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# CITY OF CAMBRIDGE

Community Development Department

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To: Planning Board

From: CDD Staff

Date: March 31, 2021

Re: Special Permit PB-368, Volpe PUD – 55 Broadway (parcel address: 33 Broadway, 2 Potter Street, 20 Potter Street, 156 Linskey Way, 220 Binney Street, 60 Sixth Street, 182 Binney Street)

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Submission Type: PUD Special Permit Application

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Applicant: Massachusetts Institute of Technology (MIT)

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Zoning District(s): Business A (BA); Residence C-2B (C-2B); Office 2 (O-2); PUD-KS; PUD-7

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Proposal Summary: Redevelop the Volpe Exchange Parcel into a mixed-use center including residential, retail, office and laboratory buildings, as well as a Community Center.

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Special Permits Requested: PUD-7 Special Permit (Section 13.102) and Project Review Special Permit (Section 19.20) *A summary of the applicable special permit findings is listed on the following page. Applicable sections of the zoning are provided in an appendix.*

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Other City Permits Needed: PTDM Plan

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Planning Board Action (first hearing): Preliminary determination of approval (with requests for additional information or modification) or disapproval of PUD Development Proposal

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Memo Contents: Summary of approval process. Review of area planning and zoning, comments on proposal addressing planning, zoning, and urban design.

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Other City Staff Reports: Traffic, Parking and Transportation Dept. (TP+T), Department of Public Works (DPW), in separate documents.

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## **PUD Review Process**

This proposal is seeking a new PUD special permit (PB-368) subject to PUD-7 regulations. The applicant has submitted a Development Proposal including the following plan components required by the PUD-7 zoning:

- Site Development;
- Site Massing;
- Parking and Loading;
- Connectivity;
- Open Space;
- Ground Floor and Activation;
- Housing;
- Phasing;
- Sustainability;
- Transportation;
- Environmental Comfort; and
- Architectural Character.

In evaluating each of these plans, the Planning Board is guided by the following controls and the PUD-7 Special Permit Criteria, summarized in the table below.

Following a public hearing, the Planning Board considers whether the Development Proposal generally conforms with the zoning and with the City’s policies and plans for the area and makes a Preliminary Determination:

- A positive Preliminary Determination means that the Applicant may proceed with the submission of a Final Development Plan. The Preliminary Determination should include any requested additional information, further refinements, or changes to be incorporated into the Final Development Plan.
- A negative Preliminary Determination constitutes denial of the PUD special permit.

After holding a public hearing on the Final Development Plan (if the proposal proceeds to that stage), the Planning Board can make a final decision to grant or deny the PUD special permit along with any other requested special permits, including (in this case) the Project Review Special Permit requirements of Article 19.000, which require studies of transportation, utility, and environmental impacts. The Planning Board may require additional mitigation as a result of the findings of these studies.

The PUD-7 zoning allows development to be permitted as a “master plan,” meaning that it contains multiple building sites, open spaces, streets, and other components built in phases over time. The PUD special permit would include detailed conditions to govern how the development plan would proceed over time, including a design review and approval process for buildings and other site improvements, and procedures for modifying the development plan in the future.

The following are summarized findings for a Preliminary Determination on a Development Proposal and the planning objectives for development in the PUD-7 district:

<b>Requested Action</b>	<b>Summarized Findings</b> (see appendix for zoning text excerpts)
Preliminary Approval of a PUD Development Proposal (Section 12.35.3)	<p>The PUD Development Proposal:</p> <ul style="list-style-type: none"> <li>• Conforms with general PUD development controls and district development controls</li> <li>• Conforms with adopted policy plans or development guidelines for that portion of the city</li> <li>• Provides benefits to the city which outweigh its adverse effects, considering:                             <ul style="list-style-type: none"> <li>○ quality of site design</li> <li>○ traffic flow and safety</li> <li>○ adequacy of utilities and other public works</li> <li>○ impact on existing public facilities</li> <li>○ potential fiscal impact</li> </ul> </li> </ul>
Referenced Policy Plans in the PUD-7 District (Section 13.91)	<p>Development shall be generally consistent with the policy objectives set forth in the then current <a href="#">Kendall Square ("K2") Planning Study</a> and <a href="#">Design Guidelines</a> (2013), the <a href="#">Planning and Design Principles</a> established by the City's Volpe Working Group (2017) and <a href="#">Volpe Site Design Guidelines</a> (2017), collectively, the "PUD-7 Guidelines and Principles."</p>
Objectives for PUD-7 Special Permit (Section 13.91.4)	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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,</li> </ul>

	<p>riverfront, Grand Junction corridor, other public spaces within Kendall Square, and the East Cambridge, Wellington-Harrington, and Port neighborhoods.</p> <ul style="list-style-type: none"><li>• 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.</li><li>• 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.</li><li>• 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.</li><li>• 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.</li><li>• Providing active ground floors that animate streets and open spaces, and add to the vitality of Kendall Square.</li><li>• 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.</li><li>• Enhancing the architectural diversity and aesthetic qualities of the PUD-7 District to harness the spirit of innovation and</li></ul>
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	<p>creativity in Kendall Square and reinforces a Cambridge sense of place.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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 <a href="#">Article 18.000</a> and <a href="#">Section 19.20</a> 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.</li> </ul>
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The complete set of findings for issuance of a special permit to be made at the public hearing on Final Development Plan are summarized below:

<b>Requested Action</b>	<b>Summarized Findings</b> (see appendix for zoning text excerpts)
Approval of a PUD Final Development Plan (Section 12.36.4)	<p>The PUD Final Development Plan:</p> <ul style="list-style-type: none"> <li>• Continues to conform to the criteria for approval of a Development Proposal.</li> <li>• Contains revisions to the Development Proposal in response to the Preliminary Determination.</li> </ul>
Project Review Special Permit (Section 19.20)	<ul style="list-style-type: none"> <li>• The project will have no substantial adverse impact on city traffic within the study area, upon review of the traffic impact indicators analyzed in the Transportation Impact Study and mitigation efforts proposed.</li> <li>• The project is consistent with the urban design objectives of the City as set forth in Section 19.30 (see below).</li> </ul>
General special permit criteria (Section 10.43)	Special permits will be normally granted if the zoning requirements are met, unless it is found not to be in the public interest due to one of the criteria enumerated in Section 10.43.

19.30 Citywide Urban Design Objectives (summarized)

Objective	Indicators
New projects should be responsive to the existing or anticipated pattern of development.	<ul style="list-style-type: none"> <li>• Transition to lower-scale neighborhoods</li> <li>• Consistency with established streetscape</li> <li>• Compatibility with adjacent uses</li> <li>• Consideration of nearby historic buildings</li> </ul>
Development should be pedestrian and bicycle-friendly, with a positive relationship to its surroundings.	<ul style="list-style-type: none"> <li>• Inhabited ground floor spaces</li> <li>• Discouraged ground-floor parking</li> <li>• Windows on ground floor</li> <li>• Orienting entries to pedestrian pathways</li> <li>• Safe and convenient bicycle and pedestrian access</li> </ul>
The building and site design should mitigate adverse environmental impacts of a development upon its neighbors.	<ul style="list-style-type: none"> <li>• Location/impact of mechanical equipment</li> <li>• Location/impact of loading and trash handling</li> <li>• Stormwater management</li> <li>• Shadow impacts</li> <li>• Retaining walls, if provided</li> <li>• Building scale and wall treatment</li> <li>• Outdoor lighting</li> <li>• Tree protection (requires plan approved by City Arborist)</li> </ul>
Projects should not overburden the City infrastructure services, including neighborhood roads, city water supply system, and sewer system.	<ul style="list-style-type: none"> <li>• Water-conserving plumbing, stormwater management</li> <li>• Capacity/condition of water and wastewater service</li> <li>• Efficient design (LEED standards)</li> </ul>
New construction should reinforce and enhance the complex urban aspects of Cambridge as it has developed historically.	<ul style="list-style-type: none"> <li>• Institutional use focused on existing campuses</li> <li>• Mixed-use development (including retail) encouraged where allowed</li> <li>• Preservation of historic structures and environment</li> <li>• Provision of space for start-up companies, manufacturing activities</li> </ul>
Expansion of the inventory of housing in the city is encouraged.	<ul style="list-style-type: none"> <li>• Housing as a component of large, multi-building development</li> <li>• Affordable units exceeding zoning requirements, targeting units for middle-income families</li> </ul>
Enhancement and expansion of open space amenities in the city should be incorporated into new development in the city.	<ul style="list-style-type: none"> <li>• Publicly beneficial open space provided in large-parcel commercial development</li> <li>• Enhance/expand existing open space, complement existing pedestrian/bicycle networks</li> <li>• Provide wider range of activities</li> </ul>

**Area Planning and Zoning**

**Site Context**

The approximately 10.4-acre development parcel is located in East Cambridge, bounded by Binney Street to the North, Third Street to the East, Broadway to the south, and the Loughrey Walkway and Kittie Knox Bike Path to the west. It is one block north of the Kendall Square MBTA station, approximately one block west of the Broad Canal, and one block east of the Grand Junction railroad.

Development in the area is characterized by large-scale commercial and laboratory buildings along Broadway; mid- and high-rise residential development to the north, south and east; institutional development to the south and a transition to smaller, more compact residential development to the north.

The current development on the site is the Volpe National Transportation System Center comprised of six (6) buildings totaling approximately 375,000 gross square feet. The site also contains two (2) surface parking lots with spaces for approximately 600 cars.

**Site Zoning**

The site is located within the Office-2 (O-2), Business A (BA), and Residence C-2B base districts and the Planned Unit Development at Kendall Square (PUD-KS) and Planned Unit Development 7 (PUD-7) overlay districts. The current development proposal seeks a special permit under the PUD-7 district requirements, which provides an alternative set of requirements for development plans that are reviewed and approved by the Planning Board following the procedures in Article 12.000 of the Zoning Ordinance.

