



**KENDALL SQUARE
BUILDING 3**
DESIGN SUBMISSION
NOVEMBER 17, 2016

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I. Building 3 Design Review - Overview

Project Summary

The Building 3 project is a proposed mixed use building project containing 380,201 square feet of Gross Floor Area located on Building Site 3 in the PUD-5 District of Kendall Square. It is one of five building projects approved by the Planning Board as part of Special Permit #303. The Building 3 Project will incorporate the existing building located at 238 Main Street (MIT E48) and a 12-story commercial lab and office building addition along the southerly building face of 238 Main Street. The 238 Main Street portion of the combined building will maintain its existing uses including approximately 17,495 square feet of retail space on the ground floor/basement and approximately 74,843 square feet of commercial office space on the upper floors. The building addition will include approximately 16,032 square feet of retail space on the ground floor, access to a parking garage off Wadsworth Street, approximately 271,830 square feet of flexible lab and office space on levels 2-12 and a 2-story penthouse for base building and tenant equipment. The main entry to the new building will be at 238 Main Street, with a 5-story atrium separating the lower masses of the existing building and the building addition.

Parking for Building 3 Project uses will be included in the 1,459 aggregate spaces approved for the SoMa development and will be accommodated in a six level underground parking garage located below the new building and open space to the south designed to serve Site 3 and adjacent Sites 4, 5 and 6. Automobiles utilizing the parking will access the underground garage via the ramps on Amherst Street located to the west of its intersection with Hayward Street and below the new portion of the Building 3 project at Wadsworth Street. Loading facilities, all of which are situated below grade, are accessed from a ramp off Hayward Street and the entry to the loading ramp is incorporated into the Building 4 project. The parking garage and loading design is consistent with what was approved through the PUD Special Permit and Final Development Plan process and has progressed through the administrative review process. Related enabling activities have commenced and the garage construction is expected to begin in early 2017.

Long-term bicycle parking, with elevator access, is accommodated in the first level of the underground garage. No fewer than the approximately 64 of the long term bicycle parking spaces in the garage required per the program components of Building 3 will be available upon Building 3 occupancy. Likewise the Building 3 program requires 34 short term bicycle parking spaces. These will be provided

near the main entries of Building 3 as part of the landscape construction under separate Planning Board review.

Building 3 will add energy and vitality to Kendall Square and MIT's East Campus. Consistent with MIT's PUD-5 retail strategy, entries to active ground floor uses will occur on all four sides of the building and will keep the ground floor dynamic throughout the day, evening and weekend. Although tenants for the ground floor are not yet identified, the spaces are designed to accommodate active retailers that will complement the significant level of energy expected along Main Street and elsewhere in Kendall Square. MIT has hired a Director of Retail to focus on tenancing the Kendall Square ground floor spaces. The Director and design teams are working closely to ensure that all spaces – even those that are not standard as a result of achieving retail on four sides – can be successfully activated with a variety of tenants.

Construction of Building 3 is expected to begin in 2017, with completion expected in 2019. MIT has worked closely with each of the individual retail tenants of 238 Main Street over the past year to devise smooth exits or relocations from their current locations. The existing retail tenants at 238 Main Street may be able to operate in place through the early phases of construction. As such, plans for relocations have not yet been finalized. MIT will work with retail tenants individually to formulate a transition plan that works best for each tenant.

Consistency with Special Permit

Special Permit #303 provides for a Building 3 Project having a total approved Gross Floor Area of 362,119 square feet of which 13,500 square feet is exempt from the calculation of GFA as Active Uses GFA. As set forth above, the Building 3 Project measures 380,201 square feet of GFA (of which approximately 16,764 square is exempt from the calculation of GFA), and is consistent with the Special Permit per the requirements of its Condition #1.a.vii. Additionally, the building height does not exceed 200 feet, which is the building height approved for Building 3 in the Special Permit. The land area of Building Site 3 measures approximately 60,954 square feet, which is consistent with the Special Permit.

The Development Program contained in this Design Review Submission is consistent with the Development Program for Building Site 3 contained in the Special Permit. The GFA, building height,

setbacks and mix of uses of Building 3 has not changed in any material way as indicated by the Dimensional Table attached to this application.

Planning Board Review

In connection with granting Design Review approval, MIT requests that the Planning Board, pursuant to the provisions of Section 14 of the Special Permit, approve the revised subdivision plan and layout of Building Site 3 as depicted on said Plan, which is consistent with the Building Site Plan that was included and approved in the Special Permit.

The Special Permit requires the review of Publically Beneficial Open Space located on a particular building site to be reviewed as part of the design review process for each individual building site. Further, open space on Building Sites 3 and 4 shall be reviewed in combination prior to the issuance of a building permit for either Building 3 or 4. Landscape materials for the above referenced areas were submitted to the Planning Board for review on October 24, 2016.

Status of Mitigation and Commitments

Housing Contribution

As the Building 3 Project will be considered an Incentive Project pursuant to Section 11.201 of the Zoning Ordinance, the new commercial GFA included in the Building 3 Project will require the payment of a Housing Contribution pursuant to Section 11.203.1 of the Ordinance. As indicated in the Dimensional Table included with this Design Review submission, Building 3 will contain approximately 289,049 square feet of new commercial GFA. That commercial GFA will result in a Housing Contribution of approximately \$4,001,032, which will be payable, pursuant to the requirements of Section 11.203.1.3. of the Zoning Ordinance at the time that Building 3 receives its Certificate of Occupancy.

Traffic

Appendix B of Special Permit #303 enumerates certain transportation mitigation and monitoring requirements that may be triggered at Certificate of Occupancy of the Building 3 project components. MIT will work with the City's Traffic, Parking and Transportation department on the design and timing of required items. In addition, to the extent that it has not been funded (at building permit for Building 4),

MIT will provide the initial funding associated with the installation, operations and maintenance of two Hubway stations at building permit for the Building 3 project.

Community Fund Payments and Community Benefit Organization Contributions

As required by Section 13.810.2 of the Ordinance and Paragraph G of the Commitment Letter, respectively, the first and second Community Fund Payments and Community Benefit Organization Contributions have been made by MIT to the City, with the first being paid in July 2013, and the second being paid in April 2016. As a result of the above, MIT has satisfied its payment and contribution obligations relative to each of these items until such time as MIT applies for a building permit for new commercial square footage in excess of 500,000 square feet. As the commercial space contained in Building 3 does not result in the aggregate new commercial square footage exceeding 500,000 square feet when combined with buildings anticipated to apply for Building Permit before it (Building 4), no Community Fund Payment or Community Benefit Organization Contribution is expected to be required in connection with the construction and occupancy of Building 3.

Other April 8, 2013 Commitments

All other commitments contained in the Commitment Letter from MIT to the City of Cambridge dated April 8, 2013, have been and continue to be satisfied by MIT to the extent implicated by the proposed development on Building Site 3.

Dimensional Form

The Standard Cambridge Form with revisions to show progress toward maximum allowable Gross Floor Area of overall PUD Final Development Plan is included in this submission.

II. Building 3 Urban Design Narrative

Urban Design Objectives

The proposed design is consistent with the Building 3 guidelines and objectives as described in the Kendall Square PUD-5 Design Guidelines. A principal urban design objective for Building 3 is to reinforce the scale and character of Main Street by preserving the 238 Main Street building. The building addition is sited directly to the south of 238 Main Street and is visually separated from the existing Main Street massing by a 30' wide, 5 story high glass atrium that allows abundant light into both portions of the building. The atrium is accessed through the front entry of 238 Main Street and from Wadsworth Street. Modifications to 238 Main Street to accommodate the atrium and two-story entry have been reviewed with the Executive Director of the Cambridge Historical Commission (CHC).

The ground floor in the building expands upon the existing retail activity with over 30,000 sf of retail on Main Street, Hayward Street, Wadsworth Street, and the public space to the south. The design will allow for maximum visual transparency between the sidewalk and retail spaces, while allowing for the future incorporation of additional entrances to optimize pedestrian flow in and out of the building.

The building has two dynamic massing moves that connect this building to the ensemble of buildings that MIT is developing South of Main (SoMa) in Kendall Square. The first five stories of the building create a similarly scaled lower mass to the existing 238 Main Street structure and also relates to the Suffolk Engraving and J.L. Hammett buildings to the northwest and to the height and scale of the Muckley building to the south. This 5 story expression with ground floor retail locks the building into the context of these early 20th century brick and precast manufacturing buildings.

The upper 6 stories dramatically rotate 90 degrees to reinforce Wadsworth Street as the predominant north-south street connector that links East Cambridge to the Charles River. This mass pivots on a recessed 6th floor that allows it to float above its base and creates a landscaped terrace overlooking the new public open space that is part of the larger SoMa development. The pivoted mass also creates a gateway expression from the public space to the east towards the Sloan School through a cantilever at the sixth floor, the underside of which will be programmed with art and lighting, to draw pedestrians through the space. This upper mass is composed of a glassy curtain wall which will reflect the sky,

screen the mechanical penthouse, and create an asymmetric mass behind the clock tower which articulates the end of Third Street.

The Architectural Expression

The building addition works with the surrounding 6 story structures to create a pedestrian scaled early 20th century feel. Its ground floor retail will enliven the area with restaurants, service, and specialty retail activities. The retail design will create a range of pedestrian oriented spillout with awnings and entries that will announce each retail opportunity.

The 238 Main Street existing entry will be expanded into a 2 story expression that will continue into the atrium. The atrium is anticipated to extend along a portion of the south side of 238 Main Street connecting 238 Main Street with the building addition. Six story glass walls at the Wadsworth Street and Hayward Street facades will fill the atrium with light throughout the day and connect to the existing pedestrian system. This interior public space will provide seating, display, and meeting space for tenants, visitors, students, faculty, and neighbors. 238 Main Street and the building addition will each have lobbies to access their upper floors.

The lower mass of the building addition will pick up on the scale of the 238 Main Street building, and will be wrapped in a highly glazed skin with tightly-spaced vertical aluminum fins. The upper portion of the mass will continue the module, scale, and materiality of the lower mass in a transparent, slightly reflective, glass curtain wall. The penthouse will continue this expression with the vertical fins unifying the louvered face with the glazed wall below, such that the screen appears to disappear into the skyline. This architecture is complimentary of the scale and character of the early 20th century buildings being preserved and a bold new expression of 21st century office/lab buildings. Pedestrian entrances will be provided on all four sides of the building - from Hayward Street to the west, along Main Street to the north, from Wadsworth Street to the east and along the new open space to the south.

The building has been designed to mitigate adverse environmental impacts upon its neighbors. Building 3 is oriented on the site and set back off of Main Street in order to minimize shadow impact on open spaces. The anticipated shadow is consistent with the shadow studies presented as part of the Special

Permit submission. Since the granting of the Special Permit the team has continued to test wind conditions in SoMa to reflect planting, landscape and other design changes. An update on wind study tests is included in this submission.

Mechanical equipment will be carefully designed to minimize noise and exhaust, and have been located in fully enclosed two penthouse levels. The emergency generator and cooling tower are located within wells and are not visible. Strobic exhaust fans and specialty exhaust fans for the building's laboratory tenants will be on the roof of the penthouses, with particular care to locate the taller fans in the center of the building to minimize views of them from the street. Exhaust for ambient garage air will be centered 15 feet above sidewalk. An acoustical report for Building 3 is included in this submission. Waste and recycling compactors and loading docks are located below grade, at Level P1 of the parking garage.

Building Sustainability

MIT's Kendall Square Initiative is designed to be a leader in urban sustainability revitalization and renewal. MIT has made sustainability an integral part of the project and Building 3's design process and is committed to developing buildings that are sustainably designed, energy efficient, environmentally conscious and healthy for the occupants and visitors that enhance the community.

MIT has embraced an integrated design process and includes technical experts who are actively engaged with the design process of both the site and overall SoMa District. This comprehensive view allows the development to incorporate sustainability best practices in design and operation, stormwater capture and reuse, transportation and landscape strategies.

MIT established a minimum commitment to Leadership in Energy and Environmental Design (LEED) Gold and Building 3 will achieve a LEED Gold Rating under the v4 system. The team's efforts have been in developing a building that is sustainably designed, energy efficient, environmentally conscious, and healthy for the occupants, visitors, and community and committed to earn the buildings at least 60 credit points under the more stringent LEED v4 system, for LEED Gold ratings.

As required by Special Permit #303 included in this submission are a LEED Checklist and Narrative for Building 4 consistent with Article 22.20. These materials address the sustainability standards contained

in Section 13.89.4 and the sustainability strategies and guidelines set forth in Appendix D of Special Permit #303.

Dimensional Form for SoMa Building 3

	Allowed/ Required	Existing*	Removed **	Proposed Building 3	Total
Land Area	25,000	60,954	0	0	60,954
Total Non-Exempt GFA	348,619	94,413	94,413	363,437	363,437
Residential	N/A	0	0	0	0
Commercial	348,619	94,413	94,413	363,437	363,437
<i>Office</i>	65,119	76,918	76,918	74,843	74,843
<i>Lab</i>	270,000	0	0	271,830	271,830
<i>Innovation</i>	0	0	0	0	0
<i>Retail</i>	13,500	17,495	17,495	16,764	16,764
Academic (all types)	N/A	0	0	0	0
Non-Exempt Dormitory	N/A	0	0	0	0
Structured Parking	N/A	0	0	0	0
Total Non-Exempt FAR	Max. 3.9 across PUD-5	1.55	1.55	6.0	6.0
Total Exempt GFA ***	13,500	0	0	16,764	16,764
Ground-Floor Retail	13,500	0	0	16,764	16,764
Public Transportation	N/A	0	0	0	0
Residential/Dormitory	N/A	0	0	0	0
Innovation	See Note 2	0	0	See Note 2	See Note 2
Total Dwelling Units	N/A	0	0	0	0
Market Rate Units	No max. or min.	0	0	0	0
Affordable Units	N/A	0	0	0	0
Dormitory Beds/Units	N/A	0	0	0	0
Publicly Beneficial Open Space	15% in PUD-5 total	See Note 3 Below	See Note 3 Below	See Note 3 Below	See Note 3 Below
Max Height	200 ft.	N/A	N/A	200 ft.	200 ft.
Min Yard Setbacks	0	0	0	0	0
Off Street Parking	See Note 1 below	See Note 1 below	See Note 1 below	See Note 1 below	See Note 1 below
Bicycle Parking	98	0	0	98	98

**GFA that is existing on Building Site 3 as of January 1, 2013. For the Building 3 Project, the existing number has been amended to reflect 16,000 sf of existing GFA, primarily basement storage, that was unaccounted for in Special Permit #303.*

***Building Site GFA that is demolished or renovated. Includes existing upper floor office space at 238 Main Street.*

**** Proposed retail GFA is conceptually estimated at 50% exempt. Actual exemption will be known at building occupancy.*

Note 1: 70 commercial and 49 academic parking spaces exist on Building Site 3. These are being discontinued as part of the SoMa enabling and garage construction that has progressed separately through the administrative review process. Parking will be located in subsurface garage following construction of same.

