



CITY OF CAMBRIDGE
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To: Planning Board
From: CDD Staff
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Re: **PB-315, MXD Infill Development Concept Plan Amendment**

Overview

Boston Properties proposes an amendment to the Infill Development Concept Plan (IDCP) for the Mixed-Use Development: Kendall Center (MXD) zoning district. Per Article 14.000 of the Zoning Ordinance, an IDCP must be created for new development permitted in the MXD district exceeding 3,333,000 square feet. The IDCP is subject to special permit review and approval by the Planning Board, similar to a Planned Unit Development (PUD) but with some procedural differences. The IDCP is also subject to approval by the Cambridge Redevelopment Authority (CRA) Board pursuant to the Kendall Square Urban Renewal Plan. These two approvals are separate, but a joint public hearing is conducted before both boards as part of the review process.

This is the first proposed amendment to the IDCP that was approved in early 2017. Because it is presumed to be a Major Amendment, it follows the same special permit procedure and is subject to the same approval criteria as the original IDCP.

Boston Properties has also submitted a design proposal for a new building at 325 Main Street, which would be enabled by the proposed amendment. Like a PUD, the IDCP approves buildings in concept form, which are subject to more detailed design review approval by the Planning Board and CRA before construction. Procedurally, the Planning Board will need to approve the amendment to the IDCP before approving the proposed design of 325 Main Street. However, the intended design for that site might help inform the Board's consideration of the proposed amendment.

Approval Criteria

The relevant approval criteria and guidelines are attached in a separate document. Similar to PUD districts, the key consideration for the Planning Board is how the proposal conforms to the plans and guidelines that have been established for the district along with the development objectives for the city as a whole. In this case, the most relevant plan is the Kendall Square ("K2") Planning Study, found here:

<https://www.cambridgema.gov/CDD/Projects/Planning/K2C2>

This memo discusses the background of the proposed IDCP amendment, relevant planning and urban design considerations, and other comments from staff. The focus of this memo is the IDCP rather than the detailed design proposal. Staff received and reviewed the full design proposal more recently, and have requested some additional information that is required by the special permit.

Background

Zoning Requirements

A zoning amendment enabling approximately 600,000 square feet of net new commercial development and 400,000 square feet of net new residential development in the MXD district was adopted by the City Council in 2015. The overall height limit remains at 250 feet, but may be increased to 350 feet for residential uses in limited areas. This amendment followed the completion of the K2 Planning Study in 2013, and includes requirements that were recommended in the K2 plan, including the following:

- Of the approximately 1 million square feet of additional GFA allowed in the district, 400,000 must be residential (along with an additional 20,000 square feet of middle-income housing, described below, which is exempt from the overall calculation). Part of the new residential development must commence before the occupancy of more than 375,000 of new commercial GFA.
- Residential development must be no less than 20% affordable, per the citywide inclusionary housing requirements, and an additional 5% of residential development must be priced for middle-income households. Through a separate commitment made to the City Council, at least 20% of residential development must be homeownership units.
- “Innovation Space,” a type of commercial space that is made available for smaller companies and individuals on more flexible lease terms, must be created in an amount equivalent to 10% of new office/lab space created in the district. Innovation space is exempt from GFA limitations, provided that at least 25% is below-market-rate space for qualifying tenants.
- At least 75% of the ground floor frontage of new buildings along Main Street, Broadway, and Ames Street must contain retail uses or active public gathering space.
- At least 100,000 square feet of public open space must be provided (as has been required in this district in the past), and at least 15% of the lot area in the district must be public or publicly beneficial open space.
- New parking is limited according to maximum ratios, and reductions in parking are encouraged as a measure to manage traffic growth and support sustainable design. Like other large projects, transportation impact review and mitigation is required as part of the approval process. Through a separate agreement with the CRA, the developer must contribute funding to support public transportation improvements through the Kendall Square Transit Enhancement Program (KSTEP).
- New buildings must meet a minimum LEED Gold design standard and incorporate an integrated design approach to energy and emissions, water management, cool roofs, energy monitoring, and mechanical equipment noise mitigation. (Additional sustainable design standards are incorporated into the approved IDCP special permit.)

