

**13.90 PLANNED UNIT DEVELOPMENT 7 DISTRICT**

- 13.91 *Purpose.* The PUD-7 District is intended to provide for the creation of a vibrant mixed-use district of high quality general and technical office and retail activity, with significant components of residential use and open space. The retention of government office facilities on the site is desired, as well as space for smaller innovation companies as a component of the commercial space that is created. The creation of open space to serve residents of the District and the surrounding neighborhoods, as well as workers, students from nearby institutions, and visitors, is desired. The PUD-7 District permits larger scale development and supporting commercial activities and residences close to Kendall Square and the major public transit services located there. It encourages strong connections between new development at Kendall Square, the East Cambridge riverfront, the PUD-7 area and the neighborhoods of eastern Cambridge. It also promotes permeability at the edges of the district, public spaces that will feel welcoming and comfortable to all users, ground floors that will activate public streets and spaces, and civic functions and amenities serving residents and visitors of all ages and all socioeconomic backgrounds. The expectation is for the District to transform into a recognizable center of activity and civic life for Kendall Square and the surrounding neighborhoods. Development in the PUD-7 District is expected to meet high standards for urban design, architectural design, environmental sustainability and open space design. Development should be generally consistent with the policy objectives set forth in the then current Kendall Square (“K2”) Planning Study and Design Guidelines (2013), the Planning and Design Principles established by the City’s Volpe Working Group (2017) and Volpe Site Design Guidelines (2017), collectively, the “PUD-7 Guidelines and Principles.”
- 13.91.1 Master Plan Area. To further the purpose of this Section 13.90, any Development Parcel or portion of a Development Parcel meeting the requirements set forth in Section 13.93 below that is at least five (5) acres in area shall be considered a Master Plan Area, within which a Development Proposal shall present physical information in a more conceptual or generalized way, subject to more detailed approval by the Planning Board at a time and in a manner determined by the Board in its PUD special permit decision.
- 13.91.2 Master Plan Requirements. Within the Master Plan Area, the locations of streets and open spaces, the quantities of proposed land uses, and general building envelopes, locations and heights shall be indicated in sufficient detail that the Planning Board can reasonably assess the impact of the Master Plan and its general consistency with the Master Plan Criteria set forth in Section 13.91.4 below and the guidance provided in the PUD-7 Guidelines and Principles. At a minimum, a Development Proposal and subsequent Final Development Plan for a Master Plan Area must contain the following components:
- (a) Site Development Plan — describing how the Master Plan Area is divided into distinct building sites (including any Government Owned Lot as defined in

Section 13.97 below), streets, and open spaces and their development characteristics, including potential uses and Gross Floor Area (“GFA”).

- (b) Site Massing Plan — illustrating the height and massing of building volumes for each proposed building site, and including studies of anticipated shadow and wind impacts resulting from building mass.
- (c) Parking and Loading Plan — identifying the locations of all parking facilities, bicycle parking facilities and facilities for loading or other vehicular service functions, and the number of spaces proposed at each location.
- (d) Connectivity Plan — illustrating all pedestrian, bicycle and vehicular circulation routes within the Master Plan Area, their connections to nearby public circulation routes and destinations outside the Master Plan Area, and approximate locations of access and egress points on each building and parking facility within the Master Plan Area.
- (e) Open Space Plan — illustrating and quantifying the areas of all proposed open space and the ownership and designation of each area, specifically delineating open space required in Section 13.94 below and the portions of such open space that will be permanently guaranteed for public use, as well as descriptions of major design elements and themes to be incorporated into each space and the types of uses and activities that could be accommodated in each space, including areas that will be designated for programmed uses such as spill-out dining and performance space.
- (f) Ground Floor and Activation Plan — illustrating the conceptual arrangement of functions such as retail establishments and other active uses, residential and office lobbies, and utility spaces at the ground floor of each building in the Master Plan Area, as well as the locations and anticipated sizes of Active Space, Innovation Space, and Community Space that may be required or incentivized by the specific provisions of this Section 13.90 and strategies for programming and activating those spaces (specifically including a report from a retail specialist describing strategies for recruiting and supporting retail tenants in a manner that will support the requirements and goals of the District).
- (g) Housing Plan — providing the approximate number and mix of housing unit types proposed on each residential site, and identifying the anticipated location of dwelling units that may be required or incentivized by specific provisions of this Section 13.90.
- (h) Phasing Plan — describing the general sequence in which development is proposed to proceed, and specifically describing how the phasing requirements set forth in this Section 13.90 will be met.
- (i) Sustainability Plan – describing: (1) how the sustainability requirements set forth in Section 13.96.4 below will be met; (2) expected greenhouse gas emissions from the development and strategies employed to improve energy

efficiency and support renewable energy production, through individual building design and by utilizing existing or new district-wide energy systems; and (3) expected vulnerability of the development to the effects of climate change, including increased precipitation, flood risk, temperature, and urban heat island effect, and strategies to promote resiliency within individual building sites and at a larger district-wide level, including natural stormwater management systems, increased vegetation and shade, and measures to withstand and recover from extreme climatological events.

(j) Transportation Plan – incorporating: (1) a Transportation Impact Study required by Section 19.20 of this Ordinance; (2) a Shared Parking Study required by Section 13.95.5 below; (3) a study of the impacts of increased demand on public transportation services in the Kendall Square area; (4) a description of the development’s relationship to future regional rail, bus, pedestrian/bicycle and other transportation system connections in the area, such as the Grand Junction rail corridor; and (5) a Transportation Demand Management and Mitigation program describing measures to offset or mitigate the project’s impacts on transportation systems. Such studies shall account for the proposed scale and phasing of development and the limitations on system capacity to accommodate new vehicle, transit, and other trips.

(k) Environmental Comfort Plan – describing or showing screening, building elements, or other site improvements designed to reduce impacts from wind and shadows, provide adequate lighting for safe use while minimizing excessive light, mitigate urban heat island effect, and control noise generated by mechanical systems and by truck traffic, particularly on Binney Street.

(l) Architectural Character Plan – describing general approaches to the design of buildings, landscaped areas, streets, and pathways, identifying the type of visual character that the development will aim to achieve, with the expectation that specific designs of individual buildings and spaces will be reviewed in further detail as they are developed.

13.91.3

Master Plan Approval. The Planning Board shall grant a PUD special permit approving a Final Development Plan for a Master Plan Area (with the exception of any Government Owned Lot that is not subject to local regulation) upon finding that the Final Development Plan is consistent with the criteria set forth below, all other criteria applicable to approval of a Final Development Plan in this Zoning Ordinance and any other special permits being sought, and upon consideration of the PUD-7 Guidelines and Principles. In approving a Final Development Plan, the Planning Board may incorporate criteria and **additional** guidelines for future design review of individual building sites and open spaces in support of its findings. The PUD special permit may identify specific modifications to the Final Development Plan that may be subject to future approval by a written determination of the Planning Board. Otherwise, any modifications to a Final Development Plan for a Master Plan Area shall be

considered pursuant to the PUD Amendment provisions set forth in Section 12.37 of this Zoning Ordinance.

13.91.4 Master Plan Criteria. An approved Final Development Plan for a Master Plan Area shall meet the following objectives:

- (1) Providing a mix of commercial, including research and technology, and residential uses, with particular emphasis on ground-floor retail along portions of Third Street and Broadway, to encourage activity throughout the day and evening.
- (2) For residential uses, incorporating a diversity of dwelling unit sizes that are appealing and accessible to a variety of users, including families with children and households from a variety of socioeconomic backgrounds.
- (3) Breaking up large blocks to increase permeability and create a fine-grained network of connections that seamlessly integrates the PUD-7 District with the surrounding urban fabric of Kendall Square and the East Cambridge, Wellington-Harrington, and Port neighborhoods.
- (4) Sensitively interfacing with adjacent land uses with respect to use scale, density, setback, bulk, height, landscaping, and screening, while providing integrated pedestrian circulation systems with particularly strong linkages to the Broad Canal, riverfront, Grand Junction corridor, other public spaces within Kendall Square, and the East Cambridge, Wellington-Harrington, and Port neighborhoods.
- (5) Sensitively managing the height and bulk of new buildings to (a) reduce the impact of shadows, excessive wind, and obstruction of light and views, with specific consideration given to residential buildings and public spaces; (b) reduce detrimental environmental impacts such as excessive ground coverage, diminution of open space, and monotonous development; (c) provide an appropriate scale at interfaces with adjoining lower scale uses, such as proposed and existing buildings and open spaces in the vicinity; (d) not otherwise diminish the health and safety of the area around the development parcel; and (e) establish a defined urban character at a “streetwall” height that is distinct from taller “tower” elements of buildings, in accordance with the goals set forth in the PUD-7 Guidelines and Principles.
- (6) Creating an integrated network of high-quality streets and open spaces, including significant space for public gathering and recreation, that serves the surrounding communities as well as the development on the site by encouraging and fostering a sense of community, civic engagement, social interaction, economic development, and environmental sustainability.
- (7) Integrating development with open space physically and functionally by means of building orientation, active frontages, location of building entrances, pedestrian linkages between major activity centers, and similar techniques in accordance with the objectives set forth in the PUD-7 Guidelines and Principles.

