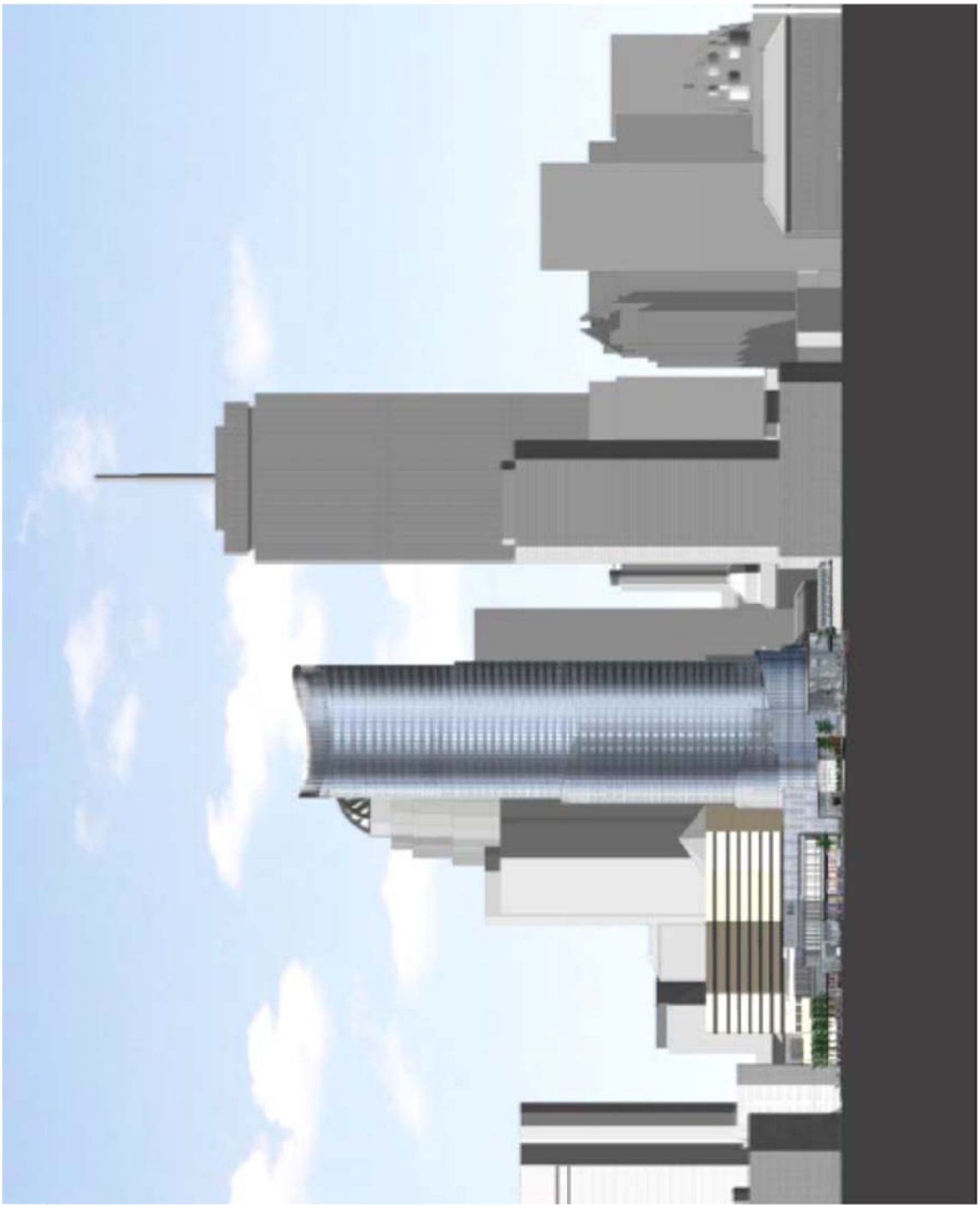

Figure 2-10 North Elevation

2.4 The Public Realm

The benefits to the public realm will not be confined to the Project site, but rather will extend beyond its borders to enrich and strengthen the neighborhood. Improvements to surrounding sidewalks, seating areas, and public spaces are critically important to the success of the proposed development.

Carefully executed design strategies will unify and improve the pedestrian arrival sequence. New seating along the sidewalk will be integrated into the exterior planting beds. The plant materials in the exterior planting beds will then tie directly into the landscape design of the Atrium, creating a seamless transition from outside to inside and vice versa. The harmonized design will draw the user into the building and help "dissolve" the perceived barrier between interior and exterior spaces.

The base of the building has evolved to allow the curvilinear tower form and glass envelope to spring from the streetscape and break down the horizontal building mass. Modern materials of curtain wall glazing and metal panel trim articulate the buildings base and relate to the tower above. Low iron, crystal clear glazing, surrounding the Atrium space is supported by steel cables and provides unobstructed view from the outside in and highlights the variety of spaces within. The primary structural supports for the tower above have been re-organized to eliminate the truss-like structure along Stuart Street and are now oriented to allow the maximum views into the Atrium space from the exterior public realm, further enhancing the invitation to enter the building.

See Figures 2-1 to 2-2 depicting the podium façade design.

The main entry doors into the Atrium from the Stuart Street/Dartmouth Street intersection have been relocated from the corner of the Atrium and have been expanded to two primary entry points into the Atrium and mall beyond. Each of the two new entries is located along the primary pedestrian circulation path along Dartmouth Street and Stuart Street respectively and is located to take advantage of the existing gradual site topography and eliminate the need for exterior stairs or ramped circulation paths. The Stuart Street entry employs a generous glass vestibule with paired automatic sliding doors making the entry sequence as seamless and effortless as possible and delivers the pedestrian directly to the escalator and elevator circulation to the rest of the mall. The Dartmouth Street entry consists of a large tri-segmented automated revolving door and enters directly into the first terrace of the Atrium. A double door entry vestibule facing south with automated doors also provides an additional accessible option into the Atrium for pedestrians traveling north along Dartmouth Street. Once inside the Atrium, circulation is focused along the retail frontage, reserving the largest interior areas for public seating and gathering.

See Figure 2-11 and 2-12 Views South and North from Dartmouth Street.

The interior of the Atrium space is designed as an all-season oasis with comfortable seating areas articulated with natural materials and plantings and activated with restaurants, retail carts, kiosks and flower stands. Three terrace areas graduate up within the space to provide a variety of viewpoints defined by generous amphitheater seating and an upper balcony at the mezzanine level. Each terrace rises approximately 20-24 inches from the exterior grade, providing a gentle transition within, achieved by a

sloped walkway in the main path of travel. By reducing the abrupt change in elevation the Atrium space now is fully engaged by the exterior landscaping elements and the paved plaza and centers the lower terrace as the heart of the space. The new Atrium at Copley Place will be an exciting experience for all and will be unlike any other public space in the City.

See Figure 2-13 for Atrium space landscape design.

As a residential neighborhood, center of business, and top destination for visitors, Copley Place is truly one of the Boston's most traveled neighborhoods. For commuters and travelers arriving to Boston through Back Bay Station, this area also serves as the gateway through which many people first experience Boston. The Copley Place expansion and design for the Southwest Corridor Park are uniquely positioned to make a memorable first impression to visitors and a rich daily experience for locals.

Building upon the community goals and desired flexibility of the space identified during the DPIR comment period, the design for the Southwest Corridor Park entry space weaves architecture and landscape together to form an inviting and exciting space for residents, shoppers, employees of the area's businesses, and visitors alike. The landscape plan presents visitors with a broad plaza to Dartmouth Street, creating an inviting space flexible to public activity and a siting opportunity for a public art statement. Neighborhood retailers, clearly visible from Dartmouth Street, invite pedestrians to meander into the park and enjoy a rest in the shade of the trees, relax during a lunch break outdoors, or play a game of chess. The surface of the plaza from Dartmouth Street to the end of the neighborhood retailers is now a continuous smooth level surface, eliminating the uneven brick paving, circulation ramps, stairs and terraces, making this space truly feel accessible. The existing grating areas are screened by a series of elliptical raised planters organized into a rectilinear grove of trees that provide variety to the seating elements and shade to the space. The park now features organic pathways and carefully integrated casual seating elements, as well as table and chair groupings, to make this a place in which people easily pass through or comfortably spend time.

The building entrance melds seamlessly into the building design on the upper level, while using a crystal clear glass expression on the lower level to welcome pedestrians inside. This design development responds to the community's desire that the South End entry have an architectural expression that is harmonious with the new building expansion while respecting the smaller scale residential building context of the South End neighborhood. A shallow canopy wraps the corner from Dartmouth Street and continues down along the facade, unifying the lively ground level retail experience, and giving the building a pedestrian friendly scale. Rich textures, accents of color, and glass animate the neighborhood retail building facades creating a modern, playful feel while maintaining a harmony with the historic character of the neighboring buildings in it scale and careful detailing. The new façade articulation on the upper levels neatly integrates with the Copley office tower, while the lower two levels slide further along the Southwest Corridor to encompass all of the retailers and truly make this area a destination.

From the end of the upper plaza, a sloped curvilinear path transitions pedestrians from the park entry and retail space to Harcourt Street and the remainder of the southwest corridor beyond. Within this transition area, we have responded to community requests

by providing an accessible lawn area with bench seating located along the quieter portion of the landscape beds.

See Figures 2-14 through 2-17 for images of the improved entrance at the Southwest Corridor.

The revitalized Stuart Street/Dartmouth Street intersection, increased transparency of the proposed façade, improved visual connections between the interior and exterior, enhanced public realm amenities and landscaping, and the new street-level retail and dining destinations will ultimately maximize the continuity of the overall pedestrian experience.

Figure 2-11 View looking south on Dartmouth Street

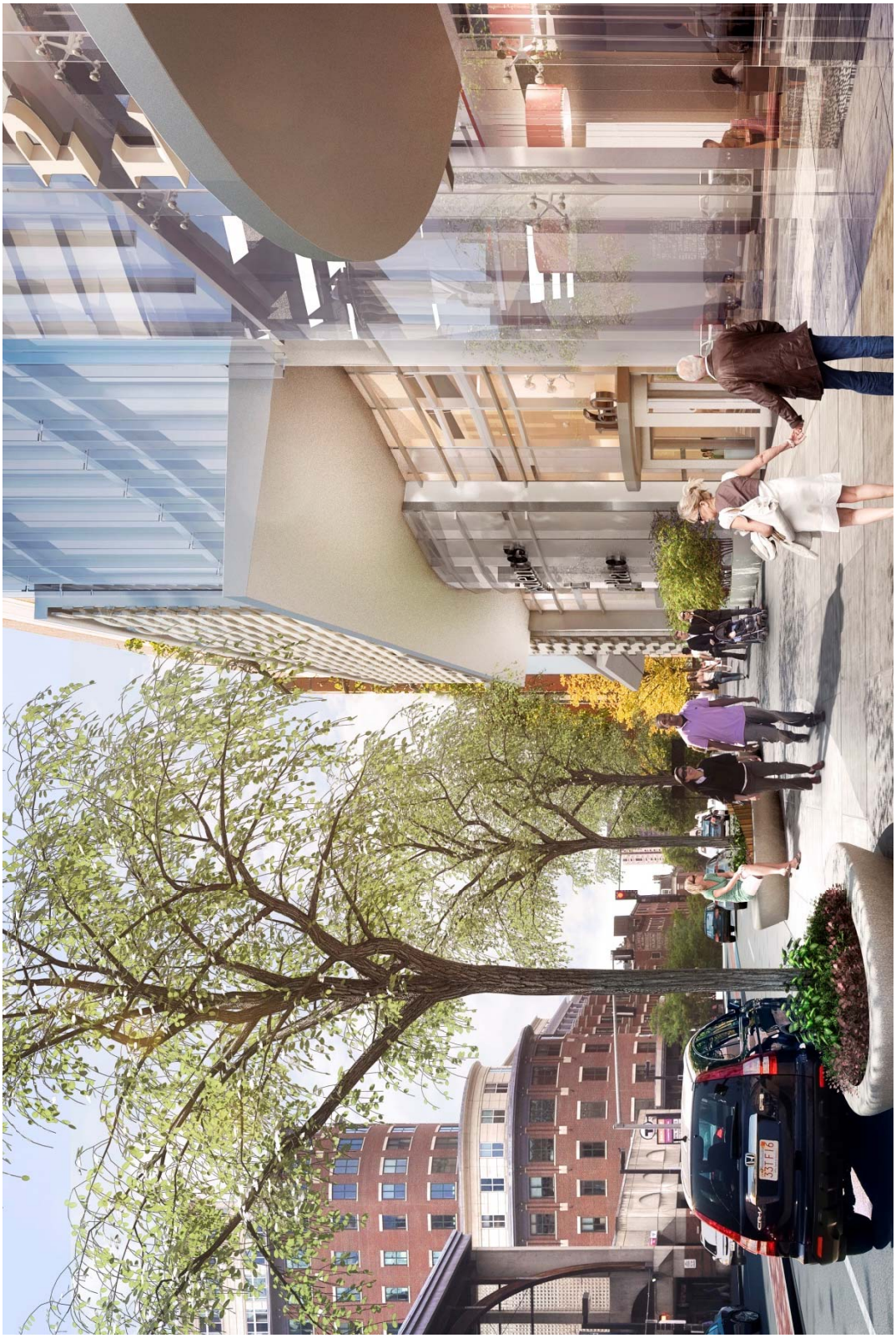

Figure 2-12 View looking North on Dartmouth Street

Figure 2-13 Atrium Space Landscape Design

Figure 2-14 Southwest Corridor Landscape Design

Figure 2-15 View of Southwest Corridor from Dartmouth Street

Figure 2-16 View from Southwest Corridor to Dartmouth Street

Figure 2-17 View from Southwest Corridor to Dartmouth Street

Chapter 3

Transportation

3 Transportation

3.1 Project Background

The Copley Place Retail Expansion and Residential Addition is located in the Back Bay neighborhood of Boston (see **Figure 3-1**). The Project site is bounded by Stuart Street to the north, Dartmouth Street to the east, and the existing Copley Place building to the south and the west. Neiman Marcus, a part of Copley Place, currently occupies part of the site.

The Project as approved by the BRA in November 2011 and by MEPA in January 2012 included up to 318 new residential ownership units, an 115,000 s.f. retail addition (including the Neiman Marcus expansion, additional retail and restaurant space, a new Wintergarden, and associated support areas). Parking was to be provided out of the existing parking supply of 1,558 spaces; no new parking would be added. Residential parking was to be supplied at the rate of 1 space per dwelling unit – 318 total spaces. A total of 143 parking spaces were to be assigned in the Copley Place (Central) Garage to provide reserved parking for the residential units. The remaining 175 spaces were to be provided by valet service in the Dartmouth Garage. Visitors and shoppers would continue to be accommodated by the commercial spaces provided within the combined capacity of the Central and Dartmouth garages.

At the present time, Simon Property Group is pursuing a revised building program. While the retail components of the Project will remain the same as the approved program, the current proposal for the residential use is a reduced number of 109 condominiums plus 433 rental units, for a total of 542 units. This section of the Notice of Project Change ("NPC") documents the transportation impacts of the proposed new Project.

Because the new program includes more rental units than condominiums, parking demand for the new Project will be reduced, as fewer spaces are needed for downtown rental units than for ownership units. In addition, no valet parking will be provided at Dartmouth Garage, reducing vehicle trips between the two garages. The major traffic and parking impacts related to the increased number of residential units are thus quite limited. This section of the NPC documents parking supply and demand and traffic impacts for the new proposal.

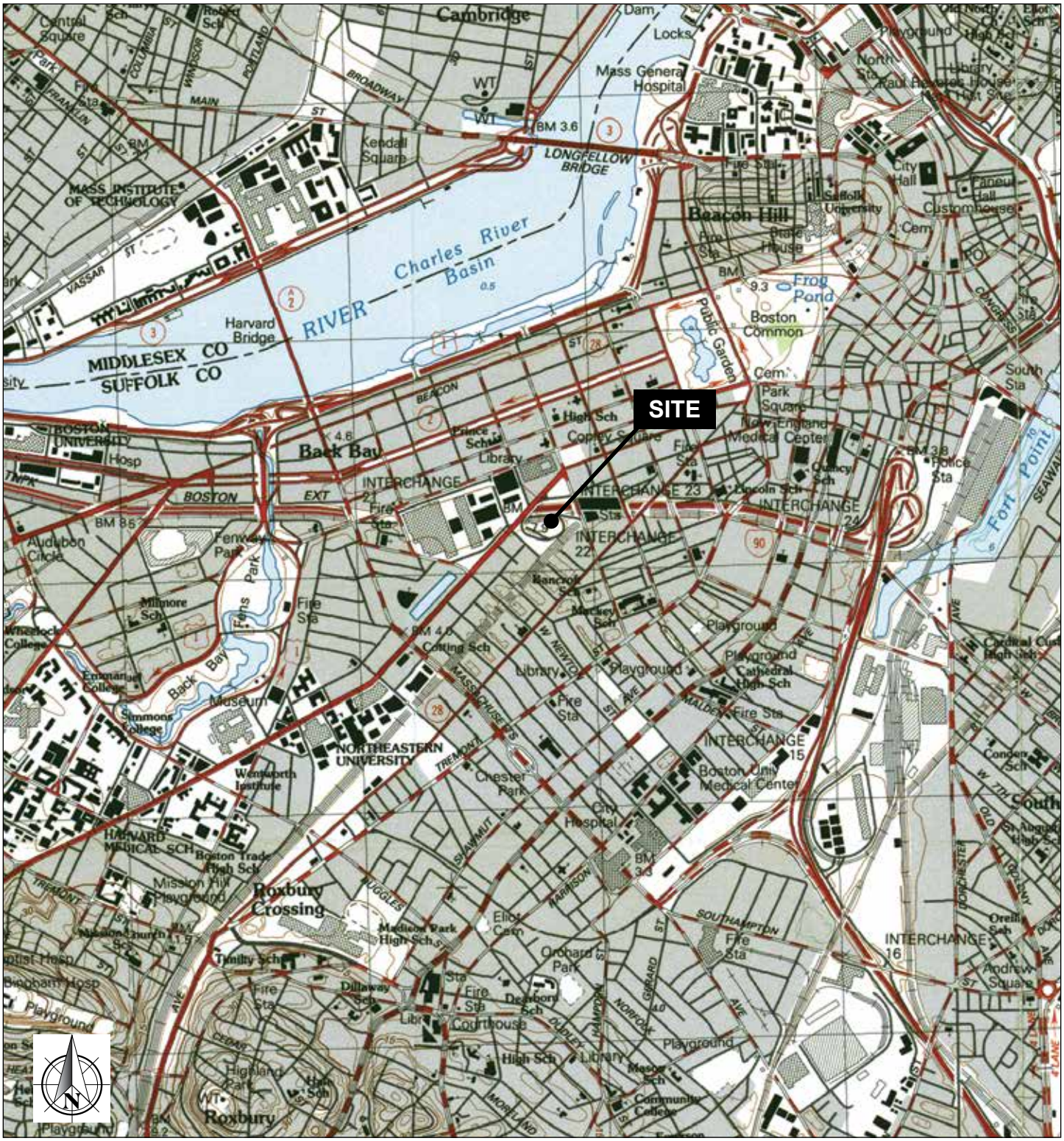

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Figure 3-1
Locus Map

3.1.1 Study Area

The study area for the NPC analysis is shown in **Figure 3-2** and includes the three intersections most immediately affected by the new building program, namely:

- Central Garage Driveway/Stuart Street/Huntington Avenue/Exeter Street;
- Dartmouth Garage Driveway/Dartmouth Street; and
- Stuart Street/Dartmouth Street;

3.1.2 Methodology

The study team conducted this transportation analysis in accordance with BTD Transportation Access Plan Guidelines (2001) and the EOEA/EOTC Guidelines for EIR/EIS Traffic Impact Assessment (1989). The analysis is summarized in two sections:

The first comprises an inventory of existing transportation conditions, including roadway capacities, transit, pedestrian circulation, parking, loading, and site conditions.

The second evaluates future transportation conditions and assesses potential traffic impacts associated with the development and other neighboring Projects. Long-term impacts are evaluated for the year 2018, based on a five-year horizon from 2013. Expected roadway, transit, pedestrian, parking, and loading capacities and deficiencies are identified. This section includes the following scenarios:

- The No-Build Scenario (2018) includes general background growth and additional vehicular traffic associated with specific proposed or planned developments and roadway changes in the vicinity of the site; and
- The Build Scenario (2018) includes specific travel demand forecasts for the proposed Project.

3.2 Existing Transportation Conditions

This section describes existing study area intersection traffic control, peak-hour vehicular and pedestrian volumes, transit availability, parking supply, and loading conditions.

3.2.1 Existing Intersection Conditions

The following descriptions of the study area intersections include geometry, pedestrian facilities, and intersection traffic control.

