



Aegis

LIVING

BUILDING

1916 EASTLAKE AVENUE E
RECOMMENDATION MEETING
NOVEMBER 15 2017
SDCI #3023368



Aegis Living



TABLE OF CONTENTS

DEVELOPMENT OBJECTIVES

<i>Development Objectives</i>	P 4
<i>Vicinity</i>	P 5
<i>Zoning Summary</i>	P 6
<i>Site Plan</i>	P 8
<i>Site Sections</i>	P 9
<i>Project Vision</i>	P 10
<i>Living Building Challenge</i>	P 12

EDG SUMMARY & RESPONSE

<i>EDG Summary & Response</i>	P 15
<i>Supported at EDG</i>	P 18
<i>Board Guidance from EDG</i>	P 19

ARCHITECTURAL CONCEPT

<i>Roof Size</i>	P 22
<i>Roof Form & Location</i>	P 24
<i>Newton Facade at Eastlake Corner</i>	P 28

STREETSCAPE

<i>Ground Level Uses</i>	P 32
<i>Vehicle Circulation Patterns & Safety</i>	P 46
<i>Pedestrian Experience at Garage Access</i>	P 50
<i>Landscape Concept</i>	P 54

EAST FACADE AND SETBACK

<i>Privacy Impact</i>	P 58
<i>Setback Buffer</i>	P 60

MATERIALS

<i>Fenestration Studies</i>	P 67
<i>Lighting Plan</i>	P 72
<i>Elevations and Material Palette</i>	P 74

SIGNAGE

<i>Signage</i>	P 77
--------------------------	-------------

DEPARTURES

<i>Departures Summary</i>	P 79
<i>Parking Location and Access</i>	P 80
<i>Street Level Development Standards</i>	P 84

APPENDIX

<i>Topography and Existing Structures</i>	P 89
<i>Tree Survey</i>	P 90
<i>Site Access Opportunities</i>	P 91
<i>Opportunities and Constraints</i>	P 92
<i>Traffic and Connections</i>	P 93
<i>Zoning and Uses</i>	P 94
<i>Zoning and Development Potential</i>	P 95
<i>Design Cues and Site Context</i>	P 96
<i>Photo Montage</i>	P 98
<i>Building Performance Report</i>	P100
<i>Traffic and Parking Study</i>	P109

PROJECT OVERVIEW

The project site is located in the Eastlake Residential Urban Village of the Eastlake neighborhood bounded by Eastlake Avenue E to the west and E Newton Street to the north. The zoning is C1-40' with the adjacent property to the south zoned C1-40' and the adjacent property to the east zoned LR2. The properties to the west across Eastlake Avenue E are zoned LR3 and to the north across E Newton Street zoned LR2. The site is currently occupied by a two-story commercial office tenant.

The project proposes demolition of the existing structure on the site, and new construction of one level below grade and six levels above grade (at Eastlake Avenue E) for senior living and a retail coffee shop.

64/13

assisted living units/memory care units

74,597

gross square footage

2/19/16/8

underground loading bays/underground parking stalls/
underground bicycle stalls/street level public bicycle stalls

Below grade includes back of house support spaces, and parking. Parking will be accessed from the southern-most portion of the facade fronting Eastlake Avenue E and will provide 19 parking stalls, 24 bicycle stalls, and 2 loading bays. Level 1 (street level) includes 8 public bicycle parking stalls, a shared entry courtyard, a retail coffee shop and lobby, offices, and amenity spaces provided for the residents. Five levels of senior housing will be provided above the ground floor including memory care (level 2) and assisted living (levels 3-6) and additional amenity spaces on level 2 and 6.

EASTLAKE NEIGHBORHOOD

The Eastlake neighborhood is one of the oldest in Seattle described by the Eastlake Community Council as a 'pleasant jumble of houseboats, singles family homes, apartments, condos, and large and small businesses.' Eastlake is home to about 4,000 residents and 4,000 people who work in the neighborhood. The neighborhood extends from the intersection of Eastlake Avenue E and Fairview Avenue at its southern end northward to University Bridge with Lake Union forming the western edge and I-5 forming the eastern edge.

The neighborhood was originally a continuation of Capitol Hill's residential district, but in 1962 the I-5 corridor cut through the neighborhood creating a physical separation. The shoreline has traditionally been the site of industrial, commercial, and residential uses. Several of Seattle's houseboat communities are located along the Eastlake/Lake Union shoreline, primarily in the Portage Bay/Roanoke sub-neighborhood.

Eastlake Avenue E is a major north-south traffic arterial and was one of Seattle's primary trolley car routes. This corridor also contains a mixture of uses, primarily commercial and multi-family buildings. Recent redevelopment along Eastlake Avenue E has resulted in higher density commercial and residential buildings that are slowly replace older one- or two-story buildings.

PROJECT TEAM

OWNER/APPLICANT

Aegis Senior Communities, LLC
415 118th Ave SE
Bellevue, WA 98005
425.284.1624
BRYON ZIEGLER

LANDSCAPE ARCHITECT

Lando and Associates
6607 SE Scott Drive
Portland, OR 97215
503.233.6600
PAT LANDO

MEP ENGINEERING

PAE
1501 East Madison Street
Seattle, WA 98122
203.596.8606
DAVID MEAD

ARCHITECT

Ankrom Moisan Architects, Inc.
1505 5th Avenue, Suite 300
Seattle, WA 98101
503.952.1551
DAVID WEBB

WATER SPECIALIST

Biohabitats, Inc.
412 NW Couch Street, Suite 202
Portland, OR 97209
971.244.8322
PETE MUNOZ

MATERIALS CONSULTANT

Brightworks Sustainability
412 NW Couch Street
Portland, OR 97209
503.290.3000
JEFF FROST



VICINITY MAP

- PLANNING AREA BOUNDARY
- EASTLAKE URBAN VILLAGE
- PROJECT SITE



GENERAL

- Parcels: 202504-9134
 - **Address:** 1916 Eastlake Ave E, 98102
 - **Cross Streets:** Eastlake Ave E & E Newton St
 - **Site Area:** 15,261 sf
 - **Market:** Assisted Living
- Zoning: C1-40 (Commercial 1)
- Urban Village: Eastlake Residential Urban Village
- Overlay District: None
- Approximate max slope across site: 35'
- No Landmark structures on site

DETAILED ZONING

SMC 23.47A.004 PERMITTED USES

- Residential uses are permitted along with other uses listed. Per 23.84A, residential use includes Assisted Living Facilities and Nursing Homes.

SMC 23.47A.005 STREET LEVEL USES

- There are no pedestrian designated zones requiring street level uses

SMC 23.47A.008 STREET LEVEL DEVELOPMENT STANDARDS:

- A.2** Blank facades between 2'-8' high may not exceed 20' in width. The total of all blank facade segments may not exceed 40% of the width of the facade along the street.
- B.** Street-level Non-residential Design
 - Transparency required for 60% of a street-facing facade. a 22' wide driveway may be subtracted from the facade width.
 - Must have an average depth of 30'
 - Must have a minimum floor to floor height of 13'.
- D.** Street-level Residential Design
 - Must contain at least one visually prominent pedestrian entry for residential uses.

SMC 23.47A.012 STRUCTURE HEIGHT C1-40

- A.** 40 foot height limit for structures (measured from Grade Plane)
 - 1.a 44' foot height limit allowed for structures if 13' provided at street level non-residential uses.
- C.** Rooftop features.
 - Open railings, parapets, planters, skylights, may exceed height limit by 4'
 - The following rooftop features may extend up to 15 feet above the maximum height limit, so long as the combined total coverage of all features listed in this subsection does not exceed 20 percent of the roof area, or 25 percent of the roof area if the total includes stair or elevator penthouses or screened mechanical equipment:

- a.** Solar collectors;
- b.** Mechanical equipment;
- d.** Stair & Elevator penthouses may extend 16' above the height limit;

SMC 23.47A.013 FLOOR AREA RATIO

- Total FAR permitted on a lot that is solely occupied by residential use or non-residential use = 3.0
- Total FAR permitted for all uses on a lot that is occupied by a mix of uses = 3.25
- The following gross area is not counted toward maximum FAR:
 - All underground stories or portions of stories;
 - All portions of a story that extend no more than 4 feet above existing or finished grade, whichever is lower, excluding access;

SMC 23.47A.014 SETBACK REQUIREMENTS

- B. Setback requirements for lots abutting residential zones (lot abuts a residential LR2 zone to east)
 1. 15' triangular setback at Newton street, adjacent to LR zone
 - 3a. 15' setback along side/rear lot line for portions of structures containing residential uses that are above 13' in height

SMC 23.47A.016 LANDSCAPING AND SCREENING STANDARDS

- A.2. Landscaping that achieves a Green Factor score of 0.3 or greater (functionally equivalent to landscaping 30% of lot). Credit is awarded for planting areas, green roofs, etc.
- Street trees are required.

SMC 23.47A.018 NOISE STANDARDS

- All permitted uses are subject to the noise standards of this Section

SMC 23.47A.020 ODOR STANDARDS

- All permitted uses are subject to the odor standards of this Section

SMC 23.47A.022 LIGHT AND GLARE STANDARDS

- All permitted uses are subject to the light and glare standards of this Section

SMC 23.47A.024 AMENITY AREA

- Amenity requirements are superseded by 23.47A.035 for Assisted Living Facilities

SMC 23.47A.032.A PARKING LOCATION AND ACCESS

1. NC zones. The following rules apply in NC zones, except as provided under subsections 23.47A.032.A.2 and 23.47A.032.D:
 - c.** If access is not provided from an alley and the lot abuts two or more streets, access is permitted across one of the side street lot lines pursuant to

subsection 23.47A.032.C, and curb cuts are permitted pursuant to subsection 23.54.030.F.2.a.1.

- d.** For each permitted curb cut, street-facing facades may contain one garage door, not to exceed the maximum width allowed for curb cuts
2. In addition to the provisions governing NC zones in subsection 23.47A.032.A.1, the following rules apply in pedestrian-designated zones, except as may be permitted under subsection 23.47A.032.D:
 - a.** If access is not provided from an alley and the lot abuts two or more streets, access to parking shall be from a street that is not a principal pedestrian street.
3. Structures in C zones with residential uses, structures in C zones with pedestrian designations, and structures in C zones across the street from residential zones shall meet the requirements for parking access for NC zones as provided in subsection 23.47A.032.A.1.
4. In the event of conflict between the standards for curb cuts in this subsection 23.47A.032.A and the provisions of subsection 23.54.030.F, the standards in subsection 23.54.030.F shall control.

SMC 23.47A.035 ASSISTED LIVING FACILITIES

- Minimum unit size per WAC 388-110-140
- Facility Kitchen is required
- Communal area shall be provided as follows:
 - 10% of the total floor area of the assisted living units shall be provided
 - Service areas shall not count as required communal area.
 - A minimum of 400 sf of the required communal area shall be provided as an outdoor area, with no dimension less than 10'.

SMC 23.54.015 REQUIRED PARKING

- Residential Uses, Table B
- M. No minimum requirement for all residential uses in Urban Villages if within 1,320 feet of a street with frequent transit service.
- Bicycle parking
- As required by section.

SMC 23.54.030.G SIGHT TRIANGLE

2. For two way driveways or easement 22 feet wide or more, a sight triangle on the side of the driveway used an exit shall be provided, and shall be kept clear of any obstruction for a distance of 10 feet from the intersection of the driveway or easement with a driveway, easement, sidewalk, or curb section if there is no sidewalk. The entrance and exit lanes shall be clearly identified.
3. The sight triangle shall be also kept clear of obstruction in the vertical spaces between 32 inches and 82 inches from the ground.
6. In all Downtown, Industrial, Commercial 1, and Commercial 2 zones, the sight triangle at a garage exit may be provided by mirrors and/or other approved safety measures.

SMC 23.54.035 LOADING BERTH REQUIREMENTS

- (2) spaces required
- Required dimensions
 - Length: 35'-0"; Width: 10'-0"; Height: 14'-0"
- Exceptions to Loading Berth Length.
 - (ii) Low- and Medium-demand Uses. Twenty-five (25) feet.

SMC 23.54.040 SOLID WASTE AND RECYCLABLE MATERIALS STORAGE

- A.** Except as provided in subsection 23.54.040.I, storage space for solid waste and recycle materials containers shall be provided as shown in Table A for 23.54.040.
 - 375 square feet plus 4 square feet for each additional unit above 50

SMC 23.84A DEFINITIONS

- "Gross Floor Area" means the floor area within the inside perimeter of the exterior wall of the building under consideration, exclusive of vent shafts and courts, without deduction for corridors, stairways, ramps, closets, the thickness of interior walls, columns, or other features. The floor area of a building, or portion thereof, not provided with surrounding exterior walls shall be the usable area under the horizontal projection of the roof or floor above. The gross area shall not include shafts with no openings or interior courts.

SMC 23.86.006.A.2 STRUCTURE HEIGHT MEASUREMENT

- The calculation of the structure height in subsection 23.86.006.A.1 may be modified, at the discretion of the applicant, as follows to permit the structure to respond to the topography of the lot.

SMC 23.40.060 LIVING BUILDING PILOT PROGRAM

- Compliance with minimum standards
 - A qualifying project shall meet:
 1. All of the imperatives of the Living Building Challenge; or
 2. At least three of the seven "petals," including at least one of the following three petals: Energy, Water, or Materials, and all of the following standards:
 - a.** Total building energy usage shall be 75 percent or less of the energy consumed by a "standard reference design building," as defined in the Seattle Energy Code in effect at the time a complete building permit application is submitted;
 - b.** Total building water usage, not including harvested rainwater, shall be 25 percent or less of the average water usage for a comparable building not in the Living Building Pilot Program, based on Seattle Public Utility estimates or other baseline approved by the director; and
 - c.** At least 50 percent of stormwater shall be captured and used on site.

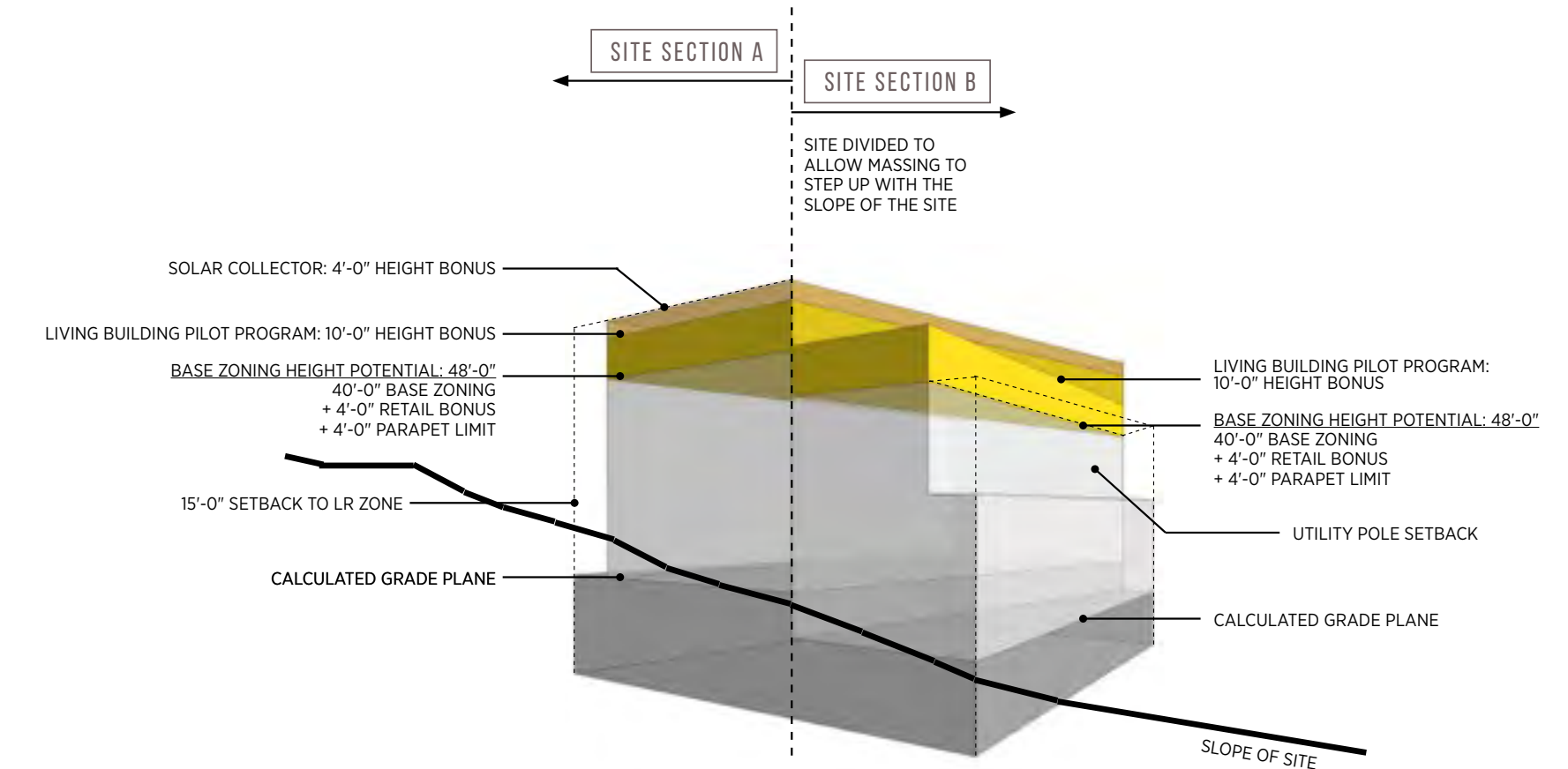
SMC 23.41.012.D DEPARTURES FOR THE LIVING BUILDING PILOT PROGRAM

1. Criteria for departures. Departures from Land Use Code requirements for projects qualifying for the Living Building Pilot Program pursuant to Section 23.40.060 may be allowed if an applicant demonstrates that the departure would result in a development that better meets the intent of adopted guidelines or that the departure would result in a development that better meets the goals of the Living Building Pilot Program and would not conflict with adopted design guidelines. In making this recommendation, the Design Review Board shall consider the extent to which the anticipated environmental performance of the building would be substantially compromised without the departures.
2. Scope of departures. In addition to the departures allowed under subsection 23.41.012.B, departures for projects qualifying for the Living Building Pilot Program established under Section 23.40.060 may also be granted for the following:
 - a.** Permitted, prohibited, or conditional use provisions, but only for accessory uses that would directly address the standards contained in subsection 23.40.060.B, including but not limited to uses that could re-use existing waste streams or reduce the transportation impact of people or goods;
 - b.** Residential density limits;
 - c.** Maximum size of use;

- d.** Quantity of parking required, minimum and maximum parking limits, and minimum and maximum number of drive-in lanes;
- e.** Standards for storage of solid-waste containers;
- f.** The quantity of open space required for major office projects in Downtown zones in subsection 23.49.016.B;
- g.** Standards for the location of access to parking in Downtown zones; and
- h.** Standards for structural building overhangs and minor architectural encroachments.

ASSUMPTIONS

- Assumptions:
- A retail space is provided at street level to achieve additional 4' of building height per 23.47A.012.A.1.a,
 - Exception 23.54.035.2.C.2.c will be used to request reduction of length of required loading berths to twenty-five (25) feet.



SITE PLAN

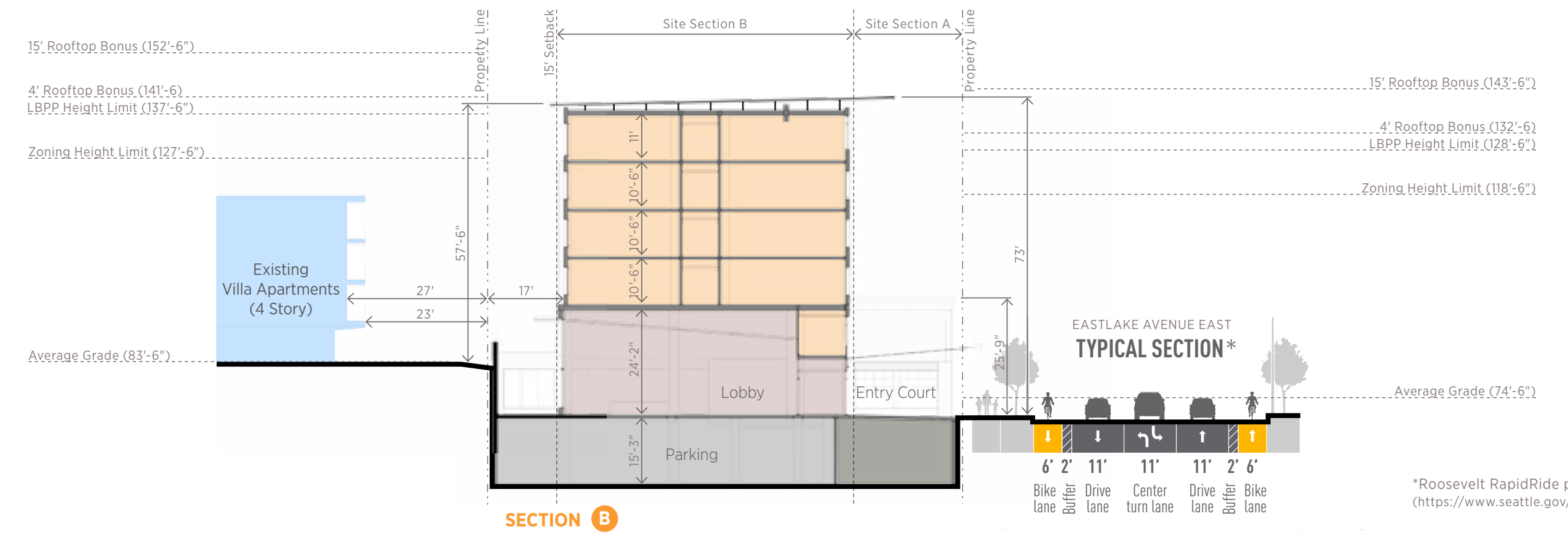
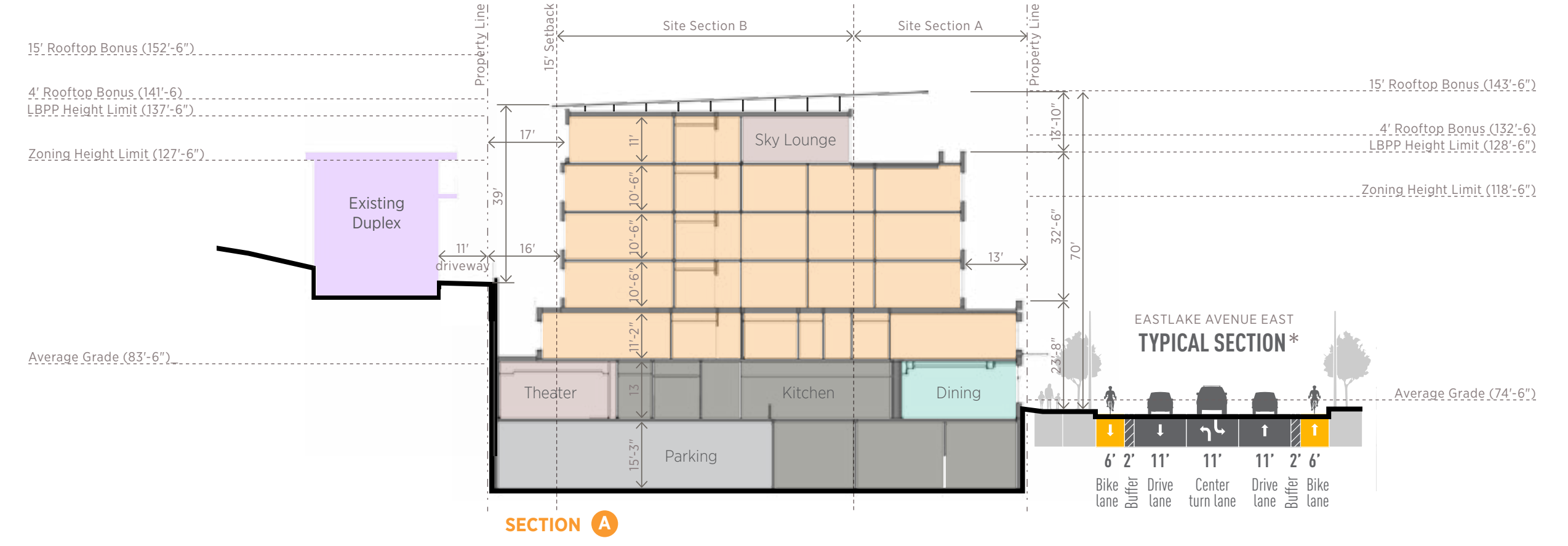
The site is steeply sloped with an elevation change of 35 feet from the lowest point at the site at the southwest corner to the highest point at the northeast corner. Along Eastlake Avenue E the elevation increases 9 feet. Along E Newton Street the elevation increases 26 feet with a 20% grade.

The proposal locates the active amenity spaces along the Eastlake Avenue E street frontage. Residential entry and retail coffee shop are concentrated to create a shared amenity court near the center of the site. Vehicle and service access is located at the southern most part of the site on Eastlake Avenue E to push the curb cut as far as possible from Eastlake and Newton intersection and utilize the slope of the site to seamlessly integrate the vehicular entry into the facade.

*Planning for Roosevelt RapidRide (formerly Roosevelt to Downtown High Capacity Transit) is currently underway along Eastlake Avenue E with service to begin 2021 (see proposed typical road section on page 9). Per direction from the Board at Early Design Guidance the project team has collaborated with SDOT and SDCI to design an Eastlake Avenue E access point that prioritizes bicycle and pedestrian safety while maintaining a pleasant streetscape for pedestrians. The design outcome of these efforts integrates into the existing Eastlake Avenue E condition while planning for the Roosevelt RapidRide improvements.



SITE SECTIONS



*Roosevelt RapidRide proposed typical road section (<https://www.seattle.gov/transportation/RooseveltHCT.htm>)

PROJECT VISION

PROJECT VISION

This project will be the first of its kind as a high-density, urban, senior living community pursuing Living Building Challenge Petal Certification along with the energy and water reduction requirements of the City of Seattle. The project will be an example of craftsmanship, lightness, and community, merging the philosophy of Aegis Living and the imperatives of the Living Building Challenge with the story and design concept of the rowing team and shell house.

ÆGIS LIVING STORY & PHILOSOPHY

Aegis Living has been providing assisted and memory care for 20 years developing homes for residents, not facilities. Design is 100% focused on providing comfort and functionality that mimic a quality home, with character that reflects that of the neighborhood.

Residents that live at Aegis need care, walking, eating, getting dressed, basic needs, memory; there are not independent living residents. The average age of our residents is 82 years, 80% come from a 3-5 mile radius around the community.

The philosophy of Aegis Living is to... "Strive to treat all people with the highest possible respect. This includes our residents, our guests, their families, our employees and our partners. In turn, they strive to help us craft, improve and provide the finest in senior living options available, emphasizing health, quality of life, well-being and community."

LIVING BUILDING CHALLENGE / PILOT PROGRAM

Through the Living Building Pilot Program, this project seeks to:

- Meet the following LBC Petals:
 - Place
 - Materials
 - Beauty
- Use 75 percent or less of the energy use targets established in the 2012 Seattle Energy Code's Target Performance Path (25 percent reduction).
- Use no potable water for nonpotable uses - as approved by Public Health - Seattle and King County.

The inspiration for this project is based in the spirit of the place - the Eastlake neighborhood, the proximity to Lake Union and the University of Washington, and the history of the UW Rowing Team, "The Boys in the Boat". The following design cues inform the design of the project.

ROWING & THE SHELL HOUSE

"Where is the spiritual value of rowing? ... The losing of self entirely to the cooperative efforts of the crew as a whole." George Yeoman Pocock

Rhythm and community, are critical principles of rowing that also inform the design of the shell house. The culminating rhythm of rowing, the 'swing' has been called the secret of successful crews, the fourth dimension of rowing, a pure pleasure they'll never forget. Rhythm is apparent in the lower floor of the shell house, the bays for shell storage. These bays provided for each crew also reflect community. Community and teamwork are the ultimate foundation of rowing, which is emphasized further in the upper level of the shell house where dining, workout, and viewing spaces are placed.

