

CITY OF CAMBRIDGE, MASSACHUSETTS

# PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139  
CAMBRIDGE, MASSACHUSETTS

## NOTICE OF DECISION

Case Number: 315

Location of Premises: 145 Broadway (Formerly Eleven Cambridge Center), 250 Binney Street (Formerly Fourteen Cambridge Center), Cambridge Center Blue Garage, Broadway, 75 Ames Street (Broad Institute) and 255 Main Street, as described in Application Documents.

Zoning: Mixed Use Development (MXD) District: Kendall Center

Applicant: Boston Properties Limited Partnership  
800 Boylston Street, Suite 1900, Boston, MA 02199

Owner: Various owners as listed in Application Documents.

Application Date: September 6, 2016

Date of Public Hearing: September 20, 2016 (initial hearing)  
December 20, 2016 (new hearing held per agreement between the Applicant and Planning Board)

Date of Planning Board Decision: January 17, 2017

Date of Filing Decision: March 20, 2017

Summary of Proposal: Special Permit pursuant to Section 14.32.2 of the Zoning Ordinance to approve an Infill Development Concept Plan (IDCP) providing for the distribution of additional Gross Floor Area (GFA) for new development within the MXD District above and beyond 3,333,000 square feet, to include the addition of 400,000 square feet of residential Infill GFA and 540,000 square feet of commercial Infill GFA (excluding such GFA that is exempt from calculation pursuant to the provisions of Article 14.000 of the Zoning Ordinance), along with other site improvements, in accordance with zoning requirements.

Decision: **GRANTED, with Conditions.**

Appeals, if any, shall be made pursuant to Section 17 of Massachusetts General Laws, Chapter 40A, and shall be filed within twenty (20) days after filing of the above referenced decision with the City Clerk. Copies of the complete decision and final plans, if applicable, are on file with the Community Development Department and the City Clerk.

Authorized Representative of the Planning Board: Jeffrey C. Roberts

For further information concerning this Decision, please contact Liza Paden at 617-349-4647, or [lpaden@cambridgema.gov](mailto:lpaden@cambridgema.gov).

## **DOCUMENTS SUBMITTED**

### Application Documents and Supporting Material

1. Planning Board Special Permit application filed with the City Clerk's Office on September 6, 2016, including: Cover Sheet, Dimensional Forms for 250 Binney Street, 145 Binney Street Tract II, 135 Broadway – Residential North, 135 Broadway Residential South, all dated 8/9/16; Addendum to Dimensional Form, Existing Open Space calculations, Proposed Open Space, Ownership Certificate, Addendum to the Cover Sheet and Ownership Certificate. Infill Development Concept Plan dated August 2016 with the proposed development plan, regulatory context, open space plan, retail plan, transportation, infrastructure, environmental impacts, sustainability plan, phasing plan, and design guidelines.
2. 145 Broadway Commercial Office A: Design Review Submission, dated 8/9/16.
3. Boston Properties report on the Pre-Application Community Meetings dated 8/31/16.
4. Letter via email to Liza Paden from Michael B. Tilford, Boston Properties, dated 9/8/16, with attachments containing supplemental information for steam utilization feasibility review.
5. Supplemental Submission with Cover Letter dated 11/10/16, with attached documents including Consolidated Comments List, Response to Comments, Revisions, Appendix with letters from Sue Hawkes of The Collaborative Companies and from Rebecca B. Higgins and Mark X. Haley of Haley & Aldrich, Inc., and Letter via email to Liza Paden from Michael Tilford, Boston Properties dated November 10, 2016 with Special Permit Conditions Request.
6. 145 Broadway Commercial Office A: Design Review Response, dated 11/22/16.
7. Letter to Planning Board from James J. Rafferty, Adams & Rafferty, dated 1/11/17.
8. Dimensional Form Addendum, dated 1/17/17.
9. MXD Infill Development Concept Plan: Consolidated Revision, dated February, 2017 (received subsequent to Planning Board vote pursuant to a request by the Planning Board to provide a consolidated IDCP document containing all revisions and additional material submitted as of January 17, 2017).
10. 145 Broadway Commercial Office A: Design Review Conforming Set, dated February 7, 2017 (received subsequent to Planning Board vote pursuant to a request by the Planning Board to provide a consolidated Design Review document for 145 Broadway site containing all revisions and additional material submitted as of January 17, 2017).

City of Cambridge Documents

11. Special Permit Criteria for the MXD Infill Development Concept Plan, compiled by Community Development Department (CDD) staff.
12. Memo to the Planning Board from Katherine F. Watkins, City Engineer, dated 9/13/16.
13. Memo to the Planning Board from Joseph E. Barr, Director of Traffic, Parking and Transportation, dated 9/14/16.
14. Memo to the Planning Board from CDD staff, dated 9/14/16.
15. Memo to the Planning Board from Katherine F. Watkins, City Engineer, dated 12/12/16.
16. Memo to the Planning Board from CDD staff, dated 12/15/16.
17. Memo to the Planning Board from Joseph E. Barr, Traffic, Parking and Transportation, dated 12/15/16.
18. Memo to the Planning Board from CDD staff, dated 1/11/17.
19. Memo to the Planning Board from Joseph E. Barr, Traffic, Parking and Transportation, dated 1/11/17.
20. Parking and Transportation Demand Management (PTDM) Plan final decision, dated 1/17/17.

Other Documents

21. Letter to the Planning Board from the Transit Advisory Committee, dated 9/13/17.
22. Copy of memo to the Cambridge Redevelopment Board from Tom Evans, Executive Director of the Cambridge Redevelopment Authority (CRA), dated 9/16/16.
23. Email to Tom Evans, CRA, from Peter Crawley, President, East Cambridge Planning Team, dated 9/19/16.
24. Letter to the Planning Board from Michael Proscia, Chair, Cambridge Bicycle Committee, dated 9/19/16.
25. Letter to the Planning Board from the East Cambridge Planning Team, dated 12/19/16.
26. Email to the Planning Board from Marilyn Wellons, dated 12/20/16.
27. Email to the Planning Board from Marie Saccoccio, dated 12/20/16.

28. Copy of a memo to the Cambridge Redevelopment Board from Tom Evans, CRA, dated 1/14/17.
29. Copy of letter to Michael Cantalupa, Senior Vice President, Boston Properties, Inc., from Thomas L. Evans, CRA, dated 1/23/17.

## APPLICATION SUMMARY

Section 14.32.2 of the Zoning Ordinance provides that the distribution of new development within the MXD District above and beyond three million, three hundred and thirty three thousand (3,333,000) square feet of Gross Floor Area (GFA), referred to as Infill GFA, must be described through the preparation of an Infill Development Concept Plan (IDCP) that would be subject to review and special permit approval by the Planning Board. The IDCP is required to include a program for current and future development, a site plan for all proposed new development including Innovation Space and Active Ground Floor Uses, a summary of current and proposed future uses on building sites, a development phasing plan, a transportation impact study, a housing program, an open space plan, a street and public infrastructure improvement plan, a plan illustrating proposed building scale, height and massing with studies of potential environmental impacts and mitigation measures, a set of urban design guidelines, proposed modifications, if any, to the development plans then approved pursuant to the Massachusetts Environment Policy Act (MEPA) and an update on implementation of required mitigations from MEPA, a sustainability plan and a Retail Plan. Special permit approval of the IDCP satisfies the Project Review Special Permit requirements (Section 19.20) for development authorized within the IDCP, with future building phases subject to continuing design review in accordance with a process set forth in the special permit conditions.

The IDCP submitted by the Applicant proposes the addition of 400,000 square feet of residential Infill GFA and 540,000 square feet of commercial Infill GFA, excluding such GFA that is exempt from calculation pursuant to the provisions of Article 14.000 of the Zoning Ordinance., New development is proposed to occur mostly in the portion of the MXD District north of Broadway, east of Galileo Galilei Way and south of Binney Street, distributed as follows:

- The existing 48-foot tall commercial building at 145 Broadway (known as Eleven Cambridge Center) is proposed to be demolished and replaced with a new, 250-foot tall commercial office building with ground-floor retail space and a below-grade parking facility.
- The existing 32-foot commercial building at 250 Binney Street (known as Fourteen Cambridge Center) is proposed to be demolished and replaced with a new, 200-foot tall commercial office/laboratory building with ground-floor retail space and a below-grade parking facility.
- Portions of the existing above-grade parking garage north of Broadway (known as Cambridge Center Blue Garage) are proposed to be altered to accommodate the construction two new residential buildings, one attached to each end of the parking structure, including one 350-foot tall residential building attached to the south end and one 170-foot tall commercial building attached to the north end. Existing public open spaces adjacent to the south and north ends of the garage are proposed to be retained and improved.

- The existing commercial office/laboratory building at 75 Ames Street, currently occupied by the Broad Institute, is proposed to be increased in GFA by 14,000 square feet through the conversion of existing building mechanical space to usable commercial GFA, though no change in the height or volume of the structure is proposed.
- The existing commercial building at 255 Main Street (known as One Cambridge Center) is proposed to be converted to Innovation Space as described in Section 14.32.5, fulfilling the requirement for Innovation Space associated with new office Infill GFA and exempting the floor area of such Innovation Space from district GFA limitations pursuant to Section 14.32.6, though no change in the height or volume of the structure is proposed.

## FINDINGS

After review of the Application Documents and other documents submitted to the Planning Board, testimony given at the public hearing, and review and consideration of the applicable requirements and criteria set forth in the City of Cambridge Zoning Ordinance (“Zoning Ordinance” or “Ordinance”) with regard to the special permits being sought, the Planning Board makes the following Findings.

Section 14.32.2.2 of the Zoning Ordinance provides the following guidance in making the Board’s findings:

*The Planning Board shall grant a special permit approving an Concept Plan upon finding that the new development identified within the plan meets the criteria for approval of a Planned Unit Development set forth in Section 12.35.3(3) of the Zoning Ordinance and the criteria for approval of a Project Review Special Permit set forth in Section 19.25 of the Zoning Ordinance. In making its finding, the Board shall consider the objectives set forth in the Kendall Square Final Report of the K2C2 Planning Study (“K2 Plan”) and the Kendall Square Design Guidelines.*

The applicable criteria are discussed in the following sections of these Findings.

### 1. Criteria for Planned Unit Development (PUD) Approval (Section 12.35.3)

The Planning Board finds that the proposed IDCP is in general conformance with the criteria set forth in Section 12.35.3, as explained in detail below.

*(1) The Development Proposal conforms with the General Development Controls set forth in Section 12.50, and the development controls set forth in the specific PUD district in which the project is located.*

The IDCP conforms to the provisions of Article 14.000 of the zoning ordinance, as most recently amended by the City Council in 2015 based on the 2013 recommendations of the Kendall Square Planning Study. The proposed development will conform to the provisions of Section 12.50 in relation to roadways, utilities and public works, landscaping and environmental performance standards.

*(2) The Development Proposal conforms with adopted policy plans or development guidelines for the portion of the city in which the PUD district is located.*

The MXD District is a special zoning district created to authorize mixed-use development in accordance with planning for the area overseen by the Cambridge Redevelopment Authority (CRA). The requirements in Article 14.000 are intended to allow a diversity of land uses in close proximity, within a limited area; to promote a balance of land uses; to facilitate development proposals responsive to current and future market conditions; to

facilitate integrated physical design; and to encourage interaction among activities located within the District.

In accordance with the 2013 Kendall Square Planning Study, the zoning amendment adopted by the City Council in 2015 expanded the capacity for development in the MXD district to allow additional commercial and residential development with a required residential component, including ground-floor retail and active uses, Innovation Space that would be available to smaller companies on more flexible terms than otherwise found in the commercial market, and improvements to open space and the public realm. The IDCP follows from the 2015 zoning amendment and is in conformance with the specific requirements as well as the intent of the zoning in that district.

*(3) The Development Proposal provides benefits to the city that outweigh its adverse effects.*

The Planning Board finds that the IDCP will provide sufficient public benefits to offset any adverse impacts, as described in detail below. The Board makes reference to the communication provided by James Rafferty on behalf of the Applicant dated January 11, 2017, describing public benefits to be provided by the proposed development.

In addition to the specific PUD considerations set forth in Section 12.35.3, the IDCP will provide benefits required in the 2015 zoning amendment and related commitments. These benefits include required residential development that will be delivered before or simultaneously with phases of commercial development, including housing affordable to low, moderate and middle income households, and homeownership opportunities at all income levels. The IDCP also proposes to exceed zoning requirements for Innovation Space, as is incentivized in Article 14.000, providing 105,200 square feet of such space and offering 25% of such space at below market rents.

*In making this determination the Planning Board shall consider the following:*

- (a) [The] quality of the site design, including integration of a variety of land uses, building types, and densities; preservation of natural features; compatibility with adjacent land uses; provision and type of open space; provision of other amenities designed to benefit the general public*

The development proposed within the IDCP will include a mix of residential, office, laboratory and retail uses through the redevelopment of existing building sites. New buildings will be of a high quality, in accordance with the design guidelines included within the IDCP, and will be subject to continuing design review by the Planning Board and the Cambridge Redevelopment Authority (CRA). The plan will also include enhancements to the streetscape and several public open spaces on Broadway and Binney Street, including the public pathway connecting the ends of Sixth Street and Ames Street.

- (b) Traffic flow and safety*



The proposed IDCP is not expected to have a substantial adverse impact on traffic flow and safety, as discussed further below in the transportation impact findings related to Section 19.20.

*(c) Adequacy of utilities and other public works*

The proposed development plans have been reviewed by the Department of Public Works (DPW), which provided a communication to the Planning Board dated December 12, 2016, indicating that the development will be able to meet applicable standards for utilities and public works. Formal complete engineering review will be undertaken by the DPW at each phase of the development, at the time of the Building Permit Application, to confirm that all DPW Standards have been met.

*(d) Impact on existing public facilities within the city*

The proposed development is not expected to impact existing public facilities. Public utilities and infrastructure will be improved in concert with the development proposed on individual building sites.

*(e) Potential fiscal impacts*

As provided in the communication referenced above, the project is expected to lead to approximately 4,500 permanent jobs and approximately 2,600 construction jobs in the city, and to generate an estimated \$12 million in new annual real estate tax revenue, along with other positive economic impacts resulting from new employees and residents.

2. Project Review Special Permit (19.20)

The Planning Board finds that the proposed IDCP is in general conformance with the Project Review Special Permit criteria set forth in Section 19.20 of the zoning ordinance, as explained in detail below.

*(19.25.1) Traffic Impact Findings. Where a Traffic Study is required as set forth in Section 19.24 (2) the Planning Board shall grant the special permit only if it finds that the project will have no substantial adverse impact on city traffic within the study area as analyzed in the Traffic Study. Substantial adverse impact on city traffic shall be measured by reference to the traffic impact indicators set forth in Section 19.25.11 below.*

*(19.25.11) Traffic Impact Indicators. In determining whether a proposal has substantial adverse impacts on city traffic the Planning Board shall apply the following indicators. When one or more of the indicators is exceeded, it will be indicative of potentially substantial*

*adverse impact on city traffic. In making its findings, however, the Planning Board shall consider the mitigation efforts proposed, their anticipated effectiveness, and other supplemental information that identifies circumstances or actions that will result in a reduction in adverse traffic impacts. Such efforts and actions may include, but are not limited to, transportation demand management plans; roadway, bicycle and pedestrian facilities improvements; measures to reduce traffic on residential streets; and measures undertaken to improve safety for pedestrians and vehicles, particularly at intersections identified in the Traffic Study as having a history of high crash rates.*

*The indicators are: (1) Project vehicle trip generation weekdays and weekends for a twenty-four hour period and A. M. and P.M. peak vehicle trips generated; (2) Change in level of service at identified signalized intersections; (3) Increased volume of trips on residential streets; (4) Increase of length of vehicle queues at identified signalized intersections; and (5) Lack of sufficient pedestrian and bicycle facilities. The precise numerical values that will be deemed to indicate potentially substantial adverse impact for each of these indicators shall be adopted from time to time by the Planning Board in consultation with the TPTD, published and made available to all applicants.*

The Applicant completed a Transportation Impact Study (TIS), with a functional scope determined by the Traffic, Parking and Transportation Department (TP&T). As communicated in a memorandum from TP&T dated September 14, 2016, the TIS was certified as complete and reliable by TP&T on July 14, 2016. The TIS indicated 31 instances in which the Planning Board indicators for transportation impact review were exceeded, including: total weekday daily and peak hour trips; reduced level of service at the Broadway/Hampshire Street, Binney Street/Third Street, Broadway/Galileo Galilei Way, and Broadway/Third Street intersections; increased traffic on residential streets for Third Street between Charles Street and Spring Street; and low pedestrian level of service at the intersections of O'Brien Highway/Land Blvd., Binney Street/First Street, and Binney Street/Land Blvd. due to signal timing and not directly because of the proposed project.

The Planning Board received additional communications from TP&T on December 15, 2016 and January 11, 2017, discussing a program of mitigation measures to address the exceeded indicators identified in the TIS. Such measures are intended to reduce overall vehicle trips by shifting trips to sustainable modes, promote and support transit use while taking into account existing congestion on the transit network, improve safety at intersections for all modes, manage parking supply and auto demand (TDM), monitor trips over time, and manage loading and deliveries. The memo dated January 11, 2017 contained a specific set of recommended mitigation requirements to be implemented throughout the phases of the IDCP, which were found to be agreeable to the Applicant and were accepted by the Planning Board.

Therefore, upon consideration of the TIS, the communications from TP&T, and the agreed-upon mitigation measures, the Planning Board finds that the development proposed within the IDCP will not result in substantial adverse impact on city traffic in the area.

*(19.25.2) Urban Design Findings. The Planning Board shall grant the special permit only if it finds that the project is consistent with the urban design objectives of the city as set forth in Section 19.30. In making that determination the Board may be guided by or make reference to urban design guidelines or planning reports that may have been developed for specific areas of the city and shall apply the standards herein contained in a reasonable manner to nonprofit religious and educational organizations in light of the special circumstances applicable to nonprofit religious and educational activities.*

The Board finds that the proposed IDCP is consistent with the Urban Design Objectives set forth in Section 19.30, along with the more specific plans and guidelines established by the City for the Kendall Square area. The Board acknowledges that the IDCP presents development in conceptual form, and therefore makes the below findings based on the overall master plan presented for the development. The detailed designs of proposed new buildings and site improvements will be reviewed further by the Board in accordance with the Conditions of this Decision and with the design guidelines submitted as part of the IDCP, which will also be subject to further review and refinement by CDD staff and the Planning Board.

*(19.31) New projects should be responsive to the existing or anticipated pattern of development.*

As discussed in the findings above, the IDCP follows from the extensive planning undertaken during the Kendall Square Planning Study, the recommendations of which were adopted by the City Council as amendments to the zoning requirements for the MXD District in 2015. Historically, the MXD district has contained commercial office, laboratory and hotel facilities in relatively large-scale buildings, and a component of retail use at the ground floor. The proposed IDCP continues this pattern while, in accordance with the Kendall Square Planning Study, providing a larger residential component, providing more retail at the street level, promoting a more pedestrian-oriented and bicycle-friendly streetscape, and improving public open spaces and connections.

*(19.32) Development should be pedestrian and bicycle-friendly, with a positive relationship to its surroundings.*

The proposed new buildings in the IDCP will create more transparent and welcoming ground floors than the existing buildings, with new retail and active use spaces. The proposed site improvements will also enhance the public realm for pedestrians and bicyclists with landscaping and furniture along the streetscape and within public open spaces on Broadway, Binney Street and the connecting path between those two streets. New buildings will feature pedestrian entrances at the most prominent locations, will locate parking and loading access along internal access drives, and will provide bicycle parking facilities in accordance with city standards.