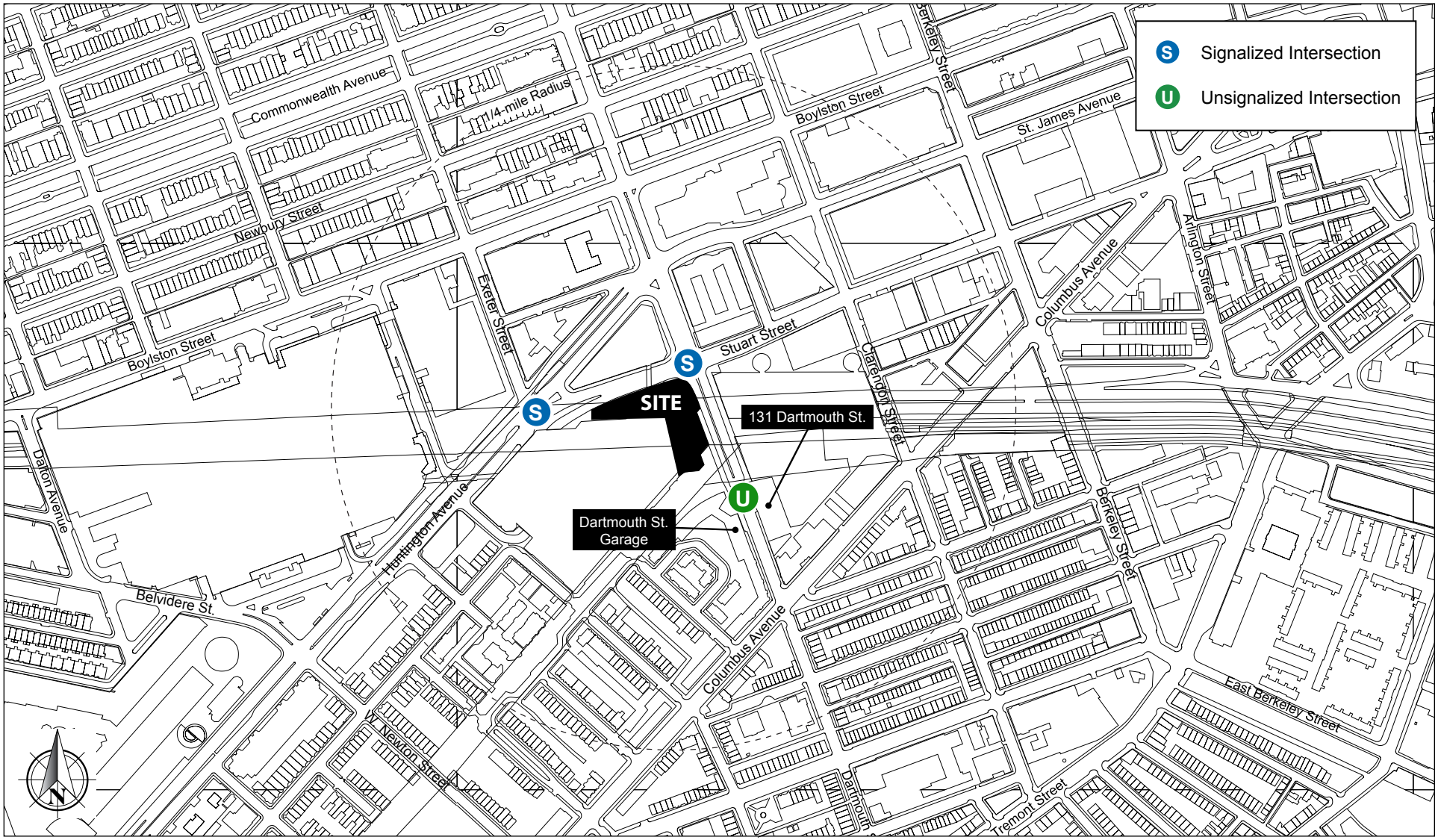

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Figure 3-2

Study Area Intersections

Central Garage Driveway/Huntington Avenue/Stuart Street/Exeter Street is a six-leg, signalized intersection with five approaches. The Huntington Avenue northeast-bound approach consists of two through lanes and one shared through/right-turn lane. The northbound approach is the exit for the Marriott Hotel valet area and the entrance and exit to the Copley Place Garage, the site driveway. The garage northbound approach comprises one exclusive left-turn lane and one exclusive right-turn lane. The Huntington Avenue southwest-bound approach consists of a channelized U-turn lane, an exclusive left-turn lane, and three through lanes. Parallel to the Huntington Avenue southwest-bound approach is a one-lane frontage road that provides access to buildings along the north side of the I-90 entry ramp that begins at the intersection of Saint James Avenue and Dartmouth Street. The Exeter Street southbound approach consists of a left-turn lane and a shared through/right-turn lane. Metered and valet parking spaces are provided along the east side of Exeter Street and the north side of the frontage road. To the east of the intersection, a Massachusetts Turnpike off-ramp adds eastbound traffic to Stuart Street. As noted below for the Stuart Street/Dartmouth Street intersection, observations and analyses of weaving movements of traffic from this ramp to turn left in front of the Westin Hotel were also performed as part of this study.

Stuart Street/Dartmouth Street is a four-way, signalized intersection with two approaches: Stuart Street eastbound and Dartmouth Street northbound. The Stuart Street eastbound approach consists of two exclusive left-turn lanes, three through lanes, and an exclusive right-turn lane. The Dartmouth Street northbound approach consists of two through lanes and one right-turn lane. No parking is allowed on either approach. On the south side of the intersection, a concrete median separates the northbound and southbound traffic on Dartmouth Street as Dartmouth Street becomes two-way. Besides the intersection capacity analysis, observations and analyses for this location were extended to look at vehicle weaving between the Massachusetts Turnpike off-ramp and the intersection.

Dartmouth Street/Dartmouth Garage Driveway/131 Dartmouth Street Garage Driveway is a four-way, unsignalized intersection with four approaches. The Dartmouth Street northbound and southbound approaches consist of single travel lanes. The Dartmouth Street Garage and the 131 Dartmouth Street Garage driveways consist of single lanes under gate-control that exit from structured parking. Two-hour on-street parking is allowed along Dartmouth Street northbound. Parking is allowed along Dartmouth Street southbound except between 7:00 – 9:30 a.m. and 4:00 – 6:00 p.m.

3.2.2 Existing Traffic Conditions

The study team collected weekday intersection turning movement counts on March 9, 2011 at the intersection of Stuart Street/Dartmouth Street and May 29, 2013 at the remaining two study area intersections from 7:00–9:00 a.m. and from 4:00–6:00 p.m.

Based on the turning movement counts, the weekday peak hours were identified as 8:00–9:00 a.m. and 5:00–6:00 p.m. The 2011 counts were factored up to 2013 based on the 2013 volumes.

Figure 3-3 shows the existing 2013 a.m. peak-hour turning volumes and **Figure 3-4** shows the existing 2013 p.m. peak-hour turning volumes for the study area intersections. These traffic volumes reflect the existing traffic generated by Copley Place. Complete traffic count data are provided in the Transportation Appendix.

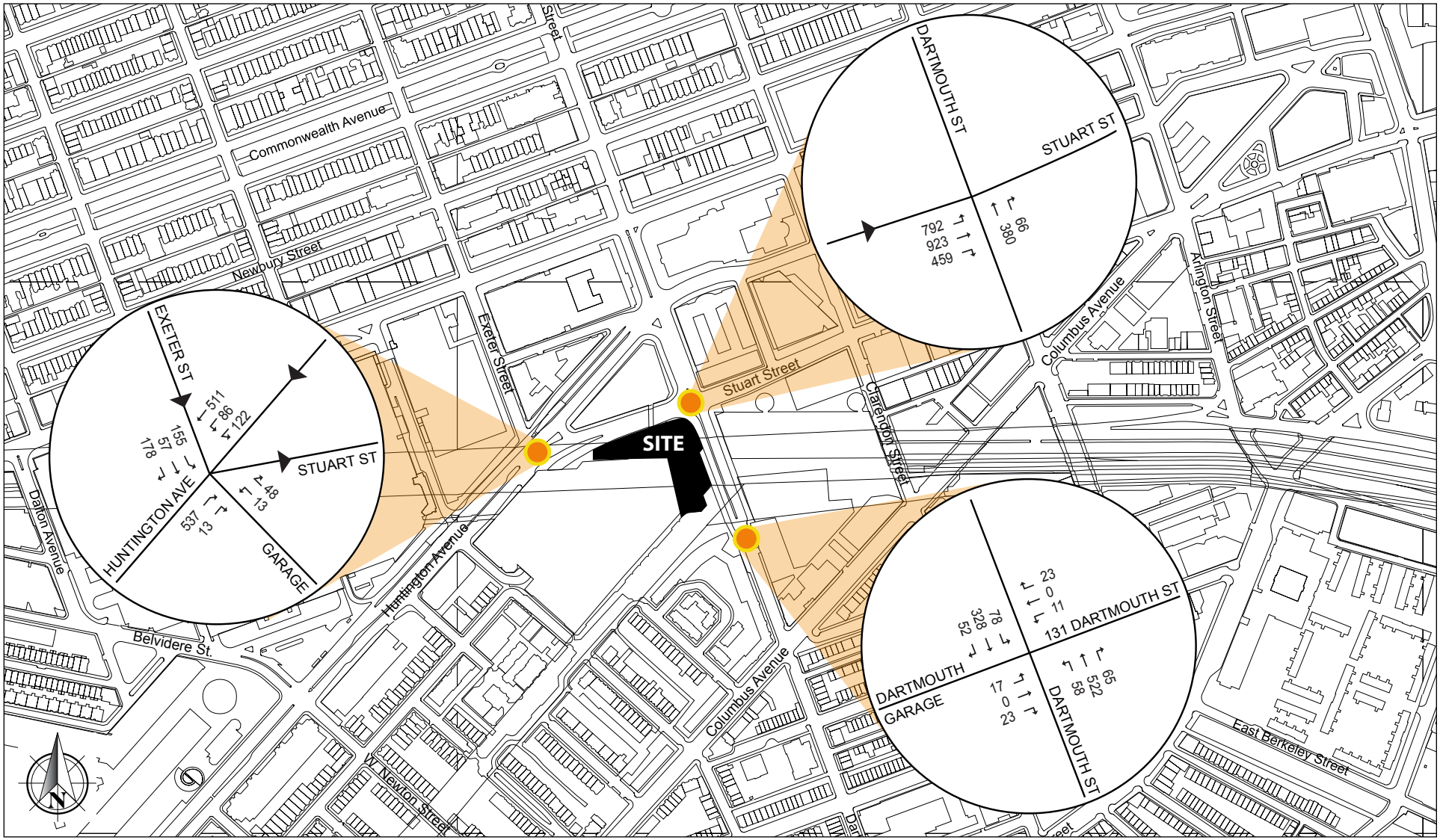

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Figure 3-3

Existing Conditions (2013) Turning Movement Volumes,
a.m. Peak Hour 8:00-9:00 a.m.

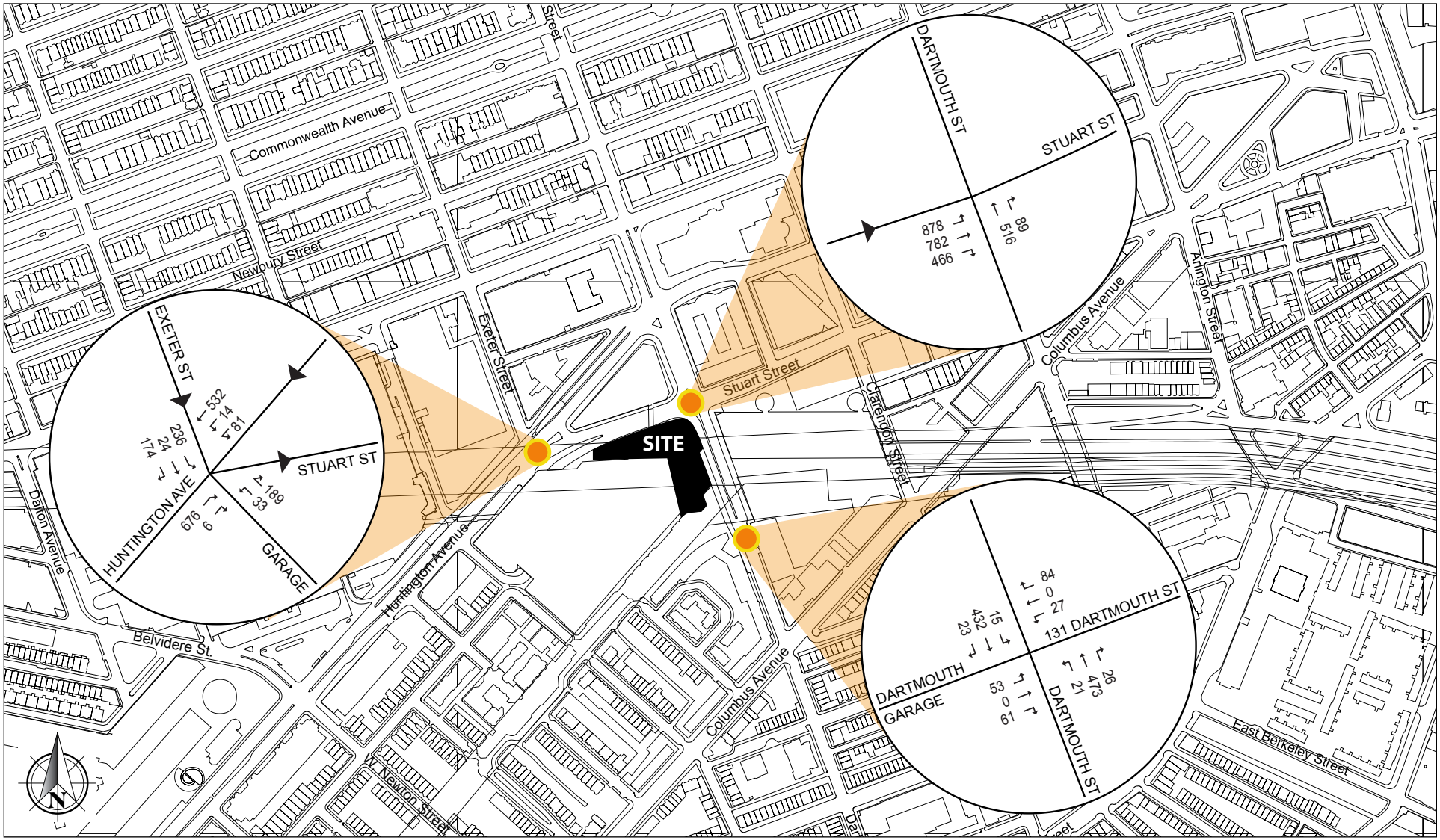

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Figure 3-4

Existing Conditions (2013) Turning Movement Volumes,
p.m. Peak Hour 5:00-6:00 p.m.

3.2.3 Existing Traffic Operations

Traffic operations are determined through an analysis of intersection Level of Service (LOS). The study team analyzed LOS and delay at the intersections using Trafficware's Synchro 6.0 software, which is based on the traffic operational analysis methodology of the Transportation Research Board's 2000 Highway Capacity Manual (HCM). LOS and delay (in seconds) are determined based on intersection geometry and available traffic data for each intersection. Synchro also evaluates the effects closely spaced intersections may have on one another.

The existing signal timings used in the analysis were those recommended by the Boston Transportation Department Traffic Signal Optimization Study for Back Bay and implemented in the summer of 2010. **Table 3-1** provides LOS criteria for signalized and unsignalized intersections. LOS A defines the most favorable condition, with minimum traffic delay. LOS F represents the worst condition (unacceptable), with significant traffic delay. LOS D is generally considered acceptable in an urban environment.

Table 3-1: Intersection Level of Service Criteria

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

The LOS analysis evaluated existing intersection operations and was calibrated based on field observations of actual queues and delays. **Table 3-2** shows existing intersection LOS results for the Project study area during the a.m., and p.m. peak hours, respectively. Complete Synchro reports are provided in the Transportation Appendix.

Table 3-2: Existing Conditions (2013) Level of Service Summary

Intersection	LOS	Delay	V/C	95th Percentile Queue (feet)
a.m Peak Hour				
Signalized Intersections				
Huntington Avenue/Stuart Street/Garage/Exeter Street	**D**	**37.7**	**-**	**-**
Garage NB left	C	27.5	0.11	19
Garage NB right	A	8.3	0.17	23
Exeter SB left	D	45.7	0.71	130
Exeter SB thru/right	D	51.2	0.81	186
Huntington EB thru | thru | thru/right	D	46.9	0.90	195
Huntington WB left	C	26.7	0.45	191
Huntington WB thru | thru | thru | thru	C	26.4	0.39	96
Stuart Street/Dartmouth Street	**B**	**18.5**	**-**	**-**
Stuart EB left | left	A	1.9	0.32	m37
Stuart EB thru | thru | thru	C	23.0	0.51	m210
Stuart EB right	D	41.0	0.85	m380
Dartmouth NB thru | thru	B	13.6	0.27	100
Dartmouth NB right	B	10.5	0.29	31
Unsignalized Intersection				
Dartmouth Street/Equinox Garage/Dartmouth Garage	**-**	**-**	**-**	**-**
Dartmouth Garage EB left/thru/right	D	25.1	0.20	18
Equinox WB left/thru/right	C	22.3	0.15	13
Dartmouth NB left/thru/right	A	1.4	0.05	4
Dartmouth SB left/thru/right	A	2.4	0.09	7
p.m. Peak Hour				
Signalized Intersections				
Huntington Avenue/Stuart Street/Garage/Exeter Street	**C**	**33.6**	**-**	**-**
Garage NB left	C	28.6	0.24	34
Garage NB right	A	6.6	0.48	26
Exeter SB left	D	50.2	0.81	196
Exeter SB thru/right	D	36.1	0.59	137
Huntington EB thru | thru | thru/right	D	43.9	0.89	#251
Huntington WB left	C	26.2	0.25	68
Huntington WB thru | thru | thru | thru	C	25.6	0.36	98
Stuart Street/Dartmouth Street	**B**	**10.5**	**-**	**-**
Stuart EB left | left	A	1.8	0.34	m46
Stuart EB thru | thru | thru	A	8.8	0.38	m85
Stuart EB right	B	15.3	0.67	m251
Dartmouth NB thru | thru	C	21.1	0.45	165
Dartmouth NB right	B	14.9	0.48	22
Unsignalized Intersection				
Dartmouth Street/Equinox Garage/Dartmouth Garage	**-**	**-**	**-**	**-**
Dartmouth Garage EB left/thru/right	E	36.9	0.53	71
Equinox WB left/thru/right	C	21.6	0.36	40
Dartmouth NB left/thru/right	A	0.6	0.02	2
Dartmouth SB left/thru/right	A	0.5	0.02	1

During the weekday morning and afternoon peak hours, all intersections in the study area operate at acceptable overall levels of service (LOS D or better). The Dartmouth Garage driveway traffic exiting during the p.m. peak hour experiences delay just at the threshold for LOS E conditions, although Dartmouth Street itself operates at LOS A.

3.2.4 Existing Parking

Existing Off-Street Parking

Simon Property Group Garages In total, Simon Property Group controls 1,558 parking spaces in the Copley Place (Central) and adjacent Dartmouth garages.

- In the Central Garage, 860 commercial spaces are permitted by the Air Pollution Control Commission ("APCC"). A total of 500 spaces in the Central Garage must be made available for customer parking by agreement with Neiman Marcus. These are provided out of the commercial parking supply. Of these spaces, 356 are currently committed on monthly leases either to tenants or other parties at the time of this study.

- In another portion of the Central Garage **not controlled by Simon Property Group** are 45 residential spaces for the Copley Residences and 252 exempt spaces for the Marriott Hotel. Marriott controls 3.5 levels of the "Blue Garage" for hotel parking, exclusively by valet. These spaces are accessed separately from the Copley Place spaces. From time to time (maybe 8-10 times per year) Simon Property Group has an agreement at its own option to open its spaces in the "Blue Garage" to hotel patrons for valet overflow parking during special events, typically on evenings or weekends.

- In the Dartmouth Garage, 228 commercial spaces, 341 employee exempt spaces, and 129 residential exempt spaces restricted to Tent City residences are permitted, for a total of 698 spaces. Car sharing services use a total of 15 spaces in the Dartmouth Garage, with Zipcar using 12 spaces and Hertz on Demand using 3 spaces.

- The parking operator, LAZ Parking, also leases 75 valet spaces in the Dartmouth Garage and 45 valet spaces in the Central Garage. These are utilized almost exclusively during evenings and weekends.

Table 3-3 illustrates the findings of occupancy counts compiled from entry and exit data at the Central and Dartmouth Garages for the 2012 calendar year. The spaces restricted to the Tent City residences were excluded from this table and will not be available for any future development uses.

Table 3-3: Average Available Parking Spaces in Copley Garages by Time of Day

Time	Central	Dartmouth [a]	Total	% Available [b]
Weekdays:				
10 AM	200	113	313	22%
2 PM	179	105	284	20%
4 PM	281	186	467	33%
8 PM	513	311	824	58%
12 AM	632	377	1,009	71%
Weekends:				
10 AM	497	408	905	63%
2 PM	391	395	786	55%
4 PM	418	376	794	56%
8 PM	492	351	843	59%
12 AM	545	367	912	64%

a The 129 spaces restricted for Tent City residents are not included.
b Based on a total of 1,429 non-residential spaces in the two garages.

As shown, there are on average 284 spaces available in the Central and Dartmouth garages, even at the weekday peak demand hour of 2:00 PM. After that time, vacancies increase to 71% available spaces at midnight. On weekends, demand is typically much lower with 55% to 64% available spaces. While these are averages, the annual data did show that capacity of the Central Garage was exceeded briefly on only 8 days in 2012. All of these instances were for 5 hours or less, with four instances lasting only a single hour. The total capacity at the Dartmouth Street Garage was exceeded on only one day in 2012. A special $15 per day "early bird" deal was introduced at the Dartmouth Street Garage for daily parkers arriving early in the morning. This deal has increased the demand for the 228 commercial spaces open to the public and often requires the garage to limit parking on some days, even though it may not be at full capacity.

***Area Garages*.** Public parking spaces in surface lots and garages within a quarter-mile of the study area, in addition to the Copley and Dartmouth garages controlled by Simon Property Group, are shown in **Table 3-4.**

Table 3-4: Additional Public Off-Street Parking in the Study Area

Map No.	Facility	Capacity (public spaces)
Surface Lots		
A	Newbury/Dartmouth	71
	Subtotal	**71**
Parking Garages		
1	100 Clarendon (John Hancock) Garage	576 [a]
2	The Clarendon	93 [b]
3	131 Dartmouth Street	100 [c]
4	Back Bay Garage	625 [d]
5	Prudential Center	2,067 [e]
6	10 St. James	170
	Subtotal	**3,631**
	Total Off-street Parking	**3,702**

a 576 commercial spaces out of 2,013 total capacity
b 93 commercial spaces out of 393 total capacity
c 100 commercial spaces out of 730 total capacity
d 625 commercial spaces out of 1,000 total capacity
e 2,067 commercial spaces out of 3,920 total capacity

As shown in the above table, approximately 3,702 commercial off-street spaces are provided in garages and one lot within a quarter-mile radius of the Project site, in addition to the two garages serving Copley Place. This total does not include any private spaces that are provided within these garages. The reserved, employee, and monthly parking spaces are excluded from the total of transient spaces that are available to the public within the study area.