CRAFTSMANSHIP, MATERIALITY & INTENTION

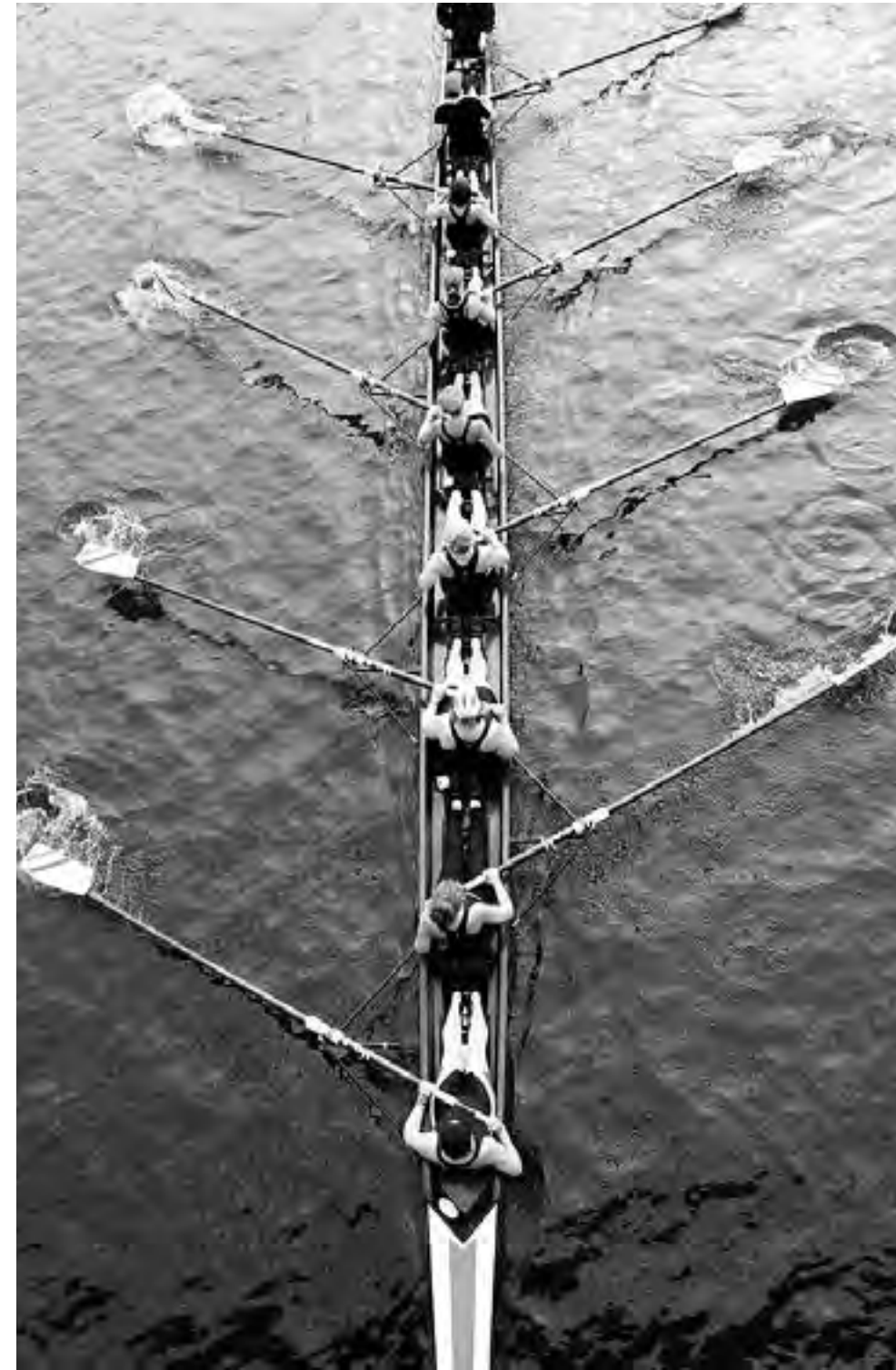
"When I build a shell I leave a piece of my heart in that shell, that's how I want you to leave a race." George Yeoman Pocock

The racing shell is a carefully crafted vessel, constructed using the highest quality materials with scrupulous attention to detail. Every part of the shell is critical, serving a function - nothing is extraneous.

SUSTAINABILITY, LIGHTNESS & SENIOR LIVING

"One of the first admonitions of a good rowing coach, after the fundamentals are over, is 'pull your own weight,' and the young oarsman does just that when he finds out that the boat goes better when he does. There is certainly a social implication here." George Yeoman Pocock

More and more seniors report being concerned with environmental issues, but sustainability doesn't start and stop with environmental impact. It also includes economic and social tenets such as enhancing sense of community, and creating comfortable and healthy indoor environments.



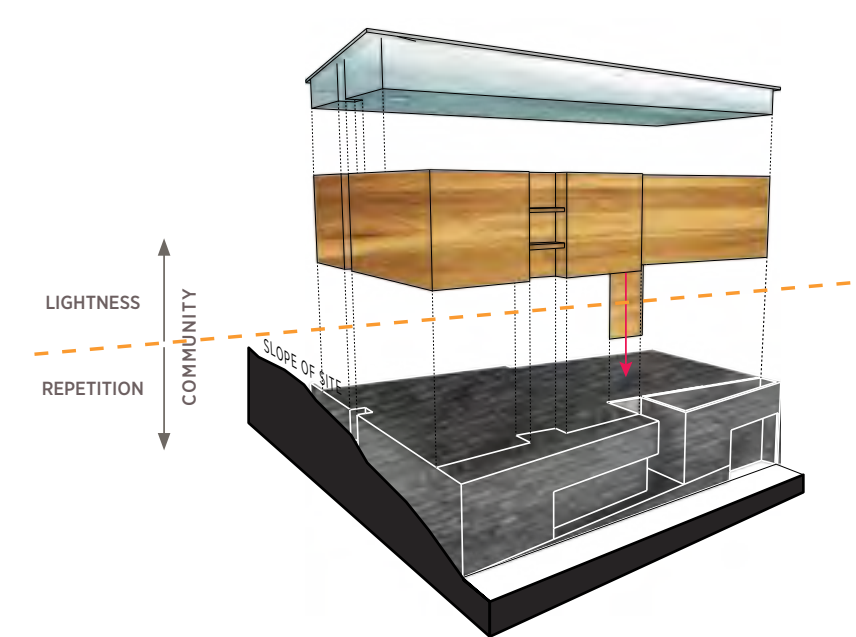
SHELLHOUSE PARTI STUDY



APPLICATION OF SHELLHOUSE PARTI



MATERIALITY BASED ON CONCEPT

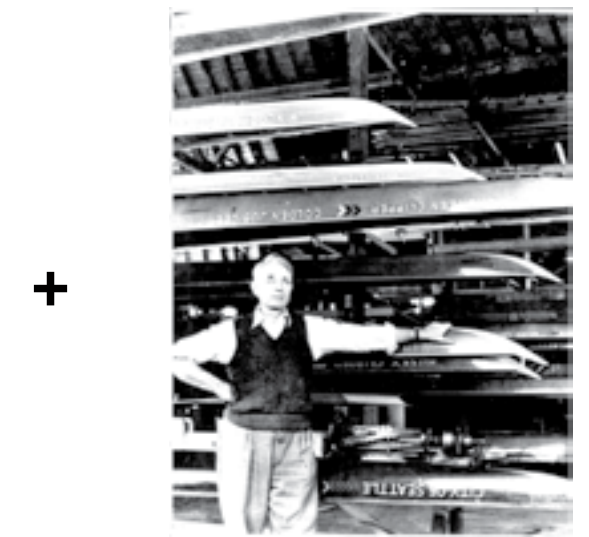


- GLASS**
 - Solar panels 'float' above building form
 - Curtain wall glazing allows maximum light and views for west-facing facade
 - Echoes shell house typology, where top floor windows provide ample view of water
- WOOD**
 - Natural material with regional sourcing
 - Provides a warm, residential aesthetic
 - Material precedent and tectonic details draw from the shell house and rowing shell
 - Wood continues to street level at entry and Queen Bee to warm entry court
- BRICK**
 - Familiar and welcoming texture at pedestrian levels with thoughtful details
 - Storefront glazing allows visual connection to sidewalk and street
 - Vernacular material of the earth designed with attention to detail and reflective of concept

DETAILING AND CONSTRUCTION



CRAFTSMANSHIP



BEAUTY & EFFICIENCY



PLACE

The intent of the **Place Petal** is to realign how people understand and relate to the natural environment that sustains us. The human built environment must reconnect with the deep story of place and the unique characteristics found in every community so that story can be honored, protected and enhanced.

WATER

The intent of the **Water Petal** is to realign how people use water and to redefine "waste" in the built environment so that water is respected as a precious resource. Scarcity of potable water is quickly becoming a serious issue as many countries around the world face severe shortages and compromised water quality.

ENERGY

The intent of the **Energy Petal** is to signal a new age of design, wherein the built environment relies solely on renewable forms of energy and operates year round in a save, pollution-free manner. In addition, it aims to prioritize reductions and optimization before technological solutions are applied to eliminate wasteful spending - of energy, resources, and dollars.

HEALTH + HAPPINESS

The intent of the **Health + Happiness Petal** is to focus on the most important environmental conditions that must be present to create robust, healthy spaces, rather than to address all of the potential ways that an interior environment could be compromised. By focusing attention on the major pathways of health, we can create environments designed to optimize our well-being.



MATERIALS

The intent of the **Materials Petal** is to help create a materials economy that is non-toxic, ecologically restorative, transparent, and socially equitable. Throughout their life cycle, building materials are responsible for many adverse environmental issues. The imperatives in this section aim to remove the worst known offending materials and practices and to drive business toward a truly responsible materials economy.

* PETALS SELECTED BY PROJECT TEAM

EQUITY

The intent of the **Equity Petal** is to transform development to foster a true, inclusive sense of community that is just and equitable regardless of an individual's background, age, class, race, gender, or sexual orientation.



BEAUTY

The intent of the **Beauty Petal** is to recognize the need for beauty as a precursor to caring enough to preserve, conserve, and serve the greater good.

01

LIMITS TO GROWTH

02

URBAN AGRICULTURE

03

HABITAT EXCHANGE

04

HUMAN-POWERED LIVING

CITY OF SEATTLE REQUIREMENTS:

If approved by Public Health - Seattle and King County - no potable water is used for nonpotable uses.

CITY OF SEATTLE REQUIREMENTS:

75% of less of the energy use targets established in the 2012 Seattle Energy Code's Target Performance Path (25% reduction).

10

RED LIST

11

EMBODIED CARBON FOOTPRINT

12

RESPONSIBLE INDUSTRY

13

LIVING ECONOMY SOURCING

14

NET POSITIVE WASTE

19

BEAUTY + SPIRIT

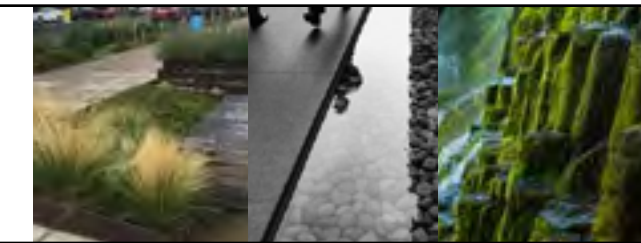
20

INSPIRATION + EDUCATION

Place: pedestrian and resident experience



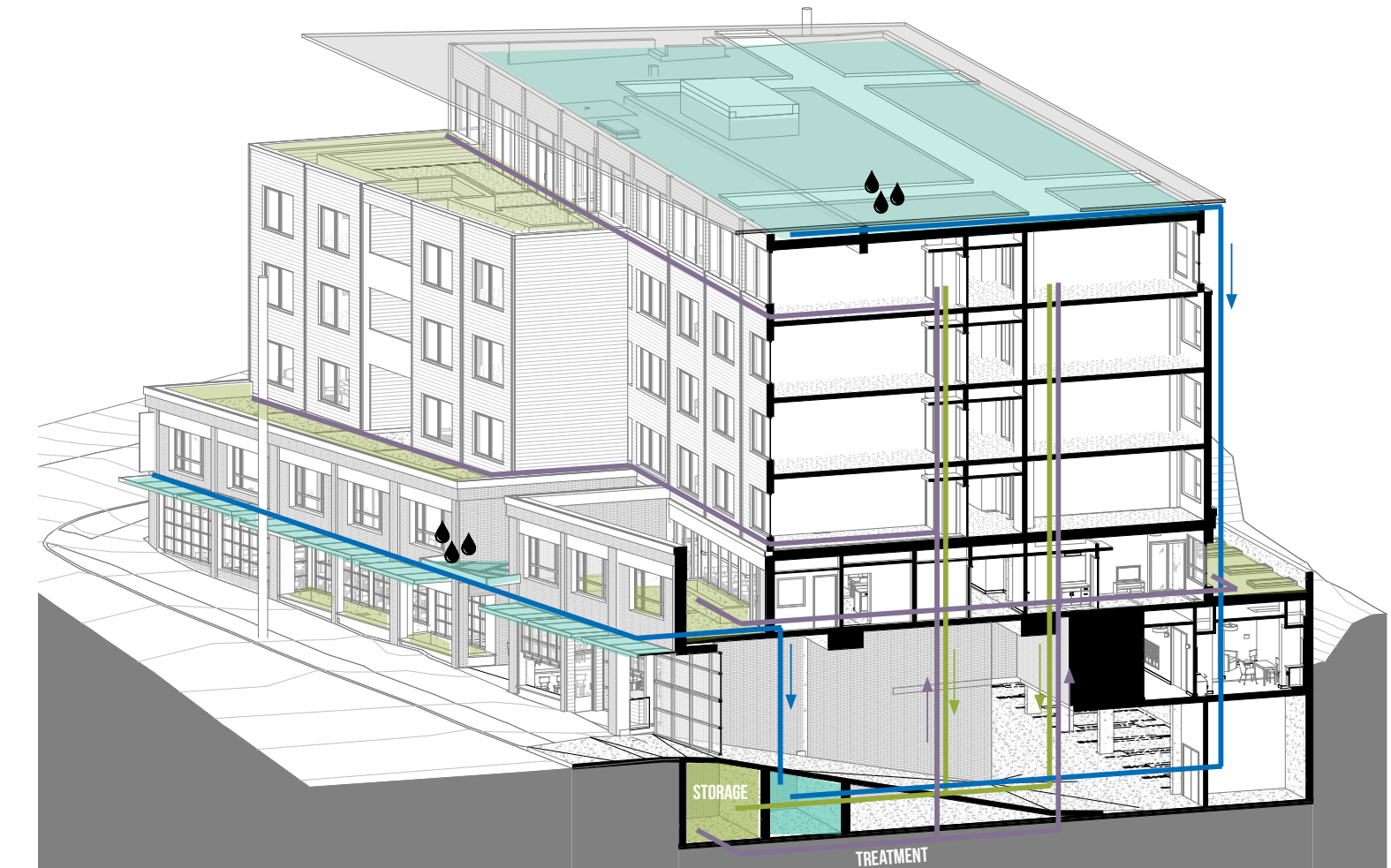
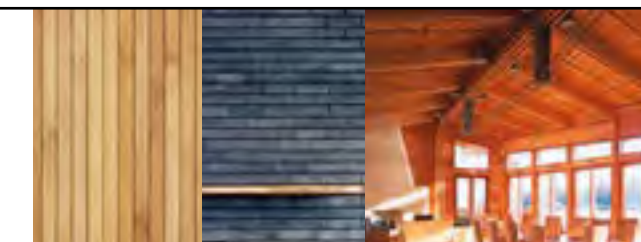
Water: celebrate water story



Energy: solar array as concept



Materials & Beauty: health, regionalism, and inspiration



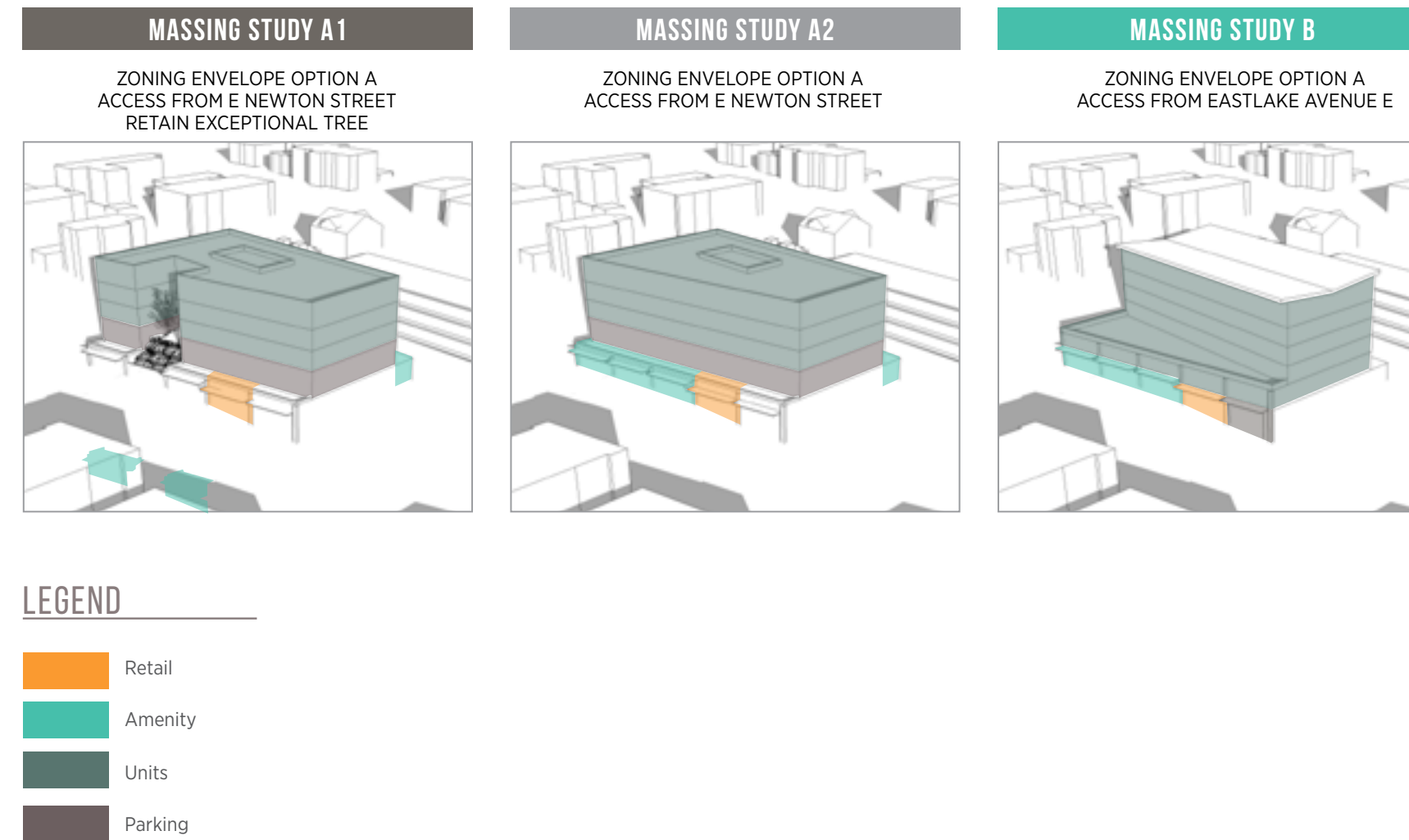
WATER STORY

To meet the stringent Living Building Pilot Program energy reduction goals, the project has incorporated intensive energy conservation measures throughout. A high performance envelope, high efficiency systems and fixtures, and a focus on operational energy reduction combine to reduce energy demand. An 11,000 square foot 111 kW high efficiency array provides the additional energy needed to meet LBPP target energy reduction.

ENERGY STORY

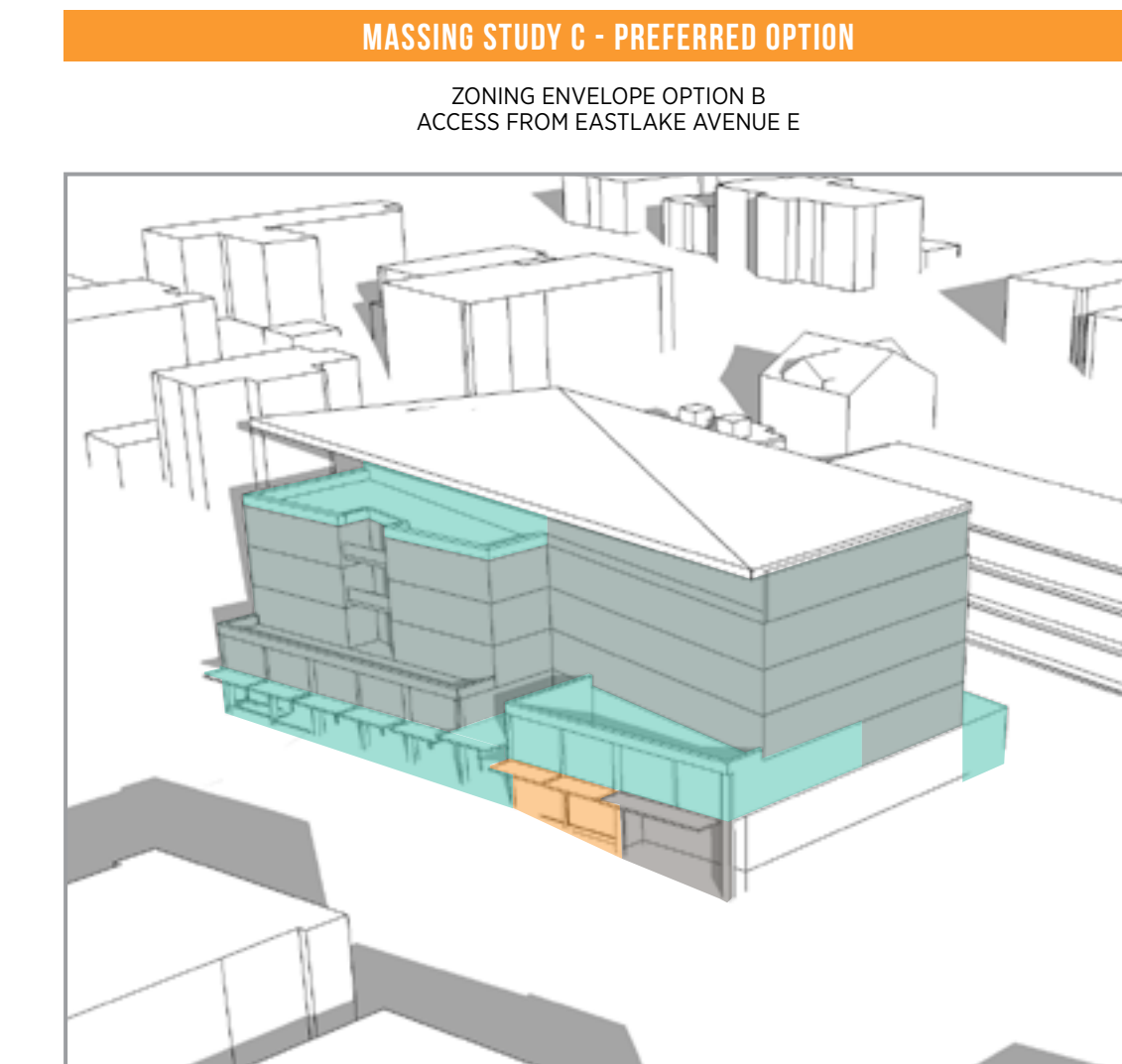
The Living Building Pilot Program requires that projects use no potable water for non-potable uses as approved by DOH and King County Public Health officials. With the exception of the memory care floor, all non-potable water needs in this community are supplied by on-site recycled greywater. These uses include all irrigation and toilet flushing. Rainwater is captured and stored in a cistern below grade (in addition to the greywater cistern) as backup water supply. See pages 22-23.

EDG SUMMARY & GUIDANCE **RESPONSE**



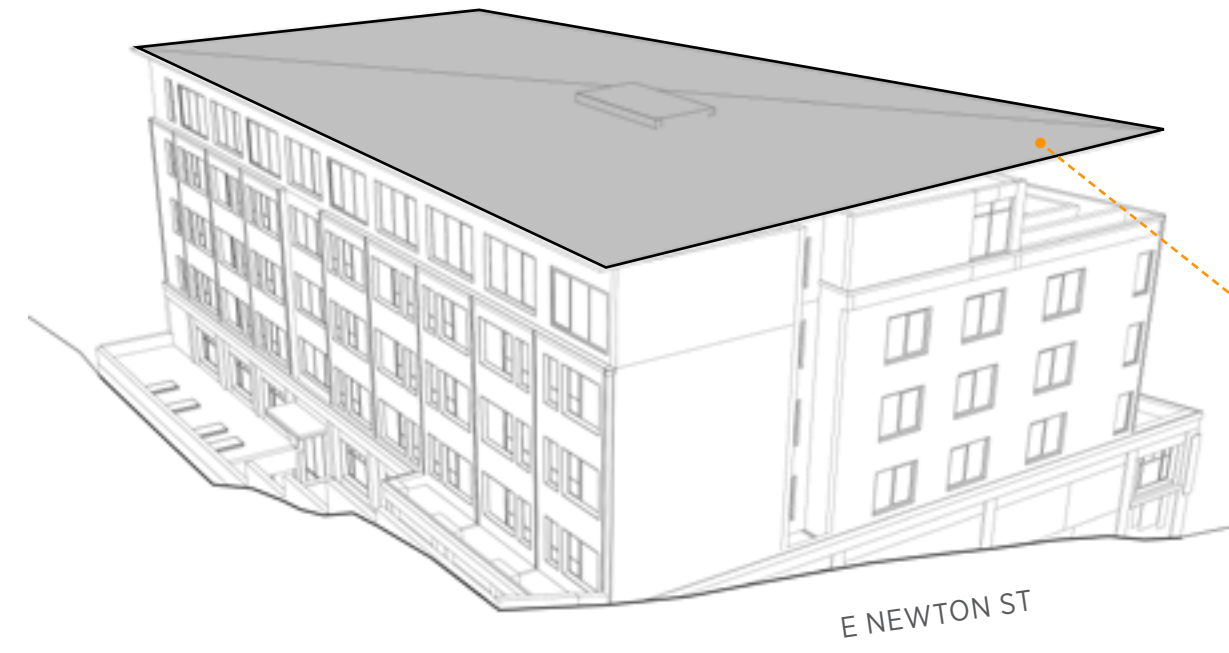
SUPPORTED BY EDG

The majority of the Board preferred Option C but also felt additional design efforts were necessary to make this scheme the most successful.



ITEM	EDG SUMMARY	RESPONSE
1. Architectural Concept		
1a. Roof Size:	<p>1 Echoing public comment, the Board expressed concern regarding the roof form, size, and location. At the Recommendation phase the Board would like to better understand the minimum roof size necessary to meet LBC requirements and that the application should research alternative energy strategies to minimize roof size (CS1-A, CS2-D).</p>	<p>Project team has held three Energy Summits with City of Seattle, one with the International Living Future Institute (ILFI) in attendance, to identify energy target required under the Living Building Pilot Program (LBPP). Both parties agree that the project has integrated nearly every strategy possible to reduce energy use. In addition to utilizing Passive House envelope strategies, high-efficiency equipments and fixtures, and optimizing project operations, continued energy analysis conducted per project MEP Engineer (PAE) refines impact of energy conservation measures (ECMs) on the project in order to minimize roof size needed to meet energy reduction requirement.</p> <p>The following design guidelines will be better supported: CS1-A, CS2-D</p>
1b. Roof Form and Location:	<p>2 The Board supported the low point of the sloped roof to the east, adjacent to low rise residential uses. In agreement with public comment, the Board noted that the roof elevation is a critical elevation and directed the applicant study the roof form and location to minimize impacts to the E Newton right-of-way and balance impacts across the site (CS1-A, CS2-D).</p>	<p>SUPPORTED BY EDG</p> <p>In response to EDG comments, the project team has studied form and location of the solar array. Once the team was able to minimize the area of the array to the extent possible (see 1a.), the team explored multiple massing options. We were able to minimize the overhang of the array into the E Newton St right-of-way by locating the bulk of the massing toward the urban street (Eastlake Avenue E) while maintaining the low point of the solar array toward the residential zone to the east.</p> <p>The following design guidelines will be better supported: CS2-C, CS2-A, CS2-D, DC2-A</p>
1c. Newton Facade at Eastlake corner:	<p>3 The Board expressed concern regarding the treatment of the Newton Avenue facade near the corner of Eastlake. At the Recommendation phase the Board would like to see additional fenestration, at all levels, composed to accentuate the corner of the building and along the Newton facade (CS2-C, PL3-C, DC2-C).</p>	<p>As asked by the Board at EDG, the project team has addressed the corner of Eastlake Ave E and E Newton St to accentuate the corner of the building. Due to the complex nature of the site - in particular, the 20% grade on E Newton St - and the goal to maintain privacy to the extent possible for the neighbor to the north fenestration was not the appropriate response at all levels. In these cases, the project team integrated artwork to accentuate the corner.</p> <p>The following design guidelines will be better supported: CS2-B, CS2-C, CS2-D, CS3-B, DC2-C</p>
2. Streetscape		
2a. Ground Level Uses:	<p>4 The Board expressed concern regarding the location of ground level uses. The Board felt the retail space was hidden at the center of the site, and the dining space at the corner would be less engaging and not activated throughout large portions of the day. The Board felt strongly that the retail space should be relocated to the corner of Newton and Eastlake Avenue E to better integrate with the neighborhood (PL3-C, DC1-A).</p>	<p>Per EDG recommendation, the team studied alternative ground level use options. As a summary of this study, it was found that by moving the retail space to the corner will have more disadvantages due to the complex nature of the site compared to the preferred Scheme C. We discovered in this study that Scheme C best engages the street edge through a shift in massing at the corner, locating the building's most active uses along Eastlake Avenue E, locating the retail nearest the nearby bus stop at grade with the adjacent sidewalk, allows the retail space to be active and transparent on two sides, provides the entry courtyard to be shared by both residents and the public, and provides the residents who call this building home 24 hours per day with the most street frontage and daylight possible.</p> <p>The following design guidelines will be better supported: PL1-A, PL1-B, PL3-C, PL4-C, DC1-A</p>
2b. Vehicle Circulation Patterns and Safety:	<p>At the Recommendation phase, the Board requested additional information about the anticipated circulation patterns of vehicles coming to and from the site. The Board directed the applicant to work with SDOT to design a garage entry that maximizes pedestrian, bicycle, and vehicle safety while minimizing vehicular circulation in the adjacent neighborhood (DC1-B).</p>	<p>SUPPORTED BY EDG</p> <p>As requested, the project team has worked with SDOT to design a garage entry that both maximizes safety for all modes while minimizing vehicular trips in the adjacent neighborhood including transparency, increased sidewalk width, and pedestrian warning devices.</p> <p>The following design guidelines will be better supported: DC1-B</p>

