



CITY OF CAMBRIDGE
COMMUNITY DEVELOPMENT DEPARTMENT

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To: Planning Board

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Date: November 10, 2016

Re: Special Permit **PB #321, "Mass + Main" Development**

This memo contains an overview of the proposed Residential Mixed Income Project at 411-413, 415-429, 433-445 and 453-457 Massachusetts Avenue; 9-19 and 25 Columbia Street; and 65 Bishop Allen Drive, the special permits being requested, and related comments. Comments from the Traffic, Parking and Transportation Department (TP&T) and Cambridge Historical Commission are provided in separate memos. The applicant is in communication with Department of Public Works (DPW).

Summary of Proposal

The applicant is proposing to demolish four existing buildings and construct a mixed use development consisting of two new buildings with ground-floor retail space and upper-floor residential units. One smaller existing historic building will be retained, reused and incorporated into the new development. The proposal includes 283 residential units and about 17,279 square feet of ground floor retail space. One new building "B-1" contains a section proposed to have 7 floors with a functional green roof on top, whereas the other section rises up to 19 floors. The other new building "B-2" is proposed to be 6 floors high with a functional green roof proposed on the fifth floor of a section in the rear. Parking is proposed mostly within a below-grade garage, with some spaces provided on an existing surface lot at 65 Bishop Allen Drive. Bicycle parking will be provided within both new residential buildings.

Requested Special Permits

The site is located in the Business B district and Central Square Overlay District, and subject to the regulations for the Mass and Main Residential Mixed Income Subdistrict (Section 20.307) as it meets the definition of a Residential Mixed Income Project. The project seeks a Project Review Special Permit for the construction of a new building of gross floor area greater than 50,000 square feet per Section 19.23 *Special Permit Threshold*. It is also seeking Special Permit for exemption of functional green roof area from gross floor area calculation. The applicable special permit findings are summarized below. Applicable sections of the zoning are provided in an appendix.

| Requested Special Permits | Summarized Findings <i>(see appendix for zoning text excerpts)</i> |
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| Project Review Special Permit (Section 19.20) | <ul style="list-style-type: none"> • 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. • The project is consistent with the urban design objectives of the City as set forth in Section 19.30 (see appendix). |
| Floor Area Exemptions for Functional Green Roof Area (Sections 22.33) | The proponent must demonstrate that the Functional Green Roof Area is designed such that the vegetation will withstand the foot traffic associated with its anticipated use. The Planning Board shall also consider the potential visual, noise and privacy impacts of the anticipated use on neighbors. |
| 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 (see appendix). |

Central Square Design Guidelines, 2013 – Summary of Design Goals

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| <i>Streets and Sidewalks</i> |
| <ol style="list-style-type: none"> 1. Establish Mass Ave and Main Street as great public spaces in an improved system of streets and sidewalks. 2. Enhance the street network to make walking more convenient, safe and fun. 3. Balance the goals of active Street edges and residential privacy on streets other than Mass Ave and Main Street. |
| <i>Integrating Buildings with Public Places</i> |
| <ol style="list-style-type: none"> 1. As the design of existing public spaces is revisited and redevelopment of adjacent properties occurs, seek to improve the attractiveness and functionality of the open space at all levels. 2. Create new outdoor and indoor gathering spaces. |
| <i>Ground Floor Design</i> |
| <ol style="list-style-type: none"> 1. Storefronts should be oriented to the pedestrian and provide visual interest both day and night along Mass Ave and Main Street. 2. Pedestrians should be encouraged to window shop by the provision of varied and interesting display areas and ground floor facades. 3. Every effort should be made to create welcoming storefronts and to express an individual building or store identity. 4. Windows should be expansive and illuminated from within to create interesting display or viewing areas for retail space. |

