



CITY OF CAMBRIDGE

Community Development Department

To: Planning Board

From: CDD Staff

Date: June 27, 2024

Re: Special Permit **PB-403, 2400 Massachusetts Avenue**

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Overview

Submission Type: Special Permit Application

Applicant: 2400 Mass Ave LLC

Zoning District(s): Business A-5/Mass Ave Overlay

Proposal Summary: Construct two 6-story mixed-use buildings totaling 94,867 square feet gross floor area with 56 residential units, ground floor retail uses, and 67 below grade parking spaces.

Special Permits Requested: Project Review Special Permit (19.20); Modification of Massachusetts Avenue Overlay District design standards (20.108); Reduction of Green Roofs requirement (22.35.3)

Other City Permits Needed: Historical Commission; Stormwater Control Permit

Planning Board Action: Grant or deny requested special permits.

Memo Contents: CDD Zoning Report & Urban Design Report

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

Zoning Section	Required Planning Board Findings <i>(Summary - see appendix for zoning text excerpts)</i>
Project Review Special Permit (Section 19.20)	<ul style="list-style-type: none"> • Traffic Impact Findings. Special permits will be granted if the project has no substantial adverse impact on city traffic as analyzed in the Traffic Study. • Urban Design Findings. The Planning Board shall grant the special permit only if it finds that the project is consistent with the urban design objectives of the city as set forth in Section 19.30.
Modification of design standards in the Massachusetts Avenue Overlay District (Section 20.108)	Special permits will be granted if the Planning Board determines that the proposed development will better serve the objectives of the Mass Ave Overlay than if the standards were followed.
Reduction of Green Roofs requirement (Section 22.35.3)	The Planning Board may grant a special permit to reduce the required Green Roof Area provided that each square foot so reduced be compensated by a unit price contribution to the Cambridge Affordable Housing Trust.
General Special Permit Criteria (Section 10.43)	<p>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:</p> <ul style="list-style-type: none"> (a) It appears that requirements of this Ordinance cannot or will not be met, or (b) traffic generated or patterns of access or egress would cause congestion, hazard, or substantial change in established neighborhood character, or (c) the continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would be adversely affected by the nature of the proposed use, or (d) nuisance or hazard would be created to the detriment of the health, safety and/or welfare of the occupant of the proposed use or the citizens of the City, or (e) for other reasons, the proposed use would impair the integrity of the district or adjoining district, or otherwise derogate from the intent and purpose of this Ordinance, and (f) the new use or building construction is inconsistent with the Urban Design Objectives set forth in Section 19.30.

Zoning & Development Staff Report

Area Planning and Zoning

Site Context

Neighborhood/Area: North Mass Ave/Trolley Square

Development Patterns: The project is bounded by Massachusetts Avenue to the east, Harvey Street to the north, Cedar Street to the west, and Alberta Terrace to the south. It is located entirely within the BA-5 base zoning district and the Mass Ave Overlay District.

This portion of Mass Ave contains a broad mix of use types and building scales from one-story commercial buildings to 5-9 story multifamily housing and mixed-use buildings. Alberta Terrace consists of 3-story, two-family, and multifamily dwellings, and Cedar Street is predominantly smaller-scale single- and two-family homes.

Nearby Features: The site is approximately ½ mile west of the Davis Square MBTA station and ½ mile east of Russell Field. The Alewife Linear Park crosses Mass Ave a block away from the site and MBTA bus route 77 stops roughly 300 feet from the site at the corner of Mass Ave and Cedar Street.

