MIT Kendall Square SoMa Site 2

DESIGN SUBMISSION

CITY OF CAMBRIDGE PLANNING BOARD

SEPTEMBER 23, 2021

UPDATED OCTOBER 22, 2021



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1. Design Review Narrative

Building 2 Design Review – Overview

PROJECT SUMMARY

The Building 2 project is a proposed mixed-use building containing approximately 302,355 square feet of Gross Floor Area located on Parcel 2 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 2 project will be a 13-story commercial lab and office building and will include approximately 10,925 square feet of retail space on the ground floor, access to a below-grade parking garage with up to 278 spaces off Wadsworth Street, approximately 302,355 square feet of flexible lab and office space on levels 2-13 and a 1-story penthouse with a screened rooftop for base building and tenant equipment. The main entry to the building will be located at 200 Main Street.

Parking for the Building 2 Project uses will be accommodated in the below-grade garage. Automobiles utilizing parking at the Building 2 Project will access the underground garage via the ramp on Wadsworth Street, located to the south of the Main Street intersection. Consistent with the approved PUD, loading facilities are at grade and accessed from Wadsworth Street, adjacent to the below-grade garage entrance ramp.

Long-term bicycle parking with elevator access is accommodated in the first level of the underground garage. No fewer than approximately 93 bicycle parking spaces required per the program components of Building 2 will be available upon Building 2 occupancy. Likewise, the Building 2 program will provide 32 short-term bicycle parking spaces as part of the landscape construction of the project and will be a continuation of the Kendall Open Space.

Building 2 will add energy and vitality to Kendall Square and MIT's East Campus. Consistent with MIT's PUD-5 retail strategy, entries to access 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's Associate Director of Retail focuses on tenanting the Kendall Square ground floor spaces. The Associate Director and design teams are working closely to ensure that all spaces can be successfully activated with a variety of tenants.

Construction of Building 2 is expected to begin in 2022/2023, with completion expected in 2026. Abatement activities have started on the existing Eastgate building in preparation for demolition of the same, which is anticipated to begin in November 2021.

CONSISTENCY WITH SPECIAL PERMIT

Building 2 measures 302,355 total non-exempt square feet of GFA, which reflects the following permitted GFA exemptions: 100% of the GFA associated with Retail/Active ground floor space (10,925 square feet) and the application of a 10,000 square feet GFA exemption for office/lab innovation per Condition #1.a.v11. Building 2 GFA measurement is within the 312,500 square feet of non-exempt GFA (316,000 square feet of total GFA) allowed by the Final Development Plan Special Permit, including minor amendment #2. Building 2 further complies with the Special Permit for height as the building height is within the allowable height of 200 feet.

The Development Program contained in this Design Review Submission is consistent with the Development Program for Building Site 2 contained in the Special Permit. The GFA, building height, setbacks and mix of uses of

Building 2 have not changed in any material way as indicated by the Dimensional Table attached to the application.

PLANNING BOARD REVIEW AND REQUEST FOR MINOR AMENDMENT

In connection with granting the Design Review approval, MIT requests that the Planning Board approve revisions to the boundaries of Development Parcel B from what was approved in the Final Development Plan, which revisions are depicted on Figure A Parcel Development Plan. The revisions to the boundaries of Development Parcel increase the size of the Development Parcel by 2,736 square feet, but do not implicate any underlying MIT parcels that were not affected by the prior configuration of Development Parcel B. Consistent with Section 12.37.2, the Planning Board may grant this requested change by Minor Amendment as the same does not alter the concept of the PUD Final Development Plan in terms of density, floor area ratio, land usage, height, provision of open space, or the physical relationship of elements to the development. Additionally, pursuant to the provisions of Section 14 of the Special Permit, MIT requests that the Planning Board approve the revised subdivision plan and layout of the Building Site 2 as depicted on said Plan, which layout is consistent with the Building Site Plan that was included and approved in the Special Permit.

The Special Permit requires the review of the Publicly Beneficial Open Space located on a particular building site to be reviewed as part of the design review process for each individual building site. Landscape materials for Building Site 2 are included herein.

STATUS OF MITIGATION AND COMMITMENTS

HOUSING CONTRIBUTION

As the Building 2 Project will be considered an Incentive Project pursuant to Section 11.201 of the Zoning Ordinance, the new commercial GFA included in the Building 2 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 2 will contain approximately 323,280 square feet of total commercial GFA (without taking into account the exemptions set forth above). Based on the current Housing Contribution Rate of \$20.31, Building 2 will result in a Housing Contribution of approximately \$6,565,816.80, which will be payable at the time that Building 2 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 2 project components. MIT will work with the City's Traffic, Parking and Transportation department on the design and timing of required items.

COMMUNITY FUND PAYMENTS AND COMMUNITY BENEFIT ORGANIZATION CONTRIBUTIONS

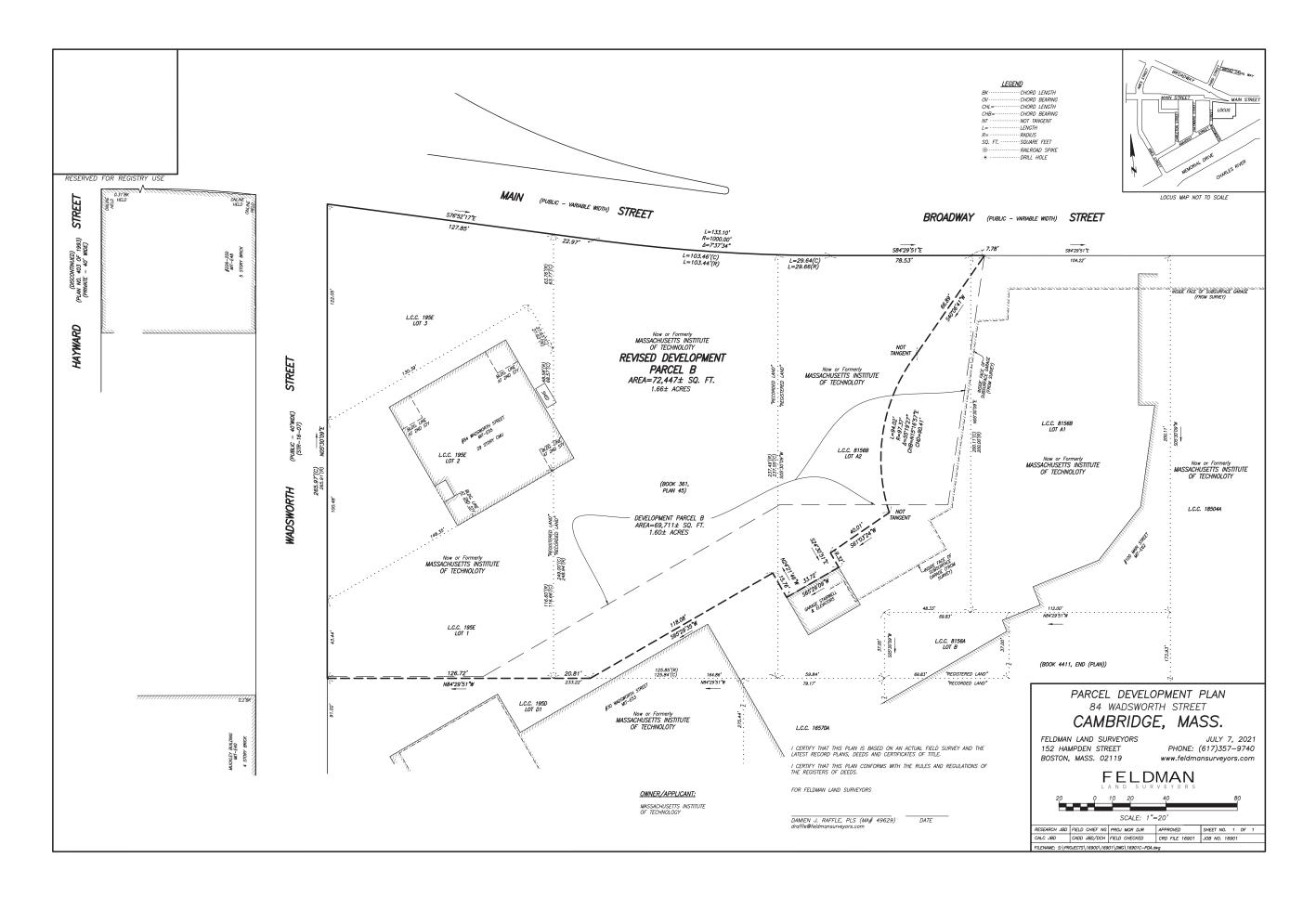
Pursuant to Section 13.810.2 of the Zoning Ordinance, Building 2 will result in a Community Fund Payment of \$3,232,800 (323,280 x \$10). In accordance with the Commitment Letter, Building 2 will result in a Community Benefit Organization Contribution of \$1,293,120 (332,280 sf x \$4). Each of the Community Fund Payment and the Community Benefit Organization Contribution shall be payable by MIT at the time that Building 2 receives its Certificate of Occupancy.

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 will continue to be satisfied by MIT to the extent implicated by the proposed development on Building 2.

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.



Dimensional Form for SoMa Building 2 9/23/2021

9/23/2021					
	Allowed/ Required	Existing*	Removed**	Proposed Building 2	Total
Land Area****		69,711	0	72,447	72,447
Total Non- Exempt GFA	302,500	163,733	163,733	302,355	302,355
Residential	0	163,733	163,733	0	0
Commercial	302,500	0	0	302,355	302,355
Office	0	0	0	0	0
Lab	298,000	0	0	302,355	302,355
Innovation	0	0	0	0	0
Retail***	4,500	0	0	0	0
Academic (all types)	N/A	0	0	0	0
Non-Exempt Dormitory	N/A	0	0	0	0
Structure Parking	N/A	0	0	0	0
Total Non- Exempt FAR****	Max 3.9 across PUD-5	2.39	2.39	4.17	4.17
Total Exempt GFA ***	13,500	0	0	20,925	20,925
Ground Floor Retail	13,500	0	0	10,925	10,925
Public Transportation	N/A	0	0	0	0
Residential/ Dormitory	N/A	0	0	0	0
Innovation	See Note 2	See Note 2	See Note 2	10,000	10,000
Total Dwelling Units	N/A	0	0	0	0
Market Rate Units	N/A	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	See Note 3	See Note 3	See Note 3
Max Height	200 ft.	N/A	N/A	200 ft.	200 ft.
Min Yard Setbacks	0	0	0	0	0
Off Street Parking	up to 278	See Note 1	See Note 1	up to 278	up to 278
Bicycle Parking	124	0	0	128	128

Note 1: 49 academic parking spaces exist on Building Site 2. Consistent with Final Development Plan, these are being discontinued as part of the SoMa Site 2 construction. Parking will be relocated in subsurface garage at 25 Hayward Street.

Note 2: Applying a partial exemption resulting from the inclusion of Innovation Space as required by Section 13.89.3 of the Ordinance at One Broadway (as described in Special Permits #302 and #303)

Note 3: 33,560 SF which represents 34% of overall required Publicly Beneficial Open Space in PUD-5.

^{*}GFA that is existing on Building Site 2 as of January 1, 2013.

^{**}Building Site GFA that is demolished or renovated.

^{***} Updated per Minor Amendment 2, which includes 18,000 of Retail /Active space, of which 75% (13,500SF) was anticipated to be exempt.

^{****} Requesting that Planning Board approve revisions to the boundaries of this Development Parcel B as outlined in the Design Review Overview.

^{*****} Consistent with Section 13.83.1, while the FAR of Building Site 2 will exceed 3.9, the overall FAR for the entirety of the PUD-5 will remain below 3.9 and will be approximately 3.51 following the completion of Site 2.

SoMa Site 2 Design Review

URBAN DESIGN

The proposed design is consistent with the goals of the Site 2 design guidelines as described in the Kendall Square PUD-5 Design Guidelines. The primary urban design objectives of the project include enhancing the pedestrian experience along streets and paths, providing vital community open space that links seamlessly with pedestrian networks, and maintaining a clarity of massing that shares common attributes with other Kendall Square buildings while allowing for distinctive architectural character.

The bold massing of the Site 2 building — with its two volumes, a lower and upper, set at 90 degrees from one another — is intended to complement the ensemble of buildings MIT has developed South of Main (SoMa) in Kendall Square while assuming a distinct identity that marks this important entrance into Cambridge and MIT. The overall scale and height of the proposed building (200') is similar to the newly constructed building at Site 3/238 Main Street, and the base volume's four stories maintain an appropriately scaled street wall height along Main Street established by the existing 238 Main Street building. This lower volume is oriented in a north-south direction with its long edge along Wadsworth Street, while the façade of the rotated upper volume is set back from and parallel to Main Street. The juxtaposition creates a dynamic cantilever that reduces the overall building massing impact on the surrounding area while increasing ground level open space to the east beneath the cantilever and extending the existing open space fronting the MIT Sloan Building. In addition, the inflection of the masses at Level 5 creates a unique outdoor terrace space.

The ground floor design of the building expands upon the existing retail activity on Main Street, maximizing visual

transparency between the indoors and outdoors. Pedestrian entrances are provided on all sides of the building. The main building lobby entry is located to the north on Main Street, with additional building entrances to the west at Wadsworth Street, and from the open space to the east. Retail and active uses wrap the north, east, and south sides of the building, engaging the adjacent open space and accommodating pedestrian flow.

The Site 2 public realm creates a significant new urban node for Cambridge, encouraging pedestrian and bicycle connections while also adding open space and resilient planting into the district. On the north side of the site, a planted green sward sweeps along Main Street to define an urban plaza with seating, trees, and understory plantings. Doorways on the north face of the building open directly from active ground floor uses onto this plaza, extending Main Street's vibrant retail energy towards Broad Canal, the Charles River, and Boston beyond. Wadsworth Street is enhanced as a major civic connection to the Charles River, including a 26' wide sidewalk, bike racks and benches, and shade trees that complements the newly installed street trees at Site 3. To the south of the building, the SoMa open space south of Sites 3, 4, and 5 continues across Wadsworth Street, extending the new 'Infinite Corridor' promenade that begins at the MIT Medical Building and terminates at the MIT Sloan School of Management. A shared drive is essential to this connection: it will continue to service the garage and loading dock of the Sloan School and the Hermann Building and offer pedestrian-friendly circulation. To reduce stormwater runoff, the driveway will be paved with permeable unit pavers, which will appear contiguous with the adjacent flush plaza paving. On the east side of the site, the Site 2 public realm is carefully integrated with the existing Sloan landscape. Building from the grassed 'Oval', Site 2 creates an enhanced entry plaza and richly planted landscape beds that cohere with the curvilinear landscape at Sloan, while also introducing new urban connections. Diverse native and adapted plantings

include shrubs, grasses, herbaceous perennials, and over 50 new trees, offering all-season interest and areas for relaxation, gathering, and spontaneous connection. Site 2 creates a welcoming and inclusive open space that will be an enduring urban amenity for the Kendall Square community.

ARCHITECTURAL EXPRESSION

The building's exterior envelope is composed of triple-insulated high-performance glazing in a unitized aluminum curtain wall system. Each of the building's façades addresses their respective solar exposures. On the south and east elevations, horizontal and vertical sun shades are carefully placed based on detailed solar analysis, reducing both solar heat gain and glare to allow for a comfortable interior working environment. Because the building does not receive any direct sunlight on the north elevation and is in shadow during the day on the west elevation, solar shading is not needed on these façades. Glazing sizes have been maximized in order to reduce thermal bridging and optimize daylight and views to the exterior.

The enclosed mechanical penthouse on Level 14 is integrated into the design of the upper tower with similar materials as the office tower below. The roof top mechanical equipment screen steps back from the mass of the tower below.

The 88' cantilever of the upper tower is supported by a two-story structural steel truss that wraps the building on Levels 6 and 7. This truss is enclosed but will be visible from the exterior. Centered beneath the cantilevered volume, the slender form of the upper tower egress stair extends from below Level 6 to the plaza level. The clear glazing enclosure of the stair will render it visible on the exterior and creates an iconic object in the space. The dramatic architecture of the cantilever provides a unique canopy to the landscaped plaza.

ENVIRONMENTAL IMPACT

The building has been designed to mitigate adverse environmental impacts upon its neighbors. An updated shadow study is included in this submission to reflect the design development since the granting of the Special Permit. In addition, since the granting of the Special Permit the team has continued to test wind conditions to reflect planting, landscape, and other design changes. An updated pedestrian wind study is included in this submission with no major changes in the results.

Mechanical equipment will be designed to reduce noise and exhaust. The emergency generators and cooling towers will be located in a screened area on the roof. Exhaust for the below grade garage is exhausted 15' above the sidewalk on the west side of the building. The loading dock is enclosed and will serve the tenant floors in the tower as well as retailers on the Ground Floor and includes waste and recycling compactors. An acoustic report for Site 2 is included in this submission.