- (8) Providing a strong street edge on major public streets, including Broadway and Third Street as well as new street connections through the district, to create a memorable “main street” experience.
- (9) Providing active ground floors that animate streets and open spaces, and add to the vitality of Kendall Square.
- (10) Fostering a spirit of inclusiveness and diversity, particularly in the planning and programming of Open Space, Active Space, Innovation Space, and Community Space (in accordance with the requirements set forth below) to draw users and visitors from across the city.
- (11) Enhancing the architectural diversity and aesthetic qualities of the PUD-7 District to harness the spirit of innovation and creativity in Kendall Square **and reinforces a Cambridge sense of place.**
- (12) Promoting best practices for environmental sustainability in district-wide planning and in establishing design objectives for individual buildings and sites, in accordance with the City’s ongoing planning efforts, including the Net Zero Action Plan and Climate Change Preparedness and Resiliency Plan.
- (13) Demonstrating a commitment to implementing a Transportation Demand Management and Mitigation Program consistent with the reduced parking mandated in this PUD zoning and the capacity limitations of the transportation network that serves the Kendall Square area, including roadways and public transportation systems. In approving a Final Development Plan, the Planning Board shall refer to Article 18.000 and Section 19.20 of this Zoning Ordinance, applicable PUD-7 Guidelines and Principles, and other City transportation planning efforts (including the Kendall Square Mobility Task Force), and may require measures to be linked to milestones, thresholds or performance standards connected to the scale and pace of development within the PUD.

13.91.5 Pre-Application Conference. In the course of preparing a Development Proposal for a Master Plan Area, the Developer shall be required to participate in at least one PUD Pre-Application Conference as established in Section 12.33 of this Zoning Ordinance **and a similar conference with the full City Council or Ordinance Committee.** The purpose of the conference will be to discuss the conceptual alternatives for site arrangement, building massing, circulation systems and public space arrangement, as well as general approaches to architectural and landscape design, and for the Developer to receive informal feedback from the Planning Board prior to preparing the materials required by Section 13.91.2. As set forth in Section 12.33.2, any statement made by the Planning Board or the Developer at the Pre-Application Conference shall not be legally binding. Notwithstanding Section 12.33.3, the Developer shall present graphic and written materials as needed to illustrate and describe conceptual development alternatives.

PUD-7 Zoning Petition – **Suggested Changes Following 10/17/2017 Ordinance Committee**

- 13.92 *Uses Allowed in a PUD-7 District.* The uses listed in this Section 13.92, alone or in combination with each other, shall be allowed upon permission of the Planning Board. The amount and extent of uses may be further regulated and limited as set forth elsewhere in this Section 13.90. This Section 13.92 shall refer to uses as they are listed in Article 4.000 and otherwise defined in this Zoning Ordinance as of the effective date of the enactment of this Section 13.90.
- 13.92.1 Residential Uses. All uses listed in Sections 4.31 d. (Townhouse Development); 4.31 g. (Multifamily Dwelling); and 4.31 i.2. (Hotels or Motels).
- 13.92.2 Transportation, Communication and Utility Uses. All uses listed in Section 4.32 and which are allowed or conditionally allowed in the base zoning district.
- 13.92.3 Office and Laboratory Uses. All uses listed in Section 4.34.
- 13.92.4 Retail Business and Consumer Service Establishments. All uses listed in Section 4.35 with the exception of j. (mortuary, undertaking or funeral establishment).
- 13.92.5 Open Air or Drive in Retail & Services. Uses listed in Sections 4.36 a. (Sales place for flowers, garden supplies agricultural product conducted partly or wholly outdoors, commercial greenhouse or garden) and 4.36 e. (Open air theatre or other open air place of entertainment), but not including drive-in theatres.
- 13.92.6 Institutional Uses. All uses listed in Section 4.33.
- 13.92.7 Light Industry, Wholesale Business and Storage. Uses listed in Sections 4.37 a. (Assembly and packaging of articles), b. (Manufacturing, processing, assembly and packaging), c. (Bottling of beverages) and f. (Printing, binding, published and other related arts and trades).
- 13.92.8 Other Uses. Any use not listed in subsections 13.92.1 through 13.92.7, otherwise allowed in a Business B District, may be allowed by the Planning Board upon written determination by the Board that such use is consistent with the objectives of the PUD-7 District and is consistent with the predominant uses in the PUD-7 District.
- 13.93 *District Dimensional Regulations.*
- 13.93.1 Permitted Gross Floor Area (GFA). In the PUD-7 District the maximum GFA shall be three million, two hundred fifty thousand (3,250,000) square feet, including the up to four hundred thousand (400,000) square feet of GFA devoted exclusively to a use designated as Other Government Facility in the Table of Use Regulations on a Government Owned Lot (as set forth in Section 13.97 below), subject to the provisions set forth below.
- (a) Assignment of GFA to Lots. A Development Proposal for a Development Parcel including all lots within the PUD-7 District shall describe how all of the permitted GFA set forth above will be assigned to lots within the District.

However, to the extent a Development Proposal for a Development Parcel excludes the single lot identified on the Cambridge Assessing Maps as Map/Lot 28-43, which is located at the southwesterly corner of Binney Street and Third Street and is approximately five thousand, eight hundred eighty-nine (5,889) square feet in size, such Development Parcel shall be allowed a maximum of three million, two hundred twenty thousand (3,220,000) square feet of GFA to be allocated to the remaining lots in the District.

(b) GFA Exemptions. The following shall be excluded from the calculation of GFA for the purpose of meeting the requirements set forth in this Section or elsewhere in this Zoning Ordinance:

(1) GFA devoted exclusively to a use designated as Other Government Facility in the Table of Use Regulations on a Government Owned Lot (as set forth in Section 13.97 below), but only to the extent that the GFA of all Other Government Facility uses on any and all Government Owned Lots located within the PUD-7 District exceeds four hundred thousand (400,000) square feet, in the aggregate.

(2) GFA devoted to Active Space that is exempt according to the provisions of Section 13.96.1, Paragraph (3) below, up to a maximum of five percent (5%) of GFA allowed in the PUD-7 District.

(3) Fifty percent (50%) of the GFA devoted to Innovation Space, up to a maximum of five percent (5%) of non-residential GFA allowed in the PUD-7 District, as described in Section 13.96.3 below.

(4) Private outdoor decks or balconies, up to eight percent (8%) of the GFA of any building.

(5) Any and all of the GFA devoted to the Community Space required by Section 13.96.5.

(c) Required Residential Development.

(1) At least forty percent (40%) of the total permitted GFA in a Final Development Plan, excluding up to four hundred thousand (400,000) square feet of GFA devoted exclusively to a use designated as Other Government Facility in the Table of Use Regulations on a Government Owned Lot (as set forth in Section 13.97 below), shall be devoted to residential use. Such calculation shall be based on GFA authorized exclusive of any GFA devoted solely to structured parking. Individual Development Parcels may exceed the limitations set forth above, as long as the limitations are satisfied, in the aggregate, within the PUD-7 District.

(2) For the purpose of this Section, residential uses shall mean the residential uses listed in Section 4.31 d. and g. of this Zoning Ordinance. In addition, hotel or motel uses (Section 4.31, i-2), up to a maximum of one hundred

thousand (100,000) square feet, may be used to partially satisfy the required residential development.

(3) Final Development Plans for Development Parcels shall include a Phasing Plan providing a general sequence for the construction of residential and non-residential uses. The Planning Board shall approve such a Phasing Plan if it is found to ensure that residential uses will be completed on a schedule that meets the objectives of the City and ensures compliance with the requirement set forth in Paragraph (1) above. In general, **exclusive of Other Government Facility Uses on Government Owned Lots,** non-residential development on Development Parcels shall not be authorized to exceed, in the aggregate, sixty percent (60%) of the total non-exempt GFA permitted for non-residential uses until substantial construction activity of a significant portion of the required residential GFA within the Final Development Plan has commenced. Full completion of all of the permitted non-residential GFA shall not be allowed before substantial construction activity has commenced on all of the required residential development. The Planning Board may approve variations to the standards in this Paragraph if the Phasing Plan is found to be in general conformance with the intent of this Paragraph.

(4) Residential GFA shall be subject to the Inclusionary Housing Provisions of Section 11.203 of this Zoning Ordinance, but in no case shall the Inclusionary Housing Requirement be less than twenty percent (20%). However, notwithstanding the provisions of Section 11.203.5, no further increase in Floor Area Ratio or Gross Floor Area beyond the limitations set forth in this Section 13.93.1 shall be provided.

(5) In the event that a Final Development Plan contains hotel or motel uses in partial satisfaction of the housing requirements as set forth in Paragraph (2) above, the Final Development Plan shall also include Affordable Dwelling Units containing an aggregate Net Dwelling Unit Floor Area equal to twenty percent (20%) (or such larger percentage as may be specified in Section 11.203.2 of this Zoning Ordinance) of the aggregate GFA of any hotel or motel uses to the extent such uses are being counted toward satisfaction of the minimum residential use requirement set forth above in Section 13.93.1(c)(1), in addition to the Affordable Dwelling Units required in the non-hotel residential portions of the Final Development Plan. No hotel uses shall receive a certificate of occupancy until the City has issued certificates of occupancy for the Affordable Dwelling Units comprising the Net Dwelling Unit Floor Area required by this Paragraph.

#### 13.93.2 Minimum Development Parcel Size.

(a) A Development Parcel within the PUD-7 District shall include all lots that are in existence as of July 6, 2017, and held in common ownership where it is proposed to incorporate any portion of such lot or lots within the Development Parcel. A portion of a Development Parcel may be designated as a Government Owned Lot subject to the provisions set forth in Section 13.97 below. Where



circumstances related to the transfer of property from the federal government to other governmental or private entities (for the purpose of private development on a portion or all of the land in the control of the federal government) limit the feasibility of creating a Development Parcel meeting the size requirements of this Section 13.93.2, the Planning Board may in its discretion approve a PUD application having a smaller Development Parcel size. However, in no case shall a Development Parcel contain less than twenty-five thousand (25,000) square feet of total lot area.

(b) A Development Parcel within the PUD-7 District may also contain contiguous or noncontiguous lots elsewhere in the PUD-7 District or within another PUD District that are situated within three hundred (300) feet of the boundaries of the PUD-7 District. There shall be no specified minimum lot size for lots located within a Development Parcel.

13.93.3 Residential Density. There shall be no required minimum Lot Area Per Dwelling Unit in the PUD-7 District.

13.93.4 Maximum Building Height.

(a) The maximum height permitted in the PUD-7 District shall be two hundred fifty (250) feet, except as it may be further limited or increased in this Section 13.93.4. The permitted heights are further illustrated on the Building Height Regulation Map for the PUD-7 District, Map 13.91.

