



Assistant City Manager for
Community Development

CITY OF CAMBRIDGE

Community Development Department

To: Planning Board

From: CDD Staff

Date: May 11, 2023

Re: **PB-368 – Amendment 2 (Minor) and Design Review of 75 Broadway
(Volpe C3) & Sixth Street Park**

SANDRA CLARKE
Deputy Director
Chief of Administration

KHALIL MOGASSABI
Deputy Director
Chief of Planning

This memo contains an overview of the proposed minor amendment, as well as design review comments on the Volpe C3 Building and Sixth Street Park. Over the past several months, the Applicant has met with staff regarding the project's design. The submission package to the Planning Board includes some design considerations made in direct response to the comments by staff during these meetings.

Overview

The Volpe Exchange Parcel Planned Unit Development (PUD) was originally [approved](#) by the Planning Board in 2021 and received a [minor amendment](#) earlier this year to modify the approved phasing plan to permit that Building C3 proceed in Phase 1 and Building C2 proceed in Phase 2. MITIMCo, the developer for the project, seeks design review approval for Commercial Building C3 and Sixth Street Park. The special permit requires that both Building Sites and Park Sites are subject to design review approval by the Planning Board.

In addition to design review approval, the Applicant seeks a Minor Amendment to extend the date by which the development must commence construction by one year – from the original date of September 28, 2023 to September 28, 2024.

Building C3

The Planning Board's review of the buildings and landscape design is guided by the conditions of the special permit ([PB-368](#)), which includes the goals and objectives of the Kendall Square (K2) Planning Study and Design Guidelines, the Planning and Design Principles established by the City's Volpe Working Group (2017), and Volpe Site Design Guidelines (2017).

Building C3 is proposed to be a 250' tall, non-residential development consisting of approximately 450,000 square feet. The approved program summary for Building C3, as well as the proposed summary, is provided below:

344 Broadway
Cambridge, MA 02139
Voice: 617 349-4600
Fax: 617 349-4669
TTY: 617 349-4621
www.cambridgema.gov

Dimensional Requirement	Approved	Proposed	Compliant? (Y/N)
Total GFA (Non-Exempt):	447,947	450,591	Y
Exempt GFA:	22,666	24,453	Y
Use:	Technical Office/Laboratory	Technical Office/Laboratory	Y
Retail:	7,000	10,433	Y
Innovation Space:	20,916	20,916	Y
Active Space:	5,250	6,896	Y
Residential GFA:	N/A	N/A	N/A
Building Height:	250'	250'	Y
Automobile Parking Spaces:	1,759 max (entire Development Parcel)	354	Y
Long-term Bicycle Parking:	102	105	Y
Short-term Bicycle Parking:	32	37	Y

The development controls within the approved special permit are largely governed at the Development Parcel level, rather than on a building-by-building basis. As with other approved PUD's in the City, minor modifications to the floor area and use mix of buildings can be approved administratively as long as the site plan as a whole remains in compliance with the overall limitations set forth in the special permit.

Per Condition #13.a of the Special Permit, the City's Green Building Requirements in effect at the time of the submittal of a design review application for a building site shall be applied to that building. Building C3 submitted draft materials to the City on January 30, 2023 and a revised submission on February 21, 2023 with additional clarifications on March 17, 2023. Building C3 is targeting LEED Gold certification through LEED v4 Core and Shell and/or LEED v4 for New Construction through USGBC. Staff have reviewed these materials and the Green Building Certification issued is attached to this memo. The materials submitted on May 1, 2023 for Green Roofs Requirement are being reviewed.

Sixth Street Park

Sixth Street Park is a linear open space that runs parallel to the Loughrey Walkway, from Broadway north to Potter Street, and is connected to Broad Canal Way through a passageway that runs between Building C3 and Building R3. Condition #3b of the Special Permit requires that a publicly-accessible pedestrian and bicycle connection be created from Sixth Street Park to Broad Canal Way. The Special Permit also requires that prior to or at the time of submitting plans for design review of any Open Space denoted as Permanently Guaranteed in the Final Development Plan, the Applicant shall submit a draft deed restriction, covenant, or other mutually agreed-upon legal mechanism for guaranteeing the site is

made available for public use in perpetuity. The City's Law Department confirmed receipt of the draft language submitted by MITIMCo and it is currently under review by the City. Such mechanism must be executed and recorded prior to the completion of the Open Space.

