CITY OF CAMBRIDGE
COMMUNITY DEVELOPMENT DEPARTMENT

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To: Planning Board

From: CDD Staff

Date: September 2, 2015

Re: **PB #302 ("NoMa") and #303 ("SoMa") – MIT Kendall Square**

Overview

MIT's proposal for redevelopment of its "East Campus" area is the latest step in an ongoing process to reshape the future of Kendall Square. This particular development was discussed publicly as early as 2010, and MIT put forth an initial rezoning proposal for the area in 2011. That led to intensive public discussions through the Kendall Square component of the City's "K2C2" Planning Study, leading to a set of recommendations that would allow for future economic growth while leveraging that growth to provide additional housing, open space, retail and other public amenities.

The resulting zoning for MIT's land in Kendall Square was adopted by the City Council in 2013. The current development proposals fit within the established zoning parameters and advances the ideas that were put forward during that planning and zoning process.

This memo, along with comments from The Traffic, Parking and Transportation Department and Department of Public Works, discusses various aspects of the development proposals. However, it is important to first summarize what the approval process will entail and what actions are required by the Planning Board at this stage.

PUD Review Process

MIT's proposal seeks permits for two separate Planned Unit Development (PUD) areas, referred to as "NoMa" (North of Main, including the One Broadway site abutting the Broad Canal) and "SoMa" (South of Main, including properties along the Main Street edge of the MIT campus). The PUD review and approval process is more rigorous than for other special permits, given their size, complexity and longer timeframe.

The first step in the process is the submission of a Development Proposal, which describes the overall development plan and demonstrates how it will meet the zoning requirements and other planning for the area. Following a public hearing, if the Planning Board finds that the Development Proposal is in general conformance with those requirements and meets the City's stated goals for the district, then the Board would make a positive Preliminary Determination authorizing the Applicant to proceed with the submission of a Final Development Plan. As part of the preliminary determination, the Planning Board may (and typically does) request additional information, further refinements or changes to be incorporated into the Final Development Plan.

The Preliminary Determination findings are summarized on the following page.

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Requested Action	**Summarized Findings** (see appendix for zoning text excerpts)

Preliminary Approval of a PUD Development Proposal (Section 12.35.3)	The PUD Development Proposal:
	• Conforms with general PUD development controls and district development controls
	• Conforms with adopted policy plans or development guidelines for that portion of the city
	• Provides benefits to the city which outweigh its adverse effects, considering:
	  o quality of site design
	  o traffic flow and safety
	  o adequacy of utilities and other public works
	  o impact on existing public facilities
	  o potential fiscal impact

According to the zoning in Article 12.000, the Planning Board must issue a Preliminary Determination on the Development Proposal within 21 days. A positive preliminary determination does not guarantee ultimate approval of the project, but a negative preliminary determination amounts to a denial of the special permit application.

If a positive Preliminary Determination is made, the Applicant would submit a Final Development Plan that describes the development plan in more detail and incorporates the suggestions made by the Planning Board. When the Final Development Plan is submitted, the Planning Board holds a second public hearing, after which the Planning Board can make a final special permit decision. The decision would include detailed conditions to govern how the development would proceed over time, since PUD projects are typically constructed in phases.

Each PUD application is also accompanied by a Project Review Special Permit application. This is because a PUD project is governed both by the procedural requirements of Article 12.000 and by the Project Review requirements of Article 19.000, which requires the Planning Board to make traffic impact and urban design findings. Because all of the required Planning Board special permits will be decided at the same time, the Planning Board does not need to make the Project Review findings until the Final Development Plan phase. However, the development proposal phase is a good opportunity for the Board to pose questions and requests related to the traffic impact and urban design aspects of the proposal.

While there are technically two applications being heard, they are being heard jointly because it makes the most sense to do so in this case, given that many of the district development controls apply broadly to the entire district. However, the Planning Board will need to make separate findings for each application, and if approved, two separate special permits would be issued, one governing "NoMa" and the other governing "SoMa".