SUSTAINABILITY

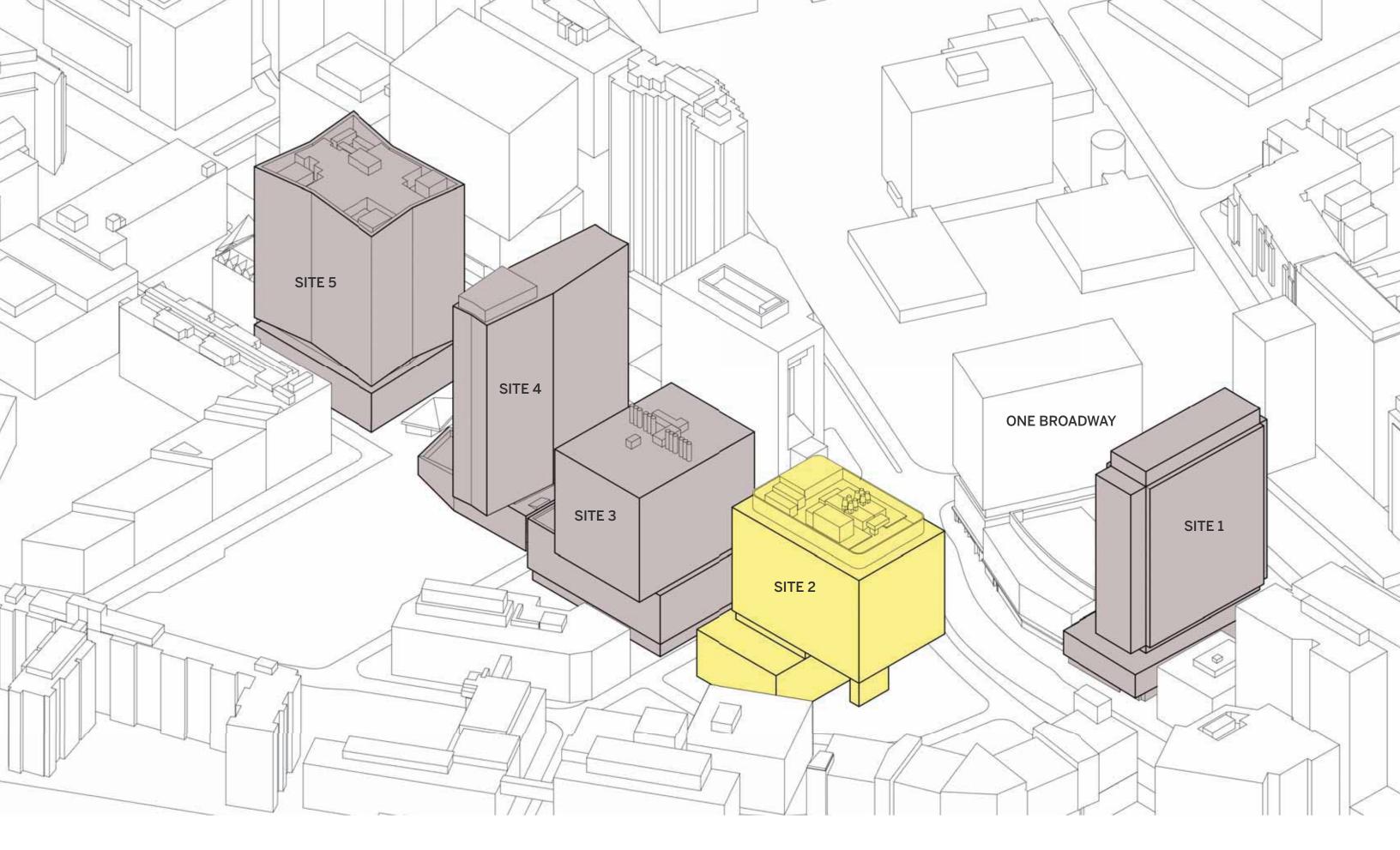
MIT's Kendall Square Initiative is designed to be a leader in urban sustainability revitalization and renewal. MIT has made sustainability an integral part of the Kendall Square design process and is committed to developing a district that is sustainably designed, energy efficient, environmentally conscious,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

MIT has led an integrated process that includes technical experts who are actively engaged in the design process of the Site 2 Design. This comprehensive view allows the development to incorporate sustainability best practices in design and operation, stormwater capture and reuse, transportation, and landscape strategies.

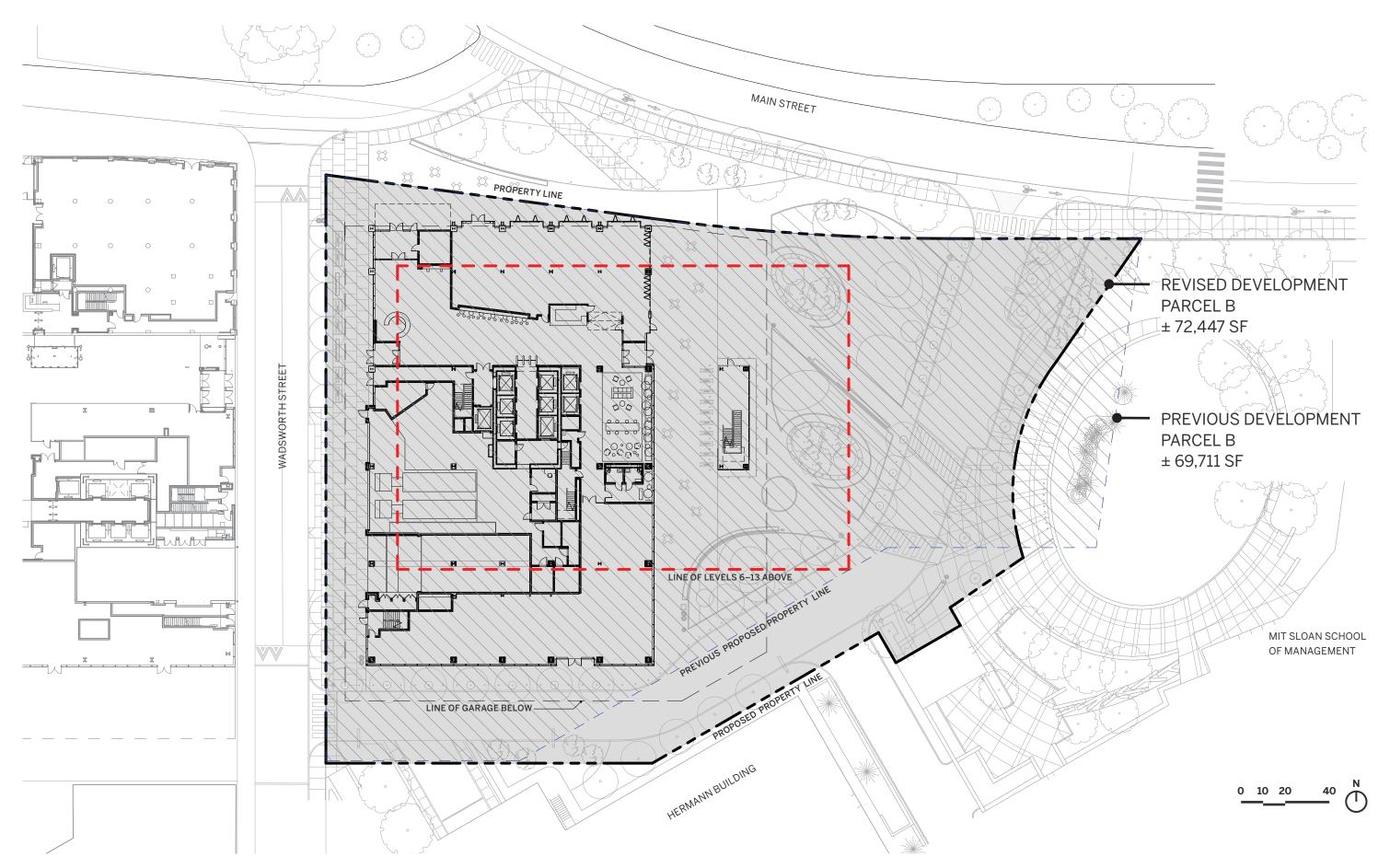
While working with the City of Cambridge to shape the PUD-5 Zoning Requirements, MIT established a commitment for new commercial office and lab construction at Site 2 to comply with the criteria for a Gold rating under the Leadership in Energy and Environmental Design (LEED) v4 standards. Through its incorporation of the latest energy standards and sustainability initiatives, such as material content disclosures that prioritize healthy buildings and indoor environments, MIT's Kendall Square Initiative will be one of the largest collections of LEED v4 projects on the East Coast.

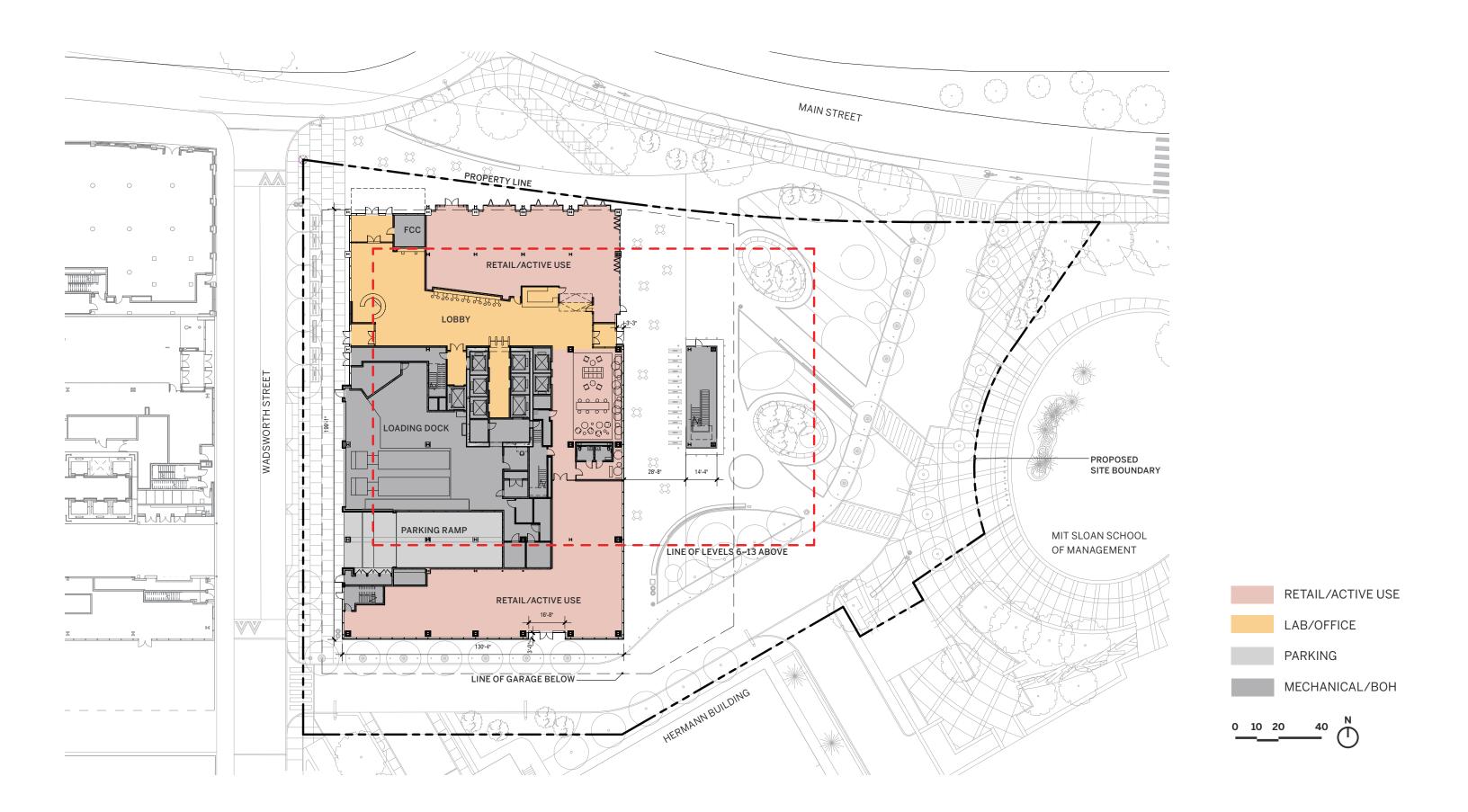
As required by Special Permit #303 included in this submission are a LEED Checklist and Narrative for Building 2 consistent with Article 22.20. These materials address the sustainability standards contained in Section 13.89.4 and the sustainability strategies and guidelines set forth in Appendix D of Special Permit #303.