*(19.33) The building and site design should mitigate adverse environmental impacts of a development upon its neighbors.*

The IDCP contains studies of anticipated wind, shadow and noise impacts from proposed new development. The Planning Board also reviewed more specific impact studies as part of the design submission for the proposed first phase of development at 145 Broadway. Wind impact studies predict generally comfortable conditions around the sites identified in the IDCP, while also identifying certain locations where mitigating measures would be incorporated into the design of individual buildings. Shadow studies show that the height and volume of proposed new buildings will not create substantial new shadow on existing abutting buildings or public spaces. The noise analysis demonstrates that buildings will be designed to meet the applicable requirements of the Cambridge Noise Control Ordinance. Approaches to manage environmental impacts are also included in the design guidelines for the IDCP, which will be subject to further review and refinement, and the specific environmental impacts of each proposed building will be considered in more detail through the continuing design review process for that building. Also, as noted above, loading and service functions of new buildings will be handled internally to the site and mostly within buildings, and will not impact abutting properties.

*(19.34) Projects should not overburden the City infrastructure services, including neighborhood roads, city water supply system, and sewer system.*

As previously noted in these findings, the IDCP has been reviewed by DPW and is expected to meet all applicable standards for infrastructure and utilities, subject to further engineering review of each proposed building. New development will also be subject to sustainable design requirements and will employ measures set forth in Section 14.74 of the Zoning Ordinance and in greater detail in the Sustainability section of the proposed IDCP, which are based on the enhanced sustainability recommendations of the Kendall Square Planning Study.

*(19.35) New construction should reinforce and enhance the complex urban aspects of Cambridge as it has developed historically.*

The IDCP proposes two new commercial buildings to replace existing commercial buildings and two new residential buildings connected to the ends of an existing parking garage. The buildings to be demolished or altered are not considered historically significant. The proposed new buildings will enhance the historical patterns of development in the area by screening above-grade parking facilities and designing new buildings to be more pedestrian-oriented and transparent, particularly at the ground floors.

*(19.36) Expansion of the inventory of housing in the city is encouraged.*

Pursuant to zoning requirements and as described in the Housing Program section of the IDCP, the proposed new development will include up to 425 new housing units,

including 80-85 units for low to moderate-income households and 20-25 units for middle-income households. At least 5% of residential GFA will be devoted to three-bedroom units, which will be primarily devoted to low, moderate and middle income households, and at least 20% of proposed new residential GFA will be devoted to homeownership units at all income levels.

*(19.37) Enhancement and expansion of open space amenities in the city should be incorporated into new development in the city.*

The IDCP includes enhancements to existing public open spaces along Broadway and Binney Street, as well as improvements to the public pathway connecting the ends of Sixth Street and Ames Street that will include a dedicated bicycle path, and enhancements to the streetscape surrounding each development site.

### 3. General Criteria for Issuance of a Special Permit (10.43)

The Planning Board finds that the project meets the General Criteria for Issuance of a Special Permit, as set forth below.

*10.43 Criteria. Special permits will normally be granted where specific provisions of this Ordinance are met, except when particulars of the location or use, not generally true of the district or of the uses permitted in it, would cause granting of such permit to be to the detriment of the public interest because:*

*(a) It appears that requirements of this Ordinance cannot or will not be met, or ...*

The requirements of the MXD zoning district are met in the proposed development.

*(b) traffic generated or patterns of access or egress would cause congestion, hazard, or substantial change in established neighborhood character, or ...*

Transportation impacts have been carefully assessed as described above in these Findings. No changes to patterns of access or egress are anticipated that would cause substantial adverse impact.

*(c) the continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would be adversely affected by the nature of the proposed use, or ...*

The proposed development is consistent with the zoning requirements for the area and will not adversely impact the operation or development of adjacent uses.

*(d) nuisance or hazard would be created to the detriment of the health, safety and/or welfare of the occupant of the proposed use or the citizens of the City, or ...*

The proposed development will not cause nuisance or hazard and will be conducted in accordance with all applicable health and safety requirements.

*(e) for other reasons, the proposed use would impair the integrity of the district or adjoining district, or otherwise derogate from the intent and purpose of this Ordinance, and ...*

The proposed uses are fully consistent with the anticipated character of the district as established through the City's planning and zoning.

*(f) the new use or building construction is inconsistent with the Urban Design Objectives set forth in Section 19.30.*

The proposed development is consistent with the Citywide Urban Design Objectives, as set forth further above in these Findings.

## **DECISION**

Based on a review of the Application Documents, testimony given and comments made at the public hearings, and the above Findings, the Planning Board hereby GRANTS the requested Special Permit for approval of an Infill Development Concept Plan in the MXD District, subject to the following conditions and limitations. Hereinafter, for purposes of this Decision, the Permittee shall mean the Permittee and any successor or successors in interest.

### Outline of conditions:

1. Approved Development Program.
2. Open Space.
3. Design Review.
4. Sustainability.
5. Traffic and Infrastructure Improvements.
6. Retail and Active Uses.
7. Housing.
8. Construction Management.
9. Other Municipal Ordinances.
10. Timing and Phasing.
11. Amendments.
12. Additional Requirements for Phase 1 Development.
13. Additional Requirements for Phases 2 and 3 Development.

### List of appendices incorporated herein and made a part hereof:

- A. Site Plan
- B. Development Summary
- C. Open Space Plan Summary
- D. Phasing Plan
- E. Transportation Mitigation Program and Monitoring Requirements
- F. Sustainability Plan and Guidelines
- G. Letter of Commitment by Boston Properties Limited Partnership
- H. Design Guidelines (approved in current draft form, subject to revision)

## 1. Approved Development Program.

All development authorized by this Special Permit shall be consistent, in concept, with the Infill Development Concept Plan (IDCP) materials dated August 9, 2016 and all supplemental plan materials submitted to the Planning Board prior to issuance of this Special Permit as listed in the Application Documents (which have been compiled into a Consolidated Revision dated February, 2017), and the applicable requirements of the Zoning Ordinance. The following characteristics of the IDCP are specifically permitted and are summarized in Appendix B, Development Summary:

### a. Aggregate Development.

- i. Total Development. The maximum Gross Floor Area (GFA) permitted within the MXD District shall not exceed 4,273,000 square feet, in the aggregate, as more specifically set forth in Appendix B. Such GFA shall not include certain spaces that are specifically exempted from the calculation of GFA by Section 14.32.6 of the Zoning Ordinance.
- ii. Mix of Uses. Subject to the provisions of Section 14.32.1, within the MXD District as a whole, GFA devoted to non-residential uses shall not exceed 3,673,000 square feet, and the remaining GFA permitted in the district shall be limited to multifamily residential uses. Such GFA shall not include certain spaces that are specifically exempted from the calculation of GFA by Section 14.32.6 of the Zoning Ordinance.
- iii. Innovation Space. Approximately 105,200 square feet of floor area within the MXD District shall be designated as Innovation Space according to the standards set forth in Section 14.32.5. Such floor area shall be exempt from the calculation of aggregate GFA by Section 14.32.6 and shall fulfill the requirements associated with new commercial development authorized by this Special Permit as set forth in Section 14.32.5.
- iv. Middle-Income Housing. Approximately 20,000 square feet of floor area shall be devoted to Middle-Income Units according to the standards set forth in Section 14.35. Such floor area shall be exempt from the calculation of aggregate GFA and shall fulfill the requirements associated with new residential development authorized by this Special Permit as set forth in Section 14.35.
- v. Retail Uses. Approximately 19,366 square feet of floor area, as depicted in the approved IDCP, shall be devoted to Retail and Consumer Service Uses, of which approximately 1,300 square feet shall be exempt from GFA in accordance with Section 14.32.6. In accordance with Section 14.38, Retail and Consumer Service Uses or active public gathering space (whether enclosed or open) shall occupy a minimum street frontage length of seventy-five percent (75%) of the building façades fronting Main Street, Broadway and Ames Street.
- vi. New Development Authorized by IDCP. This Special Permit shall authorize the demolition of approximately 141,212 square feet of GFA in two commercial buildings and the construction of approximately 772,412 square feet of GFA in two new commercial buildings, as well as the construction of 421,300 square feet



- of GFA in two primarily residential buildings, of which 21,300 square feet shall be exempt from GFA in accordance with Section 14.32.6 (including 20,000 square feet devoted to middle income housing units and 1,300 square feet devoted to ground-floor retail use), containing up to 425 total dwelling units. This Special Permit shall also authorize the conversion of approximately 14,000 square feet of floor area currently used for building mechanical functions, and thereby exempt from GFA calculations, to commercial uses that shall cause it to be included in the aggregate GFA of the district.
- vii. Net New Development. The authorized new development, conversion of mechanical space to GFA, demolition of existing buildings, and exclusion of existing and new GFA that is made exempt from zoning limitations pursuant to section 14.32.6, as set forth above, shall result in a net increase of 540,000 square feet in non-residential GFA and 400,000 square feet in residential GFA.
- viii. Other Development Not Included in IDCP. Other development in the MXD District that is outside the purview of this Special Permit includes the development authorized by Special Permit PB #294, which includes approximately 200,000 square feet of residential use and approximately 20,000 square feet of lower-floor commercial use at 88 Ames Street, and the development of up to 60,000 square feet of the aggregate 3,673,000 square feet of GFA reserved for non-residential uses, which shall require a separate special permit from the Planning Board in accordance with Section 14.72.3.
- ix. Modifications of Aggregate Development Program. Any change to the approved Aggregate Development Program that alters the GFA figures set forth in this Condition #1-a. of this Decision by no more than 10,000 square feet may be approved by the Community Development Department (CDD) as an administrative change without requiring an Amendment by the Planning Board, provided that the resulting development remains in substantial conformance with applicable Sections of the Zoning Ordinance, the approved IDCP and the Conditions of this Special Permit. Any further change to the Aggregate Development Program, provided that the resulting program conforms to zoning limitations and that the total change amounts to no more than five percent (5%) of the GFA of new development authorized by this Special Permit, may be approved as a Minor Amendment pursuant to Condition #11 of this Decision. Additionally, any increase in Retail Uses accompanied, to the extent necessary, by a commensurate decrease in other approved uses may be approved as a Minor Amendment.
- x. Parking. This Special Permit shall authorize the construction of 1,000 new parking spaces in below-grade structures and the removal of 215 existing parking spaces from existing above-grade structures, resulting in a net increase of 785 parking spaces and a total of 3,493 parking spaces in the MXD District. Accessory parking shall serve non-residential and residential uses in accordance with the limitations set forth in Section 14.52.2. Parking spaces may be used for carsharing to the extent allowable by zoning. Electric Vehicle (EV) charging

stations shall also be allowed within parking facilities. A reduction in the total number of off-street parking spaces may be approved administratively by CDD, without requiring an amendment from the Planning Board, provided that such decrease does not exceed five percent (5%) of the total number of approved parking spaces on the Development Parcel, while any further reduction may be approved as a Minor Amendment pursuant to Condition #11 of this Decision provided that the provisions of the Zoning Ordinance are met.

- xi. Bicycle Parking. A minimum of 633 long-term and 102 short-term bicycle parking spaces will be provided for new development authorized by this Special Permit, as required by Section 6.100. Any modifications that deviate from the requirements of Section 6.100 shall require a special permit from the Planning Board pursuant to Section 6.108.
  - xii. Public Bicycle Sharing Stations are authorized without limitation. At a minimum, the Permittee shall fully support the purchase, installation and ongoing annual maintenance of public bicycle sharing stations (i.e., Hubway Stations) on the Development Parcels in accordance with the transportation mitigation requirements contained in Appendix B of this Decision. The City and Permittee shall identify a mutually acceptable location for any Hubway Station.
- b. Site Development. The development authorized by this Special Permit shall occur within those Building Sites identified and depicted in the Site Plan contained within the IDCP and included in Appendix A attached to this Special Permit Decision, which are set forth below. For clarity, the figures set forth below include GFA that is exempt from zoning limitations by the provisions of Section 14.32.6.
- i. Commercial Building A, 145 Broadway. This Special Permit authorizes the demolition of an existing commercial building with approximately 78,636 square feet of GFA and the construction of a new commercial building with approximately 453,768 square feet of GFA.
  - ii. Commercial Building B, 250 Binney Street. This Special Permit authorizes the demolition of an existing commercial building with approximately 62,576 square feet of GFA and the construction of a new commercial building with approximately 318,644 square feet of GFA.
  - iii. Residential Building South, 135 Broadway (fronting Broadway). This Special Permit authorizes the demolition of a portion of an existing above-grade parking structure and the construction of a new residential building with approximately 350,000 square feet of GFA and up to 355 dwelling units.
  - iv. Residential Building North, 135 Broadway (fronting Binney Street). This Special Permit authorizes the demolition of a portion of an existing above-grade parking structure and the construction of a new residential building with approximately 71,300 square feet of GFA and up to 70 dwelling units, and a ground-floor retail use.

- v. Broad Institute Office Conversion, 75 Ames Street. This Special Permit authorizes the conversion of approximately 14,000 square feet of exempt mechanical space to usable non-residential GFA within the existing building.
  - vi. Innovation Space, 255 Main Street. This Special Permit authorizes the conversion of approximately 105,200 square feet of existing GFA to Innovation Space, which shall be exempt from aggregate GFA calculations and other GFA limitations within the MXD District. Any future relocation or redevelopment of the authorized Innovation Space may be approved as a Minor Amendment pursuant to Condition #11 of this Decision provided that the provisions of the Zoning Ordinance are met.
- c. Other Dimensional Characteristics.
- i. Height. The Planning Board approves the building heights for the proposed new buildings set forth in the IDCP and in Appendix B.
  - ii. Building Setbacks and Massing. For all new and substantially renovated buildings authorized by this Special Permit, the GFA, setbacks and building massing shall be as conceptually described and illustrated in the IDCP.
  - iii. Access and Egress. All primary building entrances, parking facility entrances, bicycle access, and vehicular loading areas shall be in the general locations described and illustrated in the IDCP.
  - iv. Bicycle Parking. The Permittee shall install short-term bicycle racks near each primary building entrance, for use by visitors, customers and couriers. Long-term bicycle parking that is convenient and secure shall also be provided for occupants of the Buildings. All bicycle parking shall be installed in conformance with the requirements for such facilities in Section 6.100.
  - v. Outdoor Spaces. The conceptual design of open spaces, streetscape types, urban space types, street walls and massing, service access design, landscaping, and exterior lighting shall be as described and illustrated in the IDCP.
  - vi. Design Review. The specific design of individual Building Sites shall be subject to Design Review by the Planning Board, as set forth further in this Decision.
  - vii. Modifications. During the Design Review process, or in the event that there is no Design Review process pending for a Building Site, upon the application of the Permittee, the Planning Board may approve modifications to the Development Summary in Appendix B that constitute no more than a five percent (5%) deviation in the GFA or building height on any individual Building Site.
  - viii. Public Improvements. The Permittee shall implement all improvements to public streets, sidewalks, other spaces and infrastructure as described in the IDCP and elsewhere in this Decision on or before the time required for the completion of such improvements set forth herein. Any such improvements or other development to be undertaken by the Permittee that will impact City streets, City sidewalks, or other City-owned public spaces, or City utilities such as water, sewer, or telecommunications service shall be subject to approval by the applicable City

Departments, which may include but are not limited to Traffic, Parking and Transportation Department (TP&T), Department of Public Works (DPW), CDD, Electrical Department, and Water Department.

## **2. Open Space.**

- a. As an element of the IDCP, the Planning Board specifically approves the amount, location, and functional characteristics of the Open Space as required in the Ordinance and such other open space as the same is contextually depicted and described in the Open Space Plan section of the IDCP, attached as Appendix C to this Special Permit Decision.
- b. According to the IDCP, the approved development shall result in approximately 276,289 square feet of Public Open Space in the MXD district, exceeding the minimum of 100,000 square feet required by Section 14.42. Such Public Open Space shall be reserved for public use and enjoyment as guaranteed through one or more of the following: retention by the Cambridge Redevelopment Authority (CRA); dedication to and acceptance by the City of Cambridge or other public entity; easements or deed restrictions over such land sufficient to ensure its perpetual reservation for public open space purposes; dedication, by covenant or comparable legal instrument, to the community use of the residents, lessees and visitors to the MXD district for reasonable amounts of time on a regular basis; or lease agreements of ninety-nine (99) years or longer from the private developer or owner to the City or other public entity.
- c. According to the IDCP, the approved development shall result in a total of approximately 473,546 square feet of total open space in the MXD district, exceeding the minimum of fifteen percent (15%) of the land area (excluding road rights-of-way) within the MXD district, required by Section 14.42.2. Such open space shall be devoted to a combination of public open spaces and private but publicly accessible spaces, which shall contribute to an interconnected network of public spaces in the broader Kendall Square neighborhood, accommodating a variety of activities for employees, residents and visitors, consistent with the place-making goals of the 2013 K2 Final Report.
- d. Creation of and improvements to open space, as described in the IDCP, shall be completed in concert with each Phase of development as set forth in the Timing and Phasing provisions in Condition #10 below. The open space elements associated with each phase shall be reviewed and approved by the Planning Board in connection with its Design Review of that phase of development.
- e. The Planning Board may approve modifications to the proposed open space identified as Binney Street Park as a Minor Amendment in accordance with the Amendment procedures set forth in Condition #11 below and the Additional Requirements for Phases 2 and 3 Development set forth in Condition #13 below.

## **3. Design Review.**

- a. Per Section 14.32.2.2, the approval of this IDCP shall serve to meet any applicable project review requirements of Article 19.000, and no additional Project Review Special Permit shall be required for individual buildings authorized by this Special Permit.

- b. In granting this Special Permit, the Planning Board hereby approves the design of Commercial Building A, 145 Broadway, constituting Phase 1 of the IDCP, in conformance with the final Design Review submission dated February 7, 2017 (which consolidates all materials and revisions submitted prior to the Planning Board’s approval of the design), subject to the provisions for continuing staff review set forth elsewhere in the Design Review Conditions of this Special Permit Decision, and subject to the Additional Requirements for Phase 1 Development set forth in Condition #12 of this Special Permit Decision. No further review and approval by the Planning Board shall be required prior to issuance of a building permit, provided that the final plans submitted to secure a building permit are in substantial conformance with the design approved by the Planning Board.
- c. In granting this Special Permit, the Planning Board hereby approves in conceptual form the other buildings within the IDCP as presented in the Application Documents, subject to future design review and approval as set forth below.
- d. Design Review Procedures. Prior to issuance of a building permit for any individual building, a detailed schematic design of each building, along with any open space and landscape elements associated with that phase of development, shall be reviewed and approved in accordance with the procedures set forth below.
  - i. Prior to submission of a design review package for a Building Site, the Permittee shall meet with the Design Review Committee of the CRA to discuss conceptual design approaches to the building and site. The Planning Board shall be notified in advance of any Design Review Committee meeting pertaining to development authorized by this Special Permit Decision and shall have the opportunity to appoint up to two (2) Planning Board members to participate in such meetings.
  - ii. At least twenty-eight (28) days prior to submission of a design review package to the Planning Board, the Permittee shall provide a draft set of plans to CDD, TP&T, and DPW staff for review and comment on such matters as the clarity of the plans and potential issues regarding conformance with City standards. Such plans shall include plans for any public improvements associated with development on a Building Site, including but not limited to construction of public streets or infrastructure. The Permittee shall also provide draft Green Building Review materials to CDD staff for review and comment.
  - iii. Following the submission of a design review package to the Planning Board, containing materials as set forth in Paragraph (e) below, the Planning Board will schedule a design review session to take place at a Planning Board meeting at which the review and possible approval of the building design has been placed on the agenda. Submitted materials will be made available to the public at least two weeks prior to the scheduled design review. For each building and/or site subject to these design review procedures, at least one Planning Board design review session shall be held jointly with the CRA Board, unless the Chair of the Planning Board and Chair of the CRA Board mutually agree that such a jointly held meeting is not necessary in a particular instance.