Criteria for Granting Minor Amendments

Per the general PUD provisions in Section 12.37 of the Cambridge Zoning Ordinance (CZO), the Planning Board determines whether changes to the Final Development Plan may be approved as minor amendments. The following guidance is provided in zoning:

(12.37.2) Minor amendments are changes which do not alter the concept of the PUD in terms of density, floor area ratio, land usage, height, provision of open space, or the physical relationship of elements of the development. Minor amendments shall include, but not be limited to, small changes in the location of buildings, open space, or parking; or realignment of minor streets.

Conditions 5(a) and 18(b) of PB-368 provide the following additional guidance:

5. Timing and Phasing

a. Commencement. This Special Permit shall be governed by the provisions of Chapter 40A of the Massachusetts General Laws (M.G.L.) and Section 10.46 of the CZO, which establish the time within which construction authorized by the Special Permit must commence. With respect to the requirements of Section 12.40, the Planning Board grants to the Permittee the right to start construction within two (2) years of the date of filing of this Decision with the City Clerk (not including the time required to pursue or await the final adjudication of an appeal under Section 17 of M.G.L. c. 40A), hereby granting the extension permitted under Section 12.41 for good cause, such good cause having been demonstrated by the Permittee because of the unusually large size and scope of the PUD and the need to obtain third party permits and approvals (including, without limitation, those for infrastructure and mitigation) for the project. The Planning Board may approve subsequent extensions of the time for commencement as Minor Amendments pursuant to Condition #18 of this Decision, not to exceed two (2) years per extension, upon determination of good cause by the Permittee.

18. Procedures for Granting Minor and Major Amendments to the Decision

b. Minor Amendments. A Minor Amendment to this Decision shall be approved by an affirmative vote of at least five (5) members of the Planning Board after consideration of the proposed change, enumerated on the Agenda, at an appropriately noticed meeting of the Planning Board. In approving a Minor Amendment, the Board shall issue a written determination that:

- i. The change is consistent with the standards for a Minor Amendment set forth in Section 12.37 of the CZO; and
- ii. The change does not violate applicable Sections of the CZO, or if the change requires relief pursuant to a special permit or variance, such relief has been granted; and
- iii. The change will not substantially alter the Findings upon which this Decision is based.

The Board may approve a minor amendment on the affirmative vote of five Planning Board members.

Relevant Design Objectives and Guidelines

The Volpe Site Design Guidelines were developed in 2017 and are part of the 2021 approval of the site's PUD. A summary of their most critical recommendations follows:

District-Wide 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.
- 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 neighborhood.
- 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

Open Space:

- 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.
- Reinforce the spatial coherence of Third Street and Broadway and expand the pedestrian-based retail of these streets.
- Extend the alignments of Broad Canal Way, Fifth Street, and Potter Street through the site.
- The massing and facades of buildings that address streets, parks, and squares should frame them as legible spaces.
- 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.
- The site's open spaces should be welcoming and engaging places for public and private use and connection.
- 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.

- Play areas should be located near residential buildings where possible.
- 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.
- 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.
- 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.

Block Guidelines:

- 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.
- Create a rich and varied, humanly scaled building with a continuous ground level pedestrian realm.
- Create strong streetwalls to frame streets, parks, squares, and plazas.
- Mitigate building bulk to minimize adverse impacts on the microclimate, including shadows, wind, and urban heat island effects.

Scale and 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.
- Building massing should give spatial definition to the site's streets and squares, and increase the compatibility of tall buildings with existing nearby buildings.
- 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.
- Break down building massing to prevent a monolithic appearance and promote a human-scaled presence.
- Depending on their heights, buildings should consist of up to four different, but integrated zones: pedestrian frontage zone, streetwall, tower, and building top.

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 variety with a strong sense that the site's buildings are part of a community.