Planned Unit Development (PUD) district zoning has been used to regulate development in many areas of East Cambridge and Kendall Square. PUD zoning provides additional flexibility in site planning for a large land area containing multiple parcels and buildings, and is balanced by additional requirements that help to fulfill area planning goals that are otherwise not found in baseline zoning.

The PUD-7 zoning was adopted by the City Council in 2017 and establishes the following development parameters:

<b>Uses</b>	<b>Max Gross Floor Area</b>	<b>Min Development Parcel (sf)</b>	<b>Max Building Height</b>	<b>Min Open Space</b>	<b>Min Parking &amp; Loading</b>	<b>Min Bicycle Parking</b>
Residential, office/lab, institutional and light industrial	3.25 million square feet, with additional limitations	25,000 square feet	Generally, 250', with taller heights possible to the south, and lower heights to the north	Minimum 25% of lot area	Article 6.000 with waivers by Planning Board possible	Article 6.100

Development under the PUD-7 zoning is also subject to the following additional requirements, which were established to support the City's planning goals for the Volpe site (see further below):

- A minimum of 40% of the total permitted GFA in a Final Development Plan must consist of residential uses, with phasing requirements for the sequencing of residential and non-residential development.
- A minimum of 65% of interior ground floors within a minimum depth of twenty feet from the principal front wall plane along Broadway or Third Street must be dedicated to Active Space (retail and similar storefront uses), which is also exempt from GFA limitations, up to 5% of the allowed GFA in the district.
- A minimum of 5% of GFA must contain Innovation Space (flexible commercial space for small companies and start-ups), half of which is exempt from GFA limitations.
- A Community Space must be included (also described in the Letter of Commitment that is associated with the PUD-7 zoning), which is exempt from GFA limitations.
- Of the required 25% open space, a minimum of two (2) acres in the aggregate must be guaranteed for public use.
- Off-street parking must be predominantly below-grade, and is subject to the following maximum ratios (minimum parking ratios may be waived by the Planning Board):
  - 0.8 spaces per 1,000 square feet of GFA for Office/Lab uses
  - 0.75 spaces per residential dwelling unit
  - 0.5 spaces per 1,000 square feet of GFA of retail uses
  - 1 space per 4 sleeping rooms for hotel uses
- No rooftop mechanical noise or vibration shall be detectable within one hundred (100) feet of the source.
- All new buildings in the PUD-7 district must achieve a minimum of LEED Gold, conduct a feasibility analysis for on-site energy generation or construction of co-generation facilities within the PUD-7 district, and employ green roofs or white roofs, in addition to the citywide standard Green Building Requirements.
- Contribution at a rate of \$10.00 per non-exempt, non-residential square footage prior to the issuance of a Certificate of Occupancy, to be used for transit improvements and community benefits.

Development is also subject to citywide development standards such as Inclusionary Housing and Incentive Zoning (requiring contributions to the Cambridge Affordable Housing Trust).

### ***Summary of Area Planning Studies and Design Guidelines***

Redevelopment of the Volpe site represents the culmination of several decades of planning and design initiatives by the City of Cambridge, which were discussed extensively at the time the PUD-7 zoning was adopted. The following is an overview of the most recent planning studies that have informed the planning and zoning of the PUD-7 district and are referenced in the zoning as components of the Planning Board's review of a Development Proposal.



Kendall Square “K2” Study (2011-2013)

The City’s “K2C2” planning effort, completed in 2013, consisted of parallel planning studies of Kendall Square and Central Square. The “K2” component of the study focused on areas in the heart of Kendall Square that were experiencing new development interest due to strong demand for office/lab space and limited capacity for growth within existing zoning limits. Surrounding areas, such as the Volpe parcel, were included in the plan.

K2 brought a lot of previous planning ideas forward and incorporated new goals and recommendations for the future development of Kendall Square. The following goals and objectives lie at the heart of the plan:

1. Nurture Kendall’s Innovation Culture

- Expand opportunities for Kendall Square’s knowledge economy to grow
- Foster a strong connection between the MIT campus and rest of Kendall square, while providing MIT the opportunity to develop in a way that is consistent with its academic and research mission and helps to further City planning goals and initiatives
- Support a vibrant environment for creative interaction

Three themes (below) working together to support this central theme of nurturing Kendall’s innovation culture.

2. Create Great Places

- Support open space and recreational needs
- Create lively, walkable streets
- Expand opportunities for Kendall’s diverse community to interact
- Development and public place improvements occur simultaneously

3. Promote Environmental Sustainability

- Expand convenient, affordable transportation choices
- Create a healthier natural environment
- Reduce resource consumption, waste and emissions
- Leverage the benefits of compact development

4. Mix Living, Working, Learning & Playing

- Support a mixed-use urban realm
- Focus development intensity around transit
- Minimize development pressure on traditional neighborhoods

In addition to these goals, K2 took a closer look at the Volpe site and offered potential redevelopment options, supplemented by urban design guidelines which set expectations for the built form of various

types of development. The study envisioned the Volpe site as being a center for research/office space as well as new housing.

K2 recommended zoning changes that would increase the development potential of Kendall Square while imposing new requirements to mitigate potential impacts and provide community-wide benefits. These zoning changes include:

- Parking maximums and enhanced Transportation Demand Management (TDM) measures
- New requirements for environmental sustainability and green building
- Housing development (including affordable housing) required and incentivized along with commercial development
- Active ground floor uses, with focus along major commercial corridors
- Inclusion of open space to expand the existing open space network
- Innovation space in new development to accommodate start-ups and small companies
- Funding contributions for area-wide improvements, such as workforce development programs, transit improvements, and open space programming
- Design guidelines to help inform the architecture and urban design of new development

After the completion of the K2 study, the City Council adopted zoning changes for MIT-owned land along Main Street (PUD-5 district, 2013) and the Kendall Center area controlled by Boston Properties and the Cambridge Redevelopment Authority (MXD district, 2015).

In 2014, the U.S. General Services Administration (GSA) announced that it would select a developer to construct a new Volpe Center facility on the 14-acre site. The GSA would retain the portion of the site with the new facility (about 4 acres) and the developer would take ownership of the remainder of the site to develop for private uses. In 2015, CDD proposed new zoning requirements for the Volpe site. The City Council did not adopt new zoning at that time, but the 2015 zoning proposal became the foundation for what was later adopted as the PUD-7 zoning.

#### Volpe Working Group (2017)

In 2016, the GSA announced that MIT was selected to be the developer of the new Volpe Center and to receive the “Volpe Exchange Parcel,” as the remainder of the site came to be known. In 2017, MIT re-initiated the rezoning process for the site.

As MIT began to discuss its plans, the City appointed a “Volpe Working Group” consisting of residents, business owners and other community stakeholders to work alongside CDD staff and urban design consultants to discuss a range of planning and urban design issues surrounding the redevelopment of the Volpe site, including topics like public space, ground floor activity, built form, sustainable design, transportation, and housing.

The outcome of this process was the [Volpe Working Group Planning & Design Principles](#), published in 2017, which built on the goals of the K2 study but also promoted planning goals of Civic Life, Connectivity & Permeability, Activation, Inclusiveness, Comfort, and Sustainability.

Continued collaboration among MIT, City staff, and the City Council resulted in the [Volpe Site Design Guidelines](#), which were completed at the time of adoption of the PUD-7 zoning. The planning and urban design work associated with the 2017 rezoning process established the following vision and goals for the redevelopment of the Volpe site:

- A vision that the Volpe site will be a unique “center of gravity” in the heart of Kendall Square, and will be a place that is memorable, delightful, comfortable, inviting and sociable through the design and programming of its buildings, streets, and public spaces.
- Development on the Volpe site will create a center for civic life by drawing in a diverse group of workers, residents, visitors and other stakeholders to its public venues and amenities.
- The Volpe site will enhance connections to the existing street and transportation network as well as surrounding neighborhoods, open spaces and activity nodes. It will be a walkable and navigable hub for the broader Kendall Square community, and will seamlessly integrate with the existing development pattern of the neighborhood.
- The Volpe site will provide a mix of commercial, residential, retail and recreational uses that are engaging, flexible, and support an active public realm.
- Volpe will be inclusive to all types of residents, businesses, and community stakeholders. Public spaces will feel comfortable and inviting to all who experience them.
- Volpe will be a leading example of sustainability, and be a flagship development for how the City will respond to the climate crisis.
- The new Volpe center will be designed and integrated into the rest of the Volpe district such that it will engage the public realm and appear as one unified network.
- Buildings, streets and public spaces will be designed to be human-scaled and contribute to the site’s overall sense of place. Buildings will be responsive to existing open spaces and site context. Buildings will be designed to be warm and inviting to pedestrians at the street level.