Currently Approved IDCP

The approved IDCP includes four new buildings on four sites, to be developed in three phases. Phase 1, a commercial building at 145 Broadway, is under construction. Phase 2 includes both a commercial building at 250 Binney Street and a residential building on the northern side of Broadway, attached to

the existing Blue Garage. Phase 3 consists of a smaller residential building on the southern side of Binney Street, also attached to the existing Blue Garage. Specific site and open space improvements are associated with each phase. To meet the applicable zoning requirements, new “innovation space” will be created within an existing building at 255 Main Street.

Proposed Amendment

The proposed amendment eliminates the proposed “Phase 2” commercial building at 250 Binney Street, retaining the existing lower-scale building on that site, and instead proposes constructing a comparable amount of net new commercial square footage by demolishing and replacing the building at 325 Main Street. The proposed amendment would also substantially reduce the number of parking spaces from the approved IDCP. There will be relatively modest changes in the mix of commercial uses, but no modifications to residential development or overall phasing are proposed.

Pre-Application Board Comments

The following summarizes some of the key comments made by the Planning and CRA Boards at the July 31, 2018 pre-application discussion.

- Rebuilding at this site presents an opportunity to make significant changes and improvements. Public benefits are paramount. Important for the developer to rise to the occasion.
- Internal relocation of development might not necessarily be problematic, but consider how it affects the arrangement of land uses and density across the district. Is commercial better than residential on this site? Is anything lost by not redeveloping the site on Binney Street?
- Recognize the very public nature of the place, including greater ambitions for the public realm, enhancements to pedestrian circulation and site permeability.
- Overall the project should show a demonstrable and measurable net gain in the quality of open space. Provide further information on open space improvements, and consider broader open space issues such as canopy cover, heat impacts, and the overall network as envisioned in the *Connect Kendall Square* Plan. Input from an independent landscape architect would be helpful.
- Look at the bigger picture, consider the unique use patterns and character of the area, and find ways to demonstrate local character in buildings and open spaces.
- Provide a more meaningful connection between the plaza and rooftop garden. Consider making the elevator more visible and providing steps, possibly with interstitial programmed open space.
- Consider impacts on the rooftop garden in particular, including shadow impacts from the proposed new building, effects on plantings, and the relationship between public and tenant use of the space.
- While the proposed building design has positive features, respond to significant concerns about building placement, massing and bulk, including:
 - Considering a narrower and potentially taller building to fit the location, offsetting the squat, horizontal proportions, and allowing more light and sun to the rooftop garden.
 - Consideration of light, air, and views from existing buildings.

- Issues with how the proposed building joins to the existing 355 Main Street.
 - Possible canyon effect associated with large buildings opposite each other.
 - Needing more separation between the new building and the Marriott Hotel.
 - Perception that the sloped façade “looms” over public space.
- Explain community benefits, including community connections to innovation space and creating a publicly beneficial ground floor experience. Consider interaction at all levels of the community, and benefits to people of all incomes, such as affordable cafes, public restrooms, jobs, places for people to stay cool in the heat.
 - Respond to questions about parking, traffic study boundary, and impacts of rideshare vehicles.
 - Consider construction staging given site constraints.

Staff Comments – Planning and Zoning

Within the overall limits on square footage and height, the MXD zoning is written to allow flexibility in where new “infill” development may be located throughout the district. Instead of strict dimensional requirements such as building locations, setbacks, and lot coverage ratios, new infill development is subject to review and approval by the Planning Board and CRA at a master plan level and then at the level of individual building sites, with the K2 plan and guidelines informing this review.

While the flexible relocation of development across building sites is anticipated by the zoning, and the overall zoning requirements will continue to be met with development relocated to a different site, some aspects of this proposed amendment highlight relevant planning and zoning considerations.

Location of Buildings and Uses

As noted in the amended IDCP submission (see page 46), 325 Main Street was identified as a redevelopment opportunity in the K2 study, demonstrating that a more substantial development on this site has been contemplated within the overall plan for the district. This Main Street location has great potential to improve the retail environment and public realm in the heart of Kendall Square, and the Board should assess whether the proposal will achieve these desired improvements.