- 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.
- Projects should relate to human dimensions and provide a sense of intimacy in all aspects of design from building concept development to construction details.
- Development bordering the public domain should be rich in architectural details, pay special attention to the ground plane and silhouette.
- 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 variety of materials.
- Commercial and residential lobbies are expected to consist of no more than 25 feet of frontage.
- 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.
- All retail/restaurant/first-floor tenant spaces should preferably be at the same level as the adjoining sidewalk or publicly accessible open space.

Staff Comments

Urban Design

The Volpe Site Design Guidelines build on the K2 Guidelines with the goal of creating a functionally diverse and animated mixed-use district with an active, safe, and welcoming pedestrian realm; one that supports a wide range of outdoor uses, and is enlivened by pedestrian-oriented functions in the ground floors of the site's buildings. The guidelines recommend the creation of a network of streets, squares, parks, and courtyards. As distinct places – visually and spatially coherent, memorable, and meaningful – framed by the masses and facades of the surrounding buildings, reinforced and enriched by the design of their landscape, and linked together to create an interconnected public realm, they will organize the site's built fabric into a series of urban blocks.

As the first of the Volpe site's commercial buildings, Building C3 will set a precedent for the quality of architectural and landscape design, and for the activation of Broadway, Broad Canal Way, and the Sixth Street Walkway. By anticipating the form of the Volpe site's ultimate buildout, the building's design should offer clues to its future neighbors – the C2 commercial building to the east and the R3 residential building to the north – as to their forms and alignments, suggestions conducive to creating a district whose whole is greater than the sum of its parts.

The applicant met with staff on several occasions to review the design and has responded to suggestions regarding the architectural and site design.

Site Design

The C3 building's site plan creates four public open spaces: Sixth Street Park on the west, the Broadway frontage on the south, Kendall Way on the east, and a covered passageway on the north which connects Sixth Street Park to Broad Canal Way.

- If the project goes to a second Planning Board hearing, additional information should be added to the overall and enlarged site plans: material notes, dimensions, spot grades, etc.

Sixth Street Park

The C3 site borders the Loughrey Walkway, a vital north/south pedestrian path linking East Cambridge to Broadway and Ames Street. With its well-established trees, it is one of the most memorable spaces of Cambridge’s public realm. As indicated in the Volpe Site’s Final Development Plan, the project will create a new linear park, parallel to the Walkway. The full length of the park from Broadway to Potter Street is included within the C3 project’s scope.

The park is designed to serve a wide range of uses: relaxed seating, children’s play, recreation for older users, outdoor performance, interactive site-located musical equipment, a dog park, and bicycle parking.

- A detailed programmatic evaluation should be done, comparing the Park’s proposed facilities to those of existing and future parks in the area.

The facilities serving these uses are treated as a series of distinct items within the linear form of the park.

- The City’s “Healthy Parks and Playground” policies encourage play as an essential aspect of life for all ages, available to everyone. Consideration should be given to dispersing the play and recreational sports amenities along the length of the park (and elsewhere in the Volpe Site) instead of allocating them into separate compartments of the park.

Along the east side of the play area, a line of four American hornbeam trees reiterates the Sixth Street Walkway’s allée of pin oaks. This suggests the possibility that rather than being conceived as two narrow parallel neighbors of contrasting character – one a path framed by trees, and the other a mostly paved area divided into a series of different facilities – the walkway and the park may instead be seen together as elements of a larger whole, the park perceived as an integral expansion of the Walkway, doubling its width to incorporate the new public amenities.

- Consideration should be given to further integrating the Park and the Walkway by extending the aligned trees by the play area where possible, and/or by providing other vegetation along the park’s east edge, including possibly on the first floor façade of the future R3 building, to create a sense of a broader space that encompasses both the Walkway and the Park, and subsumes the park’s various programmatic features as elements of a larger whole.

The play area is fenced, with gateways at its northern and southern ends. It includes a variety of play features. Seating appears to be at the ends of the play area. Consideration should be given to:

- Making the playground more open and inviting by not fencing it (if possible, given its intended users), or reducing the size of the enclosed area, or eliminating the gates at its north and south ends.
- Adding a seating area closer to the play area’s center to give caregivers a better view of the entire play area.
- Including more movement-based play equipment: swings, carousels, tight ropes, slides, climbing structures, etc.