Note 2: Innovation Space as required by section 13.89.3 of the Ordinance is provided in PUD-5 as described in Special Permits #303 and #302.

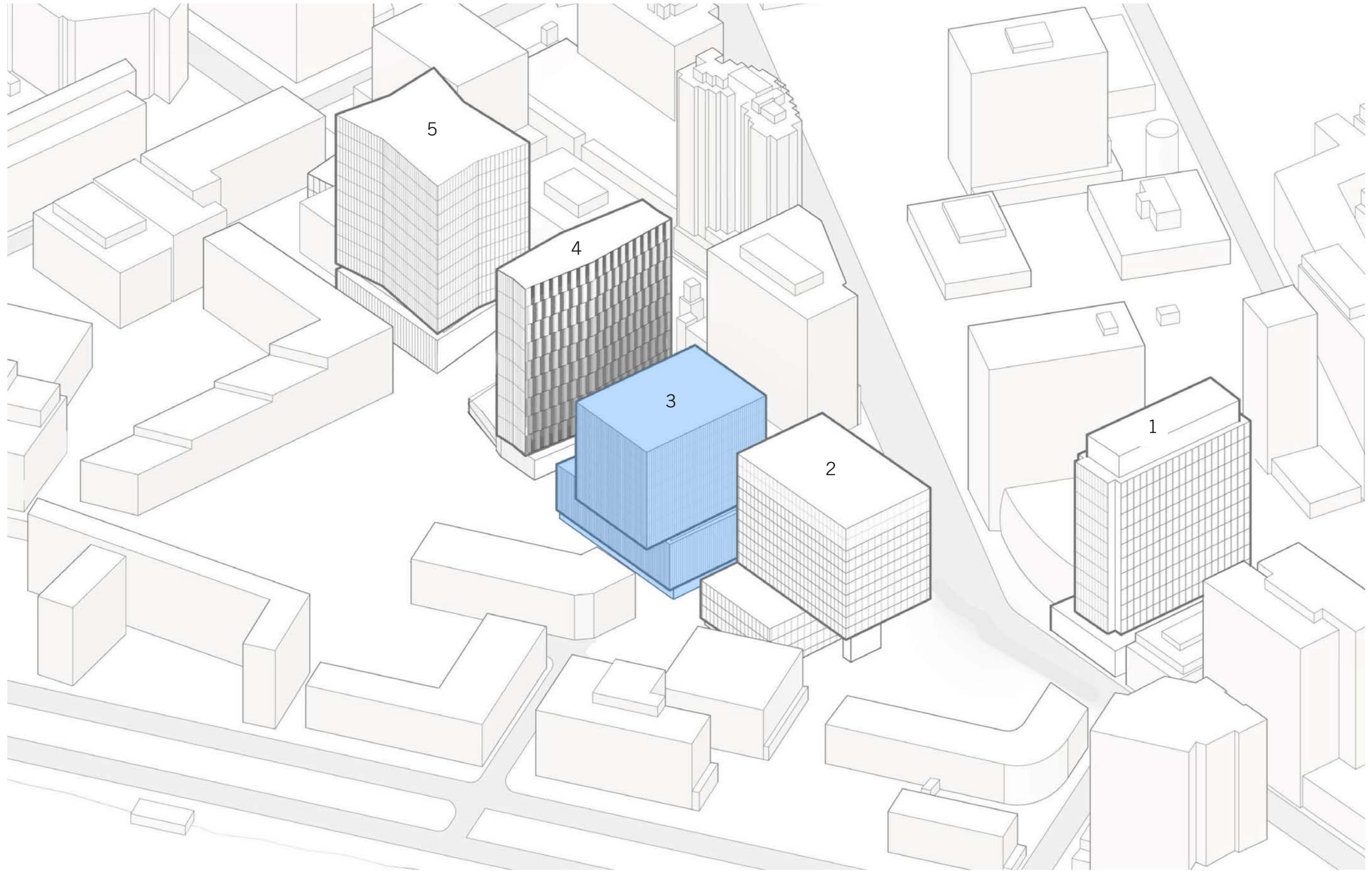
Note 3: 40,973 (46%) included in previously submitted SoMa landscape proposal for area generally bordered by Main Street, Carlton Street, Amherst Street and Wadsworth Street.