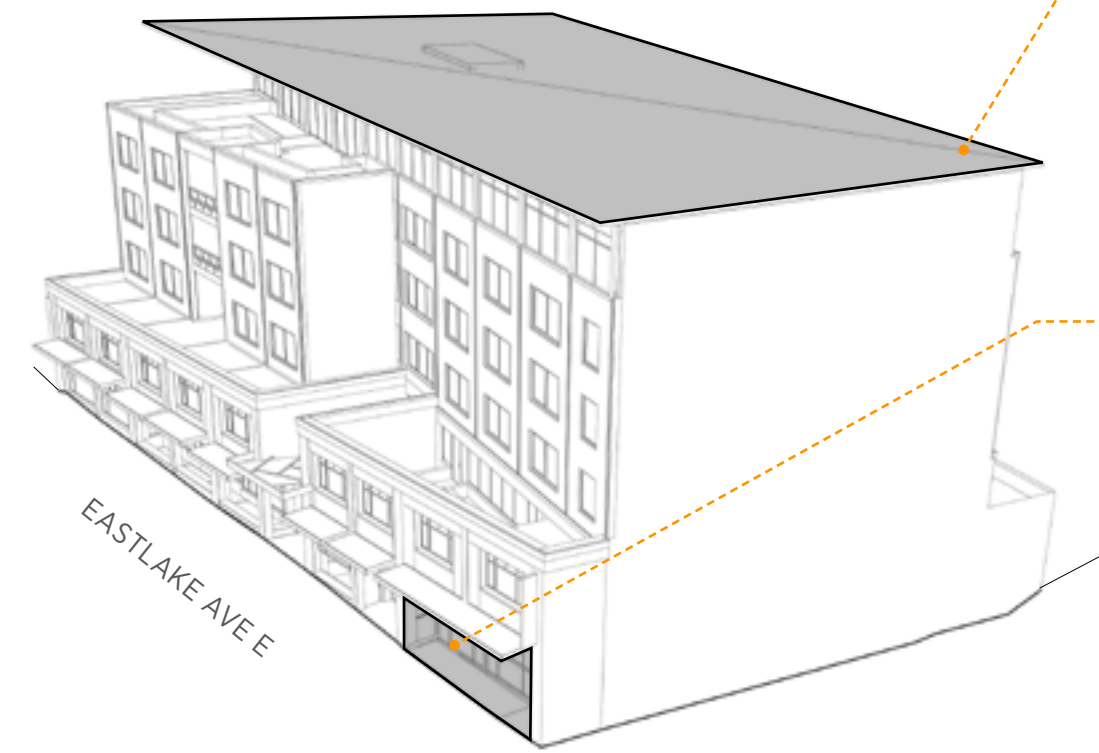
ITEM	EDG SUMMARY	RESPONSE
2c. Pedestrian Experience at Garage Access:	<p>5 At the Recommendation phase, the Board would like more detail demonstrating how the garage access is designed to minimize the impact to the pedestrian streetscape (DC1-B).</p>	<p>SUPPORTED BY EDG</p> <p>The project team has studied the streetscape to ensure seamless integration of the garage access with the design concept of the project to contribute to a comfortable, safe pedestrian experience. In addition to the same awning treatment, the design of the garage door matches the concept used at the retail and residential ground floor glazing.</p> <p>The following design guidelines will be better supported: PL2-C, DC1-B, DC2-B</p>
3. East Facade and Setback		
3a. Privacy Impact:	<p>6 At the Recommendation phase, the Board noted public comment and requested additional detail demonstrating how the east facade has been designed to minimize privacy impacts to adjacent residential units (CS2-D5).</p>	<p>The project team has studied the east facade and setback focusing on location and scale of fenestration, in addition to landscaping opportunities to minimize privacy impacts to adjacent residential uses.</p> <p>The following design guidelines will be better supported: CS1-E, CS2-D5</p>
3b. Roof at East Facade:	<p>In response to public comment, the Board noted that the point of the sloped roof should be maintained to the east to minimize height impacts.</p>	<p>SUPPORTED BY EDG</p> <p>Per EDG recommendation, the elevation of the east point of the roof has been maintained along the entire building facade to minimize height impacts.</p>
3c. Setback buffer:	<p>7 At the Recommendation Meeting the Board would like additional detail demonstrating how the 15-foot setback will be treated to provide a successful transition and buffer between the proposed building and existing residential use. The Board noted that it would be great for the proposed water features to be visible to adjacent uses (CS2-D).</p>	<p>As requested at EDG, additional detail demonstrating the treatment of the east facade and setback buffer are presented in this packet. In addition to maintaining the lowest elevation of the solar array at the east facade adjacent to residential units, the project team has focused on facade composition and detailing to reduce the overall scale of the building. Scale of fenestration and material selection were focused on maintaining residential attributes. Landscaping is integrated to enhance the buffer between properties and minimize privacy impacts.</p> <p>The following design guidelines will be better supported: CS1-E, CS2-D, DC2-B</p>
4. Materials		
4a. Fenestration Studies:	<p>8 At the Recommendation phase the Board requested fenestration studies demonstrating how the preferred proposal was developed (DC1-A, DC2).</p>	<p>Fenestration studies have been provided. The preferred option combines fenestration scale and composition to minimize privacy impacts and maintain residential attributes adjacent to existing residential units.</p> <p>The following design guidelines will be better supported: CS2-D, DC2-B</p>
3b. Lighting Plan:	<p>The Board noted that multiple public comments expressed concern regarding off site light glare. The Board directed the applicant to work with SDCI to develop an appropriate lighting plan that balances the need for safety while taking care to avoid light impacts to adjacent use (DC4-C).</p>	<p>Lighting has been provided at street and outdoor public spaces to provide a safe environment for pedestrians and residents, without contributing to light pollution and/or glare to adjacent neighbors. Sconces and down-lighting integrated into awnings is provided at the street level. Sconces are provided at sixth floor amenity deck for residents. No uplighting is provided.</p> <p>The following design guidelines will be better supported: PL2-B, DC4-C</p>



ARCHITECTURAL CONCEPT

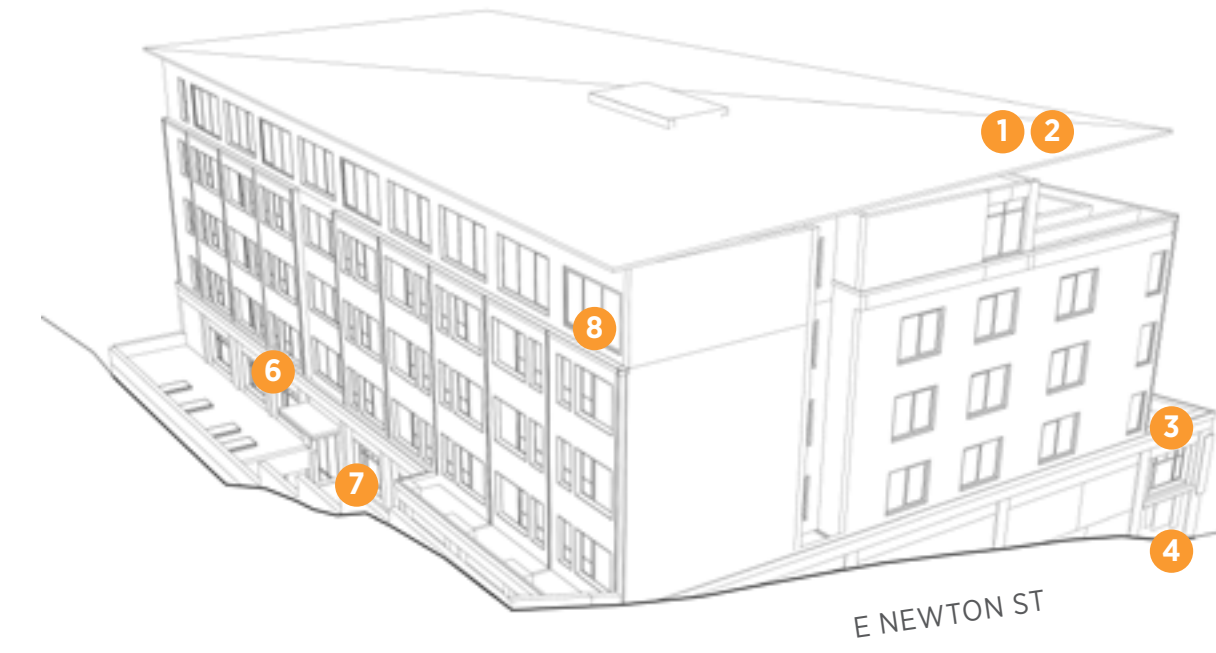
SOLAR ARRAY OVERHANGS AS NEEDED TO ACHIEVE LBC

LOW POINT OF SOLAR ARRAY TO EAST



STREETSCAPE

GARAGE ACCESS FROM EASTLAKE AVE E



ARCHITECTURAL CONCEPT

- 1 Demonstrate roof size requirements
- 2 Study roof form and location to minimize impact on Newton
- 3 Additional fenestration to accentuate corner of Eastlake & Newton

STREETSCAPE

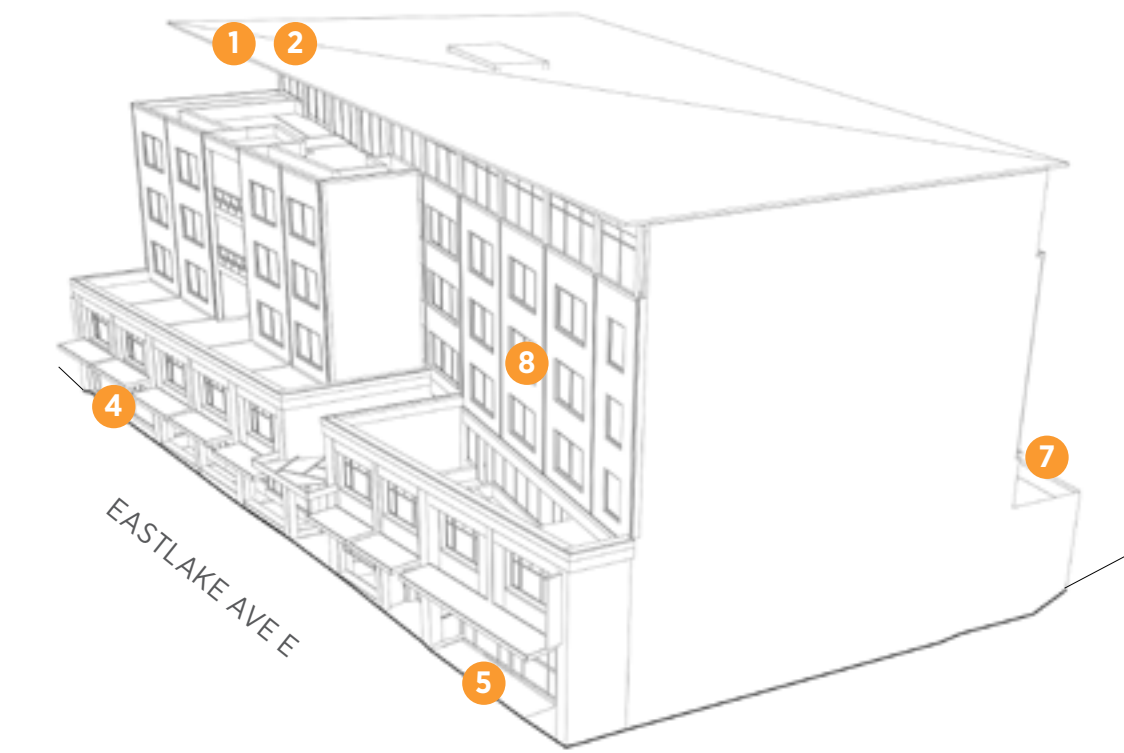
- 4 Explore retail space at corner of Eastlake & Newton
- 5 Garage access design to minimize pedestrian streetscape impact

EAST FACADE AND SETBACK

- 6 East facade design to minimize privacy impacts to adjacent units
- 7 15-foot setback treatment to provide a successful transition

MATERIALS

- 8 Fenestration studies



ARCHITECTURAL CONCEPT



CORNER OF EASTLAKE & NEWTON

1 ROOF SIZE

DRB RECOMMENDATION

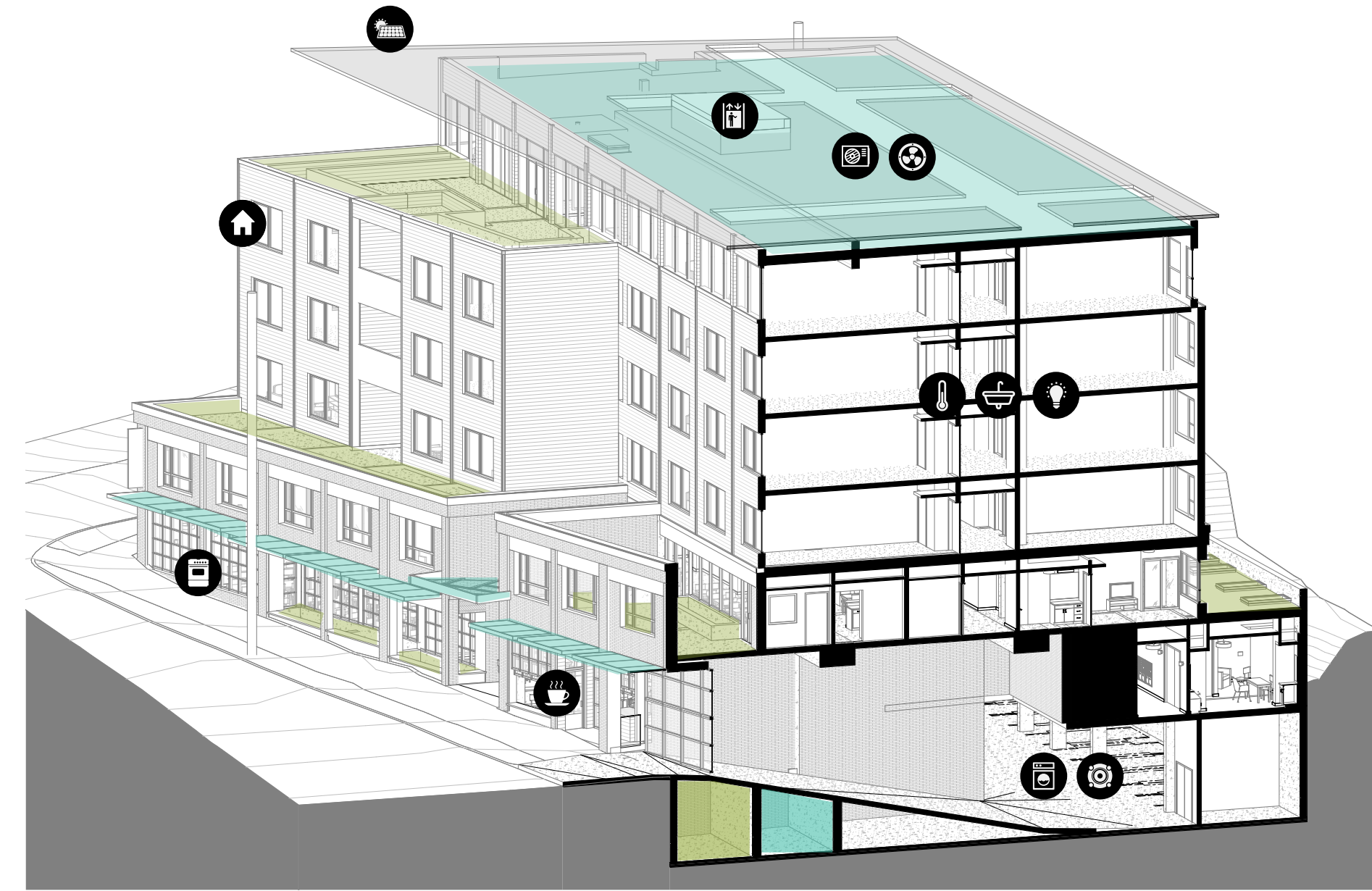
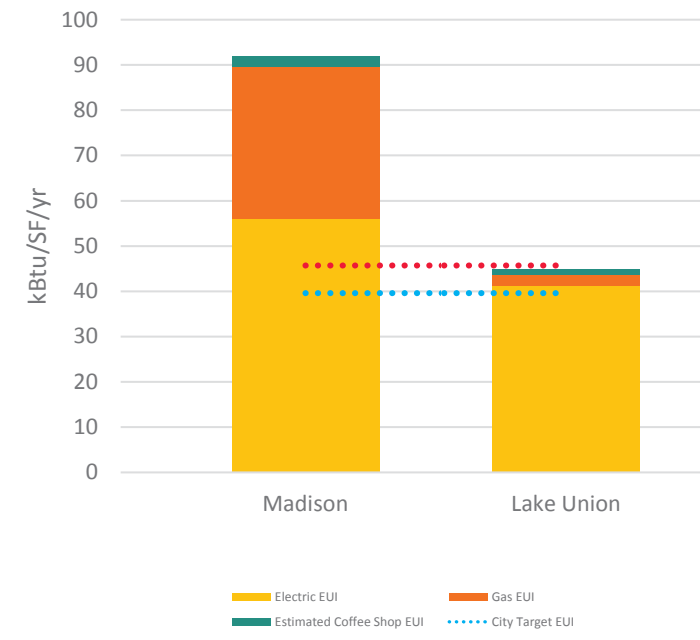
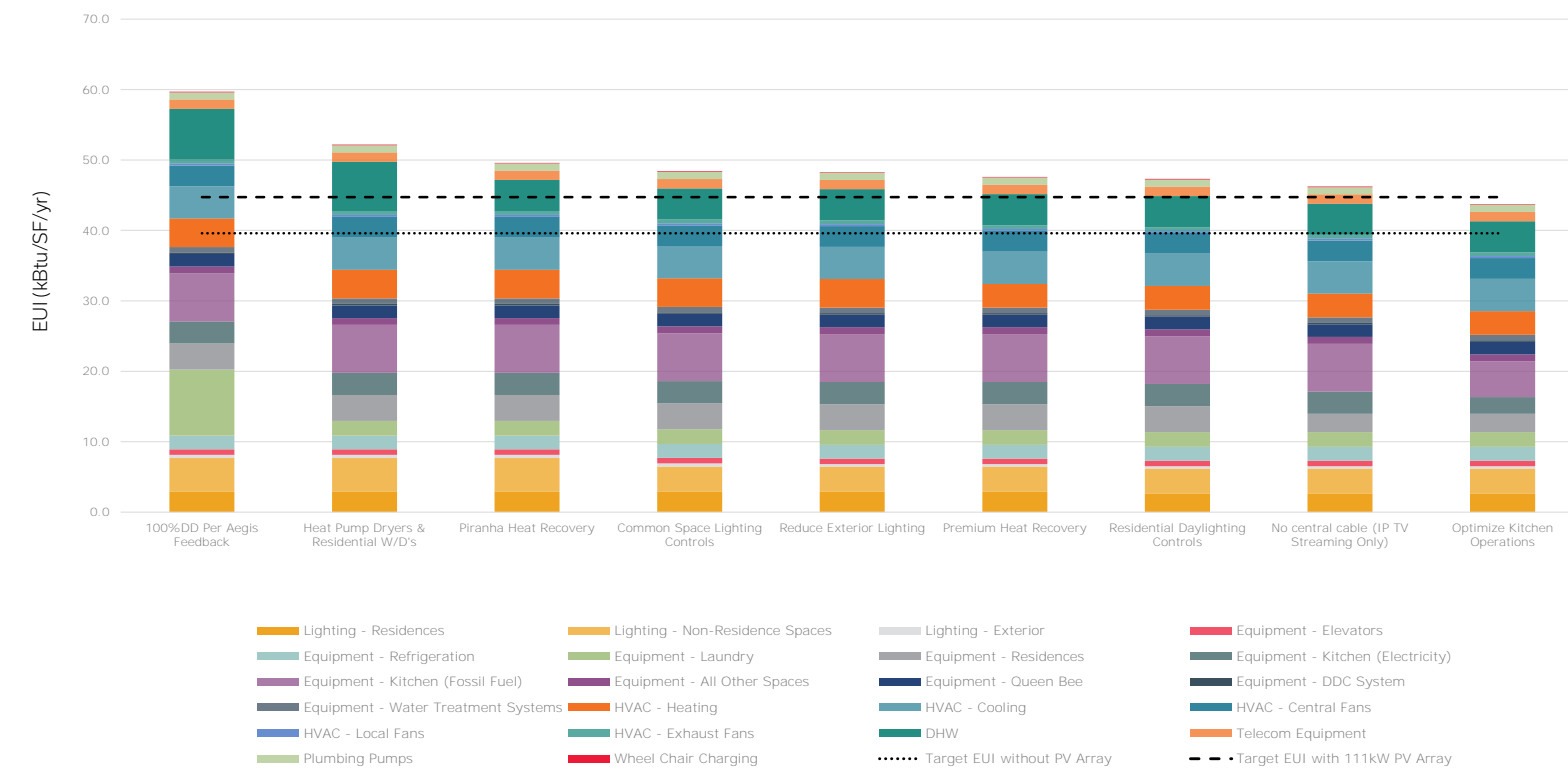
Echoing public comment, the Board expressed concern regarding the roof form, size, and location. At the Recommendation phase the Board would like to better understand the minimum roof size necessary to meet LBC requirements and that the application should research alternative energy strategies to minimize roof size (CS1-A, CS2-D).

RESPONSE

Project team has held three Energy Summits with City of Seattle, one with the International Living Future Institute (ILFI) in attendance, to identify energy target required under the Living Building Pilot Program (LBPP). Both parties agree that the project has integrated nearly every strategy possible to reduce energy use. In addition to utilizing Passive House envelope strategies, high-efficiency equipments and fixtures, and optimizing project operations, continued energy analysis conducted per project MEP Engineer (PAE) refines impact of energy conservation measures (ECMs) on the project in order to minimize roof size needed to meet energy reduction requirement.

The following design guidelines will be better supported:

- CS1-A.1 Energy Choices
- CS2-D.2 Existing Site Features



ENERGY STORY

To meet the stringent Living Building Pilot Program energy reduction goals, the project has incorporated intensive energy conservation measures throughout. A high performance envelope, high efficiency systems and fixtures, and a focus on operational energy reduction combine to reduce energy demand. An 11,000 square foot 111 kW high efficiency array provides the additional energy needed to meet LBPP target energy reduction.

- 111 kW high efficiency array
- Traction; regenerative drive; LED cab lights with auto shut-off
- Variable frequency; garage fans turn down with CO & NO2 sensors
- Demand control ventilation senses cooking activity to vary exhaust rates
- Passive house envelope strategies
- Energy and water efficient appliances; optimized kitchen operations to reduce energy consumption
- Variable refrigerant flow heating and cooling
- Heat pump water heaters; Piranha wastewater heat recovery
- LED lighting; daylighting controls; exterior light photosensors
- Commercial heat pump dryers; residential Energy Star washer and heat pump dryers
- Direct digital control building system metering
- Energy and water efficient appliances and fixtures

2 ROOF FORM & LOCATION

DRB RECOMMENDATION

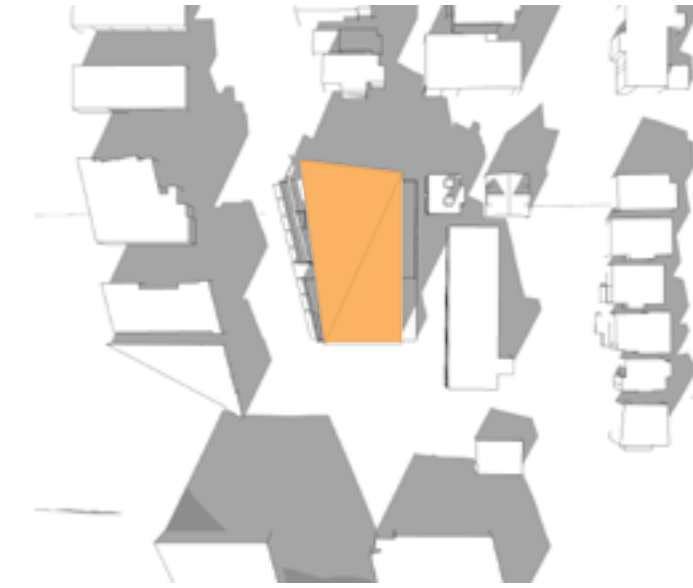
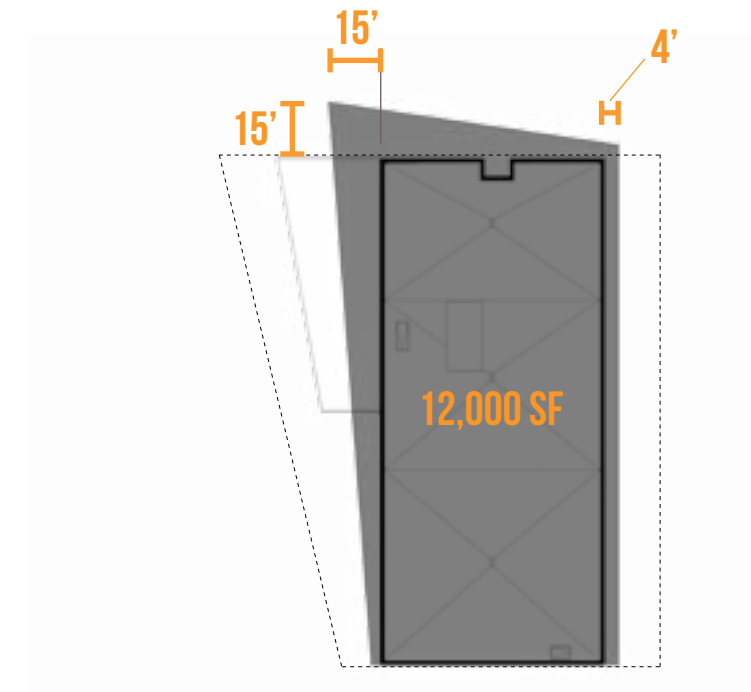
The Board supported the low point of the sloped roof to the east, adjacent to lowrise residential uses. In agreement with public comment, the Board noted that the roof elevation is a critical elevation and directed the applicant study the roof form and location to minimize impacts to the E Newton right-of-way and balance impacts across the site (CS1-A, CS2-D).

RESPONSE

In response to EDG comments, the project team has studied form and location of the solar array. Once the team was able to minimize the area of the array to the extent possible (see 1a.), the team explored multiple massing options. We were able to minimize the overhang of the array into the E Newton St right-of-way by locating the bulk of the massing toward the urban street (Eastlake Avenue E) while maintaining the low point of the solar array toward the residential zone to the east.

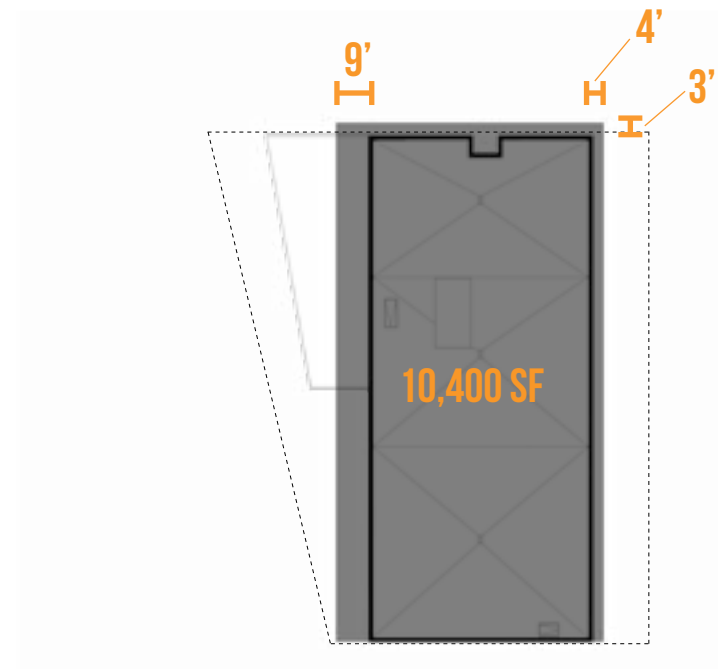
The following design guidelines will be better supported:

- CS1-A.1 Energy Choices
- CS2-C.1 Corner Sites
- CS2-D.5 Respect for Adjacent Sites



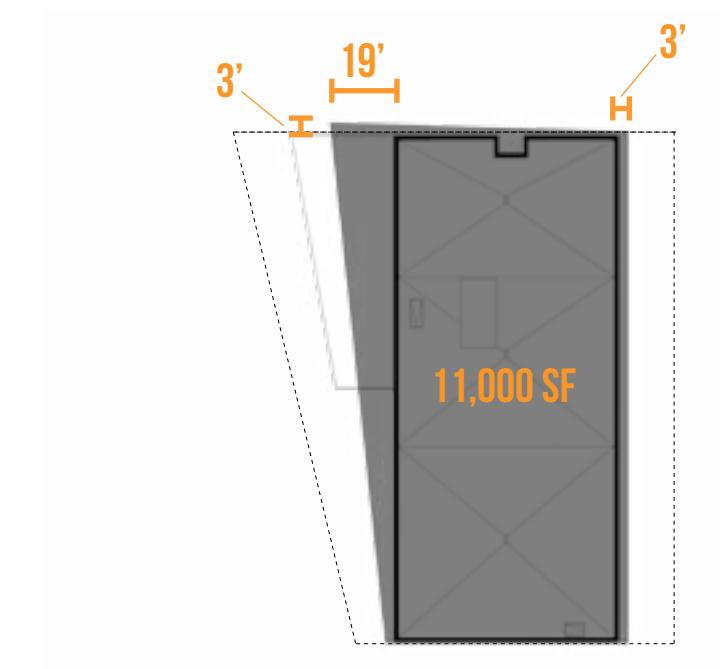
Massing Study A (EDG)

- Solar array area: 12,000 square feet.
- Proposed EDG massing composed of equal 15-foot offsets to the north and west of sixth floor exterior wall.



Massing Study B

- Solar array overhang into E Newton Street right-of-way reduced from 15-foot to 3-foot and additional area was concentrated toward the west beginning from the property line at the southwest corner and projected north.
- Further project development including more extensive engineering and introduction of increased Energy Conservation Measures reduced solar array area required to 11,000 square feet. Area provided does not meet area needed to meet project energy goals.
- The low point of the solar array was maintained at the east adjacent to existing residential units.



Massing Study C (Preferred Option)

- Further project development including more extensive engineering and introduction of increased Energy Conservation Measures reduced solar array area required to 11,000 square feet.
- Solar array overhang into E Newton Street right-of-way reduced from 15-foot to 3-foot and additional area was concentrated toward the west, locating the bulk of the massing toward the urban street (Eastlake Avenue E) and at the corner of the site to emphasize the unique shape of the site.
- The low point of the solar array was maintained at the east adjacent to existing residential units.
- Fascia was reduced to minimize the scale of the array.



At EDG - Solar Array Form & Location

- Estimated solar array area required at EDG: 12,000 square feet.
- Proposed EDG massing composed of equal 10-foot offsets to the north and west of sixth floor exterior wall.