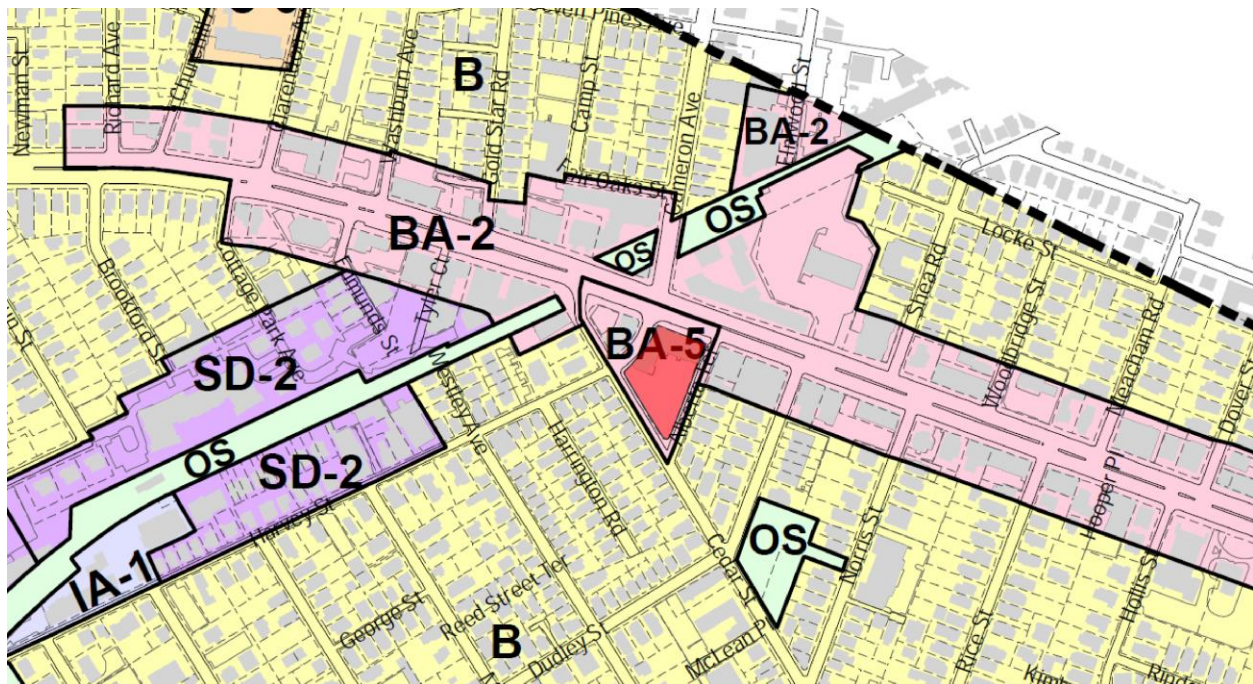


Context Map for 2400 Mass Ave. Source: Nearthmap Aerial Imagery, 2024

Site Zoning

General description: Base zoning permits a wide range of residential, institutional, and commercial uses at medium densities (1.0 FAR for non-residential and 3.0 for residential) and buildings up to 80 feet in height, with lower height requirements proximate to neighboring residential districts. The BA-5 district is a new base district that resulted from a zoning petition adopted in April 2023. The Mass Ave Overlay District applies additional design and development standards for building facades facing Mass Ave, to create a pleasant and inviting pedestrian environment while encouraging compatibility with residential neighborhoods.

	Base District	Overlay District(s)
District(s):	Business A-5	Mass Avenue Overlay District
Allowed Uses:	Residential, institutional, office/lab, retail and consumer service uses.	Same as base zoning
Max. Building Height	80', 35' within 50' of a residential district	Same as base zoning
Max. FAR/GFA	1.0 nonresidential / 3.0 residential (3.9 with inclusionary housing bonus)	Same as base zoning
Required Setbacks	none	Same as base zoning
Required Open Space	none	Same as base zoning
Other District Standards or Requirements	N/A	Building façade design standards apply to buildings abutting public streets.



Site overview. Source: Zoning Map, City of Cambridge

Development Plans and Guidelines

Massachusetts Avenue Overlay District

The intent of the Mass Ave Overlay District is:

- to create a more harmonious and consistent image for the development of Mass. Avenue, adjacent areas, and abutting neighborhoods;
- to encourage good building design and site development, which enhances the pedestrian amenities;
- to ensure that changes along the Avenue are compatible with the scale and character of abutting neighborhoods;
- to encourage the retention of existing buildings of historic value and uses which serve the abutting neighborhoods; and
- to discourage new development inappropriate in both scale and design.

Design standards associated with building facades apply based on the need to enhance the visual quality of the District, create a pleasant and inviting pedestrian environment, and be compatible with the residential neighborhoods. The Mass Ave Overlay District requires a minimum 25% glass in total for the façade facing a public street, with at least 50% on ground floor where office/retail uses are established. The maximum amount of clear glass is 75% of façade (Section 20.107.1.3).

Envision Cambridge

Massachusetts Avenue is considered a Major Mixed-Use Corridor in the [Envision Cambridge](#) comprehensive plan (2019) and as such, "...should grow at a moderate, measured pace that takes advantage of transit proximity and enhances their unique character and sense of place."

Relevant Strategies and Actions:

- [Housing Plan](#), Strategy 1: Increase overall housing production.
 - Action: Change zoning to enable more housing, including affordable housing, to be built along major corridors, squares, and in other areas that have the capacity to accommodate growth and are well served by transit (e.g., increase base zoning, allow multifamily residential development citywide, offer density bonuses for increased percentage of affordable housing units).
- [Economy Plan](#), Strategy 4: Encourage a business climate that prioritizes local, independent businesses and enables inclusive entrepreneurship.
 - Action: Change zoning to increase density and achieve a mix of uses in targeted areas along Massachusetts Avenue and Cambridge Street, in order to build the customer base for retail.
- [Urban Form Plan](#), Strategy 1: Increase density near transit nodes while accommodating the unique character of our squares and areas along the corridors.
 - Action: Adjust existing zoning near transit nodes to allow greater density while complementing the character of the surrounding area.

Current Proposal

Overview

The site currently contains a two-story mixed-use building facing Mass Ave with retail and office space and a large parking lot covering the remainder of the property. The Applicant is proposing to demolish the existing building and parking area to build a two-building mixed-use development including 56 home ownership housing units (87,706 square feet) and roughly 7,161 square feet of retail space. Both buildings will be six stories, approximately 70 feet, one of which will taper down in height towards Cedar Street. The retail spaces will front Mass Ave and line an internal retail corridor between the two buildings, running parallel to Mass Ave.

The main entrances of each building will face Alberta Terrace while the individual retail spaces will open to Mass Ave or to the internal retail corridor. There are four residential units on the ground floor that will have their own private entrances on Cedar Street. The below-grade parking garage will be accessible from Harvey Street and contain 67 vehicular parking spaces. The proposed project will provide 60 long-term bicycle parking spaces and 12 short-term bicycle parking spaces which will be accessed from Alberta Terrace.