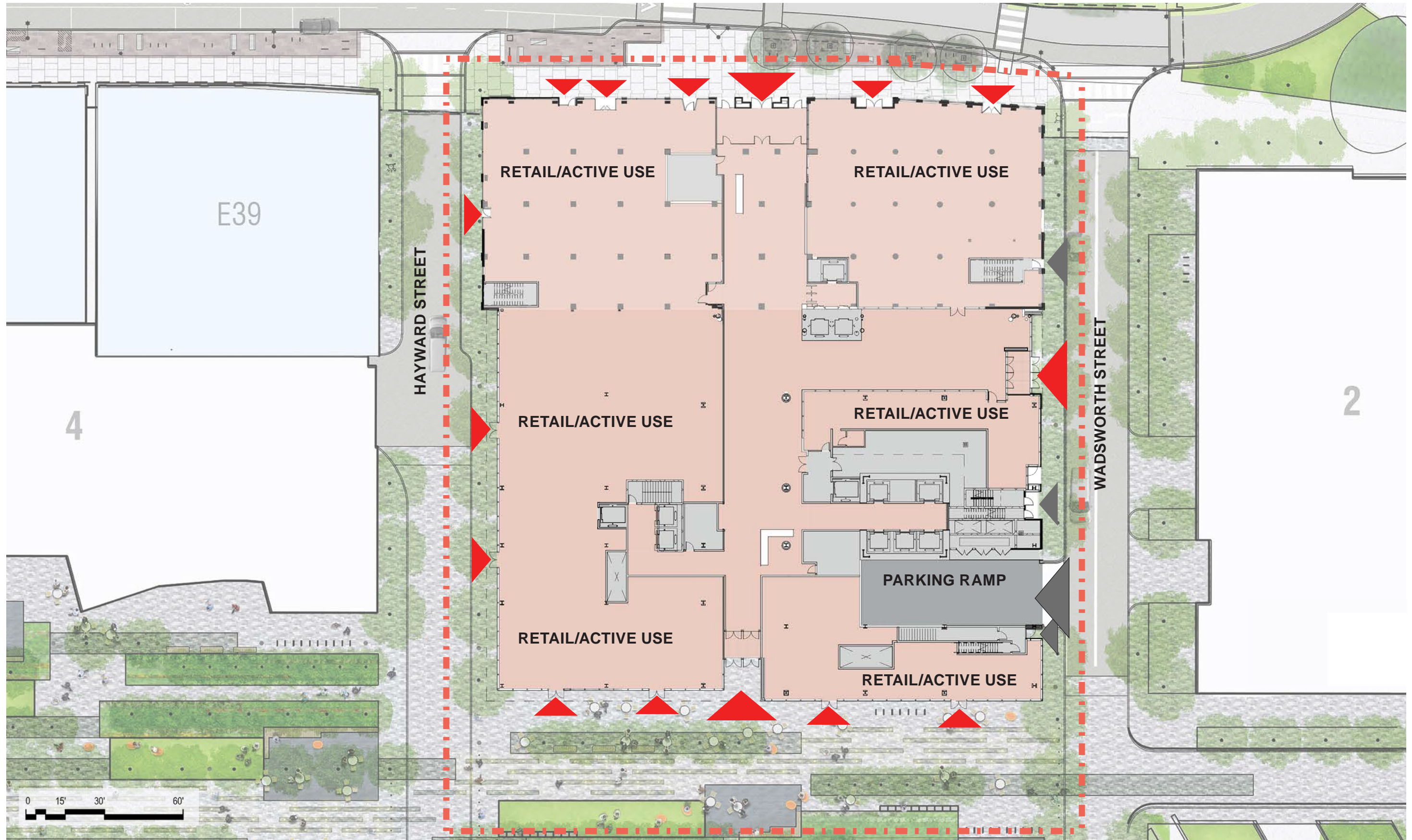
DESIGN REVIEW GRAPHIC MATERIALS

KENDALL SQUARE BUILDING 3

NOVEMBER 17, 2016







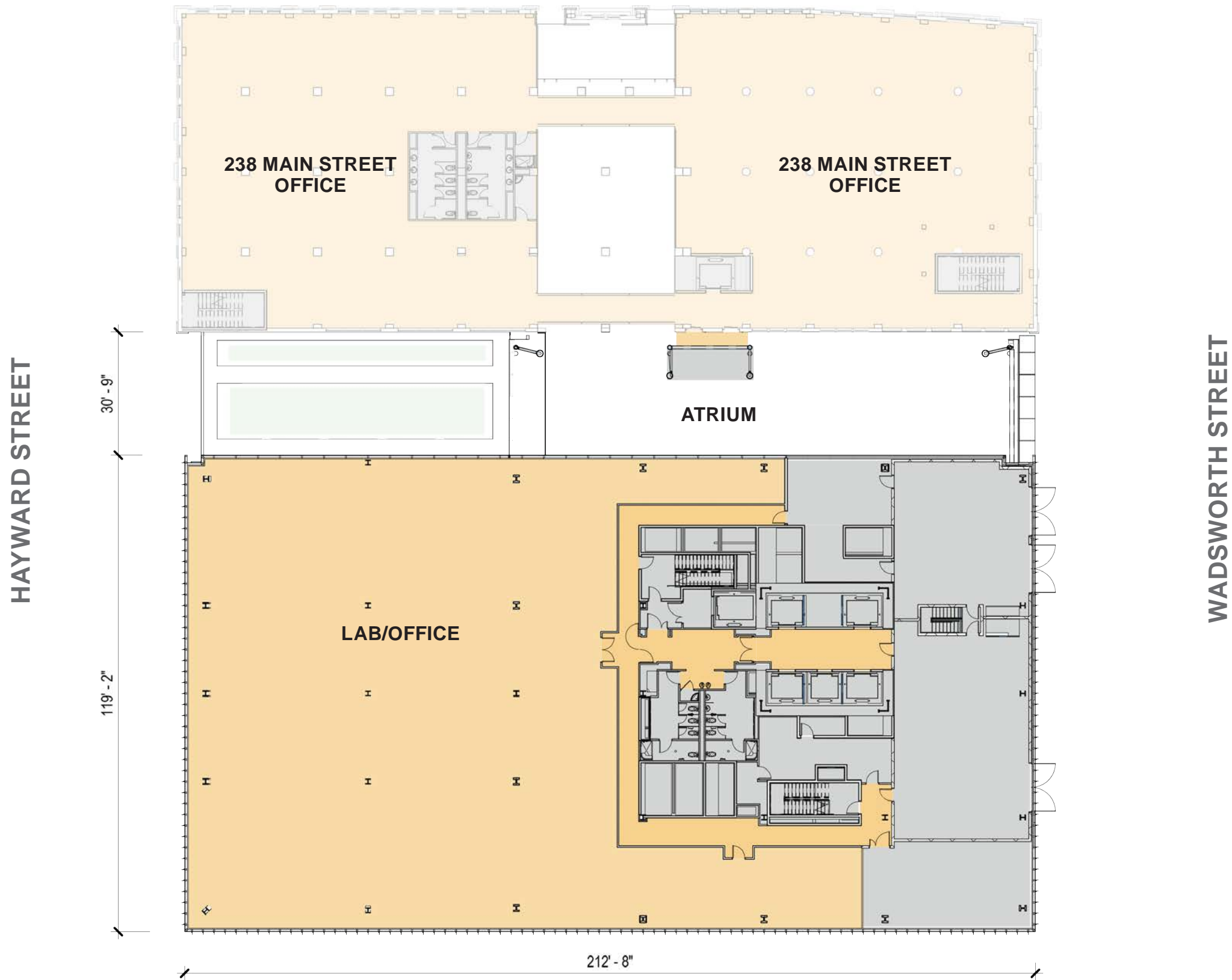


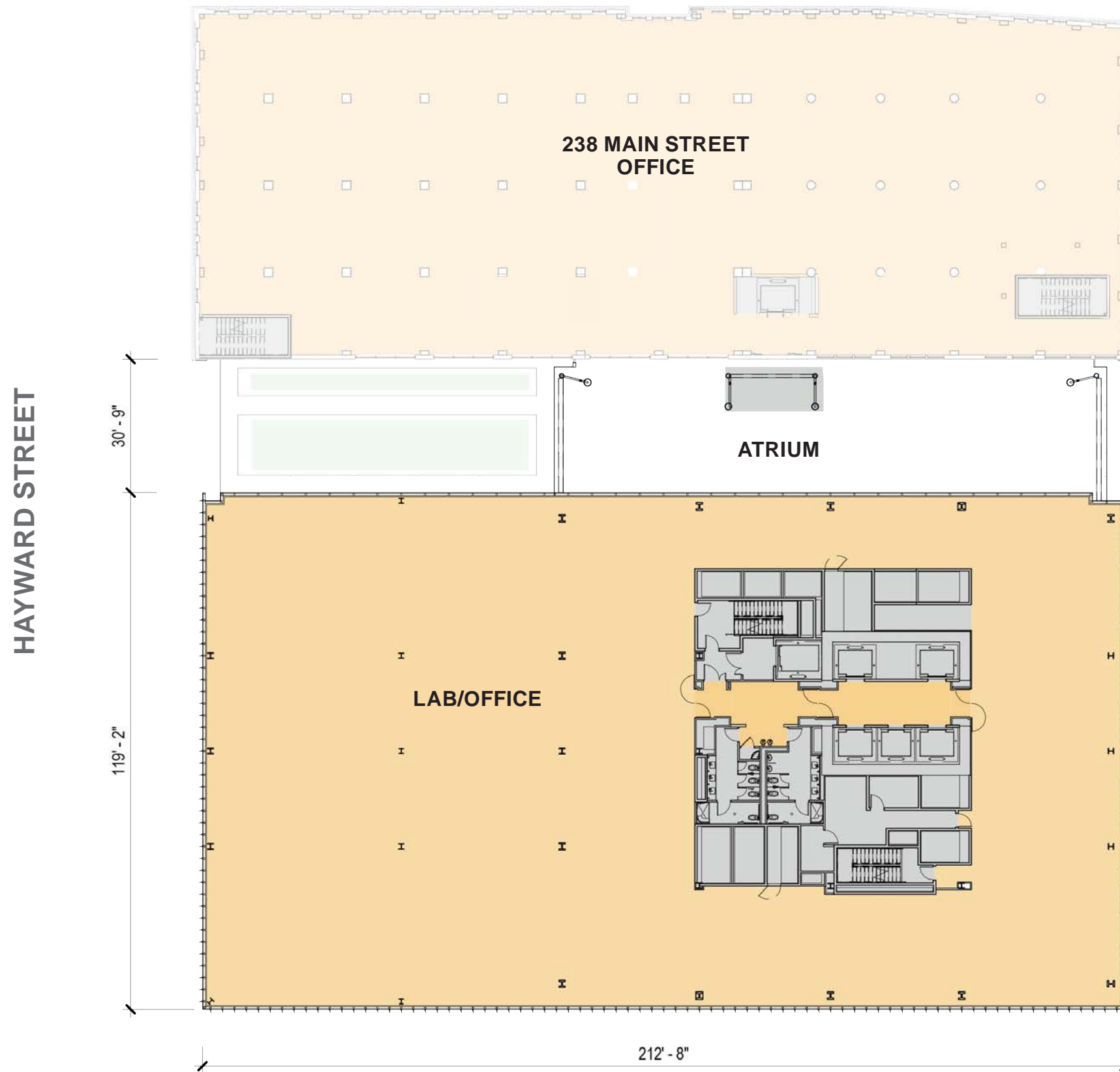
- RETAIL/ ACTIVE USE
- LAB/OFFICE COMMON SPACE
- LAB/OFFICE
- SERVICE/ MECHANICAL
- PARKING