Although there is a small reduction in the overall amount of retail in the proposed amendment, the elimination of proposed retail along Binney Street (not a high-priority retail location) is outweighed by improvements to retail along Main Street (a priority retail location in the K2 plan). Especially given overall trends that are making place-based retail more difficult to succeed, it is important to strategically locate and cultivate retail where it is most viable and will have the greatest impact. Understanding how retail at the proposed 325 Main Street site can be programmed to have the greatest benefit is an important consideration, and is discussed further in this report.

It is worth noting that in the depiction of the K2 plan on page 46, development is distributed over more sites within the MXD district than in the IDCP, and the development depicted at 325 Main Street in the K2 plan is smaller than the building that is currently proposed. This is not necessarily a problem, because the K2 Plan ultimately did not prescribe specific amounts of development on specific sites, but it shows the challenge of accommodating that amount of development on a single site. Even during the Board’s

prior review of the IDCP, the building bulk and scale proposed at 250 Binney Street was identified as a concern that would need to be addressed in future design review. As Board members noted during the pre-application review for this proposal, the 250-foot height limit in this area is a constraint that is relevant for a building of this scale. These issues are discussed further in the urban design section of these comments.

Residential Phasing

A very positive and crucial aspect of this plan is that the commercial building now proposed for 325 Main Street is bound together with a 350,000 square-foot residential building on Broadway as a single “phase” of development. Although they are on two separate sites, together they represent a balanced mixed-use development.

In terms of timing, the plan notes that the construction of the residential building will commence before the completion of the commercial building, as required by zoning. Since design review for the commercial building is commencing now, it would be helpful to have a better expectation of when the design review for the residential building is expected to commence. In approving the earlier IDCP, the Planning Board also required a study of alternative uses of the “Blue Garage” rooftop and improvements to the service streets on either side of that garage, which is expected to accompany the design review of the residential building. Reasonable flexibility in timing should be allowed, but it is also important to avoid a scenario in which the occupancy of the commercial building might be delayed, or the design review of the residential component might be unnecessarily rushed, if the schedules do not align.

Parking and Transportation

As mentioned earlier, part of the transportation strategy developed through the K2 Plan is the establishment of maximum parking limitations and flexibility to reduce parking if efficiencies can be created through shared parking and promotion of alternative transportation modes. Although specific transportation impacts need to be evaluated, and are discussed in the accompanying memo from the Traffic, Parking, and Transportation (TP&T) Department, the overall approach of reducing new parking where feasible is consistent with the intent of the K2 plan and the adopted zoning.

Open Space

The district-wide open space requirements are met under existing conditions. Within those requirements, the zoning allows open space to be modified and improved in a flexible way, subject to review and approval through the IDCP process. The currently approved IDCP contains improvements to open spaces that are adjacent to all of the approved development sites. The proposed IDCP amendment will have different impacts on different open spaces, including the Kendall Square plaza and rooftop garden, both of which are important public spaces. However, the amended IDCP does not propose improvements to those spaces comparable to the improvements to open spaces that are part of the IDCP along Broadway and Binney Street. Since new open space is not proposed to be created, more substantial improvements to surrounding open space might need to be incorporated into the plan, both to mitigate any negative impacts and to support an enhanced function for that space given the changing context around it. This is also discussed further in the urban design section below.

Staff Comments – Urban Design

Guidance for urban design review is primarily provided in the Kendall Square (K2) Design Guidelines. These guidelines were developed during the K2 study process to inform property and business owners, developers, and the public about the desired form and character of development in Kendall Square.

The guidelines aim to create consistently high-quality public environments, and to ensure that development contributes to the character and vitality of the surrounding community. A particular emphasis is the relationship between private buildings/open spaces and public streets/parks, and the desire to sensitively manage the impacts of bulk and height. The relevant design objectives and guidelines are attached in a separate document with the special permit criteria.

Pedestrian permeability and connections

By relocating Commercial Building B to Main Street, the Applicant is creating a rare opportunity to rethink the entire urban block between Main Street, Broadway and Ames Street, and to improve the area in a substantial and long-lasting way. A major goal of the K2 Planning Study is to enhance the quality of public street and park spaces, and to increase the permeability of the site to pedestrians. Of note for this block is the connection from the plaza to the rooftop garden, which was a focus of much attention at the pre-application meeting. The design of that important link has significantly advanced since the meeting with a series of animated terraces and stairs proposed. The connection now responds to many of the ideas put forward by the Planning Board, including thinking about access to the garden as an urbanistically significant connection like the Spanish Steps in Rome.