Occupancy. The 2012 annual garage occupancy data demonstrate that the Copley Place Central and Dartmouth Garages meet weekday, weekend, and evening demand consistently throughout the year, including during Red Sox games, with only a few days and hours of excess demand. Even in the peak holiday shopping season during December 2012, the Central Garage didn't reach its full capacity of 860 vehicles. Although occupancy of other area facilities is generally high, a midday survey noted that the 100 Clarendon garage and the 131 Dartmouth street garage across the street both have spaces available on weekdays out of their public supply: 170 spaces at 100 Clarendon and 70 spaces at 131 Dartmouth. Generally all the area garages, including the Central and Dartmouth garages, have excess capacity on evenings and weekends.

3.2.5 Existing Pedestrian Conditions

Sidewalks are provided on all streets within the study area. Indoor grade-separated pedestrian overpasses connecting Copley Place with Prudential Center and the Hynes Convention Center and connecting Copley Place to the Westin Hotel are also heavily used. The overpasses run diagonally across Huntington Avenue and Stuart Street.

The following describes sidewalk locations and pedestrian conditions along study area roadways. All sidewalks in the study area are in good condition; handicapped ramps, pedestrian pushbuttons, and marked crosswalks are provided at all signalized intersections. As is common in many urban settings, the effective width of sidewalks in the study area is narrowed due to light posts, mailboxes, newspaper boxes, street trees, parking meters, and other obstacles located in the sidewalk path. All of the study area streets have high pedestrian volumes generated by the major Back Bay activity centers in the area.

Huntington Avenue provides pedestrian access from Copley Square to the Prudential Center and Symphony Hall area in the Back Bay. Sidewalks on the north and south sides range from 5 to 25 feet wide.

Stuart Street provides pedestrian access from Back Bay Station and Copley Place to the Prudential Center and Park Square. Sidewalks on the north and south sides range from 9 to 30 feet wide. Pedestrians are prohibited where the I-90 off-ramp merges with Stuart Street. To prevent pedestrians from crossing the ramp, a fence is located just north of the intersection of Huntington Avenue and the Copley Place Garage. The fence extends to the edge of the off-ramp, then begins on the Copley Place side of Stuart Street and extends to the plaza located at the intersection of Stuart Street and Dartmouth Street. Signage along the fence indicates that pedestrians are prohibited.

Dartmouth Street is the main location of the MBTA Back Bay Station and serves as a major primary pedestrian route between Copley Place, Copley Square and Back Bay Station. Sidewalks on Dartmouth Street range from approximately 10 to 33 feet wide.

Concurrent pedestrian phases are provided at all intersections. Exclusive pedestrian phases are activated by pedestrian pushbuttons at the Stuart Street/Clarendon Street and St. James Avenue/Clarendon Street intersections. Field observations indicate that pedestrians are accommodated by the existing signal timings.

Pedestrian counts were conducted at the on March 9, 2011 at the intersection of Stuart Street/Dartmouth Street and May 29, 2013 at the remaining two study intersections during the a.m. and p.m. peak hours. Existing a.m. and p.m. peak-hour pedestrian volumes appear in **Figure 3-5.**

As indicated in the figures, significant pedestrian activity occurs in the study area. High volumes are generated both by Back Bay Station (along and crossing Dartmouth, Clarendon and Stuart Street) and Copley Station (along and crossing Dartmouth and Boylston Street). The John Hancock Building, New England Life and Copley Place itself are also significant pedestrian destinations.

Pedestrian improvements at the Exeter Street/Huntington Avenue intersection are discussed later in this chapter.

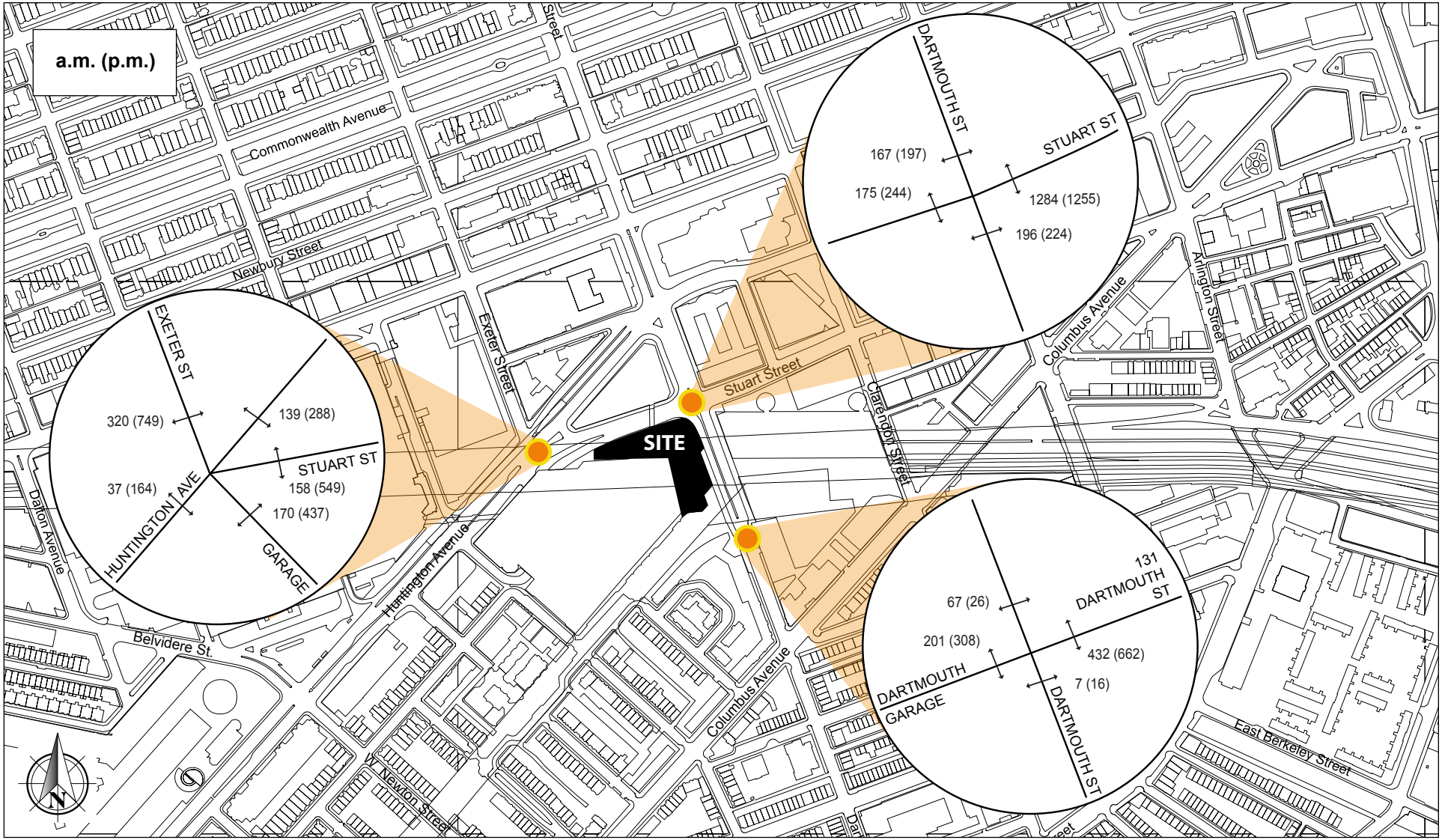

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Figure 3-5

Existing Conditions (2013) Peak Hour Pedestrian Volumes

3.3 Evaluation of Long-term Impacts

This section describes and evaluates the 2018 No-Build and Build Conditions.

3.3.1 No-Build Conditions

Background Traffic Growth

No-Build traffic conditions are independent of the proposed Project and include existing traffic and new traffic resulting from both general background growth and identified development Projects in the area.

Two procedures are used to determine background traffic growth. The first is to estimate and distribute specific traffic volumes generated by planned new major developments and anticipated roadway changes. Additional traffic generated by the following Projects, depicted in **Figure 3-6**, was included in this background analysis:

- *Wilbur Place.* This Project consists of a 14-story building with approximately 72 residential condominium units and approximately 6,300 s.f. of restaurant space. Wilbur Place will be located at the intersection of Stuart Street and Tremont Street. No parking will be provided on-site.

- *Hayward Place.* This Project includes development of a mixed-use building on Washington Street. The proposed building will contain 300 residential units, 30,000 s.f. of ground floor retail space, and 271 parking spaces. This Project will replace the existing 165-space surface parking lot.

- *Copley Residences (441 Stuart Street Residences).* A mixed-use redevelopment proposed for 441 Stuart Street would convert approximately 90,000 s.f. of office space into residential condominiums on floors 4 through 11. Floors 1 through 3 remain a mix of commercial uses. This Project produces a reduction in vehicle trips due to the change in land use and intensity.

- *350 Boylston Street.* This approved nine-story office building will include 221,230 s.f. of office space, with ground level retail and restaurant space, a health club, and 150 underground parking spaces.

- *157 Berkeley (Liberty Mutual).* This approved Project includes construction of a new office building at 157 Berkeley Street. The proposed building includes approximately 650,000 sf of general office space, and a 700-seat cafeteria, and parking for up to 205 vehicles in a below-grade parking structure.

- *93 Massachusetts Avenue.* This approved Project includes 33,600 sf of office, 7,950 sf of retail, and 11 parking spaces.

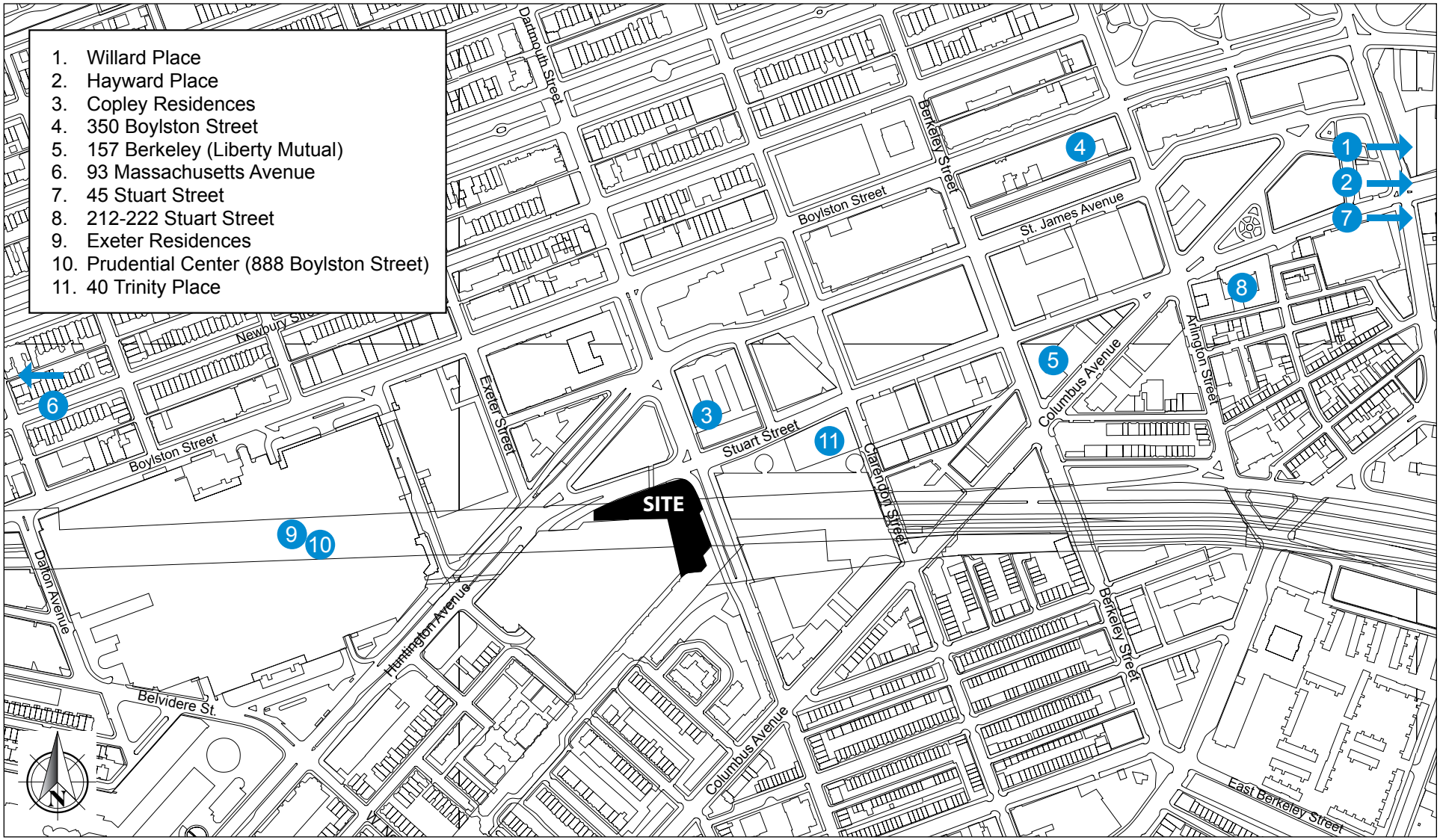

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Figure 3-6

No-Build Projects

- *45 Stuart Street (Jacob Wirth Redevelopment).* This mixed-use development has been submitted to BRA for review and comprises approximately 250,000 sf of office space, approximately 2,000 sf of retail and café space on the ground floor and mezzanine level, and restoration of the historic Jacob Wirth building. In addition, a 174-space parking garage is proposed.

- *212–222 Stuart Street Development.* This Project proposes redevelopment of a site in Bay Village currently occupied by parking and the now vacant Jae's Restaurant, to be occupied by 10 stories of retail, commercial, and office space.

- *Exeter Residences.* One of the final Projects in the redevelopment of Prudential Center, this 188-unit residential Project has been approved by the BRA and is currently under construction.

- *Prudential Center/888 Boylston Street.* The second Project in the last phase of the Prudential Center renovation includes a maximum of 362,000 sf of office and a maximum of 100,000 sf of retail space.

- *40 Trinity Place.* This Project is located at the existing location of the Boston Common Hotel and Conference Center. The existing building will be demolished and a new 33-story mixed-use building will be constructed. The Project will include 115 condominium units, a 227-room hotel, 11,300 sf of restaurant space, 5,500 sf of space reserved for the University Club, and 100 parking spaces.

The second method of determining background growth rate is to apply a general growth rate to account for changes in demographics, auto usage, and ownership. Based on a comparison of the 2007-2010 traffic volume data at study area intersections, traffic volumes have remained relatively constant in recent years. However, to provide a conservative estimate, this analysis assumes a general background growth rate of 0.5% per year. The background growth rate is assumed to include study area background traffic from the following small or more distant Projects:

- 4–6 Newbury Street. To be built on the site of a former above-ground parking garage, this approved 49,000-sf Project will include 3 stories of retail space, 4 stories of office space, and 15 underground parking spaces.

- John Hancock Tower Improvements (200 Clarendon). Building owners propose to modify the existing Hancock Towers by providing a public café in the lobby and mezzanine area and to construct up to 180 underground parking spaces beneath the John Hancock Tower.

- 100 Arlington Street. A Letter of Intent has been filed with BRA for this Project, which includes 225,000 sf of office space in the building now occupied by the Renaissance Charter School.

- Castle Square. The proposed Project includes renovation of the existing 500 affordable residential apartments, approximately 11,000 square feet of ground floor retail, restaurant and services, and approximately 8,000 square feet of office space.

- Concord Baptist Church at 199 W. Brookline Street. A small residential Project is proposed, with 9 dwelling units and 21 parking spaces.

- 5–10 St. George Street. At this site, 33 dwelling units with 22 parking spaces are planned.

- 168 Massachusetts Avenue. At this site, the Berklee College of Music plans to develop a 155,000 sf mixed-use building that will accommodate a new approximately 350-bed residence hall, 400-seat campus dining and student performance facility, music technology spaces, and ground floor retail.

- Berkeley Crossroads. The proposed Project includes an approximately 450-bed dormitory, new approximately 65,000 sf Berklee Performance Center, and approximately 45,000 sf of student life/academic space. The Project is located on the southeast corner of Massachusetts Avenue and Boylston Street.

- Christian Science Center – The Christian Science Center is proposing 950,000 square feet of new development on selected edges of the existing Christian Science Center plaza- located on Huntington Avenue and Dalton Street.

No-Build Traffic Operations

The 2018 No-Build analysis uses the methodology described for the Existing Conditions. The 2018 No-Build a.m. peak-hour traffic volumes are shown in **Figure 3-7** and the 2018 No-Build p.m. peak-hour traffic volumes are shown in **Figure 3-8.** Signal timings used in the No-Build Conditions were the same timings as those used in the Existing Conditions analysis. The resulting intersection operations for No-Build Conditions are shown in **Table 3-5.** Complete Synchro reports are provided in the Transportation Appendix.

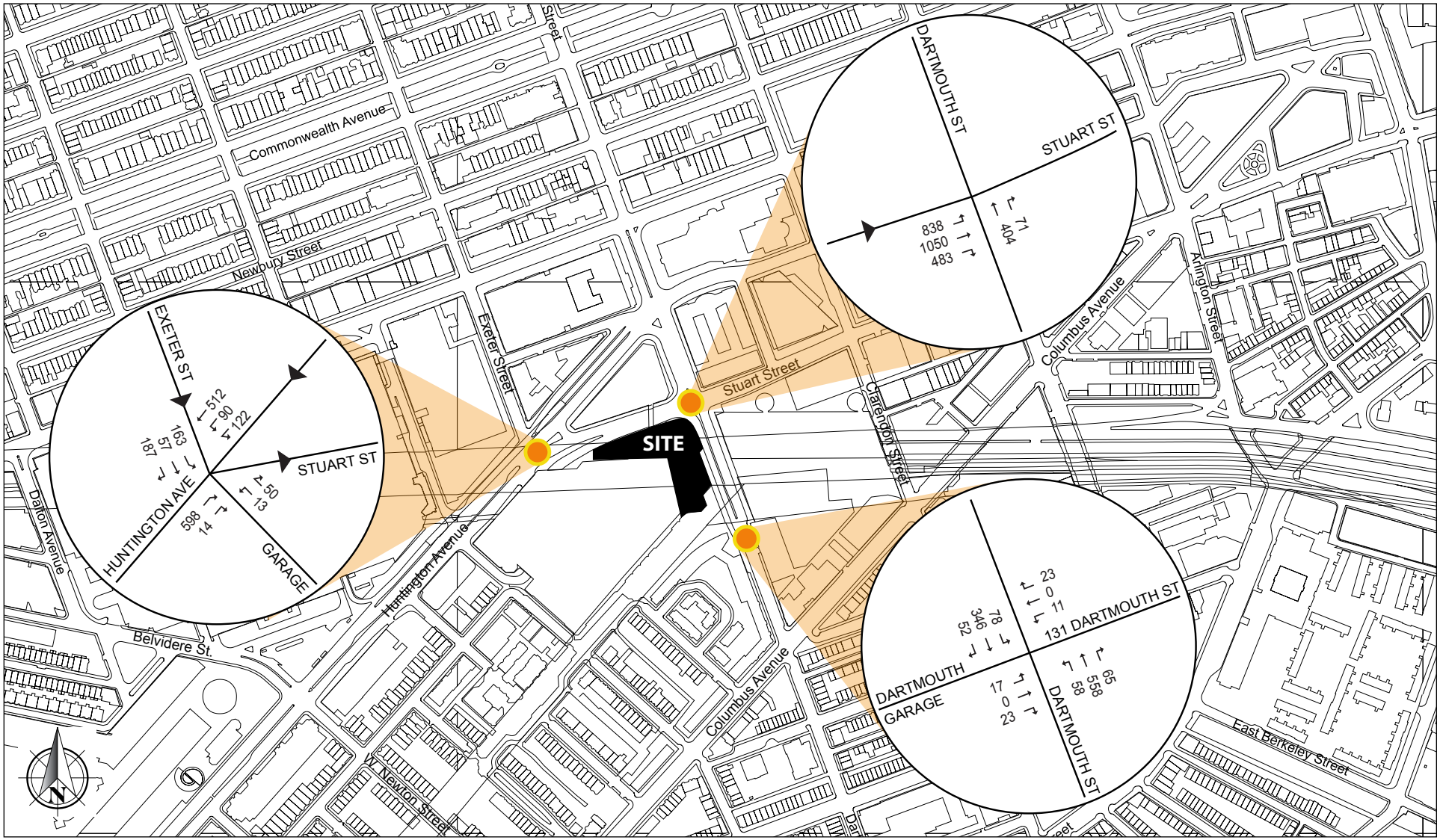

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Figure 3-7

No-Build Conditions (2018) Turning Movement Volumes,
a.m. Peak Hour 8:00-9:00 a.m.