Revised at DRB - Solar Array Form & Location

- Further project development including more extensive engineering and introduction of increased Energy Conservation Measures reduced solar array area required to 10,000 square feet.
- Solar array overhang into E Newton Street right-of-way reduced from 10-foot to 3-foot and additional area required was concentrated toward the west, locating the buld of the massing toward the urban street (Eastlake Avenue E).
- The low point of the solar array was maintained at the east adjacent to existing residential units.
- Fascia was reduced to minimize the scale of the array.



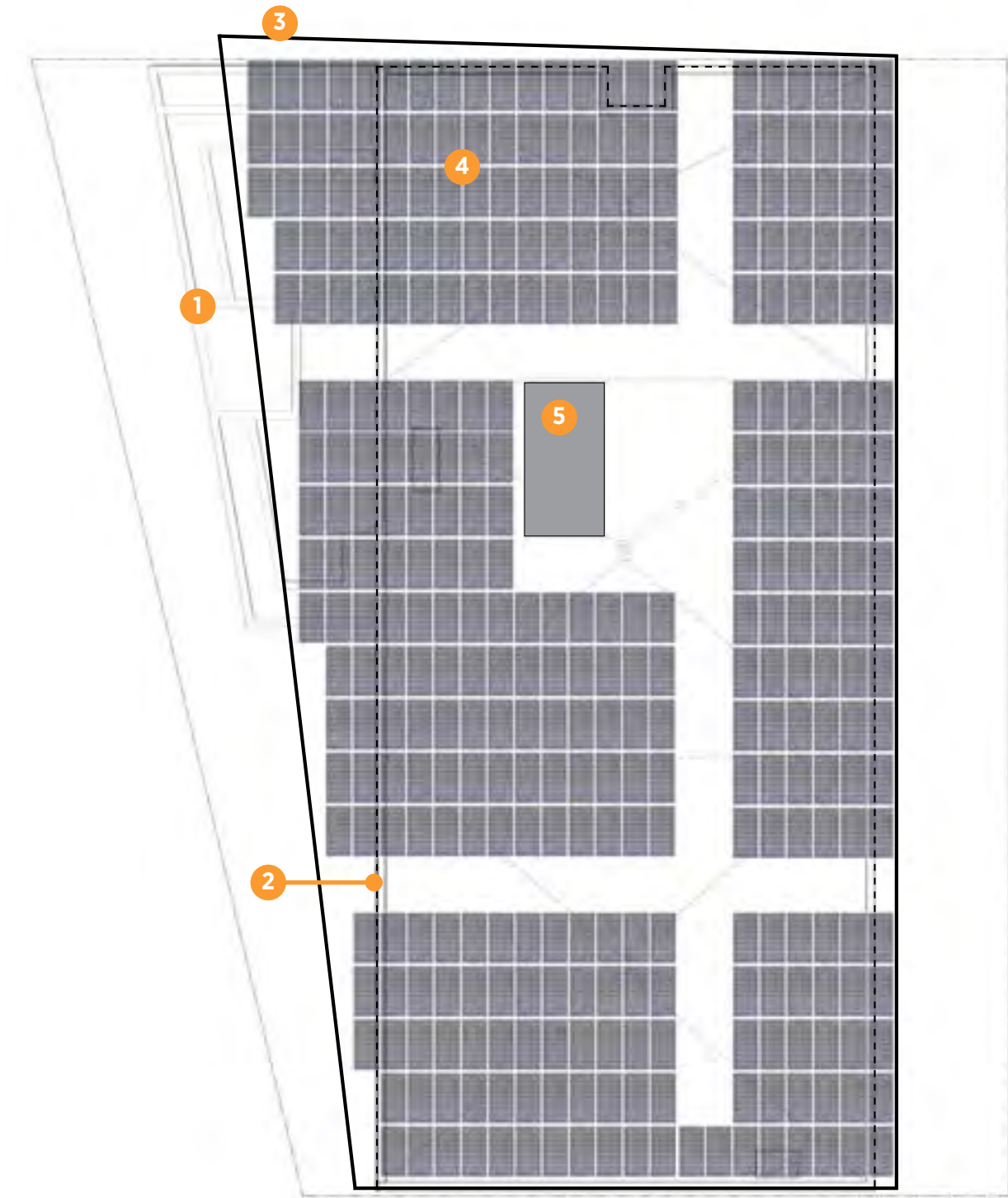
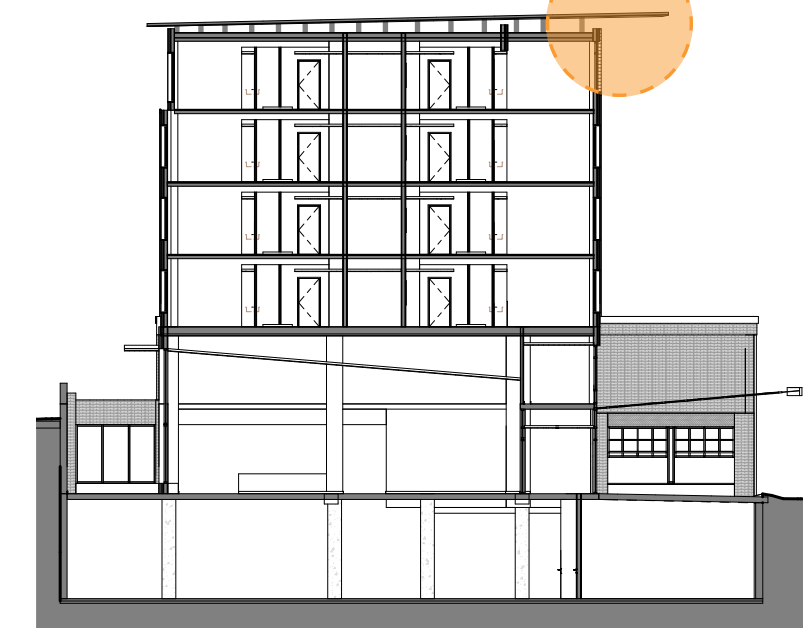
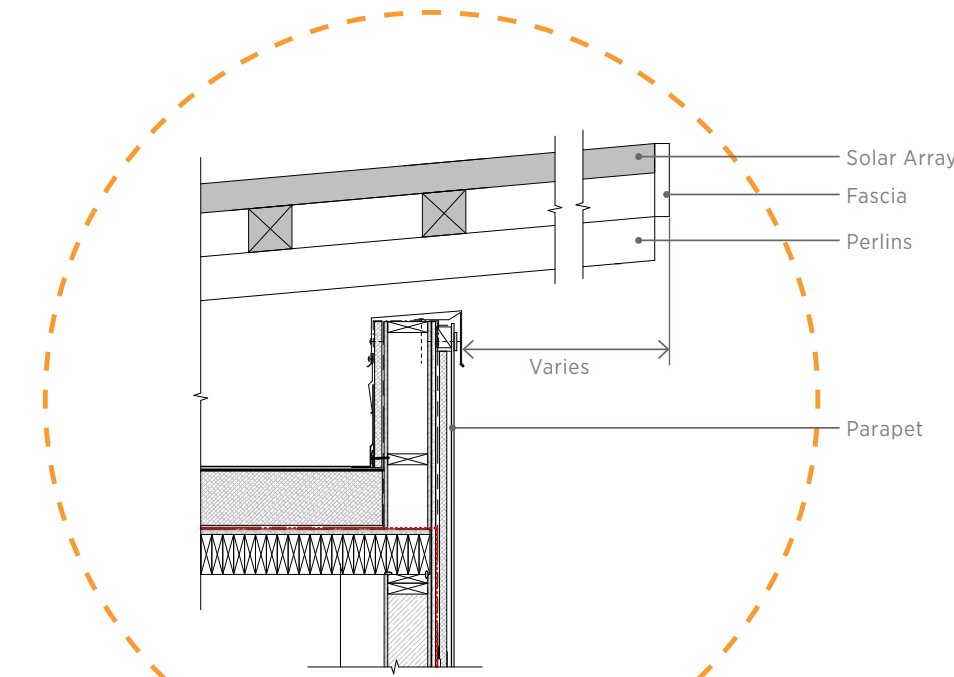
Concept: Shellhouse roof forms



Concept: Bullitt Center PV array superstructure



4



- 1 Sky terrace below
- 2 Line of roof below
- 3 Solar array fascia
- 4 PV panels
- 5 Elevator overrun

3 NEWTON FACADE AT EASTLAKE CORNER

DRB RECOMMENDATION

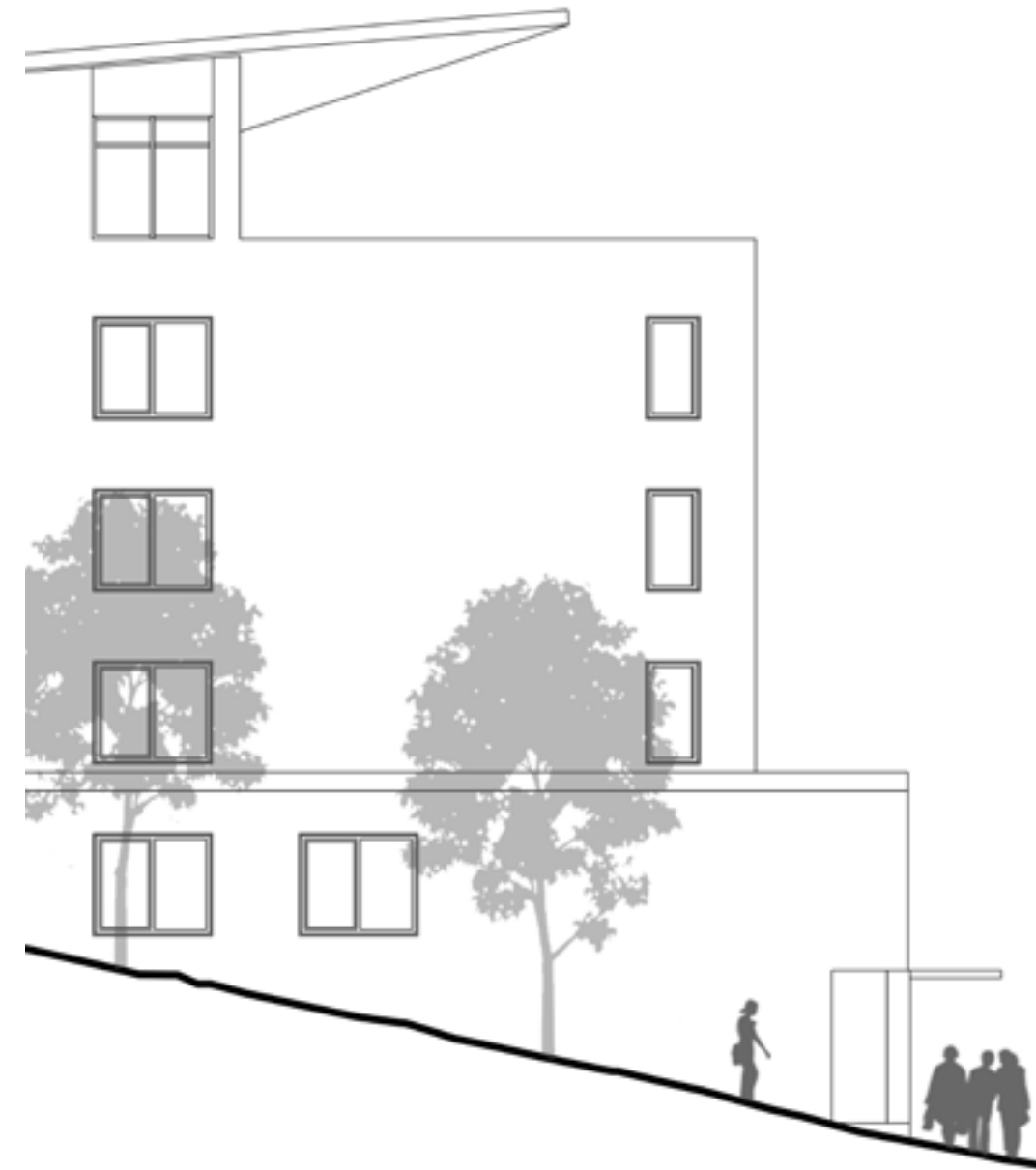
The Board expressed concern regarding the treatment of the Newton Avenue facade near the corner of Eastlake. At the Recommendation phase the Board would like to see additional fenestration, at all levels, composed to accentuate the corner of the building and along the Newton facade (CS2-C, PL3-C, DC2-C).

RESPONSE

As asked by the Board at EDG, the project team has addressed the corner of Eastlake Ave E and E Newton St to accentuate the corner of the building. Due to the complex nature of the site - in particular, the 20% grade on E Newton St - and the goal to maintain privacy to the extent possible for the neighbor to the north, fenestration was not the appropriate response at all levels. In these cases, the project team integrated artwork and brick detailing to accentuate the corner.

The following design guidelines will be better supported:

- CS2-B.2 Connection to the Street
- CS2-C.1 Corner Sites
- CS2-D.2 Existing Site Features
- CS3-B.1 Placemaking
- DC2-C.1 Visual Depth and Interest



Newton Facade at Eastlake corner: EDG



Newton Facade at Eastlake corner: DRB



DESIGN STRATEGIES

- 1 Added more glazing at upper residential levels
- 2 Protected privacy of residents at memory care level
- 3 Added brick detail and planting for visual interest
- 4 Added glazing at corner
- 5 Added building info plaques where glazing not feasible
- 6 Pushed dining area further out toward corner
- 7 Enhanced brick detailing around corner at all sides

STREETSCAPE



STREET FRONTAGE AT EASTLAKE AVE E

4 GROUND LEVEL USES

DRB RECOMMENDATION

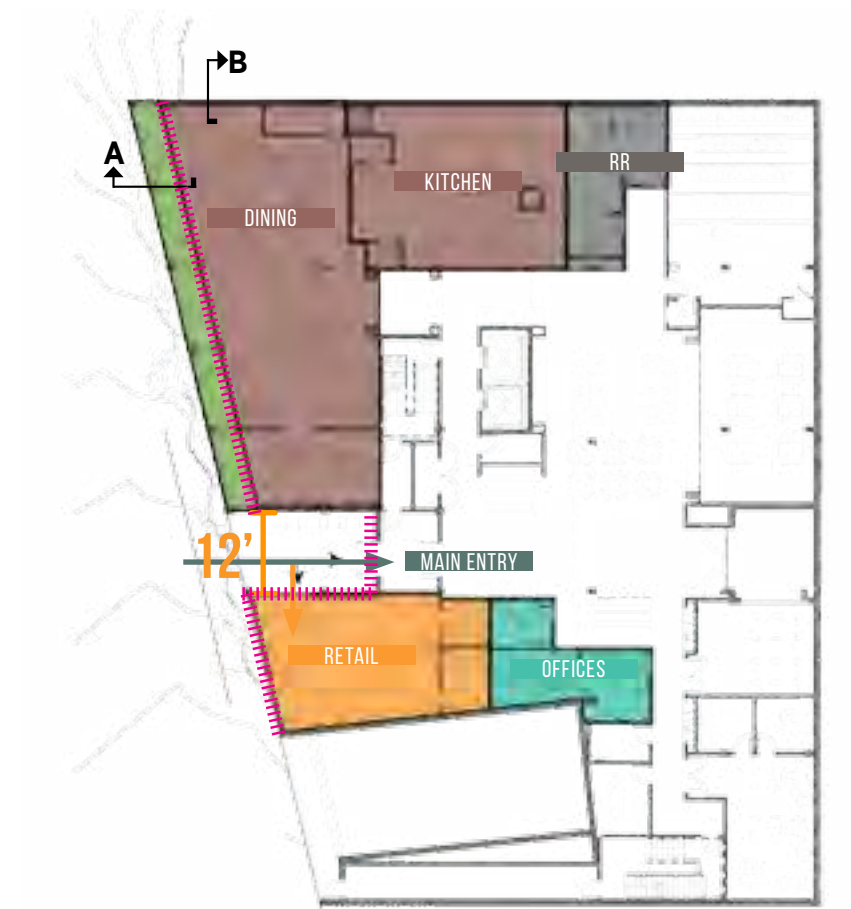
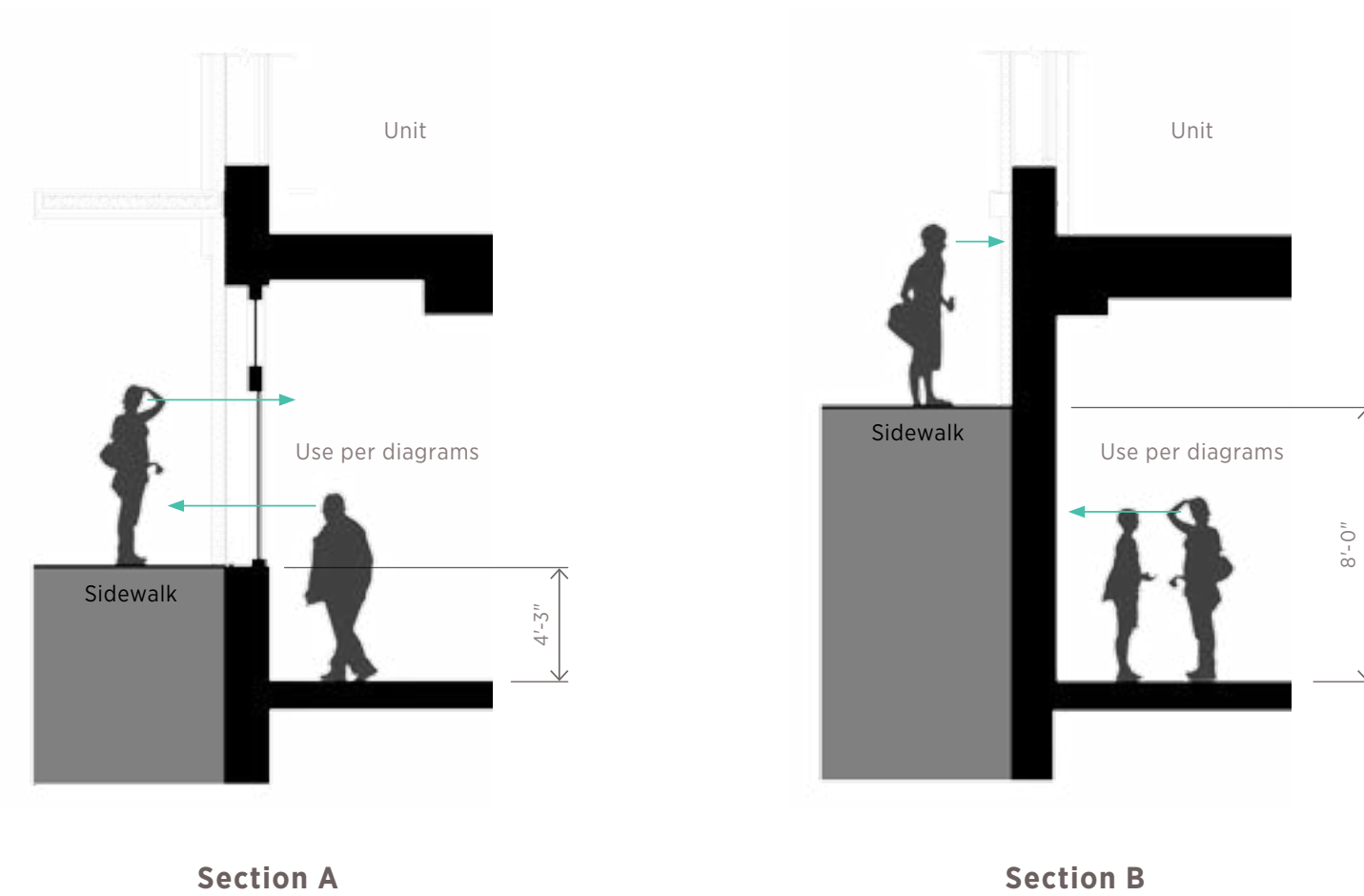
The Board expressed concern regarding the location of ground level uses. The Board felt the retail space was hidden at the center of the site, and the dining space at the corner would be less engaging and not activated throughout large portions of the day. The Board felt strongly that the retail space should be relocated to the corner of Newton and Eastlake Avenue E to better integrate with the neighborhood (PL3-C, DC1-A).

RESPONSE

Per EDG recommendation, the team studied alternative ground level use options. As a summary of this study, it was found the moving the retail space to the corner will have more disadvantages due to the complex nature of the site compared to the preferred scheme. We discovered in this study that the preferred scheme best engages the street edge through a shift in massing at the corner, locating the building's most active uses along Eastlake Avenue E, locating the retail nearest the nearby bus stop at grade with the adjacent sidewalk, allows the retail space to be active and transparent on two sides, provides the entry courtyard to be shared by both residents and the public, and provides the residents who call this building home 24 hours per day with the most street frontage and daylight possible.

The following design guidelines will be better supported:

- PL1-A.2 Adding to Public Life
- PL1-B.3 Pedestrian Amenities
- PL3-C.1 Porous Edge
- PL3-C.2 Visibility
- PL4-C.1 Influence on Project Design
- DC1-A.1 Visibility



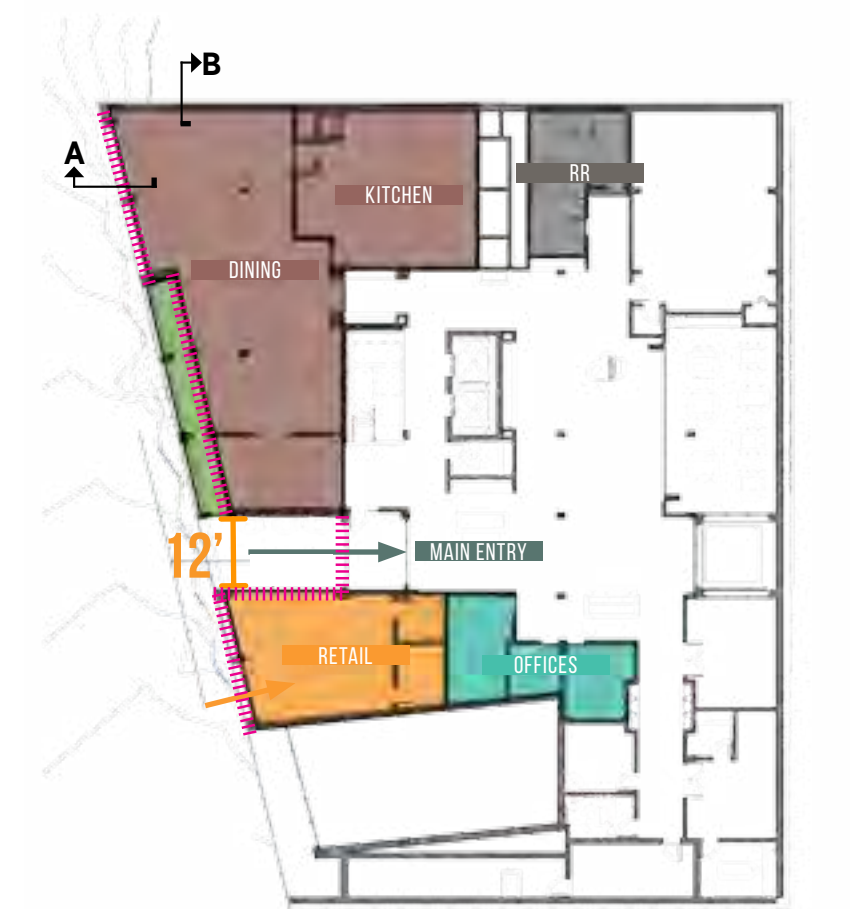
Ground Level Programming at EDG

- Stormwater planter extends length of dining room edge at Eastlake Ave E sidewalk.
- Retail and residential share entry court including outdoor seating.



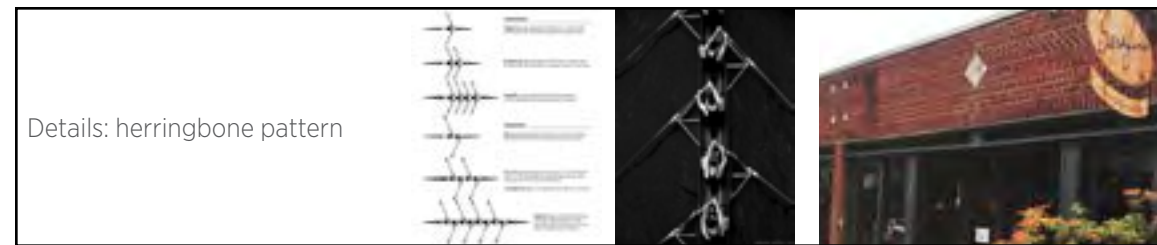
Study - Retail at Corner

- Locating the retail at the corner is traditional urban design in most cases, however significant differences in finish floor and adjacent sidewalk (see Section A & B) grades on this site decrease effectiveness of this scheme to strengthen the corner on this site.
- Shifting ground floor uses moves retail and residential entries 80' apart, decreases size of entry court, eliminates retail outdoor seating, and removes stormwater planters which must be converted to a ramp for public access to retail.
- The dining room is a very active amenity space serving 300+ meals per day from 7am to 7pm, making this space at least as active as any other restaurant along Eastlake.



Revised at DRB - Retail @ South Side of Entry Court

- Locating a use at the corner that does not require a direct entry from the sidewalk solves the challenges of the steep slope of the site at this corner.
- Eliminating the stormwater planter and bumping dining out creates a more direct connection between dining and pedestrians.
- Locating retail at south side of entry court creates active, shared entry court for the public and residents and closer proximity to the nearest bus stop.
- Retail location allows for activity and transparency along all public edges, a bike-up window, window seating, and entry court seating.
- The dining room is a very active amenity space serving a total of 300+ meals per day from 7am to 7pm over 3 standard meal times plus occasional dine on demand, making this space at least as active as any other restaurant along Eastlake.
- The dining room is a primary amenity for residents. This study maximizes the amount of daylight and interactive street frontage available to residents who rarely, if ever, leave the building while maintaining a high quality retail street edge.