A performance platform is provided where the Passage meets the Park. Consideration should be given to:

- Providing power and AV connections in anticipation of programming and operational needs.
- Providing a canopy overhead to reduce the sound impacts on the residences in the R3 building, and to help mitigate the wind levels indicated in the application's wind study.
- Clarifying the route of delivery trucks bringing performance equipment to the performance platform. Will they be allowed to use the passage?

The recreational sports and interactive musical instruments areas are located at the northern end of the park, next to the future R3 residential building. The fenced play area for younger children is in the southern portion of the Park, next to the commercial C3 building.

- Consideration should be given to swapping these uses: locating the play area adjacent to the residential building, and the potential noise of the ball sports and musical instruments farther from it.

To protect the Walkway's existing trees, the Park's features are set back from them. Numerous wooden walkways, oriented east/west, link the park to the Sixth Street Walkway. The walkways and the park's areas of pavement are suspended above grade. Additional boardwalks are oriented north/south in an irregular arrangement, the logic behind their locations and segmented layout is less clear.

- For a full evaluation of how the walkways will organize the space between the Walkway's trees and the C3 and R3 buildings, more views showing their three-dimensional form and more details of their layout and slopes would be needed.

In addition, consideration should be given to:

- Reducing the amount of pavement in the park, or at least incorporating permeable pavement where possible.
- Using porous pavers in the "courtyard area" with trees & seating. (The main travel corridor should remain as regular pavers for accessibility.)
- Ensuring that water can find its way to existing tree roots under the raised concrete slab at the Sports court.
- Providing additional public art.
- Providing more benches with backs and fewer raised wooden platforms, which tend to be underutilized.
- Emphasizing universal accessibility, including in the recreational and play features.
- The project's "limit of work" line should be clarified.

Broadway

As part of realizing the CRA/City of Cambridge's Conceptual Streetscape Redesign Project for Broadway, Main and Third Streets, the scope of the C3 Project includes improvements to the full width of Broadway. In the area adjoining the C3 project, the existing curbs and trees will remain in place. Adjustments will be made to the roadway striping, an active curb zone will be created, a separated

bicycle lane will be added on the north side, new street trees will be planted and a new public sidewalk created on the north side of the tree zone, most of it within Building C3's property line.

- All aspects of the design should be closely coordinated between the project's designers and city staff, including the optimal length of the active curb zone.
- The project's "limit of work" line should be clarified.

Broadway's existing street trees are a significant asset to the city. New trees of the same species (littleleaf linden) will be planted in gaps on the street's north side.

- Consideration should be given to providing an additional street tree at the east end of building C3's planting zone, on the west side of Kendall Way.

A new underground box drain will be installed along the building's Broadway frontage, potentially impacting the tree's roots.

- Every effort should be made to minimize damage to the trees.

Areas of permeable pavement are proposed at intervals between the trees for seating; they will likely also be used for pedestrian movement between the active curb zone and the sidewalk.

- In coordination with city staff, consideration should be given to protecting the tree planting beds from pedestrian traffic and other causes of soil compaction.

The application indicates short-term bicycle parking in the sidewalk by the building's lobby entrance, reducing the clear pedestrian width of the sidewalk at this point to 6'-3".

- Staff recommends that these spaces be relocated to the bicycle area at the southern end of the Sixth Street Park.

The application indicates sidewalk seating for the building's first floor retail spaces facing Broadway. At 14'-4" wide, the proposed sidewalk appears to be adequate in width to accommodate some seating.

- The layout should avoid unduly constricting the sidewalk's clear pedestrian passage width and follow the recommendations of the City's "[Outdoor Dining in Public Areas](#)" guidelines (2021).
- Consideration should be given to recessing the retail shopfronts away from the sidewalk to provide more width for outdoor dining.

Kendall Way

Kendall Way, on the east side of the C3 site, is planned to extend from Broadway to Potter Street. The portion south of Broad Canal Way will be realized as part of the C3 project. It will serve pedestrian movement between Broad Canal Way and Broadway and also the loading docks of both the C3 building and the C2 Building to the east. Through traffic will be prevented by bollards where the street meets Broad Canal Way. Flush curbs delineate its central asphalt vehicular area from its unit paver sidewalks and loading dock entrance areas. Sidewalk trees and short-term bicycle parking areas are proposed where not precluded by loading dock entrances.