- iv. The Planning Board shall entertain written and oral comments from members of the public on the proposed design prior to making a determination of approval. The Permittee may also submit interim materials for review and comment by the Planning Board prior to seeking final design approval.
- v. The Planning Board shall approve the schematic design of each building by an affirmative vote of at least five (5) Planning Board members present at the meeting, upon finding that the design is generally consistent with the design standards and guidelines listed in Paragraph (f) below. In granting approval, the Planning Board shall provide written comments describing how the project responds to the applicable standards and guidelines, and may provide a list of detailed design elements to be made subject to continuing review by CDD or other City staff. The Planning Board may also request additional information to be provided to the Board for review and comment after design approval has been granted.
- vi. Subsequent to Planning Board design review and approval of a Building Site but prior to issuance of a building permit, the Permittee shall prepare and submit seventy-five percent (75%) design drawings of any public improvements for review and comment by applicable City departments prior to submitting final construction drawings for approval. Prior to issuance of a building permit, all applicable City departments shall certify to the Planning Board and to the Superintendent of Buildings that either the design of such public improvements has been approved, or that such approval will be given at some specific future time subsequent to issuance of the building permit.
- vii. Prior to issuance of a building permit, CDD (and other departments as applicable) shall certify to the Superintendent of Buildings that the plans submitted to secure the building permit are in substantial conformance with the schematic design approved by the Planning Board and that all detailed design elements made subject to continuing review by staff have been sufficiently addressed. CDD may present any design changes made subsequent to design approval to the Board for its review and comment. If any design changes are found to be substantial, the Board may schedule an additional design review session to consider approval of such changes.
- viii. Prior to issuance of a building permit, applicable City departments including but not limited to CDD, TP&T, DPW, and other departments that may have purview over a particular aspect of the development as determined by CDD or by the Superintendent of Buildings shall review the plans submitted to secure the building permit for compliance with City requirements or standards pertaining to design elements including but not limited to parking facilities, bicycle parking facilities, street trees, loading facilities, bicycle and vehicular access and egress, public bicycle sharing stations, stormwater management systems, Green Building requirements and historic protections, if applicable.
- ix. Prior to issuance of a building permit, CDD shall certify to the Superintendent of Buildings that all Conditions of this Special Permit are being met.
- x. Prior to final selection of façade materials and colors, the Permittee shall erect an on-site mock-up of an exterior wall displaying selected materials and composition.

Planning Board members will be notified in order to view the mock-up and provide comments to CDD, and CDD will review and provide all comments to the Permittee prior to the commencement of exterior façade construction.

- e. Materials. The Permittee shall provide the following materials in the design review package for each building:
  - i. A dimensional form describing the Gross Floor Area, building height, setbacks, size of open space, and vehicular and bicycle parking spaces, as well as cumulative dimensional information for all development authorized by this Special Permit, that has been previously constructed or has received final Design Review approval from the Planning Board.
  - ii. A description of all uses intended to be located within the new or renovated buildings.
  - iii. A Site Development Plan, revised as necessary, showing the proposed boundary lines for the subject Building Site and other Building Sites within the IDCP.
  - iv. A site plan (or plans) of the entire Building Site and other open space associated with that phase of development, illustrating, in detail:
    - A. Landscape features including hardscape and vegetated surfaces, trees and other plantings, outdoor furniture, outdoor lighting, bicycle parking, activity spaces, public art, signage and wayfinding, and any other design elements.
    - B. Conceptual plans for all roadways or sidewalks adjacent to the Building Site, including any planned changes approved or to be approved in the future by City departments.
    - C. Circulation routes to, from and through the site for pedestrians, bicyclists, passenger vehicles and service or delivery vehicles.
    - D. The locations of all access and egress points for pedestrians, bicyclists, passenger vehicles and service or delivery vehicles.
  - v. Scaled and dimensioned floor plans of each level of the proposed building.
  - vi. A scaled and dimensioned roof plan, illustrating all features proposed to be located on the roof including the arrangement of any rooftop mechanical systems and enclosures, and any proposed lighting that will be visible from outside the building.
  - vii. Scaled and dimensioned elevations of each side of the proposed building with labels and descriptions of proposed exterior façade materials, which shall include any visible rooftop mechanical equipment, screening devices, exterior vents, lighting fixtures and other appurtenances, as well as focused elevations of each of the ground floor façades.
  - viii. Perspective views of the Building Site from significant vantage points, including public streets from which the building will be visible at a distance, pedestrian views from all sides of the building to illustrate how the building will relate to the adjacent public realm, and nighttime views to illustrate the appearance and illumination of the building after dark.

- ix. Preliminary Signage Plan depicting, in concept, the anticipated locations and sizes of signage on the building and site, for purposes including but not limited to wayfinding, retail signage and building identification.
- x. Lighting Plan describing the selection and placement of light fixtures on the building and site, identifying areas on the site and abutting sites that will be illuminated by such light fixtures, and demonstrating compliance with any lighting regulations that may be applicable to the project at the time of review.
- xi. Sustainability Narrative and supporting materials required to certify compliance with applicable sustainability standards set forth in Section 14.74, and to respond to applicable sustainability guidelines as set forth in the IDCP and in this Special Permit Decision.
- xii. Noise Mitigation Narrative and acoustical report prepared by a professional acoustical engineer, addressing the requirements in Section 13.89.1 and Condition #8 of this Special Permit Decision.
- xiii. Pedestrian Wind Comfort Study, demonstrating anticipated impacts and examining various wind mitigation strategies including modifications to building form and massing.
- xiv. The Permittee shall also assemble the following materials to present to the Planning Board at the design review meeting:
  - A. A physical, contextual scale massing model of the proposed building and surrounding buildings.
  - B. Samples of materials to be employed for major elements of the building façade.
- f. Review Standards and Guidelines. In reviewing and approving the schematic design of a Building Site, the Board shall consider the general consistency of the architectural and site design with the following standards and guidelines, provided that in the event of any conflict between the guidelines set forth below and the provisions of Article 14.000 of the Zoning Ordinance, the Zoning Ordinance shall control:
  - i. The IDCP Design Guidelines included within the IDCP and approved by the Planning Board. The version of the Design Guidelines included as Appendix H to this Special Permit Decision are hereby approved by the Planning Board in draft form, and shall be revised and submitted for final review and approval by the Planning Board, as a matter of general business, prior to the submission of design review materials for Phase 2 of IDCP development.
  - ii. The Sustainability Standards and Guidelines set forth in the IDCP and included, as excerpts, as Appendix F to this Special Permit Decision. The Planning Board shall also consider additional sustainability standards or guidelines that have been established by the City through amendment to the Zoning Ordinance or other planning initiatives, provided that such standards or guidelines have been communicated to the Planning Board and the Permittee prior to the commencement of the design review procedure for a Building Site.



- iii. Other applicable urban design guidelines for the area, including the Kendall Square Design Guidelines.
- iv. The Citywide Urban Design Objectives set forth in Section 19.30 of the Zoning Ordinance.

#### **4. Sustainability.**

Development authorized by this Special Permit shall be subject to the sustainability requirements set forth in Section 14.74. Compliance shall be reviewed by CDD at the design review phase as set forth in the Design Review conditions set forth above in this Special Permit Decision, and ongoing compliance shall be certified by CDD prior to issuance of a building permit and prior to issuance of a certificate of occupancy for any development authorized by this Special Permit.

#### **5. Traffic and Infrastructure Improvements.**

- a. The Permittee shall be required to implement the parking and transportation mitigation program, transportation monitoring program and transportation demand management measures all contained in Appendix E: Transportation Mitigation Program and Monitoring Requirements, as transmitted to the Planning Board in the memorandum from TP&T dated January 11, 2017, at such times as are identified in said Appendix E.
- b. Prior to issuance of the project's first Occupancy Permit, the Permittee shall provide a proposed parking management plan and obtain approval from TP&T and CDD, as set forth in the memorandum from TP&T dated January 11, 2017.
- c. The Permittee shall be responsible for the design and installation of all necessary infrastructure and utility improvements both on and off the site needed to support the construction of a specific building within the IDCP. Any and all necessary infrastructure improvements shall be designed to meet all requirements and standards of the City of Cambridge and its relevant departments (including the City Engineer, Department of Public Works, the Water Department and the Electrical Department), and all other legal requirements with regard to the design and installation details of the improvements, as if such facilities were to be installed in City streets.
- d. Where any utility is to be conveyed to the City of Cambridge, it shall be done in a manner acceptable to the City. The Permittee shall prepare all documents necessary to transfer these facilities to the City.

#### **6. Retail and Active Uses.**

- a. The Planning Board approves the proposed amount and location of space devoted to retail uses and active public gathering spaces as described and illustrated in the Retail Plan section of the approved IDCP. Such spaces shall be designed and programmed in accordance with the requirements of Section 14.38.

- b. Any additional ground-floor frontage of the buildings authorized by this Special Permit may be devoted to retail uses or other public gathering spaces, subject to review of any design modifications in accordance with the Design Review procedures of this Decision.
- c. Any relocation of retail use or other active public gathering space from the locations depicted in the IDCP to another location within the MXD district may be permitted as a Minor Amendment pursuant to Condition #11 of this Decision, upon a determination by the Planning Board that there will be no reduction in the total amount of such uses and that the proposed relocation will better serve the objectives of the district, and provided that the requirements of Section 14.38 continue to be met.
- d. The Permittee shall consult with the Economic Development Division of CDD prior to initiation of marketing and tenancing efforts for any space devoted to retail and consumer service uses within the IDCP, for the purpose of sharing information about outreach strategies, leasing provisions, and programs that might assist in serving local businesses. Such consultation shall include a discussion of efforts to recruit “Independent and Local Retailers” as described in Section 14.32.6, Paragraph (4), Subparagraph (e), in order to fulfill the requirements to exempt certain retail spaces from GFA calculations.

#### **7. Housing.**

- a. Residential development authorized by this Special Permit shall be subject to the requirements of Article 14.000 related to housing, including requirements for Middle Income Housing (Section 14.35), Affordable Housing (14.36), and dwelling units for families with children (Section 14.37), as well as the commitments to homeownership housing set forth in the Letter of Commitment dated December 21, 2015 by Boston Properties Limited Partnership, referenced in Section 14.39, and attached as Appendix G to this Special Permit Decision. Compliance with such requirements shall be certified by the Housing Division of CDD prior to issuance of a building permit, and again prior to issuance of a certificate of occupancy, for residential development authorized by this Special Permit.

#### **8. Construction Management.**

- a. Before issuance of a building permit for any Phase of development within the Development Parcels, the Permittee shall prepare a new or updated Construction Management Program consistent with the requirements of Section 18.20, which Program shall be reviewed and approved by the CDD, DPW, the Water Department, TP&T, the Inspectional Services Department, and other departments as deemed appropriate by the City.
- b. The Construction Management Program shall include those elements listed in Section 18.20, with particular attention to ensuring safe and convenient pedestrian access to major public facilities.
- c. In addition to the requirements of Section 18.20, the Construction Management Program shall include a community outreach component including, at minimum, maintenance of a web site, on-site bulletin board, and e-mail list to provide construction updates, and a

designated point of contact to which community members can address questions and receive responses throughout the development process.

## **9. Other Municipal Ordinances.**

All authorized development shall conform to all other requirements of Ordinances of the City of Cambridge, including but not limited to the Parking and Transportation Demand Management Ordinance, the Asbestos Protection Ordinance, and the Noise Control Ordinance.

## **10. Timing and Phasing.**

- a. Commencement. This Special Permit shall be governed by the provisions of Chapter 40A and Section 10.46, which establish the time within which construction authorized by the Special Permit must commence. Pursuant to Section 10.46, the Permittee shall start construction within two (2) years of the date of filing of this Decision with the City Clerk (not including the time required to pursue or await the final adjudication of an appeal under Section 17 of M.G.L. c. 40A). The Planning Board may approve subsequent extensions of the time for commencement, not to exceed two (2) years per extension, upon determination of good cause demonstrated by the Permittee.
- b. Completion. Construction of the development contained within the IDCP and authorized by this Special Permit shall be completed within ten (10) years of the date of issuance of this Special Permit Decision, provided that if construction on a particular Phase has commenced prior to that date, such Phase shall be entitled to a Certificate of Occupancy so long as construction is continued through to completion continuously and expeditiously and all required improvements associated with that Phase are met. The Planning Board may approve an extension of the completion timeframe upon determination of good cause demonstrated by the Permittee.
- c. Phasing. Development will occur in three Phases, according to the Phasing Plan set forth in the IDCP, attached as Appendix D to this Special Permit Decision. The Permittee may undertake the Phases of development in sequence or simultaneously, provided the following requirements are met:
  - i. Completion of the open space and site improvements included within each Phase, as illustrated in the approved IDCP and Appendix D, and including streets, utilities, and other public improvements, shall be completed prior to issuance of a final Certificate of Occupancy for development within that Phase. In addition, compliance with the Conditions of this Special Permit applicable to each Phase, including all required mitigation measures, shall be completed prior to issuance of a final Certificate of Occupancy for development within that Phase.
  - ii. In accordance with Section 14.32.1, construction of at least 200,000 square feet of the residential GFA within the IDCP, in total, shall commence prior to the issuance of a Certificate of Occupancy for non-residential GFA exceeding 375,000 square feet within the IDCP, in total. In accordance with the approved IDCP, to satisfy this requirement, construction of the residential building within Phase 2 shall occur prior

to or simultaneously with construction of the commercial building within Phase 2. However, there is no limitation on residential development authorized by this Special Permit preceding any non-residential development.

- iii. At no time shall the number of total parking spaces exceed the total number authorized for development within the IDCP. During construction, any parking facilities proposed to serve authorized uses on an interim basis while permanent parking facilities are being developed shall be reviewed and approved by TP&T and shall meet all applicable City parking regulations. Wherever parking spaces have been constructed in excess of the number of spaces permitted for the authorized uses occupied at that time, such excess spaces shall not be used and shall be made physically inaccessible to users in a manner approved by TP&T.
- iv. In the event that construction of a Phase has commenced but subsequently ceases, causing a Building Permit to lapse prior to the delivery of required public benefits, improvements or mitigation associated with that Phase, then the Planning Board may withhold authorization of a building permit for a future Phase until construction has recommenced, or the required public benefits, improvements or mitigation have been delivered, or this Special Permit Decision has been amended to authorize a change to the IDCP.

## **11. Amendments.**

- a. Amendments to the approved IDCP may be considered in accordance with the provisions of Section 14.32.2.5 after review and approval by the CRA. The Conditions of this Special Permit specify some modifications that would constitute Minor Amendments. Otherwise, the determination of whether a change constitutes a Major or Minor Amendment to this Special Permit shall be made by the Planning Board as set forth in Section 12.37 of the Zoning Ordinance.
- b. Minor Amendments. A Minor Amendment to this Decision shall be approved by an affirmative vote of at least five (5) members and/or associate members of the Planning Board after consideration of the proposed change, as enumerated on the Board's Agenda, at an appropriately noticed meeting of the Planning Board. In approving a Minor Amendment, the Board shall issue a written determination that:
  - i. The change does not violate applicable Sections of the Zoning Ordinance, or if the change requires relief pursuant to a special permit or variance, such relief has been granted.
  - ii. The change will not substantially alter the Findings upon which this Decision is based.
- c. Major Amendments. A Major Amendment shall only be granted after an affirmative vote of at least five (5) members and/or associate members of the Planning Board and only after the proposed change has been advertised as a new Special Permit subject to the procedural requirements of Section 10.40. The Planning Board shall consider the substance of the change as presented in the amendment application documents and shall not be reviewing this Decision in its entirety. Upon granting a Major Amendment, the

Board shall issue written Findings that the amended portions of the IDCP remain in conformance with applicable requirements and criteria set forth in the Zoning Ordinance. However, if the Board finds that a requested Major Amendment constitutes a substantial alteration to the intent, purpose and substance of this Decision, such Major Amendment shall be considered under the procedures established in Article 14.000 as if it were a new IDCP after the submission of all required application materials.

- d. Conditions. Upon issuing any Amendment, the Planning Board may impose additional conditions intended to ensure conformance with the intent, purpose and substance of this Decision and the Zoning Ordinance.

## **12. Additional Requirements for Phase 1 Development**

The following considerations related to the development of Phase 1 of the approved IDCP shall be addressed during the procedures for design review by City staff:

- a. CDD staff shall review the design of proposed pedestrian wind mitigation measures to be installed at the corner of Broadway and Galileo Galilei Way, which may include a vertical wind screen. CDD may present the design of such measures to the Planning Board for its review and comment if they are deemed to substantially alter the building design at the ground level. The Permittee shall also prepare additional studies to assess the effectiveness of the proposed mitigation strategies, including a plan for a post-occupancy evaluation of wind conditions at that location, for review by CDD staff.
- b. The Permittee shall coordinate with CDD and CRA staff on the continuing design of ground floor active use spaces in the 145 Broadway building, and CDD will present any significant advancement of such ground floor design to the Planning Board for its review and comment.
- c. The final design of improvements to the Sixth Street walkway, including the grading plan, construction methods and tree protection measures, shall be reviewed and approved by the City Arborist and City Engineer to ensure that the proposed bicycle path is designed and constructed to protect existing trees. Alterations to the design are authorized to achieve this objective, potentially including a narrowing of the path to a minimum of eight feet (8') in sections, realigning the path to be closer to buildings and away from the drip line of the trees, and raising the elevation of the path.

## **13. Additional Requirements for Phases 2 and 3 Development.**

The following considerations related to the development of Phase 2 and Phase 3 of the approved IDCP shall be addressed either prior to, or as part of, the Planning Board design review procedures for the earlier of those Phases:

- a. The Permittee shall provide to the Planning Board a study of options for public use of the parking garage rooftop and/or modifications to the location, design and programming of Binney Street Park and the north residential building. The purposes of such study shall include assessing whether publicly accessible and beneficial space either at the roof level or within a building, possibly programmed for public recreation use, would be preferable

to the proposed open space on the north side of the north residential building, which may have limited public benefit. The Planning Board may approve an alternative plan resulting from such study as a Minor Amendment to the IDCP, after entertaining comments from the public and determining that the alternative plan would result in a greater public benefit. It is acknowledged that an alternative plan may require amending existing public open space covenants, which may be beyond the purview of the Planning Board or the Permittee, and that an alternative plan might not be feasible for that reason.

- b. The Permittee shall provide to the Planning Board a study of potential improvements to service drives on either side of the existing above-grade parking garage, which shall consider surface materials, plantings and treatment of the garage façades, among other potential improvements.
- c. The Permittee shall work with CDD staff to refine the Design Guidelines included in the IDCP, which the Planning Board has approved herein in draft form. Refinements shall include language to better explain the objectives of the guidelines and precedent images illustrating measures such as wind mitigation. The Planning Board shall review and approve the revised version of these Design Guidelines prior to conducting Design Review for any development within Phase 2 or 3.

Voting in the affirmative to GRANT the Special Permit were Planning Board Members Louis Bacci, H Theodore Cohen, Steven Cohen, Mary Flynn and Hugh Russell, constituting at least two thirds of the members of the Board, necessary to grant a special permit.

For the Planning Board,

A handwritten signature in cursive script, appearing to read "H Theodore Cohen", with a long horizontal flourish extending to the right.

H Theodore Cohen, Chair.

A copy of this decision PB #315 shall be filed with the Office of the City Clerk. Appeals, if any, shall be made pursuant to Section 17, Chapter 40A, Massachusetts General Laws, and shall be filed within twenty (20) days after the date of such filing in the Office of the City Clerk.