LEGEND

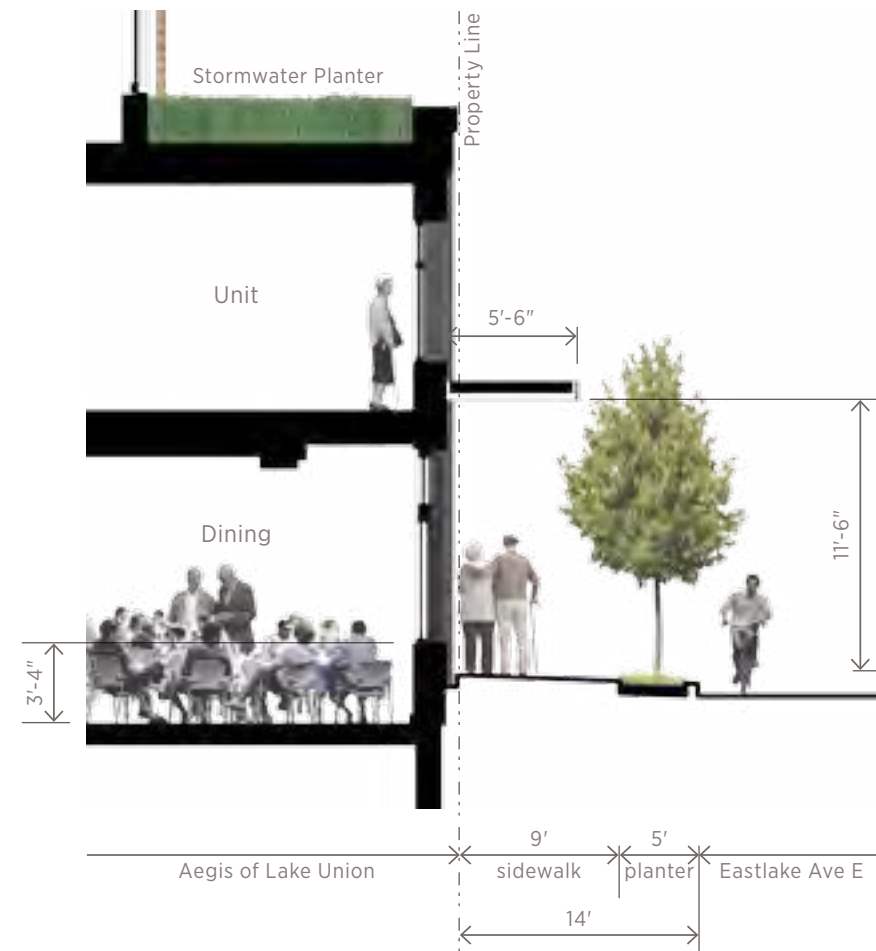
- Amenity
- Retail
- Units
- Circulation
- Parking
- Back of House



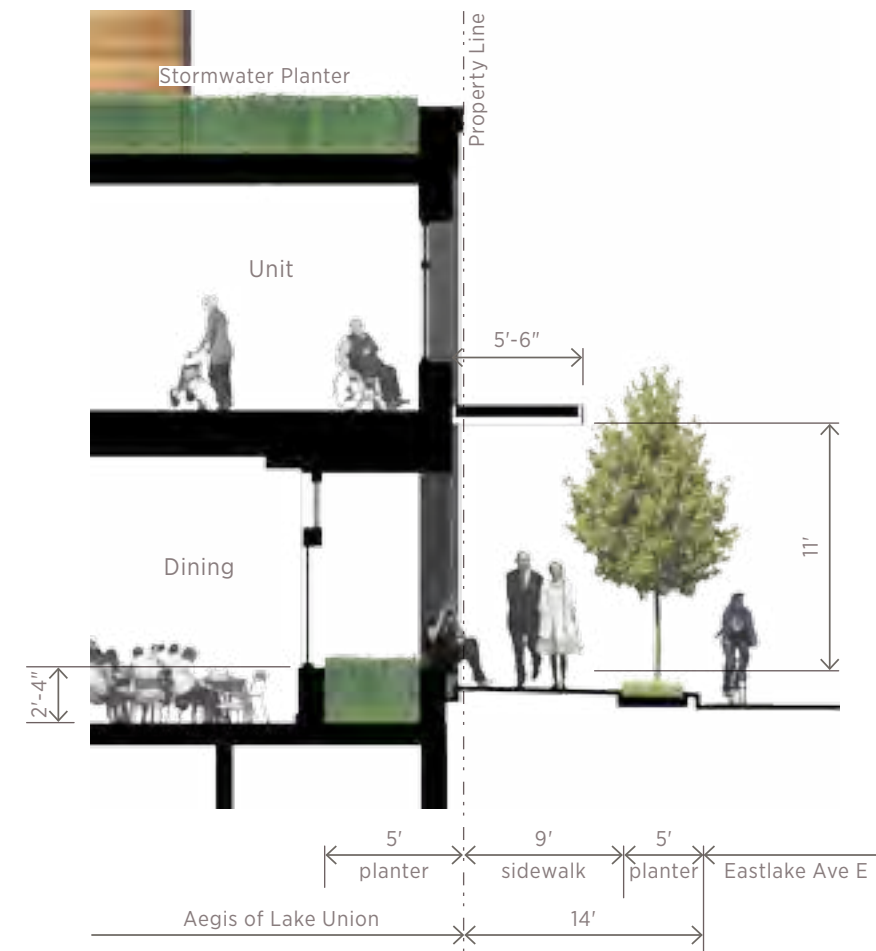


A

B



SECTION A



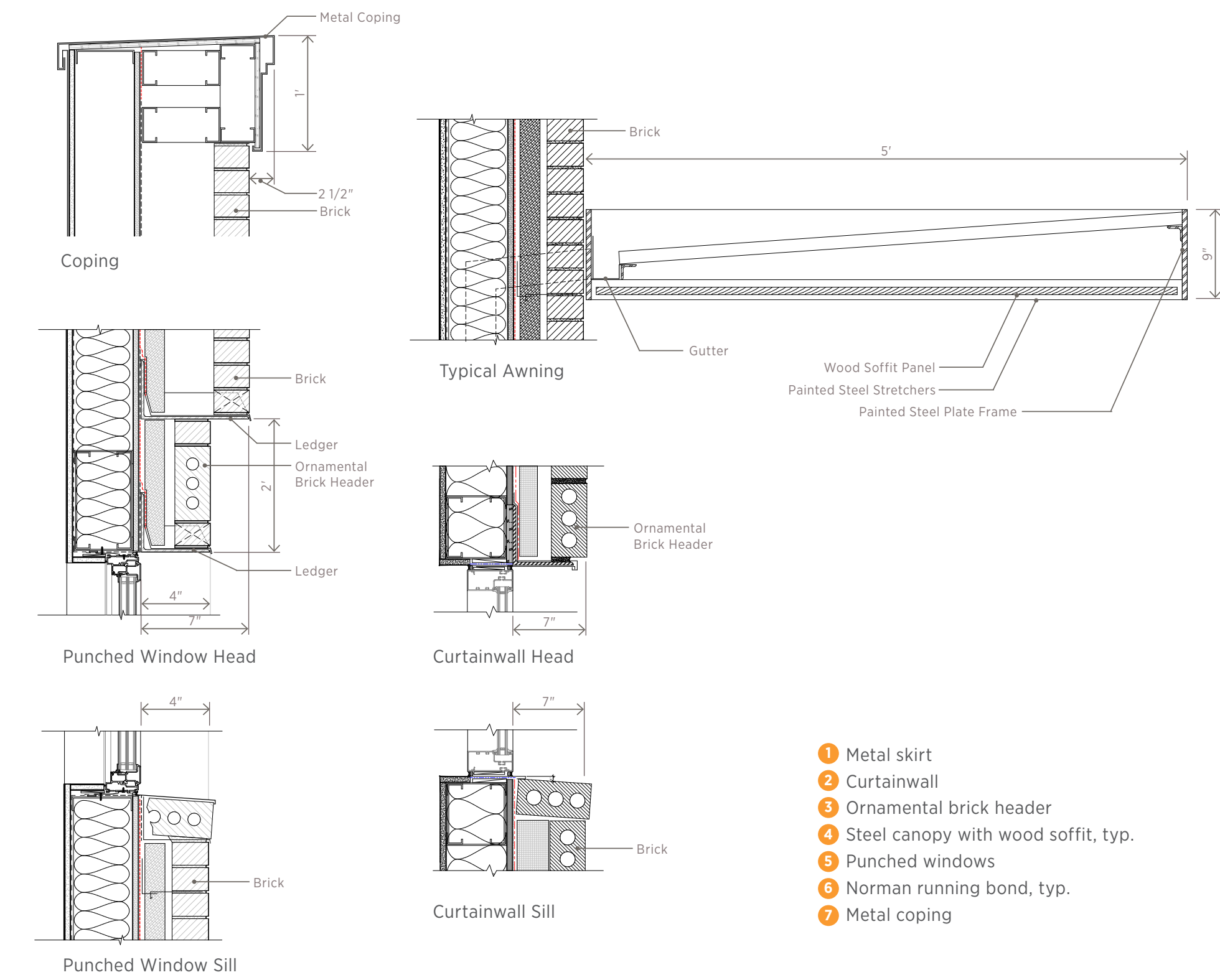
SECTION B



STORMWATER PLANTER BENCHES AT DINING



DINING AT EASTLAKE & NEWTON



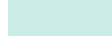

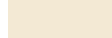
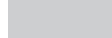



GROUND LEVEL USES - ENTRY & QUEEN BEE

To create a strong, interactive connection to the street for the public, as well as residents, special attention was paid to the treatment of the facade at the Queen Bee coffee shop (CS2-B.2). A series of pedestrian amenities were integrated into the public realm and street edge including bicycle parking, oversized operable glazing, benches, entry court, a large sidewalk, and overhead weather protection along the entire Eastlake street frontage (PL1-B.3).

- 1 Short-term bike parking
- 2 Walk/bike-up coffee window
- 3 Oversized awning windows
- 4 Indoor/outdoor bench seating
- 5 Indoor/outdoor bench/counter
- 6 Cafe tables in entry court
- 7 Stormwater planter benches
- 8 Wide sidewalk

LEGEND

	Amenity	
	Retail	
	Units	
	Circulation	
	Parking	
	BOH	



Promote human-powered living by providing a place for bikes



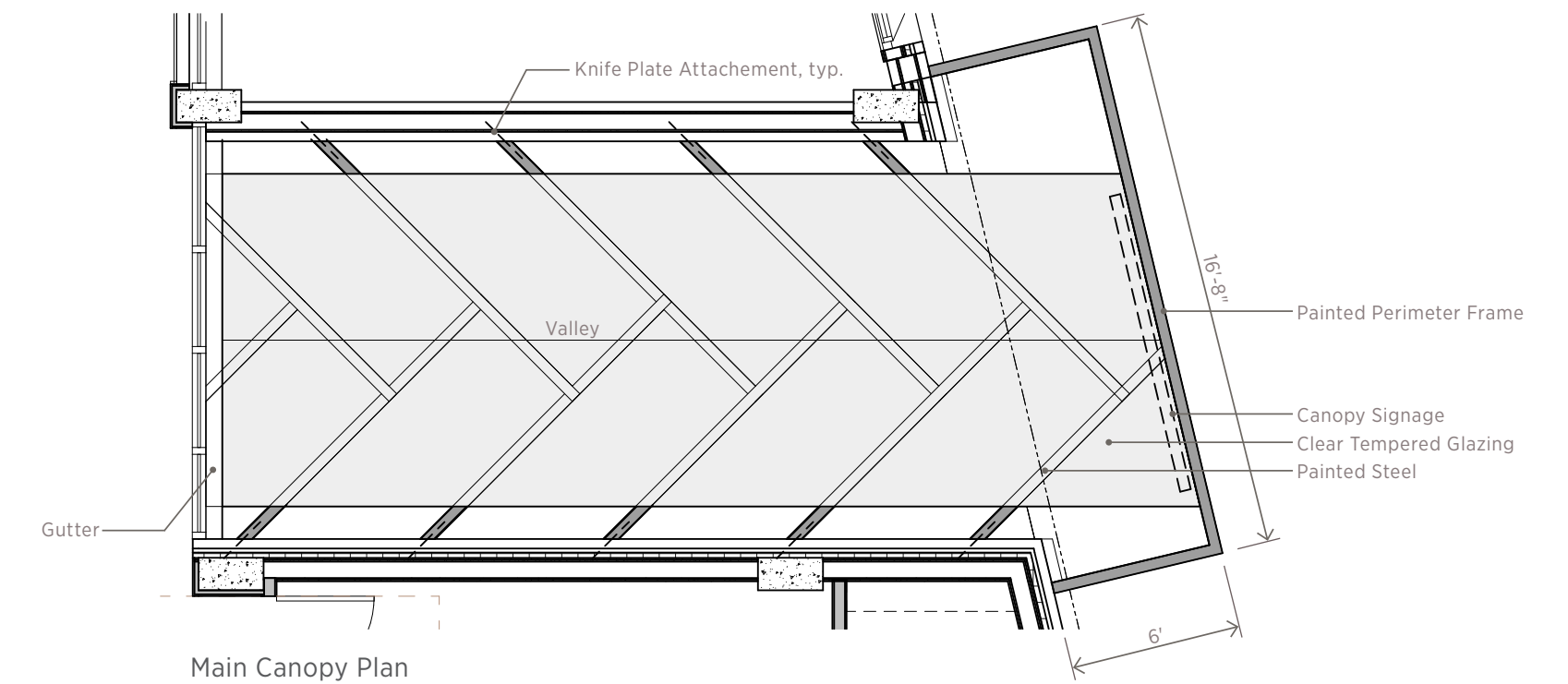
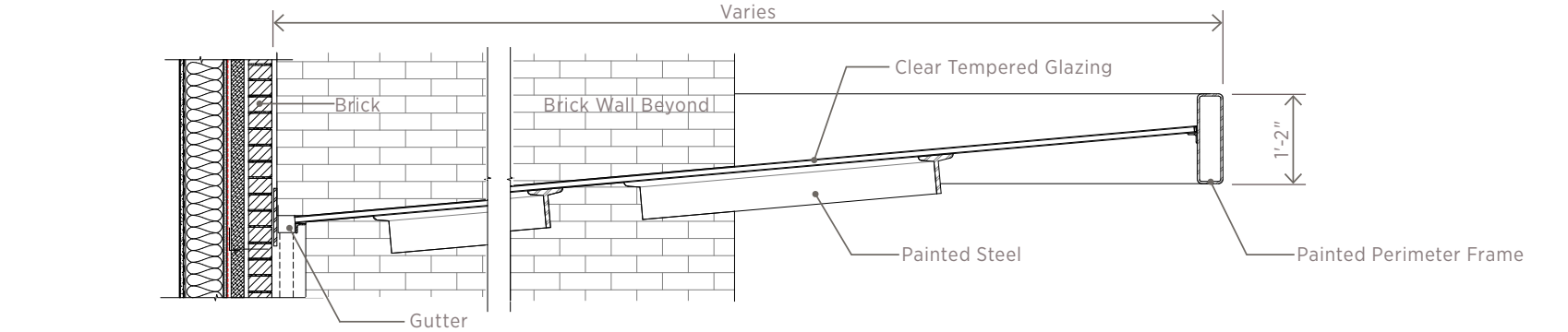
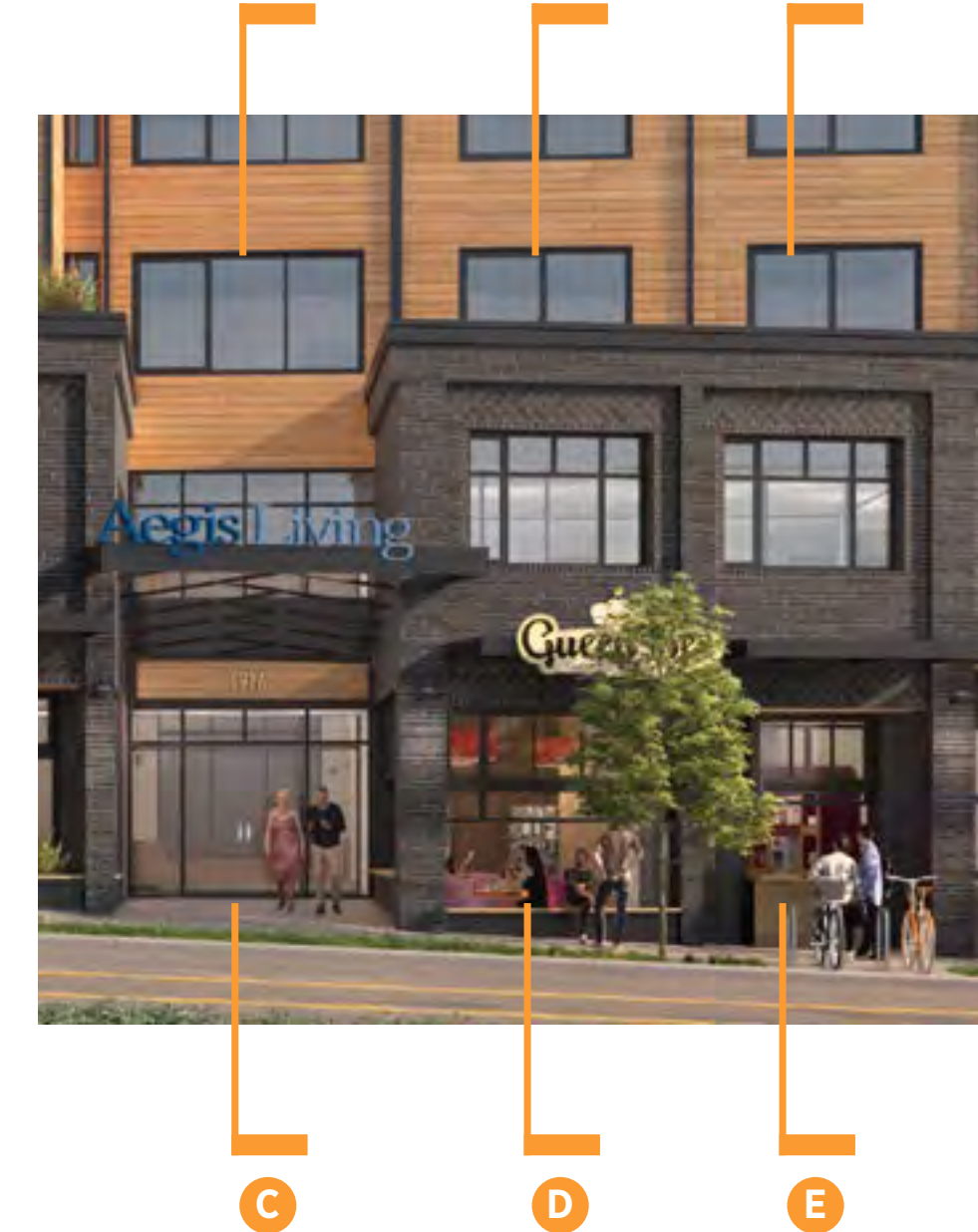
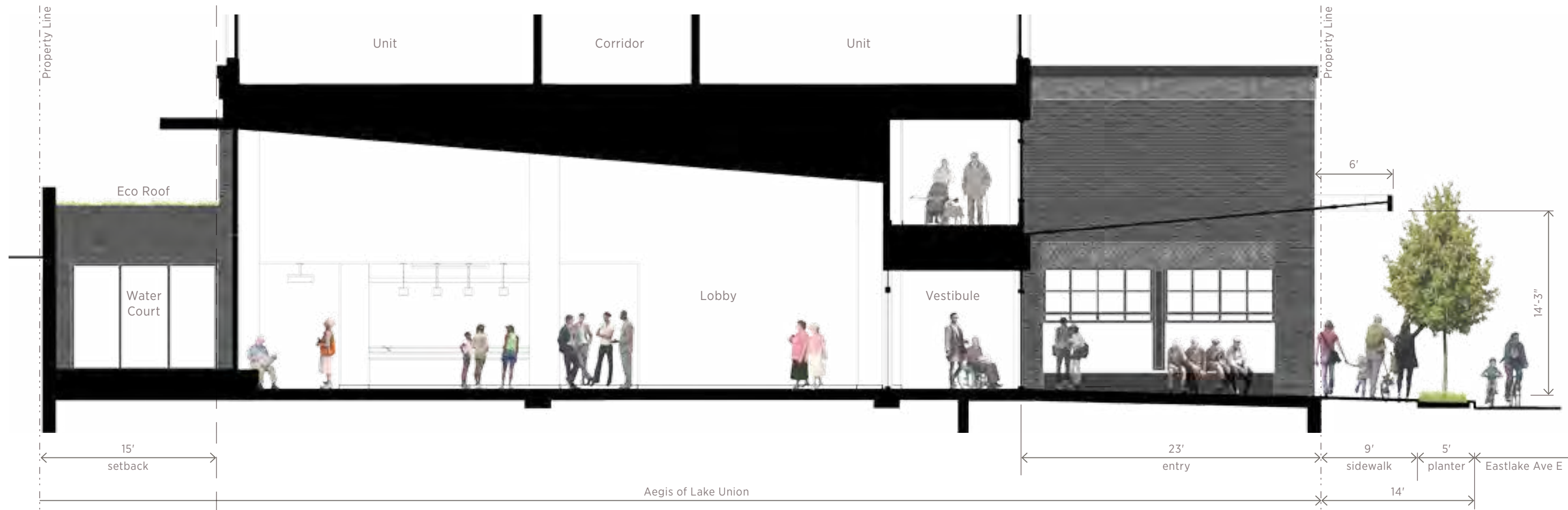
Encourage gathering with outdoor cafe seating

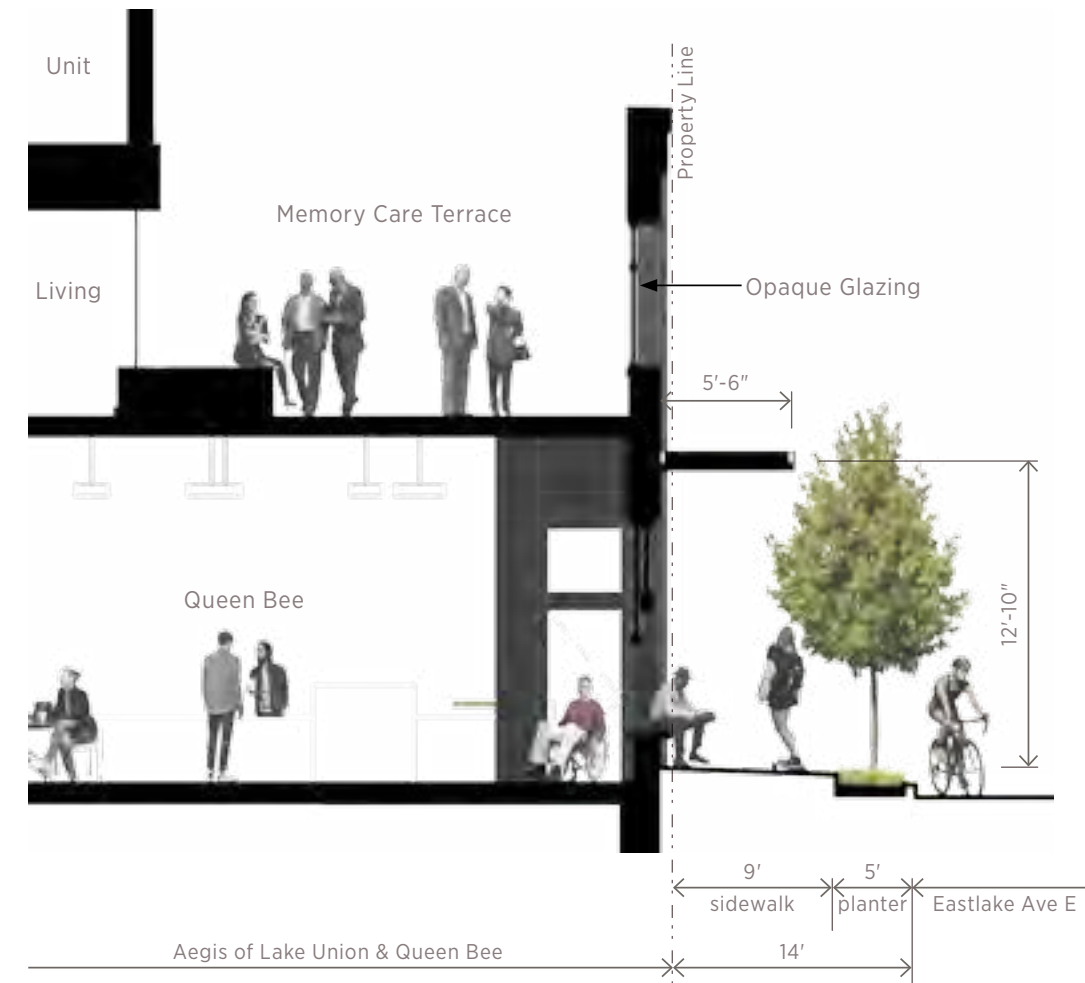


Activate the street edge with indoor/outdoor connection

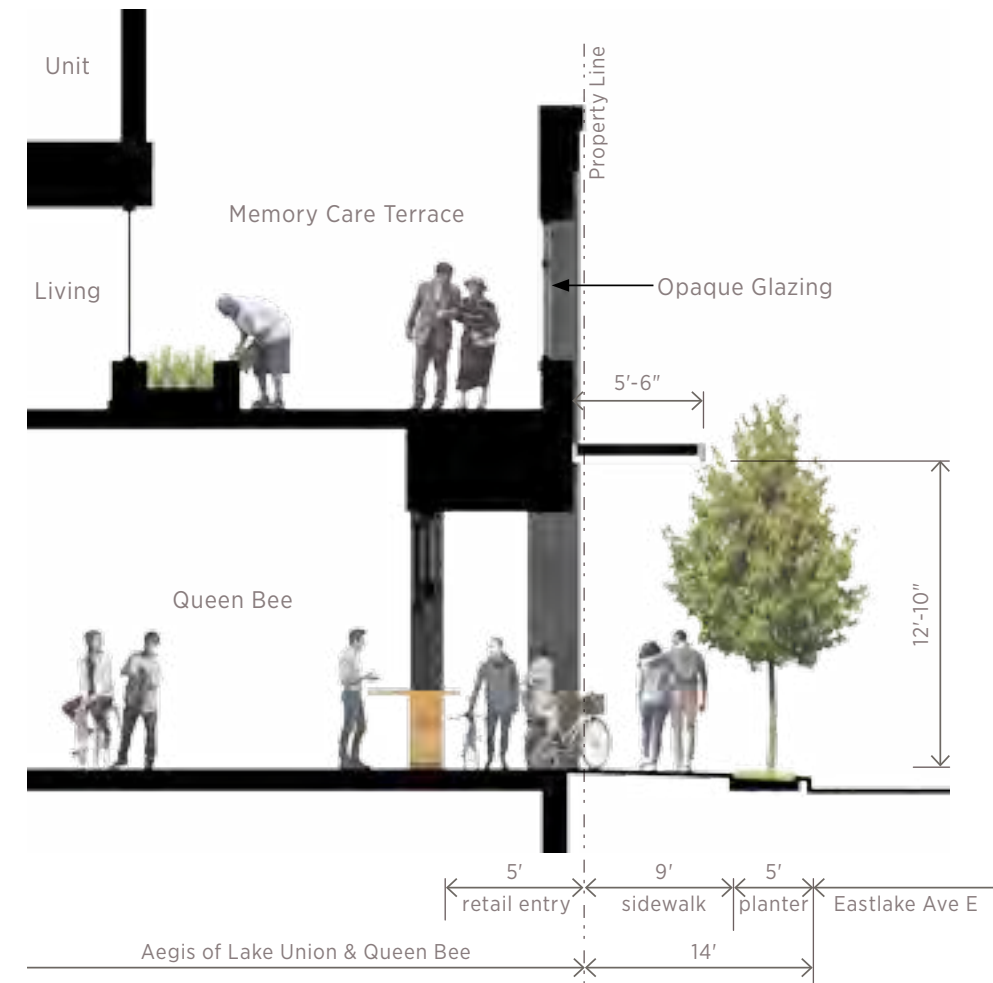


QUEEN BEE AND MAIN ENTRY

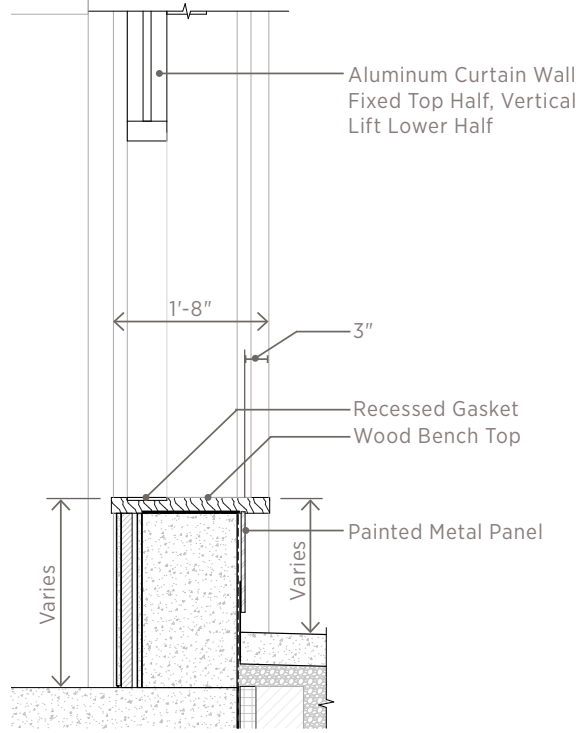




SECTION D



SECTION E



Typical Bench at Facade



QUEEN BEE ENTRY & BIKE/WALK-UP COFFEE WINDOW

SUMMARY OF TRANSPORTATION STUDY

- The development is expected to generate approximately 40 net new weekday daily trips.
- The most recent three-year summary of accident data from SDOT (January 1, 2014 to December 31, 2016) reports no collisions on Eastlake Avenue E between E Newton Street and E Howe Street. This suggests there is not an existing safety issue along the project frontage, nor is this mid-block location classified as a high accident location.
- The number of potential conflicts with access via Eastlake Avenue E would be minimal due to the small amount of anticipated driveway trips.
 - Less than 17 potential vehicle-bicycle conflicts per hour.
 - The number of potential conflicts would be less during the AM peak hour and less still during non-peak hours.

LEGEND

- Pedestrian
- Bicycle
- Vehicle



Existing Condition

- The site currently has two access points, one on Eastlake Avenue E and one on E Newton Street.
- There are 10 potential routes to turn into and out of the site.
- Entry from E Newton Street requires vehicles to use this residential street to access the site.
- Potential vehicle-bicycle and vehicle-pedestrian conflicts due to vehicle site access can occur mid-block on Eastlake Avenue E, at the intersection of Eastlake Avenue E and E Newton Street, and mid-block on E Newton Street.



Proposed at EDG

- Access to the site provided only at Eastlake Avenue E. Right turn in, right turn out only proposed.
- There are 6 potential routes into and out of the site.
- Right turn in, right turn out only prevents coming drivers from the north and leaving to the south from directly entering the site or Eastlake Avenue E, respectively. Consequently, this solution sends additional vehicle trips through the adjacent neighborhood for vehicles to be able to turn into or out of the site in the needed direction.
- Potential vehicle-bicycle and vehicle-pedestrian conflicts due to vehicle site access can occur mid-block on Eastlake Avenue E, at the intersection of Eastlake Avenue E and E Newton Street, at the intersection of Eastlake Avenue E and E Howe Street, and within the adjacent neighborhood on Franklin Avenue E.



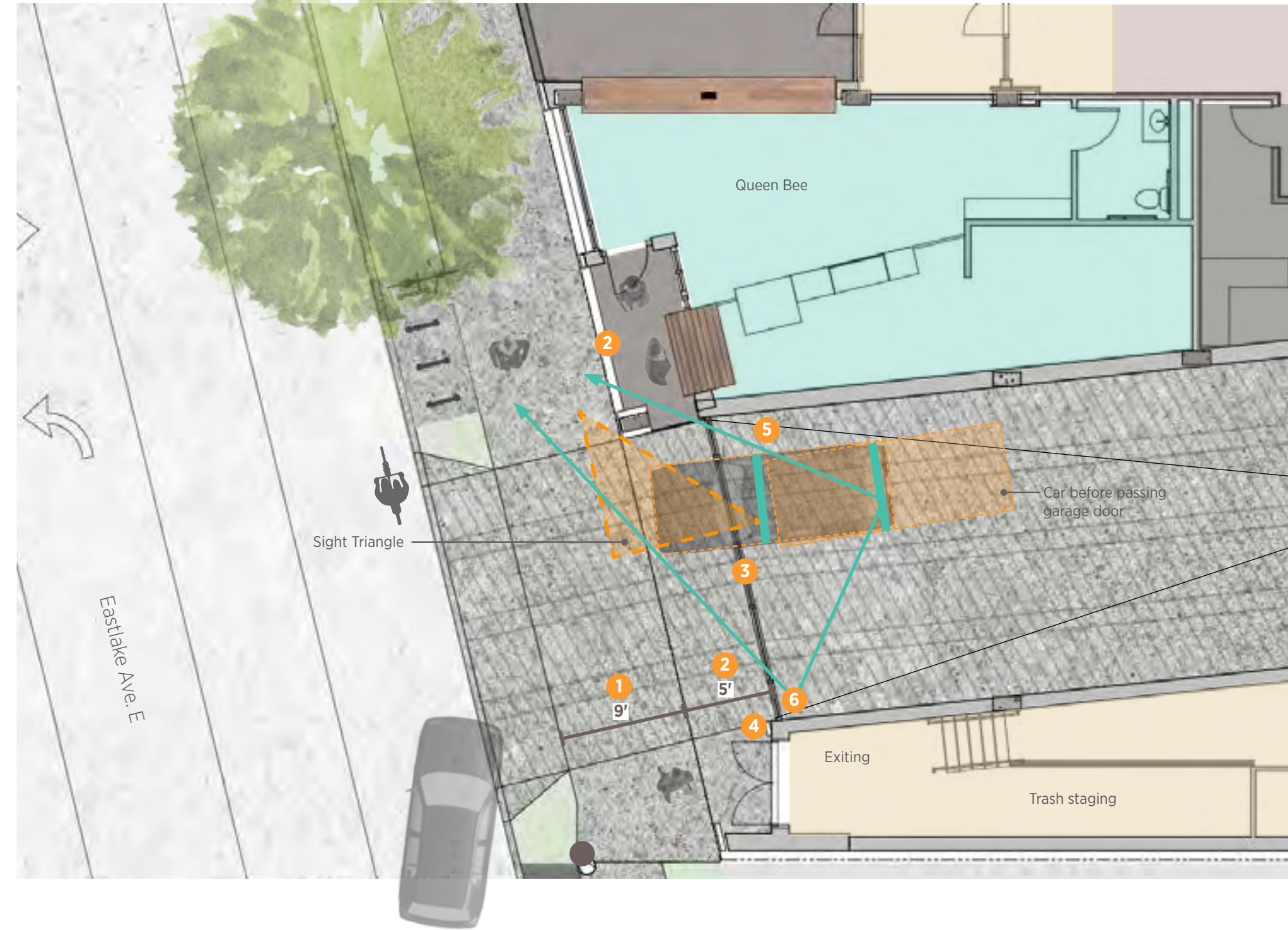
Revised at DRB

- Access to the site provided only at Eastlake Avenue E.
- There are 4 potential routes into and out of the site. **Least number of routes, all occurring from Eastlake Avenue E, reduces the number of vehicle trips into the adjacent neighborhood.**
- Potential vehicle-bicycle and vehicle-pedestrian conflicts due to vehicle site access can occur mid-block on Eastlake Avenue E. **Per Transportation Study, no collisions have occurred in this block according to the most recent SDOT accident report.**

GARAGE SAFETY

As requested, the project team has worked with SDOT to design a garage entry that both maximizes safety for all modes while minimizing vehicular trips in the adjacent neighborhood including transparency, increased sidewalk width, and pedestrian warning devices.