#### Letter of Commitment

Another result of community discussions at that time was that MIT agreed to certain commitments upon the City Council’s adoption of the PUD-7 zoning (set forth in a [Letter of Commitment](#)), that was incorporated by reference into the zoning. Those commitments are summarized below:

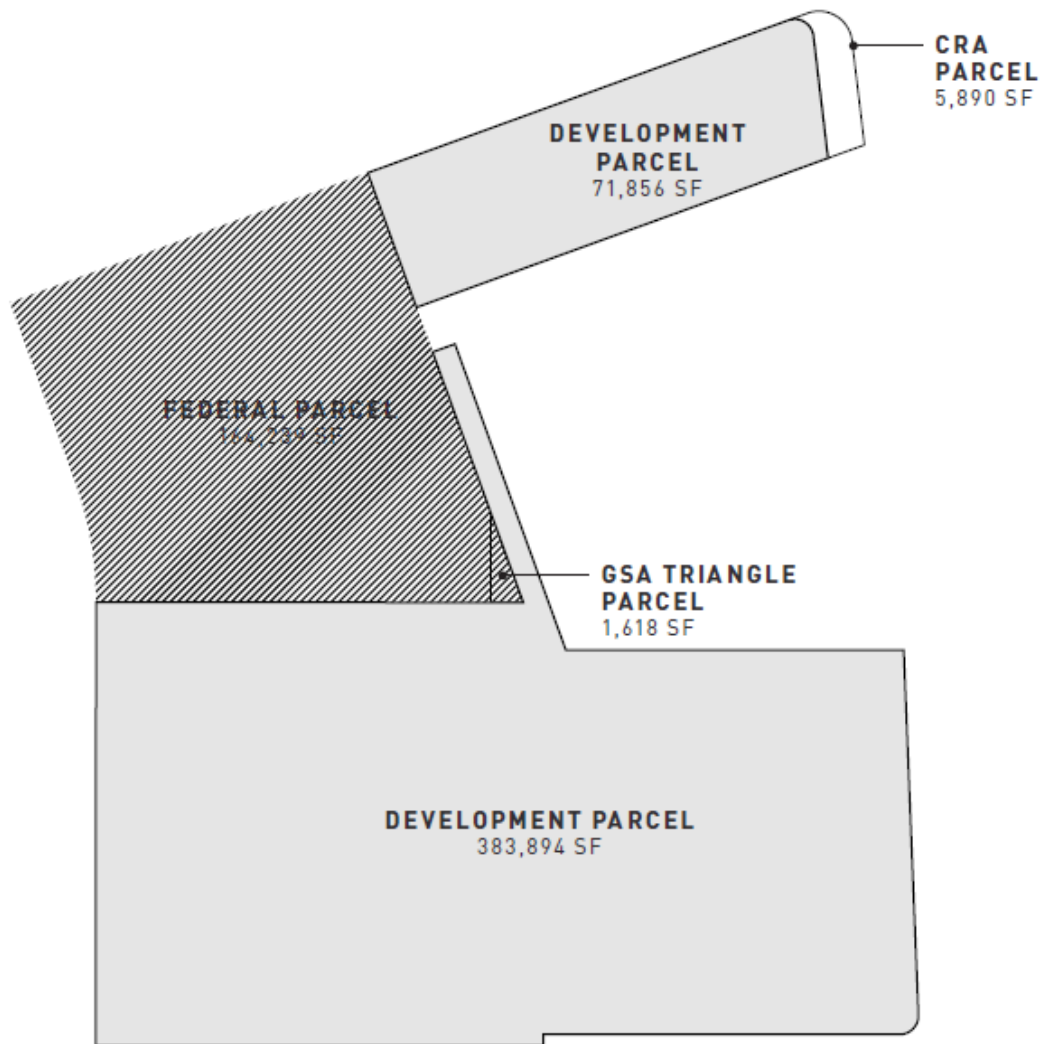
- Contribution to the development of the Grand Junction Multi-Use Path
- Development of a Community Center and creation of a Community Space Advisory Committee
- Development of new graduate student housing on MIT’s campus
- Creation of a Job Connector at 792 Main Street and funding for its ongoing operation
- Dedication of at least 20 middle-income units in the Volpe development

- A minimum of 5% of net floor area of residential uses dedicated to Innovation Housing Units
- Development of an Open Space and Retail Advisory Committee
- Ongoing community event programming
- Making all proposed Volpe buildings taxable, except for the Community Center
- Establishment of an Innovation Arts Program

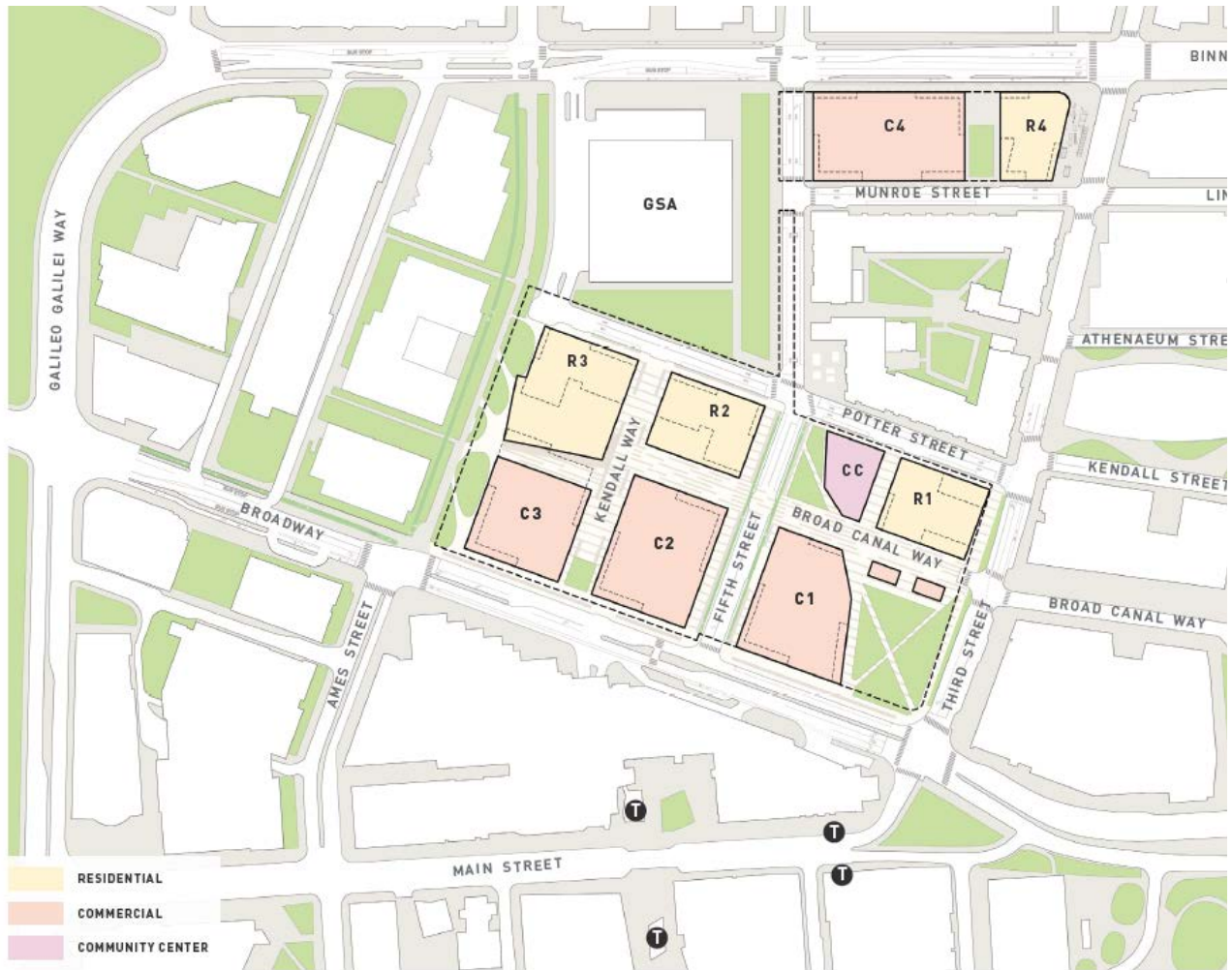
## Comments on PB-368 Development Proposal

### *Overview of the Proposed Development*

The Applicant is proposing a development parcel containing 455,750 square feet of land area. The development parcel specifically excludes 164,329 square feet of land area denoted as the “Federal Parcel”; 1,618 square feet known as the “GSA Triangle Parcel”; and 5,890 square feet at the southwest corner of Binney St and Third St known as the “CRA Parcel”.