GROUND FLOOR PLAN







HAYWARD STREET

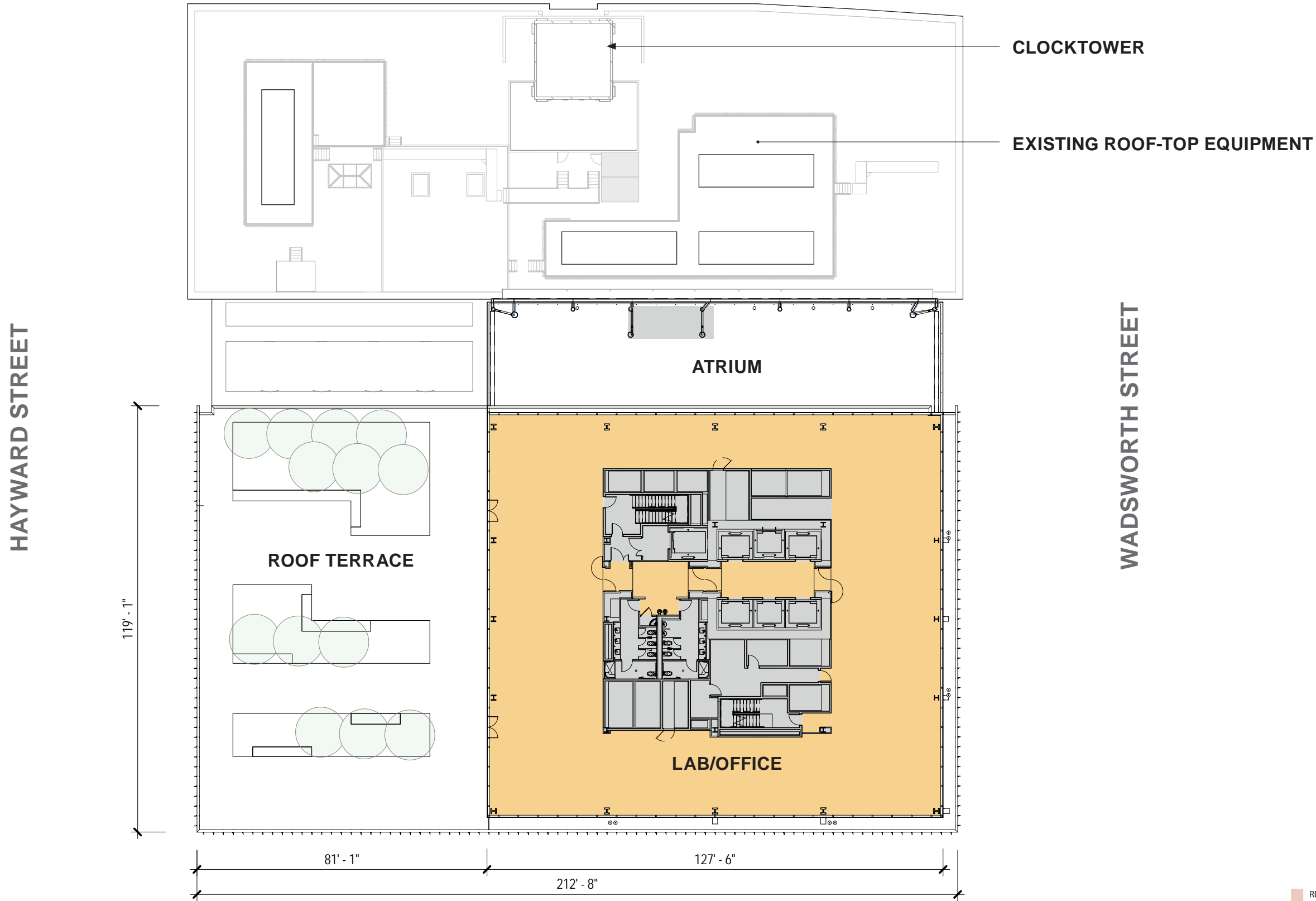
WADSWORTH STREET

- RETAIL/ ACTIVE USE
- LAB/OFFICE COMMON SPACE
- LAB/OFFICE
- SERVICE/ MECHANICAL
- PARKING



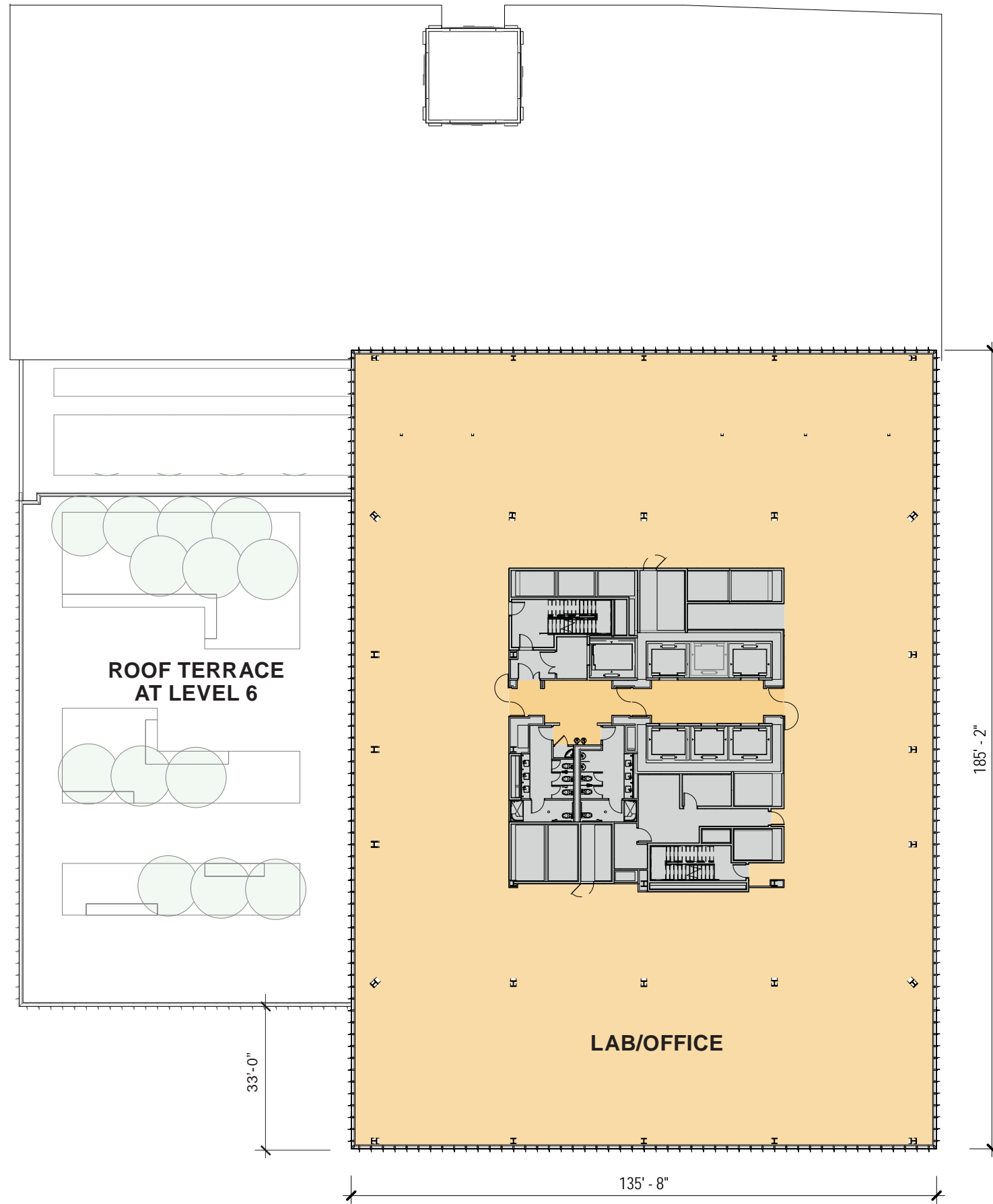
TYPICAL LOWER FLOOR PLANS



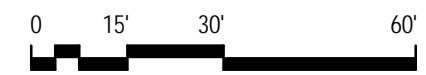


HAYWARD STREET

WADSWORTH STREET



- RETAIL/ ACTIVE USE
- LAB/OFFICE COMMON SPACE
- LAB/OFFICE
- SERVICE/ MECHANICAL
- PARKING

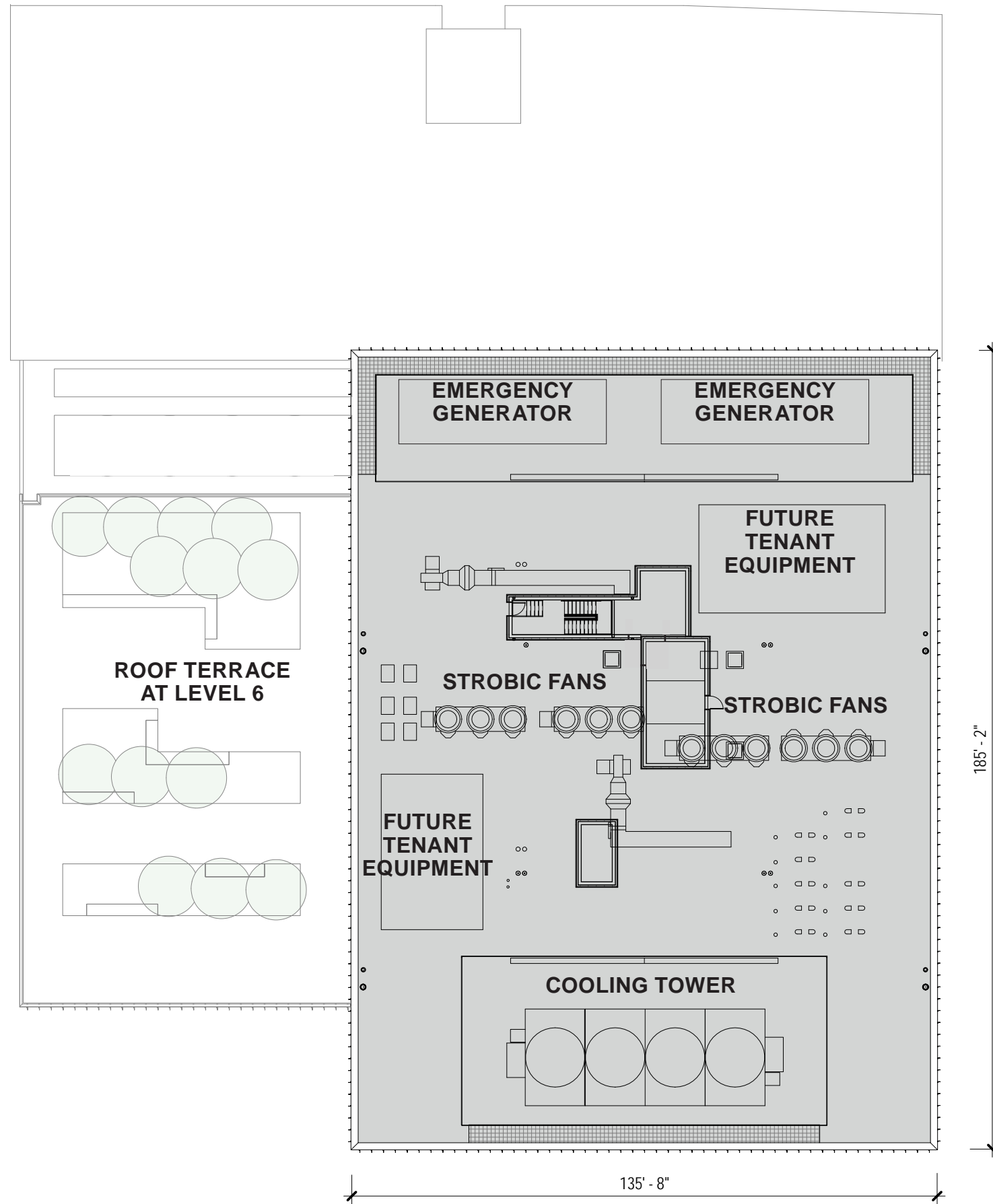


TYPICAL UPPER FLOOR PLANS



HAYWARD STREET

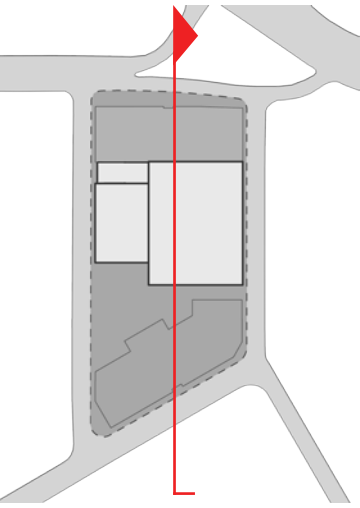
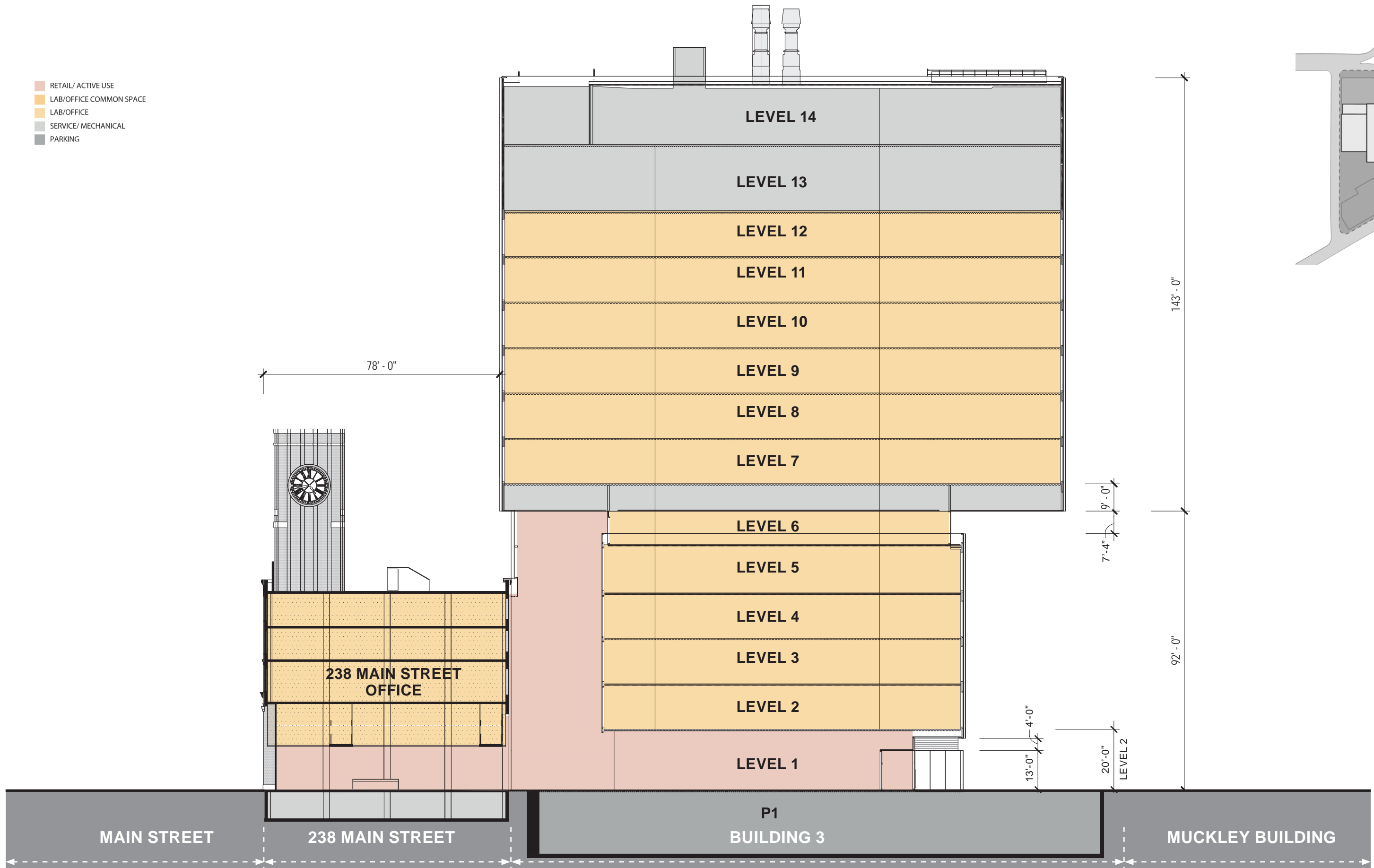
WADSWORTH STREET



ROOF PLAN

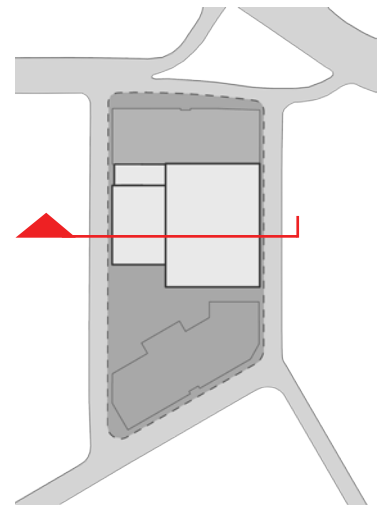
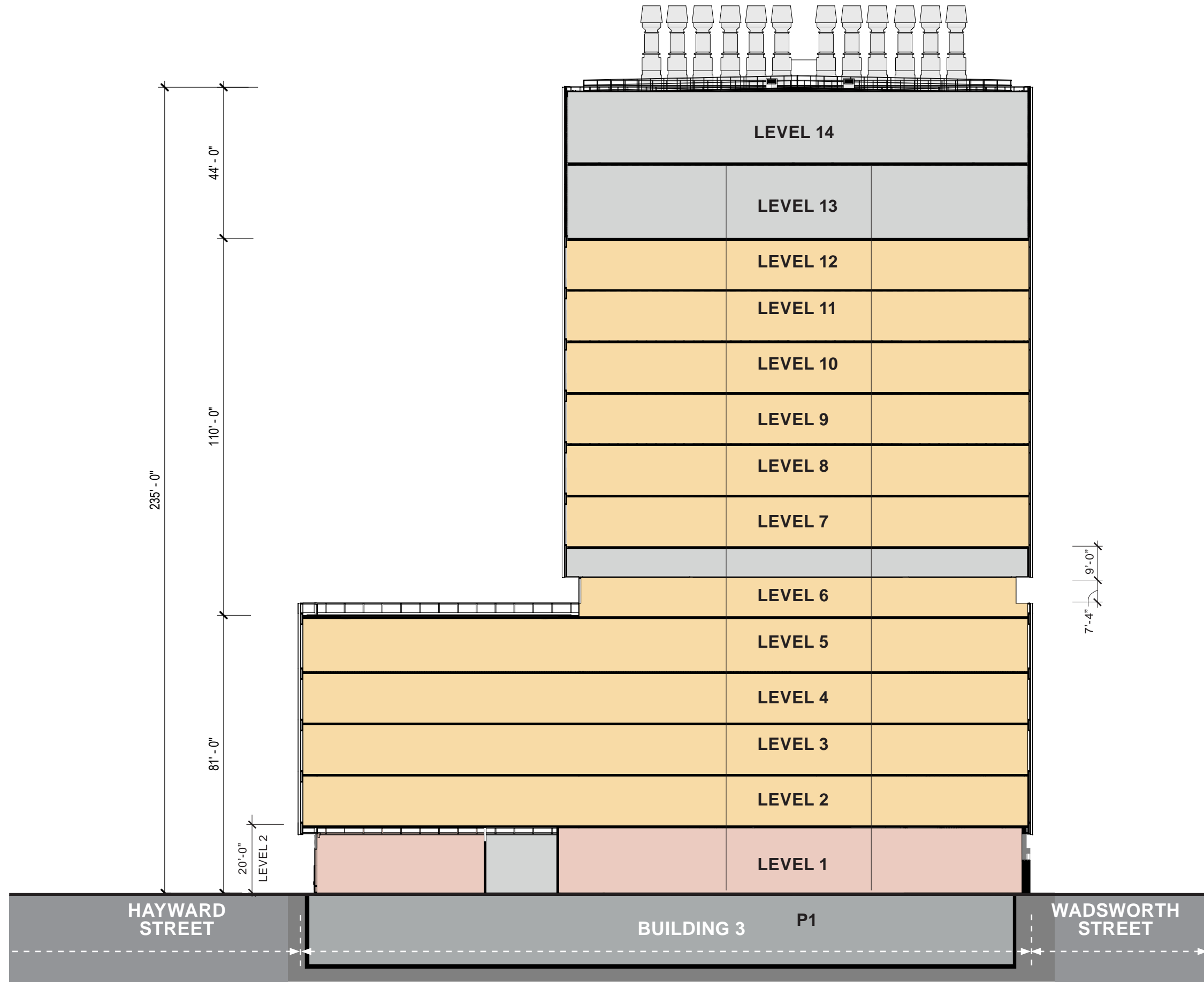


- RETAIL/ ACTIVE USE
- LAB/OFFICE COMMON SPACE
- LAB/OFFICE
- SERVICE/ MECHANICAL
- PARKING

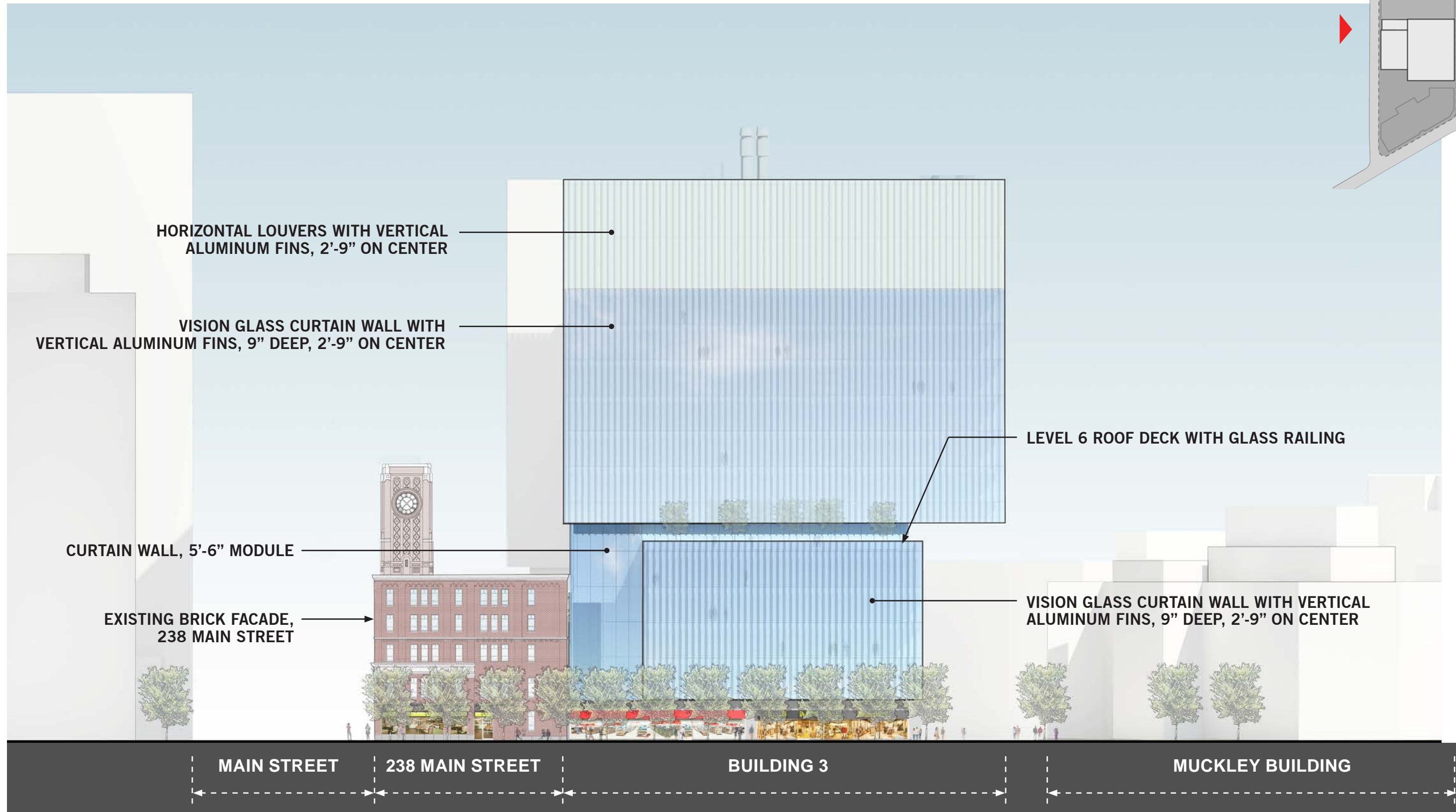
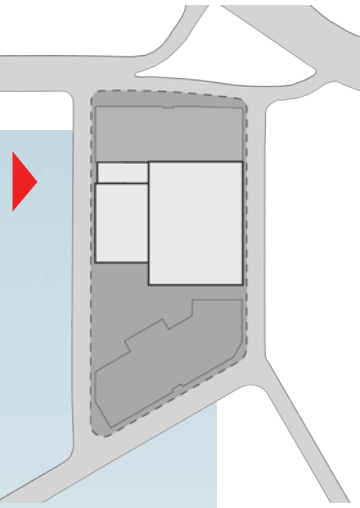