- 1 Increased sidewalk width
- 2 Garage door and cafe setback from sidewalk
- 3 Transparent glazing at garage door
- 4 Exiting signal
- 5 Signage for exiting vehicles
- 6 Visibility mirrors



LEGEND

- Amenity
- Retail
- Units
- Circulation
- Parking
- BOH
- Line of Driver
- Sight Line



Pedestrian View - Looking South



Pedestrian View - Looking North



Vehicle View - Approaching Garage Door



Vehicle View - Approaching Sidewalk

5 PEDESTRIAN EXPERIENCE AT GARAGE ACCESS

DRB RECOMMENDATION

At the Recommendation phase, the Board would like more detail demonstrating how the garage access is designed to minimize the impact to the pedestrian streetscape (DC1-B).

RESPONSE

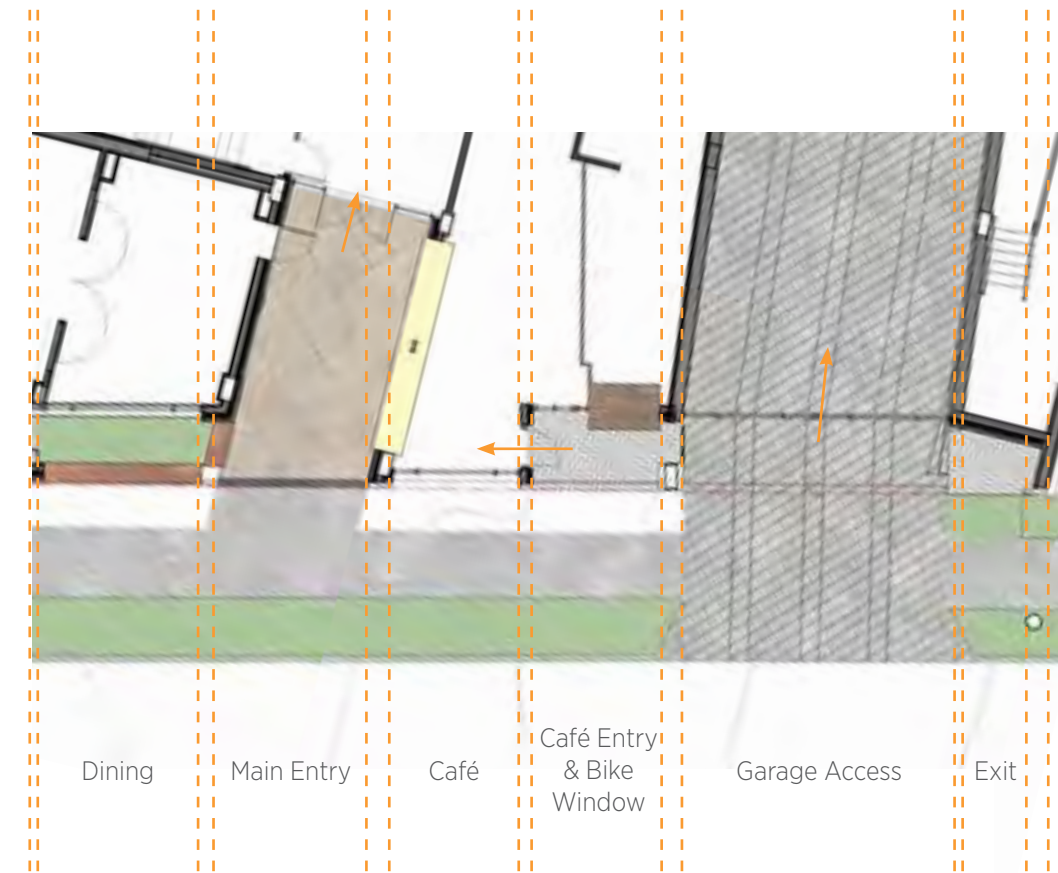
The project team has studied the streetscape to ensure seamless integration of the garage access with the design concept of the project to contribute to a comfortable, safe pedestrian experience. In addition to the same awning treatment, the design of the garage door matches the concept used at the retail and residential ground floor glazing.

The following design guidelines will be better supported:

- PL2-C.1 Locations and Coverage
- PL2-C.2 Design Integration
- DC1-B.1 Access Location and Design
- DC2-B.1 Facade Composition



Diagram: Elevation



DESIGN RESPONSES

- 1 Repetition of bays is emphasized through brick detailing and reflects the concept of rhythm as found in rowing and vernacular shellhouse architecture. This helps to break up the elevation at the pedestrian scale and incorporates garage entry into overall elevation design.
- 2 Awnings continue along full length of facade within each structural bay, contributing to a comfortable pedestrian experience.
- 3 Created hierarchy in mullion thickness to reflect historical context, and carried this through in the design of the garage entry door for a seamless, quality experience at pedestrian scale.



SECTION F







Western Spirea
Spirea douglasii



Red Twig Dogwood
Cornus sericea



Red Twig Dogwood
Cornus sericea



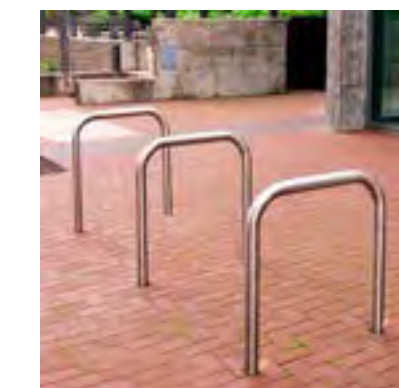
Deer Fern
Blechnum spicant



Douglas Iris
Iris douglasiana



Slough Sedge
Carex obnupta



Bike Racks



Street Trees: Eastern Hackberry



Kinnikinnick
Arctostaphylos uva ursi



Point Reyes Ceanothus
Ceanothus gloriosus
"Pt. Reyes"



Rock Rose
Cistus sp.

EAST FACADE AND SETBACK



EAST FACADE FROM E NEWTON STREET

6 PRIVACY IMPACT

DRB RECOMMENDATION

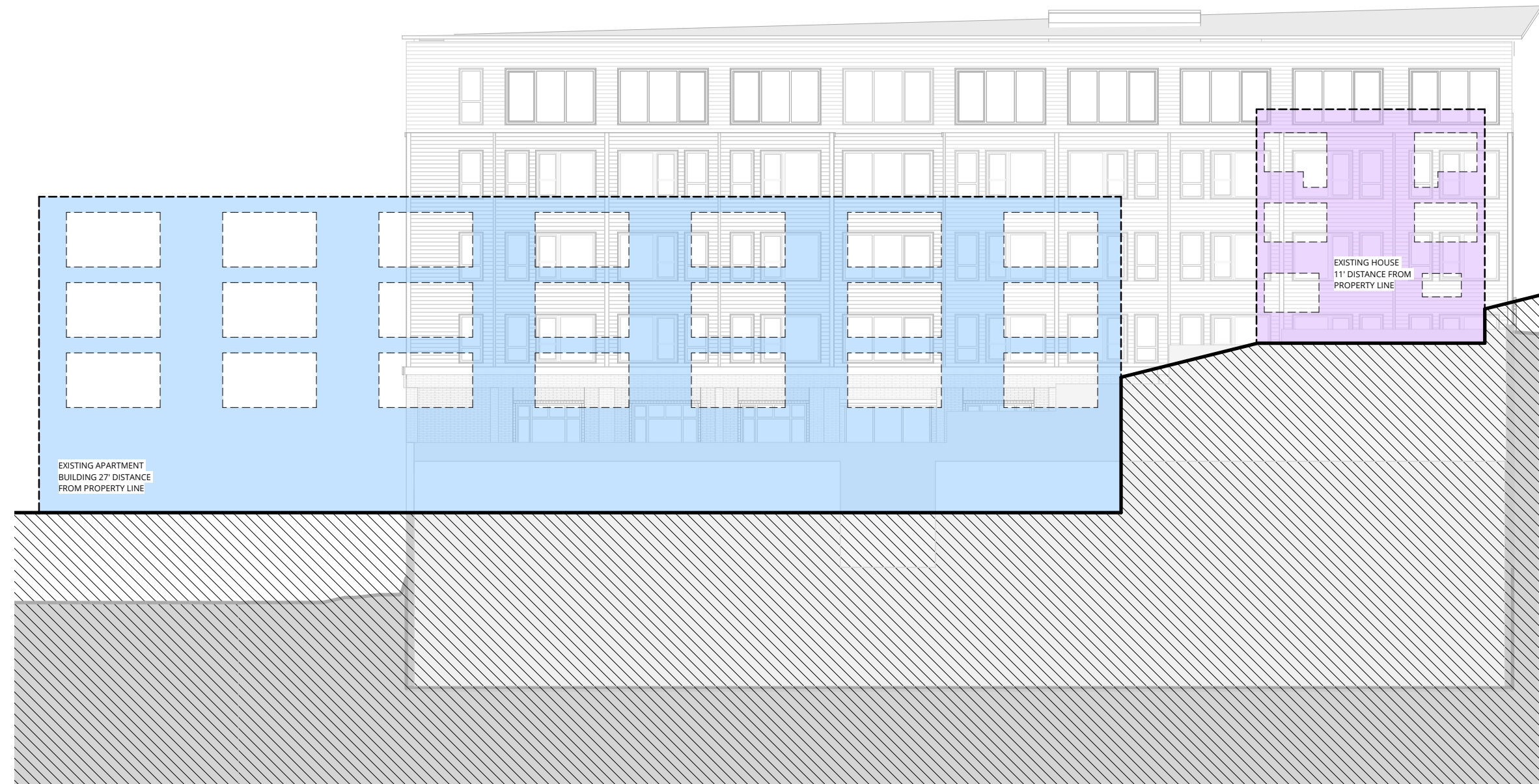
At the Recommendation phase, the Board noted public comment and requested additional detail demonstrating how the east facade has been designed to minimize privacy impacts to adjacent residential units (CS2-D5).

RESPONSE

The project team has studied the east facade and setback focusing on location and scale of fenestration, in addition to landscaping opportunities to minimize privacy impacts to adjacent residential uses.

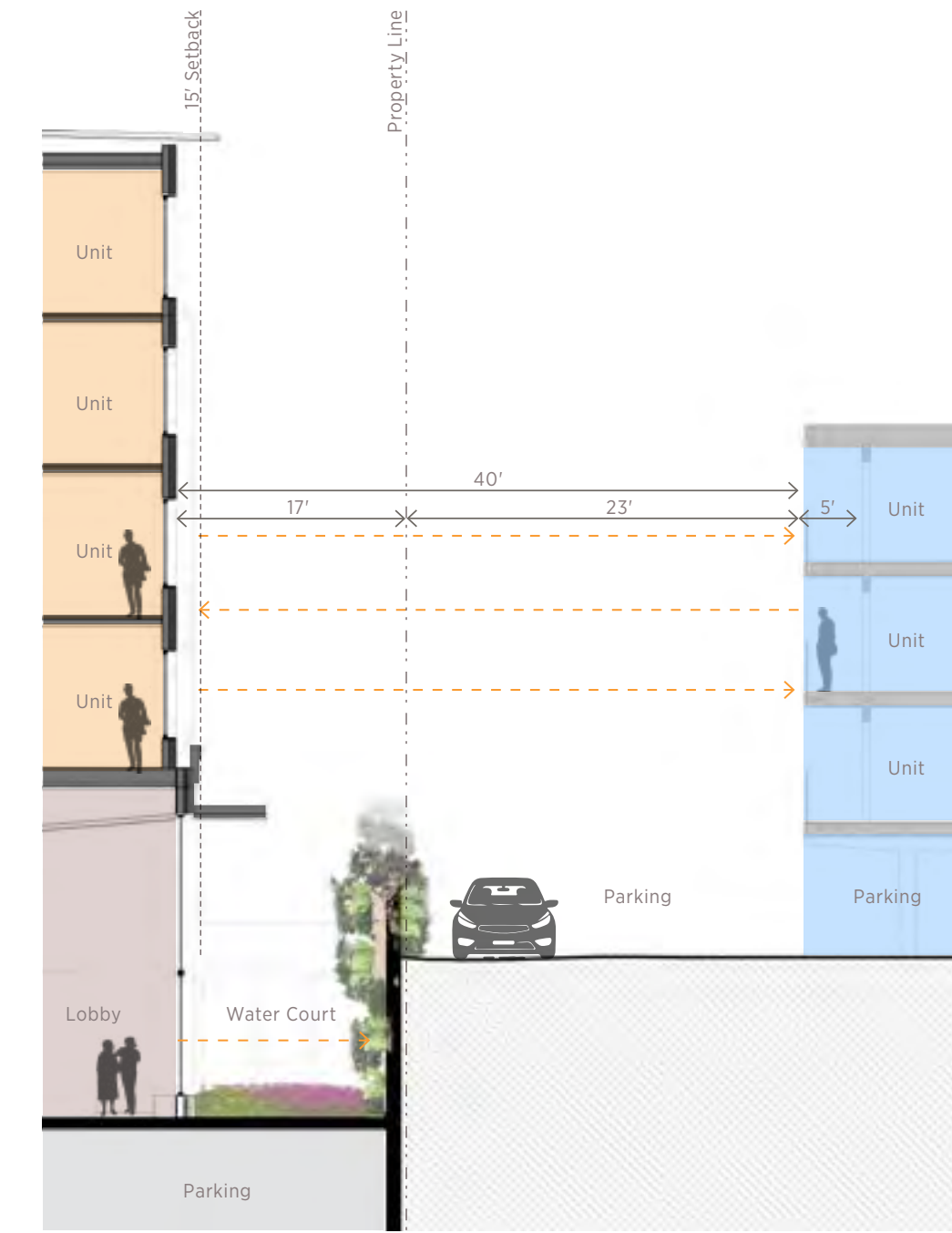
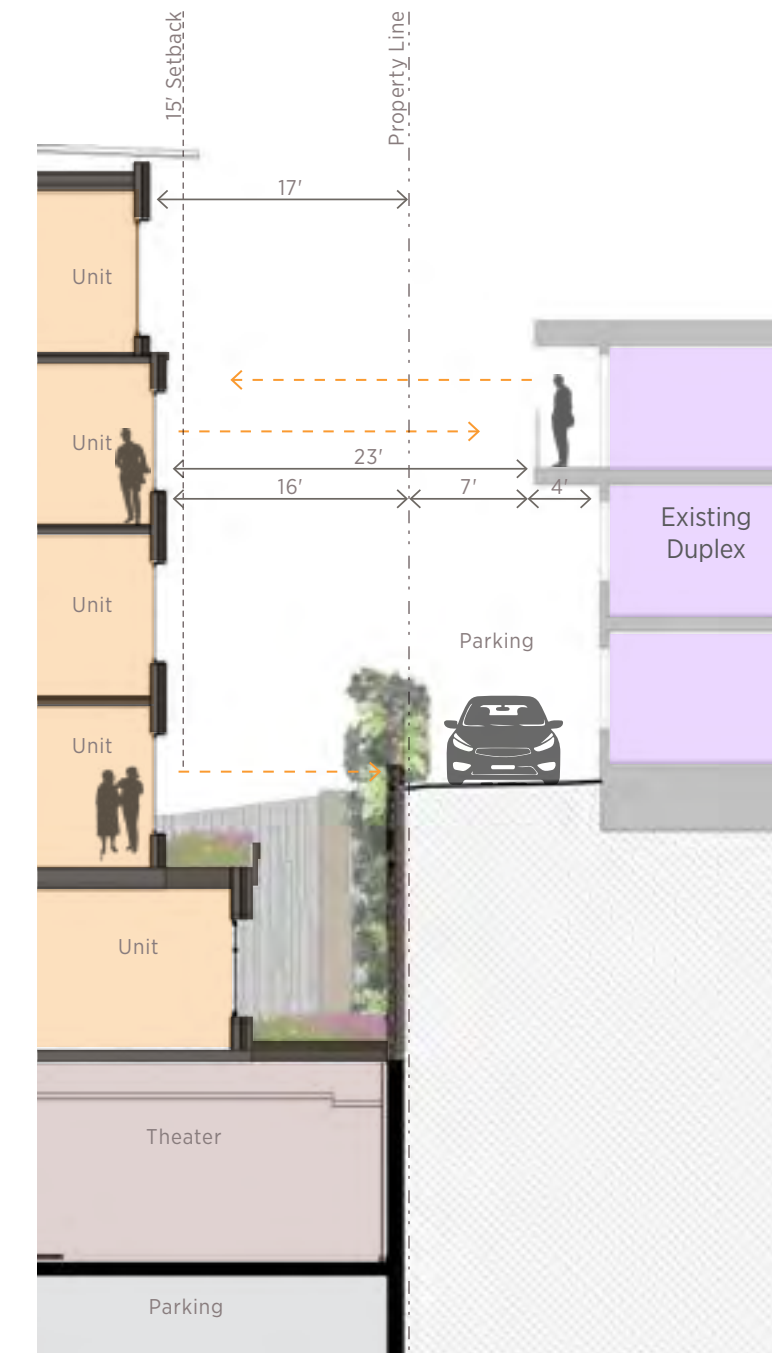
The following design guidelines will be better supported:

- CS1-E.2 Adding Interest with Project Drainage
- CS2-D.5 Respect for Adjacent Sites



LEGEND

- Amenity
- Retail
- Units
- Circulation
- Parking
- BOH
- Visual connection



7 SETBACK BUFFER

DRB RECOMMENDATION

At the Recommendation Meeting the Board would like additional detail demonstrating how the 15-foot setback will be treated to provide a successful transition and buffer between the proposed building and existing residential use. The Board noted that it would be great for the proposed water features to be visible to adjacent uses (CS2-D).

RESPONSE

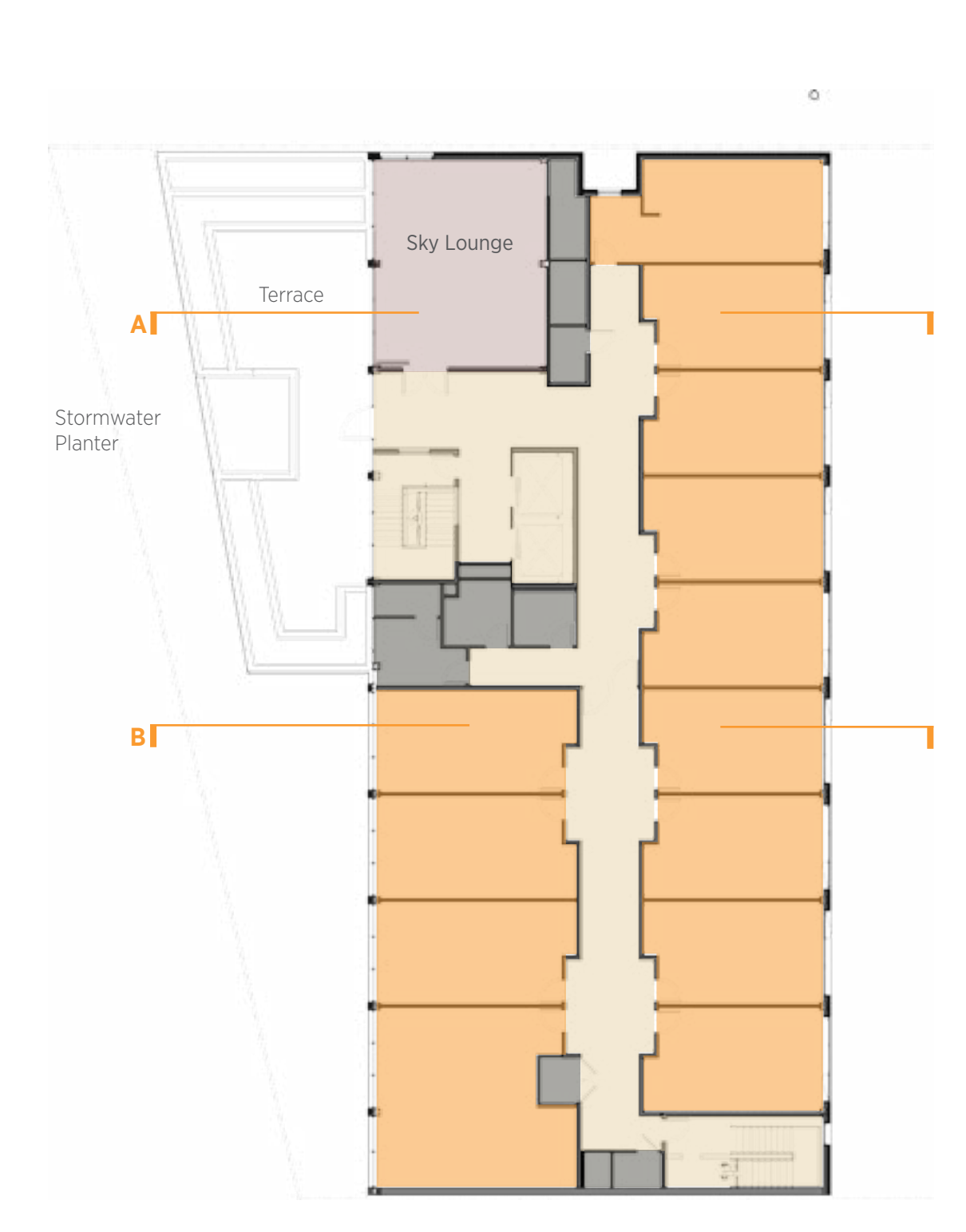
As requested at EDG, additional detail demonstrating the treatment of the east facade and setback buffer are presented in this packet. In addition to maintaining the lowest elevation of the solar array at the east facade adjacent to residential units, the project team has focused on facade composition and detailing to reduce the overall scale of the building. Scale of fenestration and material selection were focused on maintaining residential attributes. Landscaping is integrated to enhance the buffer between properties and minimize privacy impacts.

The following design guidelines will be better supported:

- CS1-E.2 Adding Interest with Project Drainage
- CS2-D.3 Zone Transitions
- CS2-D.5 Respect for Adjacent Sites
- DC2-B.1 Facade Composition

LEGEND

- Amenity
- Retail
- Units
- Circulation
- Parking
- BOH

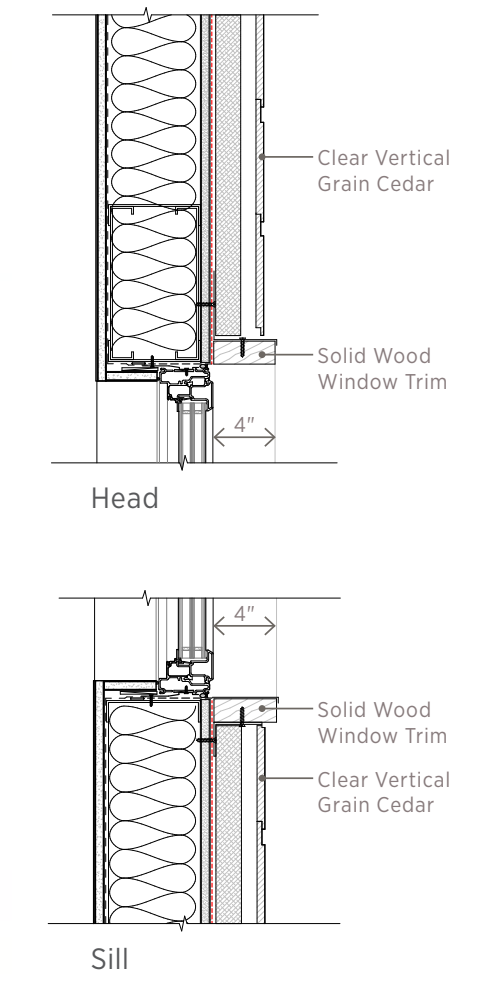




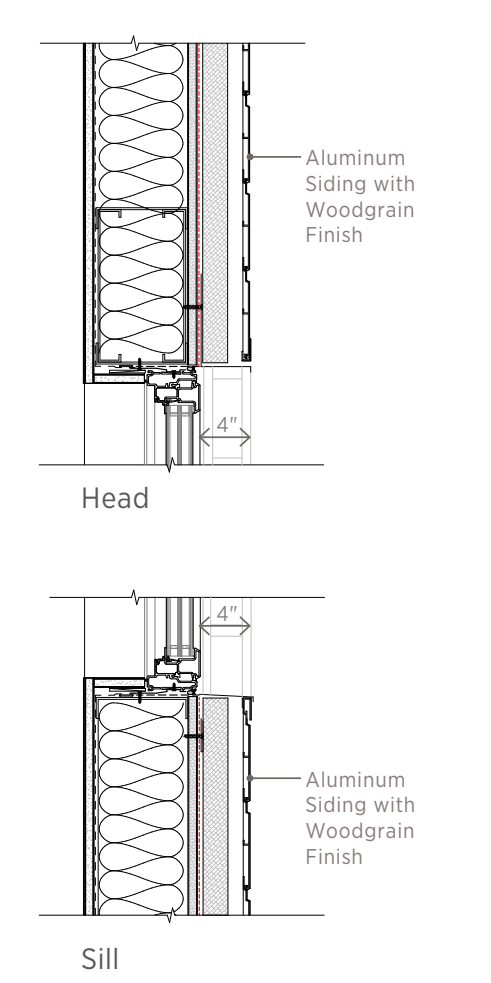
- 1 Solar array
- 2 Clad Siding (Color 2)
- 3 Fiberglass windows
- 4 Level 6 facade step
- 5 Clad Siding (Color 1)
- 6 Metal reveal, typical
- 7 Metal reveal, corner
- 8 Brick
- 9 Metal Rail
- 10 Eco roof
- 11 Water court



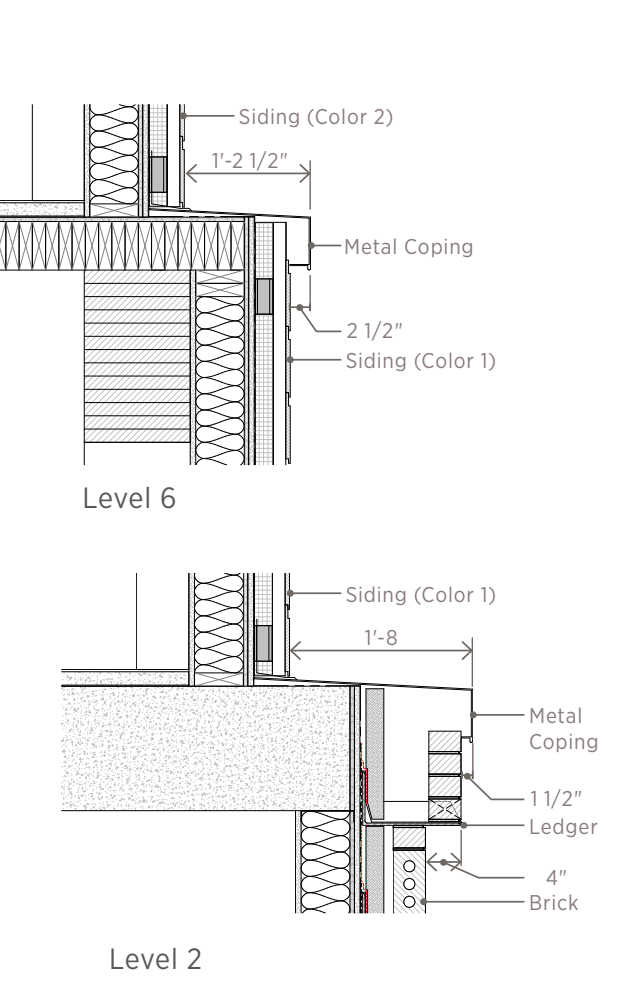
Typical punch window (Siding Opt 1 - Wood):



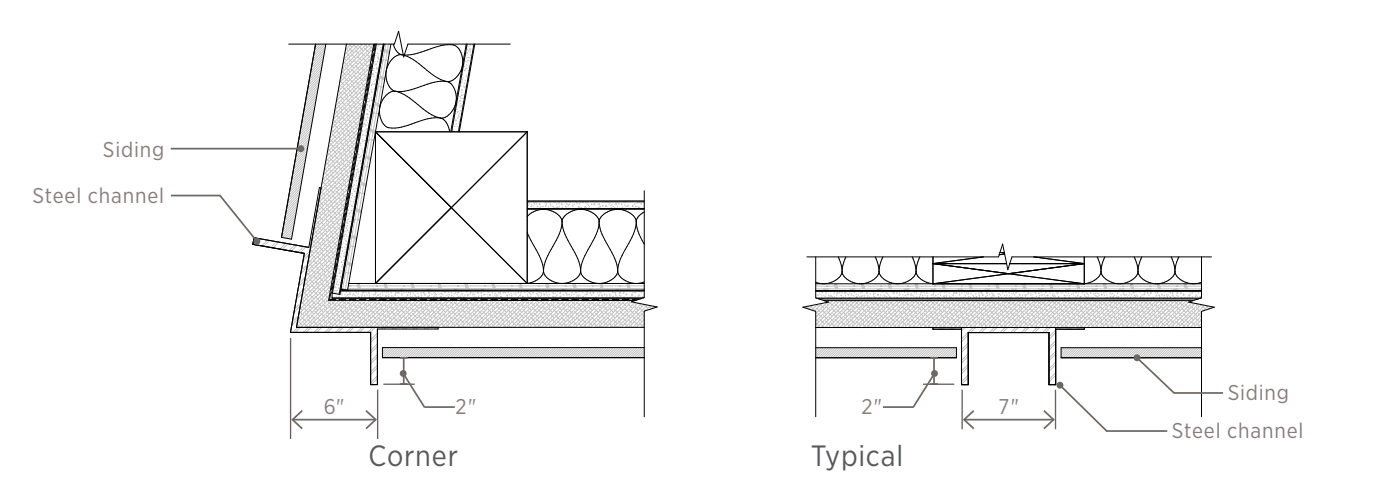
Typical punch window (Siding Opt 2 - Aluminum):



East facade steps:

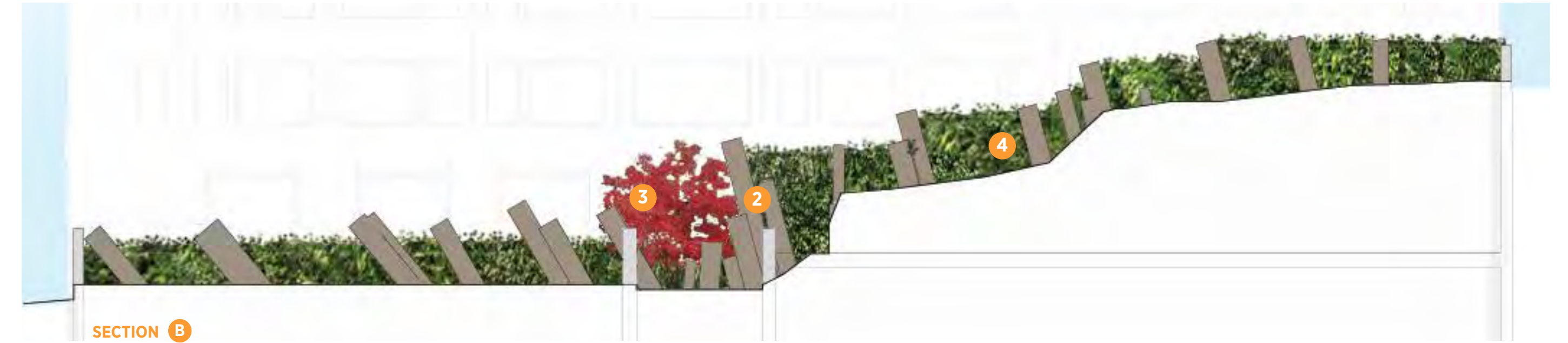


Metal reveals:





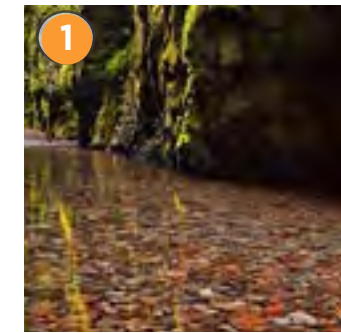
SECTION A



SECTION B

As one enters the building a long framed, view comes into focus - a small, water-filled garden. Open to the air, the small water court has a reflecting pool at the base of a rocky wall.