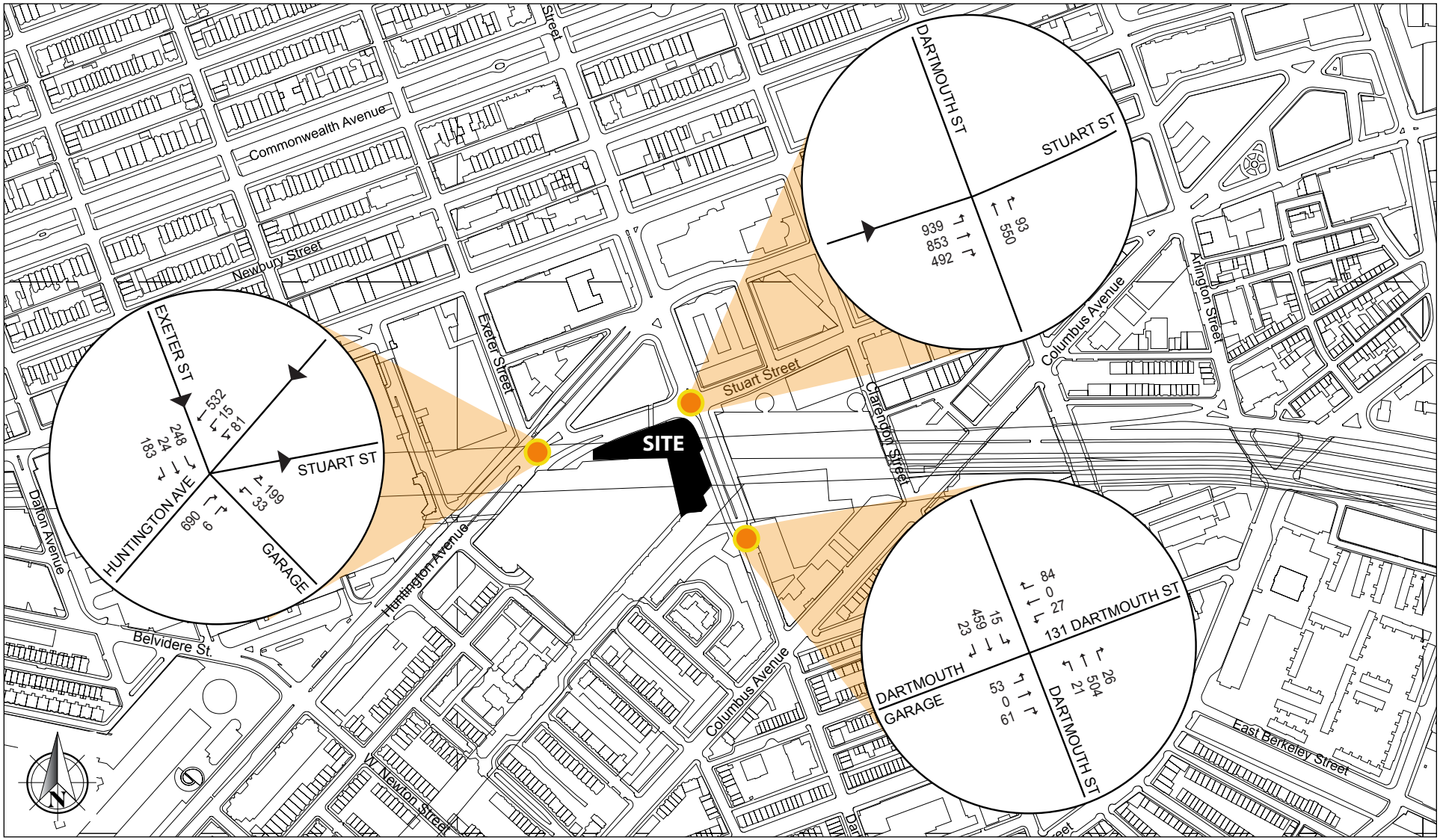

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Figure 3-8

No-Build Conditions (2018) Turning Movement Volumes,
p.m. Peak Hour 5:00-6:00 p.m.

Table 3-5: No-Build (2018) Level of Service Summary

Intersection	LOS	Delay	V/C	95th Percentile Queue (feet)
a.m. Peak Hour				
Signalized Intersections				
Huntington Avenue/Stuart Street/Garage/Exeter Street	**D**	**41.1**	**-**	**-**
Garage NB left	C	27.4	0.11	19
Garage NB right	A	8.2	0.18	24
Exeter SB left	D	46.7	0.73	137
Exeter SB thru/right	D	51.9	0.82	193
Huntington EB thru | thru | thru/right	E	55.3	0.96	#243
Huntington WB left	C	27.8	0.48	194
Huntington WB thru | thru | thru | thru	C	25.7	0.37	96
Stuart Street/Dartmouth Street	**B**	**19.9**	**-**	**-**
Stuart EB left | left	A	2.0	0.34	m39
Stuart EB thru | thru | thru	C	24.1	0.58	m243
Stuart EB right	D	45.5	0.90	m#422
Dartmouth NB thru | thru	B	13.8	0.29	106
Dartmouth NB right	B	13.2	0.32	40
Unsignalized Intersection				
Dartmouth Street/Equinox Garage/Dartmouth Garage	**-**	**-**	**-**	**-**
Dartmouth Garage EB left/thru/right	D	27.3	0.21	20
Equinox WB left-thru/right	C	24.0	0.16	14
Dartmouth NB left/thru/right	A	1.4	0.06	4
Dartmouth SB left/thru/right	A	2.5	0.09	8
p.m. Peak Hour				
Signalized Intersections				
Huntington Avenue/Stuart Street/Garage/Exeter Street	**C**	**33.7**	**-**	**-**
Garage NB left	C	27.5	0.24	33
Garage NB right	A	7.2	0.50	30
Exeter SB left	D	49.0	0.81	203
Exeter SB thru/right	D	35.0	0.59	140
Huntington EB thru | thru | thru/right	D	44.6	0.89	#260
Huntington WB left	C	27.3	0.26	70
Huntington WB thru | thru | thru | thru	C	25.4	0.36	98
Stuart Street/Dartmouth Street	**B**	**11.1**	**-**	**-**
Stuart EB left | left	A	1.9	0.36	M51
Stuart EB thru | thru | thru	A	9.3	0.42	M97
Stuart EB right	B	16.7	0.70	M285
Dartmouth NB thru | thru	C	21.6	0.48	177
Dartmouth NB right	B	18.3	0.52	32
Unsignalized Intersection				
Dartmouth Street/Equinox Garage/Dartmouth Garage	**-**	**-**	**-**	**-**
Dartmouth Garage EB left/thru/right	E	43.6	0.59	82
Equinox WB left/thru/right	C	23.7	0.39	44
Dartmouth NB left/thru/right	A	0.6	0.02	2
Dartmouth SB left/thru/right	A	0.5	0.02	1

Under No-Build Conditions, signalized intersections in the study area operate at the same level of service as under Existing Conditions. Only minor changes in LOS, all of which result in acceptable conditions, are found at a few individual intersection approaches during one or more peak hours.

3.3.2 Build Conditions

The study team conducted an impact analysis for Build Conditions. The Project now includes 109 condominium units and 433 apartments in place of the previously approved 318 condominiums, as well as the prior program of approximately an 115,000 s.f. retail addition (including the Neiman Marcus expansion, additional retail and restaurant space, a new Wintergarden, and associated support areas). A total of up to 268 parking spaces in the existing Copley Place and Dartmouth garages will be managed so as to provide parking for the residential units.

Vehicular Access

Vehicles associated with the retail and restaurant uses on the site will utilize the Central Garage, accessed at the intersection of Huntington Avenue and Exeter Street. One level of the Central Garage will accommodate 116 reserved spaces for condominium units in the building. The remaining total of up to 152 spaces for the rental units will be located as unreserved self-park spaces in the Dartmouth Garage. There will no longer be valet trips between the two garages.

Pedestrian Access

The entrance to the residential component of the Project will remain in the same location along Dartmouth Street. Careful landscaping along the Stuart Street building frontage will reinforce the prohibition of pedestrian travel across the Massachusetts Turnpike eastbound Copley Square off-ramp.

Trip Generation

The study team has developed trip generation for the Project using the rates derived from the Institute of Transportation Engineers' (ITE) Trip Generation Manual (9th edition, 2012) fitted curve equations and average trip rates. The residential use consists of 109 condominium units and 433 rental units.

The following ITE land use codes (LUC) were used to develop the net-new trips related to the change in the residential component of the Project.

LUC 220 – Apartments. Apartments are defined as rental dwelling units located within the same building with at least three other dwelling units. The data for apartments include low-rise, mid-rise, and high-rise buildings.

LUC 230 – Residential Condominium/Townhouse. Residential condominiums/ townhouses are defined as ownership units that have at least one other owned unit within the same building structure. Both condominiums and townhouses are included in this use.

Pass-by and Internal Trips

A portion of trips to the Project will be pass-by and internal trips. Pass-by trips are trips that are already in the transportation network and not specifically destined to the proposed uses. ITE defines pass-by trips as trips "made as intermediate stops on the way from an origin to a primary destination without a route diversion." This accounts for trips generated by people already in the area, as in common shopping districts or dense urban areas. Internal trips are trips that occur between uses within the mixed-use redevelopment, such as a resident who walks to a retail shop within the complex. The same pass-by and internal capture rates as used for the prior Project were applied to the changed residential program, along with the unchanged retail and restaurant component.

After determining the pass-by and internal trips, the "unadjusted" vehicle trips were converted to person trips by applying the vehicle occupancy rates (VOR) as derived from the 2000 U.S. Census Journey to Work Data and the Nationwide Personal Transportation Survey.

A detailed presentation of the pass-by, internal trips, and person trips is provided in the Transportation Appendix.

Mode Split

Mode split for the residential use was again determined using data provided by BTD for Area 4; vehicle occupancy rates (VOR) were derived from 2001 National Household Travel Survey, as shown below.

- Walk share: 57%
- Transit share: 19%
- Vehicle share: 24%
- Vehicle occupancy rate: 1.2

As shown, the automobile share is quite low for the residential land uses, because of the proximity of the site to public transportation and its location in the middle of the Back Bay commercial area. Vehicle trip generation for the proposed development as compared to

the approved DPIR development appears in **Table 3-6.** Detailed trip generation for the proposed Project is included in the Transportation Appendix.

Table 3-6: Vehicle Trip Generation Comparison-Residential Component

		DPIR [a]	Current Residential Program			Net Change
		318 condos	433 apartments	109 condos	Total	
Daily	In	196	350	75	425	+229
	Out	196	350	75	425	+229
	Total	392	700	150	850	+458
Morning Peak	In	5	10	2	12	+7
	Out	28	42	10	52	+24
	Total	33	52	12	64	+31
Evening Peak	In	21	38	8	46	+25
	Out	8	17	3	20	+12
	Total	29	55	11	66	+37

a From the August 15, 2011 Draft Project Impact Report (DPIR) submitted for the Project.

As shown in **Table 3-6**, the residential component of the Project (433 apartment units and 109 condominium units) is expected to add approximately 850 new vehicle trips on an average weekday, with 64 new vehicle trips during the weekday morning peak hour (12 entering/52 exiting) and 66 new vehicle trips during the weekday evening peak hour (46 entering/20 exiting).

When compared to the development program evaluated in the DPIR, the residential component of the Project will generate a net change of 458 additional vehicle trips on an average weekday, with 31 additional vehicle trips (7 entering/24 exiting) during the weekday morning peak hour and 37 additional vehicle trips (25 entering/12 exiting) during the weekday evening peak hour.

As previously mentioned, the valet service that was proposed in the DPIR will be removed. The valet service previously generated an additional 18 trips during the a.m. peak hour and 16 trips during the p.m. peak hour at the study area intersections that will no longer occur with the proposed development program.

The vehicle trip generation associated with the full build-out of the Project is shown in **Table 3-7.**

Table 3-7: Vehicle Trip Generation Comparison – Full Development Program

		DPIR/ EENF [a]	Current Development Program	Net Change
Daily	In	446	675	+229
	Out	446	675	+229
	Total	892	1,350	+458
Morning Peak	In	19	26	+7
	Out	43	67	+24
	Total	62	93	+31
Evening Peak	In	43	68	+25
	Out	24	36	+12
	Total	67	104	+37

a From the August 15, 2011 Draft Project Impact Report (DPIR) and the EENF submitted for the Project.

As shown in **Table 3-7**, the full build-out of the Project will result in 1,350 net new vehicle trips on an average weekday, with 93 net new vehicle trips during the weekday morning peak hour (26 entering/67 exiting) and 104 net new vehicle trips during the weekday evening peak hour (68 entering/36 exiting).

When compared to the development program evaluated in the DPIR, the full-build out of the Project will generate a net change of 458 additional vehicle trips on an average weekday, with 31 additional vehicle trips (7 entering/24 exiting) during the weekday morning peak hour and 37 additional vehicle trips (25 entering/12 exiting) during the weekday evening peak hour.

Trip Distribution

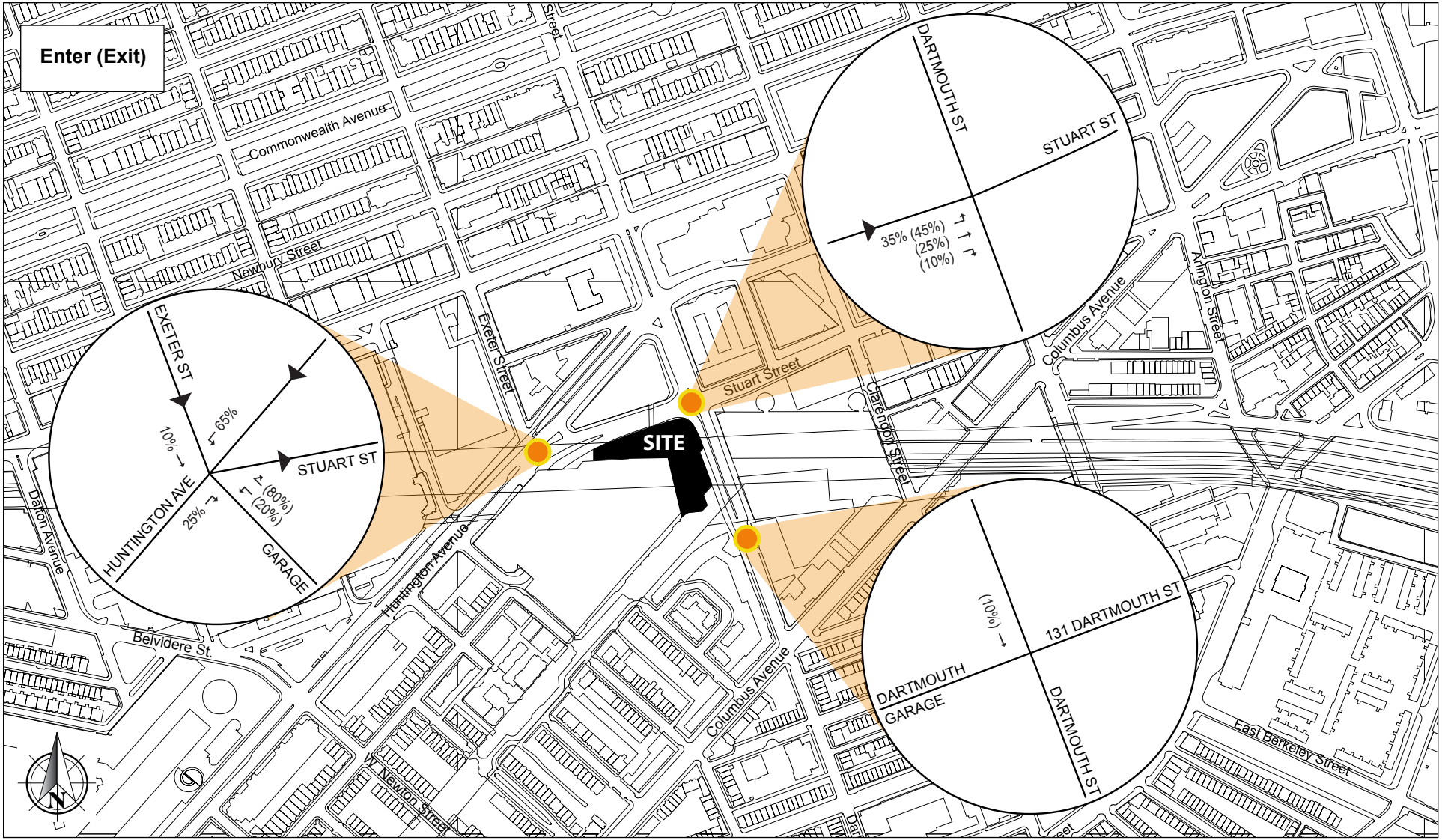
Vehicular trip distribution data were developed based on BTD guidelines, using origin-destination characteristics for Area 4. The distribution appears in **Table 3-8** and **Figure 3-9.**

Table 3-8: Vehicular Trip Distribution

	Distribution	
Vehicle Access to/from the Site	**To Site**	**From Site**
Boylston Street	10%	10%
Huntington Avenue	25%	20%
I-90 (Masspike)	35%	35%
Dartmouth Street	—%	10%
Stuart Street/St. James Street	30%	25%
Total	**100%**	**100%**

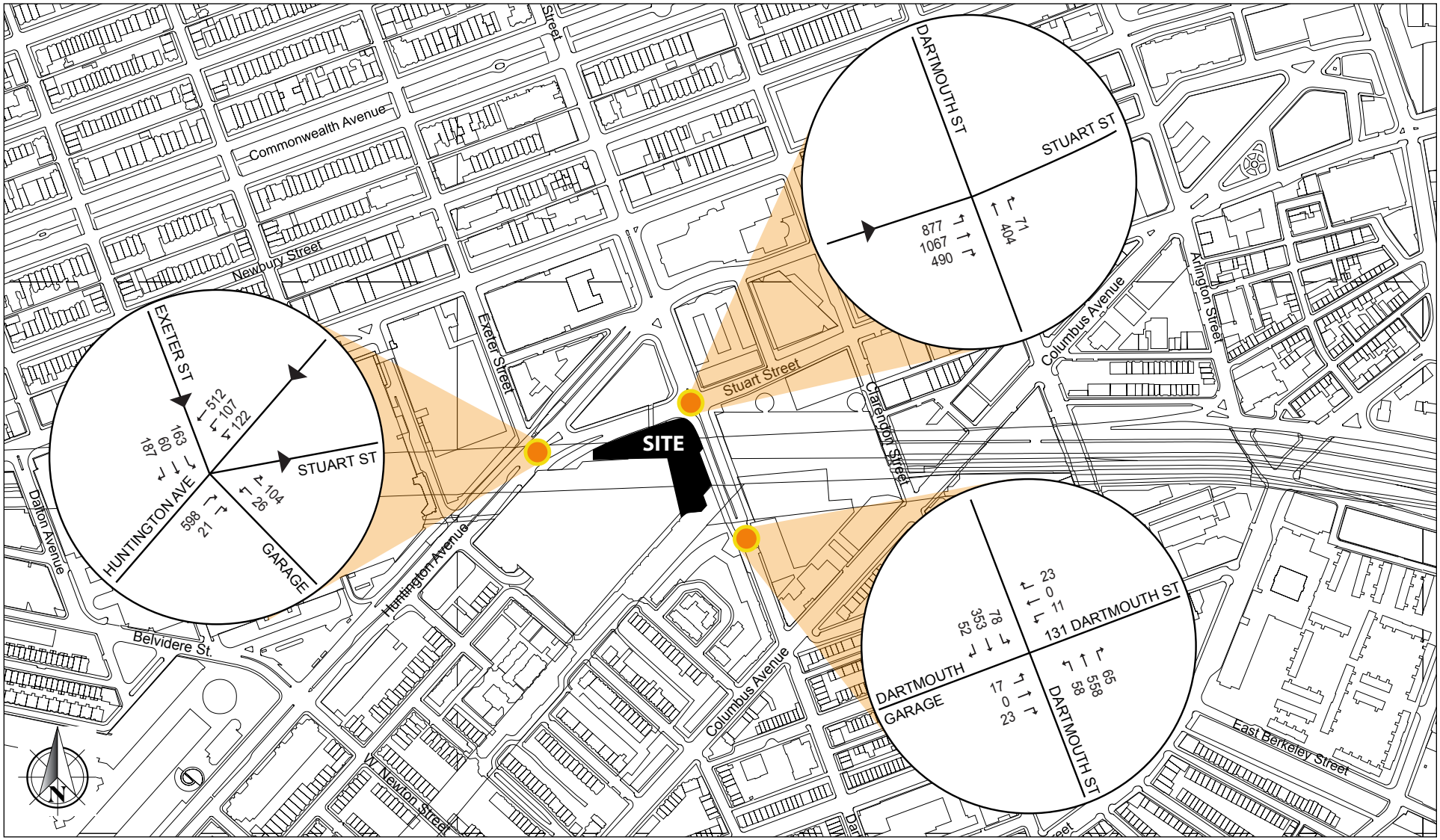
Build Traffic Operations

The 2018 Build a.m. peak hour traffic volumes are shown in **Figure 3-10** and the 2018 Build p.m. peak hour traffic volumes are shown in **Figure 3-11.** The resulting traffic operations for the 2018 Build Conditions are presented in **Table 3-9.** Capacity analysis reports are provided in the Transportation Appendix.



Not to scale.