Overview of Area Zoning and Planning

Planning and urban development in Kendall Square has evolved over many decades. After about a century as a predominantly industrial district, the "urban renewal" era of the 1950s and 1960s brought about the notion that as older uses were phased out of Kendall, they would be replaced by more modern industries such as high-tech offices and labs. Many such businesses were associated with MIT or benefitted from their proximity to MIT. On the site of this development proposal in particular, the decline of traditional industry and related uses also allowed MIT to acquire land for future expansion. Much of the urban development that occurred through the 1980s and 1990s followed the general pattern of replacing buildings that were more industrial in character with new offices, labs, academic uses, and (to a lesser extent) housing and hotels. The proposed Development Parcels largely contain land that has been retained as surface parking by MIT in anticipation of future development.

Toward a Sustainable Future, ECaPS and Citywide Rezoning

By the time of the Eastern Cambridge Planning Study (ECaPS) and the most recent Citywide Rezoning initiative (both completed in 2001), the City had begun to incorporate a more urbanistic planning approach that encouraged mixed-use areas and walkable communities, as reflected in the 1993 Citywide Growth Policy document *Toward a Sustainable Future*. In evolving commercial areas such as Kendall Square, policies urged the development of housing, neighborhood-serving retail and amenities, public space, and an approach to urban design that put less emphasis on automobiles and more on people engaging with the city at the ground level. After 2001, these principles were reflected in newer developments like the 303 Third Street housing and the "Cambridge Research Park" complex that includes the Broad Canal boat launch and skating rink along with housing, offices, labs and restaurants.

"K2" Planning

The Kendall Square (or "K2") planning process was undertaken in 2011-2012, largely in response to plans by MIT and other property owners to develop sites in Kendall Square. The K2 study marked a further evolution of prior planning principles by acknowledging Kendall Square's status as a "world class innovation center" that should be preserved and allowed to grow (including commercial, research and academic functions), while continuing to introduce new housing, retail, open space and other community amenities that would transform Kendall into a great urban place that attracts a diverse range of people.

The K2 study also prioritized increased sustainability in planning and design, including reduced car dependence and support for walking, bicycling and transit. Other priorities included retaining space for smaller companies to thrive in an increasingly competitive real estate market, and promoting workforce readiness programs to help residents from all backgrounds participate in Kendall's growing economy.

The specific zoning recommendations of the K2 study were incorporated into the requirements of the "PUD-5" district, adopted in 2013, and summarized on the following pages. In addition, a set of *Kendall Square Design Guidelines* were established to guide future projects and inform the Planning Board's review of development proposals. Those are discussed in the Urban Design section further below.

Summary of PUD-5 Zoning – Section 13.80

The development controls for a PUD overlay district are applied in place of the base zoning subject to the Planning Board's approval of a Final Development Plan. Therefore, the following controls are allowed if the Board determines that the development plan, as a whole, meets the intent and objectives of the zoning and planning for the area.

Major Development Controls

- **Density.** The total Floor Area Ratio (FAR) is limited to 3.9 across the district, although the FAR of an individual parcel may exceed 3.9. There is no minimum lot area per dwelling unit for residential uses.
- **Commercial.** Net new commercial development is limited to 980,000 square feet in the district, in addition to the gross floor area of any commercial uses that exist in the district as of 2013.
- **Housing.** At least 240,000 square feet of net new residential development in the district is required, for which construction must commence before commercial development can exceed 600,000 square feet. Inclusionary housing requirements must be met, with the required affordable housing percentage increased to 18%. (MIT additionally committed to have at least 8% of housing be "innovation" housing, with units of 300-550 square feet).
- **Innovation Space.** At least 5% of office/lab development must be space serving smaller companies on shorter lease terms, such as small business incubators, small research labs, office space for investors and entrepreneurs, facilities for teaching, product development and testing and prototype fabrication or production of experimental products. (MIT additionally committed to providing an equal amount of Innovation Space outside the district.)
- **Active Ground Floors.** New buildings must contain active spaces (including retail and cultural spaces, but not office or residential lobbies) for the equivalent of 75% of the ground floor frontage along Main Street, Broadway and the Broad Canal. A consultant must be engaged at the special permit phase to provide recommendations on ground-floor active space planning.
- **Open Space.** At least 15% of the district area must be publicly beneficial open space.