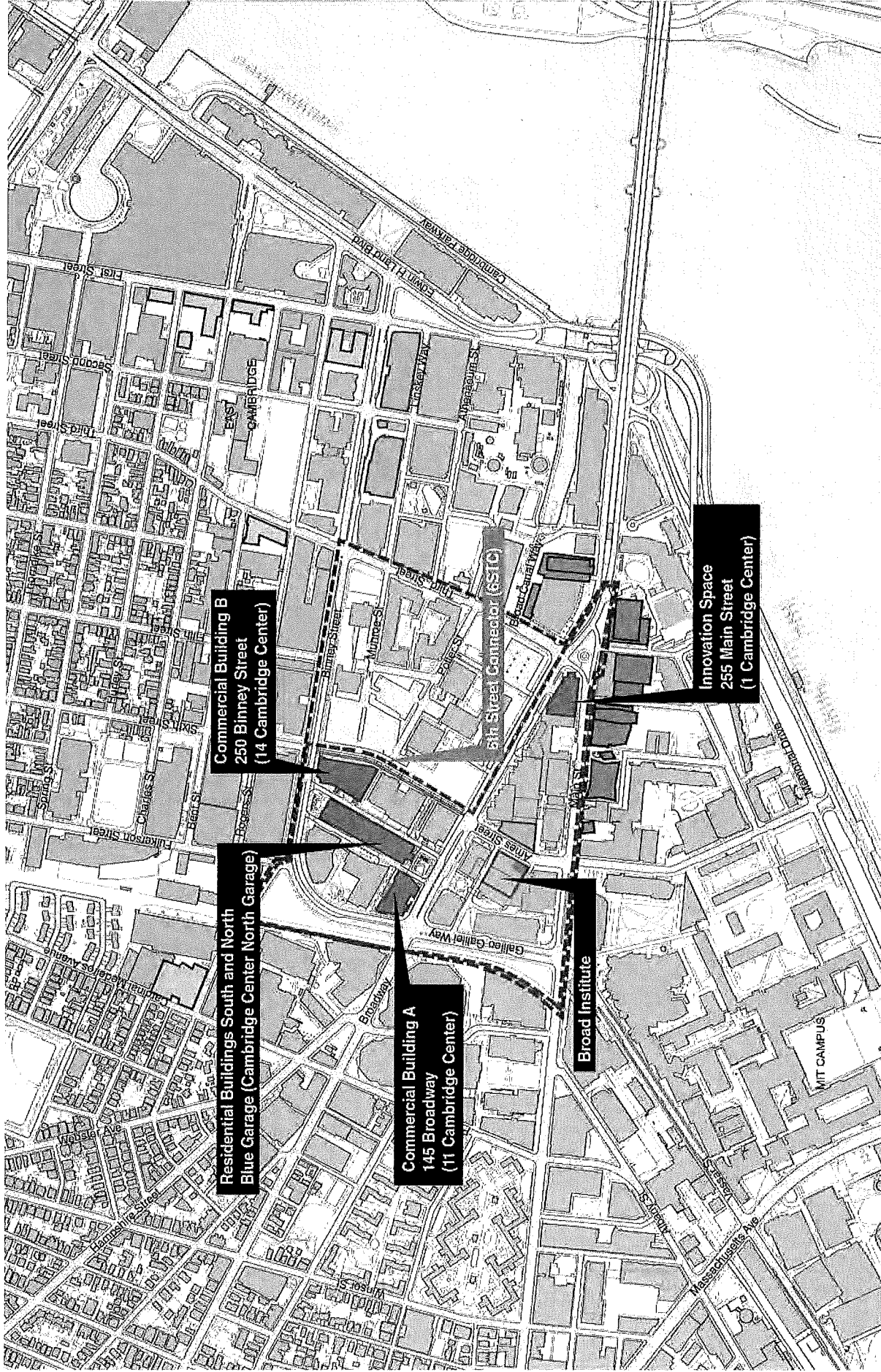
ATTEST: A true and correct copy of the above decision filed with the Office of the City Clerk on March 20, 2017, by Jeffrey C. Roberts, authorized representative of the Cambridge Planning Board. All plans referred to in the decision have been filed with the City Clerk on said date.

Twenty (20) days have elapsed since the filing of the decision. No appeal has been filed.

DATE:

City Clerk of Cambridge

FIGURE 1.2 - SITE CONTEXT



- ▬ Permitted Under Construction
- ▬ Proposed Permitted
- ▬ Proposed MIT Noma/Soma

- ▬ MXD Boundary
- ▬ KSURP Boundary
- ▬ Proposed Building Sites



MXD INFILL DEVELOPMENT CONCEPT PLAN  
ADDENDUM TO DIMENSIONAL FORM

DEVELOPMENT PROGRAM SUMMARY

|                       | COMMERCIAL                            |  |  | RESIDENTIAL                                |  |                               | PROJECT TOTAL | SCOPE EXCL. FROM PROJECT | TOTAL INCL. BROAD |
|-----------------------|---------------------------------------|--|--|--|--|-------------------------------|---------------|--------------------------|-------------------|
|                       | PHASE 1                               | PHASE 2                                    |  | PHASE 2                                    | PHASE 3                                  | TOTAL RES <sup>1</sup>        |               |                          |                   |
|                       | Commercial Building A<br>145 Broadway | Commercial Building B<br>250 Binney Street | Residential Building South<br>135 Broadway | Residential Building North<br>135 Broadway | Residential Building Nth<br>135 Broadway | Resi Bldg Sth + Resi Bldg Nth |               |                          |                   |
| Total Building GFA    | 453,768                               | 318,644                                    | 350,000                                    | 71,300                                     | 71,300                                   | 421,300                       | 1,193,712     | 14,000                   | 1,207,712         |
| Existing GFA          | (78,636)                              | (62,576)                                   | 0  | 0  | 0  | 0                             | (141,212)     | 0                        | (141,212)         |
| NET NEW GFA           | 375,132                               | 256,068                                    | 350,000                                    | 71,300                                     | 71,300                                   | 421,300                       | 1,052,500     | 14,000                   | 1,066,500         |
| EXEMPT GFA            |                                       |  |  |  |  |                               |               |                          |                   |
| Innovation Space      | (62,522)                              | (42,678)                                   | 0  | 0  | 0  | 0                             | (105,200)     | 0                        | (105,200)         |
| Middle-Income Housing | 0                                     | 0  | (16,667)                                   | (3,333)                                    | (3,333)                                  | (20,000)                      | (20,000)      | 0                        | (20,000)          |
| Retail                | 0                                     | 0  | 0  | (1,300)                                    | (1,300)                                  | (1,300)                       | (1,300)       | 0                        | (1,300)           |
| TOTAL EXEMPT GFA      | (62,522)                              | (42,678)                                   | (16,667)                                   | (4,633)                                    | (4,633)                                  | (21,300)                      | (126,500)     | 0                        | (126,500)         |
| NET NEW INFILL GFA    | 312,610                               | 213,390                                    | 333,333                                    | 66,667                                     | 66,667                                   | 400,000                       | 926,000       | 14,000                   | 940,000           |

Existing District Aggregate Infill GFA 3,333,000  
Proposed Additional Infill GFA 940,000  
New District Aggregate Infill GFA 4,273,000

DEVELOPMENT PROGRAM SUMMARY BY USE

|                               |         |         |         |         |         |         |           |
|-------------------------------|---------|---------|---------|---------|---------|---------|-----------|
| Commercial - Existing         | 78,636  | 62,576  | 0       | 0       | 0       | 0       | 141,212   |
| Commercial - New              | 365,095 | 248,039 | 0       | 0       | 0       | 0       | 613,134   |
| Retail                        | 10,037  | 8,029   | 0       | 1,300   | 1,300   | 1,300   | 19,366    |
| Residential                   | 0       | 0       | 350,000 | 70,000  | 420,000 | 420,000 | 420,000   |
| Total GFA                     | 453,768 | 318,644 | 350,000 | 71,300  | 421,300 | 421,300 | 1,193,712 |
| Existing Building Height (FT) | 48      | 32      | 56      | 56      | 56      | 56      | -         |
| Proposed Building Height (FT) | 250     | 200     | 350     | 170     | 350     | 350     | -         |
| Existing Lot Size (SF)*       | 37,862  | 60,622  | 91,848  | 91,848  | 91,848  | 91,848  | 190,332   |
| Proposed Changes to Lot Size  | 18,898  | 0       | -18,898 | -18,898 | -18,898 | -18,898 | 0         |
| Proposed Lot Size (SF)*       | 56,760  | 60,622  | 72,950  | 72,950  | 72,950  | 72,950  | 190,332   |

FAR SUMMARY

|                      |      |      |      |      |      |      |      |
|----------------------|------|------|------|------|------|------|------|
| Total Proposed FAR   | 7.99 | 5.26 | 4.80 | 0.98 | 0.98 | 5.78 | 6.27 |
| Residential Base     | -    | -    | 4.80 | 0.96 | 0.96 | 5.76 | 2.21 |
| Non-Residential Base | 7.99 | 5.26 | -    | 0.02 | 0.02 | 0.02 | 4.07 |

DWELLING UNIT SUMMARY

|                      |   |   |           |          |           |           |           |
|----------------------|---|---|-----------|----------|-----------|-----------|-----------|
| Total Dwelling Units | - | - | Up to 355 | Up to 70 | Up to 425 | Up to 425 | Up to 425 |
| Lot Area / Unit (SF) | - | - | 205       | 1042     | 172       | 448       | 448       |

PARKING AND LOADING SUMMARY

|                            |     |     |       |      |       |     |
|----------------------------|-----|-----|-------|------|-------|-----|
| Off-Street Parking Spaces  | 350 | 650 | (156) | (59) | (215) | 785 |
| Long-Term Bicycle Parking  | 112 | 75  | 372   | 74   | 446   | 633 |
| Short-Term Bicycle Parking | 33  | 24  | 36    | 9    | 45    | 102 |
| Loading Bays               | 3   | 3   | 4     | 1    | 5     | 11  |

NOTES:

1. Represents the combined total of Residential Building South and Residential Building North. It is anticipated that these buildings will be phased, the Residential Building South being completed prior to the Residential Building North. The two buildings share the same lot and therefore certain information is more relevant presented as the final condition with the two buildings as a total than as the Residential Building North being presented individually.
2. This considers the conversion of existing mechanical space into office use at the Broad Institute. This is not the responsibility of the Applicant and does not fall under the scope of the Project being presented within the MXD Infill Development Concept Plan. The GFA is, however, relevant in determining the total GFA assessed against the Aggregate GFA allowable in the District under Section 14.32.1 and therefore this has been shown separately in the above table.

# 3.2 PROPOSED OPEN SPACE PROPOSED PARCEL AREA AND OPEN SPACES

| EXISTING MXD DEVELOPABLE PARCEL AREA |                  |
|--------------------------------------|------------------|
| P2                                   | 445,825          |
| P3                                   | 229,558          |
| P4                                   | 257,824          |
| GRAND JUNCTION + BINNEY              | 79,611           |
| <b>TOTAL EXST MXD AREA (#SF)</b>     | <b>1,012,817</b> |
| PROPOSED OPEN SPACE (OS) TOTALS      |                  |
| P2                                   | 155,605          |
| P3                                   | 77,429           |
| P4                                   | 141,247          |
| GRAND JUNCTION + BINNEY              | 79,611           |
| <b>TOTAL PRPSD MXD OS (#SF)</b>      | <b>453,892</b>   |

| TOTAL PROPOSED MXD PUBLIC OS          |                |
|---------------------------------------|----------------|
| TRACT III (BROADWAY PARK)             | 11,874         |
| TRACT II (BINNEY PARK)                | 7,793          |
| 6TH STREET WALKWAY                    | 19,569         |
| P2 ENHANCED OPEN SPACE                | 73,290         |
| GRAND JUNCTION                        | 32,611         |
| BINNEY ST. PARK                       | 47,000         |
| GARAGE ROOF GARDEN                    | 25,798         |
| MARIOTT PLAZA                         | 14,372         |
| POINT PARK                            | 22,933         |
| DANIEL LEWIN PARK (CENTER STRIP ONLY) | 5,297          |
| ORIGINAL BROAD OPEN SPACE (7CC)       | 5,022          |
| WHITEHEAD PLAZA                       | 10,930         |
| <b>TOTAL PRPSD PUBLIC OS (#SF)</b>    | <b>276,289</b> |

| REQUIRED                             | PROVIDED   |
|--------------------------------------|--|
| 100K<br>100,000 ±SF                  | TOTAL PROPOSED PUBLIC OPEN SPACE<br><b>276,289 ±SF</b> |
| 15% OF TOTAL MXD AREA<br>151,923 ±SF | TOTAL PROPOSED OPEN SPACE<br><b>473,546 ±SF</b>        |

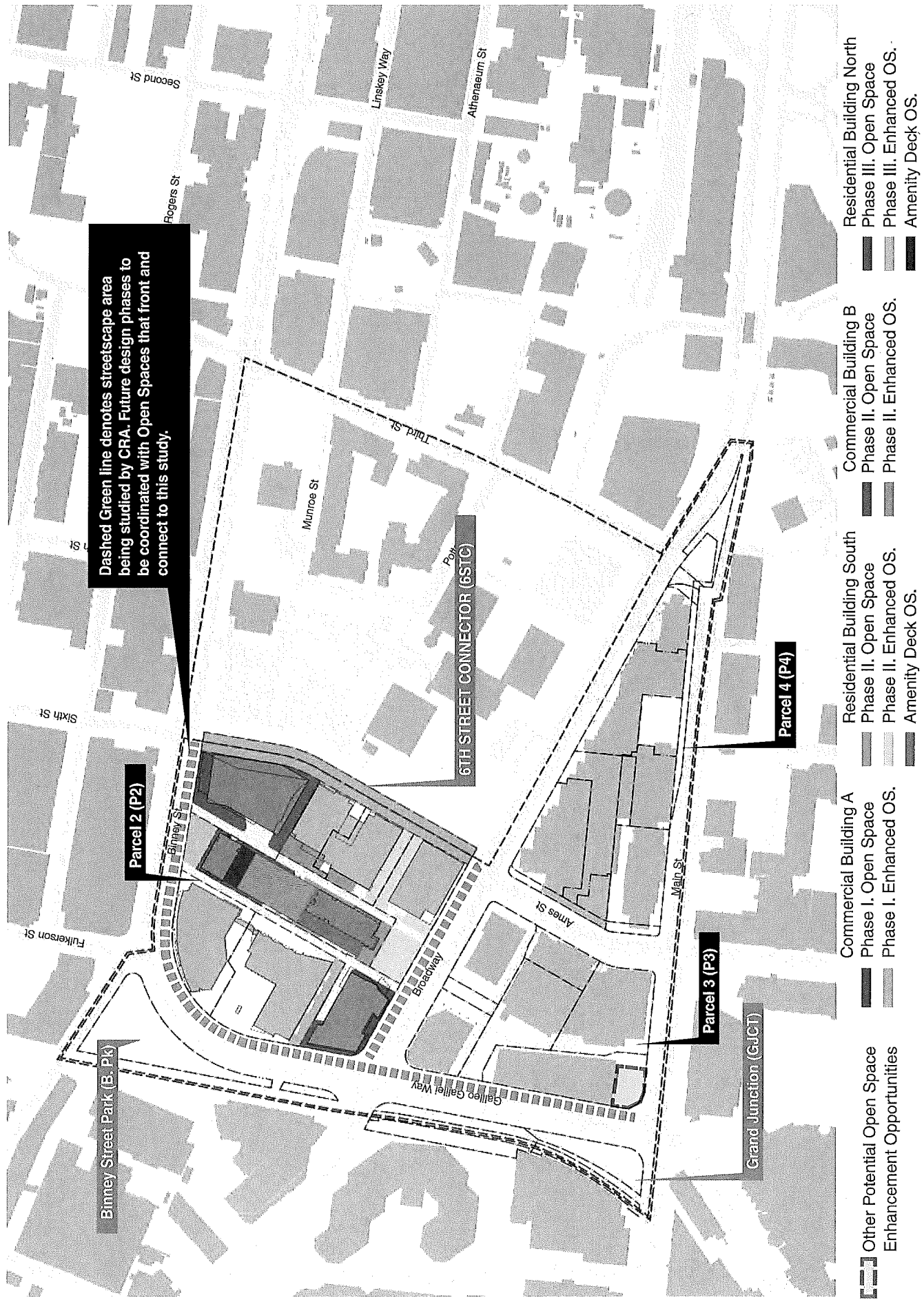
REQUIRED OPEN SPACE VS. PROVIDED OPEN SPACE

| TOTAL EXISTING MXD PUBLIC OS          |                |
|---------------------------------------|----------------|
| GARAGE ROOF GARDEN                    | 25,798         |
| MARIOTT PLAZA                         | 14,372         |
| POINT PARK                            | 22,933         |
| DANIEL LEWIN PARK (CENTER STRIP ONLY) | 5,297          |
| ORIGINAL BROAD OPEN SPACE (7CC)       | 5,022          |
| WHITEHEAD PLAZA                       | 10,930         |
| GRAND JUNCTION                        | 32,611         |
| BINNEY STREET PARK                    | 47,000         |
| 6TH STREET WALKWAY                    | 19,569         |
| <b>TOTAL EXST PUBLIC OS (#SF)</b>     | <b>183,532</b> |

- SOURCES:**
- CAD/Alta survey
  - Exhibit A Development Area Map. CRA Document: March 18, 1982.
  - Exhibit A Development Area Map. CRA Document: May 25, 1979.
  - CRA's KSURP Open Space Accounting. June, 2015.
  - Article 14. July 31, 2015.

PUBLIC REALM: PROJECT RELATED OPEN SPACE AND OTHER OPEN SPACE OPPORTUNITIES WITHIN MXD DISTRICT

FIGURE. R3.3.1



# 9.1 PHASING PLAN

The evolution of the Project is expected to occur over three major phases consisting of the following generally described components:

- Phase 1 (Commercial Building A) The commercial space and associated ground floor retail or active use at 145 Broadway
- Phase 2 (Residential Building South) The residential space on the South side of the existing Blue Garage consisting of both rental apartments and home ownership units
- Phase 2 (Commercial Building B) The commercial space and associated ground floor retail or active use at 250 Binney Street
- Phase 3 (Residential Building North) The residential space on the North side of the existing Blue Garage consisting of either rental apartments or home ownership units.

The specific timing of each of the phases depends upon the duration required for permitting, the leasing conditions within the Cambridge sub-market and the construction logistics associated with staging and the demolition of portions of the Blue Garage. Additionally, the phasing plan is governed by the requirements of 14.32.1 of the Zoning Ordinance that requires the commencement of construction of at least 200,000 square feet of residential preceding any commercial development that exceeds 375,000 of Infill GFA.

As of the date of this submission, market conditions allow for the immediate commencement of Phase 1 as soon as a special permit is received for the Concept Plan and the associated approval of the Design Review Submission for Commercial Building A.