Consideration should be given to:

- Creating safe refuges for pedestrians on the sidewalk between the loading dock doors.

- Ensuring that sufficient soil depth for the street trees is provided above the underground parking garage that underlies the street.
- Protecting the trees and bicycle parking areas from unintentional truck movements.
- Reducing the 30-foot width of the vehicular pavement.
- Providing unit pavers as vehicular pavement instead of asphalt.
- Providing removable bollards where Kendall Way meets Broad Canal Way.

The Passageway

The pedestrian covered passageway on the building's north side runs below the building's upper floors as they extend north toward the R3 building. It will connect Broad Canal Way to the Sixth Street Walkway and the MXD site's "Connector" path, which in turn leads to MXD's Center Plaza. It will be activated by first floor retail in the C3 building and by the R3 Building's Performance Center, which is intended to open directly onto the passage. The design of the passage is discussed below under Architectural Design.

Resiliency, Stormwater and Sewer Infrastructure and the Urban Tree Canopy

DPW has continued its conversation with the Development team and finds the Design Review package consistent, with respect to DPW purview, with what was presented in the Special Permit. The DPW will continue to work with the applicant as the project progresses to Building Permit applications to review items specific to resiliency, stormwater and sewer infrastructure, and urban tree canopy.

Architectural Design

The Building's Massing in its Context

The spaces immediately adjoining the building - Sixth Street Park and Walkway on the west, Broadway on the south, Kendall Way with the future C2 building on the East, and the Passageway and the future R3 residential building with its first floor Performance Center on the north - differ dramatically in size and character.

The building's volume is articulated as three stacked elements, all with rounded corners in plan and with reduced floorplate areas as they ascend. The lowest one – at streetwall level – is square to the site on its west, south, and east sides and angled on its north for the passageway's orientation between Broad Canal Way and the MXD site's "connector" path. The upper two - the building's tower floors - twist counterclockwise in plan. The funnel effect this creates on the building's west side emphasizes the Sixth Street Walkway: the building opens away from the Walkway at its upper levels to allow the Walkway more sunlight. On Broadway, the tower's angled face pulls away from the street. As seen in the view looking west on Broadway, the benefits of the resulting stepback away from the intersection of Kendall Way and Broadway are less clear.

- Consideration could be given to aligning the tower's Broadway facade parallel to the plane of the Broadway streetwall. The resulting contrast between the tower's vertical faces on Broadway and the angled west façade would further emphasize the Sixth Street Walkway. Or alternatively, consideration could be given to angling the tower floors facing Broadway at a slight angle in the opposite direction, to relate to the west façade's funnel effect and to create a

more dramatic vertical edge at the intersection of Broadway and Kendall Way, a point of vertical emphasis that would contribute to the definition Broadway as a grand urban space.

Tower and Streetwall Facades

The building's typical façade system consists of ribbon windows and horizontal spandrels, the former with butt-glazed mullions at consistent intervals, the latter constructed of green terracotta with shallow horizontally oriented scallops. The restrained façade vocabulary and straightforward details give the building a quiet elegance. Despite the variety of different types of spaces in the building's immediate context, its façade system is generally undifferentiated between its four sides, and is consistent through the streetwall, tower, and mechanical floors.

The major exceptions to this consistency are the four recessed balconies on the tower's west façade, one in the lower part of the tower, and three in the upper.

- Consideration could be given to adding one or two more recessed balconies between the three proposed in the upper portion of the tower. A group of balconies on adjoining floors, rather than three separate horizontal recesses, would make a stronger statement in response to views from Broadway.

The facades of the mechanical floors - the top 65 feet of the building – will match the typical facades as closely as possible, with shadow boxes at glazed openings. The building's mechanical louvers, while large, are located in less visible portions of the facades: in the second floor streetwall façade facing Kendall Way and in the northern parts of the east and west facades at the mechanical penthouse level.