Dimensional Requirements

- **Height.** Allowed heights range from 150 feet near Memorial Drive to 250 feet along Main Street. Additional heights to 300 feet are allowed for residential or dormitory buildings, provided that in residential buildings, middle-income units must be provided that occupy an amount of floor area equivalent to 25% of the floor area above 250 feet.
- **Setbacks.** Few strict setbacks are required, except at a height of 85 feet along Main Street, Third Street and Broadway, there is a required 16-foot step-back from the street edge; however, this can be waived for up to one-third of the cumulative façade length along the street. Also, a setback of at least 20 feet and a height step-back of at least 36 feet are required where the proposed One Broadway expansion abuts 137-145 Main Street (the Red Cross building).

Parking Requirements

- Parking must be below-grade, with some specific exceptions like disabled parking, short-term loading, food trucks and temporary lots on future development sites, and in the "north of Main" area above-grade structured parking is allowed if it is found to be consistent with the existing structured parking at One Broadway.
- For new commercial development, parking is limited to the following ratios for the following uses:
    - Office: Maximum 0.9 spaces per 1,000 square feet of Gross Floor Area
    - Lab: Maximum 0.8 spaces per 1,000 square feet of Gross Floor Area
    - Retail: Maximum 0.5 spaces per 1,000 square feet of Gross Floor Area
    - Hotel: Maximum of 1 space per 4 sleeping rooms
- For new residential development, parking is restricted to a minimum of 0.5 spaces per unit and a maximum of 0.75 spaces per unit.
- A "shared parking" study is required showing peak demand times for different uses; parking may be further reduced if shared parking can serve combined peak demands.
- The replacement of existing parking spaces serving pre-existing commercial uses may be approved by the Planning Board, so long as the spaces were legally permitted and the Board finds that replacing those spaces will not cause an increase in traffic.
- Loading requirements may be modified by the Planning Board in approving a PUD.
- Bicycle parking must be provided per citywide requirements (Section 6.100).

Sustainability and Environmental Requirements

- New buildings must meet LEED Gold design standards and submit a Statement of Energy Design Intent.
- New buildings must evaluate on-site energy, cogeneration and use of district steam.
- New buildings must meet City stormwater management standards and must explore stormwater management practices using open space, vegetation and potable water use reductions.
- New buildings must employ "cool roofs" – either green roofs or high-albedo materials.
- New buildings must incorporate features that demonstrate other sustainability strategies.
- Noise from rooftop mechanicals must be mitigated using best practices. In addition to the Noise Ordinance requirements, no perceptible noise may be created at 100 feet from the development site, and acoustical reports must be completed prior to occupancy of a building.

Incentives

- Net new residential and dormitory development south of Main Street is exempt from zoning limitations related to floor area (FAR or GFA). This was a provision recommended by the Planning

Board when the zoning was adopted, in order to encourage additional housing and/or student housing beyond the amount that is required.

- Ground-floor and basement areas devoted to retail uses are exempt from floor area limitations, provided the average size of establishments is less than 5,000 square feet (except for grocery, market or pharmacy uses).
- Half of Innovation Space is exempt from floor area limitations, to encourage space exceeding the minimum amount.

Fund Contributions

- Contributions to a City-controlled Community Fund are required at rate of $10 per square foot of new commercial office and lab development.
- A "deposit" of $2,500,000 was paid by MIT to the City after adoption of the zoning in 2013. An additional $2,500,000 payment is required either in April 2016 or upon occupancy of the first new commercial building, whichever occurs sooner.
- Further contributions to satisfy the $10 per square foot requirement are made after occupancy of new commercial development exceeding 500,000 square feet.

Additional Commitments

While these are not reflected in the zoning, MIT agreed to certain commitments upon the City Council's adoption of the PUD-5 zoning (set forth in a Letter of Commitment), summarized below (in addition to those provisions already mentioned above):

- A study and fund contribution to further implementation of the Grand Junction Multi-Use Pathway.
- Transfer to the City of an MIT-owned lot at Cherry and School Streets.
- Union labor for new buildings and contributions to an apprentice Pathways Program.
- At least half of retail space devoted to independent businesses with less than five locations in Massachusetts.
- Creation of an Open Space and Retail Advisory Committee.
- A "phase-out" taxation plan in the event that any commercial building is converted to academic use in the future.
- An additional $4,000,000 in contributions to support non-profit charitable community benefit organizations, of which a $1,000,000 contribution has been made thus far.