(b) Reduced Building Height to One Hundred Seventy Feet. The maximum height for non-residential buildings shall be reduced to one hundred seventy (170) feet in the portion of the PUD-7 District bounded by the centerline of Binney Street, the centerline of Third Street, the southerly line of Monroe Street and a line that is the extension of the easterly line of Fifth Street running from the northerly line of Fifth Street to centerline of Binney Street. In such portion of the District, any part of a building exceeding one hundred seventy (170) feet in height shall (i) be limited to residential and/or institutional dormitory uses (and may include related amenity space), and (ii) have floor plates measuring no more than fifteen thousand (15,000) square feet.

(c) Increased Building Height. In the portion of the PUD-7 District bounded by the centerline of Third Street, the centerline of Broadway, the westerly boundary of the PUD-7 District and the northerly line of Potter Street and its extension from the centerline of Third Street to the westerly boundary of the PUD-7 District, building heights can be increased above two hundred fifty (250) feet, subject to the limitations set forth below:

(1) The use of any occupiable space situated above three hundred (300) ~~two hundred fifty (250)~~ feet in height shall ~~(i)~~ be limited to residential and/or institutional dormitory uses (and may include related amenity space); ~~, and~~ ~~(ii)~~

**(2) Portions of buildings situated above two hundred fifty (250) feet in height shall** have floor plates measuring no more than fifteen thousand (15,000) square feet of GFA. ~~No non-residential building shall have a height exceeding 250 feet.~~

**(23)** No more than ten percent (10%) of the aggregate land area of the PUD-7 District (including any private rights of way situated on or constructed within parcels owned by the Developer or public streets created after the adoption of this Article 13.90) may be covered by portions of buildings in excess of two hundred fifty (250) feet in height, excluding the height of any buildings containing Other Governmental Uses. In approving a Final Development Plan, the Planning Board may increase such coverage upon finding that it would facilitate the accommodation of residential uses in accordance with the requirements of this Section 13.90 and the PUD-7 Guidelines and Principles.

**(34)** No more than one building shall be allowed to exceed three hundred fifty (350) feet in height. In reviewing a Development Proposal or Final Development Plan including a building that exceeds three hundred fifty (350) feet in height, the Planning Board shall give consideration to a building that is designed to be ~~an iconic or~~ a distinctive architectural landmark. In no event shall any building having a height in excess of five hundred (500) feet be permitted.

(d) Notwithstanding the non-residential height limits contained above, publicly accessible areas of a building located at or above a height of three hundred (300) feet shall be permitted, subject to approval by the Planning Board. Such public access shall be subject to such reasonable hours of operation and rules and regulations as the owner of the building containing such uses may from time to time adopt; however, the Planning Board must approve any proposal to significantly limit public access to such uses.

13.93.5 Other Dimensional Requirements. There shall be no minimum width for a Development Parcel and no minimum width for lots located within a Development Parcel. There shall be no minimum required front, rear and side yard requirements for a Development Parcel or for lots located within a Development Parcel, except that no building shall be constructed within ten (10) feet of the westerly boundary of **a development parcel abutting the existing open space parcel that connects the corner of Binney Street and Sixth Street to the corner of Broadway and Ames Street**~~the PUD-7 District~~. There shall be no minimum required distance between buildings situated on the same lot within a Development Parcel. The Planning Board shall approve all such lot sizes and building setbacks.

13.94 *Open Space.*

(a) At a minimum, twenty-five percent (25%) of the land area within the PUD-7 District, excluding any land designated as a Government Owned Lot, shall be Public Open Space or Publicly Beneficial Open Space, subject to the further

standards set forth below. Less than twenty-five percent (25%) of the land area of an individual Development Parcel may be Public Open Space or Publicly Beneficial Open Space, provided that the requirement of this Paragraph is otherwise met within a combination of parcels in the PUD-7 District in accordance with Paragraph (c) below.

(b) For the purpose of this Section 13.90, the building footprint of any free-standing structure devoted to Community Space, as defined in Section 13.96.5 below, shall be applied toward the minimum Open Space requirements set forth in the preceding paragraph. Such free-standing structure must be used solely for Community Space, with the exception that Active Space, as described in Section 13.96.1 below, is permitted on the ground floor but such Active Space shall not apply toward the minimum Open Space requirements set forth in Paragraph (a) above.

(c) Owners of adjacent Development Parcels or non-adjacent parcels contained within the PUD-7 District (with the exception of Government Owned Lots) may collectively provide the required Open Space, provided that the parcels are held in common ownership or the Planning Board finds that the owners of each Development Parcel have provided written evidence of an agreement that the total amount of open space required for both Development Parcels is provided and that the Open Space Plans for each Development Parcel meet the standards for approval. In that event, the Planning Board shall identify in the Special Permits for each PUD the amount of open space required on each parcel.

(d) The required Open Space shall contain, in the aggregate, at least two (2) acres of such Open Space that is permanently guaranteed for public use by means of a recorded covenant, easement, conservation restriction, or other similar legal instrument acceptable to the City. Such public use may include active or passive recreation, pedestrian and bicycle connections, enjoyment of natural environments, spillover activity from publicly accessible ground floor uses, public performances, or other programming opportunities. All such open space shall be generally accessible to the public for the purposes for which the open space is designed and approved by the Planning Board.

13.95 *Parking and Loading Requirements.* Development in the PUD-7 District shall conform to the off-street Parking and Loading Requirements set forth in Article 6.000, and in the Schedule of Parking and Loading Requirements applicable to the Residence C-3, Office 3, Business B and Industry B districts, except as modified by this Section 13.95.

13.95.1 With regard to uses contained within new commercial buildings, provided that the requirements of Section 6.23 of the Ordinance are met, the parking requirements of this Section 13.95 may be satisfied (a) anywhere in the PUD-7 District or, if located outside of the PUD-7 District, within 2,000 feet of the use being served, notwithstanding anything to the contrary contained in Article 6.000; and (b) in total or in part by a lease agreement, occupancy agreement, license or other

comparable legal instrument between the Developer and the City, other public entity or private owner or consortium for use of parking spaces in the public or pooled private parking facilities within said area.

- 13.95.2 All parking provided within an approved PUD shall be considered collectively accessory to all approved uses within the PUD and the PUD-7 District. Notwithstanding anything to the contrary in Article 6.000, this Ordinance shall not restrict the management and assignment of parking spaces in a way that will most efficiently utilize the existing and proposed parking spaces to serve all approved uses. As an exception to these rules, all parking spaces (whether existing or proposed) that are accessory to an Other Government Facility use as listed in Section 4.33, paragraph (g) of the Table of Use Regulations shall be distinctly identified and shall not be accessory to any other uses.
- 13.95.3 **Minimum Parking.** In approving a Final Development Plan for a Development Parcel, the Planning Board may waive any minimum parking requirements applicable in the PUD-7 District and the underlying Zoning District, ~~with the exception that parking for residential uses shall not be less than 0.4 parking spaces per dwelling unit.~~ The Planning Board may approve arrangements for shared parking of such residential parking spaces with commercial spaces. The Planning Board shall specify a minimum parking requirement for a PUD Final Development Plan based on review and analysis of Transportation Impact Studies and other relevant information on parking demand provided in application documents, including the Shared Parking Study as required below and with the guidance of City agencies.
- 13.95.4 **Maximum Parking.** Maximum allowed parking for a PUD shall be limited by applying the rates set forth below to each use within the PUD and taking the summation of the result for all uses. For any use not listed below, the maximum parking ratio set forth in Article 6.000 shall apply. Exceeding the maximum allowed parking shall require a waiver of maximum parking required under the general provisions of Article 6.000.
- (a) Maximum of 0.8 spaces per 1,000 square feet of GFA for office and laboratory uses.
  - (b) Maximum of 0.75 spaces per residential dwelling unit.
  - (c) Maximum of 0.5 spaces per 1,000 square feet of retail space.
  - (d) Maximum of 1 space per 4 sleeping rooms for hotel use.
- 13.95.5 **Shared Parking Study.** A Development Proposal for development in the PUD-7 District shall include an analysis of anticipated parking demand for all uses in the development throughout the course of a typical day and week. This analysis may identify opportunities for reducing the total amount of parking required to serve all uses through the sharing of parking spaces by multiple uses. Based on this analysis, the Planning Board may approve a reduced minimum or maximum

parking requirement upon finding that the approved amount of parking will be sufficient to serve all permitted uses.

13.95.6

Surface Parking. All parking within the PUD-7 District shall be provided underground, as defined in Section 5.25.22 of this Zoning Ordinance, with the following exceptions that may be approved by the Planning Board in a Final Development Plan:

(a) Surface Parking on Private Roadways. On-grade parking shall be allowed along private ways to be constructed within the PUD-7 District, provided that the location and amount of said on-grade parking shall be depicted in the Final Development Plan.

(b) Interim Use of Surface Parking. On an interim basis, in anticipation of later construction of structured parking sufficient to meet all parking requirements, on grade open parking shall be allowed in a Development Parcel subject to the following conditions:

(1) The future parking structure will be constructed within the Development Parcel or on an adjacent Development Parcel or outside of the PUD-7 District in a location that complies with the provisions of Section 13.95.1, but it may be located either on or off of the lot which it will serve;

(2) Construction of the replacement parking structure will commence within five years of the date of certificate of occupancy for the building initially served by on grade parking;

(3) The future parking structure will contain sufficient spaces for users of the building initially served by on grade open parking so as to meet the parking requirements for such building; and

(4) Binding commitments exist to establish, to the reasonable satisfaction of the Planning Board, that requirements (1) through (3) above shall be satisfied. Such commitments shall be made by negotiated lease agreement, deed restriction, covenant, license, occupancy agreement or comparable legal instrument.

(c) Where required, parking spaces for persons with disabilities may be located on-grade.