First Floor Facades

In contrast to the green of the building's upper floor spandrels, the first floor facades are a light cream color. The lobby and retail shopfronts that wrap most of the building's north, west, and south sides are extensively glazed, with low iron glass above low knee walls. The awnings and canopies of individual shopfronts will be allowed to vary to suit the tenants, providing additional visual interest for pedestrians. Public art will enhance the loading dock area and where building systems preclude retail spaces. Rectangular piers between the shopfronts support the second floor level spandrel, which consists of flat panels above a louver zone, capped by a narrow projecting cornice with a coved underside. Consideration could be given to:

- Incorporating three-dimensional relief in the spandrel's flat faces.
- Using rounded piers between the shopfronts, as an echo of the building's other rounded forms.
- Avoiding coatings that create excessive reflectivity on the first floor's glazing.

The Passageway

A vital link between the Volpe site's east/west Broad Canal Way and the Central Plaza of the MXD site, the 45-foot-tall passageway will be activated by a narrow band of retail in the first floor of the C3 building and by building R3's first floor Performance Center. The passageway is covered by building C3's upper floors as they extend north toward the adjoining R3 building. To further enhance the pedestrian experience as one moves from Broad Canal Way to the Sixth Street Walkway and the MXD site,

consideration should be given to giving the passageway a unique identity as a meaningful space.

Potential means include:

- A more engaging treatment of the Passageway's soffit: using art, color, lighting, and three-dimensional shaping to create a space of unique character.
- Changes to the Passageway's paving pattern. The paving used on Broad Canal Way is proposed to continue in its same orthogonal orientation through the Passageway, unaffected by the angle of the Passageway. Consideration should be given to instead following the angle of the Passageway.
- A more unified treatment of the Passageway's south side facade. As depicted in the application, this facade is horizontally divided by the third-floor-level green spandrel band that wraps continuously around the building. Consideration should be given to instead interrupting the spandrel band at the beginning of the building's rounded corners and treating the passageway's south wall, together with its rounded corners, as a vertically integrated three-floor-tall facade dedicated to framing the full volume of the Passageway. Given the Passageway's importance as a component of the east/west pedestrian route connecting the entire Volpe/MXD district, this exception to the building's otherwise consistent facade system seems warranted.

Mechanical Penthouse

The building's programmatic uses require a considerable amount of mechanical space - the top 66'-5" feet of the building. The facade treatment of these floors continues the design of the occupied floors, integrating the mechanical space with the design of the tower. Shadowboxes are used at its fenestration. Ventilation louvers are located to minimize their visual impact from public ways.

- The acoustical treatment of mechanical systems should minimize noise impacts on the future residential building on the adjoining R3 site to the north.

The R3 building will be considerably taller than C3; more documentation should be provided of the building's appearance from above, including the design and layout of building mechanical systems.

- A three dimensional depiction would be informative.

Plans

Much of the first floor plan is occupied by the building's loading docks, core, and other back of house functions. Retail spaces on its north, west, and south sides are fairly shallow in plan, but will enliven the pedestrian spaces around the building. The project anticipates outdoor dining on the Broadway frontage.

- To increase the available width for seating in the Broadway sidewalk without unduly constricting the clear pedestrian passage zone of the sidewalk, consideration should be given to recessing the shopfronts slightly back behind the plane of the streetwall.
- The building lobby occupies about 50 feet of the Broadway frontage. In accord with the K2 and Volpe Design Guidelines, its width should be reduced to at most 25 feet, which would allow more space for retail tenants.

The first floor spaces on the Broadway frontage are at grade, below the 2070 10-year flood level. They will be protected by a knee wall below their glazed storefronts, and by passively activated flood gates at the entrances. Critical systems will be above the 2070 100-year flood level.

- If the drawings are updated for a second Planning Board hearing, it would be helpful to note first floor levels on the plans and indicate floodproofing devices at entrances.

Terraces are provided at the tower setbacks.

- It should be clarified whether they will be green roofs.

Arts & Culture

To further enhance the project's contribution to community life, the developer should consider:

- Engaging city staff, including the Cambridge Arts Council and the CDD, for further guidance on the Open Space Art Strategy for Sixth Street Park.
- Considering using the Passageway as an opportunity for public art, including the overhang and the columns. Art could include light installations.
- Providing more information on how the performance platform will be programmed. Will it be part of a larger venue? Will community organizations have access to offer programming?