Proposed Development Concept

The SoMa and NoMa projects represent the culmination of several years of planning and design work undertaken by MIT along with participants in the K2 Study process and the broader community. As previously noted, the City and the community have planned and advocated for housing and a livelier neighborhood in Kendall Square for many years, and the section of Main Street between Third Street and Ames Street has remained relatively dormant thus far. Now, MIT proposes an extraordinary transformation of both the north and south sides of Main Street, including an intensive mixed-use program and a series of iconic buildings, which achieves many of the goals of the K2 Study.

In most ways, the development proposals (considered as a whole) reflect the development concept that was discussed when the PUD-5 zoning was adopted in 2013. At that time, the desired assemblage of commercial, residential, academic, retail, innovation and open space uses were extensively discussed and ultimately approved by the City Council, with the support of the Planning Board. The current proposal adheres to that established mix of uses, buildings and spaces. However, some elements have been incorporated into the current proposals that were not specifically discussed in the rezoning process. Generally speaking, the new elements help to enhance and further the goals of the district.

- Student Housing: The strongest addition is the introduction of graduate student housing, which was discussed in the rezoning process but was not made a requirement, though (at the Planning Board's suggestion) incentives were included in the final zoning. While the new housing will replace an older existing building, it will result in a significant net increase in MIT's capacity to house students on campus. Also, the proposed location of the housing as a central part of the development plan will help to bring greater life and diversity of uses into the core of Kendall Square.
- Museum: Another positive addition is the relocation of the MIT Museum to Kendall Square, which will even further enhance the diversity of uses in the heart of the area. It will provide an attraction for a wide range of visitors from within Cambridge and beyond, and will establish a base for educational and cultural programming that can reach out into the community.
- Historic Buildings: At the time of the zoning, the question of whether the existing row of buildings between Carleton and Wadsworth Streets would remain, or if some would be demolished or altered with the new development, was unanswered. The Historical Commission had expressed a keen interest in preserving the row of three buildings as a rare remaining example of the area's character before Urban Renewal. In the proposed plans, these buildings are retained and sensitively incorporated into the development scheme. Some other buildings are proposed to be removed, including the Eastgate student housing tower (to be replaced by the larger graduate student housing building mentioned above), which would be subject to consideration by the Cambridge Historical Commission before its demolition could be authorized.
- Housing: 285,000 square feet of net new residential Gross Floor Area is proposed, nearly 20% more than the 240,000 square-foot minimum zoning requirement (and in addition to the student housing mentioned above). It is located adjacent to One Broadway, where it was envisioned during the rezoning discussions, and will meet the elevated inclusionary housing requirement to provide 18% of units as affordable to low and moderate income households. The provision in the zoning that

provides greater building height in exchange for the provision of middle-income units is not being utilized in this proposal. The Final Development Plan should include some discussion of the anticipated mix of unit types in the proposed residential building.