(d) Nothing in this Section 13.95 shall prohibit the use of the surface parking spaces on Government Owned Lots.

13.95.7

Ground Floor Retail and Customer Service Uses. Retail and customer service uses not exceeding ten thousand (10,000) square feet of space for each separately leased establishment shall not be required to provide any accessory parking. Where parking is provided, it shall be subject to the other provisions of this Section 13.95.

- 13.95.8 Loading. The Planning Board, in its approval of a Final Development Plan, may waive any requirements for the amount, location and design of loading facilities within a Development Parcel, and may permit loading facilities to be shared across various uses and lots within the PUD-7 District, upon finding that such waiver would reduce the negative impacts of loading activities on the public realm.
- 13.95.9 Bicycle parking shall be provided in accordance with Section 6.100 of this Zoning Ordinance.
- 13.96 *Special Requirements, Conditions and Standards Applicable to Certain Development Authorized by the Planning Board in Kendall Square.* The Planning Board shall approve a Final Development Plan in the PUD-7 District only after finding that in addition to all other applicable requirements the following requirements have been met. The Planning Board shall, in addition, include conditions in the approval of a Final Development Plan that will ensure ongoing compliance with these requirements.
- 13.96.1 Active Space. Final Development Plans shall enhance the public pedestrian usage of the sidewalks and create a sense of neighborhood continuity by providing an interesting, lively and active presence at street level. Accordingly, with the exception of buildings containing Other Government Facility uses on Government Owned Lots, the ground floors of buildings in the PUD-7 District immediately fronting on Third Street or Broadway shall be planned, designed, and constructed to contain Active Space as required below, and the ground floors of buildings facing public parks and public streets in the PUD-7 District shall be designed to be inviting to the public and to accommodate Active Space in the future where feasible.
- (a) Characteristics of Active Space. For purposes of this Section, “Active Space” shall include any interior floor area meeting the following standards:
- (1) Use Limitations. Active Space shall include retail business and consumer service establishments permitted in Section 13.92.4, institutional uses that are generally open to the public such as museums and exhibition spaces, child care, education or recreation uses serving families with children, Community Space as required in Section 13.96.5 below, and other uses that are generally open to the public and that the Planning Board determines meet the goals of this Section. Space occupied by office uses, specifically including lobbies for office or laboratory tenants, as well as banks, trusts, and other financial institutions, shall not be considered Active Space. Portions of hotel and other lobbies containing retail uses that are open to the general public, and not reserved exclusively for hotel guests or tenants, may be considered Active Space with written Planning Board approval.
- (2) Location. Active Space shall be located at the ground floor of a building, adjacent to and at the grade of a public sidewalk or Open Space, and

with one or more entrance(s) providing direct access from such sidewalk or Open Space and not requiring passage through any non-Active Space, provided that access through lobbies constituting Active Space as set forth above in Section 13.96(a)(1) shall be permitted. In addition, with Planning Board approval, Active Space may be located either below grade or above the ground floor if such space is combined with or accessory to Active Space with entrances at the ground floor, provided the Board finds that such location is appropriate for the intended use and is generally consistent with the purpose and objectives of the District.

(3) Establishment Size Limitations for GFA Exemption. Active Space shall be exempt from the GFA requirements of this Section 13.90, up to the maximum exemption set forth above in Section 13.93.1(b)(2), only to the extent that it is leased or otherwise occupied by individual commercial establishments or uses occupying no more than three thousand (3,000) square feet, which may include vendor stalls or kiosks located within larger public spaces. Grocery, market or pharmacy uses of up to ten thousand (10,000) square feet shall also be exempt. The Planning Board may also exclude other Active Space from the calculation of GFA to facilitate the inclusion of specific larger-scale active uses that are consistent with the purpose and objectives of the District and the PUD-7 Guidelines and Principles. The GFA and approximate location of all such exempt Active Space shall be depicted in a Final Development Plan.

(b) Required Active Space.

(1) At a minimum, a total of at least sixty-five percent (65%) of those portions of the interior ground floors of buildings that are within a minimum depth of twenty (20) feet from a Principal Front Wall Plane directly fronting Broadway or Third Street shall be Active Space. Active Space is also encouraged to activate new major streets and open spaces created within a PUD.

(2) At least twenty-five percent (25%) of the floor area of the Required Active Space in the Final Development Plan shall be devoted to Independent Retail Operators each occupying no more than three thousand (3,000) square feet of floor area. Such space requirements may be satisfied as larger public atrium spaces containing smaller vendor stalls or kiosks. For the purposes of this Section 13.90, “Independent Retail Operators” shall mean any retail operator that does not own and operate more than ten (10) retail locations in the Commonwealth of Massachusetts with same name and the same retail concept on the date that the first lease is initially executed for such retail space.

(c) Notwithstanding the provisions set forth above, the Planning Board, in approving a Final Development Plan, may grant minor modifications to the requirements set forth in this Section 13.96.1, upon finding that the proposed Ground Floor and Activation Plan meets the purpose of the PUD-7 District.

(d) Prior to submitting an application for a special permit in the PUD-7 District, the Developer shall have either hired or engaged, respectively, an

employee with substantial retail experience or the services of a consultant or other party with retail expertise in order to advise the Developer in connection with tenanting and programming of retail and other Active Space to be included in the applicable Development Parcel. The recommendations of that consultant shall be included in the Development Proposal.

- 13.96.2 Rooftop Mechanical Equipment Noise Mitigation. Sound emanating from rooftop mechanical equipment on all new or substantially altered structures in an approved Final Development Plan shall be minimized by the adoption of best available and feasible practices regarding the location and sizing of equipment, the selection of equipment and sound attenuation measures.

At a minimum, any noise or vibration emanating from new commercial or substantially altered commercial buildings shall not be normally perceptible **at ground level** without instruments at a distance of one hundred (100) feet from the source lot line and shall comply with the provisions of the City of Cambridge Noise Ordinance applicable to Commercial Areas (as such term is defined in the Noise Ordinance).

In order to enforce these requirements, the Developer shall provide, in addition to a Noise Mitigation narrative required as part of Article 19.000 review, acoustical reports prepared by a professional acoustical engineer as described below:

- (a) Prior to and as a condition of the issuance of the first certificate of occupancy for a new or substantially altered commercial building, an acoustical report, including field measurements, demonstrating compliance of such building with all applicable noise requirements; and
- (b) Prior to obtaining any building permit to add any new equipment having a capacity greater than five (5) horsepower to the rooftop, a narrative report demonstrating that there will be continued compliance with all applicable noise requirements after such addition, and upon completion of such addition and as a condition thereof, an acoustical report, including field measurements, demonstrating such compliance.

- 13.96.3 *Innovation Space*. A Development Proposal containing at least two hundred thousand (200,000) square feet of new GFA for Office Uses identified in Section 4.34, and specifically excluding any office space designated as Other Government Facility on a Government Owned Lot, shall include a plan for Innovation Space meeting the requirements set forth below.

- (a) Required Space.

(1) The Development Proposal must identify Innovation Space that has a GFA equal to, or in excess of, five percent (5%) of the new GFA approved in the Final Development Plan for Office Uses other than the office space designated as an Other Government Facility on a Government Owned Lot. GFA, including, without limitation, existing GFA, within the PUD-7 District or other



Zoning and/or PUD Districts situated within one and one-half (1.50) miles from the PUD-7 District may be used to meet this requirement.

(2) Where at least 40,000 square feet of Innovation Space is required, Innovation Space may be distributed in separate buildings, provided, however, that each separate “unit” of Innovation Space contains at least 20,000 square feet. If less than 40,000 square feet of Innovation Space is required, the Innovation Space must be contained in a single building.

(3) Developers of properties within the PUD-7 District may collaborate with one or more property owners in Zoning and/or PUD Districts located within one and one-half (1.50) miles from the PUD-7 District to develop or designate joint Innovation Space. In such a case, the total square footage of Innovation Space must be large enough to satisfy the sum of the requirements, if any, for such participating Developers and their Zoning and/or PUD Districts.

(4) A developer may enter into a lease, license or other contract or occupancy agreement with a third party, whereby the third party provides (via sublease or other occupancy agreement), administers, and manages the required Innovation Space within a building (or buildings) without violating the requirements of this Section 13.96.3, provided that such third party complies with the requirements of this Section as the same may be varied by the Planning Board.

(b) Characteristics. For the purposes of this Section, Innovation Space shall have the following characteristics:

(1) Durations of lease agreements (or other similar occupancy agreements) with individual business entities shall be for periods of approximately one (1) month.

(2) No single business entity may occupy more than 2,000 square feet or ten percent (10%) of the entire Innovation Space required to be provided in the PUD-7 District, whichever is greater. The average size of separately contracted private suites may not exceed 200 square feet of GFA.

(3) Innovation Space shall include shared resources (i.e., co-working areas, conference space, office equipment, supplies and kitchens) available to all tenants occupying at least fifty percent (50%) of the Innovation Space.

(4) Individual entities occupying Innovation Space may include small business incubators and accelerators, small research laboratories, office space for investors and entrepreneurs, facilities for teaching and for theoretical, basic and applied research, product development and testing prototype fabrication, or production of experimental products.

(c) Variations. In approving a Final Development Plan or a Minor Amendment to a Final Development Plan, the Planning Board may allow variations in the specific standards and characteristics set forth in this Section

13.96.3, if the Planning Board finds that the Innovation Space, as proposed, will be consistent with the purposes of these standards and characteristics.