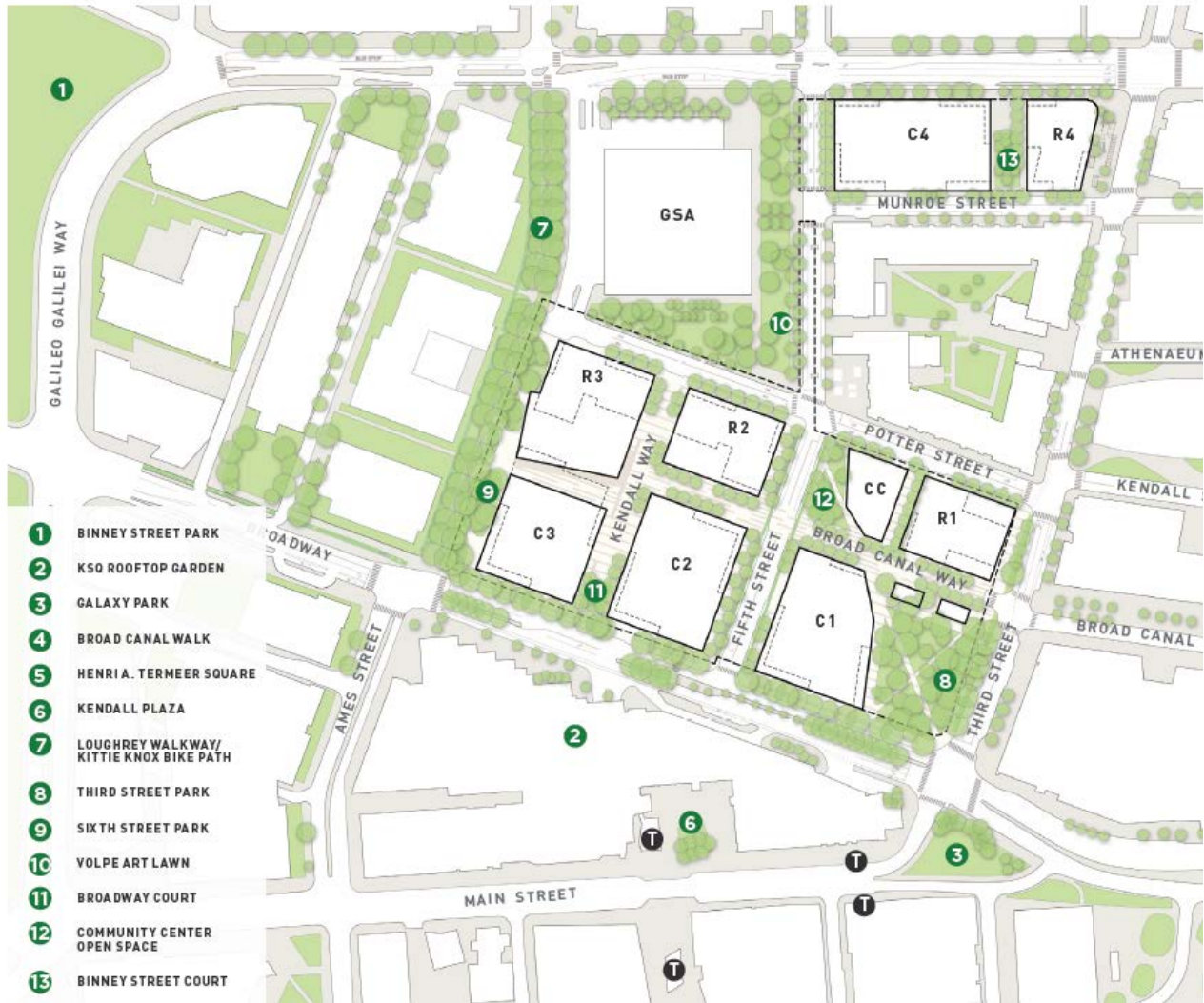
The development parcel consists of four (4) predominantly residential buildings (R1, R2, R3 & R4), four (4) predominantly commercial/lab buildings (C1, C2, C3 and C4), and a Community Center (CC) standalone building. The development also contains two (2) standalone retail pavilions along Broad Canal Way bordering Third Street Park, and an entertainment venue as part of R3. Ground-story retail, restaurant and consumer service uses are dispersed across the separate buildings, with concentrations located along Broadway, Broad Canal Way, and Third Street Park.



The Development Plan includes new street connections to the existing grid and throughout the site. Fifth Street is proposed to be a private way connecting Binney Street to Broadway. Potter Street is proposed to be extended as an east-west private way connecting Third Street to the south edge of the new GSA building. Broad Canal Way is proposed to be extended from Third Street westward to the Loughrey Walkway and Kittie Knox Bike Path, but is proposed to be a private way. A new north-south private way called Kendall Way will extend from Potter Street southward toward Broadway.



A number of new open spaces are proposed in the development plan. The largest proposed open space is a new park located at the northwestern corner of Broadway and Third Street, called “Third Street Park”. To the west of the proposed Community Center is an open space between the Community Center and the northeastern corner of Fifth Street and Broad Canal Way (“Community Center Plaza”). On the western side of the site, a linear open space is provided adjacent to the Loughrey Walkway and Kittie Knox Bike Path called “Sixth Street Park”. On the northeastern portion of the site, an open space called “Binney Street Court” is shown between the proposed C4 and R4 buildings.



Parking and loading are provided across the Development Parcel. The Development Plan is served by two underground parking garages: a North Garage consisting of 419 spaces, and a South Garage consisting of 1,457 spaces. On-street parking is proposed along many of the private ways within the development. Loading is organized on a building-by-building basis, with most loading entrances located along Kendall Way, Fifth Street, Potter Street, and Munroe Street.

***Analysis of Development Proposal***

Overall

The proposed Development Plan responds to several area planning goals and meets the dimensional standards set forth for Master Plans in the PUD-7 district zoning. Specifically, the site contains a balanced mix of uses between office/lab, residential, community space, and restaurant and retail spaces. The proposed Development Plan creates new connectivity through the Volpe site and establishes a regular street grid pattern that integrates with the existing street network. Generally, buildings are located along street edges and help to create street walls where pedestrian activity is encouraged and helps to reinforce an active public realm. Open spaces are dispersed throughout the site and vary in their size, design, and



planned programming. Off-street parking for vehicles is relegated to underground garages, away from public view. New housing comprises a significant portion of the development program and will help serve a broader need in East Cambridge and Kendall Square.

Along with these notable benefits, there are specific areas which may require a closer look or refinement before being finalized. A more detailed discussion of these issues is provided below.

**Major Development Controls**

**Uses.** The PUD-7 district permits a broad range of uses, including residential uses, office and lab uses, retail and consumer service establishments, institutional uses, hotel/motel uses and light industrial uses. The proposed Development Plan incorporates residential, office/lab, retail and consumer service uses, and community uses. Three commercial/lab buildings are located along Broadway and South of Broad Canal Way (C1, C2, and C3). North of Broad Canal Way and south of Potter are three residential buildings (R1, R2 and R3), and the proposed Community Center (CC). Along Binney Street to the north is a commercial building (C4) and a residential building (R4). Retail and consumer service uses are dispersed across building ground floors and in two standalone retail pavilions fronting the proposed Third Street Park. The following table illustrates the proposed uses and associated GFA:

Use Type	Proposed GFA (square feet)
Commercial (Office/Lab)	1,589,587
Innovation Space	167,326
Residential	1,128,000
Retail/Active Use	100,000
Community Space	20,000

One of the Planning Board’s considerations in evaluating the Development Proposal is whether the overall development plan provides an appropriate mix of uses and emphasizes retail uses and a strong street edge along Broadway and Third Street. Planning Board could consider whether the overall development program goes far enough to emphasize street activity along Third Street, or whether additional uses or improvements (such as additional retail pavilions) would help to meet the criteria identified above. As discussed further below, more information may be needed on the range of “Retail/Active Use” types that are proposed, to create clearer expectations for how that space might be used.

**Gross Floor Area (GFA).** The maximum permitted GFA in the PUD-7 district is 3,250,000 square feet, of which 400,000 shall be devoted to an “Other Government Facility” on a “Government Lot” (GSA Building on GSA Parcel). Further, if the Development Parcel excludes the Cambridge Redevelopment Authority (CRA)-owned parcel at the southwesterly corner of Binney Street and Third Street, then the total GFA is reduced to 3,220,000 square feet. The PUD-7 district contains a number of GFA exemptions as described in the previous section. The following table illustrates the total proposed GFA, the associated exemptions, and the net proposed GFA:

Proposed Use	Gross Floor Area (GFA)	Exemptions (SF)	Non-Exempt GFA	Permitted/Required	Compliant? (Y/N)
Commercial (Office/Lab)	1,589,587	0	1,589,587	N/A	Y

Innovation Space	167,326	83,663	83,663	N/A	Y
Residential	1,128,000	0	1,128,000	1,128,000 (min)	Y
Retail/Active Use	100,000	81,250	18,750	N/A	Y
Community Center	20,000	20,000	0	N/A	Y
<b>Total (not including Government Facility)</b>	<b>3,004,913</b>	<b>184,913</b>	<b>2,820,000</b>	<b>2,820,000 (max)</b>	<b>Y</b>

The proposed Development Plan meets the GFA requirements of the PUD-7 district, and the proposed uses complement one another and help to activate the public realm.

**Open Space.** The PUD-7 district requires that at least 25% of the land area within the PUD-7 district be devoted to open space, excluding any land designated as a Government Owned Lot. Further, the footprint of any standalone building devoted to Community Space may be applied to the open space requirement. The required open space must contain, at a minimum, two (2) acres which are permanently guaranteed for public use.

For a development parcel containing 455,750 square feet of land area, a minimum of 113,937 square feet must contain open space, and at least 87,120 square feet must be permanently guaranteed. The proposed Development Plan contains 156,944 square feet of open space, of which 87,120 is permanently guaranteed as public open space, which meets the minimum requirements.

The proposed open space is dispersed throughout the site. The following list provides an overview of some of the planned open spaces within the overall development:

Name of Open Space	Location	Size	Planned Program	Permanently Guaranteed? (Y/N)
Third Street Park	Northwesterly corner of Broadway & Third Street	Approx. 1 acre	Mix of large lawns, paved gathering spaces and shaded areas, bordered by kiosks and pavilions; intended to be used for seasonal markets, festivals and community events	Y
Sixth Street Park	Western edge of development parcel, running north-south	Approx. ½ acre	Children’s play areas, ancillary space for entertainment venue, linear walkway and path	Y
Community Center Plaza	Southeasterly corner of Potter & Fifth Street, next to	Approx. 0.4 acres	Passive recreation; community programming space for Community Center	Y

	proposed Community Center			
Entertainment Plaza	Western terminus of Broad Canal Way	Approx. 10,000 square feet	Support for ancillary activities of the Entertainment Venue	Y
Binney Street Court	Northern part of development parcel, between C4 and R4	Approx. 10,000 square feet	Temporary bike storage, passive recreation and pedestrian passageway	Y

The proposed Development Plan makes good use of the total site to provide an array of open spaces of varying sizes, shapes, and styles. One of the Planning Board’s criteria for approving a Final Development plan includes making a finding that the open space provided helps to reinforce a sense of community and civic engagement. More information in the Final Development Plan may be helpful to determine whether the proposed open spaces, particularly Third Street Park, will be designed and used as a place for civic engagement activity, or if they are more aligned with passive recreation and leisure.

**Housing.** The proposed Development Plan contains 40% of its total GFA as residential uses, which meets the minimum requirements of the PUD-7 district.

Inclusionary Housing requires 20% of the net residential floor area of each residential building to be affordable. Further, the applicant has committed to twenty (20) middle income units dedicated to those earning between 80-120% of Area Median Income (AMI). 5% of the total residential net square footage will be reserved for smaller footprint units meeting the definition of Innovation Units.