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| <ol style="list-style-type: none">5. Provide a framework for variation in the design of the ground floor, so that the architecture of the building does not dominate the architecture of the street.6. Encourage expansion of the definition of ground floor articulation to the lowest 2 levels to further enhance the pedestrian experience.7. Pedestrian level treatments should relate to the human dimension and be rich in detail to enhance the pedestrian experience through the use of architectural elements such as trim, sills, lintels, awnings and canopies or, in more modern fashion, should be inviting and interesting through dramatic treatment of space, lighting, and signage.8. Enliven the public realm by expanding the publicly accessible private spaces along sidewalk, in association with the creation of retail, cultural and office space. |
| <p><i>Built Form - height</i></p> |
| <ol style="list-style-type: none">1. Variation of height is encouraged.2. While buildings are encouraged to align facade elements with tops of adjacent buildings, overall building height does not necessarily need to be uniform from one building to another.3. Allow the greatest height and bulk on Mass Ave with a diminution in height and bulk as the project approaches the lower residential uses in abutting areas4. Consider opportunities to maintain and enhance views to significant historic structures when composing building height and bulk. |
| <p><i>Built Form - massing</i></p> |
| <ol style="list-style-type: none">1. Continuation of a strong linear retail frontage is critical to preserving the strength and historic character of the commercial district.2. Building fronts should maintain a strong linear edge along Mass Ave.3. Adjacent structures should build to a common party wall, although occasional setbacks of up to 15 feet to accommodate outdoor dining or retail sales, integrated with ground floor design and programming, are encouraged.4. Alleyways between buildings are not encouraged except at identified locations where public pedestrian passages are desirable.5. Limit shadow impacts of new development on portions of neighborhoods outside the study area and public parks within approximately 1-2 blocks or 500 feet of development site. Shadow impacts should not substantially reduce the appeal of public spaces, nor direct sun access to neighborhood housing, during spring and fall. |
| <p><i>Streetwalls and Bulk Control</i></p> |
| <ol style="list-style-type: none">1. Building facades along Mass Ave and Main Street should both reinforce the traditional 55 foot height range of traditional buildings, and introduce variation in height.2. Added height is especially encouraged where it can help buildings serve as attractive landmarks.3. Streetwall height should step down towards the neighborhoods.4. Relate architectural elements of new construction to significant architectural elements, including cornice heights, on adjacent buildings. |

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| <i>Building Facade</i> |
| <ol style="list-style-type: none">1. Respond to orientation with regard to environment, place, and site, while providing context by acknowledging the importance of building profile, edges and corners.2. New projects should be conceived with enduring and durable qualities, such that, many years from their conception, they are seen as strong contributors to the liveliness of the Square and to its role as presenting a diverse set of architectural statements over a century or more. |
| <i>Parking and service areas</i> |
| <ol style="list-style-type: none">1. Off-street parking and service areas should be screened from the public realm wherever possible2. Enrich neighborhood walkability with safe, green streets. Promote use of transportation modes other than driving. |

Area Planning and Zoning

The site was the subject of the “Mass and Main” zoning petition, adopted in 2015, which established the Mass and Main Residential Mixed Income Subdistrict regulations in Section 20.307. This petition, submitted by a partnership that included the current applicant, followed the City’s work on the Kendall Square Central Square or “K2C2” Planning Study. The particular goals for Central Square that emerged from that study included public spaces to build community, diversity in retail, non-profit and cultural institutions, increased housing and residential diversity, connecting people to the square, and encouraging sustainable development choices. The purpose of the Mass and Main zoning, for that particular site, was to provide incentives for residential development, and to serve as a transition between the character, uses and scale of Central Square, the adjacent Cambridgeport Revitalization Development District and Kendall Square, as well as a transition from the commercial core of Central Square to the abutting residential districts behind Bishop Allen Drive.

The Mass and Main zoning establishes three distinct areas. One area, along Massachusetts Avenue, is intended to accommodate taller, denser residential development with heights up to 195 feet, and require ground floor retail with a minimum proportion of locally-owned businesses and incentives for establishments no larger than 1,500 square feet. Areas along Columbia Street and Douglass Street are intended for mid-rise development up to 70 feet, with step-down requirements near the southern edge of Bishop Allen Drive. Areas north of Bishop Allen Drive are intended to accommodate parking for new development, but also allow moderate-scale residential uses consistent with the base Business A zoning.