13.96.4 *Sustainability.* New buildings constructed within the PUD-7 District shall comply with the provisions of Section 22.20 of the Zoning Ordinance. For those construction projects subject to Section 22.23, LEED certification at the Gold level or better is required. In connection with the submission requirements of Section 22.24.2.a., the Developer of such buildings shall submit a Statement of Energy Design Intent produced through the EnergyStar Target Finder tool, or comparable method. New institutional buildings will meet LEED Gold level criteria, unless the technological specifications of a proposed specialized research facility are such that the developer can demonstrate to the reasonable satisfaction of the Planning Board the impracticality of achieving the LEED Gold level criteria or the inordinate impact achieving the LEED Gold level would have on such specialized research facility. New buildings in the PUD-7 District must incorporate an integrated design approach and incorporate the best practices for meeting sustainability in the following five (5) areas:

(a) Energy and Emissions; Steam. Each new building must conserve building energy and, to the extent applicable, reduce carbon/GHG emissions. The Developer, with each Development within the PUD-7 District, must evaluate the potential for on-site energy generation or the construction of co-generation facilities within the PUD-7 District. A Development Proposal for a commercial building shall include a study, prepared by the Developer, considering the feasibility of connecting the building(s) identified in the Development Proposal to the existing district steam system.

(b) Urban Site and Landscaping; Water Management. The Developer, for each new building, must explore opportunities for (i) potable water use reductions, (ii) storm water management using open spaces, (iii) the incorporation of indigenous vegetation, and (iv) storm water for irrigation purposes. At a minimum, all new buildings within the PUD-7 District must meet the Department of Public Works' standards for water quality management and the retention/detention of the difference between the 2-year 24-hour pre-construction runoff hydrograph and the post-construction 25-year 24-hour runoff hydrograph. The design of buildings and outdoor spaces must also provide for vegetation such as canopy trees, green walls and other measures to reduce urban heat gain.

(c) Cool Roofs. All new buildings approved in the PUD-7 District, must employ Functional Green Roofs (as such term is defined in Article 22.000 of this Zoning Ordinance), high-albedo "white" roofs, or a functionally equivalent roofing system. Where Functional Green Roofs are not employed, roofs shall be constructed to facilitate the future installation of Solar Energy Systems.

(d) Monitoring. All new buildings approved in the PUD-7 District shall be required to conform to the requirements of the Cambridge Building Energy Use Disclosure Ordinance, Chapter 8.67 of the Municipal Code.

(e) In connection with the approval of a Final Development Plan or in connection with the granting of a PUD or other special permit pursuant to this Zoning Ordinance, the Planning Board may grant dimensional and other zoning relief in order to permit the construction of a co-generation facility or other energy systems that allow developments to develop shared solutions to minimize energy usage.

13.96.5 Community Space. A Final Development Plan shall provide for the establishment of a Community Space, which for the purpose of this Section shall mean a freestanding building or a portion of a building containing other uses that is occupied and programmed for one or more non-commercial service functions, including but not limited to public recreation, social services, and educational programs. The intent is for the Community Space to serve residents of nearby neighborhoods, including East Cambridge, Wellington-Harrington, and the Port, and to complement other public and community services available in those neighborhoods.

13.96.6 Funding Contributions.

(a) Contribution to Kendall Square Fund. Prior to issuance of a Certificate of Occupancy for any building authorized by a PUD special permit in the PUD-7 District and containing non-residential uses not exempt from GFA pursuant to Section 13.93.1, the permittee shall be required to contribute to a Kendall Square Fund established by the City Manager. The contribution (referred to as a “Fund Contribution Payment”) shall be calculated by multiplying ten dollars (\$10.00) by the number of square feet of new GFA for all non-residential uses in the subject building not exempt from GFA pursuant to the provisions of Section 13.93.1, excluding the GFA of any Other Government Facility uses. The City shall use any Fund Contribution Payment made pursuant to this Section 13.96.6 for the following uses in such allocations and amounts as the City Manager may determine:

(1) Transit Improvements. Fifty percent (50%) of any Fund Contribution Payments shall be allocated for transportation improvements and services to benefit the Kendall Square neighborhood and residents in adjacent neighborhoods not already required by the City of Cambridge Parking and Traffic Demand Management (PTDM) Ordinance. The transit improvement funds shall be allocated at the direction of ~~a committee appointed by~~ the City Manager, ~~which committee shall contain representatives from Kendall Square, adjacent neighborhoods and, at the written request of the developer of a Development Parcel, a representative from the developer.~~

(2) Community Benefits Fund. Fifty percent (50%) of any Fund Contribution Payments shall be allocated to the Community Benefits Fund that has been established by the City Manager.

(b) All development that meets the definition of an Incentive Project as set forth in Article 2.000 of this Zoning Ordinance shall make a contribution in accordance with the requirements of Section 11.202 of this Zoning Ordinance.

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*Special Requirements Related to Government Use on Government Owned Lots.* Where a Development Parcel or Master Plan Area in the PUD-7 District includes a Government Owned Lot as it is defined below, the special provisions set forth in this Section 13.97 shall apply notwithstanding any other regulations to the contrary set forth in this Ordinance.

(a) For the purpose of this Section 13.97, a Government Owned Lot shall mean a lot owned by the federal government that may be developed in conjunction with a transfer of land to a private entity, where such transferred land is adjacent to the Government Owned Lot, and where the Government Owned Lot is included as part of a Development Parcel or Master Plan Area. If so included, such Government Owned Lot shall be clearly identified in a Development Proposal and Final Development Plan.

(b) Uses on a Government Owned Lot categorized as Other Government Facility in Section 4.33 g. in in this Zoning Ordinance, if included within a Final Development Plan, shall be exempt from the requirements set forth in this Section 13.90 and elsewhere in the Ordinance, except when calculating Permitted GFA in the PUD-7 District as set forth in Section 13.93.1 above.

(c) If a Special Permit has been granted authorizing development on a Development Parcel or Master Plan Area containing a Government Owned Lot in accordance with a Final Development Plan, and the controlling government entity later separates the Government Owned Lot from the remainder of the Development Parcel or Master Plan Area, then no future modification to development on the Government Owned Lot shall affect the development authorized in the approved Final Development Plan on the remainder of the Development Parcel or Master Plan Area, and such development shall be allowed to proceed in accordance with the Final Development Plan.

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# **VOLPE SITE – DESIGN GUIDELINES**

## **October 19, 2017**

### **1.0 INTRODUCTION**

The following architectural and urban design guidelines are incorporated by reference to the PUD-7 zoning district. These guidelines should be used by the Planning Board and CDD staff to evaluate the various stages of development plan and design review for the district.

Numerous studies and master plans, including the Kendall Square Planning Study and the Connect Kendall Square Framework Plan, show the potential of increasing Kendall Square commerce and housing, strengthening existing retail, expanding open space opportunities, improving access to and from surrounding neighborhoods/districts, updating transit capacity, and improving pedestrian accessibility and safety. Properly designed and implemented the Volpe site can create a unique and meaningful place for all of Cambridge.

The Volpe Site Design Guidelines articulate the design and site planning goals for the PUD-7 Zoning District, and measures to achieve them. The guidelines aim to create a positive mixed-use district where tall buildings with large floorplates can be good neighbors to public spaces, smaller existing buildings, and adjacent residential neighborhoods. Therefore, the guidelines are particularly geared to sensitively manage the impacts of bulk and height and animate major streets and public spaces through encouraging active ground floors and warm, inviting buildings that humanize the Volpe site.

However, the guidelines are not intended to impose a strict limitation on the building form and style. Other creative design solutions or measures, not noted here, may also be utilized if the Planning Board finds that they further the goals of these guidelines, especially in the interest of enhancing architectural richness in the area.

### **2.0 GOALS**

The goal of the Volpe Plan is to create a functionally diverse and animated downtown development: predominately consisting of handsome background buildings that focus on and enrich the public street and open space system, enlivened by variety and liveliness that articulates the urban pattern. An active pedestrian realm will extend throughout the site, and especially along its main streets and squares both during and after customary business hours. The combination of commercial and residential development throughout the site will maximize hours of activity and improve public security.

The site's interconnected network of public open spaces – its streets, squares, parks, and courtyards – should constitute its fundamental organizational principle. These spaces should be distinct places – visually and spatially coherent, memorable, and meaningful. They should be framed by the masses and facades of the surrounding buildings, and their form should be reinforced and enriched by the design of their landscape. They should enhance public life by constituting a safe and welcoming pedestrian environment. The design of public open spaces should support a wide range of outdoor uses, and should be enlivened by pedestrian oriented functions located in the ground floors of the surrounding buildings. These spaces should link together with each other, and with the surrounding districts to create a varied yet continuous

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public realm that gives the district permeability, porosity, a strong sense of place, and attractive and inviting connections to and from adjacent neighborhoods.

Regardless of the details of ownership and responsibility for maintenance, the site's streets, squares, and parks should be public in use and character.

Development in the public and private realms should be integrated in as positive, secure, and elegant a manner as possible. Buildings fronting onto existing streets or public open spaces should complement and harmonize with adjacent, existing or planned architecture and open spaces with respect to use, scale, density, setback, bulk, height, landscaping, and screening. Each individual project should be carefully conceived and executed to the mutual benefit of its immediate neighbors and adjacent neighborhoods.

The site's buildings should be compatible with the very best of the buildings in Kendall Square and Cambridge's unique sense of place. The City seeks new buildings and additions that are timeless, and elegant structures that should always feel comfortable and inviting to the general public. This can be achieved in part through the design of properly scaled windows, masonry articulation, setbacks, and use of materials that are warm, inviting, and supportive of other proposed buildings and spaces.

The city will not support isolated, individual architectural statements that relate only to themselves. The city supports projects that are positive additions to East Cambridge.

### **3.0 OPEN SPACE AND SITE DESIGN:**

#### **3.1 Introduction**

The site should have a robust, flexible, gracious, active, and accommodating public open space system that brings together a variety of different types of spaces: large and small parks/natural areas, more contained plazas or squares, and pedestrian and vehicular streets to provide a multitude of places for use and enjoyment.

##### **3.1.1 Objective**

The network of the site's streets, pathways, squares, parks, and other open spaces should organize the site's buildings and circulation, and connect the site to the surrounding districts. The combination and interconnection of these different kinds of public spaces will enrich the experience of the site's residents, users, and visitors.