One criterion for granting approval for a Final Development Plan is that the residential component provides a mix of unit sizes that are affordable and appeal to families. Planning Board should consider seeking more information on the following housing elements:

- What is the planned distribution of unit types, sizes and associated amenities for each residential building?
- How will the residential buildings differ from one another in terms of design, character and identity?

**Building Height.** Generally, buildings within the PUD-7 district may be built up to 250’ in height, with specific increases and decreases in accordance with “height zones” that allow taller allowable heights closer to Broadway, and lower heights closer to Binney Street, as shown below:



The Development Plan illustrates the following building heights:

In granting approval to a Final Development Plan, the Planning Board must find that the proposed Development Plan refrains from “monotonous development” and that the design of buildings harnesses a “spirit of innovation and creativity,” with an overall design palette that reinforces context sensitivity and pedestrian linkages. Planning Board could request that the Applicant provide answers to the following questions:

- Are the proposed heights of the buildings illustrated, or the allowed zoning heights? If the latter, what are the actual planned heights of the buildings?
- Does the building massing illustrate allowable zoning standards, or the actual planned massing? If the latter, what is the actual planned massing of the buildings? How will they stray from monotonous development and help support varied and creative design?

Of the eight high-rise buildings proposed as part of this Master Plan, six are shown at the same height of 250'. The Community Center and retail pavilions are shown with a much lower building typology. While the buildings' massing fits within the allowable zoning standards, they contain little variation in height and massing from site to site. While individual buildings will be subject to design review and more unique approaches could be taken in their façade design, a more varied scale of building heights and massing shapes could be considered in the Final Development Plan to reinforce and support the criteria for eclectic, creative design.

**Parking and Loading.** Parking and loading requirements in the PUD-7 district generally follow Article 6.000 of the Zoning Ordinance, but the Planning Board may waive minimum required parking and approve shared parking arrangements among multiple uses in both parking and loading facilities. In the granting of a PUD Final Development Plan, Planning Board shall specify a minimum parking requirement.

In addition to parking minimums, the PUD-7 establishes parking maximums, as follows:

- Office/Lab uses – 0.8 spaces per 1,000 square feet of GFA
- Residential uses – 0.75 spaces per dwelling unit
- Retail uses – 0.5 spaces per 1,000 square feet of GFA
- Hotel/motel uses – 1 space per 4 sleeping rooms

Applying parking minimum requirements per Article 6.000 would equate to approximately 3,000 required spaces, while applying parking maximums per the PUD-7 district equates to approximately 2,400 spaces. The Proposed Development Plan consists of 1,876 total parking spaces; 419 of which are provided in an underground garage along Binney Street (“North Garage”), and 1,457 spaces are located in an underground garage in the center of the site (“South Garage”). Some on-street parking is proposed along the new street connections, but is not subject to zoning provisions for off-street parking.

Similar to parking, the PUD-7 district requires loading bays in accordance with Article 6.000 of the Zoning Ordinance, but the Planning Board retains the ability to waive any requirements in its approval of a Final Development Plan. In Article 6.000, there is no loading requirement for multifamily dwellings. Loading for office/lab buildings shall be provided at a rate of one space for the first 10,000 square feet; then 2 spaces at 100,000 square feet; and one additional loading space for every 200,000 square feet thereafter. Based on the development program proposed, the total loading requirement equates to ten (10) loading bays. The

proposed development plan includes fourteen (14) loading bays, which exceeds the minimum requirement in Article 6.000. Loading facilities appear to serve individual buildings, rather than being shared across the site.

**Bicycle Parking.** The PUD-7 zoning requires bicycle parking to be provided in accordance with Article 6.100 of the zoning ordinance. Applying the required rates to the proposed development program yields a total requirement of 2,162 bicycle parking spaces; of which, 1,862 must be long-term spaces and 302 short-term spaces. The proposed development plan includes 1,862 long-term spaces and 302 short-term spaces as required, for a total of 2,162 spaces.

**Active Uses.** Zoning requires a minimum of 65% of interior ground floors of buildings within a minimum depth of twenty (20) feet from a Principal Front Wall Plane directly fronting Broadway or Third Street shall consist of Active Space. Further, at least 25% of the required Active Space shall be devoted to Independent Retail Operators each occupying no more than 3,000 square feet of floor area.

The Applicant has proposed 120,000 square feet of “Active Uses,” of which 81,250 square feet would be exempt. The table below shows how this space is distributed among all but one of the various buildings proposed on the site. A 25,000 square-foot entertainment venue is proposed to occupy a large portion of one building in the interior of the site. Otherwise, there is little detail about how the space will be programmed. The Applicant has submitted a Retail Strategy Memo as part of the Development Proposal, which details various plans for attracting retail and consumer service uses to the site.

Staff from the Economic Development Division of the Community Development Department have reviewed the proposed plans and offer additional considerations for the Planning Board. The Applicant could provide additional detail as to where specific retail uses will be placed throughout the site versus other active uses, and what other active uses besides retail are being considered. To be consistent with area planning, retail uses should be concentrated along Broadway, Third Street, and the Broad Canal to support the current retail activity along these corridors.

Broad Canal Way is envisioned to be an active shared street where retail and consumer service uses can take advantage of the additional public realm space to “spill out” along the street and encourage active pedestrian activity. In order for this street to be programmed effectively, staff recommend that Broad Canal Way vehicle traffic be limited to delivery-only traffic at all times.

The Volpe Retail Strategy memo discusses a variety of recruitment strategies to support local, racially- and ethnically diverse retail owners within the Volpe site, which is commendable. To ensure a long-term, sustainable recruitment strategy, staff recommends the Applicant commit to utilizing the proposed recruitment strategies during any tenant turnover and vacancy in the future, rather than limiting these strategies to a first round of leasing.

**Innovation Space.** As stated above, the PUD-7 district requires a minimum of 5% of the total new GFA dedicated to Office/Lab uses in a Final Development Plan consist of Innovation Space. If less than 40,000 square feet of Innovation Space is required, then all of the Innovation Space must be in a single building; otherwise, it can be divided into units of no less than 20,000 square feet each. Generally, Innovation Space is reserved for smaller start-ups (no single entity can occupy more than 2,000 square feet or 10% of the entire Innovation Space, whichever is greater), includes shared resources, and short lease terms (approximately one month). The Applicant is proposing 167,326 square feet of Innovation Space, which

accounts for 10% of the total Office/Lab GFA and exceeds the 5% requirement. However, no information is provided as to how this square footage will be distributed across the proposed site plan, and in which building(s) this Innovation Space will be located.

<b>Figure A9: Use Distribution by Building Site</b>				
	<b>Residential SF</b>	<b>Commercial SF</b>	<b>Retail/Active Use SF</b>	<b>Total SF</b>
<b>R1</b>	261,000		11,000	272,000
<b>R2</b>	259,000		12,000	271,000
<b>R3</b>	386,000		25,000 (Venue)	441,000
<b>R4</b>	222,000		10,000	232,000
<b>C1</b>		447,700	20,000	467,700
<b>C2</b>		476,700	15,000	491,700
<b>C3</b>		467,100	7,000	474,113
<b>C4</b>		365,400		365,400
<b>CC</b>			20,000	20,000
<b>Total SF</b>	<b>1,128,000</b>	<b>1,756,913</b>	<b>120,000</b>	<b>3,004,913</b>
<b>Exempt Innovation</b>		(82,663)		
<b>Exempt Retail/ Active</b>			(81,250)	
<b>Exempt Community</b>			(20,000)	
<b>Total GFA</b>	<b>1,128,000</b>	<b>1,673,250</b>	<b>18,750</b>	<b>2,820,000</b>

**Phasing**

The Development Proposal does not describe the phasing of different components of the development, instead taking the approach that buildings will be designed and built according to market demands. Typically, a PUD Development Proposal will provide some general information about the sequencing of development on different sites, with flexibility to account for changing circumstances. One of the most important reasons to have a phasing plan is to clarify when key public benefits will be delivered in relation to other components of the development plan.

The zoning requires that 60% of the commercial development cannot be exceeded until substantial construction begins on residential development, and that commercial development cannot be completed until after construction has begun on all required residential development. Otherwise, project phasing is subject to Planning Board review and approval.

At a minimum, the phasing of the following key elements of the development should be described in relation to the sequencing of a Final Development Plan:

- Residential buildings
- Public open space
- Publicly accessible streets and connections
- Innovation space
- Community center

## **Sustainable Development**

This Development Proposal is subject to a few intersecting sets of sustainability requirements in zoning. The PUD-7 zoning requires a “Sustainability Plan” at the Development Proposal stage describing how the proposed development meets stated requirements and how it is responding to the City’s objectives for greenhouse gas reduction and climate change resilience at a high level.

Green Building Requirements (Section 22.20) apply to all projects of at least 50,000 square feet. The project must be designed to meet a LEED Gold, Passive House, or Enterprise Green Communities standard, and to include a Net Zero Narrative that studies aspects of a project’s energy performance, how it can be adapted in the future to neutralize greenhouse gas emissions, and an analysis of the feasibility and cost of installing an energy system that uses alternative and renewable energy sources compared to a fossil fueled energy system. In a PUD development with multiple building sites, information is first provided at a high level for the entire site, and then the requirements are applied to each individual building in an approved Final Development Plan at the design review phase.