A key provision of the Mass and Main zoning is that it defines a Residential Mixed Income Project, which is required to set aside at least 17% of housing units as affordable to low-and-moderate income households plus at least 3% of housing units as affordable to middle-income households, among other requirements. In exchange for meeting the requirements, a Residential Mixed Income Project is allowed a significant increase in density and height, as well as some flexibility in parking, setbacks, open space and other normal district requirements.

Proposed Project

The proposed development consists of two buildings, with building “B-1” located in the Mass Ave Height Area and building “B-2” located in the Columbia/Douglass Street Height area. The existing historically significant building at 411-413 Massachusetts Avenue has been integrated into the design of building B-2.

The proposed development will conform to the allowed uses in the district and affordable housing and unit mix requirements for a Residential Mixed Income Project per Section 20.307.8. The proposed buildings are designed to conform to the zoning requirements of Section 20.307.6, including FAR, unit density, height, setbacks, parking and bicycle parking. 14,479 square feet of retail area is exempted from FAR calculations, as it is proposed to be divided into individual establishments that are 1,500 square feet or less in area, per Section 20.307.9.5.

Required long-term bicycle parking is provided in the first floor of both buildings as well as in the mezzanine level between first and second floors of building B-1. The project proposes a reduced parking ratio of 0.5 spaces per dwelling unit, which will be accommodated in a below-grade garage and some of the existing surface lot at 65 Bishop Allen Drive. This proposal is different from the anticipated outcome when the zoning was considered, which envisioned using the existing non-conforming parking garage north of Bishop Allen Drive to serve the new residential building. However, the provision of parking below grade is more consistent with the City’s well-established urban design objectives, and would allow the existing garage to be demolished and replaced with housing, as proposed in the concurrent application for 47 Bishop Allen Drive.

The project meets the minimum requirement for open space (Section 20.307.6.4), primarily with usable green roofs and public open space areas including pedestrian plazas and spill-out areas next to retail. The application includes specifications for the proposed green roofs to demonstrate that they are designed to withstand the foot traffic associated with usable open space while still performing the environmental function of a green roof. The Planning Board must grant a special permit for these spaces to be exempted from the calculation of FAR.

Sustainability

The project is required to meet the current Green Building Requirements, which require the project to be designed to a LEED Gold level (Section 20.307.11). Staff has reviewed the submitted green building materials with the Applicant’s consultant and has found that the project is on track to fulfill the requirements. Recently, the Applicant revised their LEED review materials to show compliance using the most recent version of LEED (v4).

As a result of the 2015 Net Zero Action Plan, the City is developing a proposal to increase the sustainable design standards for new buildings, with a particular focus on energy performance and enhanced commissioning. For this particular project, enhanced commissioning would be of particular benefit both to the city’s sustainability goals and energy management of the buildings. The project intends to achieve the enhanced commissioning credit for both buildings. The Net Zero Action Plan also targets at least a 16% reduction in LEED energy cost savings measured against ASHRAE 90.1.2010. In the proposed

development, Building “B1” is anticipating a 12-15% reduction whereas Building “B2” is anticipating a 14-17% reduction.

The Net Zero Action Plan also recommends that new buildings be “solar ready,” meaning that the building includes rooftop space with maximum solar access and designed to accommodate the future installation of solar energy equipment such as photovoltaic panels. While this is not required, the Applicant has indicated that roof mounted solar panels may be installed on building B-2 and staff highly recommends pursuing this objective. Also, the City is currently conducting a public process to develop a Climate Change Preparedness Plan to mitigate and adapt to climate change impacts, which includes preparing for increased flooding over time and mitigating urban heat island effects.