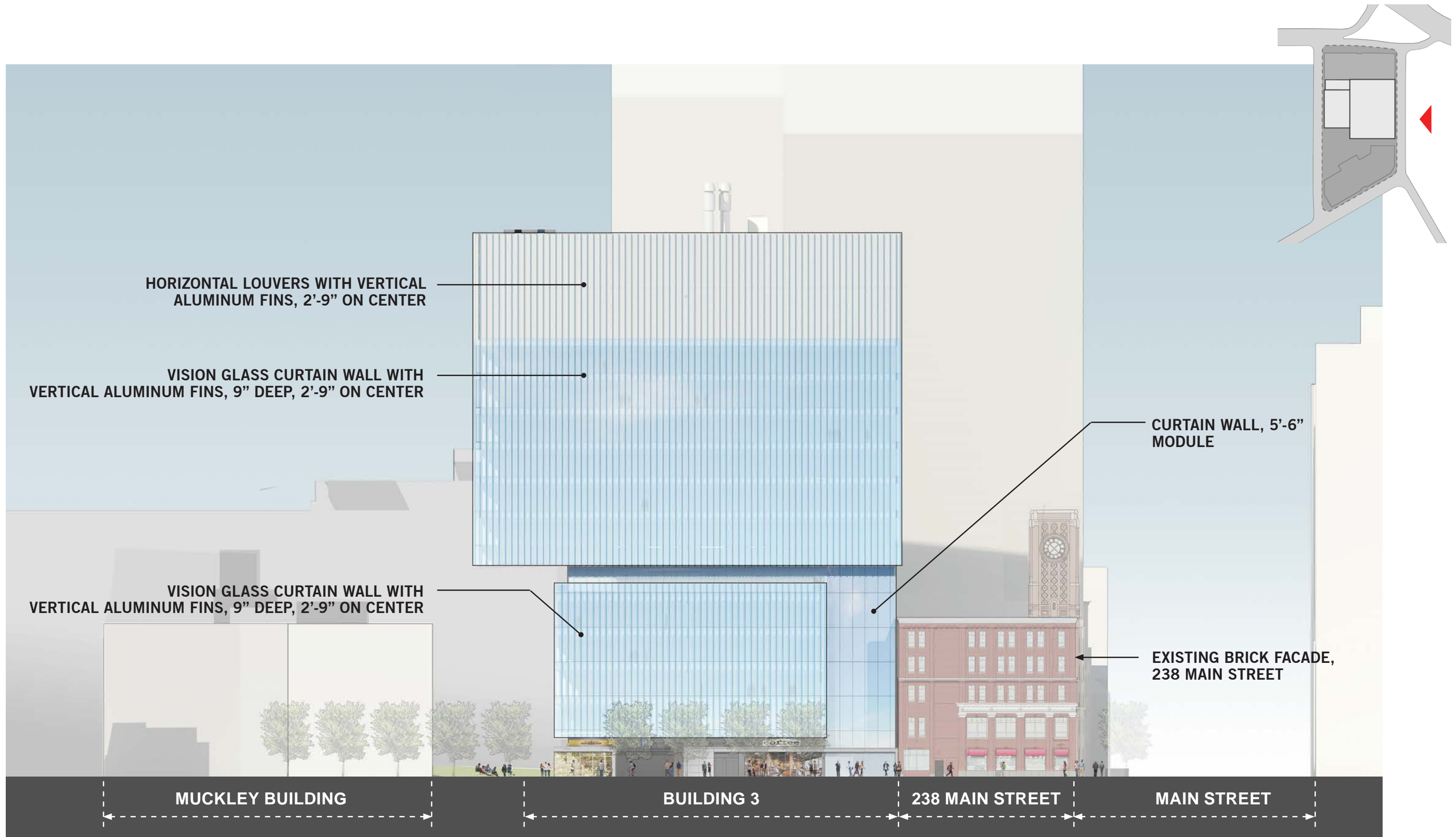
BUILDING SECTION

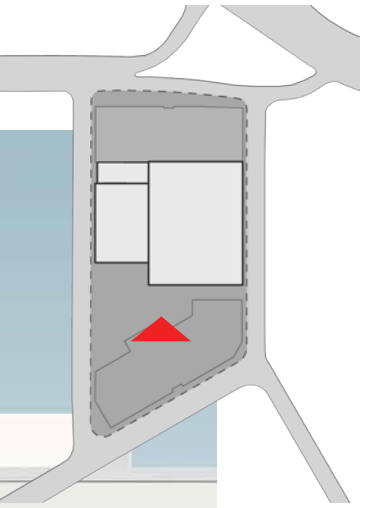
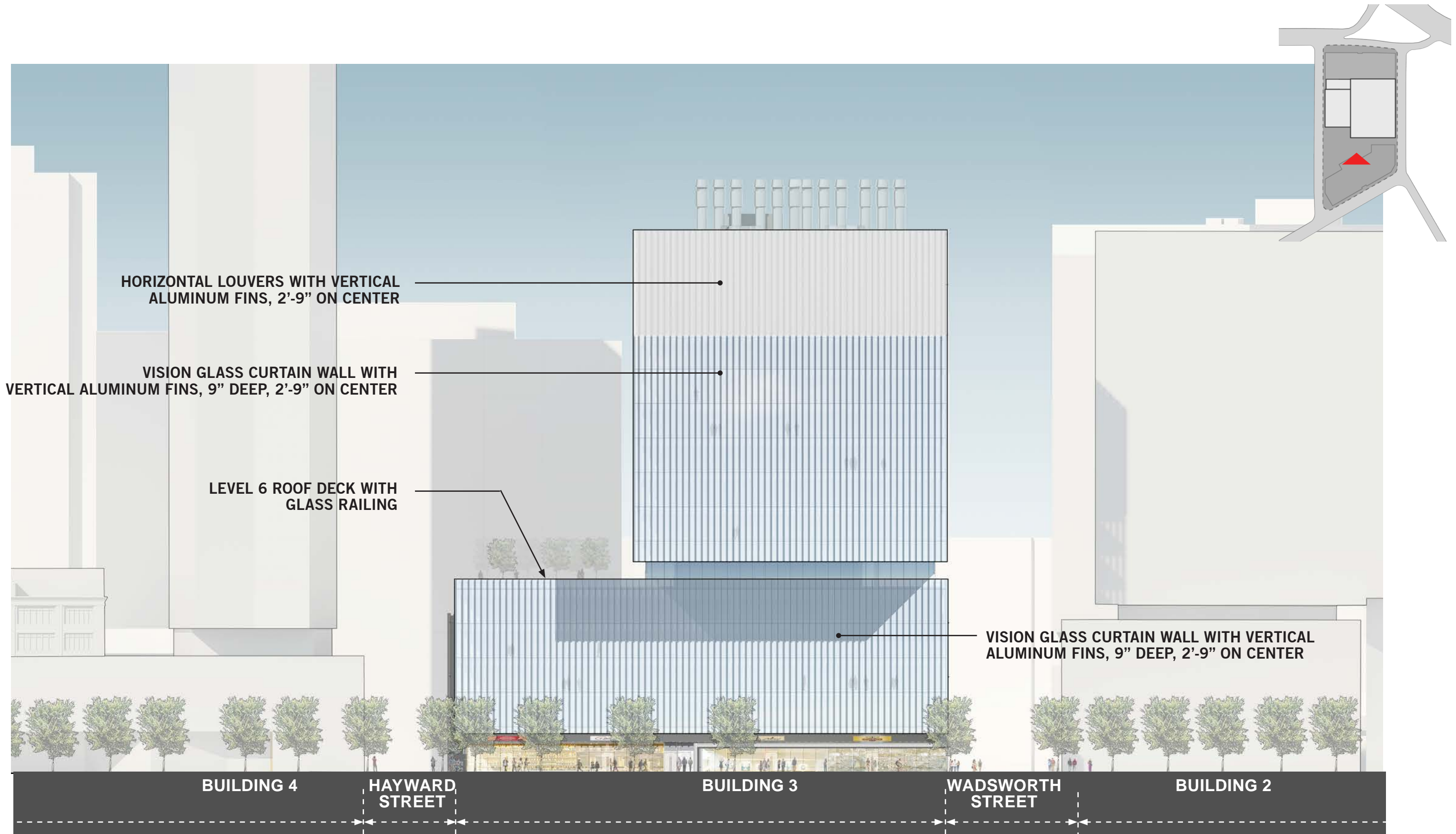