The proposal includes 32 one-bedroom, 14 two-bedroom, and 10 three-bedroom units dispersed somewhat evenly throughout the six stories. The four retail bays on the ground floor can be further subdivided into micro-retail spaces with their own entrances, either to Mass Ave or the internal retail corridor. The Applicant has indicated that the retail tenants have not been identified at this time but has assumed roughly 50% retail and 50% restaurant uses for purposes of calculating the required bicycle parking spaces.

The project will provide 35% open space, consisting primarily of roof decks and balconies. The proposal includes 14 new trees in planters along the ground floor residential entrances on Cedar Street.

Proposed Uses

The Application proposes the following uses on the site:

Proposed Uses	Location/Size	Allowed/Special Permit?
4.31.g – Multifamily housing	Predominant use on all Stories Above Ground Floor; 56 units, approx. 87,706 sf	Allowed by right
4.35 – Retail or Consumer Service Establishments	Predominant use of Ground Floor along Mass Ave and retail corridor, approx. 7,161 sf	Most uses allowed by right; some individual uses may require a special permit from the Board of Zoning Appeal (BZA)

The Planning Board could consider approving a wider range of additional ground floor uses (for example, institutional uses like a daycare or art gallery) so that the Applicant would retain additional flexibility in tenanting or re-tenanting these spaces in the future. Sections of the Mass Ave Overlay District with a BA-2 base zoning designation are required to provide active non-residential uses on the ground floor as

defined in Section 20.110.21.1. Though this is not a requirement of the BA-5 district, the range of uses identified in this section are typical of ground floor spaces along the corridor and could be appropriate for this project.

Proposed Dimensions

The Application proposes the following dimensions for development on the site:

Dimension	Proposal	Complies?
Gross Floor Area (GFA)	94,867 sf	Yes
Floor Area Ratio (FAR)	3.41	Yes
Height and Stories	6 stories; 69'	Yes
Setbacks	No setbacks	Yes
Open Space	Total: 35% Private: 46% Permeable: 35% Publicly Accessible: 16%	Yes

Per Section 5.33.2(q)(ii), the Planning Board may grant a special permit to exclude ground-floor Retail or Consumer Service Establishments from the calculation of GFA and FAR. However, the Applicant has not requested such a special permit and it appears the proposed project will comply with the FAR limitations for a mixed-use building. As proposed, none of the dimensional characteristics listed above would need special permit approval from the Planning Board.

Proposed Parking, Bicycle Parking, and Loading

The Application proposes 67 new vehicular parking spaces in an underground garage; no parking spaces are required under current zoning, though a report is required on how the number of parking spaces was determined. This report is incorporated into the Applicant’s Transportation Impact Study (TIS) and therefore the requirement is met.

The Application proposes 60 long-term bike parking spaces in an internal parking area, and 12 short-term bike parking spaces on the Alberta Terrace side of the property. All the above meet the minimum quantity standards in Article 6; however, more detail may be needed to determine if the short-term bike parking spaces comply with the design standards in Section 6.105.

No onsite loading bays are required but the Applicant is requesting that the City add an on-street loading space on Alberta Terrace. There are no parking spaces reserved for the commercial space. No special permits are needed, and additional comments are provided in the TP+T memo.

The project has completed a Transportation Impact Study (TIS) and staff have made recommendations in the accompanying TP+T memo. The proposal does not trigger PTDM requirements because all proposed parking is accessory to residential use.

Special Permits

Project Review Special Permit

As new construction greater than 50,000 sf in a base Business A-5 zoning district, this project triggers a Project Review Special Permit, which requires the Planning Board to make transportation impact findings and to assess the proposal's general conformance with the Citywide Urban Design Objectives. Please refer to memos from TP+T and Urban Design for comments on these topics.

Modification of design standards in the Massachusetts Avenue Overlay District

The Applicant is seeking a special permit under Section 20.108, which states that the Planning Board may grant a special permit to diverge from the standards specified in Sections 20.105 – 20.107. Specifically, the Applicant is looking to waive the following building façade design standards in Section 20.107.1:

1. *Principal building entrances shall face Massachusetts Avenue where a lot abuts the Avenue;*

The two residential lobbies are located on Alberta Terrace and the retail entrances face an interior corridor between the buildings. In the Application, the Applicant asserts the project meets the spirit of the Mass Ave Overlay by prioritizing retail space on Mass Ave and shifting the primary residential building entrances to Alberta Terrace. Providing multiple retail entrances on Mass Ave will maintain an active streetscape, which is consistent with the goals of the overlay.

2. *Where office and/or retail uses are accommodated on the ground floor each separately leased space shall have an individual public entrance onto the abutting street where any portion of the space fronts towards the street;*

Not all the retail spaces have entrances directly on the abutting street. Some only have entrances onto the internal retail corridor. The Applicant states that the proposed retail corridor provides a more advantageous design, creating outdoor seating and gathering space that will be beneficial to individual retailers. Those retail spaces that do not open to a public street will benefit from the inviting nature of the pedestrian-only corridor.

3. *Facades facing a public street, a public park, or designated city landmark building, or building in a local historic district or neighborhood conservation district, on an abutting lot, shall consist of a minimum twenty-five (25) percent clear glass in total for the facade, with clear glass increased to fifty (50) percent on the ground floor where retail and office uses are established. The maximum amount of clear glass permitted shall be seventy-five (75) percent of the facade. Reflective and opaque glass shall be prohibited.*

Regarding the transparency requirements, the Applicant notes two fronts do not meet the 25% minimum glazing percentage: Alberta Terrace and Harvey Street. To meet Passive House and Green Building standards, glazing locations are prioritized to benefit both residential and retail occupants. Ground floor retail spaces are highly transparent both along Mass Ave and the internal retail corridor.