##### **Guidelines**

- i. The site should offer streets, squares, and parks in a variety of sizes and characters, including at least one significant park.
- ii. Streets and open spaces should create an arrangement of urban blocks, which should generally be small to maximize permeability through the site.
- iii. Reinforce the spatial coherence of Third Street and Broadway and expand the pedestrian based retail of these streets.
- iv. Extend the alignments of Broad Canal Way, Fifth Street, and Potter Street, through the site.

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**3.1.2 Objective**

The site's open spaces should be legible, beautiful, and memorable places, visually and programmatically rich, and usable and occupiable by the public. In effect, they should be public rooms at the scale of the city.

**Guidelines**

- i. The massing and facades of buildings that address streets, parks, and squares should frame them as legible spaces.
- ii. The massing and facades of buildings should reinforce a sense of entry and arrival by emphasizing the contrast in scale between the spaces and the streets that approach them.
- iii. Establish Build-To Lines to delineate the borders of city blocks and create continuity in the alignment of building facades.
  - a. Build-to lines should generally be located at parcel boundaries adjoining streets, squares, or parks, and/or at the inner edge of the public sidewalks.
  - b. Build-to lines should govern the location and alignment of the lower portions of buildings - their streetwalls and pedestrian frontages.
  - c. At residential buildings, build-to lines may be set back from the inner edge of sidewalks to allow for entrances, compact stoops, porches, and gardens.
  - d. At commercial buildings, building streetwalls may be recessed away from the build to line to allow for building entrances, small plazas, forecourts, outdoor dining, etc.
  - e. On Broadway, Third Street, and Binney Street, building streetwalls should be aligned on build-to lines for much of their length.

**3.1.3 Objective**

The site's open spaces should be welcoming and engaging places for public and private use and connection. Landscape and streetscape design, building facades, and the programming of building ground floors should create a beautiful and programmatically rich and continuous pedestrian experience, and emphasize the public nature of the site's open spaces.

**Guidelines**

- i. Private development bordering publicly accessible open space and thoroughfares should present inviting elevations and imagery, with special attention at the ground plane and lower floors.
- ii. See the "Built Form" section of these guidelines regarding the role of architectural design in defining and enlivening the site's open spaces.
- iii. The outdoor public realm should connect with indoor public spaces.
- iv. Public open spaces should incorporate broad open areas of grass or pavement, suitable for a wide range of uses.
- v. The contrast between flexible open areas and the more articulate and specialized areas of planting, seating, low walls, and trellises, pavilions etc. that frame them should emphasize the room-like quality of parks and squares, and accommodate individuals and groups large and small, and offer a variety of ways of being in the space.
- vi. Individual works of art and their respective settings should work together in a harmonious, subtle way to help humanize public space and buildings at the pedestrian level.

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## 3.2 Parks

### 3.2.1 Objective

The site should include at least one significant park that will offer a connection to nature and provide opportunities for a range of activities, such as quiet enjoyment, recreation, outdoor dining or picnicking, temporary markets, organized public events, and public gatherings.

#### Guidelines

- i. Parks should feel welcoming and public, they should be bordered by public streets or active public uses. They are not to be designed as semi-private front yards of adjoining commercial or residential buildings.
- ii. Park design should bring together various elements – such as trees, grass, gardens, playfields, flexible open areas, water features, pavilions, loggias, and paved areas – in configurations that accommodate a wide range of uses and enhance visual and functional relationships with adjoining streets, open spaces, and buildings.
- iii. Play areas should be located near residential buildings where possible.
- iv. Park edges should be defined by elements that reinforce a sense of place, such as allées of street trees, bordering paths, other plantings and landscape elements.
- v. In addition to broad open grassy areas, parks should incorporate intimately scaled spaces. These spaces should be more specialized in form and provide a sense of shelter and permeability through the use of such elements as shade trees, loggias, trellises, pavilions, seating, low walls, fencing, and garden plantings.

### 3.2.2 Objective

Parks should provide environmental benefits.

#### Guidelines

- i. Parks should be designed to provide habitat for native species, reduce the urban heat island effect, provide cooling, and absorb stormwater.

## 3.3 Squares and Plazas

### 3.3.1 Objective

The site's squares and plazas should be foci of community life: they should be predominately pedestrian, enlivened by outdoor dining, temporary markets, outdoor events and performances, and by the retail and community functions in the ground floors of the buildings that frame them.

#### Guidelines

- i. Where appropriate, squares and plazas should incorporate planting, benches, water features, public art, appropriately scaled outdoor seating areas for restaurants, bars, cafes, and the general public, and areas appropriate for temporary retail – carts, trucks, stands, and tents.
- ii. Landscape design should complement the sense of spatial enclosure provided by the buildings that frame the squares by incorporating bordering shade trees or other landscape elements.
- iii. Vehicular traffic along or through squares, where it occurs, should be slow.



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## 3.4 Streets

### 3.4.1 Objective

The site's streets should be integral parts of the city's street network. They should create an integrated pedestrian circulation system with particularly strong connections to the public way, and between adjacent districts and residential neighborhoods.

#### Guidelines

- i. New streets should be located to connect with existing streets and open spaces, extending the pedestrian, bicycle, and, where appropriate, vehicular paths of the surrounding districts through the site.

### 3.4.2 Objective

The site's streets should create a safe, pleasant and welcoming pedestrian realm.

#### Guidelines

- i. Façade-to-façade dimensions should be no wider than necessary.
- ii. Sidewalks should be wide enough to be safe and inviting, and to accommodate street trees, pedestrian circulation, street furniture, and outdoor seating for restaurants where appropriate.
- iii. Any on-street parking should be parallel.
- iv. Service/loading areas should be below grade, and vehicular access to them should be discreet and out of sight.
- v. Travel lanes and curb cuts should be no wider than necessary.
- vi. Curb cuts should be designed to minimize impacts on the public realm, particularly on Binney Street, Broadway and Third Street.
- vii. Vehicular turnarounds and large drop-off facilities are discouraged. Drop-off/pick-up zones for ride-hailing services should be well thought out.
- viii. Bicycle facilities should be designed and located to provide safe travel for pedestrians and cyclists.
- ix. Vehicular traffic within the site should be slow, controlled by traffic calming measures such as raised crosswalks, woonerfs, etc.
- x. Street lighting should be provided by relatively low fixtures at frequent intervals.
- xi. Reinforce the public space of the street with aligned and continuous curb-side street trees.
- xii. Streets should be enlivened by the ground floor uses in the buildings that border them. Retail and/or community spaces should be continuous on primary building frontages wherever possible.
- xiii. On retail streets, the pedestrian scaled zone should extend from the curb to the façade of the building, and in some cases into the building. This zone could be defined by such elements as shade trees, street furniture, outdoor dining, canopies, recessed ground floor entrances, display windows, and loggias.
- xiv. On residential streets, the pedestrian scaled zone should transition between the public and private realms with the use of shade trees, sidewalks, stoops, porches, trellises, and/or small fenced yards.
- xv. Outdoor seating areas for cafes and restaurants, bicycle parking racks, street furniture, etc. should be arranged as a compact linear zone, so as to leave a clear pedestrian travel zone.

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### 3.5 Universal Access

#### 3.5.1 Objective

The design of buildings and outdoor spaces (public and private) in and around the site should place special emphasis on universal access.

#### Guidelines

- i. Ensure that outdoor spaces provide comparable facilities for all people regardless of their ability to climb steps.
- ii. Ensure that parks and plazas provide facilities serving people of all ages.
- iii. Provide wayfinding signage throughout the site, and create direct accessible connections, to make mobility among destinations more convenient and efficient.
- iv. Ensure that streetscape elements do not conflict with accessible parking.

### 3.6 Building Service, Vehicular Access, and Parking

#### 3.6.1 Objective

Design and locate loading/servicing areas and parking to support the quality of the pedestrian experience.

#### Guidelines

- i. Entrances to parking facilities and service areas should be coordinated with and not negatively impact adjacent development. Vehicle entries should be appropriately screened from public open space corridors, and integrated into the building forms to minimize visual impacts.
- ii. Avoid creating loading servicing areas exceeding two bays or 30 feet wide.
- iii. Loading bays should be provided with architectural doors designed to complement the overall façade composition.
- iv. Where possible, consolidate and coordinate off-street loading areas and service roads serving multiple buildings.
- v. Occupied ground level spaces with windows should occur between loading/ servicing areas wherever possible to help diminish their impact.
- vi. Locate parking primarily below grade.
- vii. Consider linking service to multiple buildings with shared underground routes so as to minimize at-grade delivery traffic.

### 3.7 The New Volpe Building's Site

#### 3.7.1 Objective

The landscape design of the new Volpe Building's site should be as seamlessly continuous with the landscape design of the rest of the site as possible while providing required security for the building.

#### Guidelines

- i. Maximize public access and permeability of the Volpe Building's site.
- ii. The design of vegetation, paving, lighting, and furniture should be coordinated across the overall site.
- iii. Vehicular barriers at the security perimeter should be integral parts of the site design, and enhance the beauty and public usability of the site.
- iv. Exhibits related to the Department of Transportation's mission, both within the building and on its site, should be considered.
- v. Look for potential synergies between the amenities and programmatic uses of the Volpe site, e.g. daycare facilities, and those of nearby publicly accessible open spaces.

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- vi. Service yards and other paved surfaces should be as small as possible, and should not undermine highly desired and sensitive pedestrian routes. Large vehicular areas such as service yards should maximize the use of permeable pavers.
- vii. Employee parking spaces should be below grade.

### 3.8 Environmental Comfort

#### 3.8.1 Objective

Open spaces, and the buildings that frame them, should be designed to minimize undesirable environmental impacts.