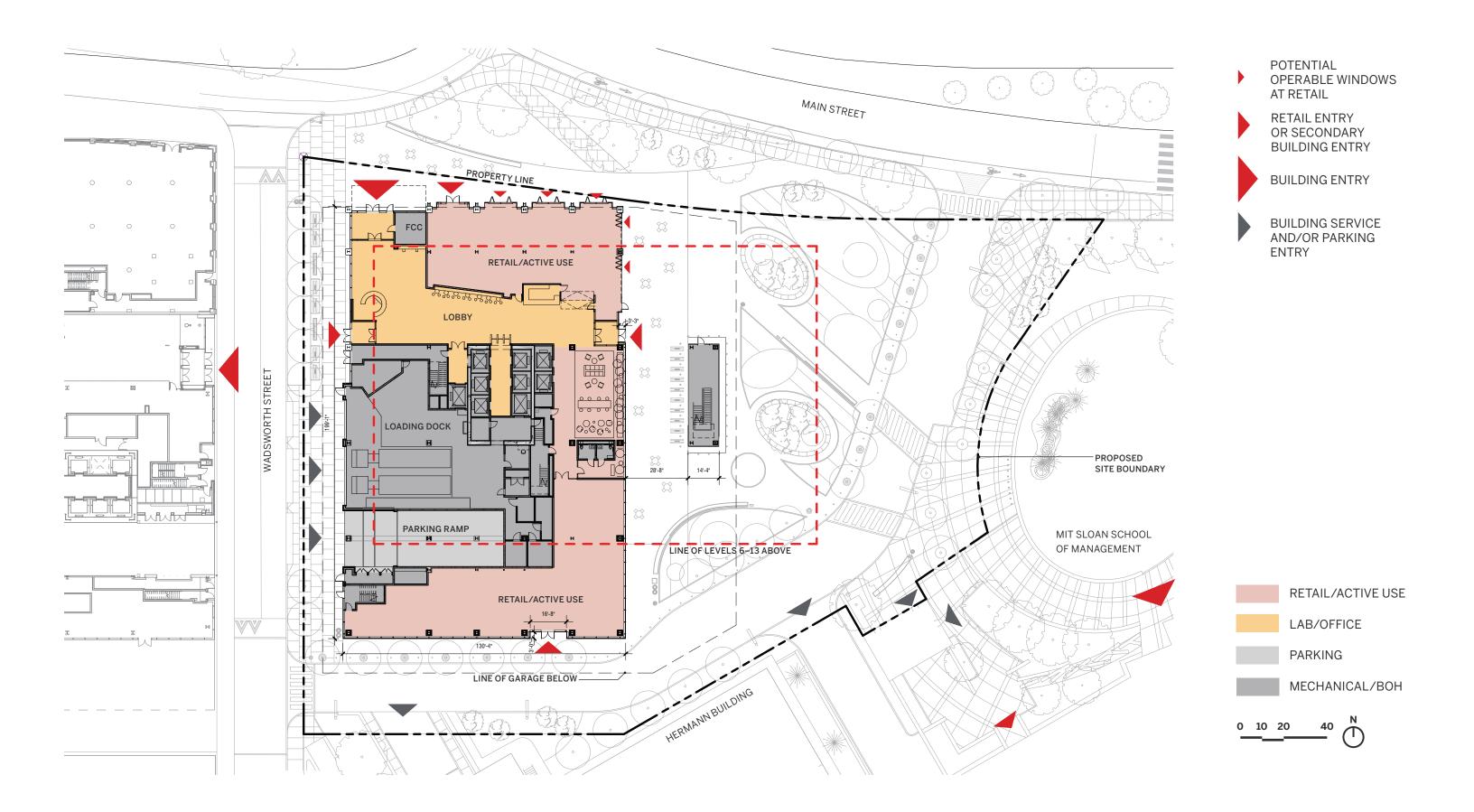
2. Design Review Graphic Material



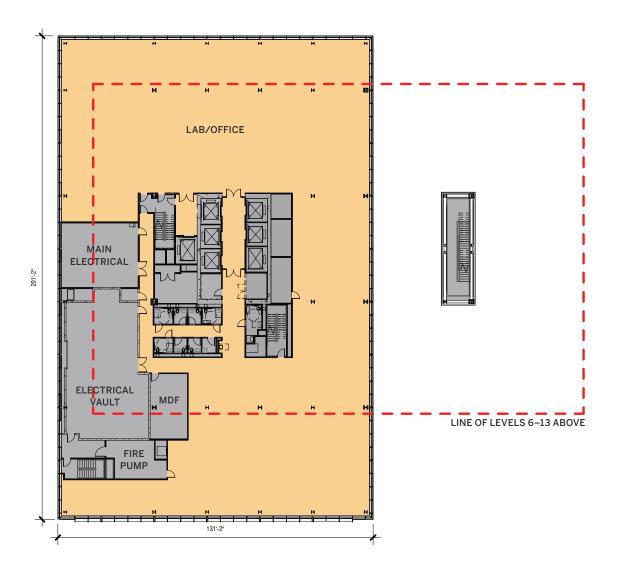




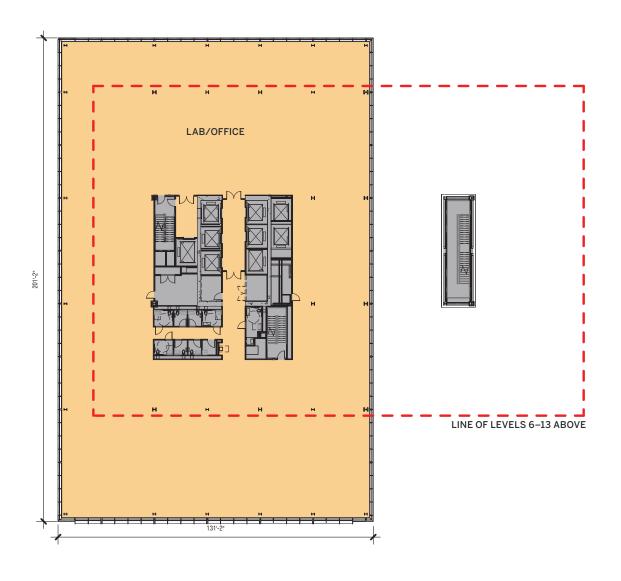


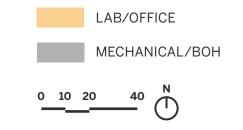


LEVEL 2

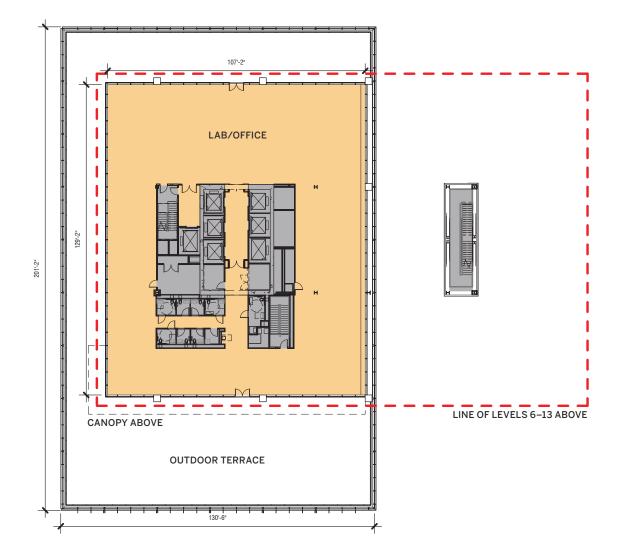


LEVEL 3

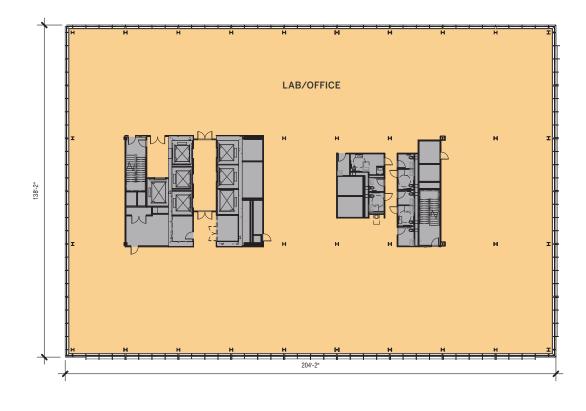


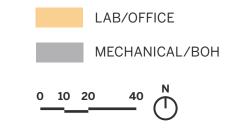


LEVEL 5

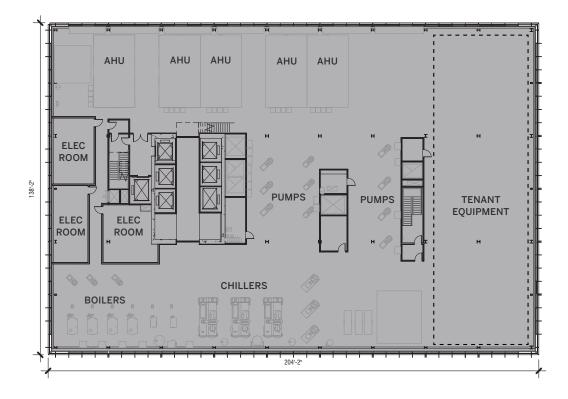


TYPICAL UPPER FLOORS (LEVELS 6-13)

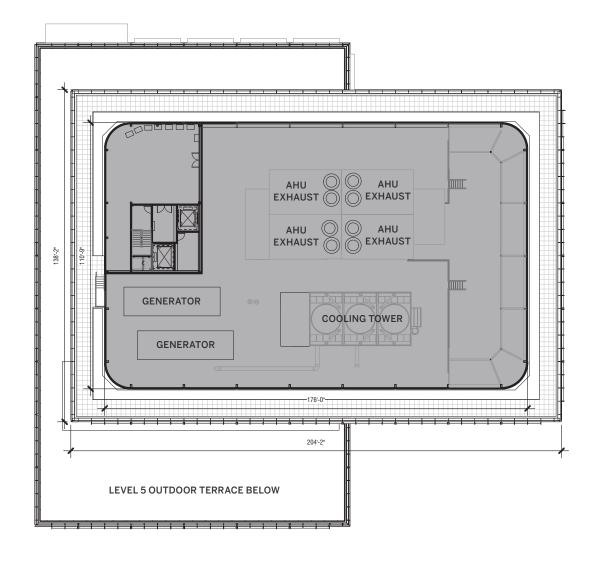




LEVEL 14

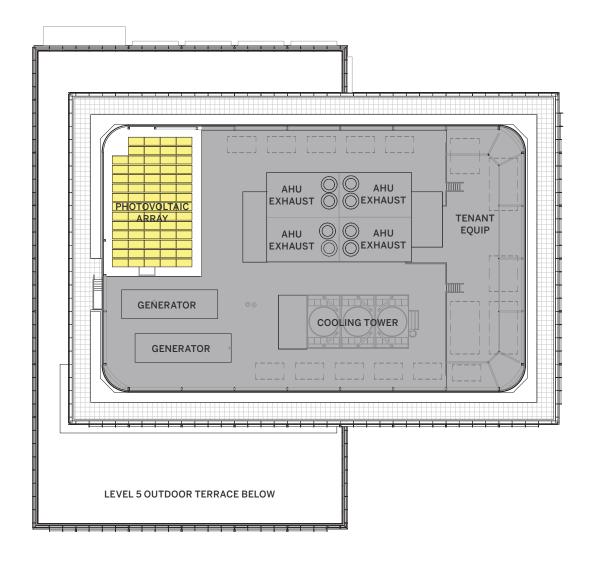


LEVEL 15 (LOW ROOF)