Other connections are not thoroughly considered in the amendment and should be studied further. The concept plan should include detailed suggestions for how to improve pedestrian circulation between the plaza and Broadway. The look and feel of the east-west connection (the extension of Pioneer Way) through to Kendall Plaza and the 325 + 355 Main Street Connector should also be further addressed. These connections are very important to the notion of breaking-up large blocks and improving walkability as recommended in the K2 Design Guidelines. To truly function as integral parts of the public realm, the connections must be legible, welcoming, and generous in scale; they should not be overwhelmed by the existing or proposed buildings. The K2 Design Guidelines for connectors provide some relevant design parameters. For example, pedestrian connectors should be set back from the public street facades, provide at least two stories of clearance, and allow light and views of the sky.

Improvements to the public realm

Another important urban design objective for the Infill Development Concept Plan is the enhancement of the open space network throughout the MXD District. This was a strong point of discussion at the pre-application meeting, and both Boards felt that there must be a demonstrable and measurable net gain in the quality of open space. Building B will be set back at the sidewalk level by 3'2" and further at building corners, which enhances the public realm and provides space for anticipated high volumes of foot traffic. The potential integration of publicly accessible bathrooms in the vicinity of the plaza will also improve the open space amenities on offer in the district.

While the connection to the rooftop garden has the potential to be a wonderful public realm asset, as described above, only minor improvements are proposed to the plaza itself or the rooftop garden. In addition, the open space diagrams do not adequately convey the pedestrian experiences of the rooftop or plaza spaces.

The following should be considered:

- Further examination of possible improvements to the rooftop garden that will enhance its use, such as opportunities for programming, lighting, public art, infrastructure to support events, upgraded furniture, and other possibilities.
- Additional public art opportunities throughout the district.
- Opportunities to enhance the appearance of the Marriott façade, particularly focused on the loggia.
- Possible public realm improvements on Broadway where the parking garage steps back from the sidewalk and creates a negative pedestrian interface.

Regarding the amendment materials, it would be helpful if the following information was provided:

- A composite plan for circulation with supporting text describing the various components of, and proposed improvements to the public spaces throughout the block – plaza, Marriott, rooftop garden, and through-block pedestrian connections, and illustrating surrounding building massing.
- Open space plans and sections showing the full height of adjoining buildings, both existing and proposed, that frame the rooftop garden and plaza.
- The proposed stairs and terraces ascending from the plaza level to the rooftop garden are difficult to evaluate in the IDCP amendment materials. An overall axonometric drawing would clarify the relationship of the stairs and terraces to the plaza.

Built Form – massing, building placement, relationship to other buildings

At the pre-application meeting, there were major issues raised about the building's placement, bulk, shape and height. Some Board members suggested additional height and changes to building placement might help to reduce horizontal bulk and the negative impacts on the plaza, rooftop and Main Street. In Kendall Square, the design guidelines were specifically prepared to ensure that tall buildings with large floorplates can be good neighbors to public spaces and smaller existing buildings. Massing should respond to the programmatic needs of the building, but it also needs to mitigate bulk, provide a human-scaled pedestrian environment and define the public realm.

The application has been modified to sculpt and articulate the building's massing, and on some levels the floorplate size has been reduced to a total area that is more consistent with the K2 guidelines, which is an improvement. Some remaining key issues for the Planning Board's consideration include:

Leaning over Kendall Square Plaza and lack of step-backs

As set out in the K2 Design Guidelines, the scale and massing of buildings abutting plazas should be carefully considered to minimize negative impacts on the public realm. Further, the guidelines recommend a 15-foot setback above the podium (usually a height of 85-feet) to help create a more

human-scaled environment, and for buildings above 200 feet in height to be separated from each other by 100 feet. Commercial Building B steps back at the lower levels, opening a view corridor to the rooftop garden; however, the tower portion leans significantly over the plaza and in the rendering appears to overwhelm the public realm. Similarly, the leaning form also overlaps the Marriott when viewed from Main Street, resulting in loss of sky view.