#### Guidelines

- i. Shadow
  - a. Building form should defer to open space through appropriate step-backs.
  - b. Locate and design buildings to minimize shadows on existing and proposed open spaces.
  - c. Configure park space to maximize solar access, while balancing the need for logical pedestrian circulation and spatial organization of new buildings.
- ii. Solar Glare
  - a. Where applicable, consider potential impacts of reflective solar glare on streets, public open spaces and pedestrian areas, including the potential for visual impairment or discomfort.
- iii. Wind
  - a. Design and shape new buildings and open spaces to minimize negative wind impacts on streets and public spaces. Minimize the use of wind screens and landscaping within open spaces as mitigation strategies.
- iv. Vegetation
  - a. Provide additional vegetative cover, improve stormwater infiltration, and reduce urban heat island effects. Both at-grade and rooftop vegetation should be considered.
  - b. Special consideration should be given to preservation of existing, large trees including relocation of healthy trees.
- v. Noise and Lighting
  - a. Mechanical noise should not impact the quality of life, either at ground level, or in residences. Design, select, locate, and acoustically screen equipment to protect neighbors from noise impacts.
  - b. Lighting in buildings, especially those with late-night uses, should be carefully designed to minimize light pollution that could impact nearby housing/hotel residents.
  - c. Rooftop lighting should be avoided except where necessary
- vi. Exhaust and Mechanical Equipment
  - a. Kitchen exhausts for food service uses should not negatively impact the ground level pedestrian experience.
  - b. Mechanical/utility rooms are not appropriate along major streets and should be located on secondary streets. There should be no exterior transformers or electrical switchgear.

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**4.0 BUILT FORM****4.1 Introduction**

The site's architecture should follow a very high standard of design excellence, using materials and detailing appropriate to the building type and location. Considerations include site and building organization, relationship to other buildings, massing, scale, proportion, rhythm, unity and expression, architectural ambition, architectural language, and aesthetics. Incorporate innovative technologies and sustainable design principles, and design for flexibility and adaptability.

**4.1.1 Objective**

Architectural form should define urban space. It should enhance the quality and amenity of the public realm and sense of place, create legible and meaningful public places, and reinforce Kendall Square's existing and proposed street and open space patterns.

**Guidelines**

- i. Create a rich and varied, humanly scaled building with a continuous ground level pedestrian realm.
- ii. Create strong streetwalls to frame streets, parks, squares, and plazas.
- iii. Mitigate building bulk to minimize adverse impacts on the microclimate, including shadows, wind, and urban heat island effects.
- iv. Make positive contributions to the Cambridge skyline and important views.
- v. Establish consistency in façade design and massing to create a strong urban pattern.
- vi. Look for opportunities to enrich that pattern by breaking or modulating it: respond to elements of adjoining buildings, spatial axes, views, significant corners, etc., or to elements of the building's own structure or program.

**4.1.2 Objective**

The site's buildings should reinforce the site's varied urban conditions.

**Guidelines**

- i. Differentiate massing and materials, color, fenestration, bay patterns, etc. on the different facades of buildings in response to the varied types and character of streets and other open spaces adjoining the different sides of the buildings.

**4.1.3 Objective**

The site's buildings should respond to a wide range of scales: intimate pedestrian, intermediate streetscape, and long-distance skyline views, and to the scale and use of existing neighboring buildings.

**Guidelines**

- i. Incorporate elements such as upper floor step-backs, or sensitively incorporate similar materials, and the architectural rhythm, bay size and scale of nearby structures into the new structures.
- ii. Break down building massing to prevent a monolithic appearance and promote a human-scaled presence.
- iii. Depending on their heights, buildings should consist of up to four different, but integrated zones.
  - a. **The Pedestrian Frontage Zone** – the building's ground floor, and often its second floor, accommodating pedestrian focused retail and community program.
  - b. **The Streetwall** – the building's lower 3 to 8 floors above the pedestrian zone
  - c. **The Tower** – the floors above the streetwall, generally repetitive vertically and accommodating much of the building's floor area.

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- d. **The Building Top** – the expressive element on the skyline, accommodating building mechanical systems and potentially other programmatic elements.

The four zones perform very different roles in creating urban space and pedestrian amenity; the following guidelines differ accordingly.

## 4.2 Pedestrian Frontage Zone

Buildings should directly relate to the pedestrian realm and reinforce activity at the ground plane by providing easy access to retail and community functions. Ground floor (and second floor) facades should especially enrich public open space, and public or private passageways that connect with that open space.

### 4.2.1 Objective

Create a welcoming pedestrian environment by maximizing retail and community functions to directly engage pedestrians, and by minimizing detrimental impacts on the pedestrian experience.

#### Guidelines

- i. Building frontages devoted to banks, trust companies or similar financial institutions should be limited to approximately 25 feet. Larger floor areas can be devoted to bank uses when fronted with other active retail uses.
- ii. Commercial and residential lobbies are expected to consist of no more than 25 feet of frontage.
- iii. Accommodate the access needs of all users, and incorporate 'visitability' measures where possible.
- iv. Where retail is not provided as part of original construction, ground floor spaces on major public streets should be designed to accommodate retail in the future with:
  - a. Adequate floor-to-floor height (e.g. 15-20 feet) to allow food-oriented uses, with ducted ventilation, etc.
  - b. Leasable ground floor depth from façade averaging 40 feet where possible.
  - c. Ground floor level flush with or easily accessible from sidewalks.
  - d. Ground floor façade readily convertible to retail storefronts.
  - e. Venting and exhaust needs of food service uses accommodated.
  - f. Services such as interior power and HVAC zoned or easily convertible to enable convenient division and sublease of interior spaces to retail tenants.
- v. At Ground Floors of Residential Buildings
  - a. If programmatically feasible, building facades should incorporate multiple entrances to activate the street. Where appropriate, design buildings with individual units and front doors facing the street.
  - b. Residential buildings should attempt to accommodate active, ground floor uses that will enliven pedestrian activities.
  - c. On streets with existing rowhouses and individual entries include row house units on the lower levels of new multi-family buildings to create a rhythm of entrances and create a residential feel.
  - d. In parts of the street level façade that do not include residential units (e.g. common rooms and lobbies), incorporate 40 to 60 percent transparent glazing in the ground level façade with direct views between sidewalk and interior building spaces to expand the apparent width of public space at ground level.

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**4.2.2 Objective**

Provide shelter and visual interest at the pedestrian scale, and emphasize the horizontal continuity of the public realm.

**Guidelines**

- i. Break up the scale of the pedestrian frontage zone. Create variation in façade treatment at an intimate scale, variations such as angled display windows, recessed entrances, awnings, changes in mullion patterns, incorporation of operable windows, use of varied materials for solid walls, etc.
- ii. Distinguish the pedestrian frontage zone from the streetwall and tower zones above.
  - a. Provide a high percentage of glazing, different materials or colors, and more detailed development of solid wall surface.
  - b. Ground floors should have ample floor-to-floor height, greater than that of the building's typical floors.
- iii. Ground floor facades should allow flexibility to accommodate changing uses.
- iv. Where the façade expression of the pedestrian frontage zone includes the building's second floor, the second-floor façade should be visually connected with the ground floor façade, differentiated from the Streetwall Zone above by its design, or serve as a mediating element linking the ground floor and the streetwall zone.

**4.2.3 Objective**

Reduce the distinction between exterior and interior space at the ground level to extend the effective public realm indoors and to reveal indoor activity to the street.

**Guidelines**

- i. All retail/restaurant/first floor tenant spaces should preferably be at the same level as the adjoining sidewalk or publicly accessible open space.
- ii. Building facades should maximize the visibility of ground floors containing retail, restaurant, and limited office space. Transparency is most important in the portion of the facade between about 2 feet to about 10 feet above the sidewalk level. Incorporate 60 to 75 percent transparent glazing in ground level façades along Broadway, Binney Street and Third Street and major public streets within the site, and as much transparent glazing as possible in ground level façades along secondary streets within the site.
- iii. Future additions of storage rooms, toilets, restaurant kitchens, and other back-of-house facilities could limit transparency. Locate these areas to maximize visibility and transparency where it is desirable.
- iv. Window and door glazing should have a high degree of light transmittance and should be low reflective. Low iron glass is preferred to maximize visibility between interior and exterior spaces.
- v. Incorporate large operable doors/windows in street-side restaurant dining rooms.
- vi. Where appropriate, retail awnings should be provided to offer an active, vital marketplace image, while at the same time protect pedestrians during inclement weather.
- vii. Avoid creating blank walls exceeding 20 feet in length.

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**4.3 Streetwall Zone:** the building's lower 3 to 8 floors above the pedestrian zone, accommodating commercial or residential program, and playing a major role in defining the street as a linear volumetric space.

#### 4.3.1 Objective

Building streetwalls should create beautiful and memorable room-like urban places by spatially defining the width and perceptual height of streets and other open spaces.

#### Guidelines

- i. Emphasize the scale and room-like character of urban space by aligning building facades with each other, by step-backs of building mass above the streetwall, and by incorporating cornice lines that complement existing buildings on the same block or neighboring blocks unless specified otherwise in a PUD/Special Permit conditions by the Planning Board. Setbacks and cornice lines should relate to each other but can vary, where appropriate, to allow for overall urban design emphasis/richness.
- ii. Permissible streetwall exceptions, subject to design review, include, but are not limited to, bay windows, entrance canopies, and at-grade open space amenities.
- iii. Streetwall facades should use rhythmic patterns, carefully considered bay dimensions, detail, proportion, color, materials, and other architectural elements to create a coherent and visually rich pedestrian experience.
- iv. In counterpoint to the generally repetitive nature of the streetwall, portions of facades may be differentiated to capitalize on significant visual axes, emphasize significant corners, express changes in interior program, or articulate primary building entrances.
- v. Streetwall facades should differentiate between primary streets and open spaces, and secondary streets by such means as differing levels of articulation and relief and changes of material or scale.
- vi. The streetwall should be warm and inviting, and should include a variety of human-scaled materials.