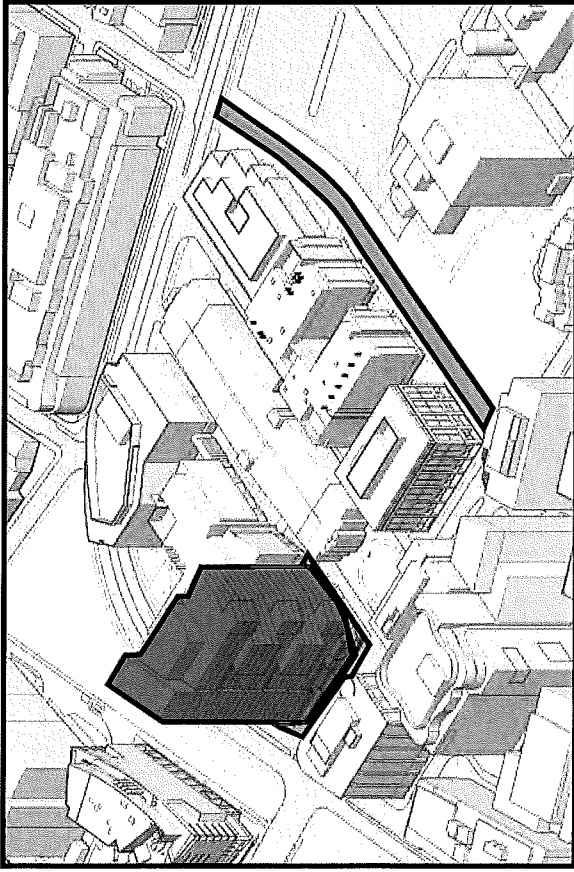
Table 9-1 summarizes the approximate GFA and program by phase along with the public benefits associated with each phase of development.

| ANTICIPATED PHASING PLAN WITH PUBLIC BENEFITS |                                     |  |                                    |
|---|-------------------------------------|--|------------------------------------|
|   | Phase 1                             | Phase 2                                  | Phase 3                            |
|   | Commercial Bldg A<br>(145 Broadway) | Commercial Bldg B<br>(250 Binney Street) | Residential South<br>(Blue Garage) |
| Commercial GFA                                | 443,731                             | 310,615                                  | 0                                  |
| Residential GFA                               | 0                                   | 0  | 70,000                             |
| Active Use/Retail GFA                         | 10,037                              | 8,029                                    | 1,300                              |
| Existing GFA                                  | (78,636)                            | (62,576)                                 | 0                                  |
| <b>NET NEW GFA</b>                            | <b>375,132</b>                      | <b>256,068</b>                           | <b>71,300</b>                      |
|   | 6th Street Connector                | E/W Connector                            | Broadway Park &<br>E/W Connector   |
| Open Space Improvements                       |                                     |  |                                    |
| Innovation Space at 255 Main                  | 62,522                              | 42,678                                   | 0                                  |
| Vehicle parking                               | 374                                 | 650                                      | (59)                               |
| Long Term Bike Parking                        | 112                                 | 75                                       | 74                                 |
| Short Term Bike Parking                       | 33                                  | 24                                       | 9                                  |
| Market Rate Housing                           | 0                                   | 0  | 53,334 GFA                         |
| Affordable Housing                            | 0                                   | 0  | 13,333 GFA                         |
| Middle Income Housing                         | 0                                   | 0  | 3,333 GFA                          |

TABLE 9-1 GROSS FLOOR AREA

# 9.1 PHASING TIMELINE

## PHASE 1



| PROJECT PHASING FORECAST |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|
|                          | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| Phase 1                  |      |      |      |      |      |      |      |      |      |
| Phase 2                  |      |      |      |      |      |      |      |      |      |
| Phase 3                  |      |      |      |      |      |      |      |      |      |

**PHASE 1** will consist of the demolition of the existing building at 145 Broadway and the construction of the Commercial Building A. In addition Phase 1 will include the planned enhancements to the 6th Street Connector and the East/West connector to the west of the West Service Drive. Innovation Space will be made available in 255 Main Street. As required by zoning, the MXD IDCP plan commits that a portion of the space will be offered at below market rate.

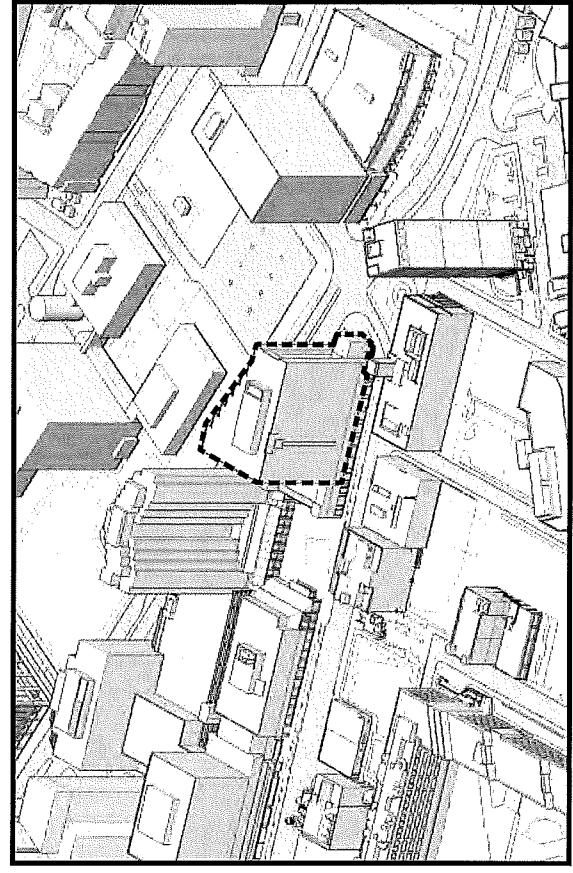
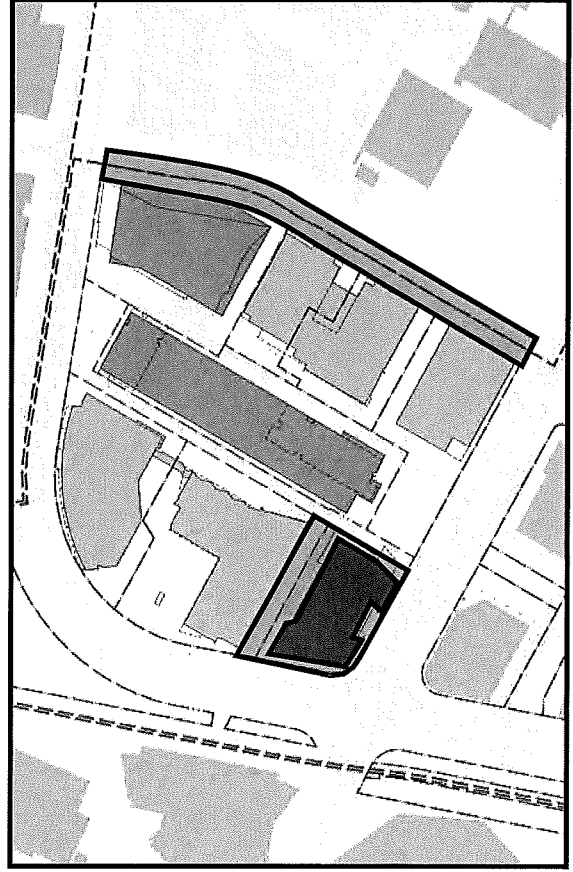


FIGURE R9.1.1

PHASE 2

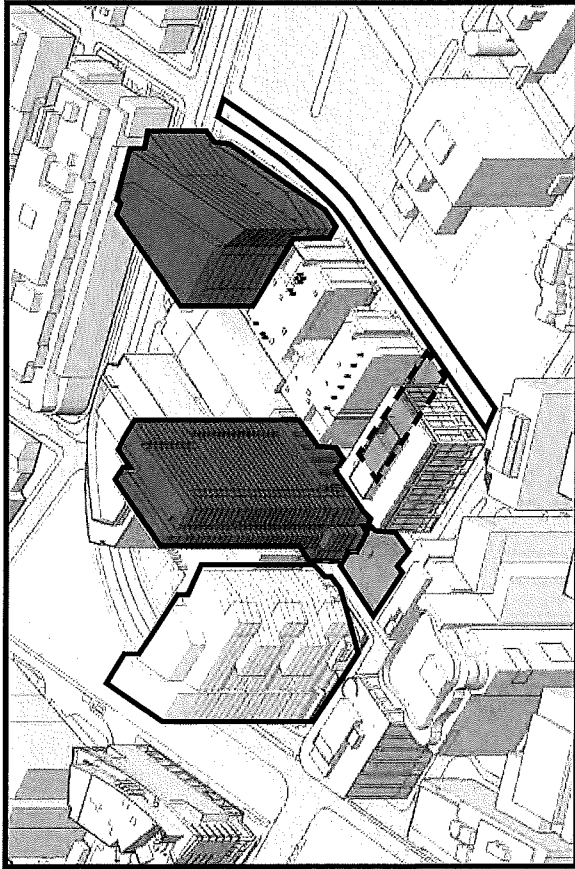
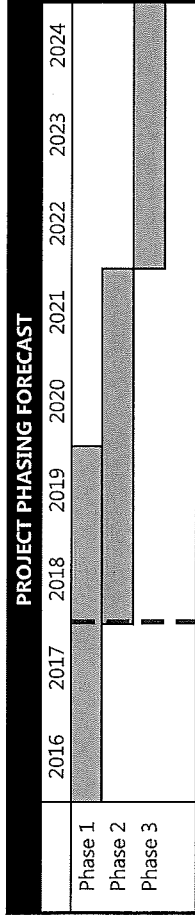
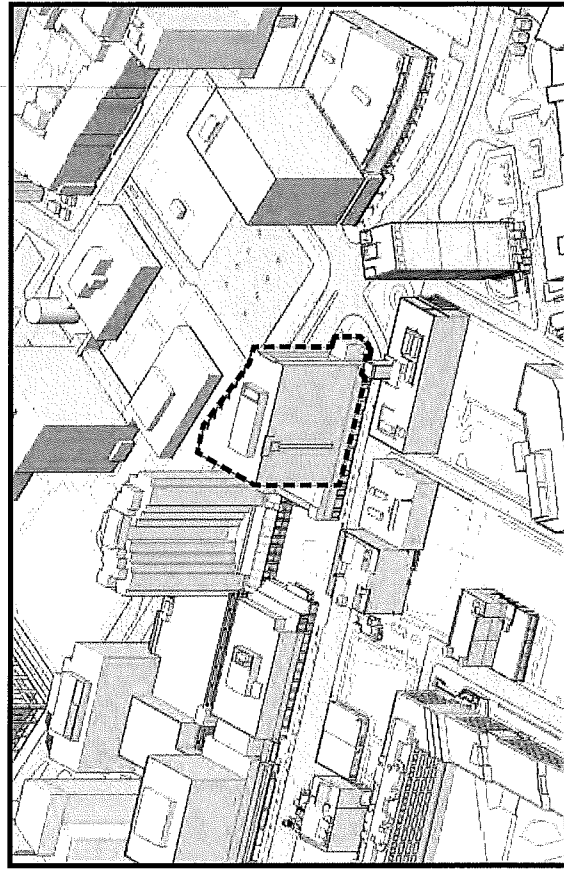
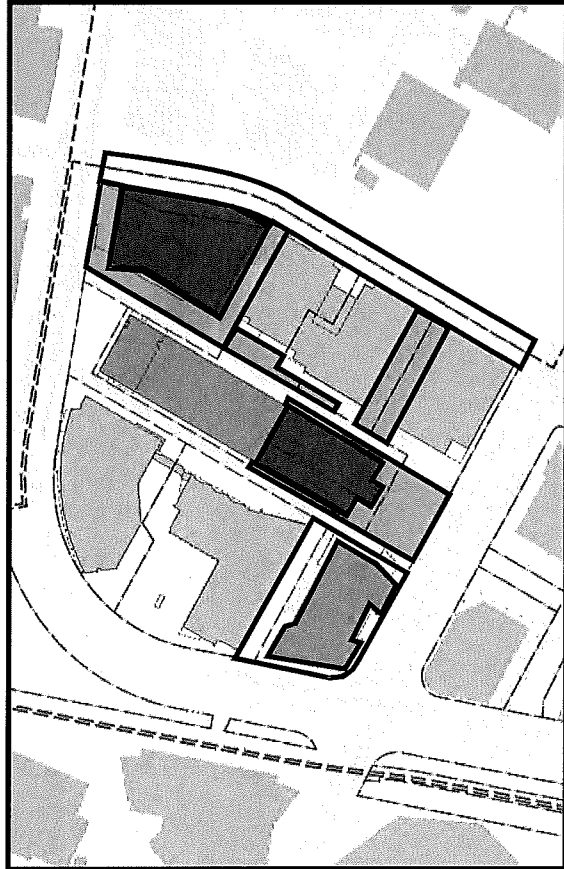
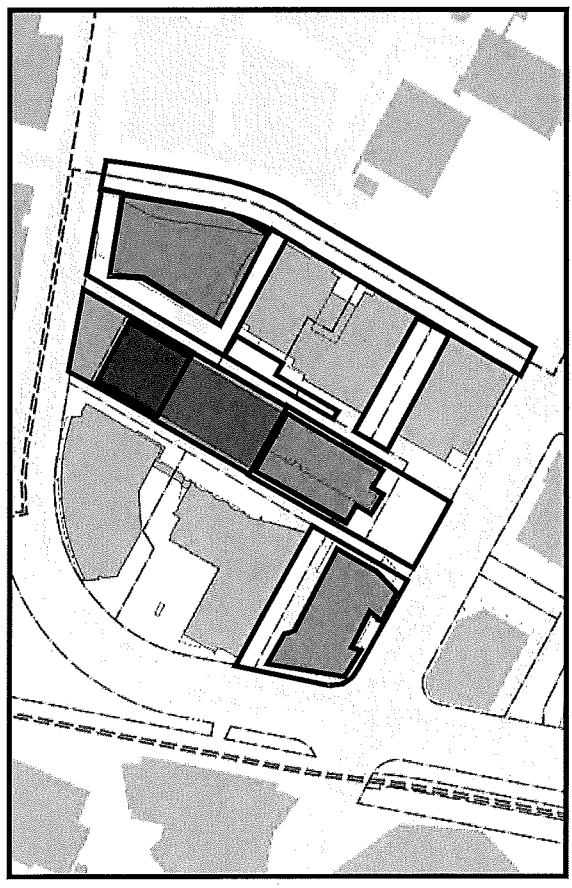
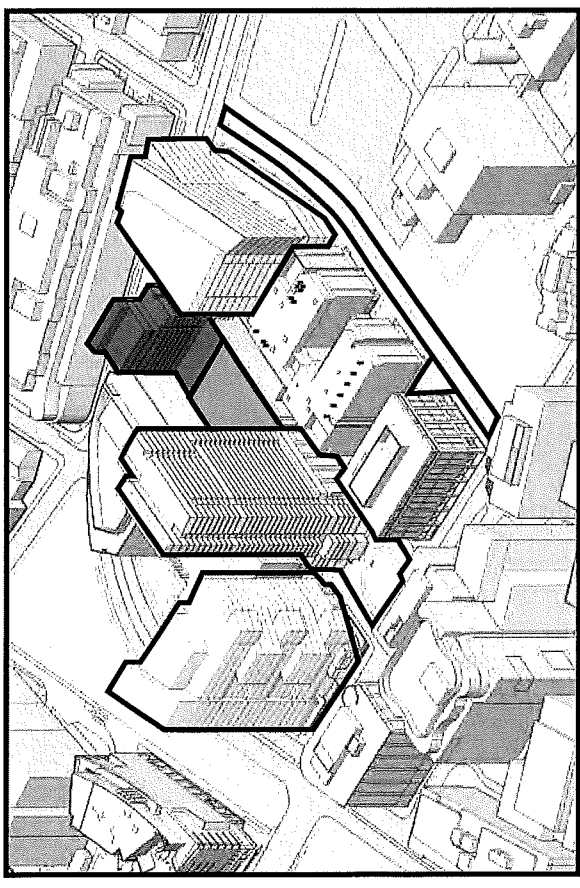


FIGURE R9.1.2



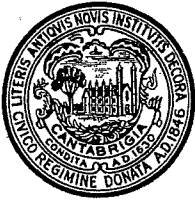
**PHASE 2** will consist of both the Residential Building South and Commercial Building B which will likely start construction at different times depending on site logistics, relative complexity of each building, and market conditions. The Residential Building South will require demolition and reconfiguration of the south side of the Blue Garage. Commercial Building B will require demolition of the existing building at 250 Binney. Phase 2 will also include the planned enhancements to Broadway Park and the East / West Connectors from the 6th Street Connector. The remaining Innovation Space will be provided in conjunction with the completion of Commercial Building B at 250 Binney Street.





| PROJECT PHASING FORECAST |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|
|                          | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| Phase 1                  |      |      |      |      |      |      |      |      |      |
| Phase 2                  |      |      |      |      |      |      |      |      |      |
| Phase 3                  |      |      |      |      |      |      |      |      |      |

**PHASE 3** will consist of the demolition and reconfiguration of the north portion of the Blue Garage and the construction of Residential North Building. Phase 3 will also include the planned enhancements to Binney Park.




**CITY OF CAMBRIDGE**  
**Traffic, Parking and Transportation**  
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Joseph E. Barr, Director  
Brooke McKenna, Assistant Director for Street Management

Phone: 617-349-4700  
Fax: 617-349-4747

## MEMORANDUM

**To:** Cambridge Planning Board  
**From:** Joseph E. Barr, Director   
**Date:** January 11, 2017  
**Re:** Kendall Square Urban Renewal Plan (KSURP), MXD Infill Development Concept Plan (PB#315)

---

The Traffic, Parking, and Transportation Department (TP&T) has been working with Boston Properties Limited Partnership on the Special Permit Application for the proposed Kendall Square Urban Renewal Plan (KSURP) Mixed Use Development District (MXD) Infill Development Concept Plan.

### Recommended Transportation Mitigation

TP&T submitted a memo dated December 15, 2016 to the Planning Board with an overview of the transportation mitigation program that we were discussing with the applicant at that time. TP&T has continued to work with the applicant since then and has completed a final proposed mitigation program for the KSURP MXD Infill Development Plan that is consistent with our December 15, 2016 memo but includes additional detail related to the expected scope of work and limits for reconstructions of streets, phasing for mitigation items, and trip generation triggers for the transportation monitoring program.

- Attached is TP&T's updated proposed transportation mitigation program for the Planning Board's consideration, to which the application has agreed.

### Parking

In TP&T's earlier September 14, 2016 memo to the Planning Board we recommended that the applicant provide an updated parking demand analysis to reflect the current proposed project. On behalf of the applicant, VHB Inc., submitted the attached memo dated January 4, 2017 with updated trip generation and parking demand analysis for the project. TP&T has reviewed the memo and finds that it is adequate, and offers the Planning Board our parking recommendations for consideration as conditions to the Projects Planning Board Special Permit:

- TP&T supports the project providing a maximum of 785 net new parking spaces (reduced from 809 spaces previously presented in the TIS) to support the KSURP MXD Infill Development Concept Plan.



- The Kendall Square Urban Renewal Area parking supply will change from 2,708 total existing parking spaces to 3,493 total parking spaces as shown below.

| Parking Facilities/Garages | Existing Parking | Proposed New Parking for Concept Plan | Future Parking |
|----------------------------|------------------|---------------------------------------|----------------|
| 135 Broadway/Blue Garage   | 1170             | (-215)                                | 955            |
| Yellow Garage              | 734              | 0                                     | 734            |
| Green Garage               | 804              | 0                                     | 804            |
| Building A (145 Broadway)  | 0                | 350                                   | 350            |
| Building B (250 Binney)    | 0                | 650                                   | 650            |
| <b>Total Parking</b>       | <b>2,708</b>     | <b>785</b>                            | <b>3,493</b>   |

- The project's parking ratios will meet the zoning under Article 14 for the project as follows:
  - Office Use: Maximum 0.9 spaces/1,000 GFA
  - Residential Use: Minimum 0.4 spaces/dwelling unit

As proposed the project will have a Maximum of 528 office use parking spaces (0.84 spaces/1,000 sf based on approximately 627,134 net new Office space GFA, and a Minimum of 257 parking spaces dedicated to residential use (0.6 spaces/dwelling unit).