Continuing Review

The following is a summary of issues that staff recommends should be further studied by the Applicant, either in preparing revised materials if the Planning Board continues the discussion to a future date, or as conditions for ongoing design review by staff if the Board decides to grant design approval:

1. The design of Sixth Street Park, including its landscape and programmatic elements.
2. Play facilities: equipment, features, and locations.
3. Potential adjustments to the design of the northern portion of Sixth Street Park with respect to the R3 residential building once its design is known.
4. Details of the improvements to Broadway vehicular roadway, sidewalk, trees and their planting bed, curbs.
5. Potential for protection of tree planting beds.
6. Provisions for outdoor dining as part of tenant fit-outs.
7. Architectural and sitework design of the Passageway.
8. Details of Kendall Way sitework.
9. Locations and layout of short and long-term bicycle parking.
10. The incorporation of public art in the sitework and the building's design.
11. Coordination with city staff on species of trees and other plantings, protection of existing trees, and on planting standards.
12. Details of the facades, including the first floor and the mechanical penthouse's shadowboxes
13. Glazing materials – visible light transmittance and visible light reflectance.
14. Control of light trespass from interior spaces.
15. Mitigation of wind impacts.
16. Mitigation of noise impacts.
17. A mockup of all exterior materials and colors, to be constructed on site and reviewed and approved before purchase of materials.

CDD Determination and/or comments for Project Special Permit submission – Design Review

Project summary: 75 Broadway is a new high-performance commercial building containing 450,221 SF of lab and office space as part of the MIT Volpe redevelopment district.

Green Building Report: 75 Broadway is expected to achieve LEED Gold certification with 75 credit points. The entire project is seeking formal LEED certification with USGBC.

Status: The Community Development Department (CDD) received the Green Building Report (GBR) for the Special Permit (Design Review) stage. Pursuant to Section 22.25.1 of the Zoning Ordinance, CDD staff have reviewed the project’s GBR and provide the following Determination, Summary of Compliance and Comments.

CDD Determination: **The documentation provided by the Applicant is adequate and demonstrates compliance with the Green Building Requirements applicable to the Special Permit stage. A revised submission, with additional documentation specifications, EPDs and LCA narrative will be required at the Building Permit and Certificate of Occupancy stages.**

Summary of Compliance:

Green Building Professional Affidavit Certification

David Manfredi, LEED AP of Elkus Manfredi Architects Ltd., has been identified as the Green Building Professional for the project. The affidavit states that this professional has reviewed all relevant documents for this project and confirm to the best of their knowledge that those documents indicate that the project is being designed to meet the LEED v.4/v.4.1 requirements per Section 22.24 under Article 22.20 of the Cambridge Zoning Ordinance.

LEED Rating System Checklist, LEED and Net Zero Narrative

- Rating System: LEED v4 BD+C Core & Shell with v4.1 substitutions.
 - ASHRAE editions used = ASHRAE 90.1-2013.
 - Energy use savings = 40% reduction compared to ASHRAE 90.1-2010 baseline.
 - Site EUI = 113 kBtu/SF-yr. & Source EUI (Stretch Code standards) = 312 kBtu/SF-yr.
 - GHG emissions reduction = 28% operational and 21% embodied.
 - GHG intensity = 9.76 kgCO₂/SF operational and 474 kgCO₂/SF embodied.
 - Indoor water use reduction = 35%; outdoor water use reduction = 50%.
 - Window-to-wall ratio = 48%; and U value for window = .23
 - LEED categories and their credit points:
 - Integrative Process – 1 point
 - Location and Transportation – 19 points
 - Sustainable Sites – 7 points
 - Water Efficiency – 5 points
 - Energy and Atmosphere – 22 points
 - Materials and Resources – 8 points
 - Indoor Environmental Quality – 5 points
 - Innovation – 6 points
 - Regional Priority – 2 points
- Total credit points = 75 points**

Comments:

As part of its continued design review, CDD staff provide comments and recommendations to the Planning Board on how projects might further improve their energy performance and reduce their embodied carbons.