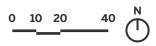


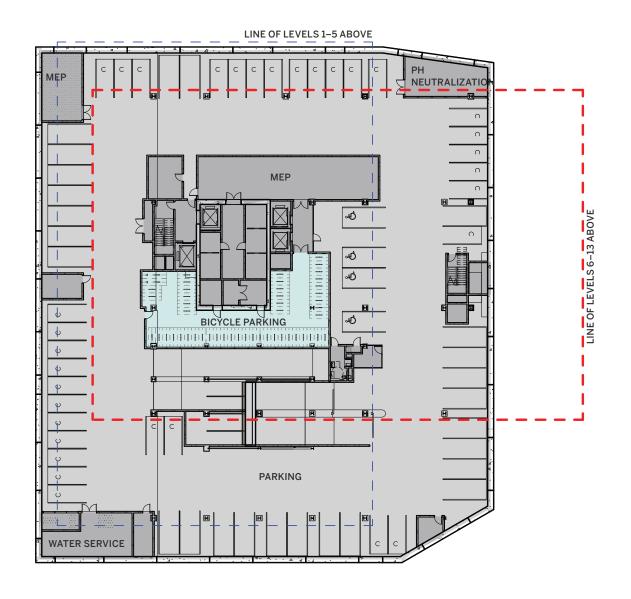
MECHANICAL/BOH

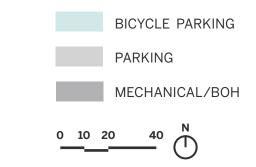
UPPER ROOF



MECHANICAL/BOH





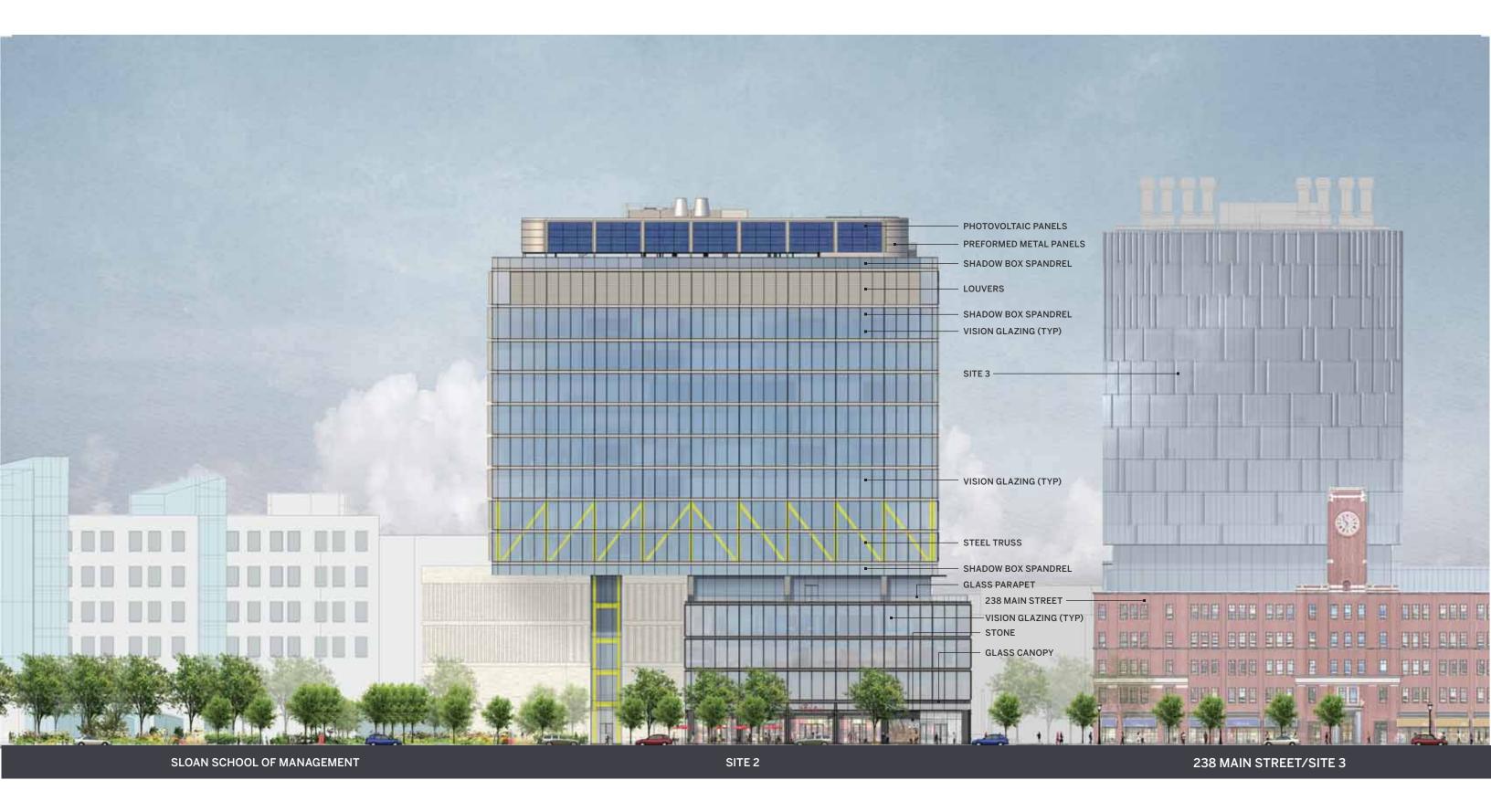








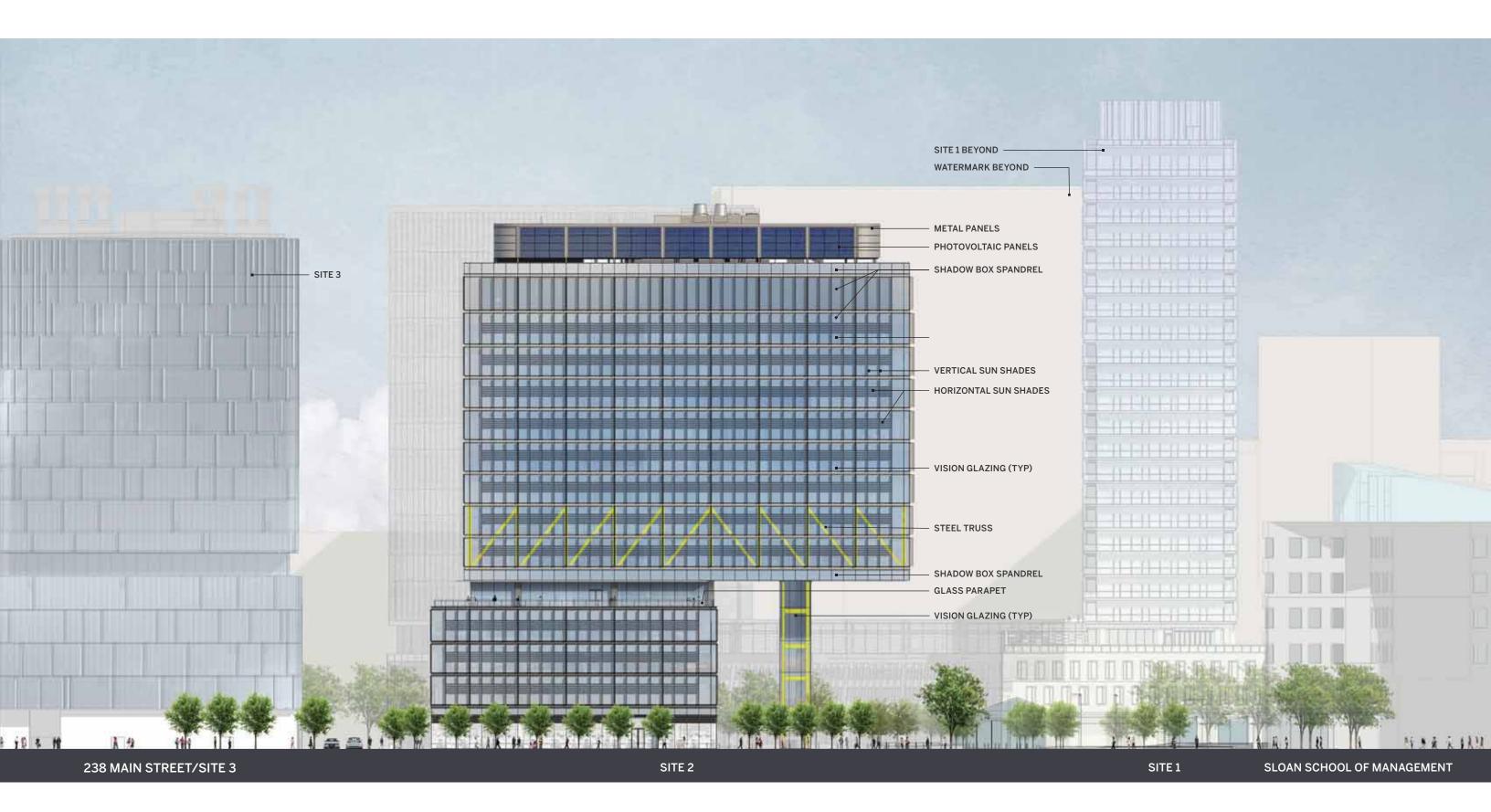




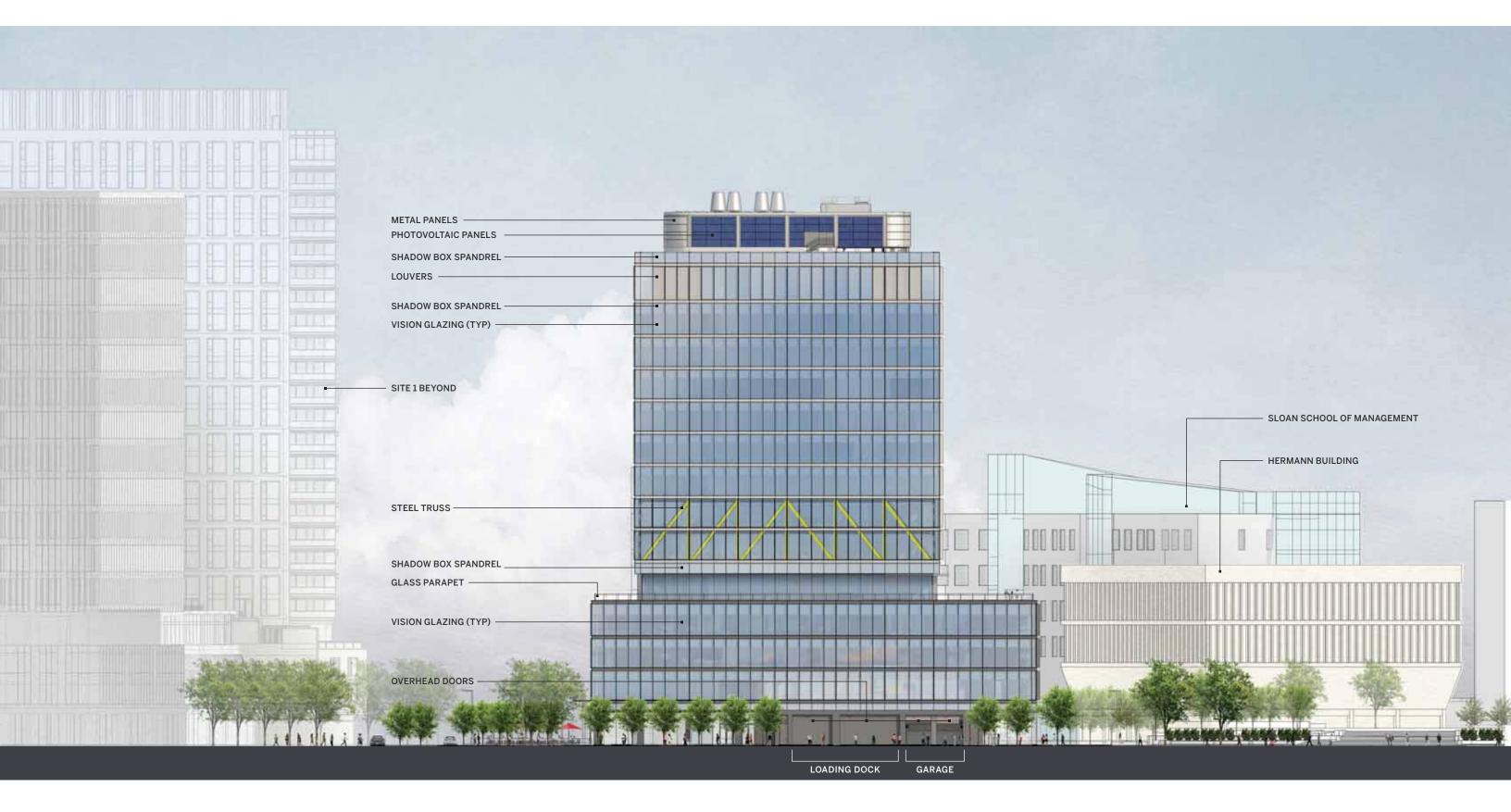
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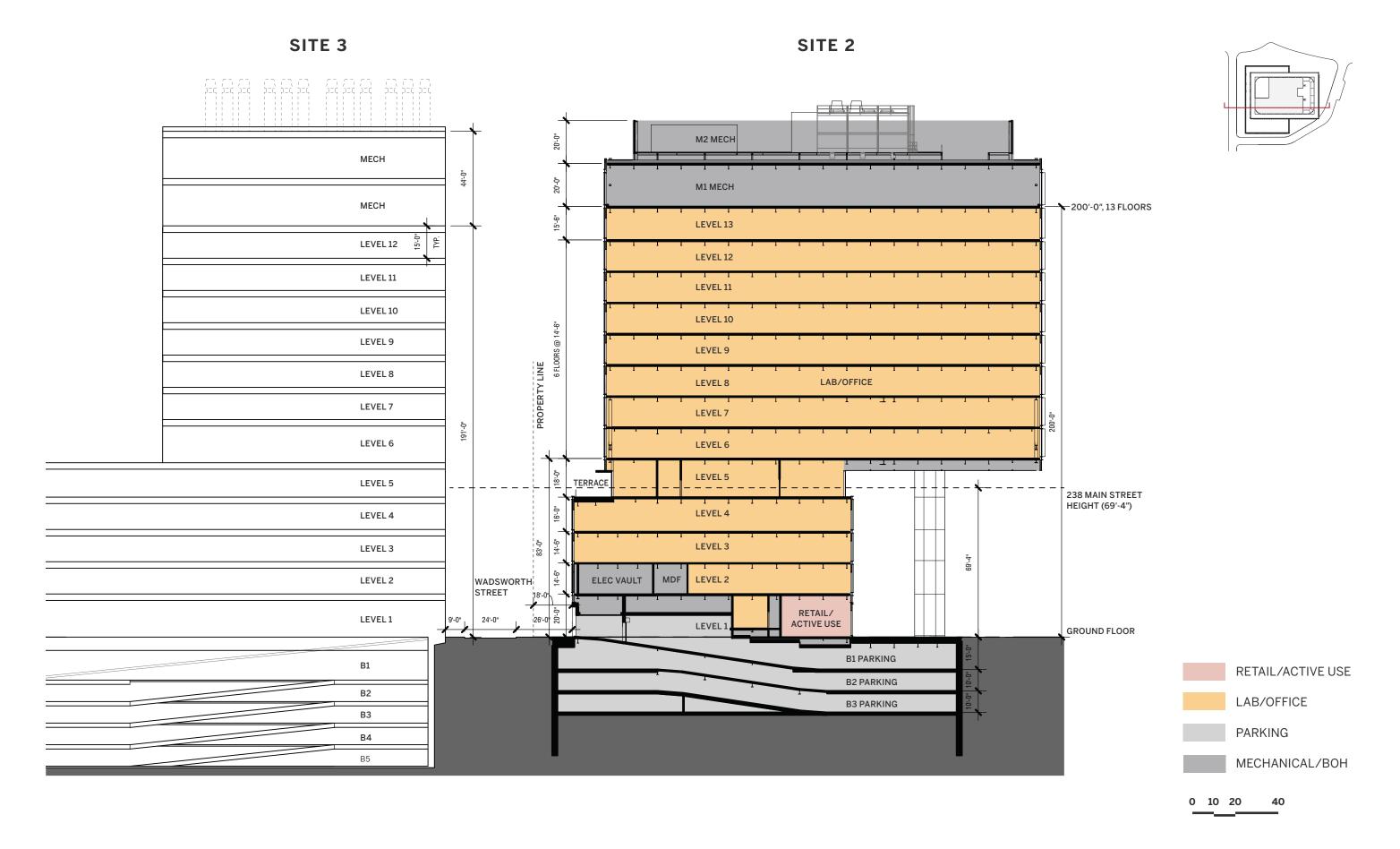


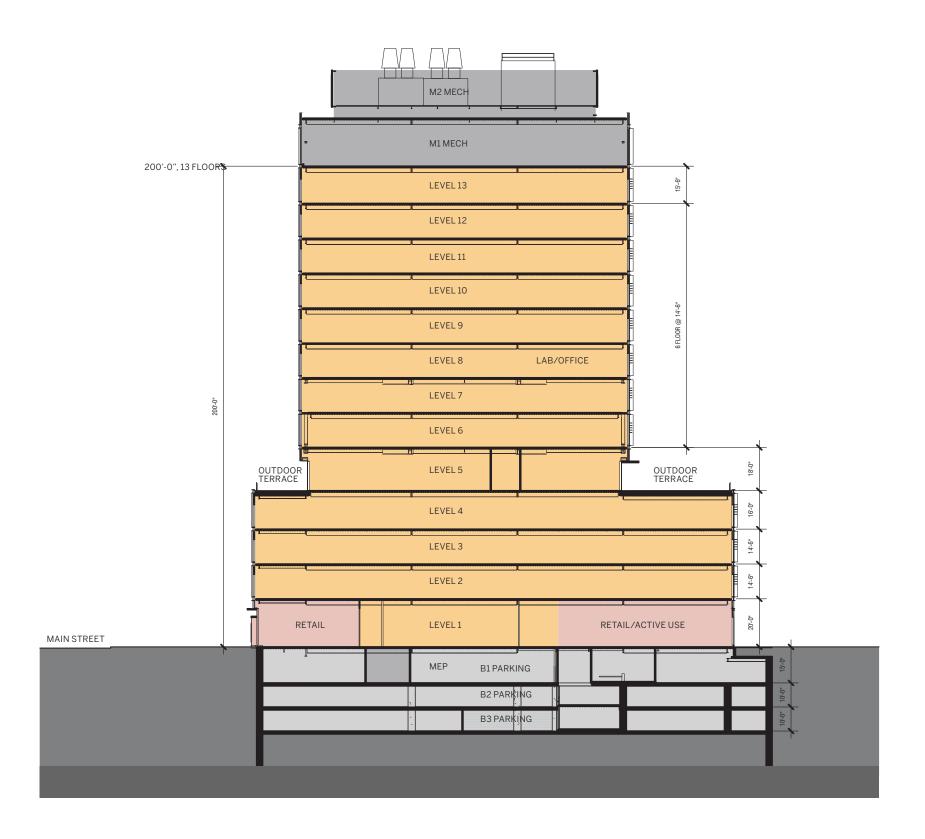


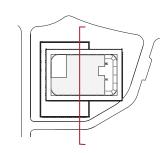
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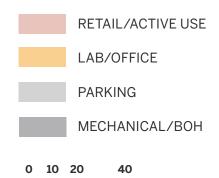


0 10 20









GLAZING

VISION GLASS SHADOW BOX SPANDREL PHOTOVOLTAIC PANELS



CURTAIN WALL SYSTEM WITH VISION AND SHADOW BOX GLAZING (PIER 4 OFFICE BUILDING)



PHOTOVOLTAIC PANELS AT MECHANICAL PENTHOUSE (ANIMO LEADERSHIP CHARTER HIGH SCHOOL)

METAL

FORMED METAL PANEL SUN SHADES METAL PANEL SOFFIT

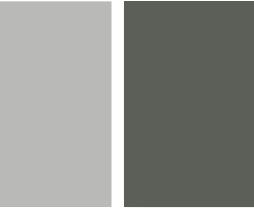




FORMED METAL PANEL AT SLAB (440 HUNTINGTON)

SUN SHADES (610 MAIN STREET)

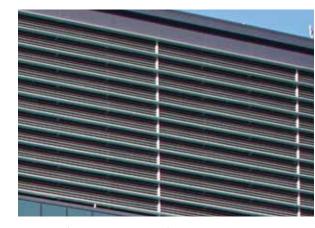
SUN SHADES







MEDIUM SILVER METAL PANELS (PODIUM)



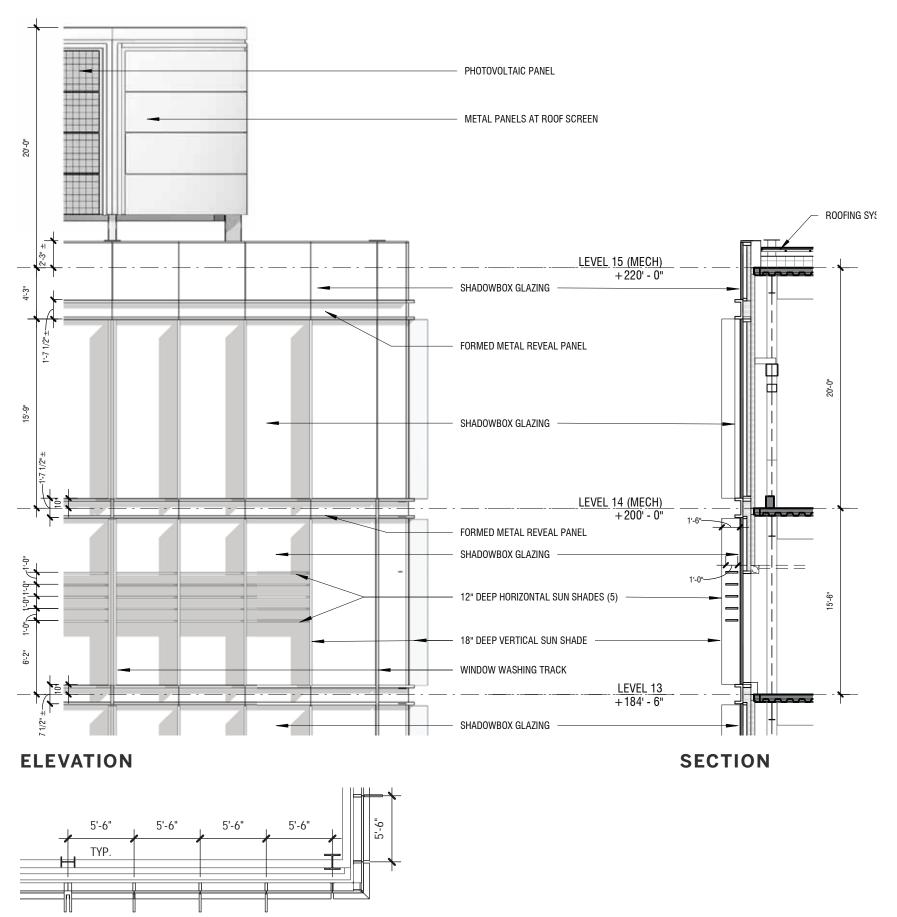
LOUVERS (LONGWOOD CENTER)