Supplementary requirements in the PUD-7 zoning require each building design to incorporate the following:

- Conservation of building energy use, reduction of greenhouse gas emissions, evaluation of potential for on-site energy generation or the construction of co-generation facilities, and analysis of feasibility of connecting commercial buildings to the existing district steam system.
- Opportunities for potable water use reductions, storm water management using open spaces, use of storm water for irrigation purposes, and the ability to enhance indigenous plantings in and around the development site with design of buildings and outdoor spaces including vegetation such as canopy trees, green walls and other measures to reduce urban heat gain.
- Functional Green Roofs, high-albedo "white" roofs, or a functionally equivalent roofing system.
- Meeting the requirements of the Cambridge Building Energy Use Disclosure Ordinance.
- Measures to meet the city’s standards to address projected future flooding impacts.
- Measures to reduce urban heat island effects and identify interior and exterior spaces in designated locations to act as cooling areas.

### Site-Level Sustainability

Most of the sustainable design strategies would be employed in the design of individual buildings. At a site level, the Development Proposal includes a district-scale blackwater treatment plant and describes a system of load sharing between complementary buildings to maximize heat exchange and optimize energy performance.

The following site-level information would be helpful to the Board’s consideration of a Final Development Plan:

- Provide clarification or additional information for the district energy strategy of heating load sharing and connections between buildings. Specifically elaborate on how that would support development electrification effort.
- Elaborate further on the type of building infrastructure and systems that would be designed to accommodate future electrification at the building pre-design/programming level. Strive to achieve electrification of commercial building base load at time of construction.



- In addition to using recycled blackwater for cooling tower demand, clarify if that recycled blackwater would also be used for landscaped open spaces and buildings' green roof irrigation.

### Sustainable Building Design

The Development Proposal demonstrates how each building will meet the minimum Green Building Requirements by targeting USGBC registered LEED Gold certification. Commercial buildings will generally employ measures such as an integrated design approach, insulation, and efficient equipment selection to meet Stretch Energy Code standards. The residential buildings will pursue all electric systems with zero on-site emissions from fossil fuels. Because much of the detail is left to building-level design approaches, it will be important to conduct a more thorough Green Building Review during the design review of individual buildings.

The Green Building Report provides some discussion of the potential for measures for transitioning the project to net zero emissions in the future, including future net zero emission options for building envelope, HVAC systems, domestic hot water, interior lighting, and on-site and off-site renewable energy sources. The technical framework includes:

- Chiller plants of commercial buildings augmented with heat pump chillers.
- Gas boilers replaced with electric boilers.
- Future conversion to electric hot water system.
- Future conversion to higher efficiency heat pump systems for building heating and service water heating in the building with residential uses.
- Installation of photovoltaic panel array on the roofs.

The Green Building Report identifies some of these items as measures that might be further explored as individual buildings are designed and developed.

Staff encourages greater focus on the following aspects of sustainable design as the development moves forward, either at a PUD level or as elements of design review for individual buildings:

- Envelope Commissioning for residential buildings.
- Additional points for Optimize Energy Performance, Renewable Energy and Green Power & Carbon Offsets in Energy and Atmosphere category.
- Water use reduction in labs beyond LEED.
- Use principles of WELL & Fitwel certification criteria to complement LEED.
- Green roof and/or vegetative surfaces where feasible on buildings and on site.
- Maximize on and off-site renewable electricity production and pursue opportunities to pair on-site renewable energy with energy storage.
- Focus on social equity in pursuit of additional Innovation credits.
- Explore how embodied carbon will be effectively addressed.
- Use LEED 4.1 (or later edition of LEED) for all categories especially for Energy and Atmosphere credits in order to maximize energy performance. Where possible, use the latest edition of ASHRAE 90.1 (i.e., ASHRAE 90.1-2016) or later to demonstrate maximizing energy performance.
- Consider a lower u value for the vertical glazing.

## Urban Design Comments

The long-awaited development of the Volpe site is an extraordinary opportunity for Cambridge. The site, currently underutilized and largely inaccessible to the general public, separates the surrounding districts and neighborhoods. The proposed development will transform the existing superblock into a new mixed-use downtown district, organized by a permeable pattern of streets, blocks, parks, and plazas, activated by ground floor retail and community uses, and connected to the Cambridge neighborhoods to the north, south, east, and west. It will provide a variety of types and sizes of accessible green open space, provide a significant amount of housing, augment Cambridge's research facilities, and activate Broadway, Third Street, and Binney Street with new ground level retail and public amenities.

The project's new Third Street Park at the corner of Third Street and Broadway and its tall buildings along Broadway will be landmarks, announcing arrival to Cambridge and to Kendall Square. The permeability of the site created by the extension of the existing Broad Canal Way on the east side of Third Street into the site, the provision of Third Street Park, the new diagonal pedestrian path through the park into the site, and the extension of Fifth Street and Potter Street through the site will all enhance the project's connections with its context.

In general, the project aligns with the Principles and Design Guidelines created for the site by the Volpe Working Group:

- The site should feel welcoming to all residents of Cambridge, connected to its immediate surroundings and to the city as a whole.
- As an urban neighborhood with its own character, the site should complement Central Square and Harvard Square.
- In its role at the entry to Cambridge from the Longfellow Bridge, it should reflect the vitality and innovation of the Kendall Square area.
- The site's streets, parks, and squares should prioritize pedestrian enjoyment and bicycle connectivity.
- The site should be seamlessly integrated with the surrounding areas by the pattern of streets and open spaces and the amenities they provide, the form of its buildings, and their ground floor uses.
- The site's streets, parks, and squares should be positive legible spaces: visually and spatially coherent, memorable, and meaningful, framed and enriched by the massing and facades of the buildings that border them and by the design of their landscape.
- They should be interconnected to create a safe and welcoming pedestrian environment.
- The site's architecture should respond to pedestrian scale. The design of ground floor facades and the provision of street activating uses should enrich the pedestrian realm.
- Shadow and wind impacts on open spaces and existing and new buildings should be minimized.

The site's buildings should achieve high standards of sustainability. Staff encourages further refinements be made to enhance the project's contributions to life in Cambridge as the project develops.

## ***Open Space, Streets, and Sidewalks***

### Geometry and Character of Internal Streets and Open Spaces

The project presents the opportunity to connect neighborhoods and districts hitherto separated by the Volpe Site with its lack of public open space and through streets and paths: residential East Cambridge to the north; the commercial and residential district on the east side of Third Street; MIT and the Kendall Square T station to the south; and the MXD district, other research areas, and residential neighborhoods to the west. As recommended by the Volpe Site Design Guidelines, the project makes excellent contributions toward this connectivity: creating the new Third Street Park, extending Fifth Street through the site from north to south, and Broad Canal Way and Potter Street from east to west. The proposed scheme provides a variety of types of open spaces: streets of different characters, paved shared use spaces, and parks of different shapes and sizes. Staff encourages this variety to be further developed, and the characters of these spaces to be emphasized more strongly. As the design is developed, the site's connectivity to its contexts could be further improved by adjustments to the geometry, alignment, and sections of these streets.

**Third Street Park.** Third Street Park, at the intersection of Third Street and Broadway, will welcome people arriving in Cambridge from the Longfellow Bridge and from the eastern Kendall Square subway exits on Main Street. The park is diagonally opposite Galaxy Park at the east end of Main Street: on the diagonal pedestrian desire line from Galaxy Park to the intersection of Potter and Fifth Streets at the center of the site. The Park's landscape design should emphasize its openness to and engagement with Broadway, and its visual connection to those arriving in Cambridge over the Bridge, from Broadway, and from Galaxy Park, and at the same time establishing the park as a useful and meaningful place in its own right.

Third Street Park is presented as a flexible-use space, combining open grassy areas and perimeter trees, and activated by ground floor uses in the bordering buildings and by retail pavilions. The amount of continuous tree canopy differs between the plans and the perspectives. Greater clarity regarding the park's character and its appearance when seen from Broadway, especially for those arriving in Cambridge from the Longfellow Bridge would be helpful. The potential of the Community Center and/or the Entertainment Venue to activate the park if incorporated into the buildings fronting onto it should be investigated.

Two pavilions along the park's north side line the south side of Broad Canal Way and accommodate small retail businesses. To create a more permeable connection between Broad Canal Way and the park, consideration could be given to providing more, but smaller, pavilions. To activate Broadway along the park, and to provide an engaging visual focus for those approaching the site from the Longfellow Bridge, consideration could be given to providing one or more retail pavilions along the park's Broadway frontage, either in addition to the ones at its north edge, or instead. A more detailed review of the park's furnishings, lighting, paving materials, plant species, etc. should occur as the design develops.

Collaboration between City staff and the CRA on the detailed designs of Third Street and Broadway is ongoing. It will be important to understand the available space of the park in connection with their design. Flexibility about expectations of the edges of the park is necessary at this stage.

**Broad Canal Way.** Broad Canal Way is extended into the site, linking the project to the existing canal on the east side of Third Street and referencing the canal's original extent. In the proposed scheme, the westward continuity of Broad Canal Way is interrupted by the Entertainment Venue, forcing people walking and

cycling to offset to the south through a passage under the southwest commercial building (C4). The visual continuity of Broad Canal Way is blocked by the overhanging upper floors of the commercial building.

Consideration should be given to adjusting the alignment of Broad Canal Way southward to create a smoother, more direct connection between the existing Broad Canal Way on the east side of Third Street through the site to the Loughrey Walkway and the Kittie Knox Bike Path, as well as to the path between the buildings at the southeast corner of the MXD site and on to future open space at the center of the MXD site. Consideration should be given to eliminating the overhanging upper volume of the commercial building, further opening a visual connection to the Loughrey Walkway and Kittie Knox Bike Path, and to opening the full length of the Broad Canal Way to the sky. Consideration could be given to referencing Broad Canal's original extension into the Volpe site by its landscape design, for example by the incorporation of a water feature.