To grant this special permit the Planning Board must find that the proposed development will better serve the objectives of the Mass Ave Overlay District than if the standards were followed due to specific site characteristics.

Reduction of Green Roofs requirement

The Application indicates 81% of roof area subject to the Green Roof Requirements in Section 22.35 will consist of a green roof, which meets the minimum standard of 80%. The Applicant states they intend to

comply with the regulations, however, to maintain flexibility they are seeking a special permit to reduce the required Green Roof area and will contribute the required amount to the Affordable Housing Trust Fund for each square foot reduction if the standard is not found to be met at the building permit stage. The specified reduction will be calculated at the time of building permit.

Other Zoning Requirements

Sustainability

The floor area of the new buildings in the proposed project exceeds the 25,000 square-foot threshold that requires conformance with Green Building requirements in Article 22. By virtue of triggering Green Building requirements, the project is also subject to Green Factor and Flood Resilience Standards. The proposed project satisfies Green Building requirements by meeting the conditions of the Passive House Institute US (PHIUS) Core 2021 certification, as confirmed by a Green Building Professional. Key sustainability components of the proposed building design include exterior insulation panels and windows with high resistance to heat transmission and all electric-powered building systems with high energy-efficiency. The exterior insulation panels are important for managing heating and cooling loss given the high amount of surface area of the building created by the terracing on Cedar Street. The Applicant will need to ensure thermal bridging is limited between structural floor components and the outside air.

Within the Green Factor submission, the Applicant exceeds the required 1.00 Cool Score with a score of 1.47 via ground-level plantings, high SRI paving materials, and green roofs. The proposed green roof area and the high SRI paving and shaded areas on the retail corridor are significant contributors to the Cool Score and the Applicant will need to consider how design choices may affect Green Factor standards as the project progresses. However, the submitted materials are sufficient for the Special Permit phase and the Applicant will need to provide more detailed information at the Building Permit stage.

There are no Long-Term Flood Elevations (LTFEs) on the site, so the project will meet the Flood Resiliency standards by default. Green Building and Green Factor Certifications are attached to this memo.

Inclusionary Housing

The project is subject to the Inclusionary Housing requirement. As such, 20% of the total Dwelling Unit Net Floor Area within the project must be devoted to Affordable Dwelling Units. If the Dwelling Unit Net Floor Area equals 30,000 square feet or more, the project will be required to provide a minimum number of Family-Sized Affordable Dwelling Units, which is defined as having three or more bedrooms and not less than 1,100 square feet of Dwelling Unit Net Floor Area.

Prior to receiving a building permit, the Applicant will be required to share detailed floor plans, unit layouts, and description of amenities with Housing Department staff as part of Inclusionary Housing review. While this information is not required at the special permit stage, it can be helpful for staff to troubleshoot any potential issues with the Applicant as early as possible. In general, staff recommend that two- or three-bedroom units are considered as inclusionary units.

Advisory Review

The Massachusetts Avenue Overlay and BA-5 districts are Areas of Special Planning Concern as defined in Article 19 of the CZO and are subject to Advisory Review procedures. However, where a special permit is required by the Planning Board, Small or Large Project Review Procedures are waived (Section 19.45).

Non-Zoning Requirements

Historical Commission review: The proposal will need to be reviewed by the Historical Commission under the Demolition Delay Ordinance as the existing building is over 50 years old.

Stormwater Management Requirements: The Applicant will need to obtain a Stormwater Control Permit from the City prior to any building permit being issued on the project. More information can be found in the attached DPW memo.

Community Engagement

The Applicant held a total of nine community meetings, two of which were held virtually, six were held in person at the site, and one was held at the North Cambridge Stabilization Committee Meeting. Five of the nine total community meetings were held during the rezoning effort that created the BA-5 district, and resulted in a Letter of Commitment by the Applicant to the abutting neighbors on Harvey Street, Cedar Street, and Alberta Terrace. This Letter of Commitment is included in the Narrative volume of the Application.

The Applicant states these meetings were consistently productive and feedback from the neighbors significantly influenced the design. The Application does not provide detail on the questions and comments that arose at these meetings or how many attendees were present at each.

Special Permit Conditions

If the Board decides to grant the special permit, the following list summarizes the general categories of conditions recommended for this development based on the requested special permits:

1. **Approved Development:** Authorized development would need to conform with the submitted application materials. An Approved Dimensional Form would be attached as an Appendix.
2. **Permitted Uses:** The special permit would authorize a specified range of uses. In the future, uses that are allowed by zoning but not authorized by the special permit would require Planning Board approval, and uses that are limited by the Zoning Ordinance (e.g., requiring a separate special permit from the Planning Board or BZA) would need to seek the necessary relief.
3. **Design Review:** CDD staff would review and approve design details at the construction documents phase, prior to issuance of a building permit, to certify that the plans conform to the Planning Board's approval. Board members may cite specific areas of focus for detailed review, based on the Urban Design Report and Board discussion.
4. **Transportation and Infrastructure:** Work being done on City property would be subject to review and approval by appropriate City departments, including DPW, TP+T and CDD. Transportation mitigation measures, as recommended in the TP+T memo, would be included as conditions.
5. **Sustainability:** Development will be subject to the Green Building Requirements in Section 22.20 and Green Factor Standards in Section 22.90; both will be reviewed again by CDD staff at the building permit and certificate of occupancy stages. CDD would also review for compliance with Green Roof Requirements in Section 22.35.
6. **Housing:** Development will be subject to Inclusionary Housing requirements, which will be certified by the Housing Department staff at the building permit and certificate of occupancy stages.
7. **Construction Management Program:** Per Section 18.20, prior to building permit, a Construction Management Program will be provided and approved by TP+T, DPW, and other applicable City departments. This program would also include a community outreach program designating a point of contact to provide information to the public during the construction process and notification panels posted on the site with project information.