STONE BASE



STONE ACCENT WALL

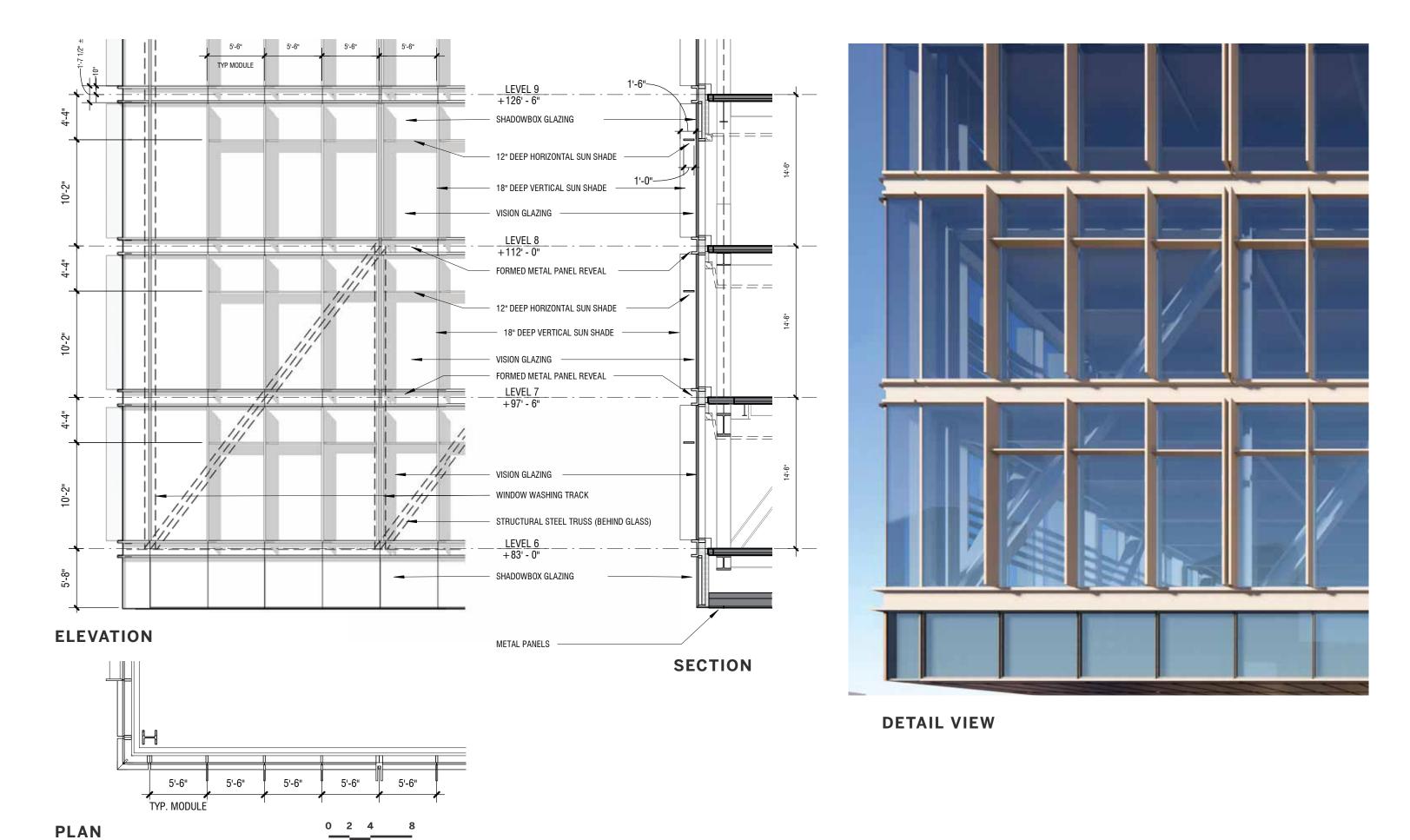


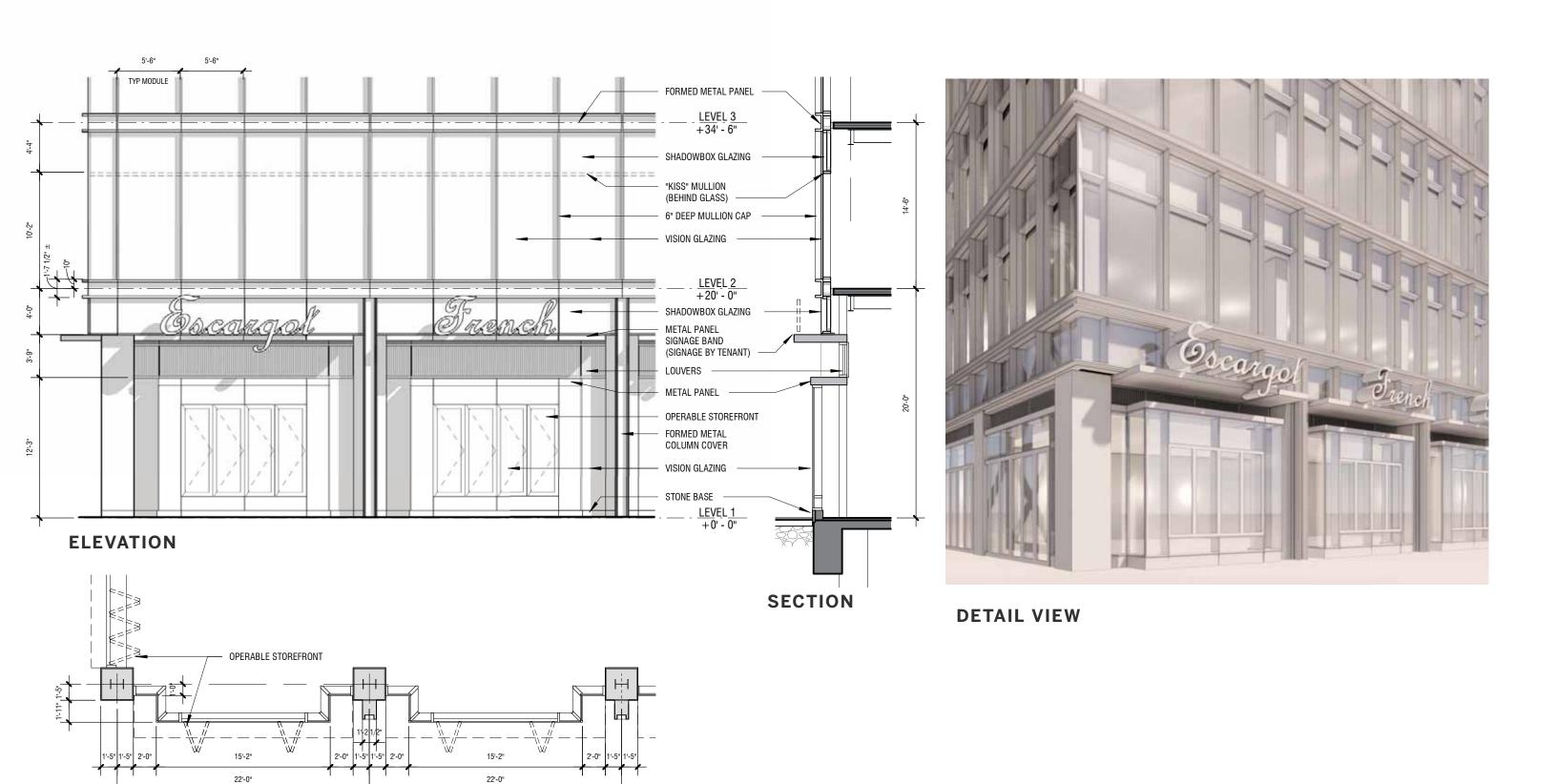




PLAN



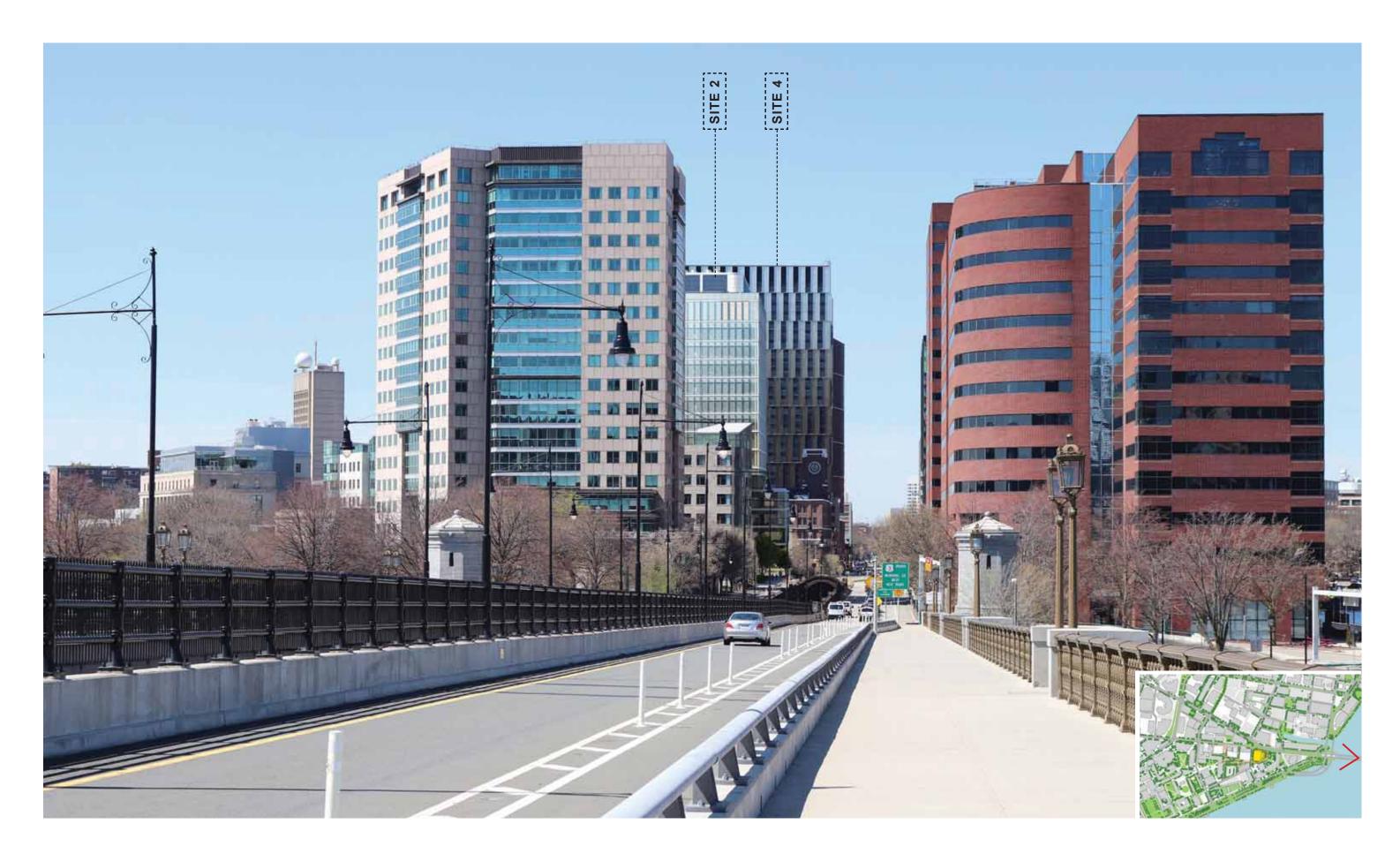


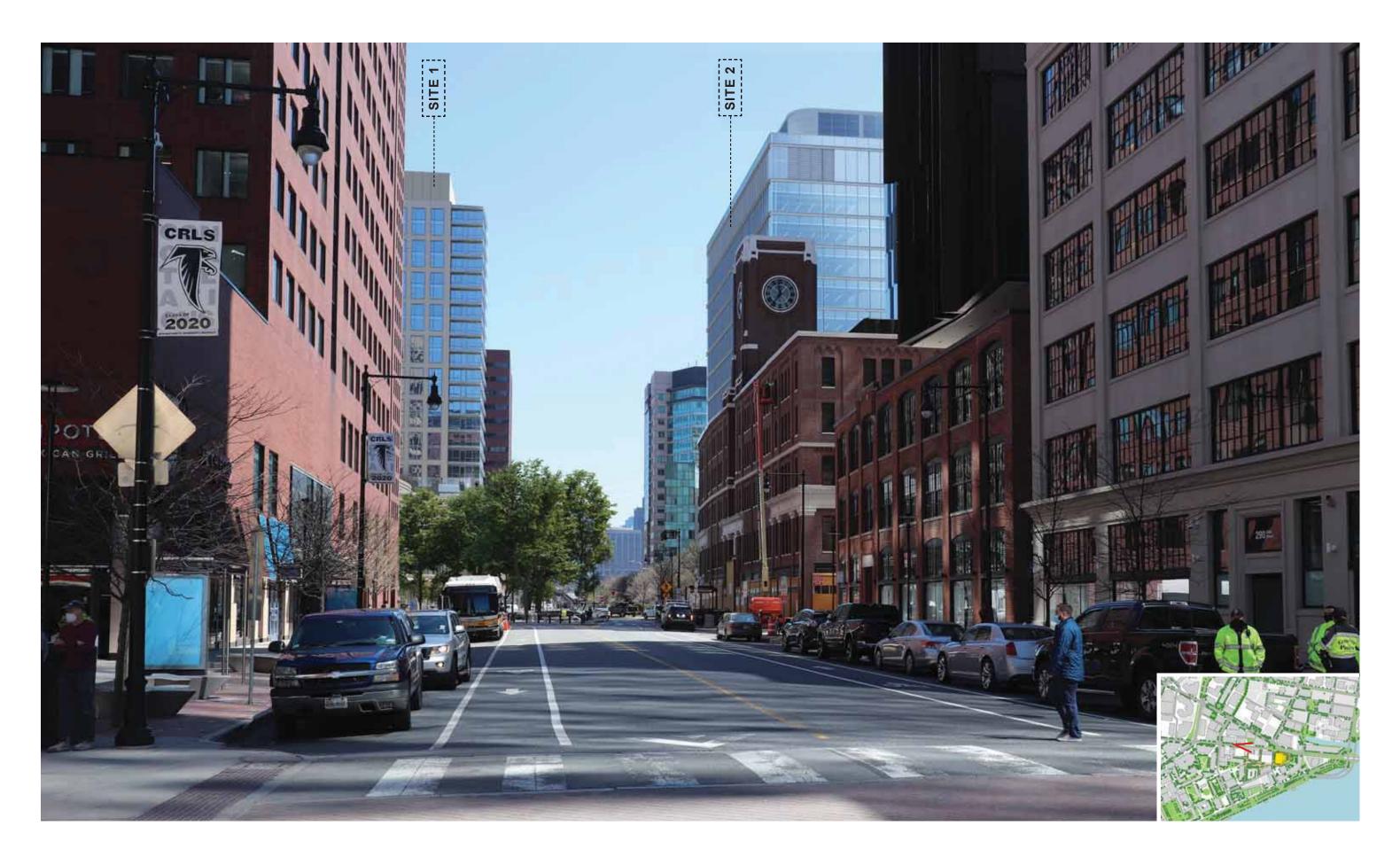


PLAN

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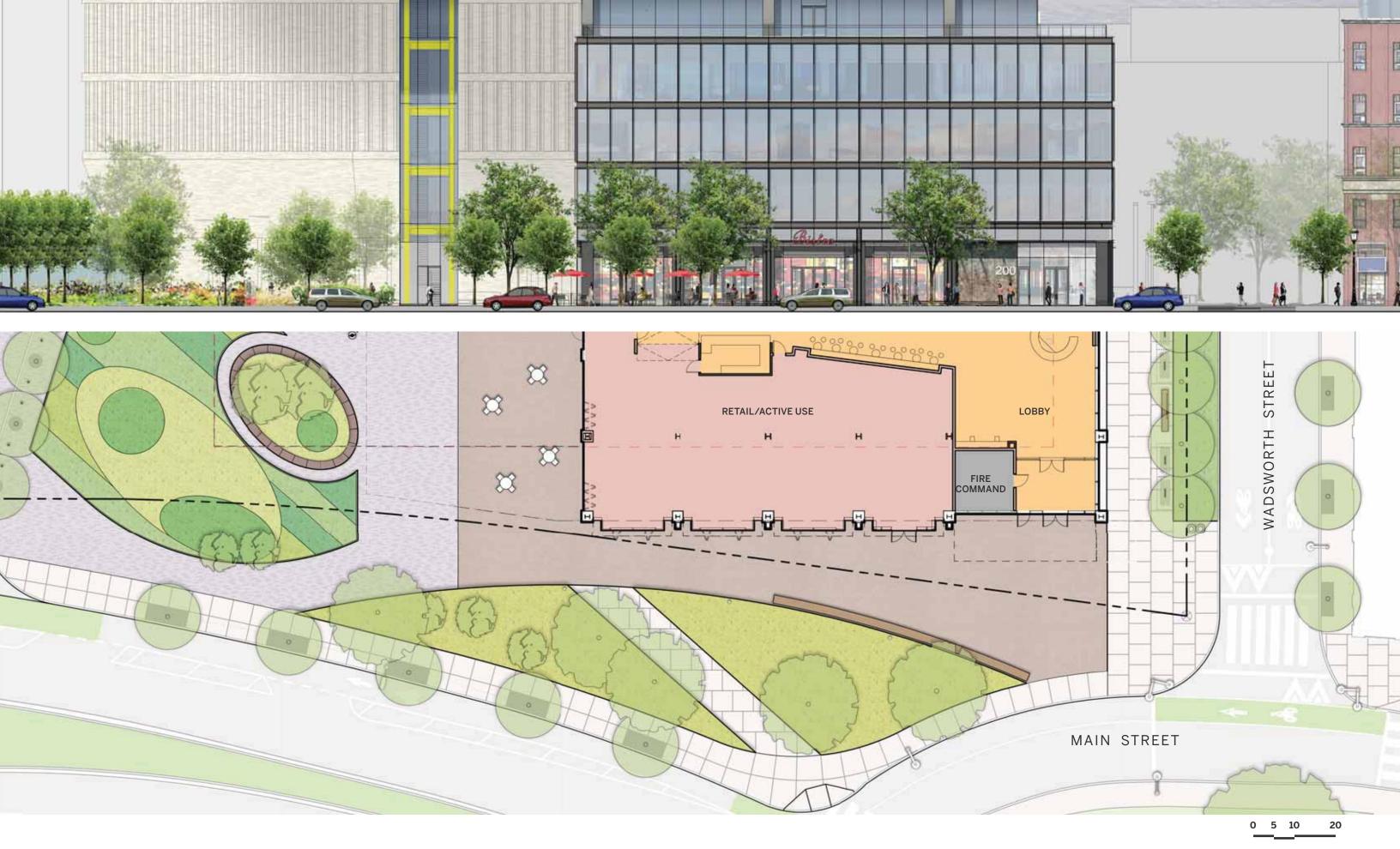