- To ensure that the parking for the project's Office use does not exceed 0.9 spaces/1,000 GFA at any time, the applicant must operate the garages in a manner that such restriction will be adhered to (i.e. if residential parking demand is less than 0.6 spaces per unit during the daytime then the parking spaces should not be offered to Office employees if doing so will increase the office parking supply to above 0.9 parking spaces/1,000 GFA. Because the KSURP parking is provided at multiple locations and serves multiple uses, **the applicant should provide a proposed KSURP parking management plan and obtain approval from TP&T and CDD prior to the issuance of the project's first Occupancy Permit.** This plan must describe the system and protocols in detail on how the project will not exceed a 0.9 parking ratio for Office use at Building A (145 Broadway) and Building B (250 Binney Street) plus the additional 14,000 GFA Office conversion at the Broad Institute. For example, garage access control gates could automatically inventory the number of Office parking spaces used in the garages; whenever the total number reaches the 0.9 parking ratio for the specific buildings or uses, a sign will illuminate that the garage entrance is closed for that use. The plan should include reports provided to TP&T on a schedule mutually agreed to by TP&T and the applicant. The plan should also permit representatives of TP&T to inspect the facility and confirm the parking plan is working as intended. Other potential options could be signing parking spaces as dedicated to residents only, to prevent over allocation of office use parking spaces that exceed the approved parking ratio.

**Parking and Transportation Demand Management (PTDM) Plan**

The proposed KSURP Infill Development PTDM Plan has been completed and approved.

Finally, TP&T wants to thank Boston Properties and the Cambridge Redevelopment Authority for working with us on this exciting project and we look forward to continuing to work with them as the project moves forward.

| Mitigation  | Phasing  |
|---|--|
| <p><b>Kendall Square Transit Enhancement Program (KSTEP).</b> As described in the Transportation Impact Study (TIS) and Planning Board Special Permit application, the Applicant will provide funding for the KSTEP Fund through an initial payment in the sum of six million dollars (\$6,000,000). The City and KSTEP Working Group shall meet to decide on funding allocations, as defined in the KSTEP MOU. Potential transit mitigation may include: MBTA Red Line Kendall Square improvements, Kendall Station/Kendall Square Connection Enhancements, MBTA Red Line Service Modernization Improvements, Long-Range Feasibility Investigations, proposed MBTA Bus and EZRide Shuttle Improvements, such as 2-3 years net operational cost of a bus route linking Sullivan Square with Kenmore Square via Lechmere and Kendall stations.</p>   | <p>Phasing shall be as described in the MOU.</p>   |
| <p><b>100% Design and Reconstruction of Binney Street and Galileo Galilei Way between Sixth Street and Broadway, including improvements at the intersection of Galileo Galilei Way/Broadway and respective approaches.</b> Based on the 25% streetscape redesign plans currently underway by the CRA for Binney Street and Galileo Galilei Way, the <b>Project should advance the 25% plans to 100% and build the street layout as designed in the ALTA plans along Binney Street/Galileo Galilei Way between 6<sup>th</sup> Street and Broadway.</b> The plans will include items such as, traffic signal equipment and timing, real-time vehicle/bike count stations, continuous separated bike lanes (cycle tracks), safety improvements to approaches to the major cross streets and potential bus priority treatments. The Binney/Galilei Way/Broadway signal improvements may include new mast arms, signal controllers, audible pedestrian signals (APS), vehicle detection (loops or other technology) and real time vehicle and bike count station to include vehicles and bikes traveling north, south, east and west.</p> <p>The street layout is more specifically defined as including the following elements:</p> <p><b>Surface Elements:</b></p> <ul style="list-style-type: none"> <li>• Sidewalks – fully ADA compliant (both sides of the street)</li> <li>• Cycle Tracks – asphalt – evaluate porous asphalt (both sides of the street)</li> <li>• Resetting and replacing Granite curbing as necessary (both sides of the street)</li> <li>• Roadway reconstruction – potentially full depth (City Standard base course + Asphalt) curb to curb, depending on condition of the streets and the grading changes.</li> <li>• Potential removal of median.</li> <li>• Planting areas and street trees, depending on available space.</li> <li>• Evaluate and install irrigation, depending on extent of plantings.</li> <li>• Bus shelter, benches and trash cans</li> </ul> <p><b>Utility Elements:</b></p> <ul style="list-style-type: none"> <li>• New catch basins, manholes and laterals. Infiltrating catch basins will need to be evaluated.</li> </ul> | <p>100% design shall be completed prior to issuance of a Certificate of Occupancy for the first Commercial Building constructed.</p> <p>Construction shall be completed prior to the issuance of the Occupancy permit for the 2<sup>nd</sup> Commercial building. An Occupancy Permit may be issued prior to complete reconstruction, as approved by the city, such as if the work is substantially completed or work is delayed due to circumstances which are out of the control of the developer.</p> |

| Mitigation   | Phasing  |
|--|--|
| <ul style="list-style-type: none"> <li>• Existing private utilities may have to be lowered, relocated or upgraded. These would not be at the expense of the permittee, but the permittee would need to coordinate their work.</li> <li>• Street lighting – if the area has older-style Kendall Square lights, they will need to be replaced with the type of lights used on Main Street – 1907 (roadway scale lighting) and Se’Lux (pedestrian scale lighting) street light fixtures. Reuse or provide new conduit, control box and hand holes as necessary.</li> <li>• Traffic signals – Galileo / Broadway, Binney / Galileo / Fulkerson, and Binney / Sixth intersections will need to be replaced and/or reconfigured.</li> </ul> <p>The permittee will cooperate with the City if the design requires changes to the streetscape/sidewalk edge, including over the property line if necessary.</p> <p>The applicant will provide restriping, bicycle lane markings, and reflective pylons on both sides of the street along Galileo from Broadway to Main Street to facilitate the roadway-level connection for bicycles between the intersections of Broadway and Galileo and Main and Galileo.</p>  |  |
| <p><b>100% Design and Reconstruction of Broadway between Ames Street and Galileo Galilei Way.</b> Based on the 25% streetscape redesign plans currently underway by the CRA, the Project should advance the 25% plans to 100% and <b>build the street layout as designed in the ALTA plans along</b> Broadway between and including, as needed, Ames Street and Galileo Galilei Way, including the crossing of the Grand Junction pathway on Broadway. Improvements may include items such as: traffic signal equipment and timing, real-time vehicle/bike count stations, road diets, transit priority treatments, bus/shuttle stop amenities, separated bicycle facilities/cycle tracks, pedestrian improvements, and reconfigured area for hotel drop-off/pick-up and taxi stand assuming the willing cooperation of impacted private property owners other than the permittee. The permitted will cooperate with the City if the design requires changes to the streetscape/sidewalk edge, including over the property line if necessary.</p> <p>The street layout more specifically defined as including the following elements:</p> <p><b>Surface Elements:</b></p> <ul style="list-style-type: none"> <li>• Sidewalks – fully ADA compliant (both sides of the street)</li> <li>• Cycle Tracks – asphalt – evaluate porous asphalt (both sides of the street)</li> <li>• Resetting and replacing Granite curbing as necessary (both sides of the street)</li> <li>• Roadway reconstruction – potentially full depth (City Standard base course + Asphalt) curb to curb, depending on condition of the streets and the grading changes.</li> <li>• Potential removal of median.</li> <li>• Planting areas and street trees, depending on available space.</li> <li>• Evaluate and install irrigation, depending on extent of plantings.</li> </ul> | <p>100% design shall be completed prior to issuance of a Certificate of Occupancy for the first Commercial Building constructed.</p> <p>Construction shall be completed prior to the issuance of the Occupancy permit for the 2<sup>nd</sup> Commercial building. An Occupancy Permit may be issued prior to complete reconstruction, as approved by the city, such as if the work is substantially completed or work is delayed due to circumstances which are out of the control of the developer.</p> |

| Mitigation  | Phasing   |
|---|---|
| <ul style="list-style-type: none"> <li>• Bus shelter, benches and trash cans</li> </ul> <p><b>Utility Elements:</b></p> <ul style="list-style-type: none"> <li>• New catch basins, manholes and laterals. Infiltrating catch basins will need to be evaluated.</li> <li>• Existing private utilities may have to be lowered, relocated or upgraded. These would not be at the expense of the permittee, but the permittee would need to coordinate their work.</li> <li>• Street lighting – if the area has older-style Kendall Square lights, they will need to be replaced with the type of lights used on Main Street – 1907 (roadway scale lighting) and Se’Lux (pedestrian scale lighting) street light fixtures. Reuse or provide new conduit, control box and hand holes as necessary.</li> <li>• Traffic signals – Galileo / Broadway intersection will need to be replaced and/or reconfigured.</li> </ul> |   |
| <p><b>Maintain sidewalks and protected bicycle facilities (i.e. cycle tracks) on Binney Street and Galileo Galilei Way between/including 6<sup>th</sup> Street and Main Street, and Broadway between/including Ames Street to Galileo Galilei Way.</b> The Applicant shall be responsible for maintenance such as, debris, snow and ice removal, crack repair, etc.</p>   | <p>Ongoing following construction of the cycle tracks.</p>  |
| <p><b>Hubway Stations.</b> Finance the purchase and installation of either A.) Two (2) 19 dock Hubway stations or B.) One (1) 27 dock Hubway station and expand the existing Binney Street station to a 27 dock station. The City and BP shall identify mutually acceptable location(s) for the Hubway station(s).</p>  | <p>Initial payment for equipment to be made to the City before the first Building Permit, excluding Demolition permits.</p>   |
| <p><b>Hubway Maintenance and Operations.</b> Pay ongoing annual operations and maintenance fees to the City for the Hubway Station(s).</p>  | <p>Annual operations and maintenance fees shall be paid to the City before June 1st in the year the Hubway Station is expected to be installed, and ongoing before June 1st annually.</p> |
| <p><b>Sixth Street Connector Pathway Improvement.</b> Improve the Sixth Street Connector Pathway by providing separated pedestrian and bicycle facilities while maintaining the mature trees along the existing pathway. The design of the pathway shall be approved by the Community Development Department, Department of Public Works and Cambridge Redevelopment Authority, and shall align with the future cycle track on Ames Street. As currently maintained today, the Applicant shall be responsible for maintaining the Sixth Street Connector pathway for bicycles and pedestrians.</p>  | <p>Construction to be completed prior to the issuance of the Occupancy Permit for the first Commercial building constructed. Maintenance of pathway to be ongoing.</p>                    |
| <p><b>Wayfinding and Real-time Transit and Hubway screens.</b> Provide real-time transit screens in the public plaza framed by the Marriott Hotel and 50 Broadway, and 255 and 325 Broadway on Parcel 4. Transit screens shall also be provided in lobbies of new commercial buildings.</p>   | <p>Prior to the issuance of the Occupancy Permit for the first Commercial building constructed.</p>   |

| Mitigation   | Phasing  |
|--|--|
| <p><b>Grand Junction.</b> The Applicant shall continue to cooperate and coordinate with the City and CRA on the Grand Junction pathway connections at intersections.</p>   | <p>Ongoing.</p>  |
| <p><b>MBTA Red Line Station on North Side of Main Street.</b> The Applicant should construct no more than \$400,000 in improvements to the MBTA Red Line Outbound Station on the north side of Main Street. These improvements shall be based on the MBTA's state of good repair needs assessment and shall include items such as safety and accessibility improvements, head house and platform flooring, walls and ceiling conditions, drainage, real-time transit screens on the outside (sidewalk side), climate resiliency, wayfinding, aesthetics improvements, etc.). Any feasible platform improvements should also not be precluded, including measures that may improve boarding/alighting from trains which may benefit train dwell times/headways/frequency/reliability.</p> | <p>Improvements to be approved by the City and MBTA and funded prior to the issuance of the Occupancy Permit for the first Commercial building constructed, and shall be substantially completed prior to the issuance of the Occupancy Permit for the second Commercial building constructed.</p> <p>An Occupancy Permit may be issued prior to completion of this work, as approved by the city, such as if the work is substantially completed or work is delayed due to circumstances which are out of the control of the developer.</p> |
| <p><b>Loading Dock and Traffic Management Plan.</b> The Permittee shall provide a loading dock and traffic management plan for City approval. The Property Owner shall monitor operations and if the operations cause issues on public users and infrastructure (e.g. vehicles blocking other users or parking illegally) then BP will work with the City to resolve it.</p>   | <p>Prior to the issuance of a Certificate of Occupancy of the commercial building and ongoing. Plan may be later amended with TP&amp;T approval.</p>   |

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| <b>Residential Transportation Demand Management Measures (TDM).</b>   | <b>Ongoing after issuance of Occupancy Permit of the residential building.</b>  |
|---|---|
| <p>1. Make available a minimum of 10 carsharing parking spaces in the Blue (North) Garage for a vehicle-sharing company. As demand dictates additional carsharing vehicles will be added over time. Provide additional designated car-sharing parking spaces within and/or nearby by KSURP parking garages, if deemed feasible. (These are designated and priority spaces for carsharing users arriving for short-periods of time which is different than carsharing spaces that “live” in the parking garages.</p>   | <p>Ongoing after issuance of Occupancy Permit for the residential building.</p> |
| <p>Provide electric vehicle (EV) charging stations (1 EV space per 100 auto parking spaces, i.e. 10 EV spaces in the Blue Garage) and preferential parking to alternative fuel vehicles, as dictated by the market.</p>   | <p>Ongoing after issuance of Occupancy Permit of the residential building.</p>  |
| <p>2. Offer each adult member of each household (up to 2) upon move-in a Charlie Card valued at the cost of a 50% bus/subway pass (subject to fare increases) for 3 consecutive months. This benefit will end after 3 months for the household and begins anew upon unit turnover.</p>  | <p>Ongoing after issuance of Occupancy Permit of the residential building.</p>  |
| <p>3. Offer each adult member of each household (up to 2) upon move-in a 1-year Gold-Level Hubway membership. This benefit will end after one year for the household and begins anew upon unit turnover.</p>  | <p>Ongoing after issuance of Occupancy Permit of the residential building.</p>  |
| <p>4. Provide air pumps and other bike tools in the bicycle storage room.</p>   | <p>Prior to the issuance of Occupancy Permit of the residential building.</p>   |
| <p>5. Join the Charles River Transportation Management Association (TMA)</p>  | <p>Ongoing after issuance of Occupancy Permit of the residential building.</p>  |
| <p>6. Provide free EZRide Shuttle sticker for each adult member of each household each year.</p>  | <p>Ongoing after issuance of Occupancy Permit of the residential building.</p>  |
| <p>7. Charge parking (market rate) separately from the residential rent, in order to remind tenants how much they pay for parking. The Permittee shall provide the summary of on-site parking fees to the TP&amp;T.</p>   | <p>Ongoing after issuance of Occupancy Permit of the residential building.</p>  |
| <p>8. Either install a real-time multimodal transportation display screen to help people decide which mode to choose for each trip (transit, carsharing vehicle, Hubway bike share, etc.), or establish a transportation information center located in an area that is central, visible, convenient, and equally accessible to all residents and visitors. The center will feature information on:</p> <ul style="list-style-type: none"> <li>a. Available pedestrian and bicycle facilities in the vicinity of the site</li> <li>b. MBTA maps, schedules, and fares</li> <li>c. Area shuttle map and schedule, if one exists</li> <li>d. “Getting Around in Cambridge” map and other CitySmart materials (available at the Cambridge Community Development office)</li> <li>e. Location of bicycle parking</li> <li>f. Hubway regional bikeshare system</li> <li>g. Carsharing</li> <li>h. Ride-matching</li> <li>i. Other pertinent transportation information</li> </ul> | <p>Prior to the issuance of Occupancy Permit of the residential building.</p>   |

|   |   |
|---|---|
| <p>9. Designate a Transportation Coordinator (TC) for each residential building or the site to manage the TDM program. The TC will also oversee the marketing and promotion of transportation options to all residents at the site in a variety of ways:</p> <ul style="list-style-type: none"> <li>a. Posting information in a prominent location in the building and on the Project’s website, social media, and property newsletters.</li> <li>b. Responding to individual requests for information in person and via phone and email</li> <li>c. Performing annual transportation surveys.</li> </ul>   | <p>Ongoing after issuance of Occupancy Permit of the residential building.</p>  |
| <p>10. Require the TC to compile and distribute up-to-date information explaining all transportation options to all new residents as part of their New Resident Packet. The packets will contain information on both the range of options available to any building manager programs to support the use of these options and will include:</p> <ul style="list-style-type: none"> <li>a. Available pedestrian and bicycle facilities in the vicinity of the site</li> <li>b. MBTA maps, schedules, and fares</li> <li>c. Area shuttle map and schedule, if one exists</li> <li>d. “Getting Around in Cambridge” map and other CitySmart materials</li> <li>e. Location of bicycle parking</li> <li>f. Hubway regional bikeshare system</li> <li>g. Carsharing</li> <li>h. Ride-matching</li> <li>i. Other pertinent transportation information</li> </ul> | <p>Ongoing after issuance of Occupancy Permit of the residential building.</p>  |
| <p>11. Require that the TC will be on-site during a minimum of 2 hours per week and will be available during other times to residents via email and telephone. Email and phone information for the TC will be posted in the transportation information center.</p>  | <p>Ongoing after issuance of Occupancy Permit of the residential building.</p>  |
| <p><b>Loading Dock/Residential Move-In/Move-Out Traffic Management Plan.</b> The Permittee shall provide a loading dock/resident move-in/move-out, and traffic management plan for City approval. The Property Owner shall monitor operations and if the operations cause issues on public users and infrastructure (e.g. vehicles blocking other users or parking illegally) then BP will work with the City to resolve it.</p>  | <p>Prior to the issuance of a Certificate of Occupancy of the residential building and ongoing. Plan may be later amended with TP&amp;T approval.</p> |
| <p><b>Transportation Monitoring.</b> The Permittee shall commit to a transportation monitoring program and mitigation measures whose effectiveness is commensurate with the triggers established in the <b>Recommended Transportation Monitoring Program.</b></p>   | <p>Annual and Biennial monitoring reports as described in the Recommended Transportation Monitoring Program.</p>                                      |

### **Recommended Transportation Monitoring Programs for KSURP Infill Concept Plan**

In order to be assured that the Kendall Square Urban Renewal Plan MXD Infill Concept Plan is meeting the traffic generation targets that are the basis for approval of the Concept Plan on an ongoing basis, the Project shall be required to monitor the project's traffic generation and mode splits as buildings are built and occupied.

#### **Residential Transportation Monitoring Program**

The residential buildings will have residential Transportation Demand Management measures.

To monitor the traffic generation, parking demand and utilization, the Permittee shall implement a monitoring program to include: annual monitoring of mode split for all trips; biennial garage driveway counts; biennial counts of parking space utilization (vehicles and bikes); and a detailed survey of the residents with regard to their pattern of trips, auto and bicycle ownership or leased, and where the residents customarily store such vehicles overnight. All surveys and counts shall be designed and conducted in a manner approved by the CDD and TP&T. Approval of the form of any survey instrument or monitoring method is required before issuance of the first Certificate of Occupancy for the Residential Building.

Monitoring and surveying shall begin when Occupancy of the residential building has reached fifty (50%) or within one year of the date of the issuance of the first Certificate of Occupancy, whichever is sooner. If the Certificate of Occupancy is issued between September 1<sup>st</sup> and February 29<sup>th</sup>, the monitoring should take place during the months of September or October and be reported to the City no later than November 30. If the Certificate of Occupancy is issued between March 1<sup>st</sup> and August 31<sup>st</sup>, monitoring should take place during the months of April or May and be reported to the City no later than June 30.