Appendix - Zoning Text Excerpts

Project Review Special Permit

19.25 *Review Criteria.* In granting a special permit under this [Section 19.20](#) the Planning Board shall make the following findings.

19.25.1 Traffic Impact Findings. Where a Traffic Study is required as set forth in Section 19.24 (3) above the Planning Board shall grant the special permit only if it finds that the project will have no substantial adverse impact on city traffic within the study area as analyzed in the Traffic Study. Substantial adverse impact on city traffic shall be measured by reference to the traffic impact indicators set forth in Section 19.25.11 below.

In areas where the Planning Board determines that area-specific traffic guidelines have been established in the Ordinance, the Board recognizes written agreements between project proponents and the City dealing with transportation mitigation strategies.

19.25.11 Traffic Impact Indicators. In determining whether a proposal has substantial adverse impacts on city traffic the Planning Board shall apply the following indicators. When one or more of the indicators is exceeded, it will be indicative of potentially substantial adverse impact on city traffic. In making its findings, however, the Planning Board shall consider the mitigation efforts proposed, their anticipated effectiveness, and other supplemental information that identifies circumstances or actions that will result in a reduction in adverse traffic impacts. Such efforts and actions may include, but are not limited to, transportation demand management plans; roadway, bicycle and pedestrian facilities improvements; measures to reduce traffic on residential streets; and measures undertaken to improve safety for pedestrians and vehicles, particularly at intersections identified in the Traffic Study as having a history of high crash rates.

The indicators are: (1) Project vehicle trip generation weekdays and weekends for a twenty-four hour period and A. M. and P.M. peak vehicle trips generated; (2) Change in level of service at identified signalized intersections; (3) Increased volume of trips on residential streets; (4) Increase of length of vehicle queues at identified signalized intersections; and (5) Lack of sufficient pedestrian and bicycle facilities. The precise numerical values that will be deemed to indicate potentially substantial adverse impact for each of these indicators shall be adopted from time to time by the Planning Board in consultation with the TPTD, published and made available to all applicants.

19.25.2 Urban Design Findings. The Planning Board shall grant the special permit only if it finds that the project is consistent with the urban design objectives of the city as set forth in [Section 19.30](#). In making that determination the Board may be guided by or make reference to urban design guidelines or planning reports that may have been developed for specific areas of the city and shall apply the standards herein contained in a reasonable manner to nonprofit religious and educational organizations in light of the special circumstances applicable to nonprofit religious and educational activities.

Special Permit for Modification of design standards in the Mass Ave Overlay District

20.108 Divergence from the standards specified in Sections 20.105 - 20.107 may be allowed by issuance of a special permit from the Planning Board. The Board shall grant such a permit upon its determination that the development proposed will better serve the objectives of this [Section 20.100](#) than if the standards were followed and that the criteria specified in Section 10.43 will be satisfied.

The Board shall be guided in its determination by Northern Massachusetts Avenue Urban Design Guidelines and other such guidelines as may be established for this portion of Massachusetts Avenue. This Section 20.108 is intended for variations from the standards which may be appropriate in specific locations and circumstances and where careful design detail is a controlling factor.

Special Permit for Reduction of Green Roofs requirement

22.35.3 *Exemption.* The Planning Board may grant a special permit to reduce the required Green Roof Area, Biosolar Green Roof Area, or Solar Energy System below the area required by Section 22.35.2, provided that each square foot so reduced be compensated by a unit price contribution to the Cambridge Affordable Housing Trust. This unit price shall be determined based on the average costs to design, install, and maintain green roofs and rooftop solar energy systems in Cambridge using actual cost figures to the extent possible, shall be subject to annual adjustment based on standard construction cost indices, and shall be calculated, and recalculated approximately every three years, by the Cambridge Community Development Department. All such funds contributed to the Trust shall be dedicated to the design and incorporation of Green Roof Area, Biosolar Green Roof Area, or Solar Energy Systems into new or existing affordable housing developments.

General Criteria for Issuance of a Special Permit

10.43 *Criteria.* Special permits will normally be granted where specific provisions of this Ordinance are met, except when particulars of the location or use, not generally true of the district or of the uses permitted in it, would cause granting of such permit to be to the detriment of the public interest because:

- (a) It appears that requirements of this Ordinance cannot or will not be met, or
- (b) traffic generated or patterns of access or egress would cause congestion, hazard, or substantial change in established neighborhood character, or
- (c) the continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would be adversely affected by the nature of the proposed use, or
- (d) nuisance or hazard would be created to the detriment of the health, safety and/or welfare of the occupant of the proposed use or the citizens of the City, or
- (g) for other reasons, the proposed use would impair the integrity of the district or adjoining district, or otherwise derogate from the intent and purpose of this Ordinance, and
- (h) the new use or building construction is inconsistent with the Urban Design Objectives set forth in Section 19.30.