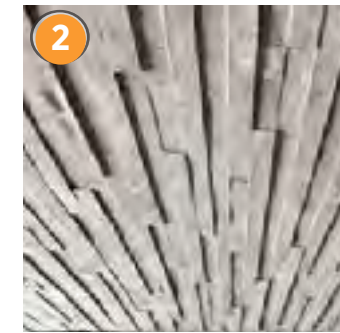
Emerging from the moss and fern, concrete formed 'basalt-columns' mimic those naturally occurring in the nearby Cascade Range. As one stands at the pool edge, you can see trees extending along this landscape providing a buffer between adjacent units. A brightly colored specimen tree warms the space.



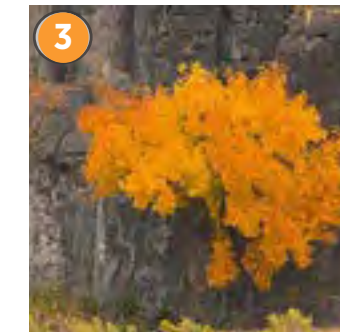
1 Water feature: Reflective Pool



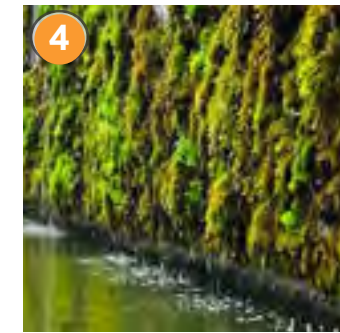
2 Concrete & Basalt Columns



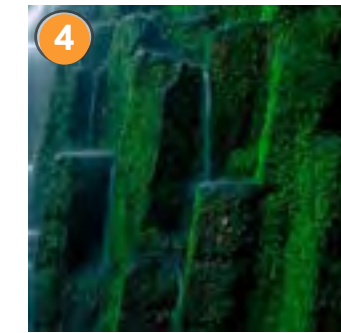
2 & Basalt Columns



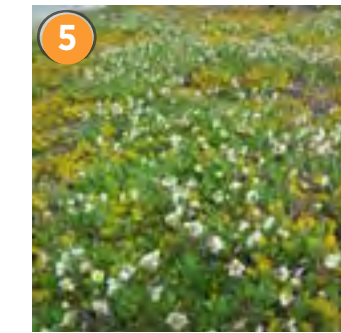
3 Specimen Tree



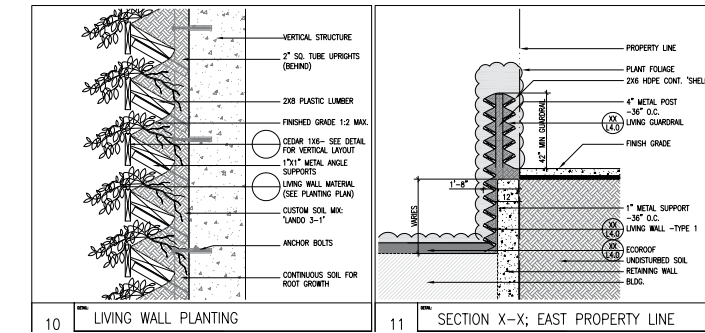
4 Moss Wall
Bryophytes



4 Moss/Water features
Bryophytes

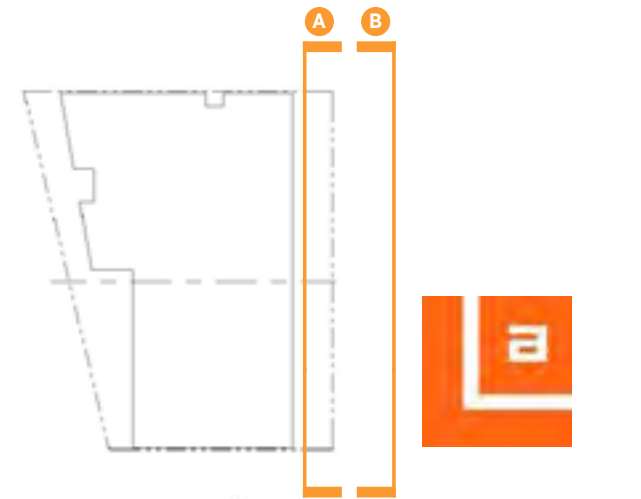


5 Eco Roof



10 LIVING WALL PLANTING

11 SECTION X-X; EAST PROPERTY LINE



MATERIALS

8 FENESTRATION STUDIES

DRB RECOMMENDATION

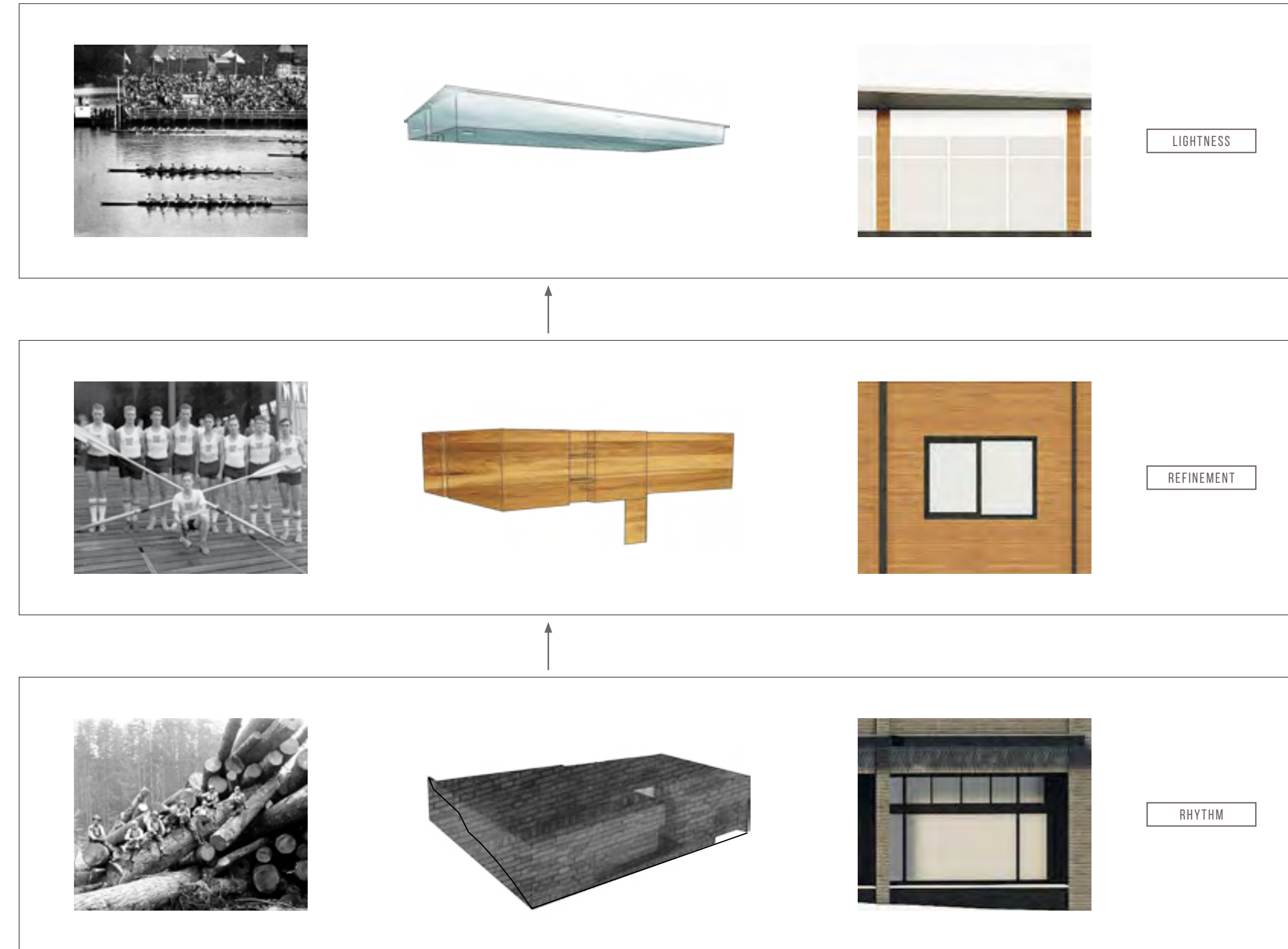
At the Recommendation phase the Board requested fenestration studies demonstrating how the preferred proposal was developed (DC1-A, DC2).

RESPONSE

Fenestration studies have been provided. The preferred option combines fenestration scale and composition to minimize privacy impacts and maintain residential attributes adjacent to existing residential units.

The following design guidelines will be better supported:

- CS2-D.5 Respect for Adjacent Sites
- DC2-B.2 Facade Composition



DESIGN RESPONSES

- 1 Refined design of top floor fenestration to reflect concept of lightness, while maintaining separation between roof and solar collector
- 2 Simplified fenestration on middle floors while enhancing repetition of bays through detailing of vertical metal reveals
- 3 At lower levels, enhanced brick detailing around fenestration and created more hierarchy in mullion thickness to reflect interactivity at the pedestrian scale and historical context



Early elevation study sketch



Working elevation after EDG



Proposed Design



Top



Middle



Base

DESIGN RESPONSES

- 1 Utilized concept of rhythm and repetition of bays to break up the massing of the facade with metal reveals.
- 2 Emphasized idea of lightness at top level of building by using a lighter color of siding material and a different pattern of fenestration, with more glazing.
- 3 Followed through the concept of base - middle - top around all sides of building, wrapping brick around to east facade and using a fenestration pattern that reflects each component of the parti.



Precedent imagery



Early elevation study: simple, alternating projections



Early elevation study: structural bays & hierarchy



Proposed Design



Top



Middle



Base

LIGHTING PLAN

1 Wall Sconce A



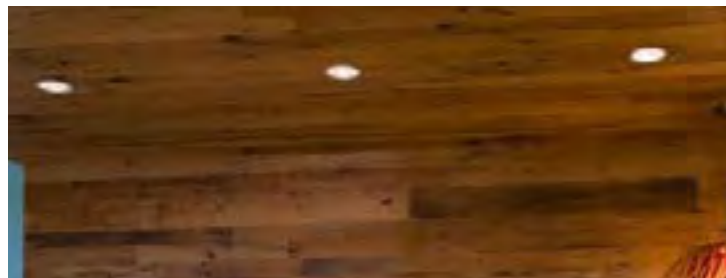
2 Wall Sconce B



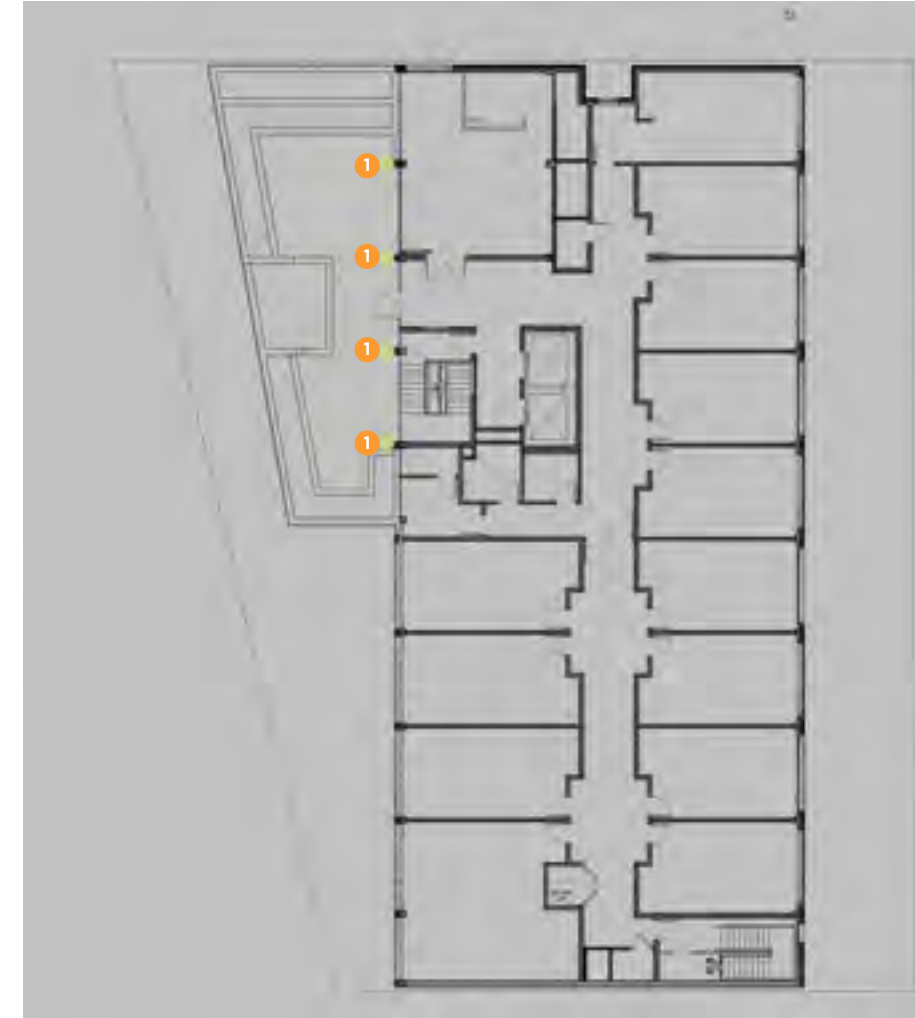
3 Blade Signage with Integral Lighting



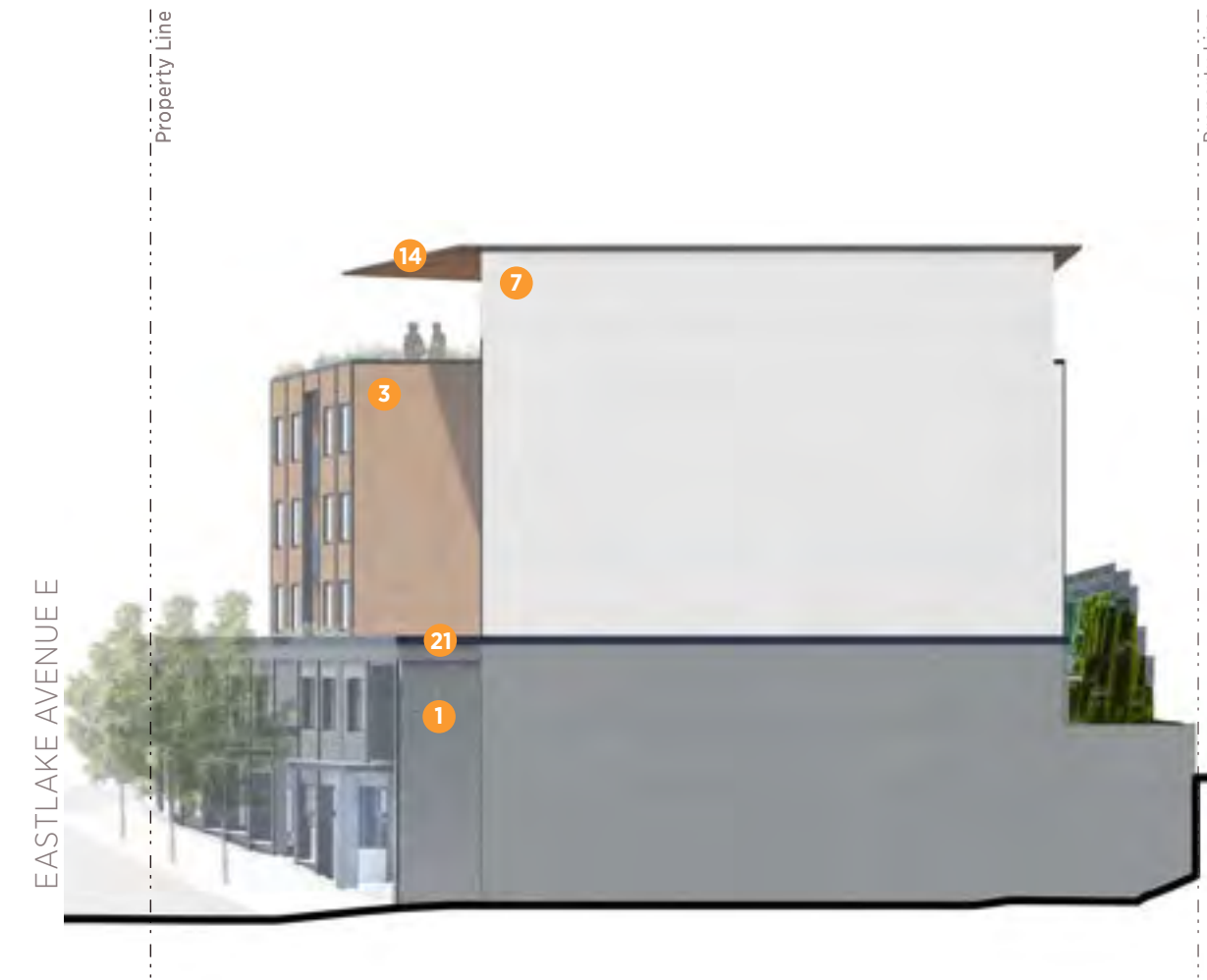
4 Can Lights at Wood Soffit



5 Concealed Wall Wash Lighting



EVENING VIEW AT EASTLAKE & NEWTON



Key

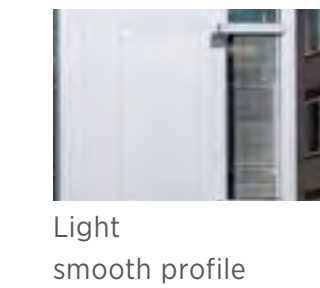
- 1 Running bond norman brick
- 2 Ornamental brick
- 3 Clad Siding (color 1)
- 4 Clad Siding (color 2)
- 5 Decorative wall - wave pattern
- 6 Metal panel
- 7 Cast in place concrete
- 8 Curtain wall (color 1)
- 9 Fiberglass windows
- 10 Curtain wall (color 2)
- 11 Operable full height glazing
- 12 Garage entry
- 13 Main entry
- 14 Solar array
- 15 Stormwater planter
- 16 Canopy
- 17 Main canopy
- 18 Metal reveal, typical
- 19 Metal reveal, corner
- 20 Metal railing
- 21 Metal cornice

Materials

Masonry



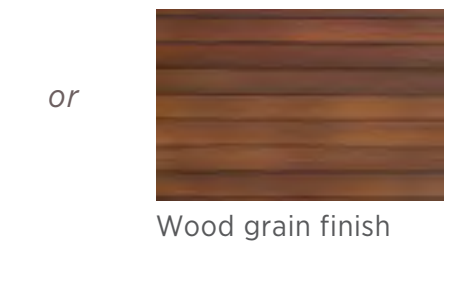
Metal Panel



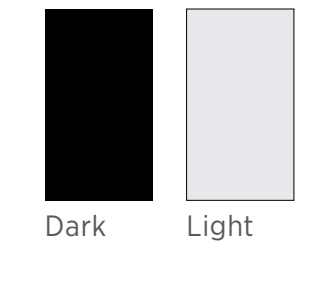
Wood Cladding



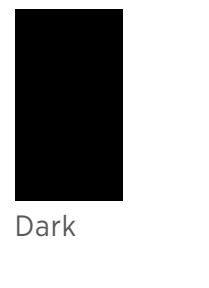
Aluminum Cladding



Window Frames



Metal Trim



SIGNAGE



1 Canopy Signage - Lettering



2 Canopy Signage - Logo



3 Blade Signage



4 Address Signage



DEPARTURES

ITEM	EDG SUMMARY	RESPONSE
<p>1. Structural Building Overhang</p> <p>SMC 23.41.012 D</p>	<p>The Code generally does not allow departures from structural building overhang standards. However, a departure is an option for projects qualifying for the Living Building Pilot Program pursuant to SMC 23.40.060. The applicant proposes a 10-foot encroachment of the west and to the north in E Newton Street right-of-way.</p> <p>At the time of the Early Design Guidance the Board indicated early support for a structural building overhang departure but expressed concerns that the departure had not fully been explored. At the Recommendation phase, the Board requested that additional information justifying the minimum roof overhang area, as well as, demonstrating that the roof shape and location is designed to minimize impacts to the adjacent right-of-way. With the provided guidance, the Board felt the requested departure would meet City adopted Design Guideline CS1-A Energy Use.</p>	<p>No longer pursuing this departure.</p>
<p>2. Parking Location and Access</p> <p>SMC 23.47A.032 A</p>	<p>The Code requires access from E Newton Street. The applicant proposes vehicular access from Eastlake Avenue E. At the time of the Early Design Guidance, the Board acknowledged public comments and indicated early support for access from Eastlake Avenue E. That Board noted that access from E Newton Street would be very difficult, if not impossible, for utility services given the substantial grade change in the right-of-way. Further, if access is provided from E Newton, the 2nd level street facade would be a parking use, which is a less desirable urban design condition. The Board agreed that access from Eastlake Avenue E was supported by SDOT, but noted that further consideration should be given to the right-of-way design to provide safe space for bicycles, pedestrians, and cars. The Board also would like to see more information about the future circulation patterns of people coming to and from the site to minimize impacts on the adjacent residential neighborhoods. With the provided guidance, the Board felt the final vehicular access design would better meet the intent of adopted Design Guideline PL3 Street-level interaction, DC1-A arrangement of interior uses and DC1-B Vehicular Access and Circulation.</p>	<p>SUPPORTED BY EDG</p> <p>Response privacy study highlighting distance between units, window placement, and landscaping strategies used to enhance privacy. (See P.xx-xx)</p> <p>The following design guidelines will be better supported: xxx-x</p>
<p>3. Street-level development standards</p> <p>SMC 23.47A.008</p>	<p>Did not pursue at EDG.</p>	

PARKING LOCATION AND ACCESS

SMC 23.47A.032.A Parking location and access

1. NC zones. The following rules apply in NC zones, except as provided under subsections 23.47A.032.A.2 and 23.47A.032.D:
 - a. Access to parking shall be from the alley if the lot abuts an alley improved to the standards of subsection 23.53.030.C, or if the Director determines that alley access is feasible and desirable to mitigate parking access impacts. If alley access is infeasible, the Director may allow street access.
 - b. If access is not provided from an alley and the lot abuts only one street, access is permitted from the street, and limited to one two-way curb cut.
 - c. If access is not provided from an alley and the lot abuts two or more streets, access is permitted across one of the side street lot lines pursuant to subsection 23.47A.032.C, and curb cuts are permitted pursuant to subsection 23.54.030.F.2.a.1.
 - d. If for each permitted curb cut, street-facing facades may contain one garage door, not to exceed the maximum width allowed for curb cuts.
2. In addition to the provisions governing NC zones in subsection 23.47A.032.A.1, the following rules apply in pedestrian-designated zones, except as may be permitted under subsection 23.47A.032.D:
 - a. If access is not provided from an alley and the lot abuts two or more streets, access to parking shall be from a street that is not a principal pedestrian street.
 - b. If access is not provided from an alley and the lot abuts only a principal pedestrian street or streets, access is permitted from the principal pedestrian street, and limited to one two-way curb cut.
3. In C1 and C2 zones, access to off-street parking may be from a street, alley, or both when the lot abuts an alley. However, structures in C zones with residential uses, structures in C zones with pedestrian designations, and structures in C zones across the street from residential zones shall meet the requirements for parking access for NC zones as provided in subsection 23.47A.032.A.1.
4. In the event of conflict between the standards for curb cuts in this subsection 23.47A.032.A and the provisions of subsection 23.54.030.F, the standards in subsection 23.54.030.F shall control.

SMC 23.54.030.F Curb cuts

The number of permitted curb cuts is determined by whether the parking served by the curb cut is for residential or nonresidential use, and by the zone in which the use is located. If a curb cut is used for more than one use or for one or more live-work units, the requirements for the use with the largest curb cut requirements shall apply.

1. Residential uses

- a. Number of curb cuts
 - 2) For lots on principal arterials designated on the Arterial street map, Section 11.18.010, curb cuts are permitted according to table B for 23.54.030:

Street or easement frontage of the lot	Number of curb cuts permitted
160 feet or less	1
Greater than 160 feet up to 320 feet	2
Greater than 320 feet up to 480 feet	3
For lots with street frontage in excess of 480 feet, the pattern established above continues.	

23.41.012.D. Departures for the Living Building Pilot Program

2. Scope of departures. In addition to the departures allowed under subsection 23.41.012.B, departures for projects participating in the Living Building Pilot Program established under Section 23.40.060 may also be granted for the following:
 - h. Standards for the location of access to parking Downtown zones

DEPARTURE REQUEST

SUPPORTED BY EDG

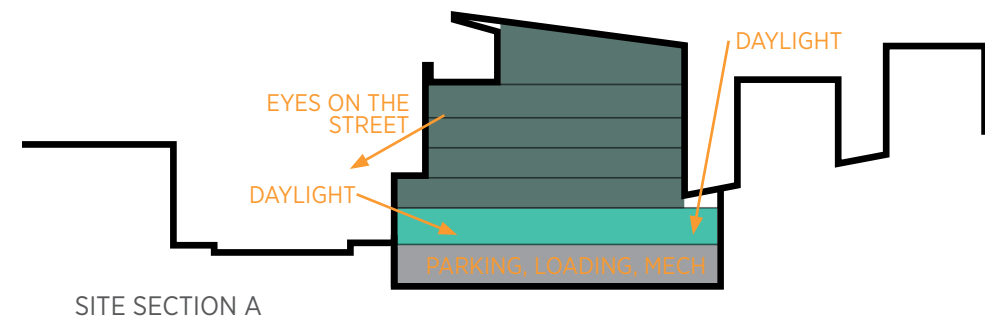
Parking and loading access from Eastlake Avenue E allows the project to locate all parking, loading, back-of-house, and mechanical functions underground. In doing so, regularly occupied spaces are able to be located on levels above grade, allowing sufficient access to daylight and natural ventilation which better meets the intent of the Design Guidelines and Living Building Challenge (CS1.B.2) and residential units are able to be located on Levels 2 & 3, which better meets the intent of the Design Guidelines so as to contribute towards a strong, residential street edge at the first three floors, and encourage 'eyes on the street' (CS2.A.1, PL2.B.1).