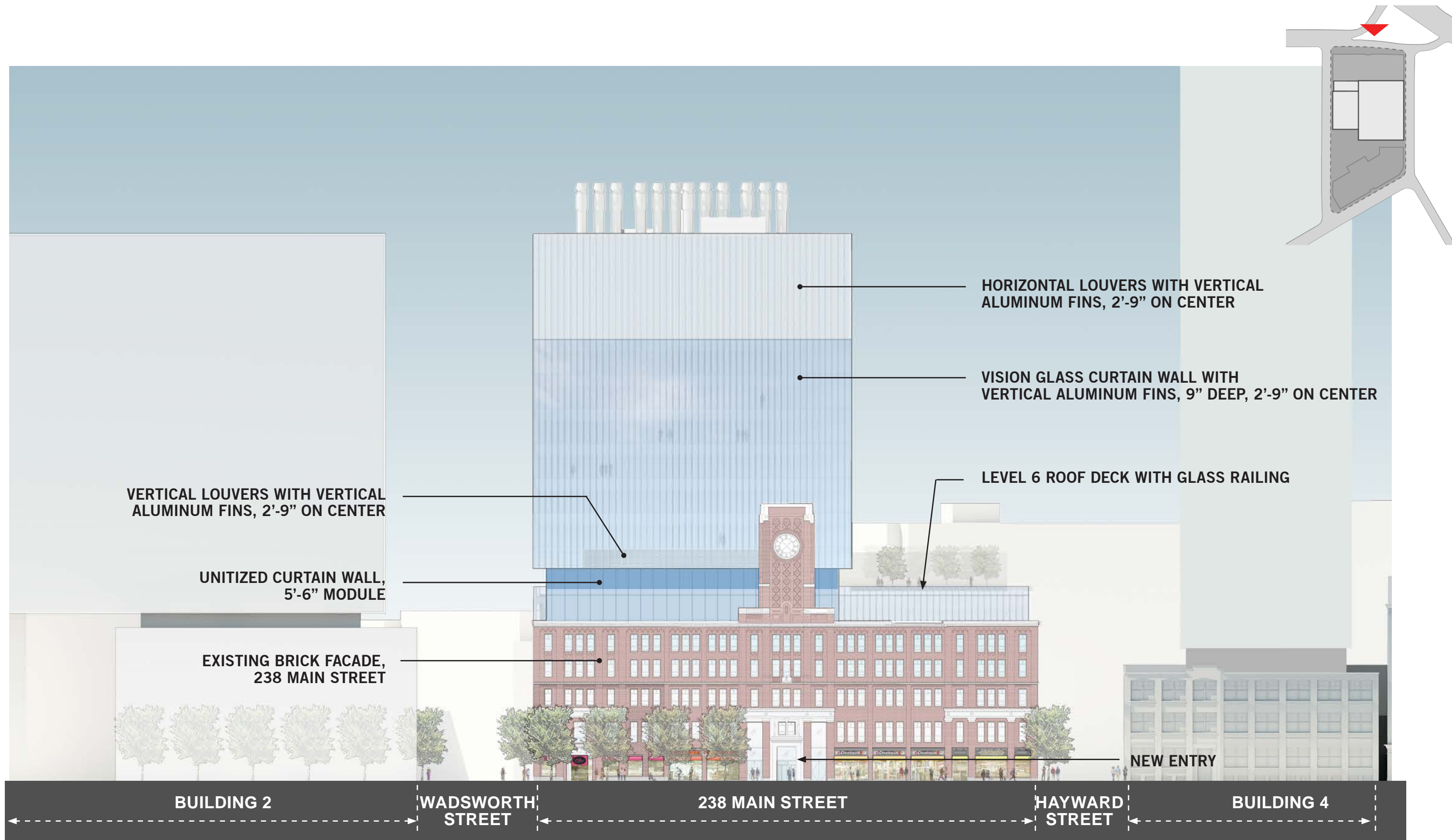


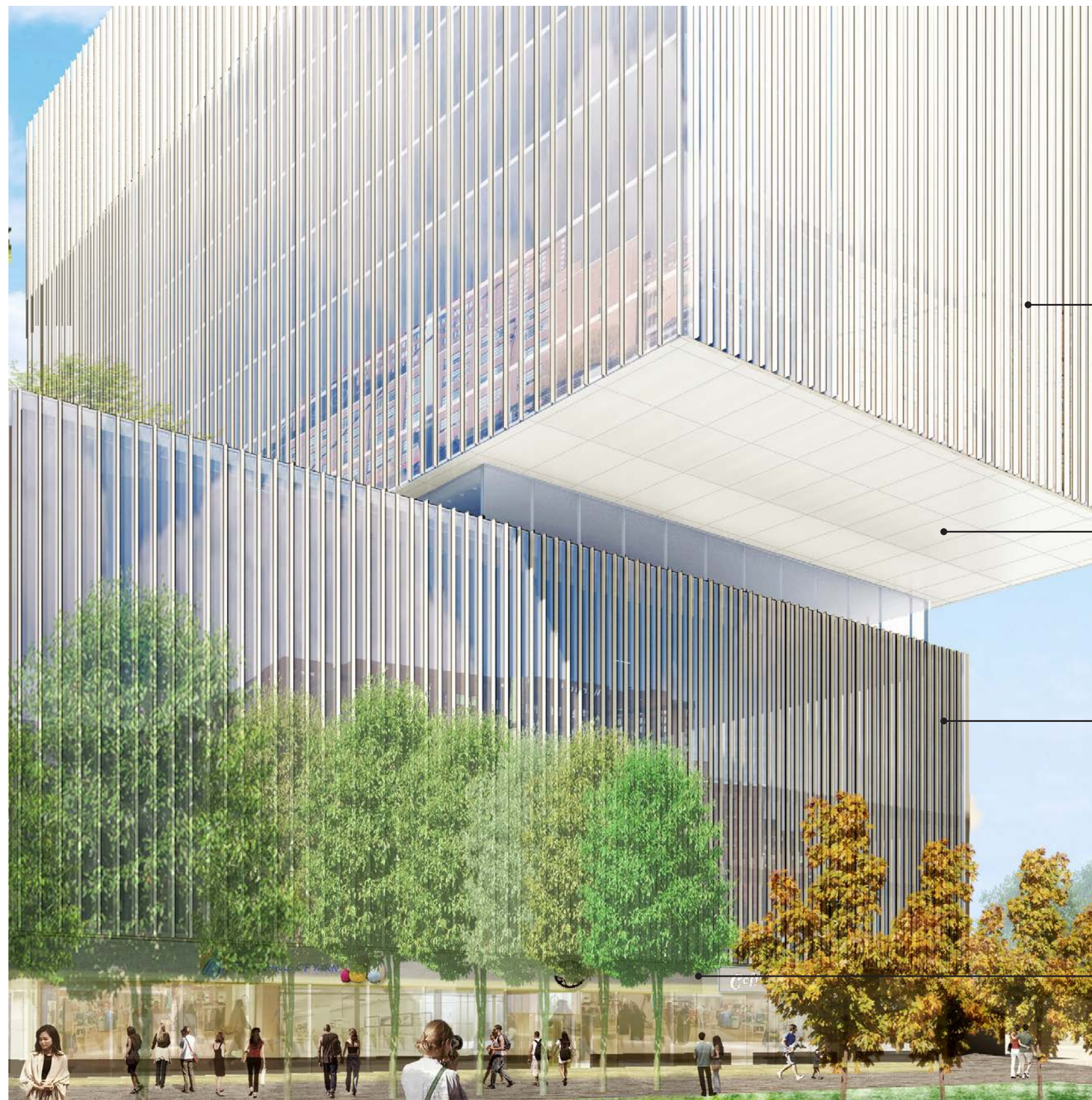
BUILDING SECTION











CURTAIN WALL WITH
ALUMINUM MULLIONS, 9" DEEP, 2'-9" ON CENTER

WHITE ALUMINUM PANEL

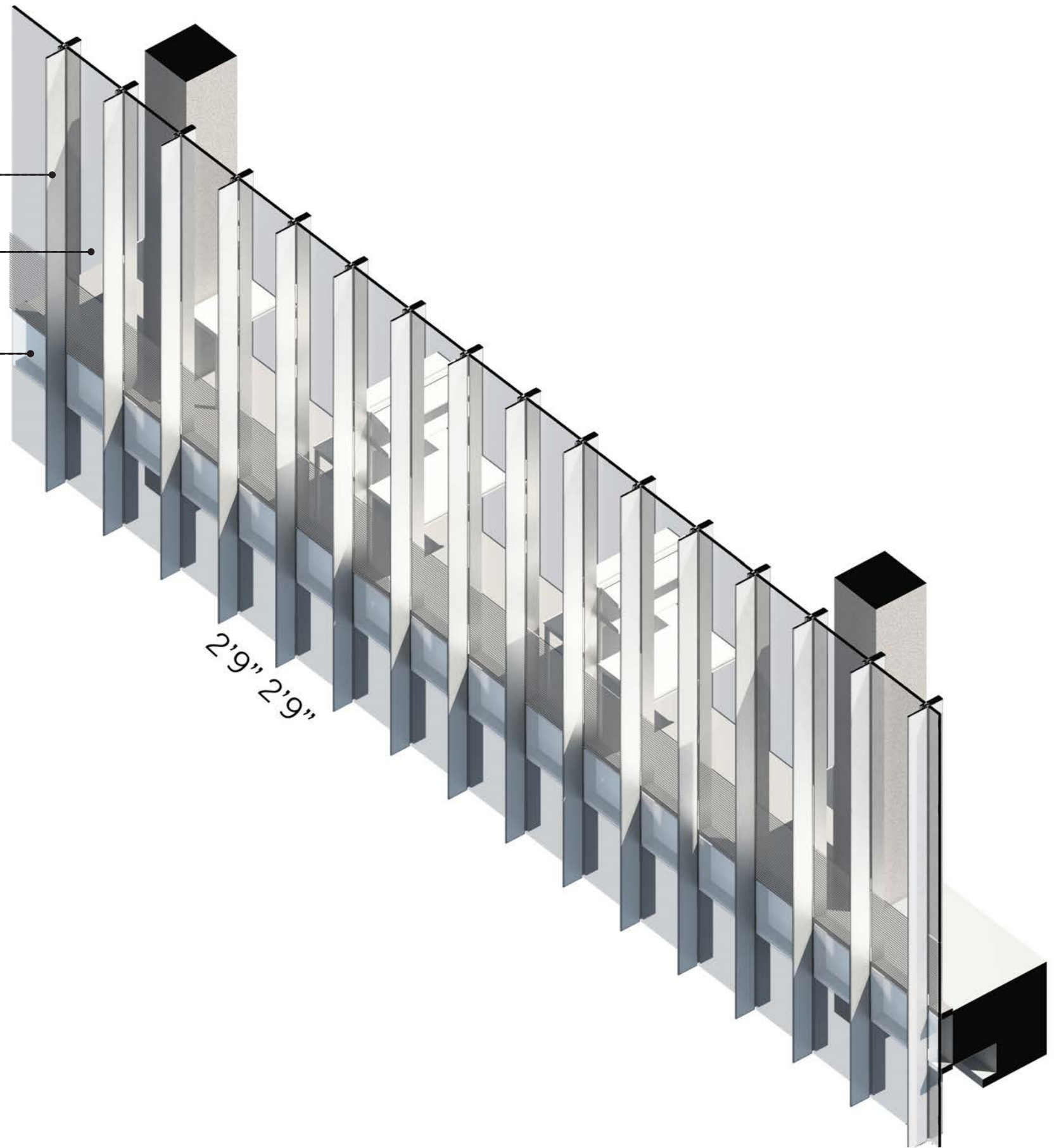
ALUMINUM MULLION, 9" DEEP, 2'-9" ON CENTER

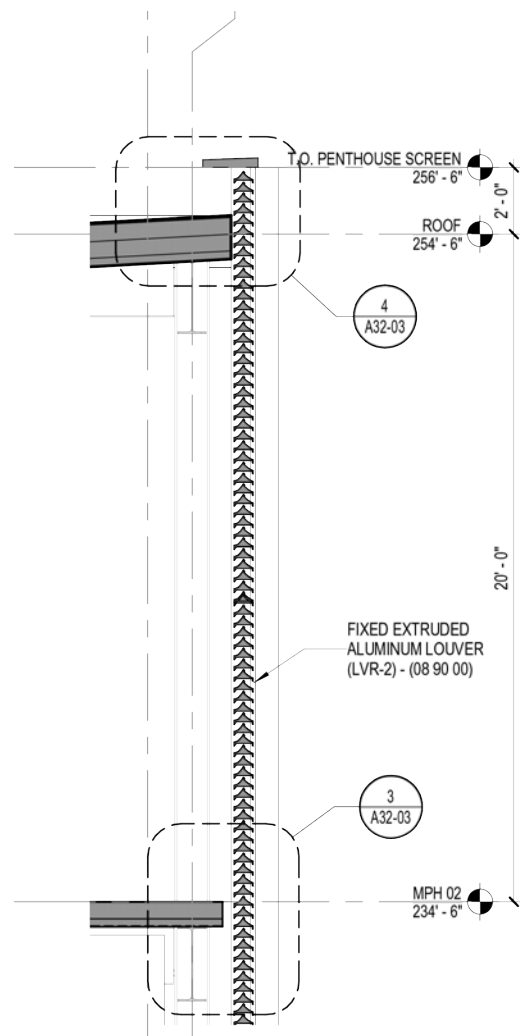
HORIZONTAL ALUMINUM LOUVER

VISION GLASS CURTAIN WALL WITH
VERTICAL ALUMINUM FINNS, 9" DEEP, 2'-9" ON CENTER

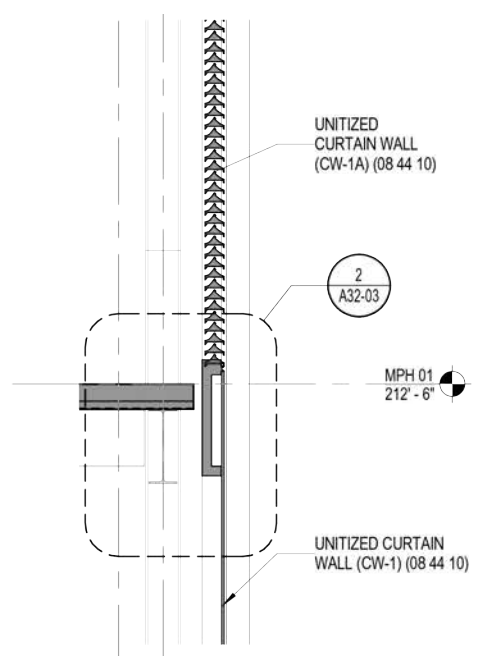
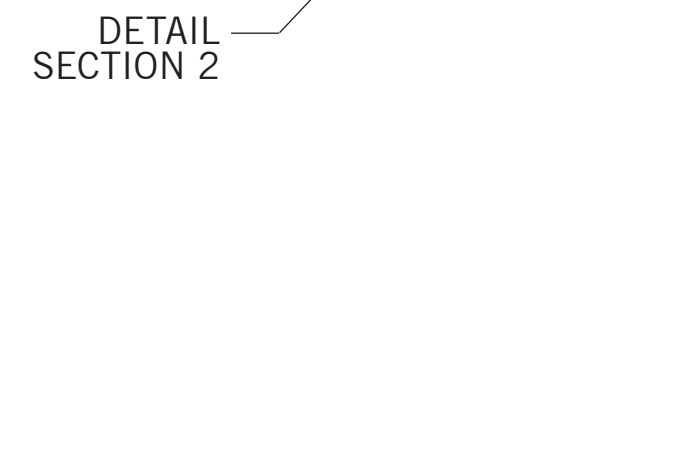
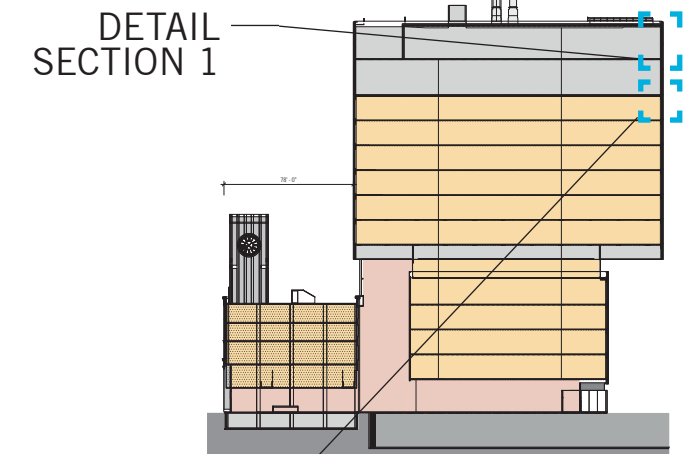
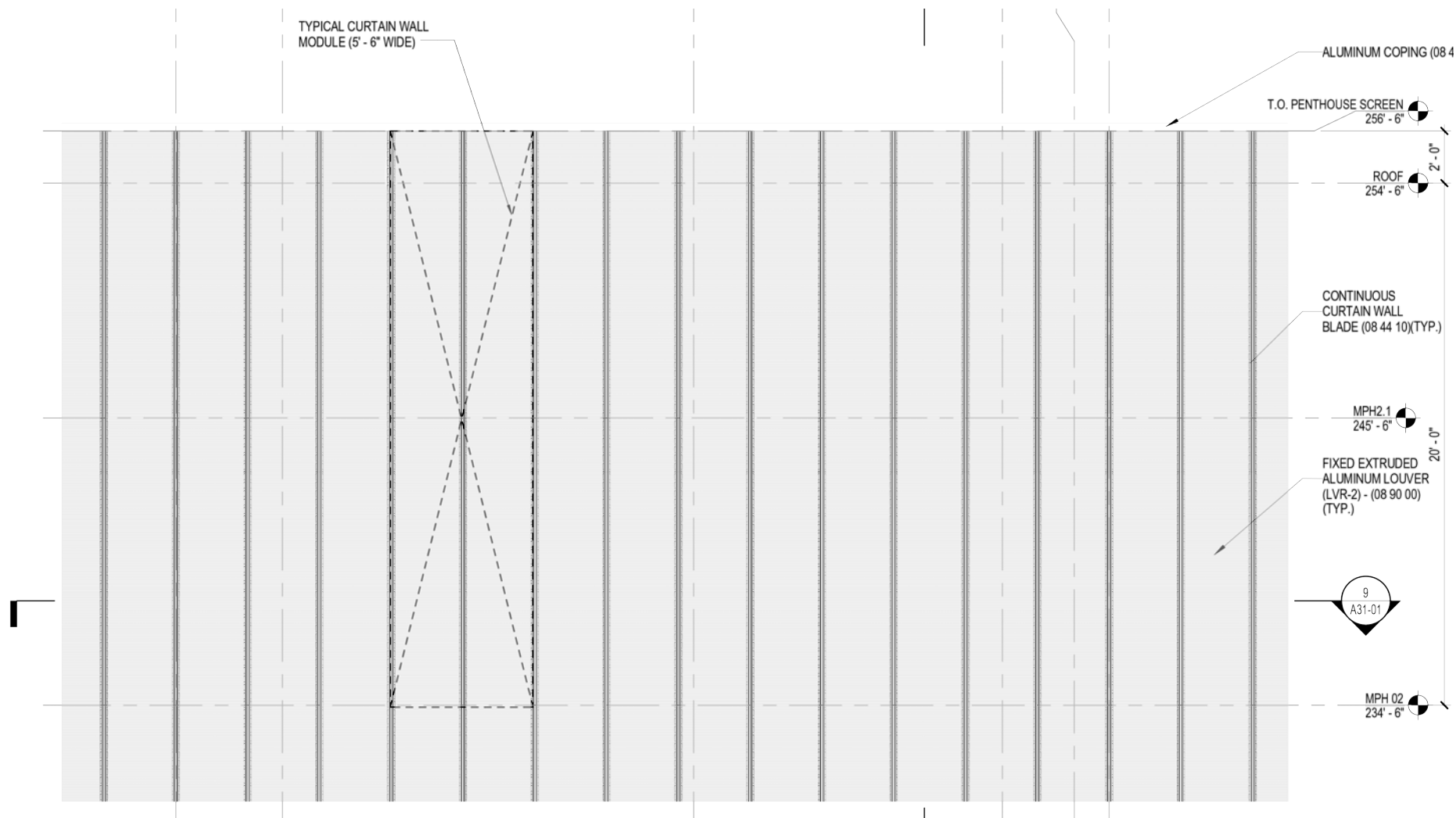
REFLECTIVE VISION GLASS