#### **Non-Residential Transportation Monitoring Program**

Using data collected as part of the PTDM Plan, KSURP traffic data collection as required under Section 61 Findings, and supplemented when necessary, the Permittee will provide to TP&T and CDD transportation monitoring reports. All surveys and counts shall be designed and conducted in a manner approved by the CDD and TP&T, and shall include the following information:

- Annual mode split surveys reported to CDD and TP&T (may use the annual PTDM monitoring reports).
- Biennial driveway counts, auto and bicycle parking utilization surveys (may use biennial PTDM driveway counts).
- Biennially when driveway counts and vehicle/bicycle parking counts are collected, a Project Vehicle and Transit Trip Generation report shall be provided to TP&T and CDD in a format approved by TP&T and CDD. The primary focus of the report will be to compare the TIS PM peak hour vehicle and transit trip generation estimates with actual trip generation. The trip generation monitoring and thresholds will be based on the Project's Office, Laboratory and Retail trips.

If any monitoring report submitted during the build-out of the project determines that trip generation for existing occupied office, lab and retail\_GFA exceeds **300 PM vehicle trips** or **exceeds 390 PM transit trips**, then new driveway counts and trip generation report must be provided the following year (instead of biennially), and if trip generation continue to exceed the vehicle trip or transit trip thresholds then additional TDM and infrastructure improvements commensurate with the level of exceedance, as described below must be implemented to keep trips at or below the levels projected in the January 4, 2017 trip generation update memo by VHB.



During the course of the project build-out, the PM vehicle and transit trips will be compared to the TIS estimates on a proportional basis related to project build-out or reflective of the building specific TIS trip generation estimates, to determine if the project trip generation is on target with the TIS assumptions. This will allow the permittee to make voluntary adjustments to its demand management programs to reduce the likelihood that the overall trip generation targets will be exceeded.

A final number of PM peak hour vehicle trips will be provided and certified by TP&T and CDD. The PM peak hour thresholds are as follows:

**Trip Generation Thresholds (2015 Kendall Square Redevelopment TIS Estimates\*)**

|         | <u>PM peak hour trips</u> |
|---------|---------------------------|
| Vehicle | 300                       |
| Transit | 390                       |

\*Vehicle and Transit trips calculations are based on VHB's January 4, 2017 updated TIS trip generation estimates for PM peak hour Office and Retail uses: 51 PM Peak hour retail vehicle trips + 250 PM Peak hour Office vehicle trips = 301, rounded to 300 PM Peak hour vehicle trips. 66 PM Peak hour retail transit trips + 326 PM Peak hour Office transit trips = 392, rounded to 390 PM Peak hour transit trips. Source is January 4, 2017 KSURP Infill Development Estimated Trip Generation. Residential trips are not included in the Trip Generation thresholds.

If monitoring indicates trip generation in excess of the thresholds above, and if MBTA and private (open to the public) transit capacity has not improved (a 5% or greater increase in calculated number of passengers accommodated in the PM peak hour), the proponent will work with the City staff to identify and implement additional mitigation measures intended to reduce auto mode share or peak hour vehicle trip generation or assist in improving transit options or shifting transit trips to walking and bicycle trips. The measures the proponent will consider include the following items or others that may have similar or better results and will be determined in consultation with the City of Cambridge. The proponent will commit to implement measures whose effectiveness is commensurate with the exceedance. Possible measures may include but are not limited to the following:

**If exceeding vehicle trips threshold:**

Shift vehicle trips to other modes and make sure that any measures that shift trips do not trigger other trip thresholds.

- Increase parking rate to market rate.
- Increased MBTA pass subsidies.
- Larger financial incentives for formation of vanpools/additional carpools.
- Acceleration of implementation of planned transit, bike infrastructure or TDM programs.
- Free bikes as rewards for not driving.
- Additional, reasonable measures as mutually agreed upon by the Permittee and the City.

**If exceeding Transit trips threshold** only if MBTA and private transit (open to the public) capacity has not been improved (a 5% or greater increase in calculated number of passengers accommodated in the peak hour):

- Contribute an additional \$500,000 to the City of Cambridge of KSTEP fund as approved by the City, to be established by the City, which shall be used to fund the cost of improving transit access to Kendall Square. The \$500,000 funds will be in addition to the initial \$6,000,000 for the KSTEP program and addition to other ongoing funding mechanism established by the KSTEP program for long-term sustainability of the KSTEP program.
- Shift transit trips to walking, bicycling and/or improve transit services.
- Provide additional bicycle parking facilities.
- Financial incentives for walking and biking.
- Additional, reasonable measures as mutually agreed upon by the Permittee and the City.

Methodology for determining Vehicle and Transit trip generation:

A combination of methods will be used to measure vehicle trips generated by the project including, but not limited to the following:

- Vehicle trips into and out of the project garages through actual car counts obtained from garage gates. Data should indicate the type/user of the vehicles entering/exiting (i.e. commercial office or laboratory employees or visitors, retail employees or patrons, academic uses, other). Data should be provided and summarized for daily, hourly, and peak hours. PM peak hour is the threshold.
- The counts will be supplemented with surveys of office and laboratory employees, visitors, and retail employees and patrons, to obtain information on number of vehicle trips during PM peak hour, location of parking (on-site or off-site), and whether dropped-off or picked up by vehicle.
- PM peak hour transit trips will be calculated based on number of employees, transit mode share, arrive/departure times, MBTA Charlie cards issued or subsidized will also be reported for office, laboratory and retail uses to help verify the PM transit trip information.

For the purposes of this agreement, the transit capacity of approximately 23,600 (23,679) passengers in the peak hour as presented in the KSRUP TIS (Table 10a.1 System Peak Hour Capacity (Per MBTA Data) from page 87 of the TIS, shown below, will be utilized as the base number of passenger accommodated on the MBTA and private transit (open to the public).

**TABLE 10.A.1 SYSTEM PEAK HOUR CAPACITY (PER MBTA DATA)**

| Mode                  | Frequency <sup>(a)</sup> | OTP Factor <sup>(b)</sup> | # Passengers / Vehicle <sup>(c)</sup> | # Cars / Train | Resulting Capacity <sup>(d)</sup><br>(# Passengers / Peak Hour) |
|-----------------------|--------------------------|---------------------------|---------------------------------------|----------------|---|
| <b>Red Line</b>       |                          |                           |                                       |                |   |
| Inbound               | 13                       | 0.848                     | 167                                   | 6              | 11,046  |
| Outbound              | 13                       | 0.848                     | 167                                   | 6              | 11,046  |
| <b>MBTA Bus</b>       |                          |                           |                                       |                |   |
| 64 Inbound            | 2.5                      | n/a                       | 54                                    | n/a            | 135   |
| 64 Outbound           | 3                        | n/a                       | 54                                    | n/a            | 162   |
| 68 Inbound            | 2                        | n/a                       | 54                                    | n/a            | 108   |
| 68 Outbound           | 2                        | n/a                       | 54                                    | n/a            | 108   |
| 85 Inbound            | 2                        | n/a                       | 54                                    | n/a            | 108   |
| 85 Outbound           | 2                        | n/a                       | 54                                    | n/a            | 108   |
| CT2 Inbound           | 3                        | n/a                       | 54                                    | n/a            | 162   |
| CT2 Outbound          | 3                        | n/a                       | 54                                    | n/a            | 162   |
| <b>EZRide Shuttle</b> |                          |                           |                                       |                |   |
| Inbound               | 7                        | n/a                       | 40                                    | n/a            | 267   |
| Outbound              | 7                        | n/a                       | 40                                    | n/a            | 267   |

## Notes:

- (a) Number of vehicles per hour, per MBTA published schedules (Red Line) and MBTA Ridecheck Fall 2014 (Buses)
- (b) On Time Performance Factor from 2015 MBTA Annual Report
- (c) Number of policy level capacity per MBTA Blue Book 14<sup>th</sup> Edition (Red Line and Buses) and EZ Ride Feasibility Study (March 2015)
- (d) Calculated Capacity = #of Trains x OTP factor x # pax per vehicles x # cars – shown as number of passengers per peak hour

**KSURP Upzoning Project**  
**Boston Properties**  
**Trip Generation Estimate**  
**Article 14 Updated Program**

**KSURP Infill Development Estimated Trip Generation**

| Size                      | Distri-<br>bution | Trip Rate | Unadjusted       |                 |         |         |      |      | Local |      |              |              |              |              |              |  |  |  |  |  |
|---------------------------|-------------------|-----------|------------------|-----------------|---------|---------|------|------|-------|------|--------------|--------------|--------------|--------------|--------------|--|--|--|--|--|
|                           |                   |           | Vehicle<br>Trips | Person<br>Trips | Vehicle | Transit | Walk | Bike | Other | VOR  | Vehicle      | Transit      | Walk         | Bike         | Other        |  |  |  |  |  |
| Daily Residential         |                   |           | 2,823            | 3,190           |         |         |      |      |       |      |              |              |              |              |              |  |  |  |  |  |
| In                        | 50%               | -         | 1,411            | 1,595           | 32%     | 30%     | 25%  | 10%  | 3%    | 1.11 | 470          | 479          | 398          | 160          | 48           |  |  |  |  |  |
| Out                       | 50%               | -         | 1,411            | 1,595           | 32%     | 30%     | 25%  | 10%  | 3%    | 1.11 | 470          | 479          | 398          | 160          | 48           |  |  |  |  |  |
| Daily Retail              |                   |           | 1,175            | 2,092           |         |         |      |      |       |      |              |              |              |              |              |  |  |  |  |  |
| In                        | 50%               | -         | 588              | 1,046           | 34%     | 37%     | 6%   | 9%   | 14%   | 1.19 | 299          | 387          | 63           | 93           | 146          |  |  |  |  |  |
| Out                       | 50%               | -         | 588              | 1,046           | 34%     | 37%     | 6%   | 9%   | 14%   | 1.19 | 299          | 387          | 63           | 93           | 146          |  |  |  |  |  |
| Daily Office              |                   |           | 5,462            | 6,172           |         |         |      |      |       |      |              |              |              |              |              |  |  |  |  |  |
| In                        | 50%               | -         | 2,731            | 3,086           | 34%     | 37%     | 6%   | 9%   | 14%   | 1.19 | 1,746        | 2,284        | 370          | 554          | 862          |  |  |  |  |  |
| Out                       | 50%               | -         | 2,731            | 3,086           | 34%     | 37%     | 6%   | 9%   | 14%   | 1.19 | 1,746        | 2,284        | 370          | 554          | 862          |  |  |  |  |  |
| <b>Total Daily</b>        |                   |           | <b>9,460</b>     | <b>11,453</b>   |         |         |      |      |       |      | <b>3,284</b> | <b>4,016</b> | <b>1,292</b> | <b>1,060</b> | <b>1,250</b> |  |  |  |  |  |
| <b>In</b>                 |                   |           | <b>4,730</b>     | <b>5,727</b>    |         |         |      |      |       |      | <b>1,642</b> | <b>2,008</b> | <b>646</b>   | <b>530</b>   | <b>625</b>   |  |  |  |  |  |
| <b>Out</b>                |                   |           | <b>4,730</b>     | <b>5,727</b>    |         |         |      |      |       |      | <b>1,642</b> | <b>2,008</b> | <b>646</b>   | <b>530</b>   | <b>625</b>   |  |  |  |  |  |
| AM Residential            |                   |           | 216              | 244             |         |         |      |      |       |      |              |              |              |              |              |  |  |  |  |  |
| In                        | 20%               | -         | 43               | 49              | 32%     | 30%     | 25%  | 10%  | 3%    | 1.11 | 14           | 15           | 12           | 5            | 1            |  |  |  |  |  |
| Out                       | 80%               | -         | 173              | 195             | 32%     | 30%     | 25%  | 10%  | 3%    | 1.11 | 56           | 58           | 49           | 19           | 6            |  |  |  |  |  |
| AM Retail                 |                   |           | 28               | 50              |         |         |      |      |       |      |              |              |              |              |              |  |  |  |  |  |
| In                        | 62%               | -         | 18               | 31              | 34%     | 37%     | 6%   | 9%   | 14%   | 1.19 | 13           | 19           | 3            | 5            | 7            |  |  |  |  |  |
| Out                       | 38%               | -         | 11               | 19              | 34%     | 37%     | 6%   | 9%   | 14%   | 1.19 | 5            | 7            | 0            | 2            | 3            |  |  |  |  |  |
| AM Office                 |                   |           | 854              | 965             |         |         |      |      |       |      |              |              |              |              |              |  |  |  |  |  |
| In                        | 88%               | -         | 752              | 850             | 34%     | 37%     | 6%   | 9%   | 14%   | 1.19 | 242          | 315          | 51           | 76           | 120          |  |  |  |  |  |
| Out                       | 12%               | -         | 103              | 116             | 34%     | 37%     | 6%   | 9%   | 14%   | 1.19 | 32           | 43           | 7            | 10           | 17           |  |  |  |  |  |
| <b>Total AM Peak Hour</b> |                   |           | <b>1,098</b>     | <b>1,260</b>    |         |         |      |      |       |      | <b>357</b>   | <b>450</b>   | <b>122</b>   | <b>115</b>   | <b>151</b>   |  |  |  |  |  |
| <b>In</b>                 |                   |           | <b>813</b>       | <b>930</b>      |         |         |      |      |       |      | <b>264</b>   | <b>342</b>   | <b>66</b>    | <b>84</b>    | <b>125</b>   |  |  |  |  |  |
| <b>Out</b>                |                   |           | <b>286</b>       | <b>330</b>      |         |         |      |      |       |      | <b>93</b>    | <b>108</b>   | <b>56</b>    | <b>31</b>    | <b>26</b>    |  |  |  |  |  |
| PM Residential            |                   |           | 269              | 304             |         |         |      |      |       |      |              |              |              |              |              |  |  |  |  |  |
| In                        | 65%               | -         | 175              | 198             | 32%     | 30%     | 25%  | 10%  | 3%    | 1.11 | 58           | 59           | 49           | 20           | 6            |  |  |  |  |  |
| Out                       | 35%               | -         | 94               | 106             | 32%     | 30%     | 25%  | 10%  | 3%    | 1.11 | 30           | 32           | 27           | 10           | 4            |  |  |  |  |  |
| PM Retail                 |                   |           | 100              | 178             |         |         |      |      |       |      |              |              |              |              |              |  |  |  |  |  |
| In                        | 48%               | -         | 48               | 86              | 34%     | 37%     | 6%   | 9%   | 14%   | 1.19 | 24           | 32           | 6            | 8            | 12           |  |  |  |  |  |
| Out                       | 52%               | -         | 52               | 92              | 34%     | 37%     | 6%   | 9%   | 14%   | 1.19 | 27           | 34           | 6            | 8            | 13           |  |  |  |  |  |
| PM Office                 |                   |           | 781              | 882             |         |         |      |      |       |      |              |              |              |              |              |  |  |  |  |  |
| In                        | 17%               | -         | 133              | 150             | 34%     | 37%     | 6%   | 9%   | 14%   | 1.19 | 42           | 55           | 9            | 13           | 21           |  |  |  |  |  |
| Out                       | 83%               | -         | 648              | 732             | 34%     | 37%     | 6%   | 9%   | 14%   | 1.19 | 208          | 271          | 44           | 66           | 102          |  |  |  |  |  |
| <b>Total PM Peak Hour</b> |                   |           | <b>1,150</b>     | <b>1,365</b>    |         |         |      |      |       |      | <b>389</b>   | <b>483</b>   | <b>141</b>   | <b>125</b>   | <b>158</b>   |  |  |  |  |  |
| <b>In</b>                 |                   |           | <b>355</b>       | <b>434</b>      |         |         |      |      |       |      | <b>124</b>   | <b>146</b>   | <b>64</b>    | <b>41</b>    | <b>39</b>    |  |  |  |  |  |
| <b>Out</b>                |                   |           | <b>794</b>       | <b>931</b>      |         |         |      |      |       |      | <b>265</b>   | <b>337</b>   | <b>77</b>    | <b>84</b>    | <b>119</b>   |  |  |  |  |  |

Notes:  
 Trip Generation based on ITE Trip Generation Manual, 9th Edition, using:  
 LUC 220 - Apartment  
 LUC 820 - Shopping Center  
 LUC 710 - General Office Building

Trip Generation Thresholds:  
 PM Peak Hour Vehicle: 51 + 250 = 301, rounded to 300 Vehicle Trips  
 PM Peak Hour Transit: 66 + 326 = 392, rounded to 390 Transit Trips

Mode shares based on FST Study and Kendall Square Advisory Committee Meeting presentation from January 26, 2012 / k2c2  
 VOR stands for Vehicle Occupancy Rate from 2009 NHHTS  
 Local VOR from American Community Survey 2006-2010; Census Tract 3523 and 3524

## 8.2 ENERGY CONSERVATION APPROACH

Buildings are significant consumers of energy, and building mechanical and electrical systems are the chief consumers within any building. The Project Components will be designed to be energy-efficient, green buildings, and renewable energy strategies will continue to be evaluated as the design evolves and will be included in each Project Component's design review submission. As previously referenced, the Applicant proposes that for each square foot of solar-ready rooftop provided, a square foot of occupiable green roof be permitted as exempt GFA (a 1:1 ratio). Renewable energy credits can also be purchased on a building-by-building basis to support off-site renewable energy production and offset non-renewable electricity use on site.

### 8.2.1 REGULATORY CONTEXT

All Project Components will meet the current Stretch Energy Code requirement to achieve at least a 20 percent overall reduction in annual energy use compared to a baseline. The current Stretch Energy Code requires that the Project show at least 20 percent overall reduction in energy used as compared to the IECC2009/ASHRAE 90.1-2007 code compliant baseline model. Since the IECC 2012 and ASHRAE 90.1-2010 is more stringent than the current Code, the proposed HVAC and lighting systems and the Energy Conservation Measures (ECMs) were selected so that the overall energy savings fall within 25 and 30 percent better than 90.1-2007 and, therefore, also meet the future Stretch Energy Code requirements.

In accordance with Article 22.20, all new project buildings will also meet the LEED minimum building performance requirement of a 10% improvement in energy use by cost when compared to a baseline building performance as calculated using the rating method in Appendix G of ANSI/ASHREA/IESNA Standard 90.1-2007.

### 8.2.2 DESIGN STAGE - REDUCE ENERGY DEMAND

Success in reducing energy demand from these systems follows a four-step approach. This basic approach will be followed for each Project Component.

- Step 1 - Reduce Demand: Challenge assumptions to right size equipment, reduce plug and lighting loads, and improve the building shell.
- Step 2 - Harvest Site Energy: Orient the building to maximize passive solar and daylighting opportunities. Harvest waste energy on site through heat recovery and other means.
- Step 3 - Maximize Efficiency: Beyond simply reducing loads, use efficient equipment to maximize benefit.
- Step 4 - Efficient Operations and Maintenance: Building commissioning, training of staff, and ongoing preventative maintenance, combined with monitoring of on-going performance will be implemented to ensure energy efficiency gains are realized.

### 8.2.3 DESIGN STAGE – SET ENERGY TARGETS

These energy conservation targets are met by the selection of efficient building systems, equipment, and a lighting power density that is below code. Additionally, an improved building envelope design is required. The design teams will develop whole building energy models to demonstrate the expected energy performance of each designed building.

A variety of ECMs will continue to be evaluated as design progresses. ECM's to be considered include, but are not limited to, the following:

- High-performance mechanical systems, including chilled beams in office and laboratory spaces.
- High-performance building envelope
- Reduced window-to-wall ratio
- Reduced lighting power density
- Building orientation and window locations shall be suited for improved energy efficiency
- Cogeneration
- Rooftop Solar PV
- Energy Star appliances and equipment
- Occupancy and daylight sensors and controls
- Demand Response / Peak Load Reduction / Smart Grid Compatibility

A preliminary energy analysis and GHG study was completed for each Project Component. The summary of findings is represented in the Preliminary Energy Analysis and Greenhouse Gas Study shown on the opposite page.