- Open Space: Another positive outcome is the provision of a large central open space far in excess of the zoning requirement to provide as publicly beneficial open space equivalent to 15% of the district area. The development plans also reflect MIT's commitment to establish an open space and retail advisory committee to provide oversight, which was a commitment made by MIT at the time the zoning was adopted. Some additional discussion of the design and programming of the open space should be provided in the Final Development Plan. For instance, it would be helpful to further describe what "spillage activity" is envisioned to occur from the buildings to outdoor areas, and whether the audience for that activity is meant to be primarily the MIT community or the broader public. Other issues are noted in the urban design section below.
- Retail: The proposal meets the PUD zoning requirements to provide active uses (primarily retail) along the ground floors of major streets, which is a significant achievement. The proposal also identifies a retail consultant to develop a strategy for tenant outreach and leasing, are required in the zoning. In the Final Development Plan, it would be helpful to provide more explanation of the future retail strategy and to provide the Planning Board with the consultant's recommendations, as indicated in Section 13.810.1 of the zoning. Some of the issues that might be considered include strategies to recruit and cultivate smaller retail tenants and independent operators, which can be a challenge in new buildings. Other considerations include the non-retail active uses such as public event spaces and recreational uses. The inclusion of the MIT Museum is an example that could perhaps anchor and catalyze a wider range of activities to serve the community.
- Innovation Space: In the proposals, the space occupied by the Cambridge Innovation Center (CIC) at One Broadway will meet the zoning requirement for Innovation Space, which is appropriate given that the CIC was a clear example of the type of space envisioned when the Innovation Space requirements were established. However, the Final Development Plan should describe the activities of the CIC in more detail and explain how it meets the requirements and the overall goals of the district, and provide assurances that if the operational model of the CIC changes over time (or if a different entity takes over the space) then it would continue to meet those requirements.
- Sustainability: This was an important component of the K2 Study, and the particular requirements will be met in the proposed development using a range of different strategies. The SoMA and NoMA projects are designed to achieve a LEED Gold rating under the latest LEED version 4 (v4) rating system. They will be registered as an overall LEED Master Site with USGBC to earn combined credits for site, landscape, and transportation strategies, and each individual building will achieve the remaining credits required for a Gold rating under LEED v4 for Core and Shell (Buildings 2, 3, and 5) or LEED v4 for New Construction (Buildings 1, 4, and 6). The project will also meet energy reporting requirements (through the city's Building Energy Use Disclosure Ordinance), employ cool roofs, and meet the City's stormwater management standards, discussed in the accompanying DPW comments. The Final Development Plan should include more discussion of opportunities for on-site and district energy, such as steam connections (as described in Section 13.89.4 of the PUD-5 zoning).

Staff also recommends discussing whether the buildings will meet the Net Zero Action Plan objective that new buildings target a 22 percent energy performance improvement over ASHRAE 90.1-2010.

Urban Design

For a PUD project, urban design considerations are relevant from the conceptual to the detailed level. At this stage of review, the primary focus is on the development concept as a whole, and some key considerations include overall site layout, circulation, public space, and building scale and massing. More detailed review of the design of spaces and buildings will occur at the Final Development Plan stage (when the Project Review Special Permit criteria will also be reviewed) and through ongoing review of the various buildings and other components within the plan.

Design Guidelines

Guidance for urban design review is primarily provided in the *Kendall Square Design Guidelines (2013)*, developed during the K2 study process to inform property owners, business owners, developers, and the general public about the desired form and character of development in Kendall Square. The Design Guidelines are to be used by the Planning Board in their review of all projects requiring approval in the Kendall Square area, including PUD-5.

The key objectives in these design guidelines are to:

- Create a positive mixed-use district where tall buildings with large floor plates can be good neighbors to public spaces, smaller existing buildings, and adjacent residential neighborhoods.
- Create high-quality public environments, and ensure development contributes to the character and vitality of the surrounding community.
- Sensitively manage the impacts of bulk and height and animate the major streets and public spaces through encouraging active ground floor.

While the guidelines are detailed and establish clear urban design expectations, they are not intended to impose strict controls on building form and style. At the discretion of the Planning Board, the guidelines provide flexibility to consider creative design solutions, innovative design approaches, and unforeseen circumstances.

Site Planning and Design

Overall, the replacement of extensive surface parking lots with infill development that establishes Main Street as a central activity spine and strengthens connections to the Broad Canal results in a very positive urban design outcome. The benefits of the proposal include a strengthened urban presence in Kendall Square, continuation of ground floor activity (which is currently sporadic) and continuous retail edges. Such an approach also complements the continued evolution of Kendall Square into a more urban setting. The retention and adaptive reuse of three historic buildings on Main Street is also a fundamental component of the successful urban design strategy. This provides opportunities for the SoMa project to capture and expand upon Kendall Square's unique built form identity.

Ground floor retail

Ground floor activation appears to have been handled exceptionally well, and exceeds the requirements of the zoning in terms of how retail wraps around to side streets and open space. The proposed mix of uses and the strong ground floor retail components are very successful, particularly given that all buildings have at least three or four public faces. The creation of two-sided retail is also an important element of the retail strategy.