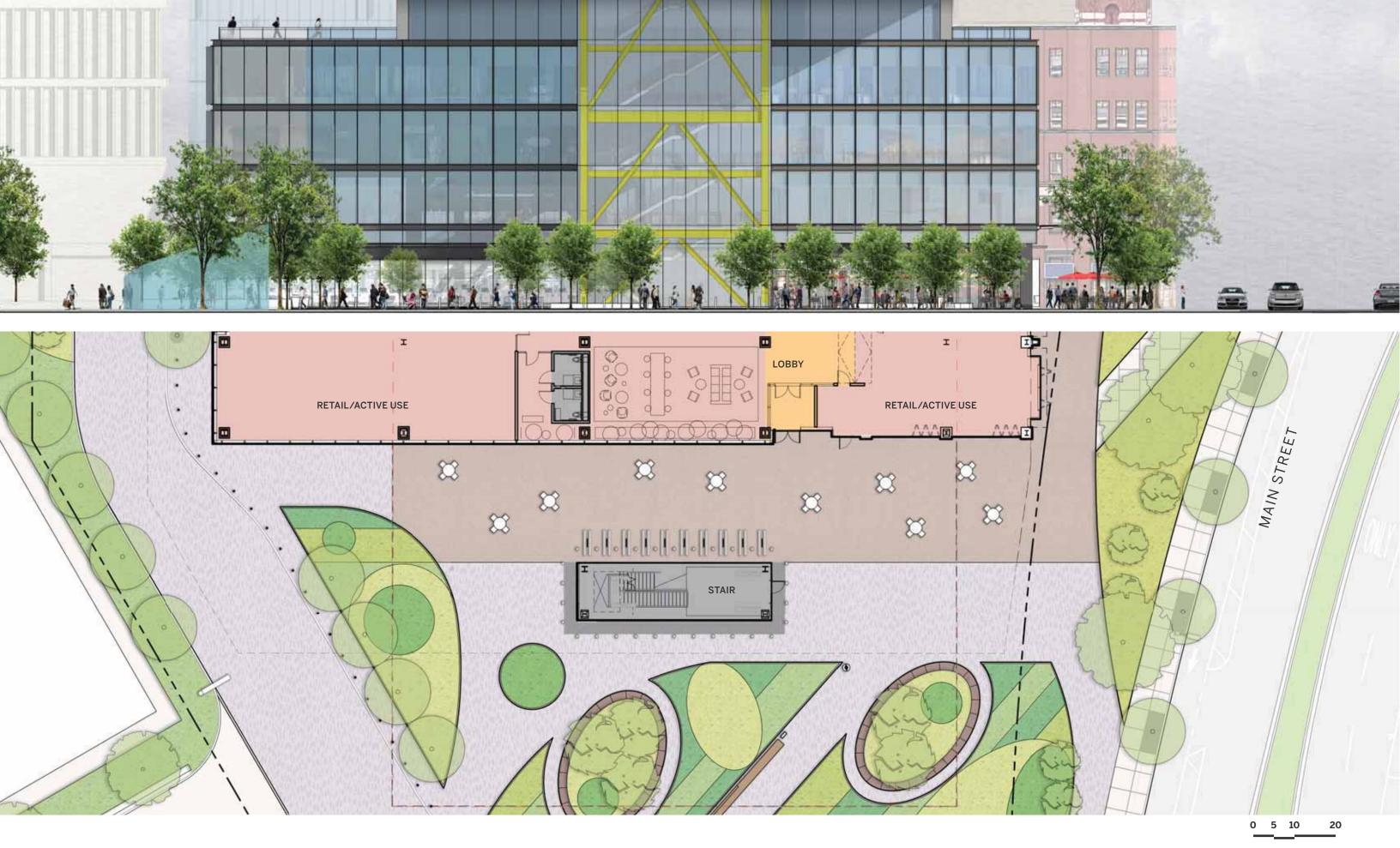


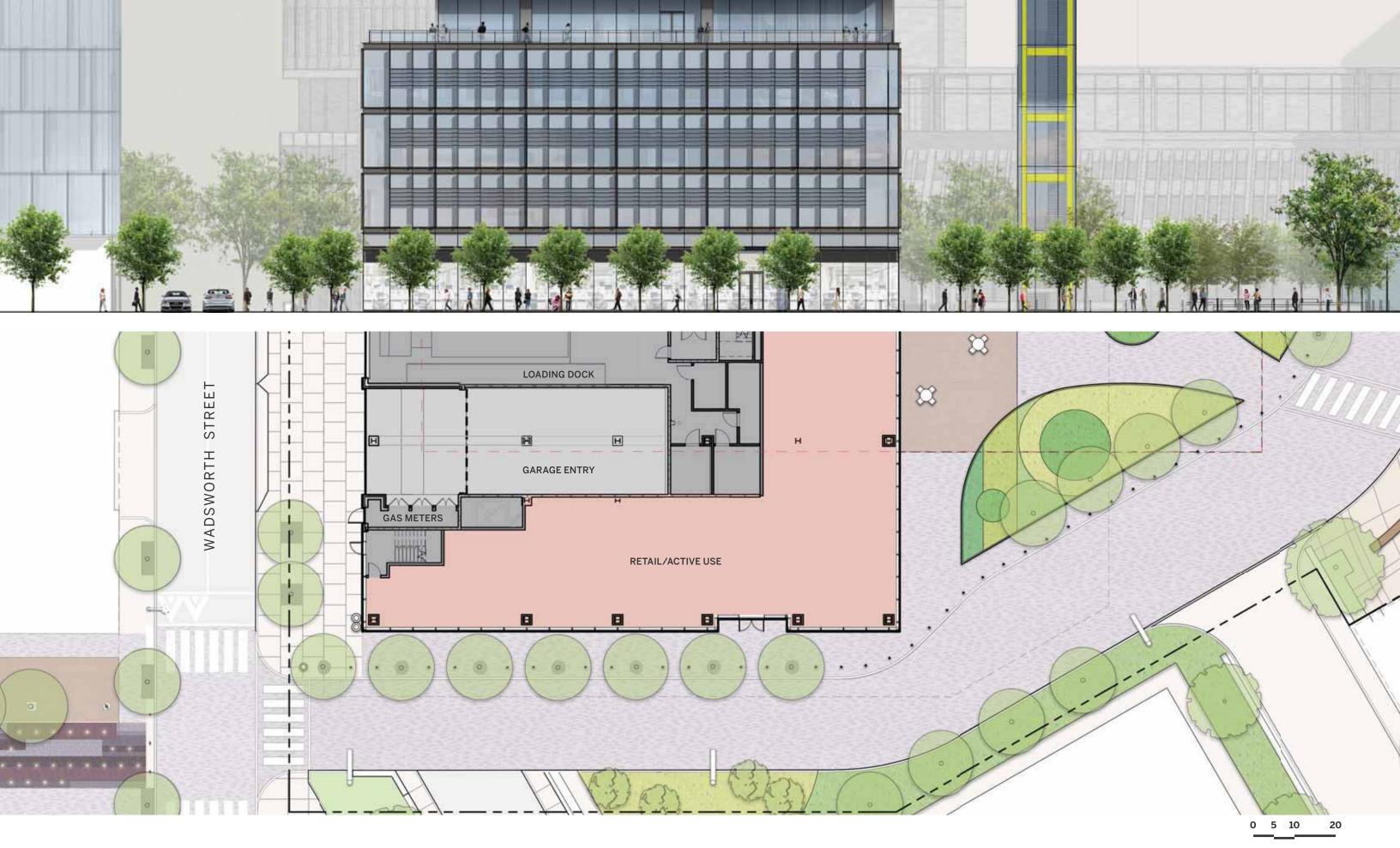


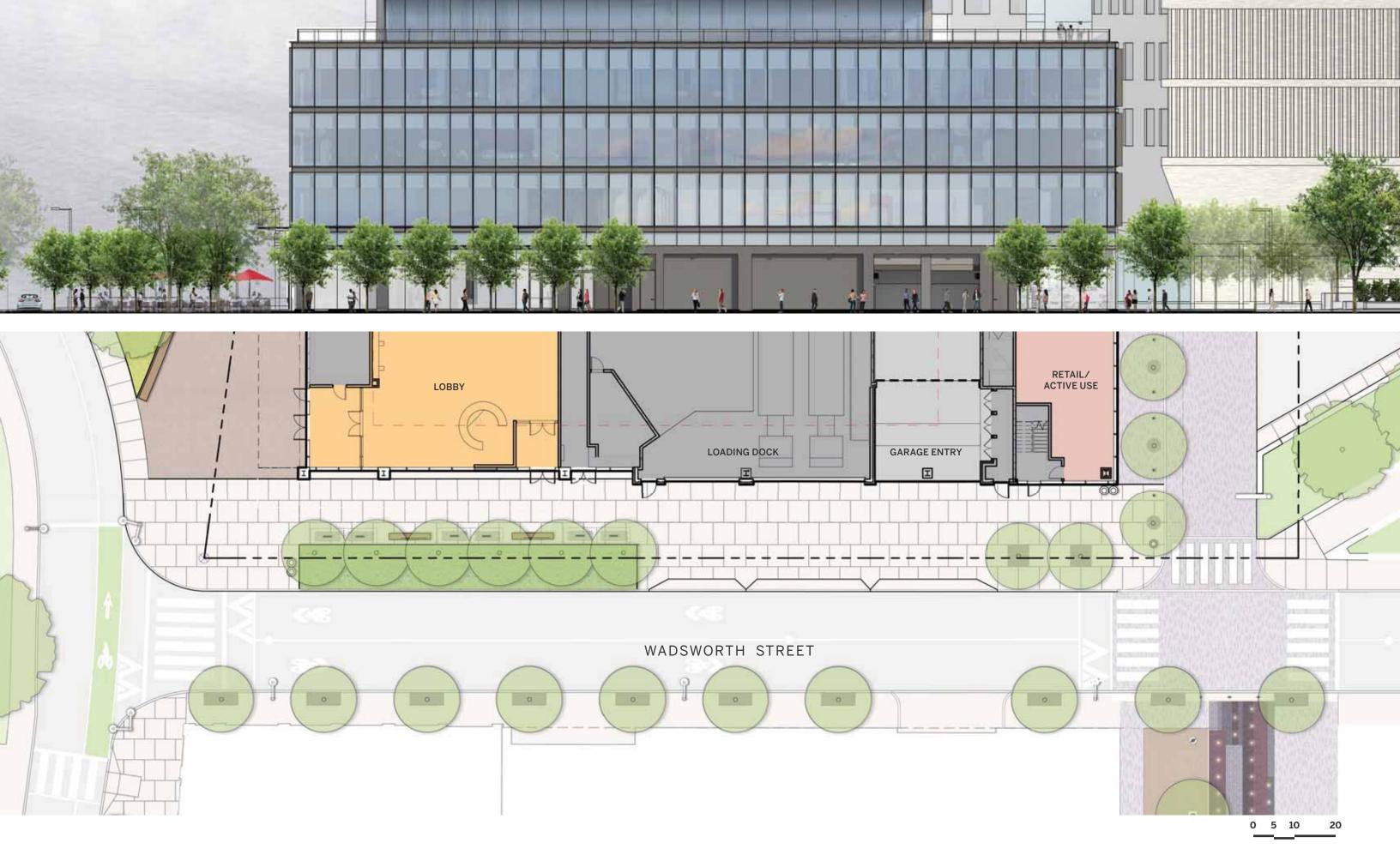








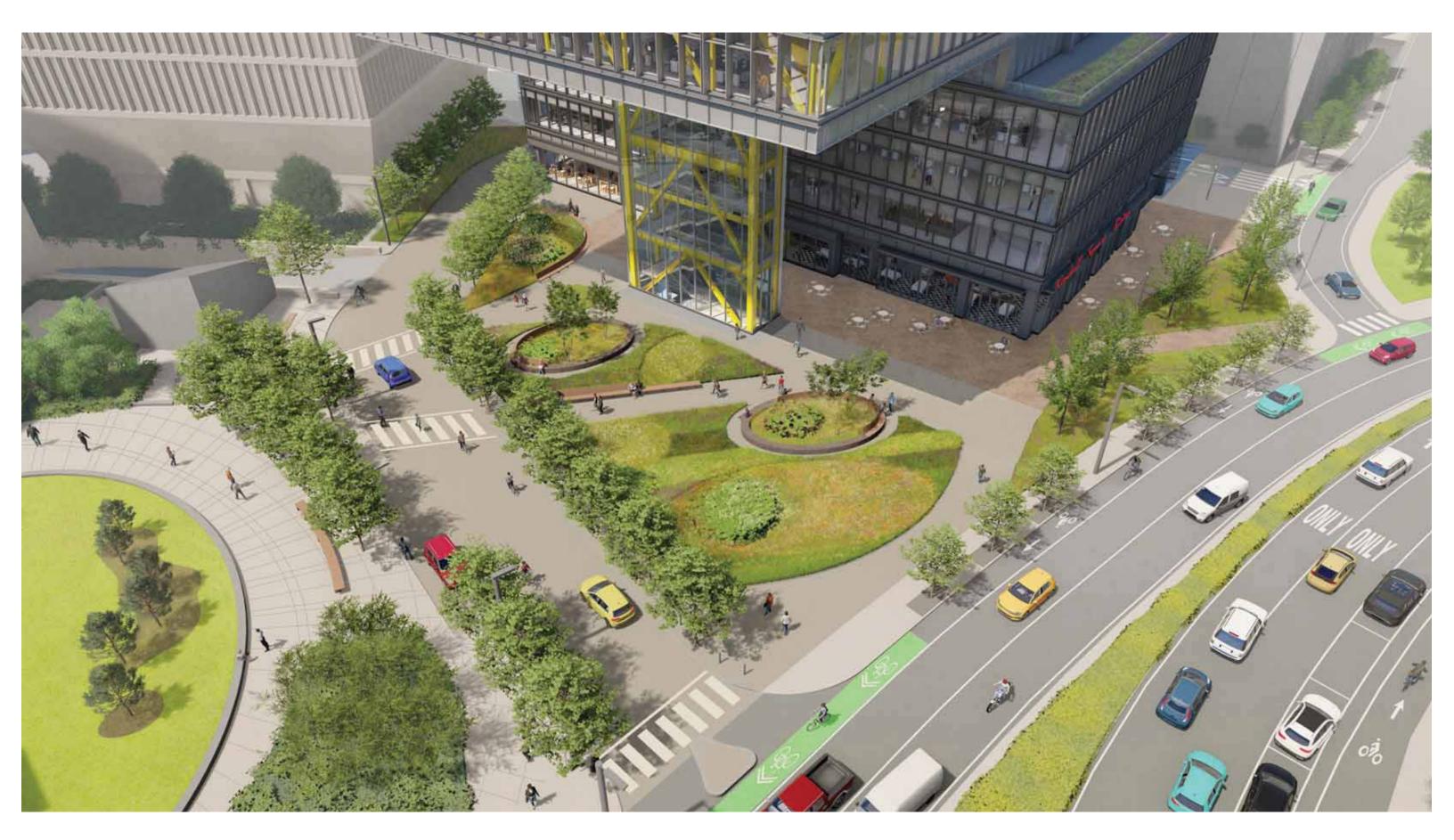








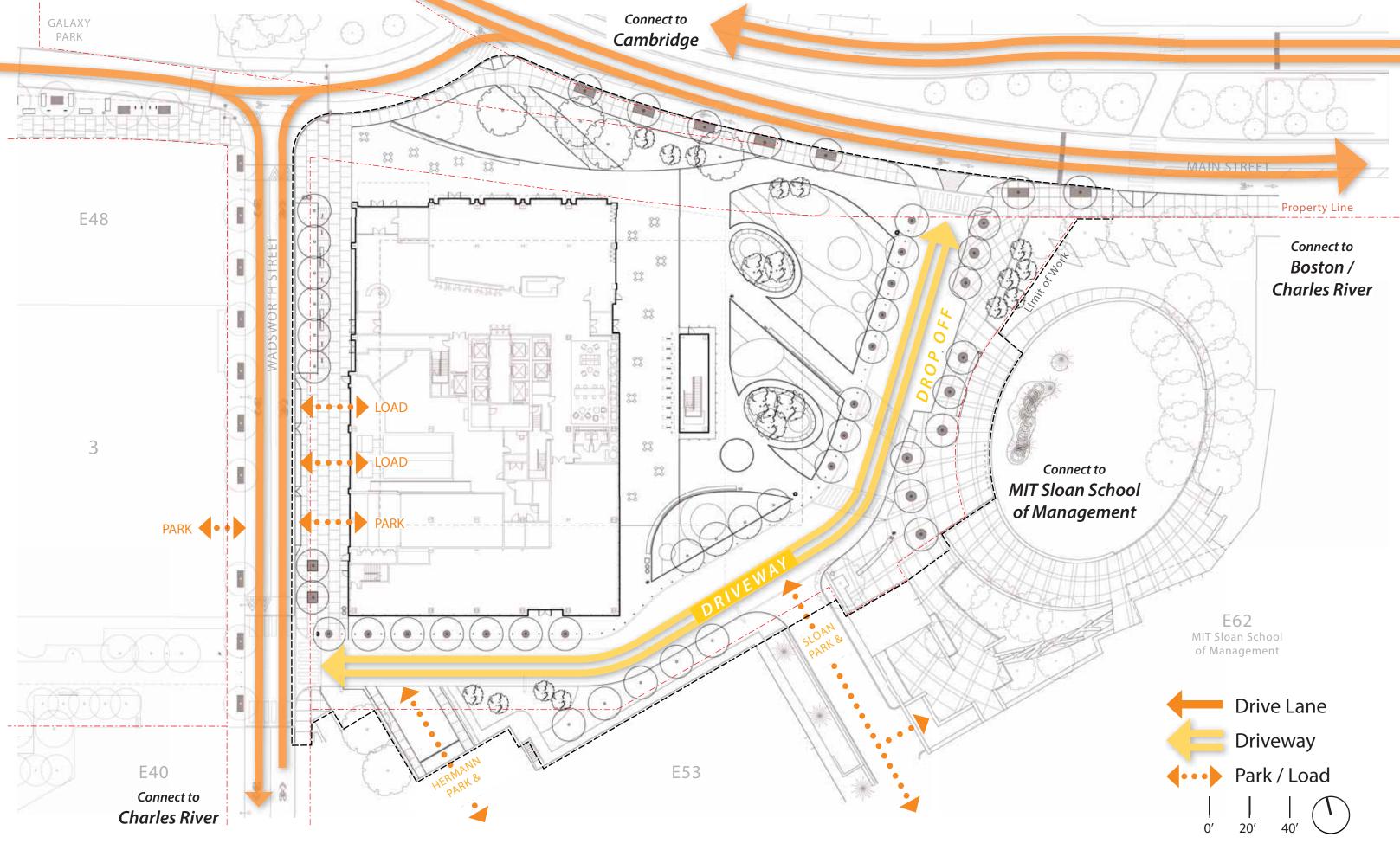


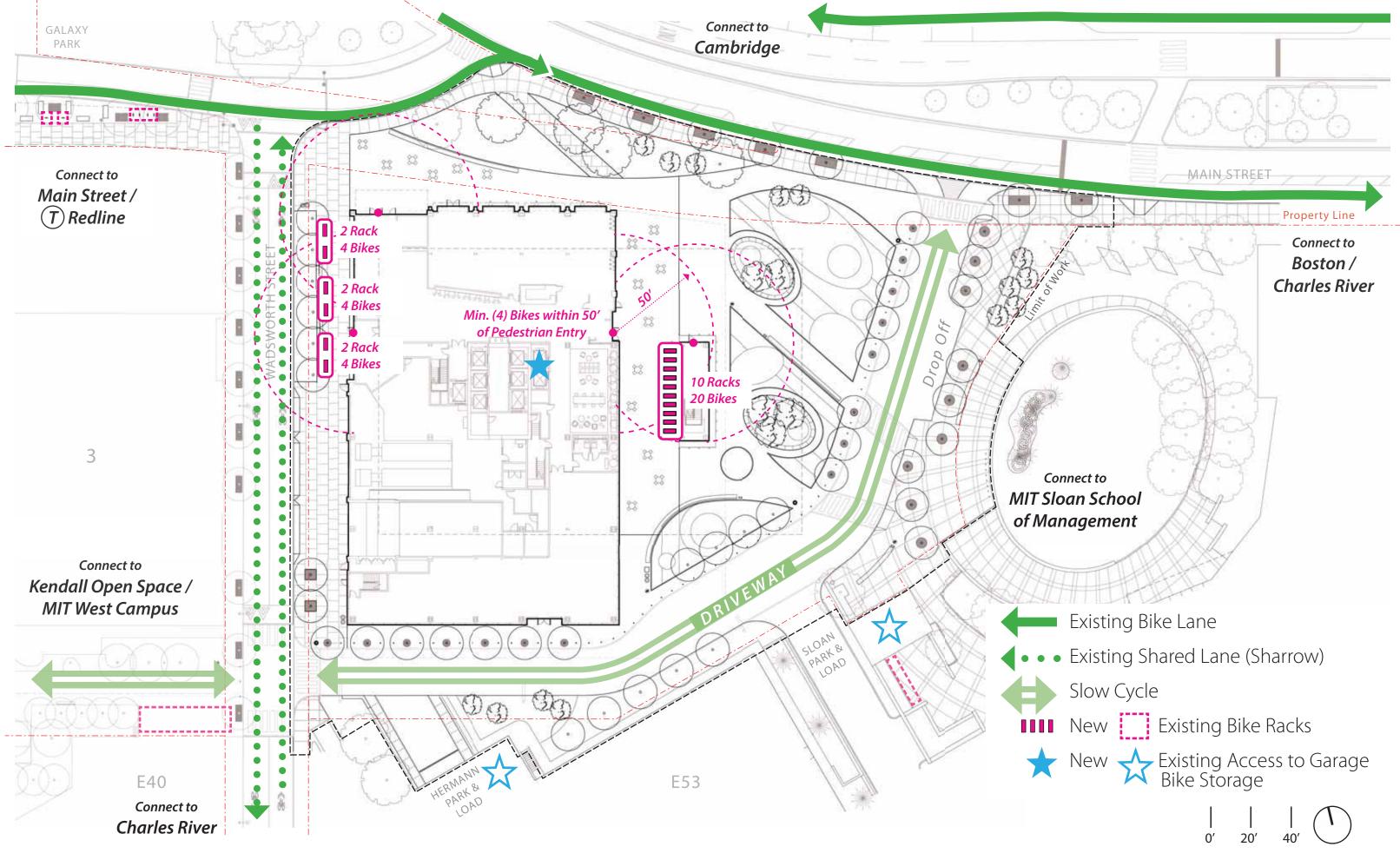


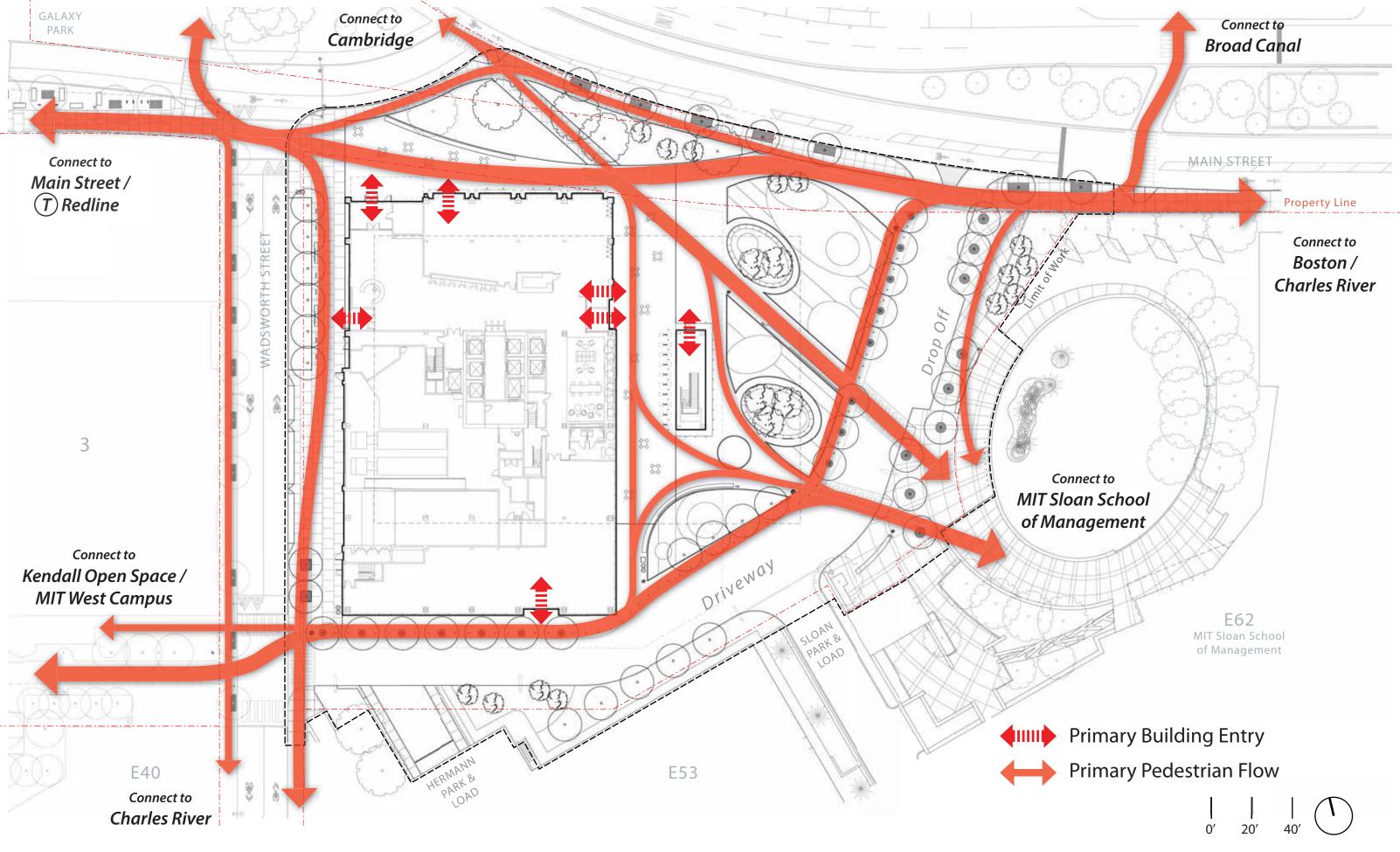


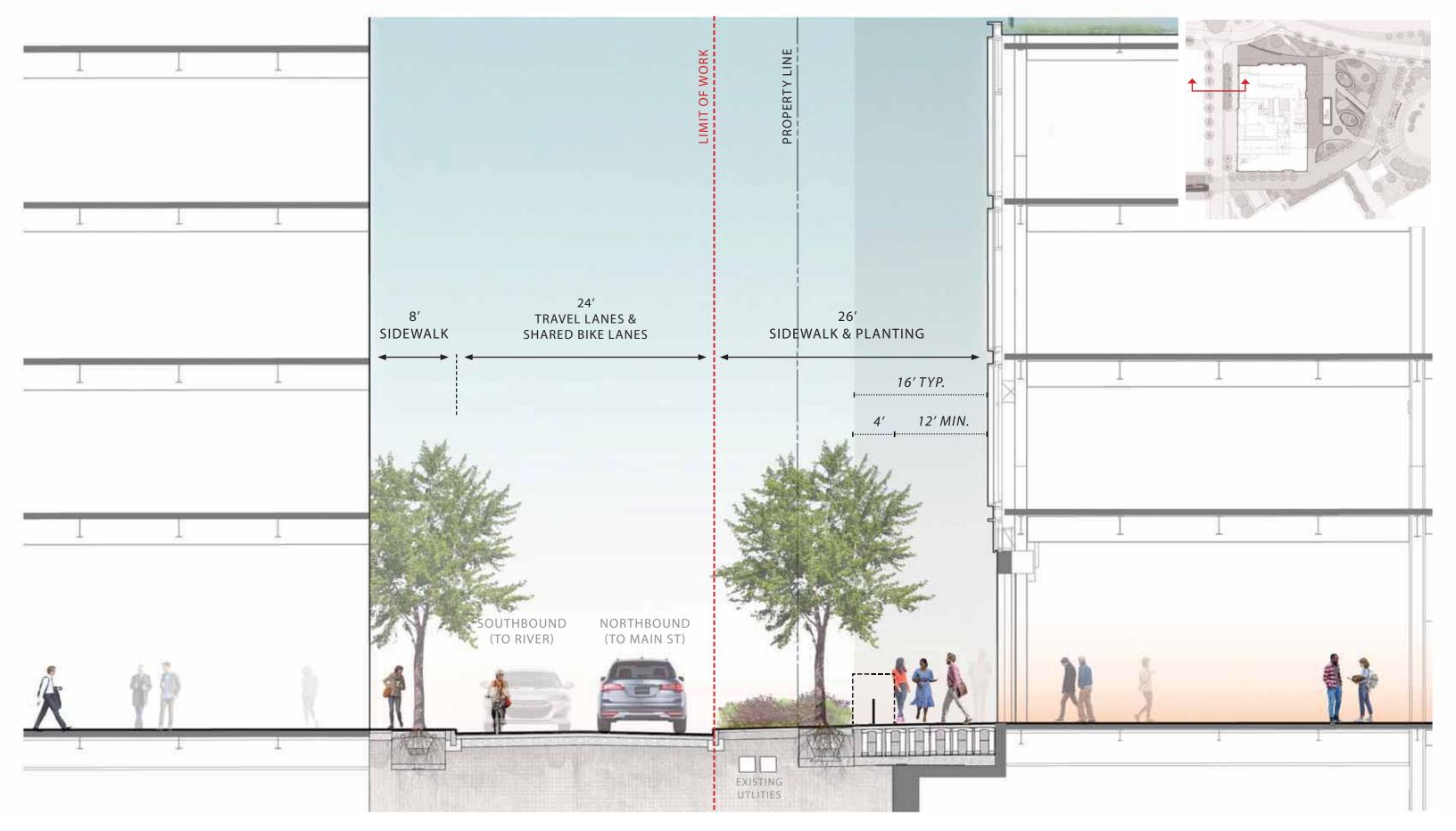








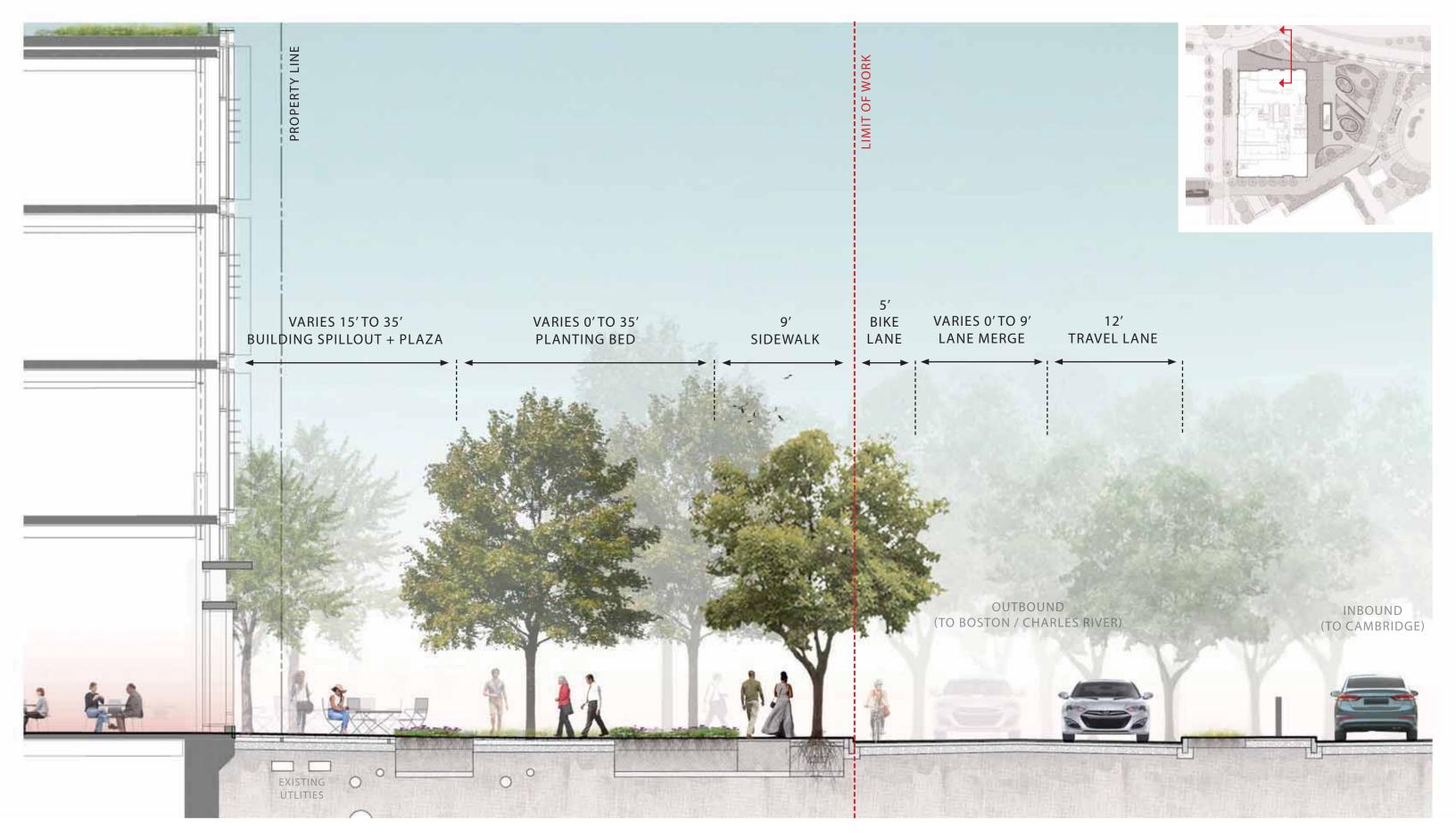




BUILDING 3

WADSWORTH STREET

BUILDING 2



BUILDING 2

MAIN STREET



Shrubs



Rhus aromatica 'Gro-Low' Fragrant Sumac 24"-36" tall

Kalmia latifolia 'Elf'

Elf Mountain Laurel

24"-36" tall



24"-36" tall



Deutzia gracillis 'Nikko' **Dwarf Slender Deutsia**



Ilex crenata 'Hoogendorn' Japanese Holly 24"-30" tall Evergreen
KENDALL SQUARE SOMA SITE 2
ELKUS MANFREDI ARCHITECTS > HARGREAVES JONES





Deschampsia flexuosa Crinkled Hair Grass 12"-18" tall Cool Season Grass



Eragrostis spectabilis **Purple Love Grass** 18"-24" tall Warm Season Grass