19.30 Citywide Urban Design Objectives [SUMMARIZED]

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

Urban Design Staff Report

Urban Design Comments

Overview

The project at 2400 Massachusetts Avenue presents a unique opportunity to transform surface parking into a mixed-use building, introduce much-needed ownership housing units, set a precedent for redevelopment along North Massachusetts Avenue, and further reinforce a distinct sense of place for Trolley Square. Its proximity to the Linear Park, Davis Square, and the adjacent bus lanes positions the site as an ideal candidate for increased housing density. Spanning a full block, the project purposefully presents a stronger urban presence along Massachusetts Avenue that transitions into a nuanced and modulated composition as it approaches the smaller neighboring residential fabric. All elevations include an extensive number of terraces and balconies that modulate the building's form, provide private open spaces for residents, and will enliven the façade and public realm.

The introduction of a central "Pedestrian Retail Corridor" that divides the site into two buildings presents a unique strategy for organizing open space within a deep parcel. This corridor provides a mid-block connection between Harvey St and Alberta Terrace and is lined with flexible retail spaces able to accommodate smaller businesses. While concerns remain about its geometry and resolution, unique design solutions that expand the public realm are generally encouraged. The materiality of the building is distinct and without precedent in the surrounding context. However, it is well-conceived and provides an opportunity to create a distinct landmark within Trolley Square.

Key recommendations for continued study and exploration are to:

- Refine the geometry of the Pedestrian Retail Corridor to ensure it is a pleasant and welcoming environment year-round.
- Consider relocating the transformer to a less prominent location.
- Further resolve the corner at Massachusetts Avenue and Harvey Street to more strongly address Trolley Square and connections to the Linear Park.
- Offset the below-grade parking from Cedar Street to generally align with the building above to allow the front yards to be at-grade, support more extensive plantings and shade trees, and allow for direct stormwater infiltration.

North Massachusetts Avenue Urban Design Guidelines Handbook, 1986

Guidance for the urban design review is found both in Section 19.30 of the Zoning Ordinance as well as the North Massachusetts Avenue Urban Design Guidelines Handbook (NMAUDGH). This handbook was created to establish a set of design guidelines "in response to ... concerns about the quality of the environment along North Massachusetts Avenue and its relationship to the neighborhoods surrounding it". Covering from Cambridge Common to Alewife Brook Parkway, it is "intended to reinforce the mixed-use nature of the Avenue while encouraging a general level of quality in new ... construction." Despite being composed 38 years ago, the General Objectives of the NMAUDGH are still valid and applicable:

1. Maintain a sense of diversity in use and physical character along the Avenue.
2. Encourage any new development to be compatible in scale and character with abutting residential neighborhoods.
3. Improve the pedestrian environment. Encourage active uses at the ground level and physical improvements to the streetscape.
4. Encourage the retention of existing historic structures.

The guidelines specify that the "Trolley Square Subarea" should develop a strong neighborhood identity with residential infill along this part of the Avenue. This would include:

1. Development of links from the new residential fabric to the Linear Park.
2. Using creative massing studies to allow for higher densities and compatibility with the surrounding neighborhoods.

3. Development of a diversity of building forms which have small-scale elements to relate to the pedestrian environment.
4. Some commercial uses at the ground floor of larger developments.

Site Design and Building Form

Building Siting

The project's massing is organized into two separate buildings that share a common below-grade parking level and are divided by a through-block pedestrian corridor. This corridor is widest (+/-35') at ground level at its ends and tapers to +/- 25' wide in the middle. It is consistently 20' wide across the top. A roughly ten-foot-wide single-story connector provides connections to Massachusetts Avenue through the first floor of the front building. The front building is shallower in depth with a consistent height that references the more urban scale of Massachusetts Avenue, while the rear building is deeper and terraces down in height towards the smaller existing residential fabric of Cedar St. A series of front yards along Cedar St. reinforce the pedestrian scale and visually expand the public realm.

- While the mid-block Pedestrian Retail Corridor represents a unique approach to creating a distinct sense of place, positioning the project's primary open space inbound from and oriented parallel to Massachusetts Avenue contradicts the NMAUDG recommendation to concentrate activity primarily along the street. Strategies for increasing its visibility or connectivity to Massachusetts Avenue would better support an enhanced and vibrant public realm.

Pedestrian and Bicycle Circulation and Access

The sidewalks around the site vary in width in response to the surrounding context. While their dimensions are not depicted in the graphic volume, the clearances between street tree pits and the back of sidewalk along Harvey St, Cedar St, and Alberta Terrace appear potentially undersized.

- Where possible, achieve a 5' minimum clearance to ensure a comfortable walking environment.

The sidewalk along Massachusetts Avenue is depicted as a wide concrete surface incorporating short-term bike parking, street trees, and rain gardens.

- This portion of Massachusetts Avenue is slated to be redesigned in the near future, so the final design of this space should be coordinated with and approved by the City.
- Delineating a shallow "frontage zone" in front of the retail spaces facing Massachusetts Avenue through the use of accessible pavers or colored concrete could create a visual threshold.