Ground-Floor Retail and Active Use

The proposed project meets the Central Square goals of providing active retail frontage along Massachusetts Avenue to provide a variety of services. Variety in the size and type of retail spaces, 25% allocation to local retailers, and short term lease provisions for different types of tenants are positive efforts to create and sustain a thriving retail environment in the area.

It is recommended that the applicant discuss retail marketing efforts with the City’s Economic Development Division (EDD) staff at the stage when spaces are being marketed but before potential tenants are selected, in order to understand what types of businesses are being contacted and to provide information about potential business owners and other resources that would help to ensure a good ground floor mix. EDD staff can also assist with permitting or licensing issues and provide information on grant opportunities, especially for local, pop-up, and short term Cambridge-based entrepreneurs.

It is recommended that there be further discussion of how the requirements for local retail are being applied. Measures should be considered that may effectively lower barriers of entry for independent retailers, such as pro bono architectural services or build out services. The application materials seem to indicate a focus on established local business owners that may be seeking locations to expand. In the proposed “Central Market” area, more opportunities can be explored for test/startup retailers, pop-ups, seasonal activities, and art spaces. Because these unique uses may not always fall within the strict zoning definitions for retail, it may be important to discuss these at the special permit phase so that they are clearly authorized in a final decision.

While it is important to set clear expectations at the special permit phase, the future success of retail and ground floor activation will depend on the applicant’s continuing efforts during and after the construction of buildings. To ensure the uses and activities in the Central Market meet the needs of the community, staff recommends that the developer create a Central Market committee (including an area resident, Arts Council representative, Central Square Business Association representative and EDD staff) to meet twice a year to discuss the market’s retail mix and/or the indoor and outdoor events space.

Urban Design

Guidance for urban design review is primarily provided in the *Central Square Design Guidelines* (2013) developed during the C2 study process to inform property owners, business owners, developers, and

the general public about the desired form and character of development in Central Square. The Design Guidelines are to be used by the Planning Board in their review of residential mixed income projects in the Mass and Main Subdistrict.

The key objectives in these design guidelines are to:

- Enrich the Square's public realm as a place that invites community interaction at many levels.
- Celebrate and maintain the mix of old, new, funky, and locally-based enterprises activating Central Square's Cultural District.
- Support community diversity through more varied housing choices.
- Enrich neighborhood walkability and livability with safe, green streets and improved access choices.

In addition, as building heights above 160 feet were not contemplated in the C2 Study, the Mass + Main rezoning included a floorplate maximum of 10,000 square feet and the following supplemental guidelines for taller structures:

- Consider the variety of vantage points from which tall buildings will be seen, especially from significant public spaces and nearby low-scale residential neighborhoods, as well as city skyline views.
- Tall buildings should be articulated to avoid a monolithic appearance, and should emphasize slender, vertically-oriented proportions.
- Avoid broad "slab" volumes that make the building appear bulky and visually dominant. Point towers expressing vertical volumes are preferred.
- Locate and shape tower elements to minimize shadows on existing or proposed public open space and streets.
- Configure towers to maximize sky views from public open space and enhance visual connections through sites.
- Consider variation in forms that present different profiles to different vantage points.
- If appropriate, step down tall buildings where they interface with adjoining historic buildings.
- Minimize impacts on the environmental performance and amenity of adjoining residential buildings.
- Consider the appearance of the building top both by day and night, while demonstrating responsible use of lighting and energy consistent with sustainability requirements.
- Design buildings to minimize negative wind impacts on streets and public spaces.

Site Planning and Design

The redevelopment of the former Quest Diagnostics site with mixed income housing and ground floor retail that enriches the public realm, and strengthens connections to open space and the neighborhood, is a very positive urban design outcome. The benefits of the proposal include continuing the streetwall and retail frontage on Massachusetts Avenue, expanding the sidewalk and open spaces areas adjacent to Lafayette Square, creating a mid-block pedestrian connection, and transitioning in scale to the historically significant Apollo Building and the neighborhood to the north. The project also deals with

several challenging site conditions and successfully manages to put all “back-of-house” functions to the rear and parking below grade.