1. Staff noted a various roof top equipment extensively related to vivarium laboratory setting (per 3/15/2023 presentation set). Will MIT/Volpe C3 building include a BSL-3 laboratory?
2. The Volpe project area bound by Third, Broadway and Binney Street, is an area with high concentration of development (tall adjacent structures) including residential buildings, Volpe R1, R2, R3 and R4, a new residential tower at nearby MXD site, and existing mid-rise residential at 303 Third among others. Staff had discussed with the MIT design team some concerns related to wind impact and comfort level related primarily to ground level i.e., wind tunnel analysis was provided in 3/15/2023 presentation. Staff appreciate that updates on that. But additional input related to wind analysis for outdoor/indoor air quality would be helpful.
3. Staff would also like to get more information on how the project will address localized air quality specifically on where C3 (and other buildings') air intakes and operable windows (if they part of future design) be located i.e., protected by design strategies to prevent contamination from buildings' exhaust stacks and outdoor/ambient pollutants (e.g., from traffic/transportation, construction or building emissions). Has the project team performed any dispersion modeling analyses to predict where might outdoor contaminant concentration occur to design where air intakes or operable windows might be located?
4. Has the dispersion modeling analysis for the purpose of item #3 above (if done) considered the entire area including adjacent residential towers?
5. Staff is unclear about the exhaust stack design/approach on the roof. What is the rationale for the proposed exhaust stacks layout? Has a different stack distribution been considered, for example, clustering stacks i.e., grouped and/or placed closer to the building core?
6. What is the nearest regional air quality monitoring station, location/name, used for monitoring criteria pollutants that the project might be using for addressing project specific air quality?
7. Staff appreciate the design team's commitment to promote occupants' health and wellness into the MIT Volpe C3 project by committing to evaluate some features of the WELL standards. Staff encourage the design team to complement LEED by focusing, for example, on enhanced air quality and ventilation design, enhanced filtration, and supply air (see item below).

Green Building Requirements - Article 22.20, Section 22.24 of Cambridge Zoning Ordinance

Certification for Green Building Report - Special Permit Stage (Design Review)

Project: 75 Broadway (MIT Volpe C3)

Date: March 31, 2023

8. Considering the dense urban environment and high concentration of pollutants and particulate matters present at this location and potentially within the building interior, staff highly recommend the MIT/design team/atelier ten to consider enhanced interior air quality e.g., additional pollutant prevention and monitoring including for, example, the following:
 - a. Incorporate the highest level of filtration media, preferably MERV 14 or MERV 16
 - b. Increase the supply air ventilation rates to occupied area by at least 60% (in lieu of 30%)
 - c. Control other exterior contaminants (in addition to carbon dioxide monitoring)

9. It is staff's understanding that Ventilation Rate Procedure/IAQ Procedure of ASHRAE 61.2-2010 is used for the project. Clarify why not a more recent ASHRAE Standard is used where applicable?

10. Staff encourage the team to pursue both points in Building Product Disclosure & Optimization: Material Ingredients, Option 2 and meeting the path listed for 'Advanced Inventory & Assessment'.

11. There were two LEED scorecards provided by the MIT design team, as part of the 2/17/2023 GBR submittal, one on page 17 dated 2/14/2023 and another on the last page of the report. Staff also received an updated Scorecard dated 3/17/2023 as part of the 'Responses'. Other than the LEED Master site scorecard, please provide one coordinated LEED scorecards that correspond with the GBR narrative i.e., on page 15. Also, confirm the LEED version used for Materials & Resources. For example, it is not clear what LEED version is used for Building Life-Cycle Impact Reduction. There is an indication in the write up that v4.1 is used for MRc-2,3,4, and 5 but not for MRc1. The LEED scorecards do not reflect that.

12. For MRc1, Building Life-Cycle Impact Reduction, indicate the LEED version used for that credit and the Option and Path used. This information should be clear and coordinated w/the LEED credit narrative.

13. While the 'Yes' credit points are 75 and meeting the requirements for Gold, staff recommend pursuing the LEED Platinum certification and set the stage for a truly high performing facility..