#### **COMMERCIAL BUILDING A - 145 BROADWAY**

Based on preliminary design strategies being considered, the estimated energy use reduction for the building is approximately 28.1 percent, which equates to a 23.4 percent reduction (446.8 tons per year) in stationary source CO2 emissions when compared to the Base Case. Key energy savings features include improved glazing properties, improved roof and wall insulation, improved lighting power densities, variable volume condensing water pump, a high efficiency DW heater, and a high efficiency gas boiler.

#### **RESIDENTIAL BUILDINGS NORTH AND SOUTH (BLUE GARAGE)**

Based on preliminary design strategies being considered, the estimated energy use reduction for Residential buildings is 24.1 percent, which equates to a 15.5 percent reduction (319.1 tons per year) in stationary source CO2 emissions when compared to the Base Case. Key energy savings features include improved glazing properties, improved roof and wall insulation, improved lighting power densities, high efficiency heat pumps, high efficiency ventilation systems, and a high efficiency gas boiler.

#### **COMMERCIAL BUILDING B - 250 BINNEY STREET**

Based on preliminary design strategies being considered, the estimated energy use reduction for the new commercial building is approximately 27.0 percent, which equates to a 21.0 percent (417.5 tons per year) reduction in stationary source CO2 emissions when compared to the Base Case. Key energy savings features include improved glazing properties, improved roof and wall insulation, improved lighting power densities, variable volume condensing water pump, a high efficiency DW heater, and a high efficiency gas boiler.

# PRELIMINARY ENERGY ANALYSIS AND GREENHOUSE GAS STUDY

| Project Component  | Energy Consumption (MBtu/yr) |             |                 | CO <sub>2</sub> Emissions (tons/yr) |             |                   |
|--|------------------------------|-------------|-----------------|-------------------------------------|-------------|-------------------|
|  | Base Case                    | Design Case | Percent Savings | Base Case                           | Design Case | Percent Reduction |
| Commercial Building A - 145 Broadway                             | 21,977                       | 15,812      | 28.1%           | 1,909.4                             | 1,462.6     | 23.4%             |
| Residential Buildings (North and South)<br>- 135 Broadway Street | 25,883                       | 19,643      | 24.1%           | 2,053.6                             | 1,734.5     | 15.5%             |
| Commercial Building B - 250 Binney Street                        | 22,140                       | 16,167      | 27.0%           | 1,984.4                             | 1,566.9     | 21.0%             |

tons/yr = short tons per year

## **8.2.4 OPERATIONS STAGE BUILDING COMMISSIONING**

In addition, building commissioning will be conducted prior to and during occupancy to ensure the building systems are operating efficiently and as designed. Tenant green building guidelines will engage and educate building users and influence occupant behavior toward more energy (water and material) efficient practices.

## **8.2.5 OPERATIONS STAGE ENERGY TRACKING AND MONITORING**

The Applicant has a robust internal program for tracking building energy use over time, using Energy Star Portfolio Manager and other tools. In addition, the Applicant has committed to reducing average building EUI by 15%, and is currently a strong supporter of the City's Building Energy Use Disclosure Ordinance.

The Applicant will implement a Measurement and Verification (M&V) plan that will utilize the base building energy management system to monitor operation of equipment or systems that are not already directly metered for electric or gas use. Core and shell projects will include a centrally monitored electronic metering network in the base building design that is capable of being expanded to accommodate and document the future tenant sub-metering.

In compliance with the Cambridge Building Energy Use Disclosure Ordinance, Chapter 8.67 of the Municipal Code, the Applicant will report energy use.

## **8.2.6 ON-SITE CLEAN/RENEWABLE ENERGY GENERATION**

The Project Components will be constructed to be solar-ready, including designing the roof structure to support the weight and wind loads associated with solar energy collectors as well as providing space to accommodate associated infrastructure, including conduit to the roof and space in the electrical room for an inverter. Each building will be individually analyzed for solar opportunities as the design develops. In addition, innovative strategies such as solar roadways will be considered.

Small-scale co-generation systems will also be considered to provide domestic hot water and a portion of the electricity for the residential buildings.

## **8.2.7 DISTRICT-WIDE ENERGY CONSERVATION**

The City secured major grant funding to support the development of a Kendall Square EcoDistrict and to initiate a study of district energy opportunities. This Project as part of the KSURP is deeply involved in both of these initiatives. The EcoDistrict will provide a framework for the utilities, the City, and the developers to work together to right size projects and infrastructure, with a goal of minimizing energy usage, water usage, and GHG generation.

The Kendall Square EcoDistrict would provide opportunities for combined heat and power and shared generation, provided projects are co-located that can utilize the heat and power generated. The Kendall Square EcoDistrict is intended to incorporate renewable energy generation, and should promote combined/cooperative development with shared information about project needs and contributions.



## 8.3 WATER CONSERVATION

The Project will reduce overall potable water use and reduce wastewater generation compared to a conventional development through installation of low-flow plumbing fixtures and high-efficiency irrigation systems. All Project Components are currently targeting a minimum 30% water use reduction compared to conventional plumbing fixtures (per Energy Policy Act of 1992 fixture performance requirements).

The landscape design will incorporate native and adaptive vegetation and the design of the irrigation system will target, at minimum, a 50% reduction in potable water use when compared to a mid-summer baseline through the use of high-efficiency irrigation systems with controllers and moisture sensors. Non-potable water use strategies, such as rainwater reuse will be considered for irrigation. In addition, the landscape design will consist mostly of local, drought resistant species to minimize or eliminate the need for irrigation over the lifetime of the Project. Landscape areas will be designed to hold as much rainwater as practicable. The Applicant is also considering the use of rainwater capture for irrigation and the incorporation of green roofs and rainwater harvesting tanks for each individual building design.

Each Project Component will largely maintain the existing site drainage, replacing existing impervious rooftop and hardscape in kind on-site. The Project will be required to mitigate stormwater runoff to comply with City and MassDEP standards. Stormwater infrastructure will be designed and installed for each Project Component to reduce the runoff discharge rate and improve the quality of the runoff to the City's stormwater system and the Charles River basin.

## 8.4 RECYCLING AND SOLID WASTE MANAGEMENT

Recycling and reuse programs will be developed and implemented by all construction contractors to reduce the amount of waste that is sent to landfill throughout construction. Prior to the start of construction, the construction management team will prepare and submit a Construction Waste Management plan which will be implemented on site. By keeping the Blue Garage overwhelmingly intact, a significant amount of construction waste associated with demolition and new construction to rebuild a garage structure is eliminated by the Project. A minimum of 75% of C&D waste will be diverted, as required by Massachusetts' law.

Storage of collected recyclables will be accommodated on the ground floor of the new buildings in a designated recycling area. A contracted waste management company will collect the recyclables on a regular basis. It is anticipated that approximately 100% of paper, corrugated cardboard, glass, plastic and metal would be recycled during operations. The Tenant Design and Construction Guidelines (discussed further below in Section 8.8) will include strategies to reduce waste through recycling and reuse programs.

## 8.5 REDUCE HEAT ISLAND EFFECT

Over the design life of the Project, climate change is expected to significantly increase the duration and frequency of heat waves. The anticipated change in average temperatures is exacerbated by the development density of Cambridge, which results in urban heat island effect. In an effort to mitigate urban heat island effect, the Applicant is considering a number of site and building design strategies, including light colored roof materials, light colored hardscape materials, landscaped areas, and green roofs.

### 8.5.1 SITE DESIGN

Site landscaping will be designed with tree canopy cover, low-level plantings, discontinuous impervious covers, reflective materials and permeable pavements in an effort to reduce the capture of energy from sunlight while promoting evaporation and plant transpiration. This design approach will not only reduce the increased heat associated with heat island effect, but will provide for a more comfortable pedestrian environment.

### 8.5.2 BUILDING DESIGN

To further reduce the heat island effect and mitigate stormwater runoff, the Applicant is exploring the use of green roof cover, where feasible. Vegetation and shading structures will also be employed to shade buildings and outdoor spaces, where possible. The roof membrane on all Project Components will be a high albedo roof product with a minimum Solar Reflectance Index (SRI) value of 78, covering a minimum of 75% of the total roof area, excluding any green roof areas. All Project Components include covered parking in garage structures, greatly reducing the uncovered and impervious surface area needed for the Project's required parking. In conjunction with the development of the Residential Project Components, the uncovered area on the top level of the Blue Garage will be upgraded to include light-colored materials and landscaping, where feasible.

## 8.6 RESILIENCY IN BUILDING DESIGN

The Applicant has studied the vulnerability of the infill development sites for the potential of precipitation-based inland flooding events. Potential building design resiliency measures being considered include limiting basement areas, and other improvements that may mitigate potential flooding. Additionally, ground floor finish elevations for all Project Components will be raised to the greatest extent possible to reduce the risk of internal flooding. Flood-resilient materials will be specified for first floor uses, where practicable.

Since the Residential Buildings are proposed to be constructed primarily over the existing Blue Garage structure, ground floor exposure to the effects of extreme weather events, such as flooding is greatly minimized. Other flood prevention techniques could include: sealed wall penetrations for cable and electrical lines; watertight door barriers; septic line backflow prevention valves, sump pumps, and discharge pumps—all of which could be connected to auxiliary external generator connections or resilient backup power. In addition, the Project is anticipated to include green roofs/roof gardens and roofing membranes with high SRI to reduce the volume of stormwater runoff and reduce solar heat gain/minimize air conditioning loads, respectively. Additionally, high-performance curtain wall is being considered to maximize views and daylighting of interior spaces, thus reducing overall lighting loads and associated internal heat gains, which has a direct impact on the space cooling load. As the climate change analysis shows, the rising temperature increases the space cooling demand in the Cambridge climate; therefore, any strategy that can reduce the space cooling demand is considered an adaptive strategy for climate change.

The Project's climate change mitigation includes the incorporation of several ECMs to reduce GHG emissions associated with energy use beyond what is required by Code. (Refer to Appendix D for further details on such measures.) Some of these measures can also be considered adaptive design approaches to mitigate the potential impacts of climate change on the Project. These GHG emissions mitigation and climate change adaptation measures are considered mutually re-enforcing and, therefore, cannot be considered in isolation. As an example, the window area in the Residential Project Components will be designed at an appropriate ratio to reduce energy use while still providing enough daylight and opening area for natural ventilation. This is an adaptive strategy in response to potential future increases in mean temperature. Other climate change adaptive strategies considered will include improved envelope insulation and high performance glazing in response to increasing temperatures. The design team will continue to investigate the feasibility of renewable energy sources and highly energy-efficient technologies, such as solar PV, wind, and co-generation. As climate change is not limited only to temperature increase, but may also include flooding, intensified downpours, and/or hail events, the design team will continue to consider ways in which the architectural elements selected for the Project can reduce the vulnerability to these extreme events.

## OTHER POTENTIAL RESILIENCY MEASURES

On-site renewable energy, a district energy network, and combined heat and power (CHP) systems also provide opportunities for added resiliency during periods of power loss during storms. While the KSURP area is served by underground utility power lines and gas mains, and as such, is not normally effected by storms that disrupt power or gas transmissions, according to DOER, the Kendall Square CHP district plant has been registered by the ISO-NE as a black start generation asset that can operate in island mode to provide both electricity to the Cambridge grid and thermal energy to the KSURP area in the event of a grid outage.

On-site CHP, or solar PV, generally will operate in phase with the incoming utility power, and needs incoming power to synchronize phase delivery. In "island mode", generators and CHP systems can be made to operate independently of the grid and self-synchronize power phasing with on-site solar. However, this approach is normally used in large-scale shelter locations only, when long-term operation may be needed to protect a group of people.

In most cases, the proposed commercial buildings will shut down and send occupants home in storm-related power failure scenarios. Any generators provided will most likely be optional standby generators that are sized to maintain server room or process operations only. In the case of the residential components, the generators provided will be for life-safety uses only (stairway pressurization, egress elevators, fire pump, etc.) and cannot by Code be used for ordinary ongoing operations in a building. The capacity provided by solar PV, even if the available space is maximized, will not be more than 10 percent of the power needed by the building, and cannot provide all power needed for normal operations. A CHP system could be used to provide limited ongoing operation, but the economics of such a system when compared to the likelihood of repeated power outages in the Kendall Square area would not be favorable. Storm response actions and resiliency measures will be incorporated into leasing agreements or tenant guidelines, including guidance related to tenant fit-out of commercial space, particularly those located on the lower floors.

## 8.7 HEALTH AND WELLNESS

Human health and wellness is addressed in the Project through design, operations, and occupant behavior. Within each Project Component, special attention will be given to address human health and comfort during construction and once the building is occupied. This will be accomplished by implementing pollutant reduction strategies, using non-toxic materials, providing fresh air to occupants, installing individual lighting and heating controls, and by providing natural daylight and views to outdoor green spaces. Tenant Design and Construction Guidelines will include comfort related requirements such as installing CO2 sensors in all regularly occupied spaces.

The Applicant is also exploring the use of principles of the WELL Building Standard, which place human health and wellness at the center of design and can encourage and educate future tenants on healthy living practices. Active design principles, encouraging physical and social activity, will be employed where possible. The Project's master site and individual building sites will be vibrant spaces where people can safely walk, bike, use transit, and access open spaces. Individual buildings will be designed wherever possible to include visible, attractive and well-lit stairs, communal services such as break areas and copy services, and a variety of public gathering spaces and individual relaxation spaces. Ground level outdoor spaces will be easily accessible to both building occupants and visitors alike.

## 8.8 SUSTAINABLE TENANT GUIDELINES

Tenant Design and Construction Guidelines will be provided to office and retail tenants as a guide to use when fitting out their spaces. The intent of these guidelines is to educate tenants about implementing sustainable design and construction features in their tenant improvement build-out as well as adopting green building practices that support the overall sustainability goals of the Project. The guidelines will also communicate the sustainable and resource-efficient features incorporated into the base building(s) and provide specific suggested sustainable strategies enabling tenants to coordinate their leased space design and construction with the rest of the building systems.

In summary, the guidelines may include the following information:

- Descriptions of sustainable design, construction and operations features of the proposed building(s), including resource conservation goals and features for tenant fit-out spaces (e.g., low-flow plumbing fixtures, sub-metered systems, lighting controls) as well as building certifications (i.e., LEED certification).
- Encourage tenant commitments for meeting various energy and water conservation goals.
- Descriptions of current regulatory requirements that pertain to leasable spaces.
- Strategies for energy efficiency, such as those for HVAC equipment recommendations, lighting and lighting controls, and low-flow, high-efficiency plumbing fixture recommendations.
- Information on the various high performance building rating systems, such as EPA's ENERGY STAR and LEED for Commercial Interiors (CI) as well as information on how the design of the base building(s) can contribute towards these certifications.
- Waste reduction goals and recycling facilities/programs.
- Information on green cleaning guidelines and policies.
- Information regarding project-wide features that aim to encourage alternative transportation and TDM measures.
- Information on how to train and inform maintenance staff and employees on operations related to sustainable design features and systems.

## **8.9 OTHER DISTRICT-WIDE SUSTAINABLE STRATEGIES**

Following the EcoDistrict model, in addition to district-wide energy and water management strategies and transportation efforts, other innovative, scalable solutions such as composting and urban farming will be considered. A composting program, as a strategy to reduce waste and ultimately reduce GHG emissions at landfills, will be studied as an additional measure to the existing waste management and recycling programs that are already included in the district. Composting can be addressed on a building-by-building basis and large-scale collection can be implemented district-wide. In addition to the network of farmers markets, a local urban farming initiative will be considered to engage community members in building a healthier and more locally based food system. Sites for urban garden plots could be identified in the district for businesses and community members who want to grow their own food.

## **8.10 LEED CREDIT NARRATIVE**

Refer to the Sustainability Support Documentation in Appendix D for individual Project Component reports.

## R8.7 ADDITIONS TO SUSTAINABILITY GUIDELINES

Applicant was asked to incorporate specific study obligations in addition to the proposed Sustainability Guidelines in chapter 8 of the MXD IDCP submitted on August 9, 2016. For clarity, specific sustainability strategies and commitments for each building will be provided during Design Review. The following study obligations and preferences will be added to the Sustainability Guidelines:

**Geothermal Assessment:** The Design Review submission for each building will include a feasibility assessment for geothermal systems including the potential for shared geothermal with other building sites.

**Energy Storage:** Incorporating energy storage systems into the building or sites, either at the time of construction or in the future, is encouraged.

**Commissioning:** Each project will incorporate mechanical, electrical, plumbing, envelope and renewable energy systems commissioning standards that are required of the LEED Enhanced Commissioning credit.

**Pathways to Net Zero:** Each Design Review submission will include a conceptual assessment of how the building can be adapted to net zero greenhouse gas emissions in anticipation of future technologies and in consideration of technology that exists at the time of the Design review. Potential means of reaching net zero greenhouse gas emissions may include building retrofits, incorporation of new technologies and alternative energy procurement or generation.

**Resilience:** Each project will provide a resilience narrative that outlines asset level and potentially district wide strategies that protect building systems and occupants in the event of major storm events or long term power outages and potential impacts associated with climate change including floods, storm surges, changes in sea level.

**Evolving Standards:** Each building's Design Review will incorporate the most recent standards set forth in applicable zoning to accommodate future evolutions in sustainability strategies.

**Tracking Greenhouse Gas Emissions:** Each Design Review submission will include a Greenhouse Gas emissions assessment for both the building being reviewed and an update of Greenhouse Gas emissions for the building that was reviewed and approved in the prior Design Review process.

*Exhibit Reference:* N/A

*Comment Reference:* CDD25, CDD26, CDD27, CDD28, CDD29, CDD30, CDD31



**BOSTON PROPERTIES LIMITED PARTNERSHIP**

**c/o Boston Properties, Inc.  
800 Boylston Street, Suite 1900  
Boston, Massachusetts 02199**

December 21, 2015

Mayor David Maher  
Vice Mayor Dennis Benzan  
City Councilor Dennis Carlone  
City Councilor Leland Cheung  
City Councilor Craig Kelley  
City Councilor Nadeem Mazen  
City Councilor Marc McGovern  
City Councilor Denise Simmons  
City Councilor Timothy Toomey  
Cambridge City Hall  
795 Massachusetts Avenue  
Cambridge, Massachusetts 02139

**Re: Commitment regarding Housing**

Dear Mayor Maher, Vice Mayor Benzan and Councilors Carlone, Cheung, Kelley, Mazen, McGovern, Simmons and Toomey:

The purpose of this letter is to confirm that Boston Properties Limited Partnership (“Boston Properties”) commits that a minimum of twenty percent (20%) of the Infill GFA (as that term is defined in Section 14.32.2 of the Petition of the Cambridge Redevelopment Authority to amend Article 14 of the Cambridge Zoning Ordinance) utilized by Boston Properties for multi-family residential development shall be devoted to home ownership units, which home ownership units shall be subject to the Middle Income Housing Requirements contained in Section 14.35 of the Petition and the Affordable Housing Requirements contained in Section 14.36 of the Petition; however, in no event shall the total number of affordable and middle income housing units be fewer than the total number of such units required by the Zoning Ordinance as amended by the Petition.

As Boston Properties' duly authorized representative, I am pleased to make this commitment on Boston Properties' behalf.

Sincerely,

BOSTON PROPERTIES LIMITED  
PARTNERSHIP

By: Boston Properties, Inc., its general partner

By: 

Name: Michael A. Cantalupa

Title: Senior Vice President, Development