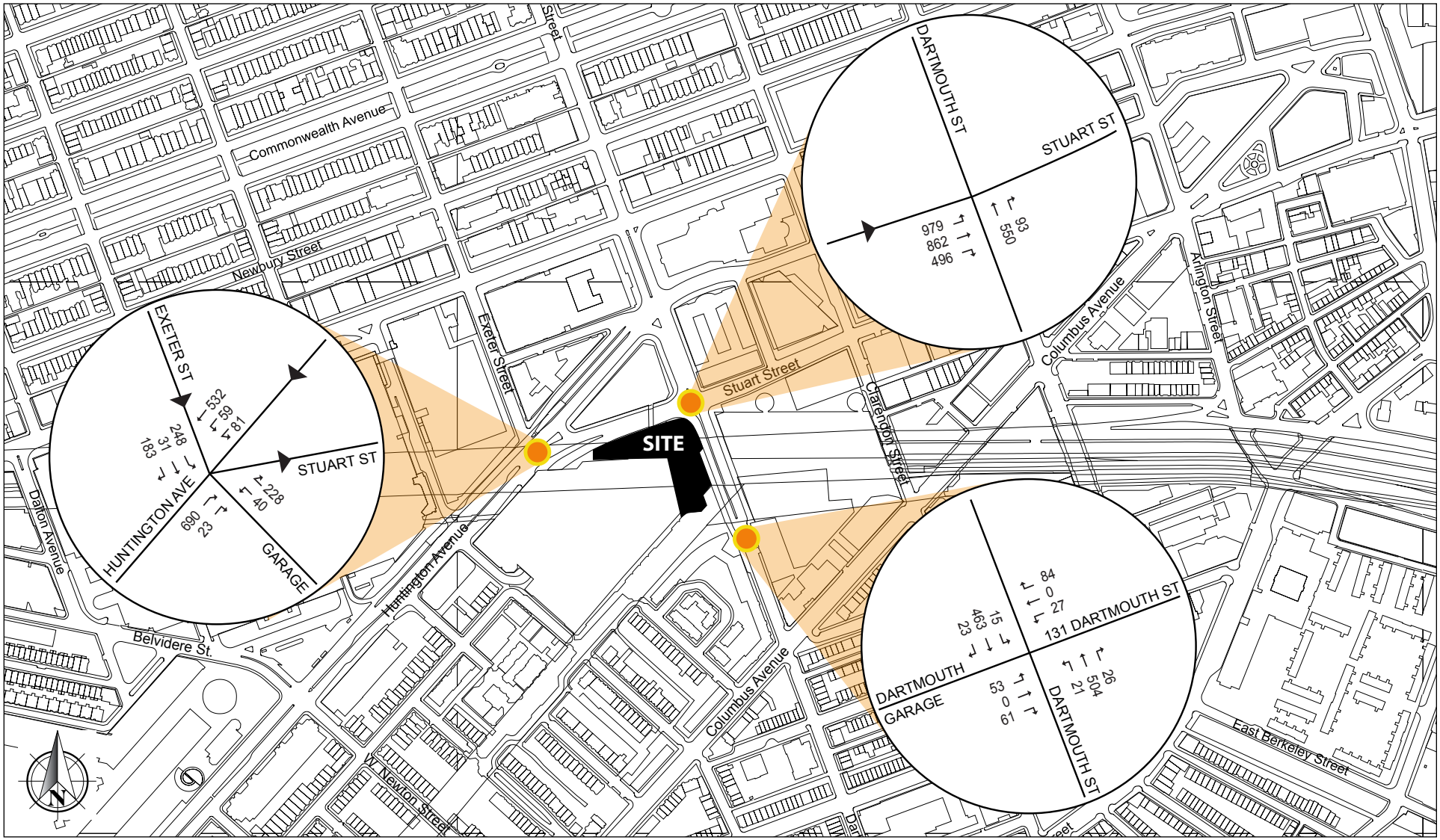
Figure 3-9
Trip Distribution



Not to scale.

Figure 3-10

Build Conditions (2018) Turning Movement Volumes,
a.m. Peak Hour 8:00-9:00 a.m.



Not to scale.

Figure 3-11

Build Conditions (2018) Turning Movement Volumes,
p.m. Peak Hour 5:00-6:00 p.m.

Table 3-9: Build Conditions (2018) Level of Service Summary

Intersection	LOS	Delay	V/C	95th Percentile Queue (feet)
a.m. Peak Hour				
Signalized Intersections				
Huntington Avenue/Stuart Street/Garage/Exeter Street	**D**	**40.6**	**-**	**-**
Garage NB left	C	29.8	0.22	32
Garage NB right	A	6.9	0.31	31
Exeter SB left	D	44.3	0.71	134
Exeter SB thru/right	D	49.5	0.80	191
Huntington EB thru | thru | thru/right	E	57.7	0.97	#252
Huntington WB left	C	30.0	0.53	216
Huntington WB thru | thru | thru | thru	C	25.6	0.37	96
Stuart Street/Dartmouth Street	**C**	**20.2**	**-**	**-**
Stuart EB left | left	A	2.1	0.35	m42
Stuart EB thru | thru | thru	C	24.1	0.59	m246
Stuart EB right	D	47.3	0.91	m#432
Dartmouth NB thru | thru	B	13.8	0.29	106
Dartmouth NB right	B	13.3	0.32	41
Unsignalized Intersection				
Dartmouth Street/Equinox Garage/Dartmouth Garage	**-**	**-**	**-**	**-**
Dartmouth Garage EB left/thru/right	D	27.7	0.22	20
Equinox WB left-thru/right	C	24.2	0.16	14
Dartmouth NB left/thru/right	A	1.4	0.06	4
Dartmouth NB right	A	2.5	0.09	8
p.m. Peak Hour				
Signalized Intersections				
Huntington Avenue/Stuart Street/Garage/Exeter Street	**C**	**34.1**	**-**	**-**
Garage NB left	C	29.2	0.30	39
Garage NB right	B	10.1	0.57	47
Exeter SB left	D	49.0	0.81	203
Exeter SB thru/right	D	35.7	0.61	145
Huntington EB thru | thru | thru/right	D	45.7	0.91	#273
Huntington WB left	C	29.9	0.42	105
Huntington WB thru | thru | thru | thru	C	25.1	0.35	98
Stuart Street/Dartmouth Street	**B**	**11.3**	**-**	**-**
Stuart EB left | left	A	2.1	0.38	m56
Stuart EB thru | thru | thru	A	9.6	0.42	m101
Stuart EB right	B	17.3	0.71	m291
Dartmouth NB thru | thru	C	21.6	0.48	177
Dartmouth NB right	B	18.6	0.52	33
Unsignalized Intersection				
Dartmouth Street/Equinox Garage/Dartmouth Garage	**-**	**-**	**-**	**-**
Dartmouth Garage EB left/thru/right	E	44.2	0.59	83
Equinox WB left/thru/right	C	23.8	0.39	44
Dartmouth NB left/thru/right	A	0.6	0.02	2
Dartmouth SB left/thru/right	A	0.5	0.02	1

Under Build Conditions, all signalized intersections in the study area operate at the same Level of Service as under No-Build Conditions, and none operates below acceptable LOS D, with the exception of the Dartmouth Garage exiting movements during the p.m. peak hour, which operate at LOS E.

Parking

In the interest of sustainability and transportation demand management, no new parking will be provided as part of the Project; spaces will be allocated from the current supply. Shoppers attracted to the expanded Neiman Marcus and Copley Place retail space will continue to be accommodated by the commercial spaces currently provided within the combined capacity of the two garages.

A "shared-parking" analysis was done for the proposed residential, retail and restaurant uses to determine future parking demand at the peak hour of 2:00 p.m. The worksheet is provided in the Transportation Appendix. Retail and restaurant parking demand was held constant, but the analysis reflected the lower parking ratio allotted for the rental units – 0.35 spaces per unit. The analysis yielded the following:

- ***Retail:*** Potential peak weekday demand for the added retail space is 38 spaces at 1:00 p.m. However, because this is not a new retail destination, it is not expected that the retail expansion will independently attract new vehicle new trips. Thus, these trips will be accommodated in the 500 spaces already allotted for customer parking in the Neiman Marcus lease.
- ***Restaurants:*** The quality restaurant will not contribute trips until evening, although the café added a potential need for 19 spaces at 1:00 p.m. Again, these trips will be accommodated in the 500 customer spaces.
- ***Residential:*** The new residents at Copley Place will not be eligible for City of Boston resident permit parking stickers.

Up to 116 self-park reserved residential parking spaces will be provided in the lowest level of the Central Garage for the condominium units. The remaining 152 spaces will be unreserved "right-to-park" spaces in the Dartmouth Garage. As necessary, monthly spaces from the 356 that are currently leased will be reallocated between the Central and Dartmouth garages controlled by Simon Property Group to meet the residential needs as units are occupied. Zipcar spaces will also be added at the Dartmouth Garage as needed to help reduce residential demand. Beyond the reallocation of the 116 leased spaces, if necessary, the number of monthly leases to outside parties and companies could be reduced over time as companies move or decide not to renew their leases. In order to insure that adequate public parking remains available in the Central Garage, the number of monthly 24-hour residential permits there will be capped at 116 in order to prevent residents from occupying additional spaces. The Proponent intends to seek from APCC the conversion of only these 116 deeded spaces from commercial to

residential exempt spaces under the Downtown Boston Parking Freeze. This would reduce the total commercial spaces at Central from 860 to 744, and in the two garages from 1,136 to 1,020.

The up-to-152 unreserved residential spaces in the Dartmouth Garage will be provided from a combination of the 276 commercial spaces, 129 residential exempt spaces and the 293 employee exempt spaces at Dartmouth. Dartmouth Garage rates will be adjusted to insure adequate daytime vacancies. The Dartmouth Garage has sufficient vacancy in the evenings and overnight to accommodate the new residential spaces. Tent City parking spaces will be maintained in the Dartmouth Garage.

It is also anticipated that about 29% of residents will use their cars for work trips during the day, consistent with BTD mode split factors, thus vacating approximately 44 of the 152 unreserved residential spaces at Dartmouth at peak, bringing the new demand generally in line with the existing garage vacancies at 2:00 p.m. Any surplus demand will be dealt with at Dartmouth Garage. As stated above, the 100 Clarendon and 131 Dartmouth garages have spaces available on weekday afternoons as well.

Weekend occupancy of both the Central and Dartmouth garages is much lower at all times of day, with at least 55% of spaces available to serve the new uses.

Pedestrians

Table 3-10 shows added walk trips for the Project. In addition to these trips, transit riders will also walk between the Project site and nearby transit stations. Detailed trip generation is provided in the Transportation Appendix.

Table 3-10: Project-Generated Pedestrian Trips

Times and Directions		DPIR Trips [a]	Current Program	Net New Trips
Daily	In	1,426	1,994	+568
	Out	1,426	1,994	+568
	Total	2,852	3,988	+1,136
a.m. Peak	In	87	107	+20
	Out	162	238	+76
	Total	249	345	+96
p.m. Peak	In	172	249	+77
	Out	99	140	+41
	Total	271	389	+118

a From the August 15, 2011 DPIR submitted for the Project.

As shown, the Project is expected to generate 3,998 daily walk trips, an increase of 1,136 daily walk trips over the previously approved program. Combining the daily walk and transit trips (that require a walk trip to or from the site) the Project is expected to add 5,238 daily pedestrian trips. There will be 345 pedestrian trips in and out of the site during the morning peak hour and 389 pedestrian trips in and out during the afternoon peak hour. Transit rider trips will add 91 new pedestrian trips during the a.m. peak hour and 106 new pedestrian trips during the p.m. peak hour.

Public Transportation

Based on the trip generation calculations, Project-added transit trips are shown in **Table 3-11.** Detailed trip generation is provided in the Transportation Appendix.

Table 3-11: Project-Generated Transit Trips

Times and Directions		DPIR Trips [a]	Current Program	Net New Trips
Daily	In	436	625	+189
	Out	436	625	+189
	Total	872	1,250	+378
a.m. Peak	In	30	37	+7
	Out	36	54	+18
	Total	66	91	+25
p.m. Peak	In	38	56	+18
	Out	34	49	+15
	Total	72	105	+33

a From the August 15, 2011 DPIR submitted for the Project.

As shown, the Project is expected to add 91 transit trips during the a.m. peak hour (54 boarding and 37 alighting) and 105 transit trips during the p.m. peak hour (49 boarding and 56 alighting). When compared to the previously approved program, this represents an increase of 25 transit trips during the a.m. peak hour and an increase of 33 transit trips during the p.m. peak hour. These trips will be dispersed to the various inbound and outbound transit lines in the study area. The most convenient services are the Back Bay/South End Orange Line and commuter rail station and the Copley Square Green Line Station. Even given a conservative estimate that all 56 returning to the site would be alighting at the outbound Green Line at Copley Square Station, the total Project-related transit trips during the evening peak hour are less than 0.01% of the peak-hour northbound capacity of about 10,800. According to *MBTA 2009 Bluebook* data, the reserve capacity is sufficient to accommodate the additional trips generated by the Project.

Bicycle Accommodations

Secure bicycle storage will be made available to residents and visitors. Each of the locked storage areas for the individual dwelling units will accommodate bicycle storage. In addition, high-density bicycle racks will be provided at a convenient location in the Central Garage for those who use their bicycles regularly. Bicycle racks will be located near major building entrances as well to accommodate messengers and visitors' bikes. The location of the spaces will be shown on the Site Plan submitted to BTD along with the Transportation Access Plan Agreement.

All bicycle racks, signs, and parking areas will conform to BTD standards and be sited in safe, secure locations.

Since the 2011 filing, a Hubway shared-bike station with 19 docks has been installed at the eastern terminus of the Southwest Corridor across from the Back Bay Station. Simon Property Group will maintain this Hubway station in its current location. There is also another Hubway location with 24 docks nearby at the Boston Public Library.

Loading and Service Accommodations

Loading, service and trash removal for the additional residential units will take place from the existing loading docks, accessed from Harcourt Street. A new service elevator will connect the new residential building to the loading dock. Whenever possible, loading and service activities will take place during off-peak hours. Permanent "No Idling" signs will be posted in the loading areas.

Based on the truck trip rate of 0.04 daily trips per dwelling unit developed from NCHRP and HSH survey data, the additional residential uses will generate a total of 9 additional deliveries per weekday beyond the 31 estimated previously for the entire development, for a total of 40 deliveries per day.

As trips will be distributed over the course of the day, this added activity will be easily be accommodated by the existing 14 Copley Place loading docks. A loading dock manager will be part of the on-site staff to manage service and loading operations on the site. Move-in/move-out and other loading/service activities will be scheduled through the management office.

3.3.3 Transportation Mitigation Measures

Intersection Improvements

The additional residential units will result in minimal impact to vehicular traffic conditions, as summarized above. However, the Proponent will continue to work with BTD to improve signal timing and phasing in the area to improve the overall efficiency of intersections in the area. Pedestrian improvements are proposed at two intersections to improve convenience and safety, as discussed below.

Figure 3-12 shows landscaping and pedestrian improvements proposed for the ***Huntington Avenue/Stuart Street/Copley Garage/Exeter Street*** intersection. As this complex intersection functions today, pedestrians going to and from the Copley Place driveway tend to walk along the narrow curbing adjacent to the fence that separates defines the Massachusetts Turnpike off-ramp, creating safety issues. On the eastern side of the intersection, the proposed plan includes several safety improvements on the southeast corner of the intersection adjacent to Copley Place, including:

- Extension to the west of the existing fence along the Turnpike ramp in order to definitively prohibit pedestrian passage along the ramp;
- Widening of the sidewalk at that location to provide a safe pedestrian storage area;
- Extension of the median between Huntington Avenue and Stuart Street to provide a pedestrian refuge and handicapped opening; and
- Realignment of the crosswalk from Copley Place to the median to shorten the pedestrian crossing distance.

These improvements will make the desired pedestrian path more convenient and, combined with improved landscaping within the fenced area, will deter pedestrians from the path along the ramp.

On the west side of the intersection, improvements are directed toward shortening pedestrian crossings and providing safe refuge. The improvements include:

- Provision of a bulbout and extension of the sidewalk to the west of the Copley Place garage driveway;
- Extension of the median to provide additional space for a pedestrian refuge and handicapped opening;
- Realignment and shortening of the crosswalk from Copley Place to the median; and
- New bulbout on the northwest sidewalk, again to shorten the pedestrian crossing.

These relatively modest improvements, in combination, should greatly improve pedestrian safety and space Level of Service at the intersection, without impeding vehicular traffic flow.

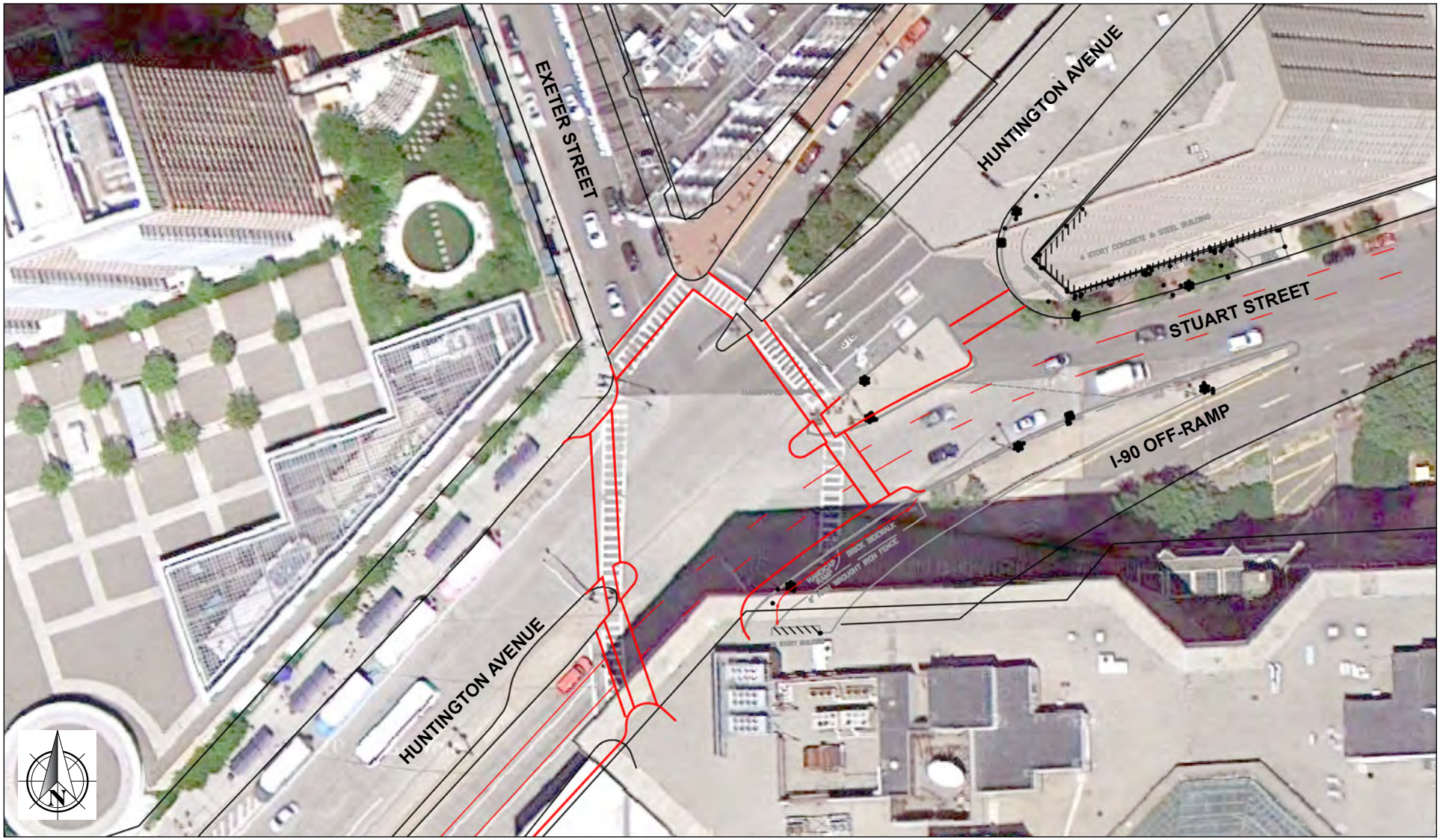


Figure 3-12

Proposed Improvements at Huntington Avenue/
Stuart Street/Copley Garage/Exeter Street

The ***Stuart Street/Dartmouth Street*** intersection is a four-way, signalized intersection with approaches from Stuart Street eastbound and Dartmouth Street northbound. The eastbound Stuart Street approach consists of two exclusive left-turn lanes, three through lanes, and an exclusive right-turn lane. The Dartmouth Street northbound approach consists of three travel lanes: two through lanes and a right-turn lane. No parking is allowed on either approach. On the south side of the intersection, a concrete median separates the northbound and southbound traffic on Dartmouth Street as Dartmouth Street becomes two-way.

West of the intersection with Dartmouth Street, a Massachusetts Turnpike (I-90) exit ramp, two Huntington Avenue eastbound lanes, and the Huntington Avenue westbound U-turn lane all empty onto Stuart Street. Queuing and weaving are critical issues that impact the operation of the intersection, because merging vehicles from the ramp have approximately 300 feet to change lanes prior to the Dartmouth Street intersection. Although Stuart Street eastbound has two channelized left-turn lanes, three through lanes, and a channelized right-turn lane at its intersection with Dartmouth Street, the lack of existing pavement markings often results in a drop in capacity due to vehicles traveling over two lanes, basically making one lane out of two.

During peak periods, the study team observed more weaving maneuvers in the a.m. peak period as well as the longest queues associated with the right-turn from Stuart Street onto Dartmouth Street. A queue on Dartmouth Street southbound south of the intersection causes a queue along Stuart Street eastbound, which, in most cases, extends to the I-90 off-ramp. Minimal queues were observed associated with the Stuart Street eastbound through and the left-turn maneuvers.

During the a.m. peak hour, illegal on-street loading was observed as well. For example, a truck double parked along the north side of Stuart Street to make a delivery at the Westin Hotel, blocking one through lane. In a “no stopping” zone, a truck was parked on the south side of Stuart Street, just west of the intersection with Dartmouth Street, making a delivery to Au Bon Pain in Copley Place. This truck was parked for over ten minutes, impacting peak-hour right-turning movements from Stuart Street onto Dartmouth Street.

The study team has proposed a scheme for reducing the cross-section of Stuart Street in order to increase the sidewalk width at the southwestern corner of the intersection, as shown in **Figure 3-13.** In this scheme, the existing channelization islands are removed and the intersection becomes a more traditional four-way geometric layout. The proposed cross-section on Stuart Street has lane usage consisting of an exclusive left-turn lane, a shared left/through lane, a through lane, and an exclusive right-turn lane. The traffic signal phasing would change, providing Stuart Street and Dartmouth Street each with its own exclusive phase, as well as an exclusive pedestrian phase. This

layout also allows for additional pedestrian phases that could run concurrently with the vehicular phases, something that does not exist at the intersection today.

Based on a review of this scheme in Synchro, the queuing caused by the proposed lane usage regularly exceeds the 300 feet of weaving space between the stop line and the Turnpike ramp. However, changing the lane usage to an exclusive left-turn lane, a shared through/left lane, a through lane, and an exclusive right-turn lane greatly reduces the number of weaving lanes necessary for vehicles coming from the Turnpike ramp wanting to turn left at the intersection.