**4.4 Building Towers:** the floors above the streetwall, accommodating much of the building's gross floor area.

#### 4.4.1 Objective

Building towers should enhance the quality and amenity of the public realm and sense of a cohesive place by their form and external appearance. They should be designed to minimize their sense of bulk, and to maintain vertical emphasis and continuity.

#### Guidelines

- i. Articulate tall buildings to avoid a monolithic appearance, and emphasize slender, vertically-oriented proportions. Changes in plane, material, fenestration pattern, color, etc. may be used to break up the bulk of building towers. Consider:
  - a. Emphasizing corners using taller elements such as towers, turrets, and bays.
  - b. Using at least two distinct finish materials and colors on each building.
  - c. Variation in forms to present different profiles to different vantage points, if appropriate.
- ii. Orient slab towers to minimize their sense of bulk on the site, or design tall buildings as point towers

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**4.5 Building Tops:** the building's expressive contribution to the skyline, screening and accommodating building mechanical systems and potentially other programmatic elements.

#### 4.5.1 Objective

Building tops should contribute to the district's profile on the skyline and should be designed as expressive architectural elements that appropriately celebrate the building's union with the sky.

#### Guidelines

- i. In general, chimneys, water towers, mechanical equipment, elevator bulkheads, skylights, and other necessary features appurtenant to structures, which are usually carried over roofs, should be designed in a coordinated, distinctive architectural manner in concert with the upper floors of the building and properly screened.
- ii. The penthouse design and materials should be of equivalent quality to the rest of the building and enhance the overall building design.
- iii. All mechanical penthouses and other projections should be architecturally integrated within the overall form and individual elevations of the building. The penthouse should enhance, not detract from, the overall building appearance and balance.
- iv. Rooftop mechanical vents and exhaust shafts may be designed to stand out as machinery, in which case they should be carefully arranged to create a pleasing visual image and rhythm.

## 4.6 Building Massing

The three-dimensional form of the site's buildings should contribute to the definition of the site's open spaces, with particular emphasis on harmonious, architecturally integrated building forms that create a varied yet coherent pedestrian realm, and on minimizing the amount of shading and loss of sky view in open spaces.

#### 4.6.1 Objective

Building massing should give spatial definition to the site's streets and squares, and increase the compatibility of tall buildings with existing nearby buildings.

#### Guidelines

- i. Pedestrian frontages should align on the build-to line, with exceptions for recessed retail or other entrances and shopfronts.
- ii. Streetwalls should align to the build-to line for 80% or more of the façade width.
- iii. Streetwalls throughout the site should generally be compatible with the height of the Third Square Residential Complex.
- iv. A taller streetwall may be appropriate on Broadway and Third Street and on wide streets.
- v. Buildings on Binney Street should have streetwalls compatible in height with the existing residential building on its north side.

#### 4.6.2 Objective

Buildings should incorporate a system of setbacks and step-backs, based on the four horizontal zones, to minimize the extent of cast shadows, loss of sky view, and undesirable wind conditions in the adjacent public streets and open spaces, and to create sensitive transitions to neighboring uses, especially to residential buildings, historic structures, and parks. Of particular concern are the Sixth Street Walkway, open space in the interior of the site and (depending on the ultimate scheme) the open space at the intersection of Broadway and Third Street. In addition, the height and bulk of buildings should be configured to minimize the visual dominance of building towers above a 6-8 story building base and above nearby low buildings.

#### Guidelines

- i. 50 - 80% of tower frontage should be set back 8 - 10 feet from the streetwall with greater setbacks provided at open spaces, the Sixth Street walkway and the Third Square apartments.



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- ii. On towers greater than 100' in horizontal length, create vertical zones, differentiated by changes in plane of at least 8', to divide the building mass into major distinct building elements. In addition, change materials, fenestration pattern, or plane, etc. to mitigate the sense of bulk.
- iii. In some cases, the direct extension of the tower's verticality through the streetwall to the ground plane may enhance the sense of place by creating a point of strong vertical emphasis.
- iv. Building towers adjacent to the Third Square Residential complex should be stepped back a minimum of 15' from their streetwalls.
- v. In addition to stepbacks, reinforce the distinction between the building's streetwall and tower by the use of contrasting strategies of homogeneity and heterogeneity. Vary the design, scale, color, materials, massing, fenestration, etc. across the width of the streetwall or tower as vertical zones.
- vi. Building Tops that are differentiated in material and design from the façade of the tower or streetwall below should be stepped back a minimum of 5' from the plane of the tower façade.
- vii. Floorplates of the upper portions of tall buildings should be limited to create slender towers and consideration should be given to stepping back the upper portions of buildings to maximize sunlight bathing public spaces. Adequate separation should be maintained between tall buildings above the streetwall to allow for views of the sky.

### 4.7 Connectors

#### 4.7.1 Objective

Upper-floor connections should be considered only in circumstances where tenants need large floorplates that would otherwise result in excessive apparent building mass. Such connectors should be designed to maintain permeability of large floorplate buildings and allow light and views of the sky.

#### Guidelines

- i. All connectors should be recessed from public spaces and made highly transparent.
- ii. Within blocks:
  - a. Set back connectors at least 35' from public street façade
  - b. Provide ground level public passage at selected locations
- iii. Over promenades or pedestrian walkways:
  - a. Set back connectors at least 35' from public street façade
  - b. Provide approximately two stories or more clearance above ground
  - c. Connectors should be no more than 20' wide
- iv. Connectors between multiple tenants/uses in different buildings are not encouraged.
- v. Connectors over public ways are discouraged and are not allowed across Binney Street, Broadway, or Third Street.

### 4.8 Community Spaces

#### 4.8.1 Objective

Community spaces should be designed to be welcoming and inviting to the public.

#### Guidelines:

- i. Primary community spaces should be located on or within parks or squares to enhance visibility and pedestrian access, and permit overflow from events.
- ii. Community spaces should have their own distinct visual identities. Their main entrances should be directly accessible from streets and other public open spaces.

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## 4.9 Architectural Character

The site's buildings should maximize design quality and be compatible with the best existing buildings in Kendall Square, and surrounding historic streetscapes and buildings. They should create a beautiful and engaging environment by combining diversity and harmony with a strong sense that the site's buildings are part of a community.

### 4.9.1 Objective

Architectural design should prioritize the definition and enrichment of open space. Of particular importance is the treatment of the ground plane and lower floors of the projects, which can be seen and experienced directly by the public.

#### Guidelines

- i. Scale/Proportion of Elements:
  - a. Projects should relate to human dimensions and provide a sense of intimacy in all aspects of design from building concept development to construction details.
  - b. Means to achieve this include the design and scale of building elements, such as size, rhythm and depth of windows; materials; cornices; projecting bay windows; expressed structural bays; entry points, signage; etc.
- ii. Details:
  - a. Development bordering the public domain should be rich in architectural details, pay special attention to the ground plane and silhouette.
  - b. Overall form and individual elevations should be designed to emphasize human scale and presence through the use of properly proportioned features, including but not limited to punched windows, integral balconies, setbacks, passageways, etc.
- iii. Materials:
  - a. New buildings should be warm and inviting, particularly at the lower levels experienced closely by pedestrians. This should be achieved through the use of a rich variety of materials.
  - b. Choice of materials should also consider sustainability requirements. The highest quality of materials should be used at the pedestrian levels and base (6-8+ stories) of all buildings.
  - c. Particular attention to these materials should be given to the base and lower floors on major streets and open spaces within public view.
- iv. Facade Articulation:
  - a. Elegant highlights and subtle embellishments such as masonry stringcourses, lintels, sills and trim should be used to soften, refine and enliven masonry facades through contrasting articulation and cast shadows, and to create a desirable community of buildings.
  - b. Key locations for articulation are at building entries, corners, building setbacks, top floor and silhouette.
- v. Balconies and Terraces:
  - a. New residential buildings should provide sheltered and human-scaled balconies at appropriate locations.
  - b. Balconies should be detailed so that they are inviting, especially adjoining open space.
- vi. All new buildings are encouraged to provide accessible terraces at building setbacks, both as important private amenities and for on-site rainwater retention.

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- vii. Color:
  - a. The city encourages the subtle use of warm and inviting color in all buildings.
- viii. Windows:
  - a. Masonry openings and fenestration systems should be detailed and articulated to enrich the building's appearance.
  - b. For reasons of public health, aesthetics and future energy concerns, the city desires operable windows to be used throughout residential and community buildings, and where possible in commercial buildings.
  - c. Strip windows are discouraged.
  - d. Vision glass that is reflective or colored is discouraged.
  - e. Predominantly glass façade buildings are discouraged. For aesthetic and sustainability reasons buildings should be a maximum of 50% glazed overall.
- ix. Signs:
  - a. In general, signs should be designed to fit well on the buildings, to be legible but not overpowering, and to complement other elements applied to buildings, such as awnings, canopies, or artwork.

## 4.10 New Volpe Building

### 4.10.1 Objective

The new Volpe Building and grounds should be part of the community of buildings and open space on the site.

#### Guidelines

- i. Its design should follow these guidelines wherever possible.
- ii. It should be as compact as possible to minimize the amount of open space within its security zone.

## 4.11 Energy Performance and Embodied Energy

### 4.11.1 Objective

The site's buildings should be designed to minimize energy use and the embodied energy of their components.

#### Guidelines

- i. Maximize on-site power generation and consider alternative building mechanical systems.
- ii. Avoid excessive use of glass both for its poor thermal performance and high embodied energy.
- iii. Incorporate passive design strategies such as building orientation, external shading, operable windows, and other approaches for natural ventilation/cooling.
- iv. Maximize the thermal performance of building envelopes, such as use of thermal mass, high performance insulation, etc.
- v. Design roofs to be "solar ready" and smaller setbacks as accessible terraces.
- vi. Employ green roofs where possible, otherwise use high-albedo "white roofs".
- vii. It is recommended that energy modeling be incorporated early in the architectural design process to optimize building energy performance.
- viii. Designers should investigate the possibility of a district energy system.