GLASS SHADOWBOX WITH VERTICAL ALUMINUM FINNS AT
2'-9" ON CENTER

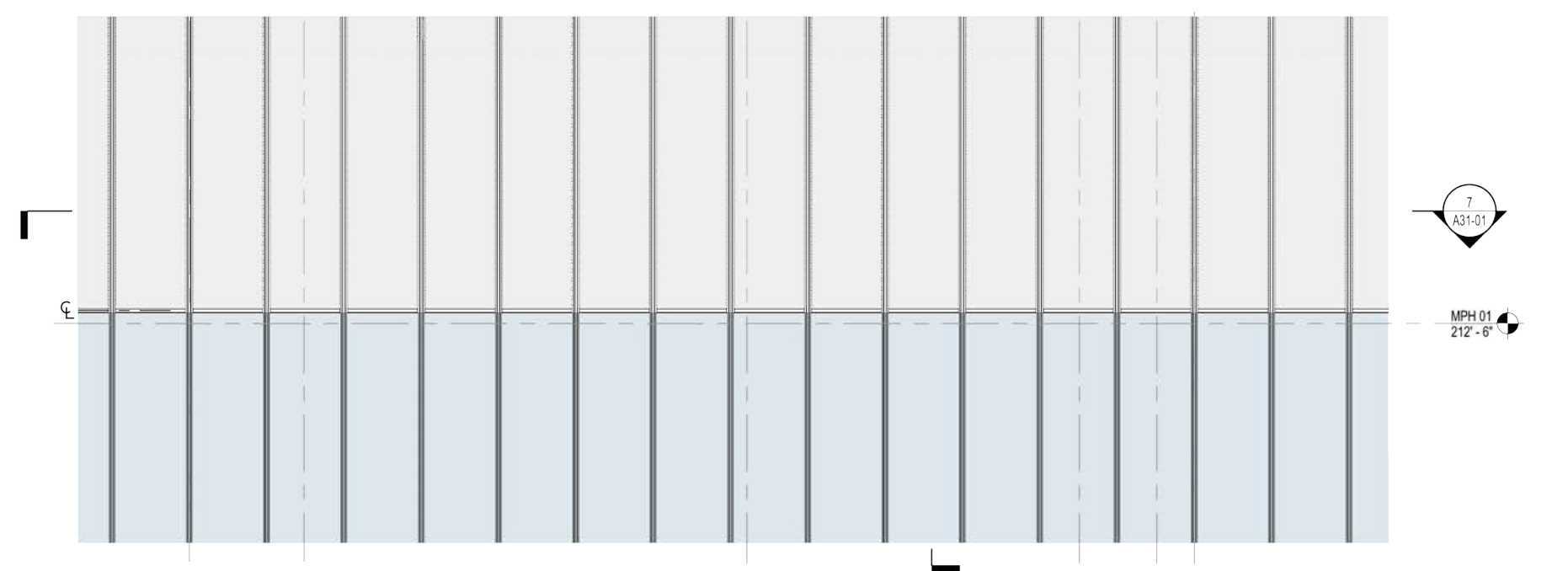


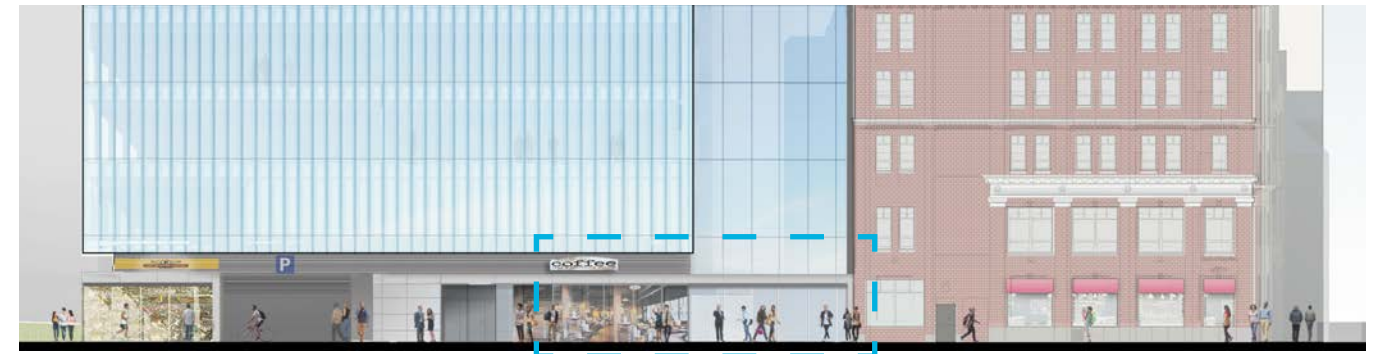


1. DETAIL SECTION



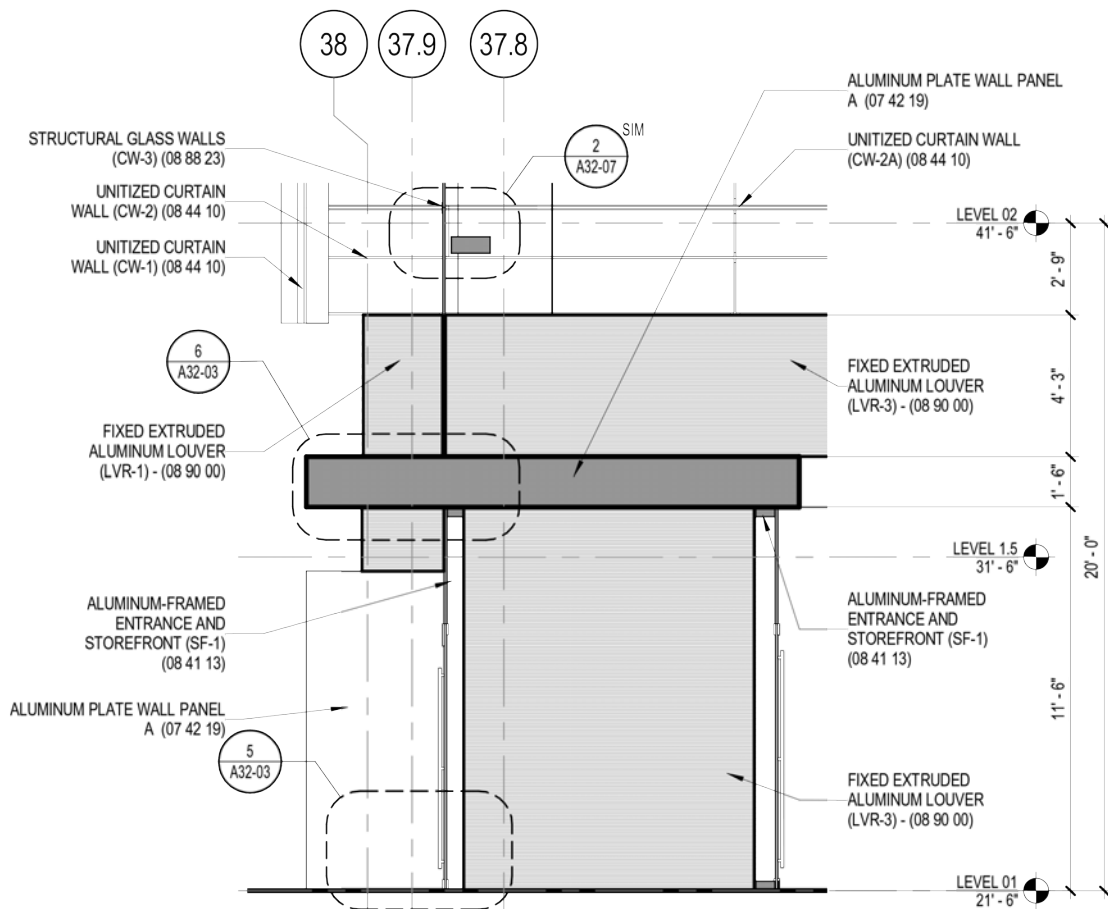
2. DETAIL SECTION



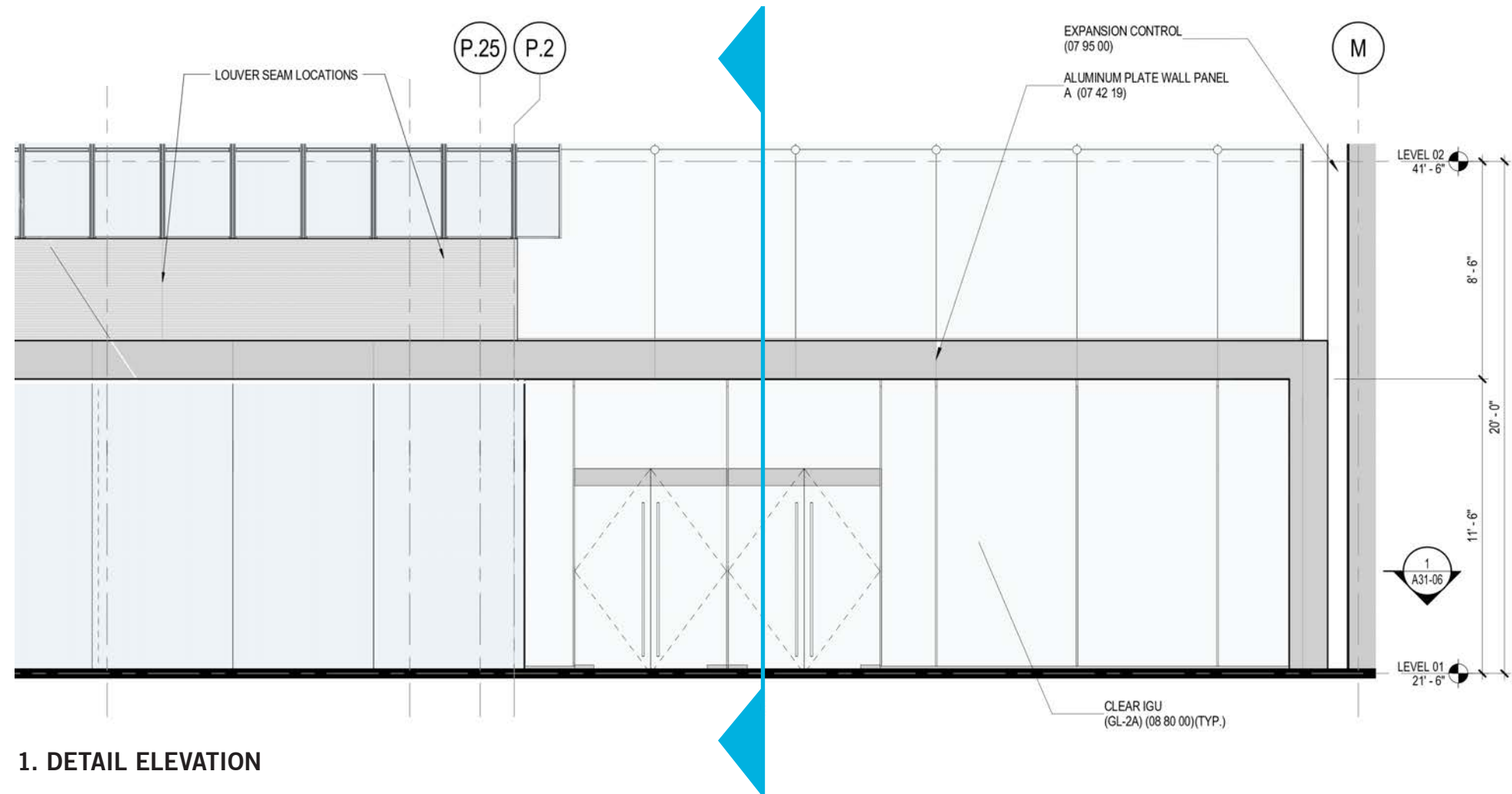


DETAIL ELEVATION

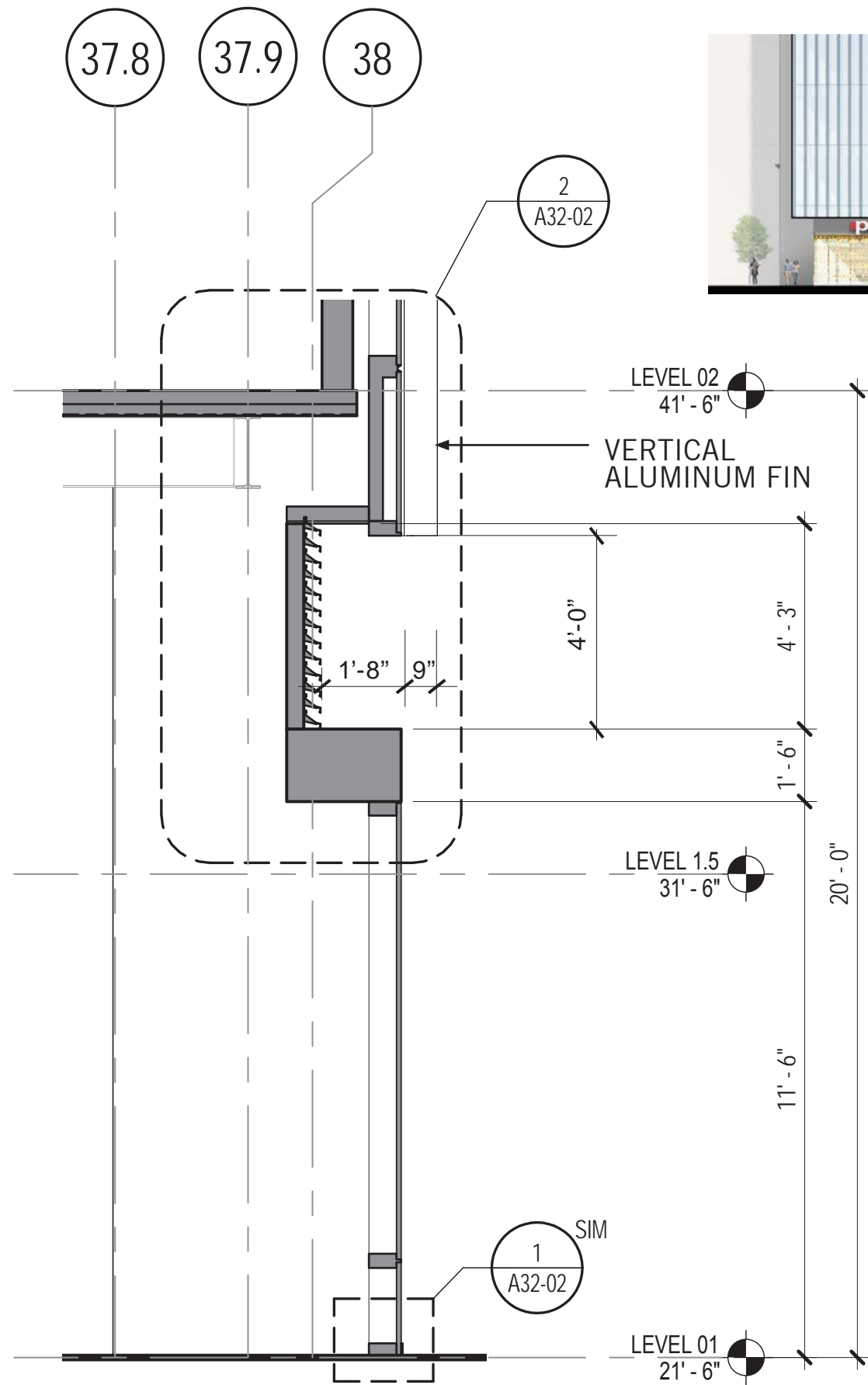
EAST ELEVATION



2. ENLARGED SECTION



1. DETAIL ELEVATION

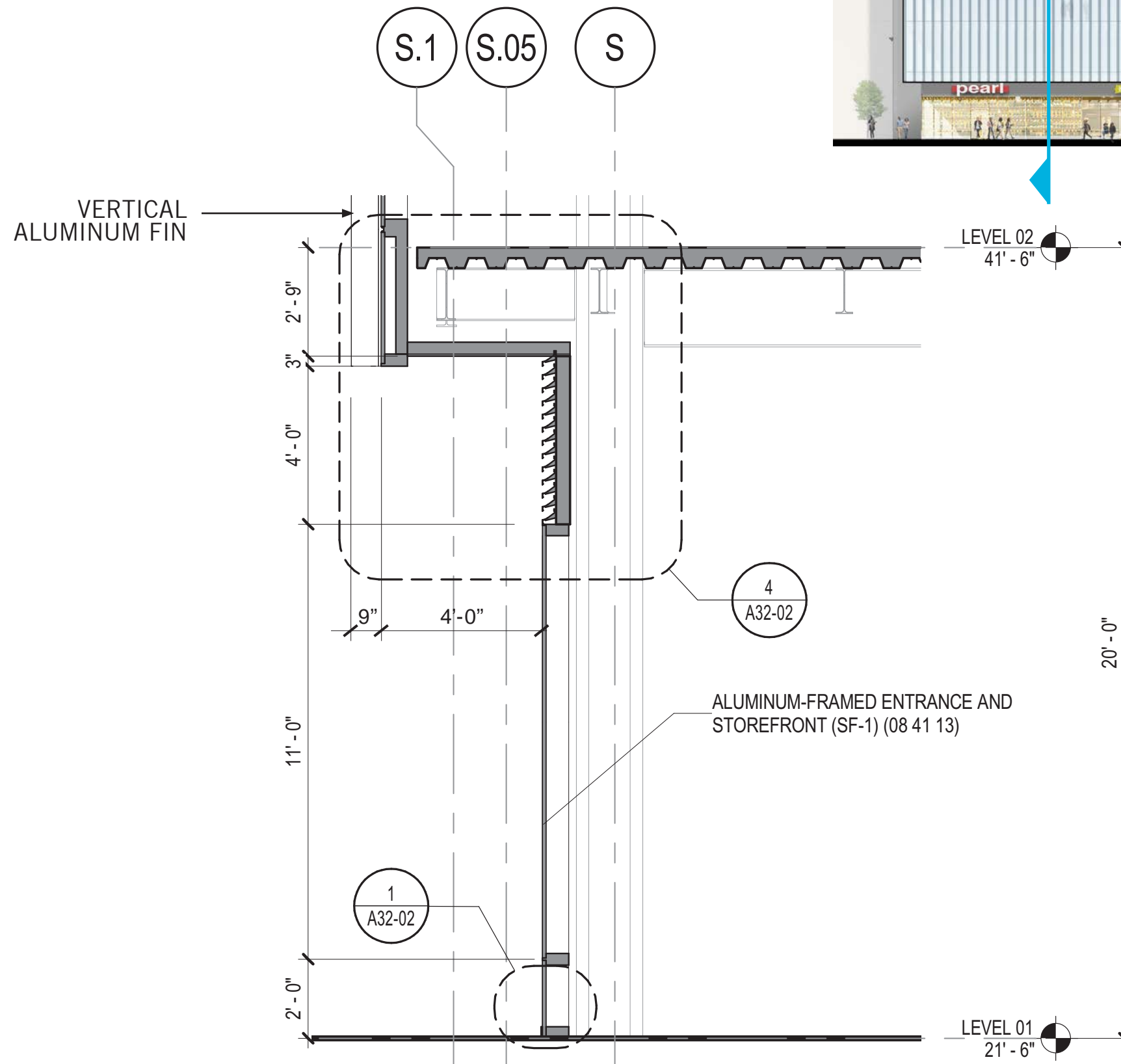


SOUTH ELEVATION

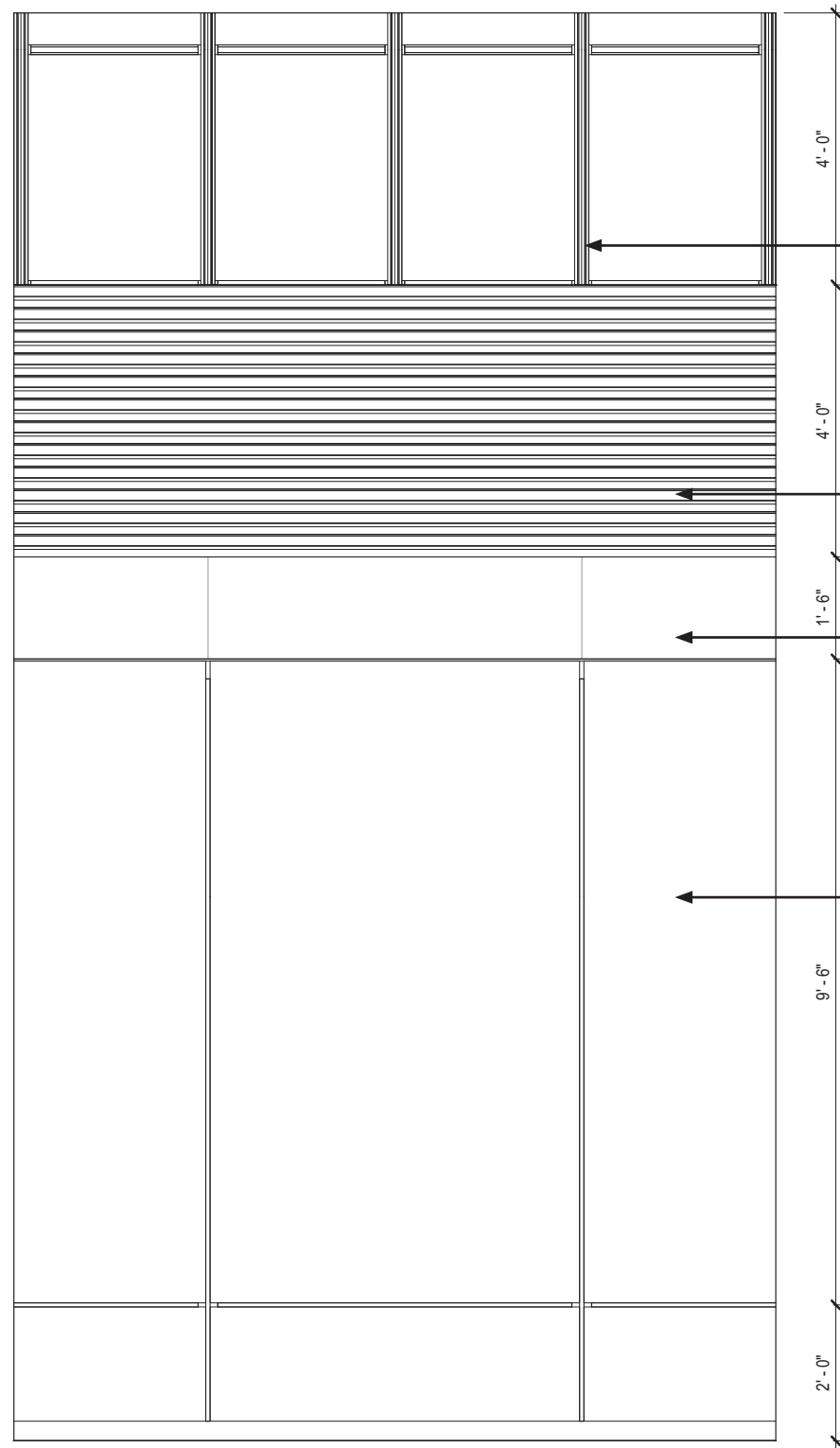