Generous ground floor heights of between 16 and 20 feet further enhance the ground floor experience of each of the buildings. The types of retail activities shown in the application materials are small-scale, have small frontages, and very unique storefront designs. The Final Development Plan could provide more information on how such uses will be accommodated and given an individual identity within the strong architecture of each of the buildings.

Open space and public realm

Another positive urban design move is the high quality and dynamic improvements to the open space network, which will have the effect of creating a welcoming and vibrant public realm. Most notably, both SoMa and NoMa emphasize open space connections through the site connecting to Main Street and the Broad Canal, creating a much more permeable framework of spaces. The possibility of programming and placemaking opportunities within this network, which sweeps behind the Main Street buildings and branches out to connect with other destinations, is also very successful.

The generous expansion of the plaza around the MBTA headhouse, between Buildings 4 and 5, will add greatly to wayfinding in Kendall Square and connecting the community to the campus. The angled building facades invite people into the space, rather than closing off the campus, which will be very welcoming compared to current conditions. Development of a more transparent and contemporary MBTA headhouse is also an improvement, although setting back the structure into the MIT site as proposed may reduce its visibility when walking down Main Street. Repositioning the headhouse to be closer to the sidewalk, while still allowing for some space for people to congregate, should be considered. The interface between the academic housing and outdoor space (Building 4) and the plaza requires further review regarding the type of screening/enclosure proposed along this important edge.

Much care and thought should be given to the detailed design of these spaces, and the interface between the proposed buildings and these new public spaces is worthy of careful attention by the Board. The Final Development Plan should discuss the inclusion of public art, wayfinding, and lighting as integral components of the open space network that might aid legibility and movement. Furthermore, the extent of tree canopy, and the proportion of hardscape and softscape, should be discussed to ensure the extent of paving is minimized and the environment is softened. Using water to define and announce connections with Broad Canal and the Charles River could also be further explored.

Pedestrian and bicycle connections

The enhanced pedestrian environment will dramatically improve upon car-oriented perceptions of much of the site. Respect for the north-south urban grid maintains site permeability and ensures a highly connective network of streets and public spaces. Providing for a substantial pedestrian connection

between Main Street and the Broad Canal is also a good urban design outcome. Even internally, the direct ground floor pedestrian connections through several of the proposed buildings enhances the permeability of the campus, and the sense of connection and openness. The proposed pedestrianization of streets on the south side of Main Street is also a positive strategy. Conceivably, more could be done to enable the shared street design to intersect with Main Street, so that the pedestrian connections are not perceived to be primarily loading or parking access roads. As the project evolves, the proposed street and sidewalk improvements should also be coordinated with the redesign process that the City will be undertaking for Point Park.

Another consideration (intersecting with the Traffic, Parking and Transportation comments) is locating Hubway stations, which have become an important piece of the public realm especially in Kendall Square. Recent experience has shown that given the various considerations required to site Hubway stations (including solar access, circulation, and distribution of demand), their siting should be considered early in the site planning process.

Loading and parking

The location of the majority of loading areas off Main Street is also consistent with the Design Guidelines. In the case of the NoMa project, the width of the loading dock, combined with the F.C.C. room, should be minimized to the greatest extent possible along its Main Street interface. Special attention should be paid to the location of parking entrances, exits and vents in relation to surface uses and activities, and the depth above the central parking structure that is needed to accommodate trees and plantings. It is noted that access to the below grade parking off of Amherst Street could be better integrated into the design of open space, and better screened or buffered where appropriate.

Built Form

With regard to architectural design, the approach of utilizing different architects for each of the buildings is a worthy strategy and consistent with the Design Guidelines. The emphasis on a distinct identify for each building, while still retaining some similarities, is also a reasonable approach. Contemporary design is also very much favored in this location, as well as an approach that conveys the district's spirit of innovation through high levels of transparency and distinctive architectural form.