Open space and public realm

The proposed public realm and open space improvements will create a welcoming and vibrant urban environment with strong ties to Central Square. Much care and thought has been given to the design of new sidewalks, outdoor seating areas and pedestrian connections, and the interface between the proposed building and these new spaces. The application also shows a richness in the detailing of landscape treatments and use of high quality materials.

The expanded sidewalk area provided by the podium and tower setback on Massachusetts Avenue relates to and bleeds into Lafayette Square, which will enhance the square’s functionality and attractiveness. It will be important to ensure that this area maintains a sense of publicness for it to fully achieve its intended public benefit. While the need for flexibility is understood, staff also query how the space will be utilized in winter months when the tables and chairs are no longer in use.

Pedestrian and bicycle connections

The enhanced pedestrian environment will dramatically improve upon perceptions of much of the site, as well as improve the functionality of Lafayette Square. Providing for a substantial, mid-block pedestrian connection, and maintaining Coolidge Place, enhances site permeability and ensures a highly connective network of public spaces. “Central Market”, as the mid-block connection will be known, has the potential to create a very unique experience in Central Square with its more intimate scale, fine-grained retail and decorative paving adding elements of surprise and diversity to the built environment. To ensure this connection continues through the site to Bishop Allen Drive in a welcoming fashion, the width of the sidewalk down the side of Building B-2 should be reviewed. Opportunities to create an attractive destination, or celebrate the vista, at the end of Central Market should also be explored.

Internally, the extent of lobby space across building frontages has been minimized, and the direct ground floor lobby connections through each building enhance visual permeability through the site and the sense of connection between back and front. While it is understood that these connections will primarily be lobby spaces for residents, staff encourage investigation of the potential for the Building B-2 lobby to be more of a publicly accessible pedestrian space. This would help break down the block size, as well as provide a reason to journey through the mid-block connection.

The proposed pedestrian and bicycle improvements on Massachusetts Avenue are also a positive urban design outcome. The landscape design for the sidewalk space is proposed to tie in with the public realm design utilized throughout Central Square; however, staff has concerns about the placement of street furniture, bicycle racks and other objects within the street furniture zone as it may contribute to clutter within the public way. In addition, there is a need to ensure that the sidewalk, including the expanded public realm, looks and feels like a welcoming public place. It is therefore suggested that as the project evolves, the design of proposed street and sidewalk improvements should continue to be coordinated with DPW, TPT and CDD staff.

In earlier discussions with the Applicant, staff expressed concerns about the width of the Columbia Street sidewalk. In response, the architect has set back the Building B-2 ground floor between columns as much as possible within the constraints of the shallow parcel. While this provides some additional space, further attention is needed to ensure the proposed retail can be served by a sidewalk that is wide enough to provide street trees and a generous circulation zone.

Ground floor retail

Ground floor activation appears to have been handled exceptionally well, in terms of how retail wraps around to Columbia Street, down the mid-block connection and into the parking area. The proposed mix of uses and the strong ground floor retail components are active and interesting, particularly given that each building has three public faces. Staff is very supportive of the planned Central Market concept, and hopes it becomes a successful and attractive destination like the precedent images show.

Generous ground floor heights with large windows further enhance the pedestrian experience of each building. The types of retail activities shown in the application materials are small-scale, have small frontages, and unique storefront designs, with architectural details, awnings and signage that is visually interesting.

Built Form

Scale and Massing

A tower has been contemplated for this site since the zoning was first proposed. From an urban design perspective, a tall structure in this location is reasonable as the urban fabric of Massachusetts Avenue and Main Street can absorb additional height, which is also consistent with C2 Guidelines. The combination of podium and elements of the tower hitting the ground effectively mediate the sense of height, yet provide for more public realm than what would otherwise be provided if a typical podium was built across the entire frontage. Ultimately, the podium and set back tower help to create a public realm with a human scale and also relate to cornice heights of significant buildings further to the west on Massachusetts Avenue.