As shown in **Figure 3-13**, the proposed design at the intersection of Stuart Street and Dartmouth Street would allow the sidewalk width adjacent to Copley Place to be increased on each of the four corners, creating a more traditional four-leg intersection without islands at the corners. The intersection works well in terms of traffic operations with the proposed design in place. The Proponent will continue to coordinate with BTD to advance the development of the modifications to this intersection.

Table 3-12 presents vehicular level of service at both intersections with improvements in place.

Table 3-12: Build Conditions (2018) Vehicular Level of Service Summary: Improvements in Place

Intersection	LOS	Delay	V/C	95th Percentile Queue (feet)
a.m. Peak Hour				
Huntington Avenue/Stuart Street/Garage/Exeter Street	**C**	**32.7**	—	—
Garage NB left	C	31.0	0.23	32
Garage NB right	A	7.1	0.37	34
Exeter SB left	D	40.2	0.74	158
Exeter SB thru/right	D	46.6	0.84	218
Huntington EB thru | thru | thru/right	D	45.7	0.97	#237
Huntington WB left	C	25.0	0.51	176
Huntington WB thru | thru | thru | thru	B	17.1	0.37	97
Stuart Street/Dartmouth Street	**D**	**50.5**	—	—
Stuart EB left	E	60.9	0.99	m#629
Stuart EB left/thru | thru	D	52.4	1.00	m#589
Stuart EB right	D	43.7	0.90	m#394
Dartmouth NB thru | thru	D	42.3	0.85	#192
Dartmouth NB right	C	30.1	0.44	58
p.m. Peak Hour				
Huntington Avenue/Stuart Street/Garage/Exeter Street	**C**	**27.9**	—	—
Huntington EB thru | thru | thru/right	D	38.8	0.95	#299
Huntington WB left	C	25.2	0.36	65
Huntington WB thru | thru | thru | thru	B	18.9	0.37	100
Garage NB left	C	32.3	0.42	53
Garage NB right	A	6.3	0.54	25
Exeter SB left	D	36.9	0.72	160
Exeter SB thru/right	C	32.5	0.64	143
Stuart Street/Dartmouth Street	**D**	**48.8**	—	—
Stuart EB left	D	50.4	0.98	m#616
Stuart EB left/thru | thru	D	43.3	1.00	#515
Stuart EB right	C	34.1	0.89	m#423
Dartmouth NB thru | thru	E	72.7	1.00	#293
Dartmouth NB right	E	56.8	0.80	72

As shown above, operations at the signalized intersections will operate at LOS D or better, with some queuing along Stuart Street with the proposed pedestrian improvements in place. The section of Stuart Street between the Massachusetts Turnpike ramp and Dartmouth Street will also experience improved weaving maneuvers resulting from the reduced cross section.

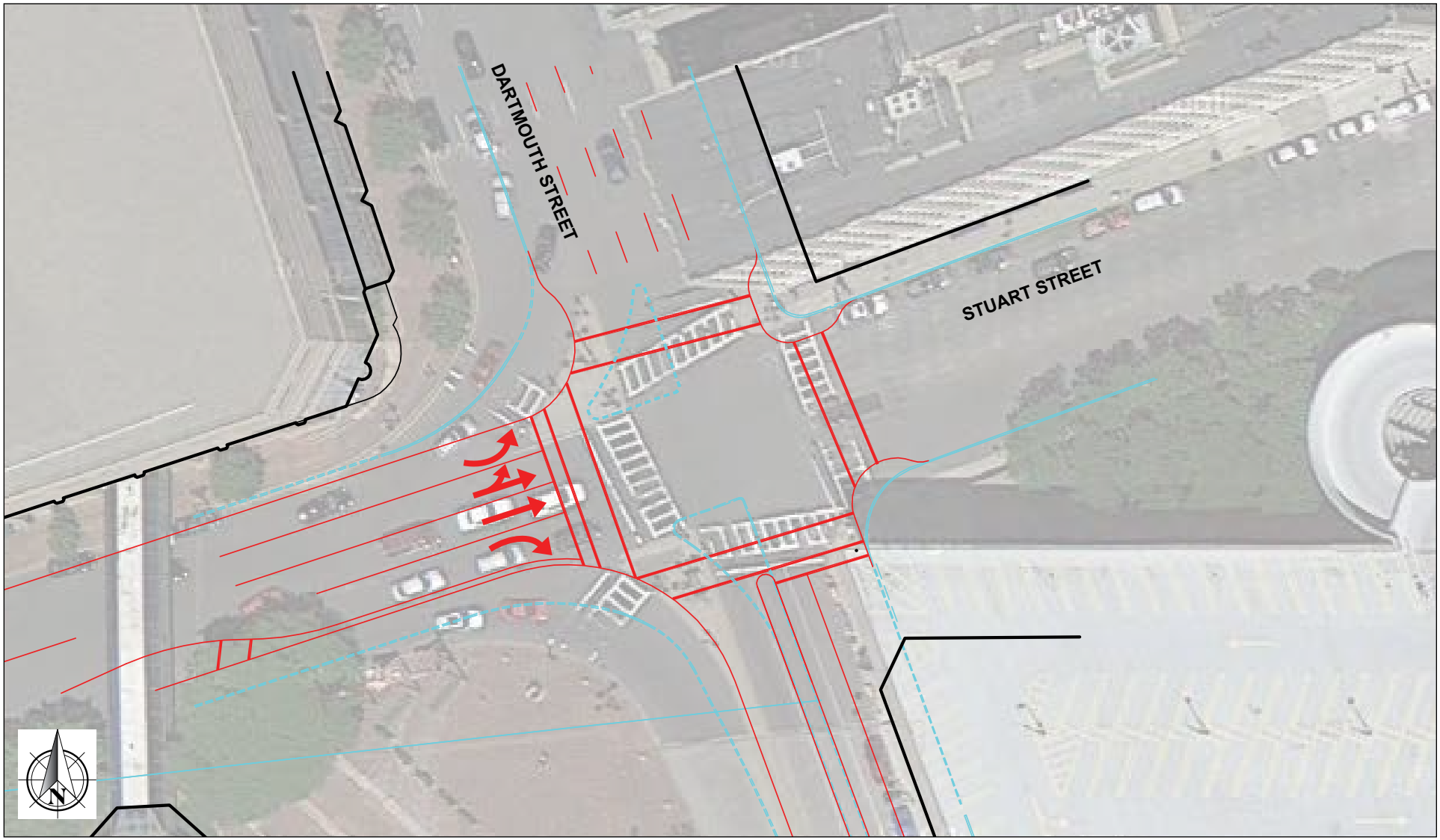


Figure 3-13

Proposed Improvements at Stuart Street/Dartmouth Street

Summary of Traffic Conditions

Table 3-13 compares intersection vehicular LOS at study area intersections for Existing, No-Build, and Build Conditions during the a.m. and, p.m. peak hours.

Table 3-13: Comparison of Existing, No-Build, and Build Conditions

Intersection	Existing	No Build	Build w/ Proposed Changes
a.m. Peak Hour			
Huntington Avenue/Stuart Street/Garage/Exeter Street	**D**	**D**	**C**
Garage NB left	C	C	C
Garage NB right	A	A	A
Exeter SB left	D	D	D
Exeter SB thru/right	D	D	D
Huntington EB thru | thru | thru/right	D	E	D
Huntington WB left	C	C	C
Huntington WB thru | thru | thru | thru	C	C	B
Stuart Street/Dartmouth Street	**B**	**B**	**D**
Stuart EB left	A	A	E
Stuart EB left / thru/thru right (proposed lane use)	na	na	D
Stuart EB thru | thru | thru (existing lane use)	C	C	na
Stuart EB right	D	D	D
Dartmouth NB thru | thru	B	B	D
Dartmouth NB right	B	B	C
p.m. Peak Hour			
Huntington Avenue/Stuart Street/Garage/Exeter Street	**C**	**C**	**C**
Garage NB left	C	C	D
Garage NB right	A	A	C
Exeter SB left	D	D	B
Exeter SB thru/right	D	D	C
Huntington EB thru | thru | thru/right	D	D	A
Huntington WB left	C	C	D
Huntington WB thru | thru | thru | thru	C	C	C
Stuart Street/Dartmouth Street	**B**	**B**	**D**
Stuart EB left	A	A	D
Stuart EB left | thru | thru right (proposed lane use)	na	na	D
Stuart EB thru/thru/thru (proposed change)	A	A	na
Stuart EB right (proposed lane elimination)	B	B	C
Dartmouth NB thru/thru	C	C	E
Dartmouth NB right	B	B	E

As shown, Existing, 2018 No-Build and 2018 Build conditions are largely satisfactory at all study area intersections. The proposed mitigation at Huntington Avenue/Garage/Stuart Street/Exeter Street has no effect on vehicular LOS, while greatly improving the pedestrian environment and enhancing pedestrian safety. The mitigation at Stuart Street/Dartmouth Street reduces the overall cross section along the Stuart Street approach to the intersection. The modifications at this intersection will improve the weaving maneuver between vehicles traveling along Stuart Street eastbound and the Massachusetts Turnpike off-ramp as they approach Dartmouth Street. The improvements will also improve the pedestrian environment at the intersection and enhance pedestrian safety by providing shorter crossing and reducing the number of conflicts between pedestrians and vehicles.

Transportation Demand Management

The Proponent is committed to implementing a TDM program that supports the City's efforts to reduce dependency on the automobile by encouraging travelers to use alternatives to driving alone, especially during peak periods. TDM will be facilitated by the nature and location of the Project's proximity to offices, transit, and shopping. The mixed- use nature of the Project already helps minimize impacts.

The Proponent will take advantage of the site's pedestrian and transit access to market to future residents. On-site management will provide transit information (schedules, maps, fare information) in the building lobbies for residents and guests. To raise awareness of public transportation alternatives, on-site management will also work with residents as they move into the facility. An enhanced effort will also be taken with current retail and office tenants at the complex.

Project residents will be informed about opportunities in the area for shared-car use, such as Zipcar, as an alternative to car ownership. As stated above, 12 Zipcar spaces and 3 Hertz on Demand spaces are already provided in the Dartmouth Garage. The Proponent will work with Zipcar to provide additional spaces as they become necessary and will help promote the Zipcar Z2B program for businesses. The Zipcar website lists additional Zipcar locations near the site that accommodate 73 vehicles, including:

- 100 Clarendon Garage, 3 vehicles
- 131 Dartmouth Street, 8 vehicles
- 200 Stuart St/Radisson, 2 vehicles
- 235 West Newton St, 1 vehicle
- 29 Mass Ave/Public Alley 908, 3 vehicles

- 30 Dalton St/Belvidere St,2 vehicles
- 30 Holyoke St,1 vehicle
- Belvidere St/Prudential Center Garage, 15 vehicles
- Boston Common Garage, 10 vehicles
- Clarendon/Tremont, 7 vehicles
- Columbus/210 W Canton, 2 vehicles
- Exeter St/Prudential Center Garage, 2 vehicles
- Hilton Back Bay, 2 vehicles
- Huntington Ave/Cumberland, 3 vehicles
- Prudential Center Garage / EV Plug-In Station, 1 vehicle
- Symphony Garage, 5 vehicles
- Park Square/Motor Mart Garage, 6 vehicles.

Other demand management measures will be the following:

- Tenant and Resident Orientation Packets. Orientation packets will provide new tenants with information about the transportation demand management programs available. The prime location of the site will be promoted as a way of encouraging walking, bike and transit trips.

- Transit Passes. The Proponent will encourage commercial tenants to subsidize transit passes for their employees, provide a pretax deduction for pass purchase, and/or on-site sales of T passes through payroll deduction.

- TMA Participation. The Proponent will participate in the Artery Business Committee Transportation Management Association (TMA) to help develop suitable programs and materials for the commercial tenants as well as the residents. The TMA's resources will be used to foster carpool/vanpool matching for the employees of commercial tenants, manage a Guaranteed Ride Home program, and help promote cycling and walking.

- Web Site. For both Copley Place Central and the expanded mixed-use development, the Proponent will design and implement a Project Web site. The Web site will include public transportation information such as public and private transit schedules for residents and visitors and links to the websites of Smart

Routes, MassDOT, transit providers and advocacy organizations such as WalkBoston.

- Parking Pricing. The Proponent will charge high all-day public parking rates in the garages as a disincentive to use of single-occupancy vehicles and commuter parking.

- HOV Parking Incentives. The Proponent will make preferential parking available in the two garages for carpools.

- Resident Bicycles. The secure storage units for each condominium will accommodate bicycles. Access will be provided via the freight elevator. In addition, the Proponent will make high density bike storage for bicycles available on the lowest level of the Central Garage without removing vehicle parking.

- Shared Bicycle Facility. As part of the Project, Simon Property Group will maintain the recently installed Hubway shared-bicycle station located at the eastern terminus of the Southwest Corridor. The location is in close proximity to Back Bay Station is ideal in terms of providing a convenient intermodal connection.

- Electric Vehicle Charging Readiness. Simon Property Group is actively engaged at the corporate level at making provisions for electric vehicle charging at its properties. Two charging stations will be installed within the existing garage.

3.4 Evaluation of Short-term / Construction Impacts

Most construction activities will be accommodated within the current site boundaries. Details of the overall construction schedule, work 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 to be filed with BTD in accordance with the City's transportation maintenance plan requirements.

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

- Limited construction worker parking will be permitted on-site; worker carpooling will be encouraged;

- 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.

3.5 Transportation Appendix

The *Transportation Appendix* is available for review at the BRA offices or by calling Collaborative Partners at (617) 778-0900.

Chapter 4

Environmental Protection

4 Environmental Protection

4.1 Wind

A qualitative pedestrian wind assessment was prepared to review the potential wind effects of recent proposed design refinements. The assessment is based on extensive wind engineering experience and results of wind tunnel tests conducted on the Project in 2011.

The 2011 wind tunnel tests found existing wind environments at all areas tested area a combination of favorable and unfavorable conditions at various times during the seasons and/or annually. The completed study concluded that the Project meets the BRA wind criteria and causes no unacceptable wind conditions on the annual basis. Wind conditions between the No-Build and Build Configurations remain mostly unchanged. In some instances, more favorable conditions result from the proposed Project. The few unfavorable wind scenarios generated by the proposed Project are limited to specific locations and times during the year. Simple mitigating solutions will be employed to return wind conditions to suitable at these locations. These include:

- Porous (50% - 70% solid) wind screens will be positioned on both sides of the main entrance to diffuse some of the northerly and easterly winds; and
- Dense landscaping in passive activity areas will be added (where feasible) near the podium and along Stuart and Dartmouth Streets to reduce wind impacts.

The general massing of the proposed building remains similar to the previous design. Some of the refinements include:

- The ground floor plan has been altered and entrances relocated
- The tower extends down to the ground level on the northern and eastern facades, rather than extending from the podium. Two new terraces have been created along the northern and eastern facades at stories four and six. A canopy has been introduces at the third level.

Considering the similarity in building massing, the assessment concluded that the potential wind conditions around the currently proposed development will be similar to those predicted by the past wind tunnel tests. The new terraces and canopies help to keep down washing flows away from the ground level. As in 2011, simple mitigating solutions will be employed to return wind conditions to suitable in locations that are currently predicted to be uncomfortable.

4.2 Shadow

An updated shadow impact analysis was conducted for the proposed Project. The shadow path was analyzed on the standard BRA solstice and equinox dates of March 21st, June 21st, September 21st, and December 21st at 9:00am, 12:00pm, and 3:00pm, and also 6:00pm in the summer and fall. Additionally, the shadow path was analyzed on October 21st at 9:00am, 12:00pm, and 3:00pm.

The shadow studies indicated the proposed Project refinements do not have any additional shadow impacts and in fact will reduce the net new shadow impact of the Project.

See Figures 4-1 to 4-5 for shadow images.

Figure 4-1 Shadow Analysis – Spring Equinox March 21

Figure 4-2 Shadow Analysis – Summer Solstice June 21

Figure 4-3 Shadow Analysis – Autumn Equinox September 21

Figure 4-4 Shadow Analysis – October 21

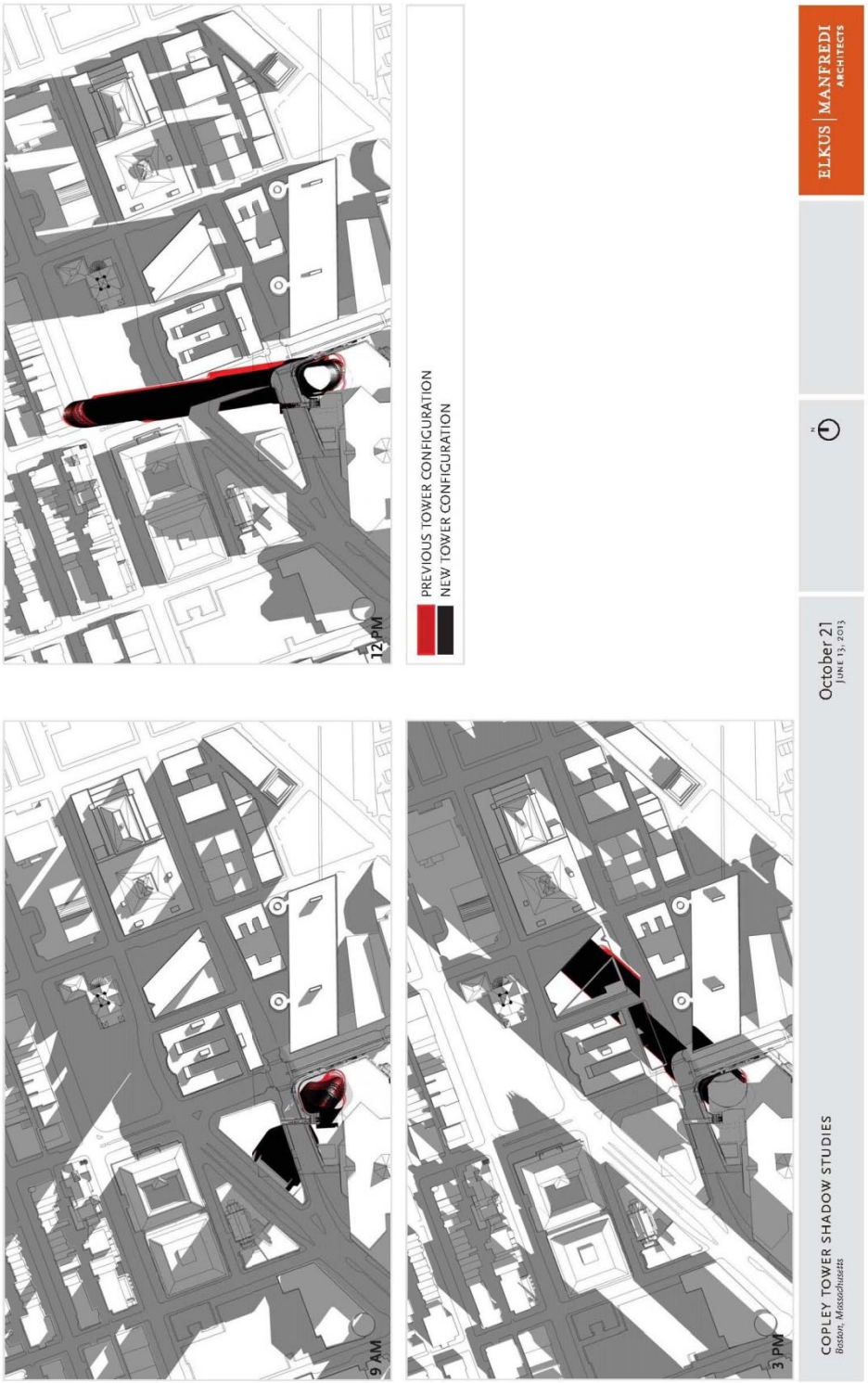
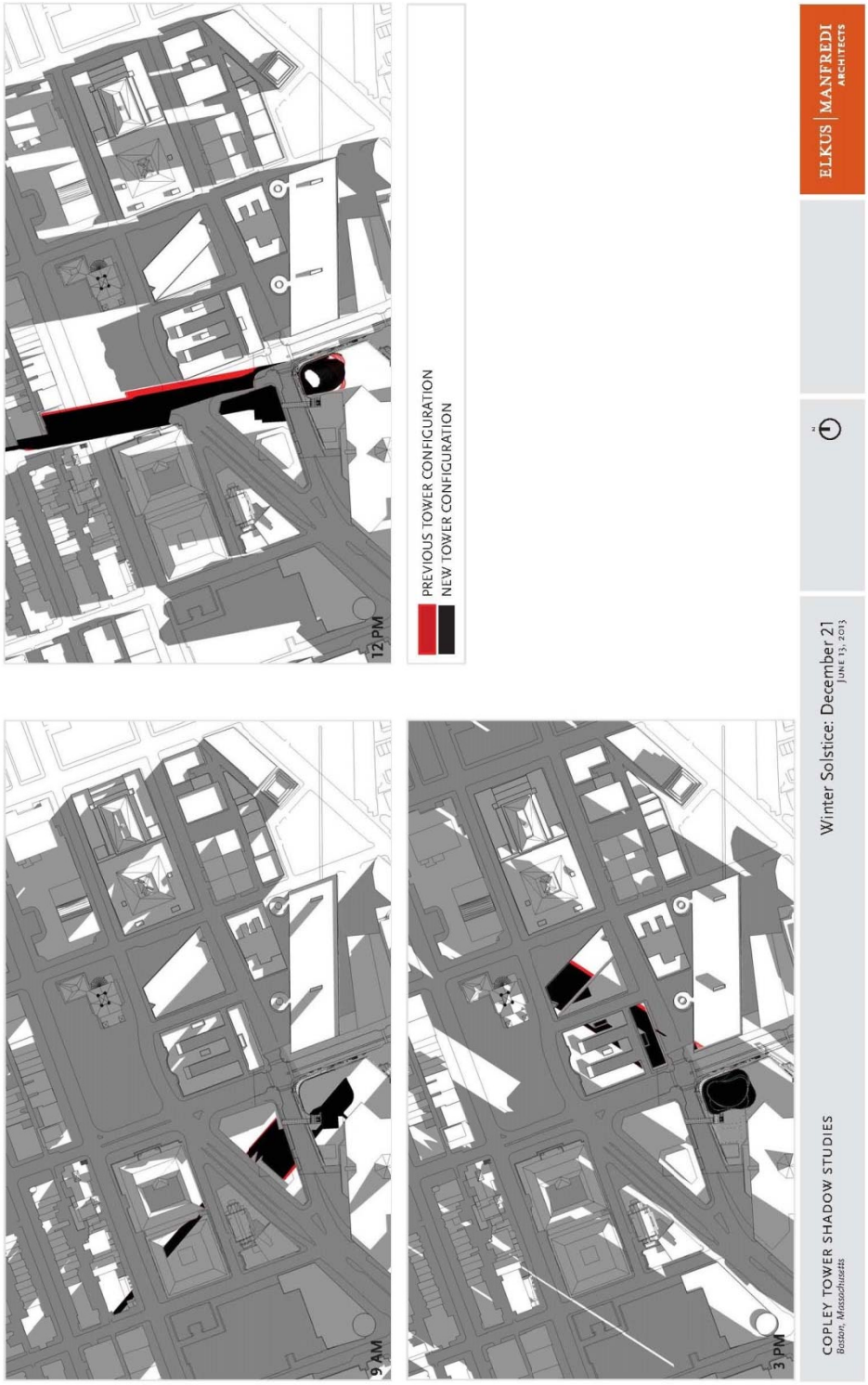


Figure 4-5 Shadow Analysis – Winter Solstice December 21



4.3 Solar Glare

The design of the proposed Project does not incorporate highly reflective glass or other highly reflective materials, nor does the Proponent anticipate the use of such materials. Reflective materials can create solar glare on area roadways and sidewalks as well as additional heat loading on neighboring buildings. The use of non-reflective materials mitigates this effect.