Staff recommends that:

- The tower façade be straightened to vertical and stepped back at upper levels to allow for more skyline and openness between the building and Marriot when viewed from Main Street and the plaza. This would help create a streetwall that frames the plaza space and would minimize perceptions of building bulk above. Opportunities to recoup lost floor area could include eliminating the chamfers at the southeast and southwest corners, eliminating the cut outs at the 10th and 15th floors, or cantilevering over 355 Main Street.

Bulk, horizontal emphasis on Main Street and connection to 355 Main Street

Perceptions of building bulk along the Main Street frontage are also an area of concern. The K2 guidelines recommend that “tall buildings be articulated to avoid a monolithic appearance, and should emphasize slender, vertically-oriented proportions”. Attempts have been made to break down the massing and creatively articulate the façade. However, the perception of bulk is intensified by the relatively blunt connection with 355 Main Street, the horizontality expressed in the massing, particularly the deep slots, and the leaning and chamfered façades. The combined façade length of 325 and 355 Main Street also exceeds 400 feet. The K2 guidelines support a continuous streetscape up to the podium height (about 85 feet), but recommend horizontal dimensions of about 240 feet in length up to 125 feet in height, and about 175 feet in length for taller building portions.

Based on the built form parameters established in the K2 design guidelines, staff suggest further study of the following potential options:

- Setting portions of the building back from Main Street at upper floors in order to limit the sense of height at street level, and to provide a human-scaled streetwall that frames the street.
- Introducing a recessed vertical element at the end of the building above the 325 + 355 Main Street Connector to clearly separate the two buildings. Additional vertical reveals between different massing components would also help reduce the sense of monolithic massing.
- Establishing a vertical rhythm across the façade to reduce perceptions of bulk and create vertically oriented proportions.

Impacts on rooftop garden

Regarding the rooftop garden, both Boards expressed concerns about the possible shadow impacts of the building on the use of the garden and on the health of its plantings. A shadow study has been provided, which shows that there will be significantly increased shadow on the equinoxes, which is an issue in relation to the K2 Design Guidelines and broader citywide urban design objectives. Further study of building placement and massing options is needed to mitigate shadow impacts. A landscape

assessment of possible impacts on plantings is noted in the submission, but has not been provided thus far.

Ground floor use and design

A building's ground floor active uses and the architectural quality of its pedestrian level façades are crucial to the success of the public open spaces it addresses. Given the importance of the Kendall Square Plaza as a civic space in Cambridge, it should be given a strong architectural frame and a well-defined edge, with clearly demarcated pedestrian entrances. While this appears to be achieved in concept in the amendment materials, the design review materials show a different approach. The entryway from the plaza to the building is not legible in plan or elevation. The retail space appears to encroach into the plaza, wrapping around the headhouse to create a narrow covered pedestrian passage, which does not seem welcoming to pedestrians and may be a safety concern. Visual and physical access from the plaza and Main Street to the rooftop garden elevator also appears very indirect.

As recommended in the design guidelines, the extent of office lobby fronting Main Street is minimized, and street activity is maximized. The main office entry is proposed to be located off the 325 + 355 Main Street Connector. While this location is pre-existing and helps to further animate the connector, without any renderings, or district design guidelines relating to pedestrian connectors, it is unclear how this space will be perceived as a public amenity. It is important to ensure that the connector does not feel privatized or simply part of the building lobby. Staff also note that the design review materials show a lack of ground floor retail entrances on Main Street and in the plaza, which is not consistent with the amendment.

The following design opportunities should be considered:

- A more generous ground floor height.
- Further study of building entries, including the need for a direct entrance to the office building on Main Street.
- A double height expression to the entries of both the 325 + 355 Main Street Connector and the extension of Pioneer Way so that these spaces feel open and welcoming to the public.
- Further study of the design and character of pedestrian connectors.
- Further review of the retail edge adjacent to the plaza, including the relationship of ground floor retail/building mass and its impact on the plaza area, especially how it will affect current programming (e.g. concerts, fitness programs, farmers markets).