The proximity of the Linear Path to the site provides enhanced cycling opportunities for residents. The Bicycle Circulation Diagram suggests that cyclists approaching from Massachusetts Avenue will circulate around the site to access the Bike Room off Alberta Terrace. However, it is likely that many will instead attempt to pass through the Pedestrian Retail Corridor as it is more direct.

- The Pedestrian Retail Corridor should either be designed to anticipate occasional cyclists or to clearly discourage them from using it to reduce conflicts.
- The Street/Retail Connector is an ideal sheltered space to locate short-term bicycle parking.

Vehicular Parking and Loading

Proposed vehicular access occurs off Harvey Street, with a ramp down into the below grade parking. The door to access the ramp is recessed into the façade at an angle to Harvey Street. Proposed loading is accommodated by a shared on-street loading zone at the southern end of the Pedestrian Retail Corridor on Alberta Terrace.

- The location of the loading zone at the southern end of the Pedestrian Retail Corridor has the potential to visually obstruct the entrance to this space. Ideally, the

loading zone would be shifted to ensure the Corridor remains visible, accessible, and welcoming.

- Reducing the solid portion of wall to the east of the garage door/north end of “Retail A” would allow greater visibility into the Pedestrian Retail Corridor looking east along Harvey Street.

Approach to Context

The project is sensitive and purposeful in its response to the scale of the surrounding context:

Cedar Street - The rear building terraces down from six floors to 1-2 stories as it approaches the adjacent smaller-scale residential context (1.5-2.5 stories).

Alberta Terrace - The rear building steps back at a height of 35’ to mirror the height of the triple-deckers across the street and visually reduce the apparent height of the building.

Massachusetts Avenue – The front building expresses the full six floor height to create a strong street wall and sense of enclosure in alignment with the NMAUDGH. The rhythm of solid and carved balcony spaces references the proportions of the nearby triple-deckers.

Harvey Street – The erosion of the building massing along the edges of the mid-block connector creates a dynamic entrance to the Pedestrian Retail Corridor.

- The project treats the corner of Massachusetts Avenue at Harvey Street and Massachusetts Avenue at Alberta Terrace equally despite their different contexts. The corner of Harvey and Massachusetts Avenue helps define Trolley Square, an important urban node where the Linear Path crosses Massachusetts Avenue. The project should explore variations of the massing or façade articulation at this corner to address and reinforce the importance of this node.

Façade Articulation and Materials

Architectural Character

The organizational strategy of the facades differentiates between “solid” and “carved”. The solid portions are rendered in a green corrugated metal paneling and cover most of the project’s public-facing elevations. The carved portions are clad in a light, vertically oriented wood-look cladding that defines the inset balconies and windows, elevations along the Pedestrian Retail Corridor, and the ground floor retail spaces fronting Massachusetts Avenue.

The primary elevation along Massachusetts Avenue has a tripart vertical composition. The base is clearly delineated by its high levels of transparency and wood cladding. A datum at 35’ divides the middle and upper portions, which are both clad in green metal paneling with inset wood-clad balconies.

- While the 35’ datum references the height of the existing context to the south, it produces an atypical proportional relationship where the middle is shorter than the top. As buildings along Massachusetts Avenue continue to increase in scale through redevelopment, retaining this reference will become less important and exploring different proportions is encouraged.
- The window-to-wall ratio of the upper levels facing Massachusetts Avenue appears low for this prominent façade. If sustainability metrics restrict larger window sizes, other methods for visually expanding the perceived size of the opening could be explored.

Materials, Color, and Details

The majority of the project is clad in vertically-oriented light green corrugated metal panels. These span the height of a floor, with a horizontal joint occurring at each floor. At a distance, the cladding will produce a more monolithic effect that resolves itself up close with a subtle play of light and shadow. The spacing of the profiles varies from floor to floor and along the length of facades, creating visual interest and a subtle visual hierarchy.

While no other adjacent buildings employ a similar industrial palette, its uniqueness could help further define and reinforce a distinct identity for Trolley Square. However, its success will rely on elevating this material through careful detailing and construction.

- Visible face fasteners should be avoided to produce a clean, refined appearance.
- Joints between corners, recesses, and material transitions should be crisp and well resolved.

Mechanical Penthouse and Systems

The distance that the mechanical penthouse is set back from the building parapets makes it unlikely to be seen from ground level. Additional mechanical considerations are:

- It is recommended that any potential kitchen exhaust systems for first floor retail spaces are vented through the top of the buildings to avoid negative impacts on the public realm.
- If the below-grade parking is intended to be mechanically ventilated, the location of the exhaust should be carefully considered to avoid negatively impacting the public realm.

Public Realm and Ground Floor

Program and Uses

The programmatic organization of the building is contextually appropriate and generally aligned with the principles of the NMAUDGH. Active retail uses line Massachusetts Avenue, and residential units and uses are concentrated along Cedar Street and Alberta Terrace to mirror the existing residential fabric. Parking access and the transformer front onto Harvey Street.

- The current floor-to-floor height for the retail spaces is shown as 14'-6", which is shorter than the typical dimension in similar buildings. It is recommended this be increased to allow for maximum flexibility to accommodate any mechanical systems tenants may require, as well as a signage zone on the building's exterior.