Chapter 5

Infrastructure Systems

5 Infrastructure Systems

5.1 Introduction

This section contains the description and availability of the existing sewage, water, electric, gas, and other utility infrastructure systems located adjacent to the proposed Project site, as well as the Project's estimated sewage generation and water demand based upon the updated Project program. Initial contact with utility companies and agencies relative to the availability of their respective utilities has been made. During the Project's design phase, the Proponent will maintain contact and coordination with these entities regarding the details of the service connections to the new building.

No modifications to existing infrastructure systems (needed to support the proposed Project) will require significant public utility agency investment in system upgrades. It is anticipated that all system upgrades will consist of:

- On-site modifications; or
- Additions to distribution systems; or
- Simple, commonplace construction of service connections to public and utility agency systems within the adjacent public ways.

All public streets, walkways, and/or streetscapes impacted by the construction of these service connections will be reconstructed to match or improve the existing conditions with all details coordinated with the appropriate City departments.

5.2 Sanitary Sewer System

Existing Conditions

The sanitary sewer system adjacent to the Project site is owned and operated by the Boston Water and Sewer Commission (BWSC). The existing system in Stuart and Dartmouth Streets is separated from the storm drainage system. The primary sewer serving the Project site is a 12-inch sewer running northerly from the Stuart Street/Dartmouth Street intersection beneath Dartmouth Street to the Huntington Avenue/St. James Street intersection where it discharges into a major sanitary sewer collector system. That system carries flows northerly beneath Dartmouth Street and then westerly beneath Boylston Street to the West Side Interceptor (WSI). The WSI is a major collection system that ultimately conveys sanitary and stormwater flows from the west side of Downtown Boston to the MWRA's Deer Island Treatment Plant for treatment, via the Boston Main Interceptor and Boston Main Drainage Tunnel, before discharge to Boston Harbor.

Sewage flow estimates generated under both the existing and proposed conditions have been calculated based on Title V guidelines contained in 310 CMR 15.203, which provides building design flow parameters by use category. Based upon present uses, current sanitary flows are Projected to average 91,000 gpd, with a peak flow rate of 190 gpm.

Proposed Conditions

Projected wastewater flow rates for the proposed building program are an average of 88,000 gpd, with a peak flow rate of 190 gpm. Added to the existing sanitary flow estimates, Copley Place is projected to generate a combined sanitary flow of 179,000 gpd, with a combined peak flow of 385 gpm. Since the proposed Project's estimated sewage flows exceed the 50,000 gallons per day threshold, a DEP Sewer connection/Extension Permit will be required. The sanitary flows of the Copley Place proposed program within the Project footprint will likely connect to the Dartmouth Street primary sewer through a manhole connection at the Stuart Street intersection. The exact location and detail will be developed with BWSC during the BWSC Site Plan Review process. The new sanitary service will be separate from the storm drain connection.

Sewer System Capacity Analysis

Based on the available BWSC system documents, this line has an approximate slope of 0.0054 ft/ft and a capacity to carry over 1.8 MGD of flow. The Projected peak Project-generated flows, using Title V, for the proposed building program represents less than 15% of the flow capacity for this line and it is our opinion that this will not impact the ability of this line to meet its current service requirements.

5.3 Water Supply System

Existing Conditions

Existing water service to the site area is supplied by the Southern High system (SH) operated and maintained by BWSC. There is an existing 12-inch SH ductile iron main beneath Stuart and Dartmouth streets. There is also a 42-inch SH ductile iron transmission main beneath both streets. Existing water demand at Copley Place, Projected at 110% of Title V wastewater generation rates, averages 95,000 gpd, with peak demand of 210 gpm.

Proposed Conditions

The proposed Project is projected to have an average daily domestic water demand of 97,000 gpd with peak demand of 210 gpm. Added to the existing estimated water demand, the combined average water demand for Copley Place will be 192,000 gpd with a peak demand of 415 gpm. It is anticipated that there is adequate water supply based on the normal flows in this area to support the proposed Project. A hydrant flow test will be conducted through the BWSC Site Plan Review process to confirm the availability of water supply.

Water Supply Conservation and Mitigation Measures

To reduce impacts to the existing water supply, the Project will meet or exceed all applicable building code requirements, including installation of low flow shower heads and water conserving toilets.

5.4 Stormwater Drainage System

Existing Conditions

The storm drainage system in the immediate site area is separate from the sanitary sewer system. The existing storm drainage system servicing the site consists of a 12" to 18" line beneath Dartmouth Street which carries flows northerly to a 48"x51" trunk line north of the Huntington Avenue and Dartmouth Street intersection. There is also an 18"x18" drain line carrying flows easterly beneath Stuart Street to the drain line in Dartmouth Street.

The Project site is impervious, consisting of paved exterior walkways and building roof tops. Surface runoff from the walkways and adjacent streets is conveyed by means of a catch basin and pipe system into the drainage system in Stuart and Dartmouth streets. Roof runoff is conveyed via service connections into this drainage system.

Proposed Conditions

The Project will reduce the peak rate of runoff from the Project site for the following reasons:

- As mentioned above, the existing site is entirely impervious and drains to the adjacent streets. The Project will feature a landscaped "green roof" which will reduce the quantity of roof drainage that would be direct to the drainage system in Stuart and Dartmouth Streets.
- Since the Project site falls within the groundwater Conservation overlay district, the Project will install a groundwater recharge system. In larger storm events, a portion of the roof runoff will be retained within the landscaped green roof and a portion will be directed to the new groundwater recharge system. The installation of the recharge system will result in further reduction of stormwater runoff volume while providing groundwater recharge. See Figures 5-1 and 5-2 for the proposed recharge system location.
- All elements of the stormwater collection and discharge system will conform to BWSC standards.

Stormwater Management and Water Quality

Stormwater discharge from the Project will be limited to runoff from roofs and exterior walkways, which are separated from industrial activities and will not result in the discharge of pollutants other than stormwater runoff into the waters of the Commonwealth.

The proposed stormwater management plan utilizes the existing BWSC stormwater collection system located in Stuart and Dartmouth Streets (adjacent to the Project site) as the point of discharge. This system currently collects flows from the majority of the Project area and the adjacent pedestrian and vehicular travel ways. It is not anticipated

that the area contributing flows to the system will be modified in any significant manner. The existing surface treatment of the contributing area is generally comprised of impervious materials: bituminous concrete roadway, brick-paved plaza with some planters, and building roof areas. The Project is proposing a green roof so that a significant volume of stormwater will be absorbed. When the capacity of this facility to contain the stormwater is exceeded, it will overflow and enter the building storm drainage system carrying the runoff for the remainder of the site. This collection system will discharge into a groundwater recharge system designed in conformance with BWSC standards. (See Figures 5-1 and 5-2 for the proposed recharge system location.) The runoff will be detained until the ability of the system to recharge into the groundwater is reached. At this point the runoff will overflow into the existing BWSC collection system. The green roof and groundwater recharge systems will assure that stormwater flows from the site will be of a higher quality and a lower volume than are discharged currently. The Project will be developing a maintenance and operations plan for these facilities which will be implemented upon completion of the Project to assure that these facilities remain functional over time.

The Project will comply with MassDEP Stormwater Management Policy standards to the extent practicable. Stormwater management controls will be established in compliance with BWSC standards and the Groundwater Conservation Overlay District. Compliance with the standards for the final site design will be reviewed as part of the BWSC Site Plan Review Process.

Figure 5-1 Utility Plan

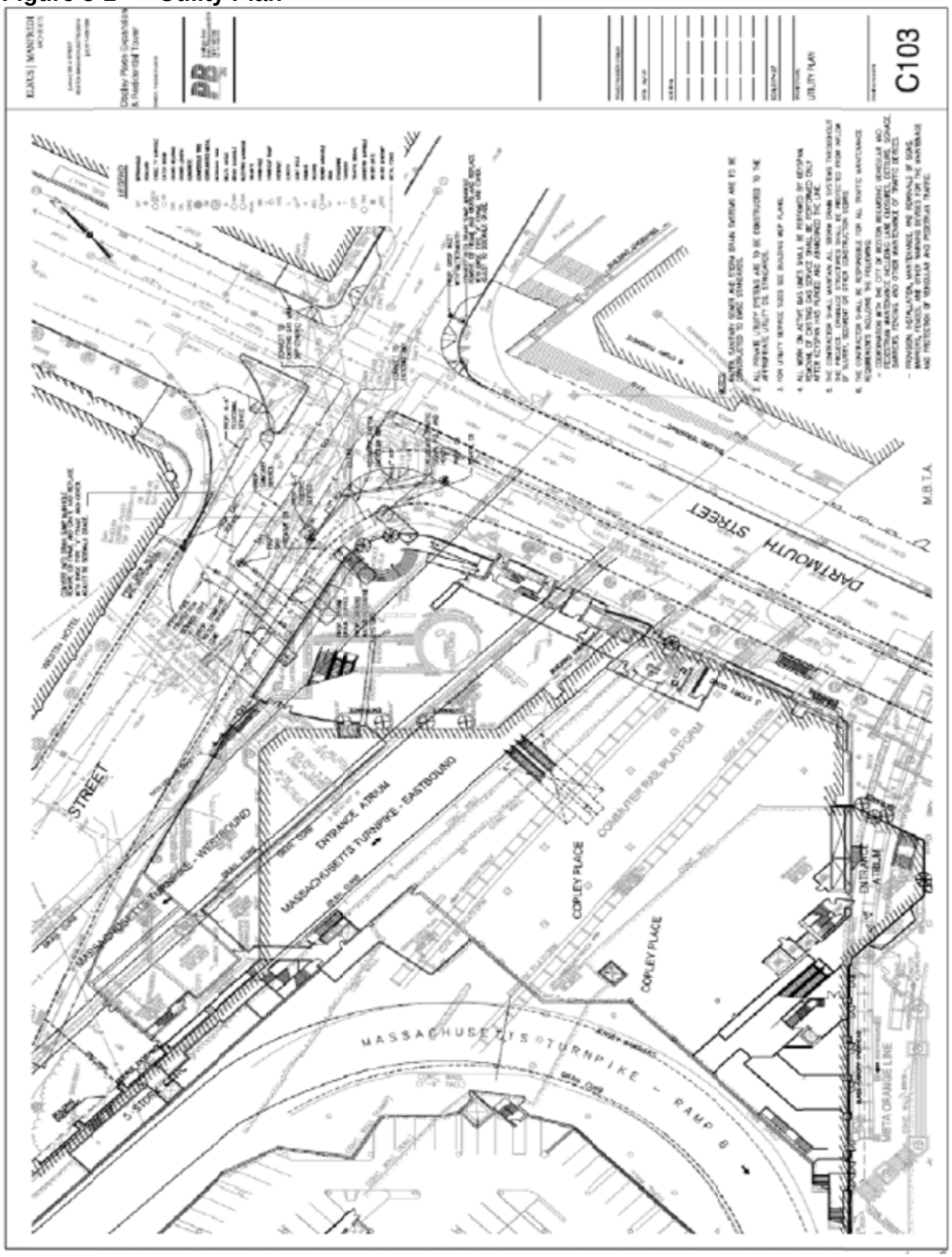
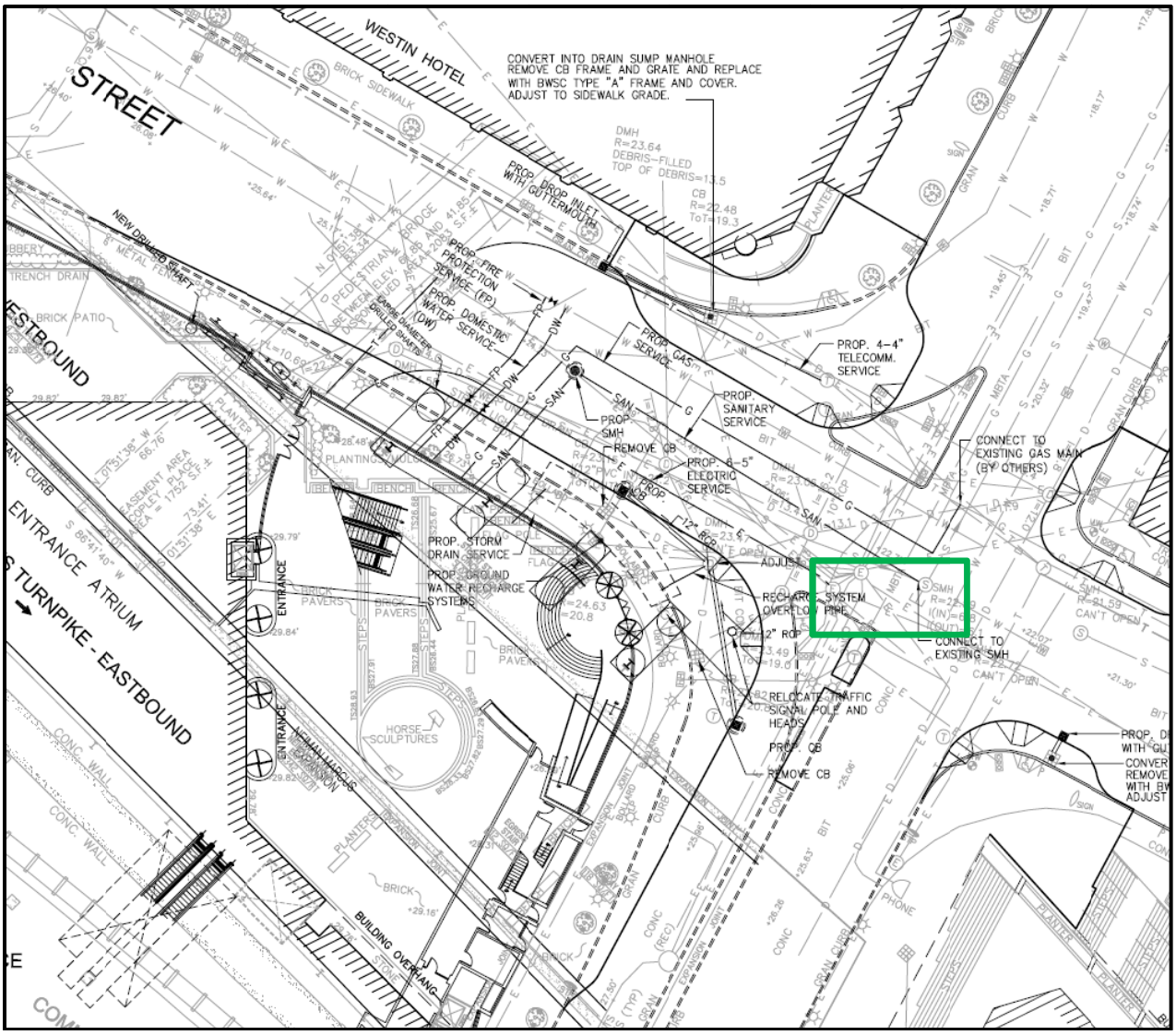


Figure 5-2 Proposed Ground Water Recharge System Location



5.5 Energy Requirements and Service

Heating and Cooling Requirements

Natural gas-fired hot water boilers and heaters will provide heating to the residential building. Space heating will be accomplished via a forced hot water system. Heating hot water will be distributed to the terminal heating/cooling units (i.e. fan coils, baseboard radiation) and air handling units.

Domestic hot water will be generated in a centralized system and distributed. It is anticipated that natural gas will also be provided for use by future restaurant tenants.

A chilled water plant, consisting of electric-driven chillers, cooling towers, and associated pumps, will provide cooling to the residential building. Chilled water will be generated and distributed to the terminal heat/cooling units (i.e. fan coils) and air handling units.

Utilities for the podium expansion will be provided by the existing heating and cooling plant in Copley Place. This plant generates heating hot water and chilled water which will be distributed to the new space.

Energy conservation measures for the proposed Project will include:

- Specifying a high efficiency chilled water and heating hot water plant. The former will include chillers with variable speed drives, low speed cooling towers, and free cooling and the latter will include condensing boilers;
- Incorporating ECM motors on fan coil units. This will reduce the fan energy needed to heat and cool residences; and
- Reducing the power density of lighting in common areas below baseline values required by the building code.

Natural Gas Requirements

Natural gas is provided to the site area by a system of gas lines owned and operated by National Grid and located in adjacent public ways. This system includes an intermediate pressure gas line in Dartmouth and Stuart Streets. Natural gas will be distributed to gas-fired equipment throughout the Project. Sub-meters will be provided for the future restaurant tenants.

Electrical Requirements

Electric service in the Project site area is supplied by the NSTAR Services Company. Electric power is supplied through its distribution network located in the adjacent public ways from a substation located on Charles Street South. The electric system in the Project area consists of a conduit and manhole system in Dartmouth and Stuart Streets. On-site utility transformers and associated equipment, subject to design and construction approval of NSTAR, are required and will be housed in a vault space located within the proposed structure. The transformer vault will be located on Level 1 on an exterior wall. Maintenance access to the vault will be located on an adjacent wall so that the doors will not open onto the sidewalk in the pedestrian path.

Power will be distributed from the utility transformers throughout the Project. It will serve residential, retail, restaurant, and common space convenience power needs as well as mechanical, lighting, and other building loads. Sub-meters or sub-metering capability will be provided for the future restaurant and retail tenants.

Telecommunications

Telecommunications service is supplied to this area through the Verizon Telephone Company manhole and conduit system located in the adjacent public ways. This system includes 28-way and 8-way fiber optic duct banks in Stuart Street.

Other Utility Systems

Other active utility systems located in the Project site area include the City of Boston Public Works Department's street light systems and the Transportation Department's traffic signal conduit systems on public ways around the site. There appear to be no steam lines or cable television lines within the Project site area. Based on available data, existing Veolia steam lines are located on Huntington Avenue. The Proponent will continue to coordinate with the appropriate utility companies as necessary during Project design and construction.

Protection of Utilities

There will be limited exposure of existing utilities to impact as most of the construction activities for the proposed Project will be within the limits of the existing developed site. Details of any maintenance and/or support of existing systems required during construction will be developed in conjunction with the appropriate utility owners.

Chapter 6

Sustainable Design

6 Sustainable Design

6.1 Introduction

The Project will meet the requirements of Article 37 of the Boston Zoning Code. In addition, the Project will comply with the Boston Stretch Code (20% reduction in Energy Use Index over the Baseline). The Project will incorporate all feasible measures to limit greenhouse gas emissions in accordance with MEPA Greenhouse Gas Emissions and Protocol.

The Proponent has evaluated the proposed Project under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) system and the Project is anticipated to attain ratings of "Silver" under the LEED-Core and Shell standard and "Silver" under LEED-NC (New Construction). See Section 6.3 for descriptions of LEED points and how they will be achieved in the Project. Section 6.3 also contains the LEED Checklists demonstrating compliance with these standards.

Simon Property Group considers LEED qualification, sustainable design and technologies, and sustainable operations important endeavors. Since the original development in the 1980s, the Proponent has integrated "green practices" and sustainable initiatives throughout the site and within their organization. Section 6.2 catalogs ongoing sustainable efforts by Simon Property Group as well as forthcoming sustainable elements to be incorporated into the proposed Project. Such environmentally conscious measures will contribute to Copley Place's success now and into the future.

6.2 Sustainable Operations and Initiatives of Simon Property Group

The Proponent is a recognized leader in their industry in sustainable measures and energy conservation incorporated into mall operations. In 2012, Simon Property Group was awarded NAREIT's Leader in the Light Award for the 8th year in a row. Simon Property Group was also named Retail Sector Leader, the Americas for GRESB. They remain committed to green practices in their business operations and will continue to integrate sustainable design, materials, and methods in the Copley Place Retail Expansion and Residential Addition Project.