Scale and Massing

The project will deliver taller built form to Kendall Square in a location where more intensive urban uses and densification are anticipated. Quite a bold massing approach is proposed across the SoMa and NoMa buildings. All of the buildings, apart from Building 6, are broken into two volumes with the notion of a podium provided in several forms, and then a dominant tower component. The emphasis on a strong horizontal datum creates a visual language that fits with the surrounding context. The podium proposed for the NoMa Building aligns with the Red Cross building, which makes sense from a streetscape perspective. However, the structured parking on levels 2-4 creates an inactive zone and an uninviting presence in the backdrop of the Broad Canal. While the proposed screening is attractive and interesting, the preferred urban design outcome would be to wrap the parking floors in a "sleeve" of

active uses. The exposed parking on Floor 4 should also be covered to avoid being visible from buildings above.

The north-south orientation of the Building 1 and Building 4 towers is beneficial because it reduces their visual presence on Main Street and minimizes shadow impacts on public spaces and sidewalks. However, there are specific locations where the scale and bulk of the primarily glass and steel-framed volumes of Buildings 1-5 may have an overwhelming presence at the pedestrian level, particularly where tower elements are cantilevered over the public realm. In this regard, the proposed massing approach varies from the specific design guidelines, which aim to limit the sense of height at street level and avoid broad slab volumes and monolithic appearances. The folded façades of Buildings 1 and 5 help mitigate bulk, but perhaps could be further exaggerated to help break up the long façades. The grouping of floors in Buildings 4 and 5 also reduces the apparent scale of the buildings. Other design solutions to consider include further fragmenting the massing, enhancing the nature of angled planes, and more strongly expressing the different functions of buildings through detailed design. Along Main Street, there should perhaps be more of an emphasis on creating a strong pedestrian-scaled street wall, which limits the sense of height at street level. To this end, at the Final Development Plan stage it would be worthwhile to review a long streetscape elevation, which shows the entire collection of SoMa buildings in context, as well as a longitudinal site section, to gain a better understanding of the relationship between buildings.

Another possible outcome of the massing approach is potential wind impact at the pedestrian level. The wind study submitted with the application found that potentially higher than desired wind speeds may occur as a result of the NoMa and SoMa tall towers. The study recommends that wind tunnel testing be undertaken to evaluate the effectiveness of mitigation strategies. Strategically Introducing some articulation into building massing (*e.g.*, setbacks and/or cutouts) might also assist with some wind impacts, particularly along the north and east facades of the NoMa building.

Rooftop mechanicals all appear well handled and are integrated into the architecture of the building, except for Building 3, which includes some exposed stacks. The results of this tactic are crisp rooflines, and little differentiation of the tops of buildings. The tower volumes also appear to accommodate additional bulk.

Relationship to historic buildings

The Building 2 setback from Main Street successfully enables views to the Kendall Building clock tower, and the lower podium volume ties in well with this historic building, as demonstrated in Figure D-15. Building 3 provides an appropriate curtilage to the Kendall Building, and seems at a reasonable scale in relation to the building. The atrium provides a nice connection between the two structures, and its detailing will be most important as design development occurs. The tower above does completely overhang this space though, so perhaps if it were set back further, more access to light and sky views from inside the atrium would be possible.

Architectural character

Much of the visual interest and articulation of the SoMa and NoMa buildings is achieved through curtain wall detailing, which is mostly clean and uniform across each of the facades. There are strong vertical and horizontal striations, and the expression of structure is noticeable as a defining element of all the architecture. The Building 4 residential tower is a notable exception, with a façade of panels framing the window openings. A restrained color palette is employed, which helps to unify the buildings. The combination of glass curtain walls and modern materials creates a contrast against the foreground of masonry buildings. The two residential buildings do little to display their residential character, though some evidence of domesticity will be realized through the small, notched balconies provided in the NoMa building. There is an opportunity for these balconies to be expanded to further break down the length of the long east elevation.

Additional Requests

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

- More perspective views travelling across Longfellow Bridge on Main Street.
- Results of wind tunnel testing for all recommended buildings and any associated wind mitigation measures.
- More detailed elevations with all external materials annotated, with special attention to the ground floor facades, the proposed retail experience, and the street presence of the museum.
- Longitudinal site sections and a Main Street elevation.
- More detailed landscape plans, including opportunities for public art, wayfinding, and lighting, creative and sustainable management of storm water, and species selection to maximize urban heat island mitigation and softscapes.
- Additional perspective views of the open spaces from different vantage points.