Broad Canal Way is proposed as a shared use pedestrian/bicycle/car/drop-off/pickup/loading activity street. Greater clarity should be provided so the street can truly function as an outdoor public space for people. With the extensive space dedicated to 24/7 motor vehicle access and curbside use, the current design still reads as an auto-centric environment, regardless of what paving materials are used. Staff would like to see an option that dedicates less space to motor vehicles and allows for time restrictions for through traffic. Opportunities for loading and delivery activities for retail can perhaps be limited to morning hours (as is done in many places in the city); the curbside space could be then used for ride hail or other drop-off/pick-up activities during afternoon and evening hours. The proposal for Broad Canal includes separate spaces for drop-off/pick up activities and loading zones; could the space dedicated to these vehicular activities be reduced by management with time restrictions? Discussions regarding the presence of absence of parking and drop off, the alignment of trees and benches, paving, the potential for the inclusion of a water feature should continue.

Consideration could be given to locating the parallel lines of trees closer to the centerline of the street, to create the effect of a grove down its center and to stress that the street's primary use is by people walking and cycling, and that automotive use is meant to be occasional and infrequent. The perspectives do not show typical accoutrements of a vehicular street, such as meters, painted parking lines, signage for loading, fire hydrants, and stop signs, which if present will reinforce the street's vehicular character, despite the curb-less roadway and pedestrian paving. In any case, discussions should continue with city staff regarding its character and section, and the planting standards for the numerous street trees proposed on top of the parking garage to ensure that they grow to an appropriate size.

**Sixth Street Park.** The proposed Sixth Street Park, at the western edge of the site, parallels the existing Sixth Street Walkway. Two different schemes, with different geometries and features, are proposed for the park. The park appears to be largely independent from the proposed buildings along its eastern side. Further investigation of recreational needs, and of the spatial and functional relationships between the park and the form and use of the adjoining buildings would clarify the social intent underlying the park's landscape design. Consideration could be given to providing a greater variety of types of recreational space and amenities both here and elsewhere on the site. Unobstructed open lawns; basketball courts; exercise equipment such as pullup bars; and fenced play areas for small children with slides, play-houses, and/or taller climbing structures would all serve the needs of the site's residents and the surrounding area. If grassy mounds are provided, they should be kept low for visibility, safety, and comfort. In addition, a dog

park (suggested in the one scheme as a possibility) could be useful. A description of the recreational areas, if any, provided on the GSA site would add context to the discussion. As noted above, the connections across the park between the Potter Street and Broad Canal Way bicycle routes and the Kittie Knox Bike Path should be carefully designed, with attention to clearances, visibility, lighting, etc.

**The Piazza at the Entertainment Venue.** The paved plaza proposed in association with the Entertainment Venue will allow its events to expand into the outdoors and engage pedestrian flow. The space is overhung by the cantilevered upper volume of the adjoining commercial building. The indoor/outdoor character of the Entertainment Venue may better serve its public and activating role if it were located on the Third Street Park. In any case, noise from events may be a consideration for nearby residences.

**Community Center Plaza.** The triangular Community Center Open Space southeast of the Potter/Fifth Street intersection incorporates mounds, randomly located trees, public art, low planting, lawn, and benches. Its intended character, uses, and functional and spatial relationships to the Community Center are unclear. As this will likely be a high pedestrian and bicycle traffic area, attention should be given to desire lines and to functional needs such as bicycle parking. Additional canopy trees could be considered.

**Fifth Street.** The project proposes to extend the existing portion of Fifth Street on the west side of the 303 Third Street Residential building north to Binney Street and south to Broadway, creating a vital new connection between East Cambridge to the north and the Kendall Square subway plaza and MIT to the south. As designed, the north end of the new portion of Fifth Street south of Potter Street is centered on 303 Third Street's site-located transformers and switchgear at the southwest corner of their property. In response to the street's importance as a north/south connection, consideration could be given to angling this portion of the street slightly towards the northwest in plan. This would move the street's northward visual focus from the residential complex's chain-link-fence-enclosed electrical equipment yard to the street's northward continuation along the west side of 303 Third Street and to the Federal Volpe Building's Art Walkway and landscaping.

#### Response to Supplemental Package

The Applicant has submitted a supplemental package which illustrates many improvements to the site's overall geometry and connectivity. Fifth Street's intersection with Broadway allows a left turn entry to the site for eastbound traffic on Broadway, in addition to right-in and right-out. The C2 building's parking garage entry, previously directly off Broadway, has been relocated to Fifth Street. These changes appear to be a significant improvement to traffic management. The final design of Fifth Street should also include traffic calming and other strategies to ensure safety for cyclists and pedestrians. Collaboration with city staff regarding the location and design of bicycle lanes, and the design and widths of sidewalks, should continue.

Fifth Street will link residential East Cambridge to the north of the site with the Kendall T station and the MIT campus to the south. The street's typical section, including the widths of vehicular and bicycle lanes and sidewalk widths, tree alignments, etc., should be developed in collaboration with City staff.

Consideration could be given to emphasizing Fifth Street's continuity and visual identity by giving the streetwall portion of the buildings that line it a more consistent profile in section, by further emphasizing their retail character, and by a symmetrical landscape treatment of its sidewalks. Collaboration between

the city and the CRA on improvements to Broadway, including the design of turn lanes, bicycle lanes, and pedestrian crossing is ongoing.

**Kendall Way.** Kendall Way, a new north/south street, is proposed roughly halfway between Loughrey Walkway and Fifth Street. It is described as a plaza-like space that prioritizes cyclist and pedestrian activity and allows for occasional managed building service access. This seems optimistic given the street's numerous loading docks. In the revised plans, the street extends to Broadway, creating a right-in and right-out intersection, which appears to be a considerable improvement to the connectivity of the street system. As described in the narrative, however, this entrance to the site is limited to service vehicles only, and bollards and other devices could be utilized to block the street's continuity across Broad Canal Way to Potter Street. Further discussion of the anticipated and preferred traffic patterns, and the street's potential to enhance the permeability of the Volpe site and its connectivity to its context will be needed to ascertain what makes the most sense for operations on this street.

**Potter Street.** Potter Street extends across the east/west width of the site toward the Sixth Street Walkway and provides access to parking garage entries, a loading dock, and to Alewife Way with its several loading docks. Trucks exiting the Volpe Federal Building will also be using Potter Street. A two-way cycle track is proposed on Potter Street's south side, past the garage entries and loading dock. While we appreciate the proposed improvements for people traveling by bicycle and agree that a high comfort design is important for this street, staff recommends have continuing discussions regarding other options, including mono-directional cycle tracks on each side of Potter street, or consideration of the facility being on the north side to avoid conflicts with loading docks and garage entries. Staff recognizes there are complications in land ownership in this area and additional coordination is needed. Discussion should continue regarding the connection to the Loughrey Walkway and the Kittie Knox Bicycle Path, including the layout of the new path(s), lighting, and signage. Consideration should be given to providing a turnaround at the west end of Potter Street for traffic unable to continue northward into the Volpe Federal Building site.

#### Building Service

Throughout the site, consideration could be given to creating a shared underground service area, to reduce the number of grade-level loading docks and their curb cuts across sidewalks and cycle tracks.

#### Perimeter Streets - Broadway, Third Street, and Binney Street

In a process being led by the Cambridge Redevelopment Authority in cooperation with the City, the conceptual designs of Third Street and Broadway are nearing completion. MITIMCO has met with the CRA team and City staff to discuss how the design can best meet our shared goals, but as the final design has not yet been completed the project's edges along Third and Broadway are still to be fully confirmed. In particular, the portion of Third Street between Broad Canal and Broadway/Main is anticipated to be different than currently shown on the proponent's plan, as opportunities for transit priority are being developed.

The 303 Third Street Residential complex, with its close relationship between ground floor retail and the sidewalk and its open passage from Third Street to its large courtyard, does much to humanize and activate Third Street. At the northeast corner of the Volpe site, the proposed residential building is set back from Third Street by the intervening separately owned property that adjoins the intersection. Consideration

could be given to discussions to bring the residential building closer to Third Street, creating a setback more consistent with that of 303 Third Street.

The project should show the full design of Binney Street between Sixth Street and Third Street, including the new pedestrian crossing and access at Fifth Street. That design has been completed and the project will be expected to construct the full buildout.

### Bicycle Parking

Additional improvements to the planned bicycle parking could help reinforce the Volpe development as a leader in transportation technology and innovation. Examples could include, but are not limited to:

- Providing direct access for bicycle parking via ramps or at-grade opportunities, rather than elevator-only access for bicycles.
- Providing weather-protected opportunities for short-term bicycle parking spaces.
- Identifying locations for valet services to store Bluebikes (in coordination with City staff)
- Ongoing coordination and consultation with City staff on finalized locations and designs for bicycle parking and Bluebikes Station locations.

### ***Built Form***

The application includes a general discussion of architectural design, examples of built projects showing architectural character, and potential massing variations for each site. Staff understands that a detailed discussion of architectural design would be premature at this point in the process. It would be helpful, however, to include a more detailed discussion of:

- How the design of ground floor facades will fulfill the project's ambitions for a rich and lively pedestrian experience. More information or examples would help convey the design intent and the range of responses to the varied site conditions and scales.
- How the height and façade design of streetwalls will realize an overall strategy for framing and enlivening the site's streets, squares, and parks.
- How the forms, locations, and heights of towers will realize an overall strategy for the definition, articulation, and enrichment of the streets, parks, and plazas on and adjoining the site. Consideration should be given to varying building heights and massing along Broadway, and to the project's skyline and building massings as seen from Third Street Park.
- How the form and locations of towers will relate to existing buildings and spaces in the context, considering views, shadow, and wind. In particular, consideration should be given to the project's impact on the 303 Third Street residential complex.
- How the site's tall buildings will contribute to skyline views from Cambridge and Boston. As suggested in the Design Guidelines, appropriate design strategies include emphasizing the vertical nature and profile of towers.
- The potential for publicly accessible dining or entertainment spaces as part of lower level terraces, at stepbacks, and on tower rooftop spaces.