Activation and Transparency

The project is generally successful at activating all sides of both buildings, notably by providing frequent and closely spaced entrances into all ground-level retail and residential spaces. The one exception is the Harvey Street elevation of the rear building, where the parking access and transformer niche are located. Expansive glazing defines both Massachusetts Avenue and the Pedestrian Retail Corridor, activating the public realm and allowing for views into and through the building.

- A less prominent location for the transformer niche should be explored. The current configuration presents blank walls to portions of Harvey Street and Cedar Street, which is discouraged by the NMAUDGH. If it cannot be moved, strategies for enlivening this elevation through art or similar techniques are encouraged.
- Moving the lobby of the front building to the Pedestrian Retail Corridor side of the stair/elevator core would allow for greater retail frontage along Massachusetts Avenue, consolidates the residential entrances along Alberta Terrace, and places it closer to the Bike Storage Room.
- Retail Spaces C & D have potentially limited areas to conceal back-of-house functions. Care should be taken to ensure future tenants will not need to obscure the proposed glazing areas.

Open Space and Landscaping

The project provides an extensive amount of private residential open space, with all units having access to at least one exterior space. Inset balconies line the façades along Massachusetts Avenue, Alberta Terrace, and both sides of the Pedestrian Retail Corridor. Large rooftop terraces tumble down the rear building towards Cedar Street, which is lined with landscaped front yards and patios at ground level. The publicly accessible open space is provided within the Pedestrian Retail Corridor and the adjacent Street/Retail Connection. The space is primarily hardscape with movable planters and green roofs on the retail canopies. Concerns remain about the viability of plantings within the Pedestrian Retail

Corridor due to the minimal amount of sunlight they will receive. Additionally, the retail canopies further reduce access to sunlight for the planters below, the plants on top will be minimally visible to the public, and their exposure on all sides leaves them vulnerable to freezing.

- It is recommended that the planted retail canopies be reconsidered and potentially exchanged for additional ground-level planting at the ends of the Pedestrian Retail Corridor.

Due to the large extent of the below-grade parking, there are few opportunities for natural stormwater infiltration or planting directly into the ground. To achieve the front yard plantings lining Cedar Street, 3' tall planting beds are depicted. In some locations, the proposed soil volume appears undersized for the proposed trees, which is recommended to be 300 cubic feet for smaller trees to ensure their survival.

- It is recommended that pulling the footprint of the below-grade parking further back from Cedar Street to generally align with the building above be studied. This minimal loss of parking area would allow for additional groundwater infiltration, eliminate the need for raised planting beds, allow for larger shade trees in the front yards, and increase their likelihood of survival.

Environmental Comfort

Urban Heat Island

The project represents a substantial improvement over the current building and asphalt parking lot. The planted yards along Cedar Street, additional street trees, light-colored paving, composite decking, and green roofs should result in an improved microclimate within and around the site.

- As noted above, reducing the garage footprint along Cedar Street could allow larger trees to be planted in the front yards, increasing the amount of shade they produce.

Wind

Since the project is a mid-rise building, no substantial wind impacts to the surrounding context are anticipated. The step-back along Alberta Terrace and the series of terraces along Cedar Street should mitigate potential downdrafts along these two residential streets. Staff have concerns about possible wind conditions within the Pedestrian Retail Corridor. Because it tapers towards the center in both plan and section, it could induce higher wind speeds as air entering from the wider ends is compressed.

- This condition should continue to be studied to ensure that the Pedestrian Retail Corridor is a pleasant environment, especially during colder times of the year. Changes to the corridor's geometry may help mitigate any potentially adverse conditions.

Shadows

The project is unlikely to produce substantive shadow impacts on the surrounding context. The terracing of the rear building towards Cedar Street reduces the length of shadows cast towards the houses across the street. Alberta Street sits to the south of the project, and the inclusion of an upper-level step-back along this elevation further reduces the potential for shadowing.

There remain concerns about the ability of natural light to penetrate into the Pedestrian Retail Corridor. The included shadow studies depict few instances throughout the year when the ground level of the corridor receives meaningful daylight. This results from the tapering of the corridor in section, as well as the inclusion of projecting retail canopies between the first and second floor.

- It is suggested that removing the retail canopies and increasing the width at the top of the corridor be explored to allow more daylight into the space.

Lighting

No exterior lighting is indicated on the landscape or site plans, nor included in the elevations.

- Exterior fixtures should be Dark Sky compliant, adjustable, programmable, and dimmable.
- Light trespass beyond the site and between residential units and spaces should be minimized.

- Lighting in the Pedestrian Retail Corridor should provide adequate visibility and safety at night while minimizing impacts on the residential units above.

Continuing Review

The following are additional recommendations for ongoing design review by staff if the Board decides to grant the special permit:

- Further study of items above, including: the connectivity of the Pedestrian Retail Corridor to Mass. Ave., the corner at Mass. Ave. and Harvey St., the transformer location, the proximity of the underground garage to Cedar St., the height of the retail spaces, and the Retail Canopies.
- Explore opportunities to provide a 5' clear sidewalk where possible.
- Review of the locations of any ventilation required for the below grade parking.
- Review of expected light and wind conditions within the Pedestrian Retail Corridor.
- Review of all landscape design details including species, materials, landscape features, and exterior lighting. The City's Draft Outdoor Lighting Ordinance can help provide guidance.
- Review of all exterior materials, colors, and details. A visual mock-up should be installed on site and be reviewed by staff and the Planning Board prior to any exterior materials being ordered.