Energy Efficiency

In March 2004, Simon Property Group launched its Energy Best Practices Program. They challenged Mall managers to examine their operating practices and trim energy costs without affecting comfort, safety, or reliability. The Best Practices Program has been implemented at Copley Place. Under the Best Practices Program, a substantial portion of savings generated to date was achieved through low cost/no cost measures, including:

- Minimizing energy use in vacant spaces;
- Keeping tight control over hours of operation for all lighting systems in the common area, parking lots, and "back of the house" areas to minimize costs without affecting comfort or safety;
- Zoning lighting systems to gain better control and minimize waste;
- Optimum start/stop of all HVAC systems to meet cooling requirements while minimizing costs;
- Adjusting temperature set points to minimize HVAC costs while meeting comfort requirements;
- Using outside air to cool properties when outside air temperature and humidity make it possible to do so;
- Minimizing energy use through proper utilization of energy control systems; and
- Remote monitoring of the malls' Energy Management Systems to help ensure optimal system operations through automated reporting of non-optimal operating practices.

Since 2004, Simon Property Group has used strategic relationships with leading performance contracting companies in the U.S. to develop $30 million in cost effective energy efficiency retrofit Projects with simple paybacks of five years or less.

Investments in energy efficiency (as based on ROI analyses) and the expectations for improvement are reflected in Copley Place's reduced energy operating budgets. Investments to date include:

- Efficient lighting systems for malls' common areas, parking structures, and parking lots;
- Energy Management Systems;
- Cooling towers with Variable Speed Drives and enhanced automation; and
- Low flow water fixtures;

In addition, Simon Property Group has reduced electric usage by 25% since 2003 for comparable properties under their control. For six years running, Simon Property Group has been awarded the NAREIT Leader in the Light award which recognizes company-wide operations generating substantially improved energy efficiency and expense management.

Carbon Disclosure

Since 2003, the Proponent has participated in the Carbon Disclosure Project's GHG information requests to inform investors of its activities in the area of Climate Change and energy conservation. Simon Property Group continues to lead the retail REITs in reporting performance measures in the area of carbon emissions.

The latest data set reported shows 94.7% of Simon Property Group's carbon footprint is attributable to its use of electricity. Absolute CO2e emissions are down 21% since 2003, a reduction of over 174,000 metric tons CO2e. This is equivalent to removing 33,270 cars from the road annually or the amount of CO2 sequestered annually by 4.4 million tree seedlings grown for 10 years.

Waste Handling and Recycling

100% of Simon Property Group Malls and Mills properties offer waste recycling to merchants. In 2012, Simon Property Group recycled over 58,000 tons of materials, which is equivalent to saving over 900,000 mature trees. Simon Property Group increased its waste diversion rate by 25% between 2010 and 2012. Simon Property Group also improved its hauling efficiency by 30% over the past 2 years, resulting in fewer trips needed to pick up waste at their malls.

Regarding the proposed Project, the residential building will employ a tri-sorting solid waste compactor and recycling sorter to increase the recycling rate and decrease the waste volume. Residents will be able to access a centralized recycling and waste center on each floor of the building where they will be able to select the type of material to be disposed of within a single chute. The materials are then delivered through the vertical chute to separate bins or compactors in the lower level and stored for later removal. The waste and recycling material will then be transferred to the main loading dock for removal as scheduled by the building management. The Copley Place residential building will participate in the City of Boston's Recycling program.

Since 2006, the Proponent has also partnered with Boston Barricade to provide reusable barricade systems for tenant storefronts during construction, which has eliminated over 12 million pounds of drywall sold waste from landfills in our communities.

Renewable Energy

In 2008, Simon Property Group completed the installation of a 173kW solar facility at Mission Viejo. This system has been working with 99% reliability since installation producing an average of 1,163 kWh per day with a peak production of 174kW. It has produced 637,984 kWh during its lifetime reducing CO2 by 869,572 lbs., NO2 by 1,276 lbs., and Sulfur Dioxide by 2,418 lbs. which is equivalent to 2,222,378 miles or 28,986 trees planted (data current as of 4/1/11). Provisions will be made in order to enable the Project to be PV ready.

Simon Property Group is one of the first retail developers to offer electric vehicle charging stations at its properties. Several stations are now in operation at Simon Property Group venues with additional charging stations planned at other sites. The Proponent strives to meet the needs of "first-to-market" electric vehicle drivers in the communities they serve. One charging station will be provided within the existing garage. The exact location will be determined during design development.

Green Products

Simon Property Group Purchasing incorporates language in all its bid documentation that encourages vendors to provide alternative green solutions. The tenant manual (to be developed by the Proponent) will encourage tenants to choose green products and participate in green housekeeping services.

6.3 Sustainable Design Elements and LEED

The Proponent and the Project team established LEED goals and sustainable objectives early in the design process. To achieve a LEED Silver rating, multiple strategies will be employed to achieve points in each of the LEED sections for Sustainable Sites, Water

Efficiency, Energy & Atmosphere, Material & Resources, Indoor Environmental Quality, and Innovation & Design Process. The following LEED guidelines will be followed for the Project:

- LEED Core and Shell v2.0 – for the Retail Expansion; and
- LEED New Construction v2.2 –for the Residential Addition.

The following information also demonstrates how the proposed Copley Place Retail Expansion and Residential Addition Project remains consistent with the Proponent's commitment to environmentally conscious design. See Tables 6-1 and 6-2 for the LEED checklists.

Sustainable Design Strategies

Sustainable Sites: Podium Core and Shell (8 Points), Tower New Construction (9 Points)

By choosing to develop the retail expansion of Neiman Marcus at Copley Place and including the residential addition in an urban area, the proposed Project will meet the criteria required for the following credits: Site Selection, Development Density & Community Connectivity, Public Transportation, Bike Storage & Changing Rooms, and Parking Capacity. By focusing the development in an area supplied by existing infrastructure (e.g. utilities, public services, and transportation), this transit-oriented design will save precious land area outside of the city as well as the cost and energy of expanding existing networks. The Project will also reduce traffic by providing easy access to public transportation and limiting the parking demand to the existing parking facilities available to the Project. Bicycle storage and access to car-sharing services (such as Zipcar) further minimize the carbon footprint of Copley Place. See Section 3.3 – Evaluation of Long-term Impacts for detailed descriptions of parking, bicycle storage, car-sharing, and public transportation as they relate to the Project.

The remaining credits in the Sustainable Sites section that the Project will strive to achieve are: Stormwater Quality & Quantity Control and the Heat Island Effect for Roofs. The Project will utilize a combination of green roofs and high albedo roofing to achieve credits for the stormwater quality and the heat island effect. The Project will improve the quality of stormwater runoff, provide filtration for quality, and reduce the heat island effect by utilizing a green roof over the newly expanded area. The remaining areas of the existing roof of the podium that cannot take the weight of a green roof will be replaced with new high albedo roofing materials that will also reduce the heat island effect.

For the podium portion of the Project, the Proponent will develop a set of tenant design and construction guidelines that direct the future retail and restaurant tenants on:

- Implementing sustainable design features in the fit-out of their space; and
- Maintaining the LEED standards of the Core and Shell structure.

Water Efficiency: Podium Core and Shell (2 Points), Tower New Construction (3 Points)

With limited landscaping on the Project property, the Proponent intends to achieve credits for water efficient landscaping by:

- Reducing potable water use for landscaping by 50% from the mid-summer baseline; and
- Eliminating irrigation in areas of the green roof.

The Proponent also expects to achieve credits for 20% water reduction by installing low flow faucets, toilets, and showers in the podium public restrooms and the residential units.

Energy and Atmosphere: Podium Core and Shell (6 Points), Tower New Construction (5 Points)

In order to achieve credits for optimal energy performance, high efficiency mechanical equipment will be used in combination with increased insulation and high performance glazing. Glazing will incorporate 1" insulated units with Low-E coatings and efficient solar heat gain coefficients. Energy recovery units will be used to provide ventilation at a minimum energy penalty and ECM motors will reduce the necessary energy in the residential fan coil units throughout the building.

For the Core and Shell component of the Project, each tenant will be direct metered allowing for measurement and verification of the tenant energy consumption. Within the new residential expansion, refrigerants and HVAC&R units that minimize or eliminate the emission of compounds contributing to ozone depletion and global warming will be used.

Materials and Resources: Core and Shell Podium (4 Points), New Construction Tower (3 Points)

The expansion of the existing retail podium and Neiman Marcus Anchor Store will take advantage of the embodied energy in the existing foundations, vertical structure, floors, and roof by maintaining up to 25% of these existing elements. Both the podium and residential structures will reduce the impacts on local landfills by diverting construction waste through recycling up to 75% of the waste material generated on the Project site. Selecting and specifying at least 10% regional materials will reduce the energy consumption expended during the material transportation. Interior finishes, structural steel, and masonry components are prime candidates for materials to be used that are fabricated or quarried locally.

Indoor Environmental Quality: Core and Shell Podium (7 Points), New Construction Tower (12 Points)

For both the retail podium and residential building, fresh air will be delivered to provide a healthy environment. The proposed design will take advantage of the existing energy in the exhaust air to:

- Temper the incoming fresh air; and
- Save on the cost of fully heating or cooling the outside air to the interior temperature.

Commissioning Manuals and Specifications will direct the proper implementation of the MEP and Fire Protection systems. The commissioning agent will develop and enforce a construction management plan to protect ductwork and other elements used in the delivery of fresh air. This ensures that the indoor air quality of the building is maintained and no mold or contaminates are distributed at the startup of the MEP systems. The Project will also feature low emitting materials that prevent the release of toxins into the occupied environment. These materials, such as adhesives, sealants, paints, coatings,

and carpets, will be installed in all common areas of the retail podium and throughout the residential building.

Within each residential unit, multiple heating zones will be defined allowing owners to maintain thermal comfort while saving energy. This is achieved by reducing the heating or cooling load in spaces that are not in use. The glazing system for the residential building will be designed to minimize solar heat gain without compromising views of the city. Vision glazing will be placed from 2'-6" to 7'-6" above the finished floor and daylight glazing from 7'-6" to 9'-0" above the finished floor in 90% of the occupied spaces.

Innovation and Design: Core and Shell Podium (5 Points), New Construction Tower (5 Points)

The Proponent and the design team will have the opportunity to develop and implement alternative strategies that are not defined within the aforementioned LEED categories. Along with the guidance of a LEED Accredited Professional, the design team will seek to gain an additional five points per Project. Some of the strategies will include:

- Recharging the groundwater within the Historic District of Back Bay and the South End;
- Implementing green housekeeping strategies;
- Recycling condenser wastewater; and
- Using chemical free water treatment.

Table 6-1 LEED Core and Shell v2.0 Checklist (Retail Expansion)

LEED for Core and Shell v2.0
Registered Project Checklist

Copley Place Retail Expansion
Boston - Massachusetts

Updated: March 2011

Yes	?	No			
8	3	4	**Sustainable Sites**		15 Points
Y			Prereq 1	Construction Activity Pollution Prevention	Required
1			Credit 1	Site Selection	1
1			Credit 2	Development Density & Community Connectivity	1
		1	Credit 3	Brownfield Redevelopment	1
1			Credit 4.1	Alternative Transportation: Public Transportation Access	1
	1		Credit 4.2	Alternative Transportation: Bicycle Storage & Changing Rooms	1
	1		Credit 4.3	Alternative Transportation: Low-Emitting and Fuel-Efficient Vehicles	1
1			Credit 4.4	Alternative Transportation: Parking Capacity	1
		1	Credit 5.1	Site Development: Protect of 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
1			Credit 9	Tenant Design & Construction Guidelines	1

Yes	?	No			
2	2	1	**Water Efficiency**		5 Points
1			Credit 1.1	Water Efficient Landscaping: Reduce by 50%	1
	1		Credit 1.2	Water Efficient Landscaping: No Potable Use or No Irrigation	1
		1	Credit 2	Innovative Wastewater Technologies	1
1			Credit 3.1	Water Use Reduction: 20% Reduction	1
	1		Credit 3.2	Water Use Reduction: 30% Reduction	1

Yes	?	No			
6	2	6	**Energy & Atmosphere**		14 Points
Y			Prereq 1	Fundamental Commissioning of the Building Energy Systems	Required
Y			Prereq 2	Minimum Energy Performance	Required
Y			Prereq 3	Fundamental Refrigerant Management	Required

*Note for EAc1: All LEED for Core and Shell projects registered after June 26th, 2007 are required to achieve at least two (2) points under EAc1.

4		4	Credit 1	Optimize Energy Performance	1 to 8
				10.5% New Buildings or 3.5% Existing Building Renovations	1
				14% New Buildings or 7% Existing Building Renovations	2
				17.5% New Buildings or 10.5% Existing Building Renovations	3
			4	21% New Buildings or 14% Existing Building Renovations	4
				24.5% New Buildings or 17.5% Existing Building Renovations	5
				28% New Buildings or 21% Existing Building Renovations	6
				31.5% New Buildings or 24.5% Existing Building Renovations	7
				35% New Buildings or 28% Existing Building Renovations	8
		1	Credit 2	On-Site Renewable Energy	1
	1		Credit 3	Enhanced Commissioning	1
		1	Credit 4	Enhanced Refrigerant Management	1
1			Credit 5.1	Measurement & Verification - Base Building	1
1			Credit 5.2	Measurement & Verification - Tenant Sub-metering	1
	1		Credit 6	Green Power	1

Table 6-1 (continued from previous page)

Yes	?	No			
4	4	3	**Materials & Resources**		11 Points
Y			Prereq 1	**Storage & Collection of Recyclables**	Required
1			Credit 1.1	**Building Reuse:** Maintain 25% of Existing Walls, Floors & Roof	1
		1	Credit 1.2	**Building Reuse:** Maintain 50% of Existing Walls, Floors & Roof	1
		1	Credit 1.3	**Building Reuse:** Maintain 75% of Interior Non-Structural Elements	1
1			Credit 2.1	**Construction Waste Management:** Divert 50% from Disposal	1
1			Credit 2.2	**Construction Waste Management:** Divert 75% from Disposal	1
		1	Credit 3	**Materials Reuse:** 1%	1
	1		Credit 4.1	**Recycled Content:** 10% (post-consumer + ½ pre-consumer)	1
	1		Credit 4.2	**Recycled Content:** 20% (post-consumer + ½ pre-consumer)	1
1			Credit 5.1	**Regional Materials:** 10% Extracted, Processed & Manufactured Regionally	1
	1		Credit 5.2	**Regional Materials:** 20% Extracted, Processed & Manufactured Regionally	1
	1		Credit 6	**Certified Wood**	1
Yes	?	No			
7	2	3	**Indoor Environmental Quality**		11 Points
Y			Prereq 1	**Minimum IAQ Performance**	Required
Y			Prereq 2	**Environmental Tobacco Smoke (ETS) Control**	Required
1			Credit 1	**Outdoor Air Delivery Monitoring**	1
	1		Credit 2	**Increased Ventilation**	1
1			Credit 3	**Construction IAQ Management Plan:** During Construction	1
1			Credit 4.1	**Low-Emitting Materials:** Adhesives & Sealants	1
1			Credit 4.2	**Low-Emitting Materials:** Paints & Coatings	1
1			Credit 4.3	**Low-Emitting Materials:** Carpet Systems	1
	1		Credit 4.4	**Low-Emitting Materials:** Composite Wood & Agrifiber Products	1
1			Credit 5	**Indoor Chemical & Pollutant Source Control**	1
		1	Credit 6	**Controllability of Systems:** Thermal Comfort	1
1			Credit 7	**Thermal Comfort:** Design	1
		1	Credit 8.1	**Daylight & Views:** Daylight 75% of Spaces	1
		1	Credit 8.2	**Daylight & Views:** Views for 90% of Spaces	1
Yes	?	No			
5			**Innovation & Design Process**		5 Points
1			Credit 1.1	**Innovation in Design:** Provide Specific Title	1
1			Credit 1.2	**Innovation in Design:** Provide Specific Title	1
1			Credit 1.3	**Innovation in Design:** Provide Specific Title	1
1			Credit 1.4	**Innovation in Design:** Provide Specific Title	1
1			Credit 2	**LEED® Accredited Professional**	1
Yes	?	No			
32	13	17	**Totals (pre-certification estimates)**		61

Certified: 23 to 27 points, **Silver:** 28 to 33 points, **Gold:** 34 to 44 points, **Platinum:** 45 to 61 points

Table 6-2 LEED New Construction v2.2 (Residential Addition)

LEED for New Construction v2.2
Registered Project Checklist

Updated: March 2011
Copley Place Residences
Boston - Massachusetts

Yes	?	No			
9	1	4	**Sustainable Sites**		14 Points
Y			Prereq 1	**Construction Activity Pollution Prevention**	Required
1			Credit 1	**Site Selection**	1
1			Credit 2	**Development Density & Community Connectivity**	1
		1	Credit 3	**Brownfield Redevelopment**	1
1			Credit 4.1	**Alternative Transportation**, Public Transportation Access	1
1			Credit 4.2	**Alternative Transportation**, Bicycle Storage & Changing Rooms	1
		1	Credit 4.3	**Alternative Transportation**, Low-Emitting & Fuel-Efficient Vehicles	1
1			Credit 4.4	**Alternative Transportation**, Parking Capacity	1
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

Yes	?	No			
3	1	1	**Water Efficiency**		5 Points
1			Credit 1.1	**Water Efficient Landscaping**, Reduce by 50%	1
1			Credit 1.2	**Water Efficient Landscaping**, No Potable Use or No Irrigation	1
		1	Credit 2	**Innovative Wastewater Technologies**	1
1			Credit 3.1	**Water Use Reduction**, 20% Reduction	1
	1		Credit 3.2	**Water Use Reduction**, 30% Reduction	1

5	2	8	**Energy & Atmosphere**		17 Points
Y			Prereq 1	**Fundamental Commissioning of the Building Energy Systems**	Required
Y			Prereq 2	**Minimum Energy Performance**	Required
Y			Prereq 3	**Fundamental Refrigerant Management**	Required
			*Note for EAc1: All LEED for New Construction projects registered after June 26th, 2007 are required to achieve at least two (2) points under EAc1.		
4		4	Credit 1	**Optimize Energy Performance**	1 to 10
				10.5% New Buildings or 3.5% Existing Building Renovations	1
				14% New Buildings or 7% Existing Building Renovations	2
				17.5% New Buildings or 10.5% Existing Building Renovations	3
				4 21% New Buildings or 14% Existing Building Renovations	4
				24.5% New Buildings or 17.5% Existing Building Renovations	5
				28% New Buildings or 21% Existing Building Renovations	6
				31.5% New Buildings or 24.5% Existing Building Renovations	7
				35% New Buildings or 28% Existing Building Renovations	8
				38.5% New Buildings or 31.5% Existing Building Renovations	9
				42% New Buildings or 35% Existing Building Renovations	10
		3	Credit 2	**On-Site Renewable Energy**	1 to 3
				2.5% Renewable Energy	1
				7.5% Renewable Energy	2
				12.5% Renewable Energy	3
	1		Credit 3	**Enhanced Commissioning**	1
1			Credit 4	**Enhanced Refrigerant Management**	1
		1	Credit 5	**Measurement & Verification**	1
	1		Credit 6	**Green Power**	1

Table 6-2 (continued from previous page)

Yes	?	No			
3	4	6	**Materials & Resources**		13 Points
Y			Prereq 1	**Storage & Collection of Recyclables**	Required
		1	Credit 1.1	**Building Reuse**, Maintain 75% of Existing Walls, Floors & Roof	1
		1	Credit 1.2	**Building Reuse**, Maintain 95% of Existing Walls, Floors & Roof	1
		1	Credit 1.3	**Building Reuse**, Maintain 50% of Interior Non-Structural Elements	1
1			Credit 2.1	**Construction Waste Management**, Divert 50% from Disposal	1
1			Credit 2.2	**Construction Waste Management**, Divert 75% from Disposal	1
		1	Credit 3.1	**Materials Reuse**, 5%	1
		1	Credit 3.2	**Materials Reuse**,10%	1
1			Credit 4.1	**Recycled Content**, 10% (post-consumer + ½ pre-consumer)	1
	1		Credit 4.2	**Recycled Content**, 20% (post-consumer + ½ pre-consumer)	1
	1		Credit 5.1	**Regional Materials**, 10% Extracted, Processed & Manufactured Regiona	1
	1		Credit 5.2	**Regional Materials**, 20% Extracted, Processed & Manufactured Regiona	1
		1	Credit 6	**Rapidly Renewable Materials**	1
	1		Credit 7	**Certified Wood**	1
Yes	?	No			
12	1	2	**Indoor Environmental Quality**		15 Points
Y			Prereq 1	**Minimum IAQ Performance**	Required
Y			Prereq 2	**Environmental Tobacco Smoke (ETS) Control**	Required
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 & Sealants	1
1			Credit 4.2	**Low-Emitting Materials**, Paints & Coatings	1
1			Credit 4.3	**Low-Emitting Materials**, Carpet Systems	1
	1		Credit 4.4	**Low-Emitting Materials**, Composite Wood & Agrifiber Products	1
1			Credit 5	**Indoor Chemical & 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 & Views**, Daylight 75% of Spaces	1
1			Credit 8.2	**Daylight & Views**, Views for 90% of Spaces	1
Yes	?	No			
5			**Innovation & Design Process**		5 Points
1			Credit 1.1	**Innovation in Design**: Provide Specific Title	1
1			Credit 1.2	**Innovation in Design**: Provide Specific Title	1
1			Credit 1.3	**Innovation in Design**: Provide Specific Title	1
1			Credit 1.4	**Innovation in Design**: Provide Specific Title	1
1			Credit 2	**LEED® Accredited Professional**	1
Yes	?	No			
37	9	21	**Project Totals** (pre-certification estimates)		69 Points

Certified: 26-32 points, Silver: 33-38 points, Gold: 39-51 points, Platinum: 52-69 poin

6.4 Conclusion

Simon Property Group effectively and successfully utilizes sustainable operations and initiatives throughout their organization to reduce the environmental impact of their company and their development properties. The Proponent will continue to lead their industry in these efforts by constantly exploring energy-efficient and renewable energy technologies, carbon disclosure reporting measures, green product specifications, and waste-handling and recycling programs. The existing site and proposed Project will incorporate sustainable design features and ongoing awareness campaigns of environmental programs for users of the site. Through all of these measures, Simon Property Group improves the environmental quality of the site, enhances the quality of life for the City of Boston, and maintains their focus on a sustainable future.