LEVEL 1 EXTERIOR WALL SECTION



SOUTH ELEVATION



LEVEL 1 EXTERIOR WALL SECTION



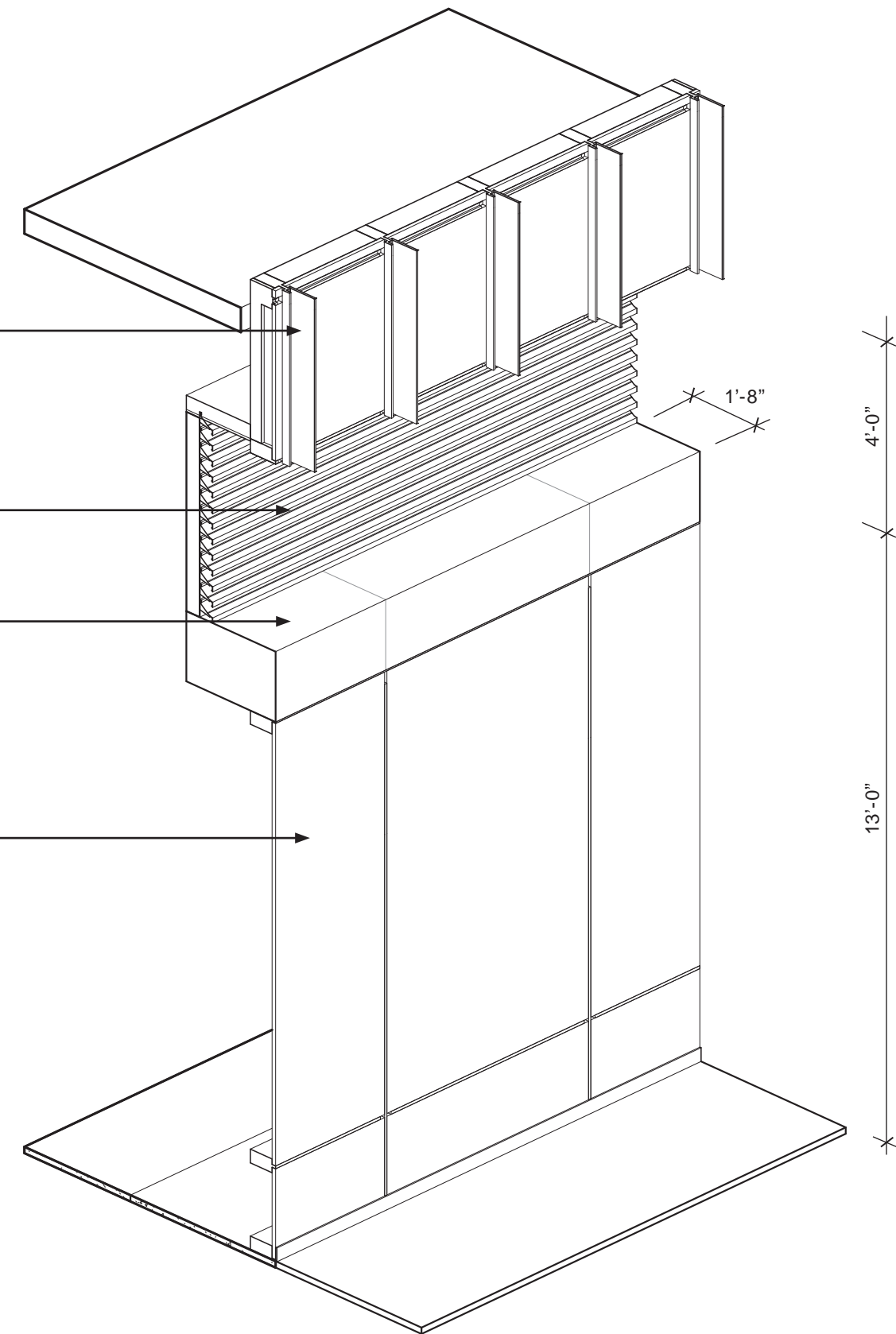
1. ELEVATION OF LEVEL 1 SOFFIT CONDITION

VERTICAL ALUMINUM FIN

FIXED EXTRUDED ALUMINUM LOUVER

ALUMINUM PLATE WALL PANEL

ALUMINUM-FRAMED STOREFRONT WALL



2. SOFFIT CONDITION





238 MAIN STREET, CORNER OF MAIN STREET
AND HAYWARD STREET



238 MAIN STREET, HAYWARD STREET LOOKING
NORTH



238 MAIN STREET, MAIN STREET FACADE



238 MAIN STREET, MAIN STREET FACADE