Wind

A district-wide pedestrian wind comfort study is included in the amendment filing. Pedestrian wind conditions around the rooftop garden and Kendall Square Plaza are expected to be comfortable for pedestrians in summer and winter, including an improvement in conditions at plaza level, which are generally positive findings. The study does show deterioration in wind conditions on the north side of Broadway, in the vicinity of 145 Broadway and the 10CC and 15 CC buildings. In the winter, five "uncomfortable" locations are identified. Furthermore, the uncomfortable condition on the south side

of Main Street associated with Building 5 has changed location since the MIT SoMa project was approved.

Staff suggest further study is needed to better understand the decline in wind conditions north of Broadway and changes to wind conditions on Main Street. In general, wind conditions should be tuned to the type of pedestrian activity desired. Mitigation strategies should first consider massing changes as a mitigation measure, rather than relying only on landscaping and wind screens.

MXD District Design Guidelines

The MXD Design Guidelines were previously prepared in draft format as part of the original IDCP application, and it was a condition of the Special Permit that these be finalized. At the time, staff had concerns that the guidelines only focused on buildings. Since then, some additional content and refinements have been made. However, there remains a focus on the design of individual buildings, rather than the role each building plays within the urban fabric.

As Commercial Building B is proposed to move to the heart of Kendall Square, staff recommend that the district design guidelines place a greater emphasis on the Kendall Square Plaza, the existing and proposed connections between the plaza and other spaces, and the ways the existing and proposed massing of the buildings around the plaza will contribute to the plaza as a civically important place. The guidelines should prioritize the definition, activation, and interconnection of public spaces by way of built form and building programming, landscape design and programming, and the design of circulation systems. Staff welcome the opportunity to continue to work with the Applicant to strengthen these aspects of the district design guidelines.

Staff Comments – Sustainable Development

The proposed IDCP includes most of the same sustainability elements as in the currently approved plan. However, the current plan (as reflected in the special permit decision) includes additional commitments that were incorporated during the prior IDCP approval process, including assessments of geothermal energy, energy storage, commissioning programs, technical pathways to adapt buildings to “net zero” performance in the future, climate change resilience, and tracking greenhouse gas emissions. These requirements continue to be supported by staff and would continue to apply.

One additional consideration is that given the shift of development onto a site where it will be connected to existing buildings, and potentially occupied by a single tenant, there may be opportunities to improve sustainability across multiple building sites or to incorporate district-wide energy strategies.

Staff Comments – Retail Programming

The Retail Plan section of the proposed IDCP states that for 325 Main Street the applicant is anticipating restaurants, entertainment/sporting venues, consumer service retail and dry goods, as well as collaboration spaces such as art galleries that double as coffee shops. The MIT COOP will also be coming back at a reduced size. Staff supports this tentative plan and would encourage the applicant to consider entertainment and non-food venues in order to diversify the retail in the district and Kendall Square as a

whole. These new uses will help activate Kendall Square on both weekdays and weekends, which is a goal stated in the IDCP.

The following are some specific comments related to the proposed changes to the IDCP:

- Staff encourages the developer to think more broadly of the mix of retail uses in the district beyond the typical food service uses. Currently, all but a few retail tenants in the MXD district are food service retailers.
- The proposed IDCP only states that the applicant/developer will meet with the CRA regarding the retail plan and mix. The approved IDCP special permit also includes a condition that “The Permittee shall consult with the Economic Development Division of CDD prior to initiation of marketing and tenancing efforts for any space devoted to retail and consumer service uses within the IDCP, for the purpose of sharing information about outreach strategies, leasing provisions, and programs that might assist in serving local businesses. Such consultation shall include a discussion of efforts to recruit ‘Independent and Local Retailers’ as described in Section 14.32.6, Paragraph (4), Subparagraph (e), in order to fulfill the requirements to exempt certain retail spaces from GFA calculations.” It is important to note that this would remain a requirement for all buildings in the IDCP.
- In order to fulfill this special permit condition, staff recommends that the applicant discuss with CDD its outreach to local businesses, leasing/length of tenancy, and an overview of the local retail incentives listed under 4.2.4 of the IDCP with an explanation of which of those incentives are actually being used or not used and why.