Hakonechloa macra 'All Gold' Japanese Forest Grass 12"-24" tall Warm Season Grass

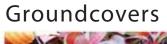


Sesleria autumnalis Autumn Moor Grass 18"-24" tall Cool Season Grass

Perennials



Baptisia 'Dutch Chocolate' Dutch Chocolate False Indigo 36"-48" tall





Gaultheria procumbens American Wintergreen 4"-8" tall Evergreen



Echinops ritro Globe Thistle 36"-48" tall



Mitchella repens Partidgeberry 4"-8" tall

Sample Planting Palette 54



Canopy Trees



Acer x fremanii 'Autumn Blaze' Autumn Blaze Red Maple



Nyssa sylvatica Black Gum



Gleditsia triacanthos **Honey Locust**

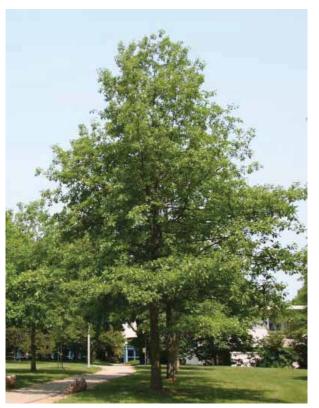


Platanus x acerifolia 'Exclamation' **Exclamation London Plane**



Gymnocladus dioicus Kentucky Coffeetree

EXISTING



Quercus bicolor Swamp White Oak



NEW & **EXISTING**



Understory Trees

Amelanchier canadensis Shadblow Serviceberry





Betula nigra 'Heritage' Heritage River Birch



Quercus coccinea Scarlett Oak







Concrete Paving



Rubber & Aggregate



Grating (Garage Intake)