- The sustainability of design, systems, and materials, with particular attention to minimizing operational and embodied energy and atmospheric impacts.

In response to their programmatic needs, the commercial buildings are depicted in the massing variation diagrams as large blocky tower volumes above streetwall height podia. The heights of the podia seem generally appropriate to the street widths and the existing context buildings. As the designs of individual buildings develop, consideration should be given to adjusting facades and materials of the towers to provide the vertical expression recommended by the Volpe and Kendall Square Design Guidelines. Given the heights of the commercial buildings' streetwalls, consideration could be given to giving the pedestrian façade zone a two-story expression on sites that address larger public spaces, including Third Street Park and Broadway.

On some of the sites, there is a significant difference – either larger or smaller – between the size of the tower floorplates and the size of the sites designated for them, resulting in several cases in small footprint towers on wide podia, and in one case in a large building volume overhanging public open space. Consideration could be given to adjusting building form and/or the street grid to achieve a more harmonious relationship between tower, podium, and site.

As depicted in the renderings and the massing variations, the residential buildings have two-floor high podia that generally fill their sites, surmounted by towers with relatively small floor plates. Consideration could be given to increasing the heights of their podia so as to create streetwalls more compatible with those of the commercial buildings, and to lessen the visual impact of the towers on the adjoining streets. Where podia extend beyond the footprint of building towers, consideration could be given to creating forecourts for building entries and/or outdoor retail use, and to rooftop terraces. As noted above, consider locating residential buildings on sites with areas closer to the floorplates of their towers.

As depicted in the application, the Community Center is treated as a sculptural pavilion with an irregular composite massing. Its form appears to be largely independent from the adjoining Community Center Open Space and unrelated to the nearby commercial and residential buildings. If it remains a stand-alone building in its current location, consideration could be given to changes to its massing and façade design to strengthen the diagonal connectivity between Third Street Park and the northern portion of Fifth Street, and to more directly engage the Community Center Open Space.

### ***Building Uses***

The project's combination of office/laboratory uses, residential units, retail spaces, and community amenities will enrich the surrounding area and help realize the site as a fully functional neighborhood. A clearer understanding of how specific uses are located in response to pedestrian flow through the site and along its edges, to vehicular access and traffic, and to the spatial framework established by the proposed streets and other open spaces would be helpful.

The Community Center and the Entertainment Venue will play important roles in welcoming residents from surrounding districts of Cambridge to the site. Consideration could be given to giving them greater visibility by locating them on Broadway or Third Street Park.

Seven buildings are located in the southern portion of the site south of Potter Street: three commercial (office/laboratory) along Broadway, and three residential buildings and the Community Center along Potter



Street. All offer retail or community-focused uses on their ground floors. While the proposed allocation of upper floor uses seems reasonable, other arrangements may offer benefits in terms of the fit of uses relative to public visibility and access, pedestrian and vehicular circulation, and open spaces in and adjoining the site and buildings.

If changes are made to the street alignments as suggested above, consideration could be given to reallocating the uses of the buildings west of Fifth Street, for example locating the commercial buildings on the north side of Broad Canal Way, and the residential buildings on the south side; or locating both residential buildings at the western edge of the site, along Loughrey Walkway, where they would benefit from the walkway's tree cover and potential recreational amenities. As the residential towers require smaller floor plates – both in width and area - than the commercial office/laboratory buildings, doing so would facilitate relocating Broad Canal Way to align with the space between the southeastern buildings on the MXD site. To enhance the pedestrian scale of Potter Street and Sixth Street Park, and to provide additional “eyes on the space”, consideration could be given to providing ground floor residential units, with individual entries, along them.

The project provides a Community Center and an Entertainment Venue as public amenities for the workers and residents of the site and the surrounding areas. Staff understands that their programs are in development through the ongoing community engagement process. Given the expected population of the site and the site's potential to benefit the surrounding neighborhoods, a full range of types and sizes of potential public and civic facilities should be investigated. Examples could include a library, innovation space, workforce training spaces, meeting rooms, shared work spaces, educational outreach venues for MIT and corporations, music practice rooms, a school, work spaces, or other such facilities.

As was suggested in pre-application meetings, consideration could be given to locating both the Community Center and the Entertainment Venue on the exterior edges of the site – either on Broadway or Third Street Park - for greater public visibility and access. The relocation of the Community Center into one of the buildings facing Third Street Park would enable its current site to be used for a residential building, potentially reducing the height of Building R1 and its shadow impact on the 303 Third Street by distributing its volume along the full length of the block between Third and Fifth Streets. Consideration could also be given to locating the Entertainment Venue in one of the buildings facing Third Street Park, where it would be more visible to the general public and help enliven the park. More information on the character and uses of the Entertainment Venue relative to those of the theater proposed at the Biomed project on the east side of Third Street would be helpful. The project's program for public amenities would benefit from clarity as to whether an Entertainment Venue is the most beneficial use of ground floor space, and whether it would be more effective if it were combined with the Community Center.

### ***Summary of Urban Design Considerations & Recommendations***

1. Explore adjusting the alignment of Broad Canal Way to lead directly across the Loughrey Walkway to the space between the southeasternmost two buildings on the MXD site, and eliminate the overhanging portion of the building in the southwest corner of the site so that the full length of the street is open to the sky. Clarify the pedestrian/bicycle/vehicular character of Broad Canal Way.

2. Explore adjusting the alignment of the new portion of Fifth Street to lead more directly to the street's existing portion on the west side of 303 Third Street, instead of focusing at 303 Third Street's site-located electrical equipment.
3. Explore moving the Community Center to the lower floors of one of the buildings facing the Third Street Park (making it more visible to the general public), and use its current site for a residential building.
4. Consider adjusting the massing of the building on the Community Center site to reduce the visual presence of 303 Third Street's site-located electrical equipment on Fifth Street.
5. Consider moving the Entertainment Venue into the ground floor of one of the buildings facing the park and/or Broadway.
6. Explore providing more and different types of outdoor recreational space.
7. Analyze moving Kendall Way to the west, creating two small blocks along the Loughrey Walkway, with sizes appropriate to the relatively small floorplates of the residential towers, and two large blocks between Kendall Way and Fifth Street with sizes appropriate for the large floorplates of the commercial buildings.
8. Consider moving the R1 building's residential tower to the south edge of its parcel, farther away from 303 Third Street, and relocate some of its GSF to the Community Center site to reduce the building height shading 303 Third Street.

## Additional Requests

Staff recommends that the following additional materials be included in the Final Development Plan:

- Include a more detailed description of the purposes, functions, amenities, and target populations of the Community Center; how it will benefit the full range of Cambridge’s neighborhoods and demographics.
- Provide a commitment to the planned retail recruitment/leasing strategy for racially and ethnically diverse retail owners beyond the initial round of leasing.
- Clarify if any of the open spaces will be designated as “Privately Owned Public Spaces”.
- Provide additional details on the proposed civic engagement programming for Third Street Park.
- Provide additional information related to planned housing unit distribution, types, sizes, and how housing might differ across the proposed residential buildings, and the anticipated location of dwelling units required or incentivized by section 13.90.
- Provide the rationale for the proposed locations of commercial and residential buildings on the site.
- Clarify how the size of the Community Center was determined. Based on community engagement and other research to date, provide a more detailed description of the target populations of the Community Center, its purposes and amenities, and a list of potential functions that it might serve and their group sizes.
- Explain the character and use of the Entertainment Venue, and its role relative to that of the similar facility proposed at the Biomed site on the east side of Third Street.
- Provide additional design details of the proposed intersection of Fifth Street and Potter Street and the termination of Potter Street at the Loughrey Walkway.
- Provide additional information related to allowed vehicle traffic along Broad Canal Way.
- The project should show the full design of Binney Street between Sixth Street and Third Street, including the new pedestrian crossing and access at Fifth Street. That design has been completed and the project will be expected to construct the full buildout.
- Explore shifting the location of the entertainment venue such that the Broad Canal Way extends without interruption to the Loughrey Walkway.
- Provide a commitment to more varied building heights throughout the site.
- Include additional details showing how the design of the buildings’ pedestrian frontage zones – their first and second floor facades - will fulfill the project’s ambitions for life on the street and sidewalk. More information or examples would help convey the design intent and the range of responses to the varied site conditions and scales.
- Clarify how the height and façade design of streetwalls relates to an overall strategy for framing and enlivening streets, squares, and parks.
- Include proposed street sections including the heights and profiles of building streetwalls.

- Explain how the forms, locations, and heights of towers will realize an overall strategy for the spatial definition, articulation, and enrichment, of the streets, parks, and plazas on the site and in the immediate context, and how they will contribute to Cambridge’s skyline.
- Provide information about how the form, locations, and heights of towers will relate to existing buildings and spaces in the context, considering views, shadow, and wind.
- Explore more in depth the opportunity to add additional retail pavilions/kiosks along Third Street.
- Provide greater clarity regarding the character of Third Street Park and its appearance when seen from Broadway, especially for those arriving in Cambridge from the Longfellow Bridge.
- In the shadow studies, it would be helpful to know how high shadows will extend up the height of adjoining buildings, particularly 303 Third Street.
- Show the public passage through the Marriott Hotel lobby in context and connectivity diagrams.
- Show the proposed future development on the Eversource site in the middle of the MXD district.
- A description of the use and character of the open space around the new federal Volpe Building would be informative as background information.
- Depict the preliminary proposal to replace the MXD site’s blue garage with a new open space, a residential tower, and a commercial building, and an additional commercial building in the northeast corner of the MXD parcel.
- The narrative (Volume 2, page 22) mentions that the CRA parcel 6 at the northeast corner of the site may be added to the site in the future. Provide more information on discussions of this matter.
- Provide more information on the planting standards for trees over the parking garages and their expected size at full growth.
- Provide additional information on phasing.