The tower itself has undergone some transformation since it was first conceived. Some massing of the floorplate has occurred to gain a more efficient unit layout. While this has resulted in a longer east-west alignment, several massing moves have been incorporated into the design, including breaking the tower into two vertically articulated elements, which ensures each facade is vertically oriented and has a varying silhouette. The rooftop has some variety, but is generally expressed as an element of the overall tower, rather than a celebrated top. Further information regarding materials and design details of the penthouse screening are needed to review the success of this approach.

The lower-rise Building B-2 incorporates step backs at the fifth floor, which help to mitigate building bulk and transition to low-rise residential buildings to the north. Perhaps there are further opportunities to create more significant changes in plane where material transitions take place, such as the white panel to wood cladding change at the fourth floor on the Bishop Allen Drive façade, and the dark vertical

notch above the main entrance. The latter could be carried up to the roof, creating diversity in roof form.

Relationship to historic buildings

Preservation of the Apollo building is also seen as a positive urban design outcome. The building is identified as contributory to the overall historical character of the Central Square National Register District. In the proposal, the Apollo is retained and sensitively incorporated into the development as both ground floor retail and amenity space for Building B-2. Staff feel this adds variety to the site and maintains the eclectic mix of buildings in Central Square, while also assisting to de-scale the tower. Further review of how each façade will be restored is necessary as the project develops.

Architectural character

Building B-1 has a relatively quiet yet elegant architectural expression, which is representative of Central Square and the historical fabric of the surrounding buildings. This is particularly evident in the use of brick and regular window openings across the façades. The base element has a robust, civic quality, mostly associated with the double-story ground floor expression and strong framing elements, which are fitting for the context. The lower façades have incorporated various pedestrian-level design treatments, which are consistent with citywide urban design objectives pertaining to activating ground floors.

In contrast, the low-rise B-2 building has more of a traditional, fine-grained residential character with the use of wood, smaller windows and a playful pattern of materials across each façade. The ground floor is successfully activated through large storefront windows and retail. Although it is a secondary façade, there are opportunities to improve the ground floor as it faces the parking lot. The potential to make the long-term bicycle parking more transparent should be considered.

Other Details

Utility and service infrastructure appear to be well handled, with spaces provided in each building for transformers and switch gear. Rooftop mechanicals appear sufficiently set back from building facades and well screened; however, further information regarding screening materials and details should be provided, and the inconsistencies between elevations and sections addressed.

The wind study submitted with the application shows that pedestrian wind comfort conditions around the site will be suitable for strolling, standing and sitting in summer months, with a slight decrease in comfort experienced in Lafayette Square (changing from standing to strolling in some locations). In the winter, some locations are expected to decline marginally to a walking condition. The study is premised on several wind mitigation strategies, including trees, individual canopies and grade level porous wind screens, which are particularly beneficial for the mid-block pedestrian connection and potential outdoor seating. Reliance on streets trees within City sidewalks should be carefully considered as a dependable form of wind mitigation. In addition, further information regarding the wind screens should be included in the application materials.

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 hearing to a future date, or as conditions for ongoing design review by staff if the Board decides to grant the special permit:

- Review of all proposed public realm, open space and streetscape improvements.
- Review of pedestrian connections through the parking lot and the width of the Columbia Street sidewalk.
- Investigation of opportunities to provide public access through the Building B-2 lobby.
- Review of the conceptual plan for activating the public realm around the retail area by the Economic Development Division.
- Review of all exterior materials, colors, and details, including a materials mock-up on the site.
- Review of all alterations and restoration work proposed for the Apollo building with staff at the Cambridge Historical Commission.
- Details of rooftop HVAC and mechanical equipment, including screening design approaches.
- Review of parking, bicycle parking, access and egress by the Traffic, Parking and Transportation Department.
- Review of stormwater management by the Department of Public Works.