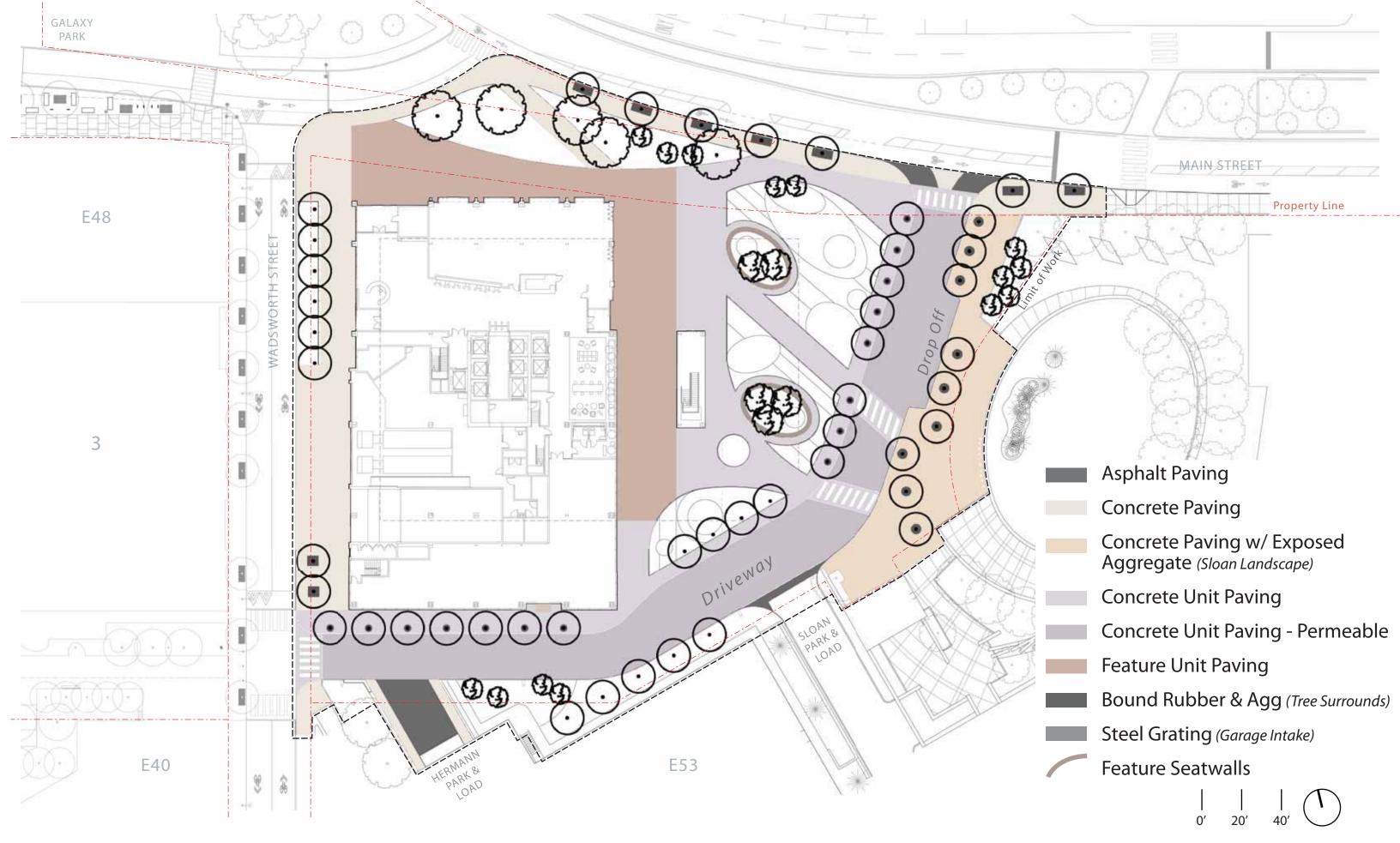
Concrete Unit Paving



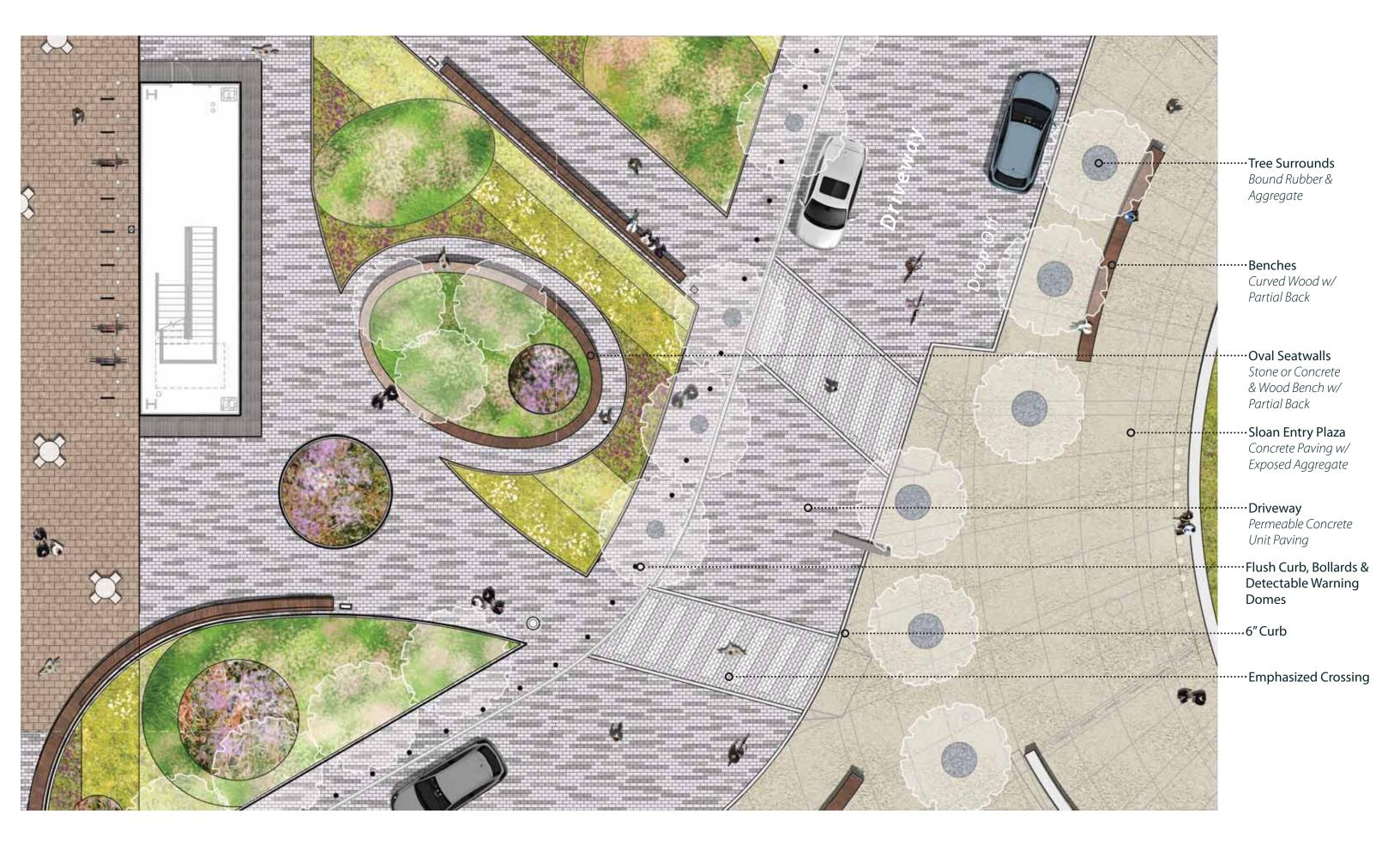
Feature Seatwalls (w/ Wood Bench Inset)



Feature Unit Paving (Stone or Concrete)









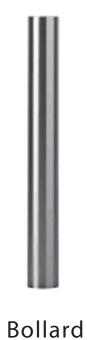


Oval Seatwalls w/ Partial Wood Bench w/Back

Benches w/ Partial Back

*NOTE: Furniture below to match Kendall Open Space west of Wadsworth Street, as previously reviewed & approved.

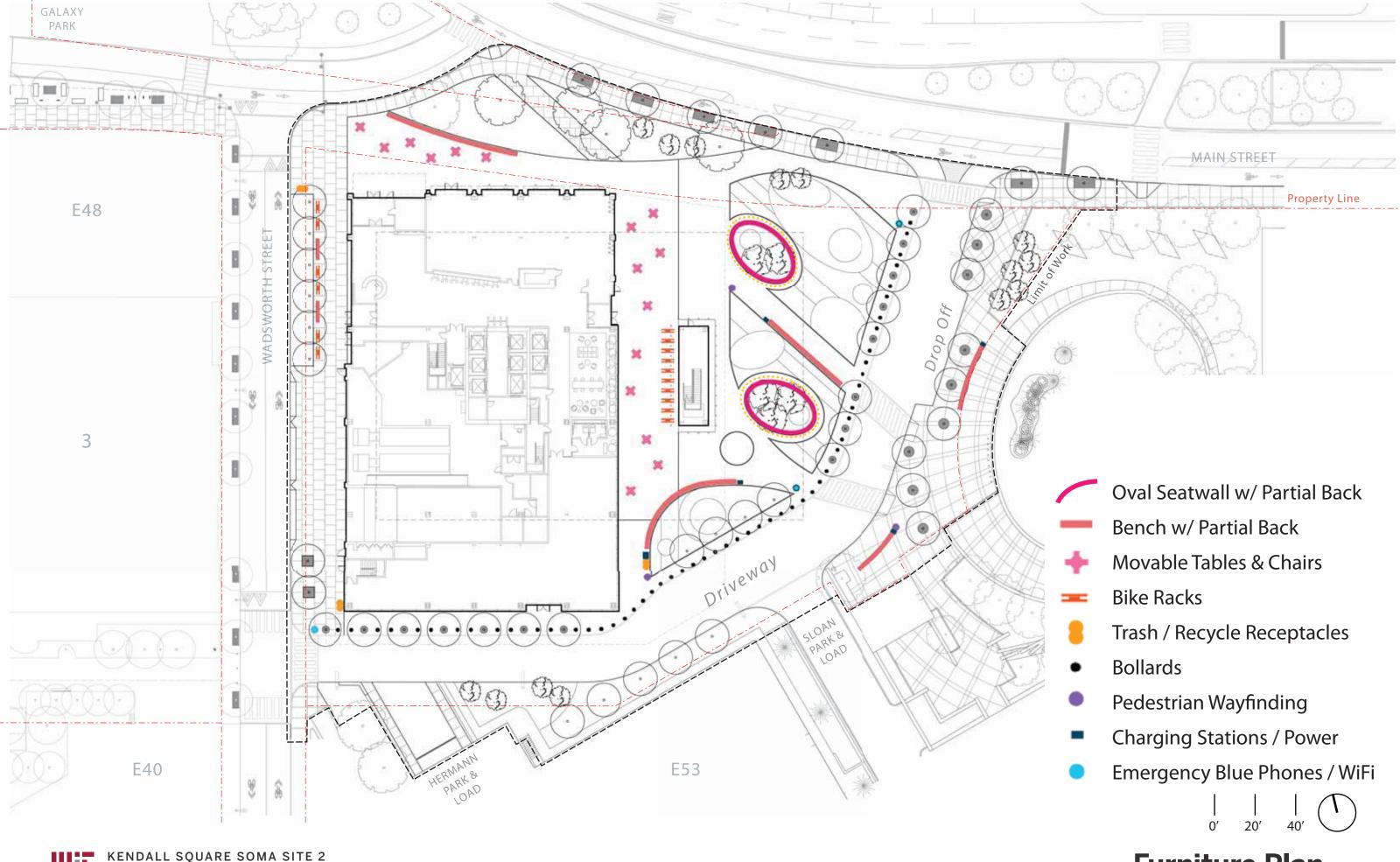


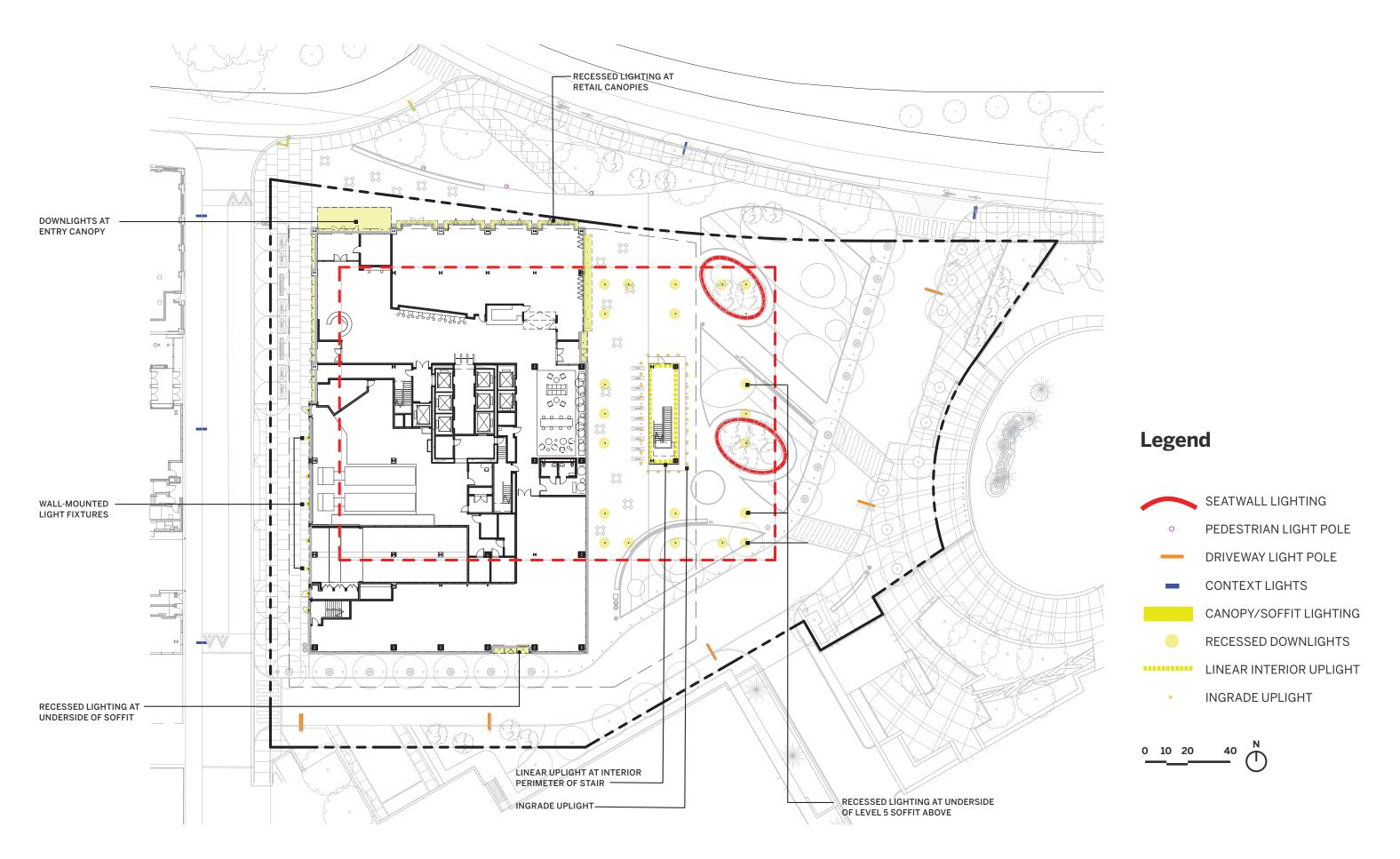




Trash / Recycle Receptacles









Signage Summary

658 Linear Feet of Sign Frontage x 1 SF =

658 SF Max Allowed signage

510 SF Total shown on elevations

FREE STANDING SIGNS

Quantity: (2) max per lot

Size: 30 SF max total per lot

Height: 15 FT max

PROJECTING SIGNS

Quantity: (1) per ground floor establishment plus (1) for any public building entrace not serving a ground floor establishment

Size: 13 SF max

Height: 20 FT max AFG provided it is below the sill line of the second floor windows

Note: any sign that projects more than 12 inches from face of building is considered a projecting sign

WALL SIGNS

Quantity: not limited

Size: 60 SF each max (for ground floor establishments with 60 FT or less frontage, max area of individual sign multiplier is (1) instead of (1.5) x frontage)

Height: 20 FT max AFG provided it is below the sill line of the second floor windows