The Design Guidelines (DC1.B.1) call for access locations that "minimize conflict between vehicles and non-motorists wherever possible." The departure request better meets the intent of this guideline and makes this more possible because:

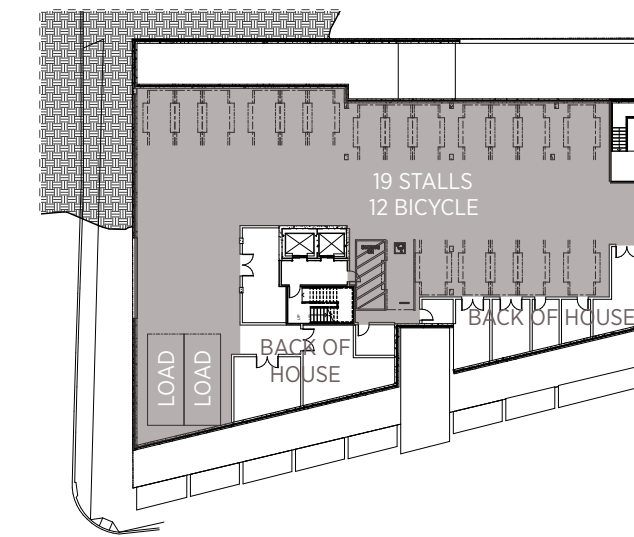
- Potential conflicts with the project traffic would be limited to 2 vehicle movements (inbound right-turns and outbound right-turns only).
- More potential conflicts would exist with access via E Newton Street with up to 6 different vehicle movements at E Newton Street/Eastlake Avenue E (inbound lefts, through and rights and outbound lefts, through and rights).

The Design Guidelines (DC1.B.1) call for "safe conditions for pedestrians, bicyclists and drivers." The departure request better meets the intent of this guideline because:

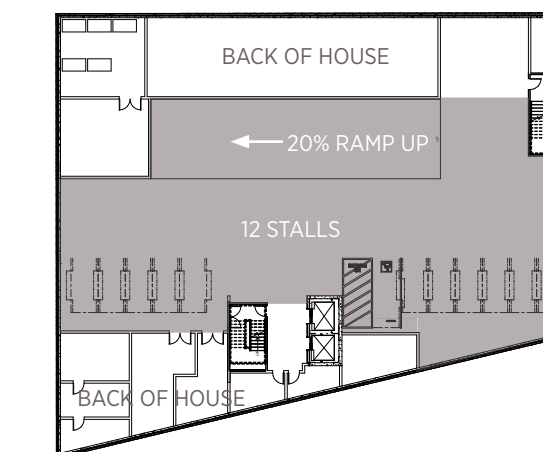
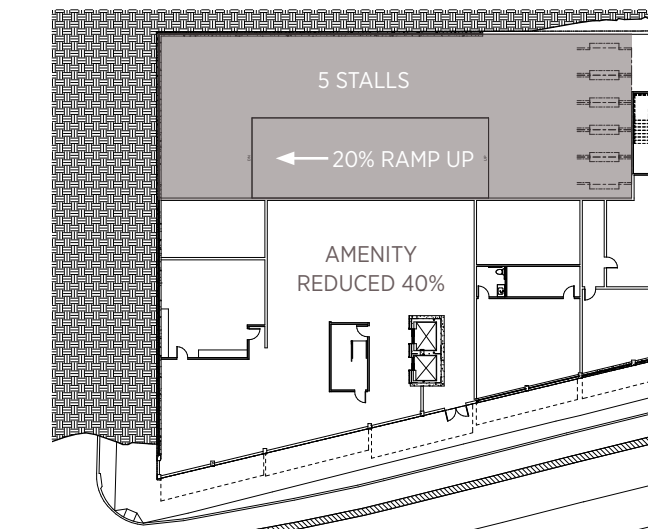
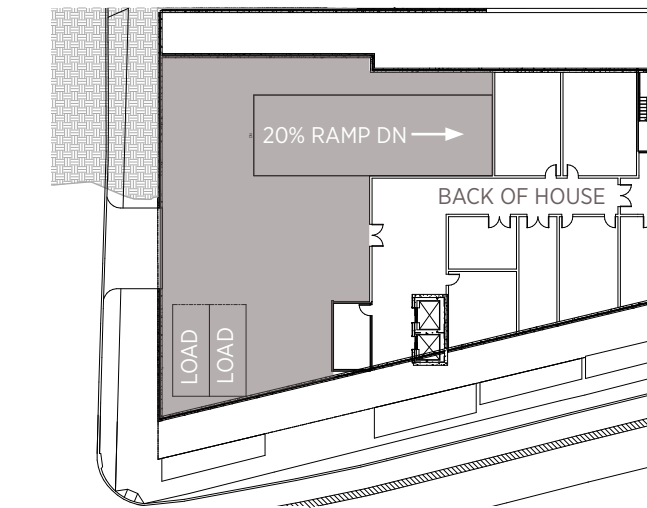
- There would be more sight distance available along Eastlake Avenue E due to less roadway grade and restriction on-street parking in the future.
- The steep grade and on-street parking on E Newton Street would provide less sight distance and potentially less safe conditions with access via this street.



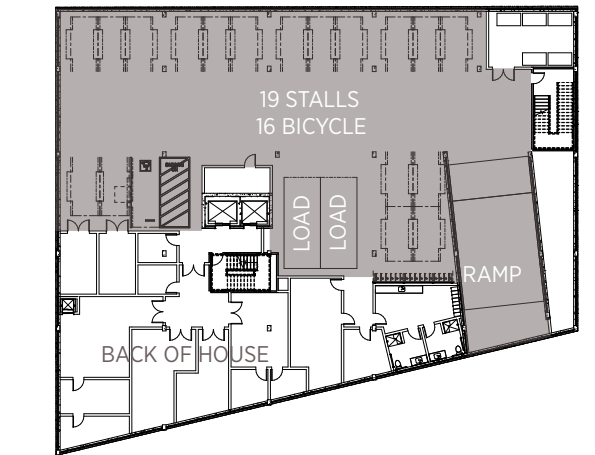
NEWTON ACCESS: LEVEL 2 PARKING

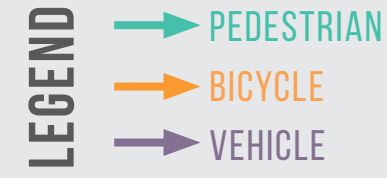


NEWTON ACCESS: BELOW GRADE PARKING



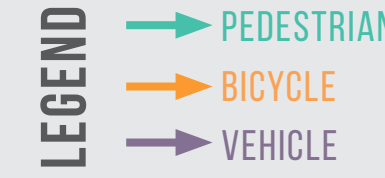
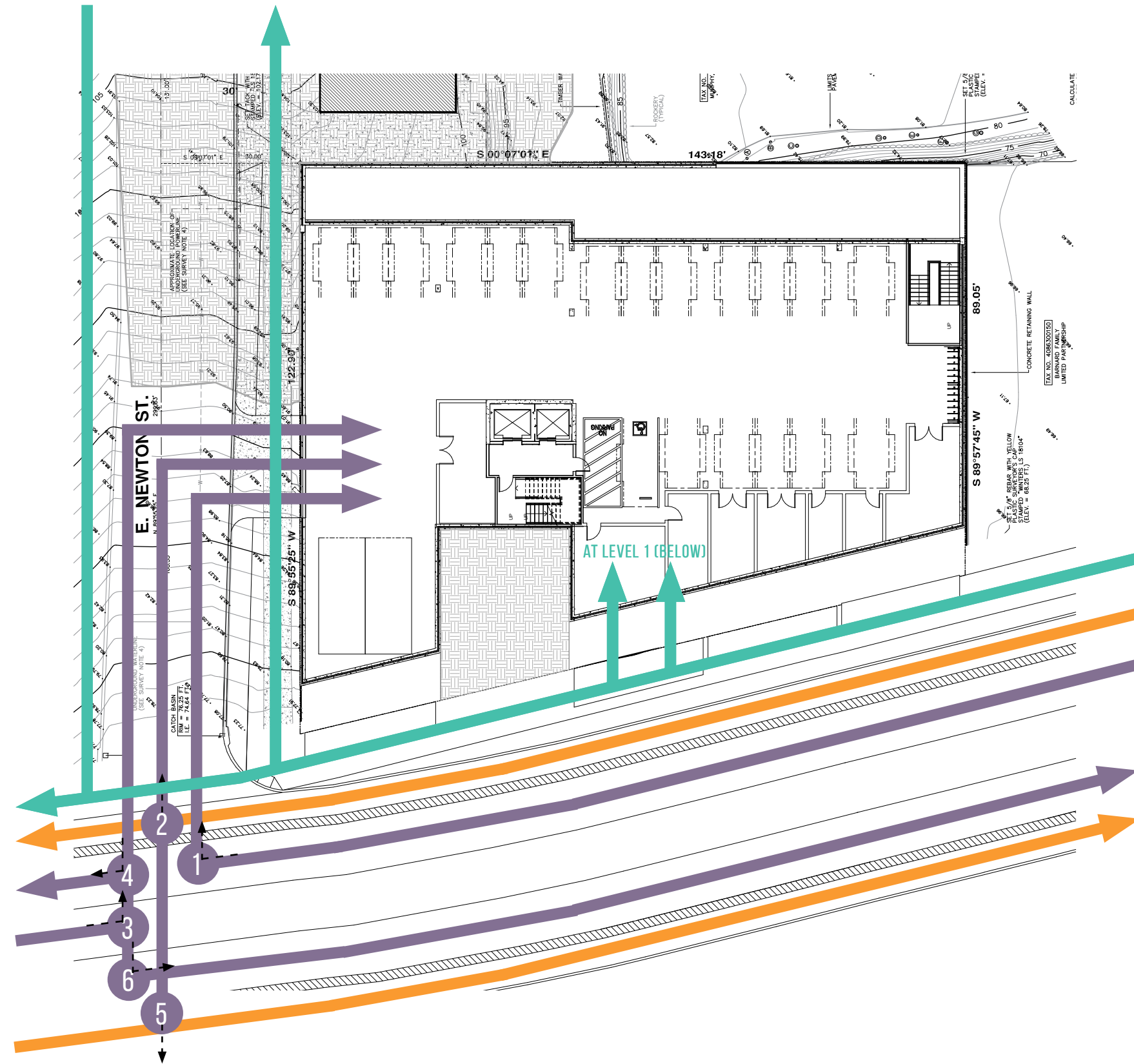
EASTLAKE ACCESS: BELOW GRADE PARKING





NOTES

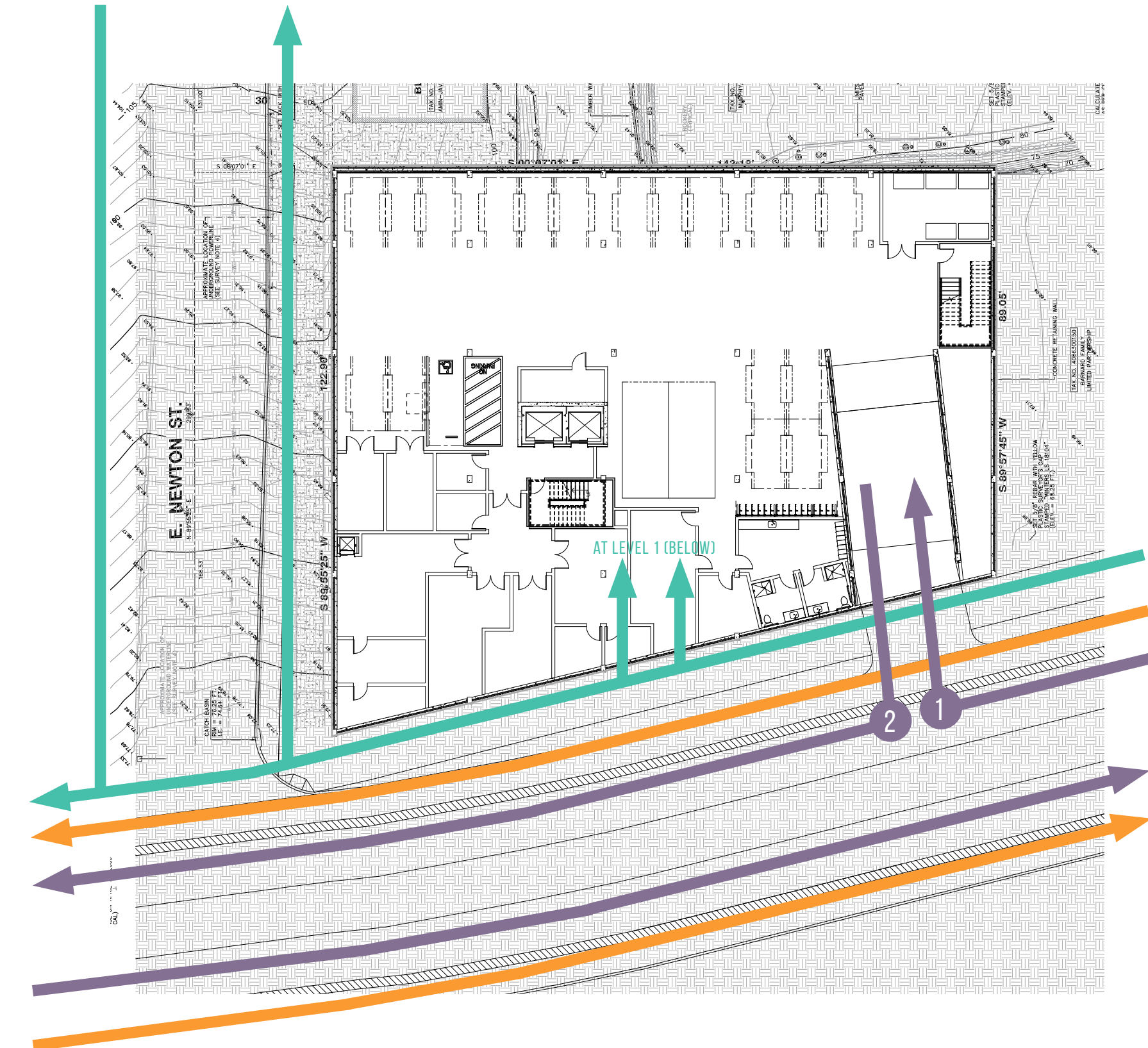
- The Design Guidelines (DC1.B.1) call for access locations that "minimize conflict between vehicles and non-motorists wherever possible." Access via E Newton Street does not meet the intent of this guideline because:
 - More potential conflicts would exist with up to 6 different vehicle movements at E Newton Street/Eastlake Avenue E (inbound lefts, through and rights and outbound lefts, through and rights)
 - Potential conflicts with the project traffic would be limited to 2 vehicle movements (inbound right-turns and outbound right-turns only) with access via Eastlake Avenue E.
- The Design Guidelines (DC1.B.1) call for "safe conditions for pedestrians, bicyclists and drivers." Access via E Newton Street does not meet the intent of this guideline because:
 - The steep grade and on-street parking on E Newton Street would provide less sight distance and create potentially less safe conditions.
 - There would be more sight distance available along Eastlake Avenue E due to less roadway grade and restriction for on-street parking as part of future HCT improvements.



NOTES

- Project proposing inbound rights and outbound rights only via Eastlake Avenue E.
- Assisted living community would generate significantly fewer vehicle trips vs. other potential redevelopment (see matrix below).
- If developed as apartments or office:
 - Nearly 4 to 8 times the number of AM peak hour vehicle trips and nearly 3 to 5 times the number of PM peak hour vehicle trips.
 - 25 to 62 more AM peak hour vehicle crossings of the future northbound protected bicycle lane and 27 to 54 more PM peak hour vehicle crossings.
- A small number of potential vehicle-bicycle conflicts (14 maximum during PM peak hour, 9 maximum during peak AM hour) since not all vehicle and bicycle trips would occur simultaneously.
 - Less than most comparable examples because vehicle trip generation is so much less than other land uses.
 - Potential vehicle-bicycle conflicts would be even less during the AM peak hour and less

Potential Use (Size)	AM Peak Hour Vehicle Trips	PM Peak Hour Vehicle Trips
Assisted Living (86 beds)	9	14
Apartments (120 units)	34	41
Office Bldg. (65,000 sf)	71	68



STREET-LEVEL DEVELOPMENT STANDARDS

SMC 23.47A.008 Street-level development standards

A. Basic street-level requirements

1. The provisions of this subsection 23.47A.008.A apply to:
 - b. Structures that contain a residential use in C zones;
 - c. Structures in C zones across the street from residential zones

2. Blank facades

- a. For purposed of this Section 23.47A.008, facade segments are considered blank if they do not include at least one of the following:
 - 1) Windows;
 - 2) Entryways or doorways;
 - 3) Stairs, stoops, or porticos;
 - 4) Decks or balconies; or
 - 5) Screening and landscaping on the facade itself.
- b. Blank segments of the street-facing facade between 2 feet and 8 feet above the sidewalk may not exceed 20 feet in width.
- c. The total of all blank facade segments may not exceed 40 percent of the width of the facade of the structure along the street.

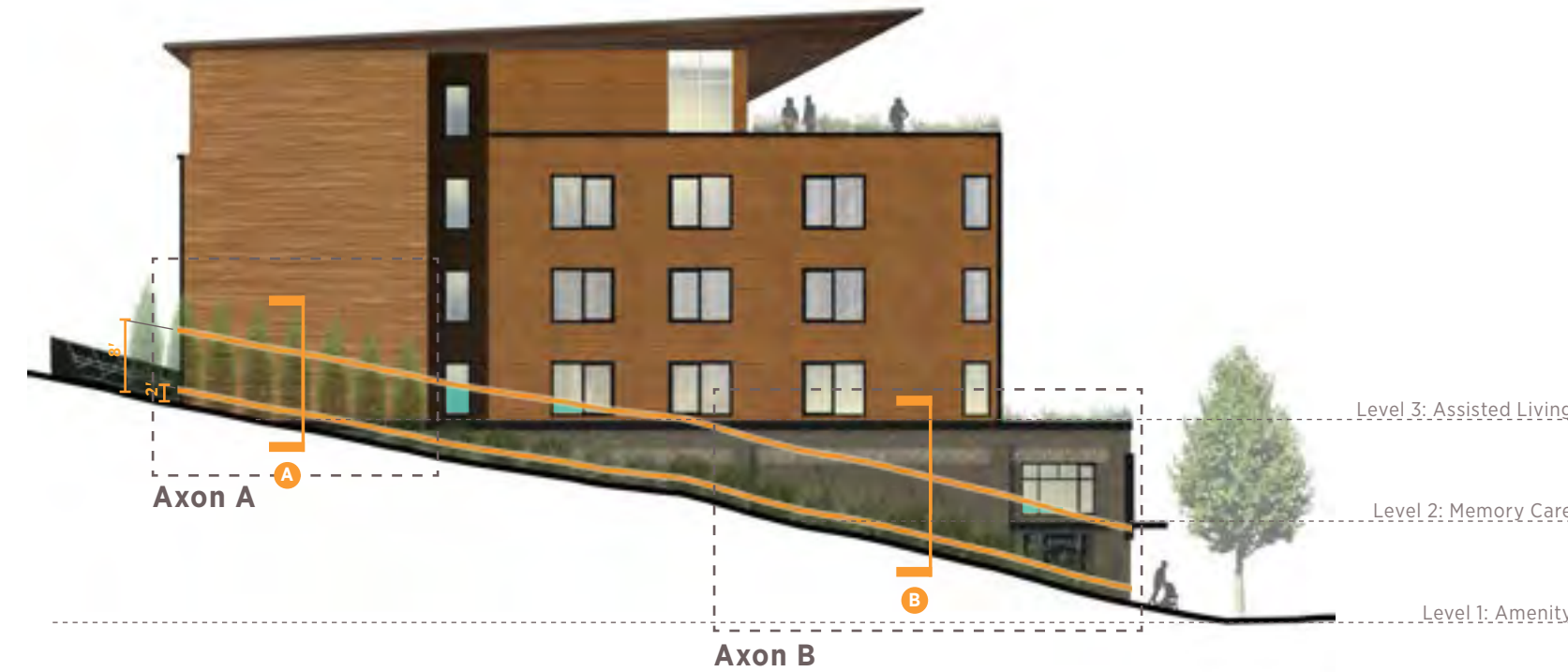
B. Non-residential street-level requirements

1. In addition to the provisions of this subsection 23.47A.008.A, the provisions of this subsection 23.47A.008.B apply to:
 - b. Structures with street-level non-residential uses that also contain residential uses in C zones;
 - c. Structures with street-level non-residential uses in C zones across the street from residential zones
2. Transparency
 - a. Sixty percent of the street-facing facade between 2 feet and 8 feet above the sidewalk shall be transparent.

DEPARTURE REQUEST

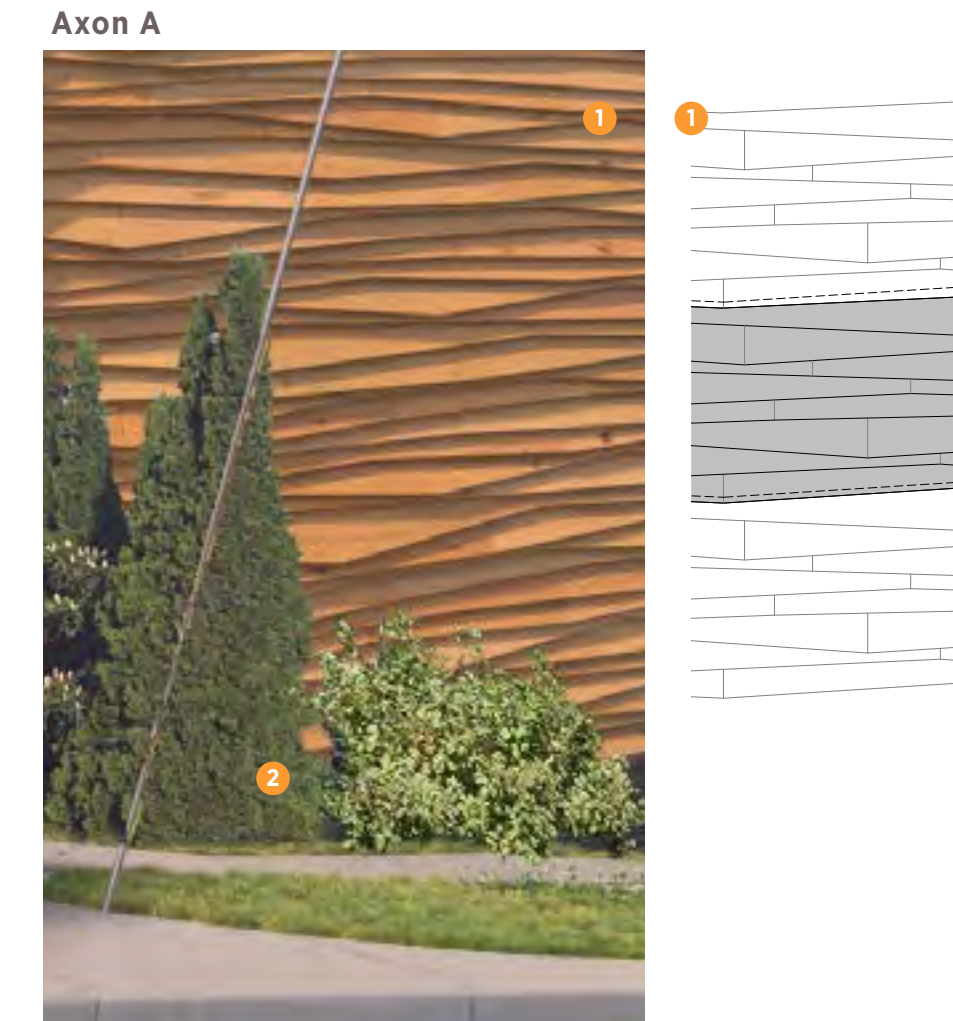
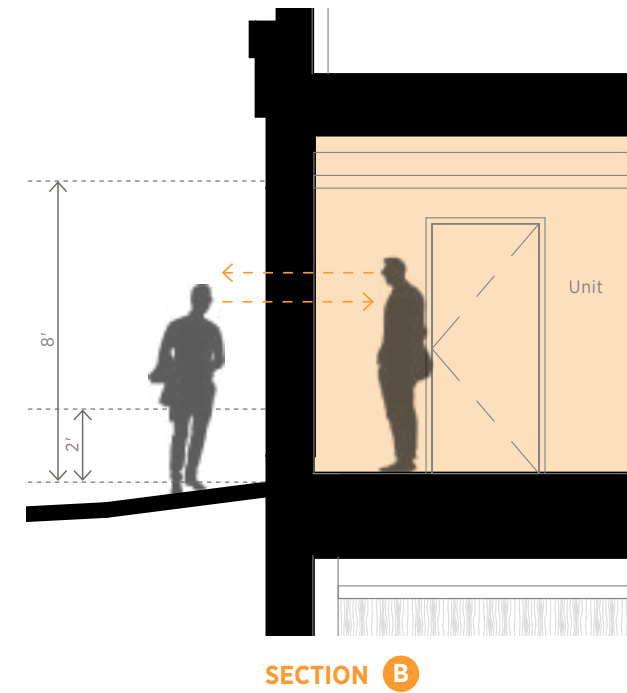
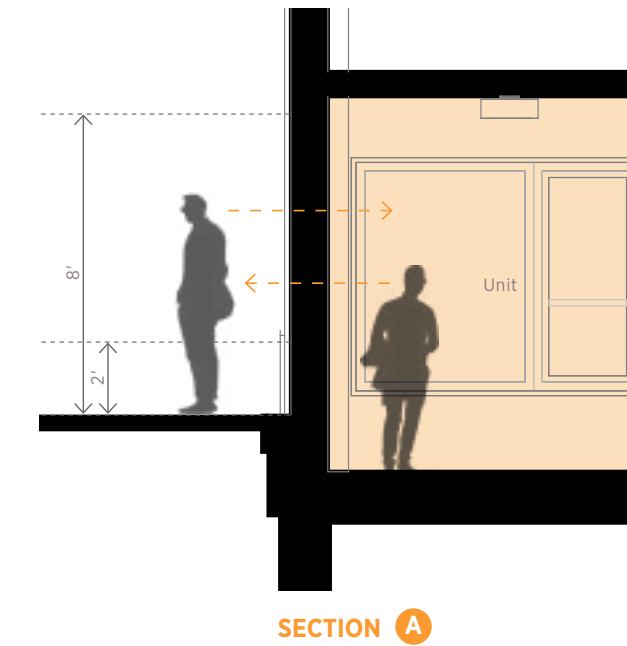
Due to the steep grade along the E Newton Street, the grade quickly becomes adjacent to residential units rather than ground floor amenity spaces. The proposed north facade integrates opaque facade detailing to create a comfortable pedestrian experience while also protecting the privacy of memory care and assisted living residents within their living units (PL3-B.1).

A wood decorative wall, ornamental brick detailing, and building information plaques are proposed along the street edge to add detail and interest (DC2-D.2). Concepts based on the Eastlake neighborhood, rowing culture, and use of natural materials highlight the local history and culture (CS3-B) while creating places of interest along the street edge (PL1-A.2).



LEGEND

	655 sf
	17 sf (2.5%)



- 1 Decorative wall - wave pattern
- 2 Landscape buffer
- 3 Running bond norman brick
- 4 Ornamental brick
- 5 Building information plaque

THANK YOU



APPENDICES

TOPOGRAPHY & EXISTING STRUCTURES

NOTES

Topography:

- Approximate slope at E Newton Street = 20%
- Existing E Newton Street curb cut enters site at approximately Level 2
- Existing Eastlake Avenue E curb cut enters the site at far south end of west property line. Curb cut of property to south is from south property line (E Howe Street).

Existing Structures:

- Existing office building to be demolished (under separate permit).



TREE SURVEY

TREE IDENTIFICATION TABLE

SOURCE: KATIE HOGAN PN 80784, TREE SOLUTIONS, INC. REPORT DATED 02/09/16

I.D. #	DIAMETER	TREE NAME	BOTANICAL NAME
330	13.1"	BITTER CHERRY	PRUNUS EMARGINATA
331	18.3"	BIG LEAF MAPLE	ACER MACROPHYLLUM
332	8.0"	HYBRID BLACK POPLAR	POPULUS X CANADENSIS
333	7.1"	HYBRID BLACK POPLAR	POPULUS X CANADENSIS
334	18.9"	HYBRID BLACK POPLAR	POPULUS X CANADENSIS
335	6.0"	BEAKED HAZELNUT	CORYLUS CORNUTA V. CALIFORNICA
336	6.9"	VINE MAPLE	ACER CIRCINATUM
337	7.3"	VINE MAPLE	ACER CIRCINATUM
338*	8.7"	VINE MAPLE	ACER CIRCINATUM
339	18.6"	SWEET GUM	LIQUIDAMBAR STYRACIFLUA
A	6.2"	NORWAY SPRUCE	PICEA ABIES
B	6.0"	NORWAY SPRUCE	PICEA ABIES
C	7.8"	NORWAY SPRUCE	PICEA ABIES
D	7.0"	NORWAY SPRUCE	PICEA ABIES
E	6.2"	NORWAY SPRUCE	PICEA ABIES
F	7.2"	NORWAY SPRUCE	PICEA ABIES
G	9.2"	NORWAY SPRUCE	PICEA ABIES

*DENOTES AN EXCEPTIONAL TREE

FROM ARBORIST REPORT:

See Appendix C for full report.

- One (1) tree on site is Exceptional by size per City of Seattle Director's Rule 16-2008.
- The exceptional tree is one of many multi-stemmed vine maples (Acer circinatum) in the planting beds that are a part of the retaining wall along the western property line. The tree is in good health and structural condition and could be considered for transplant if desired.



EXCEPTIONAL TREE (VINE MAPLE)



EXCEPTIONAL TREE (VINE MAPLE)

SITE ACCESS OPPORTUNITIES

NOTES

Eastlake Avenue E:

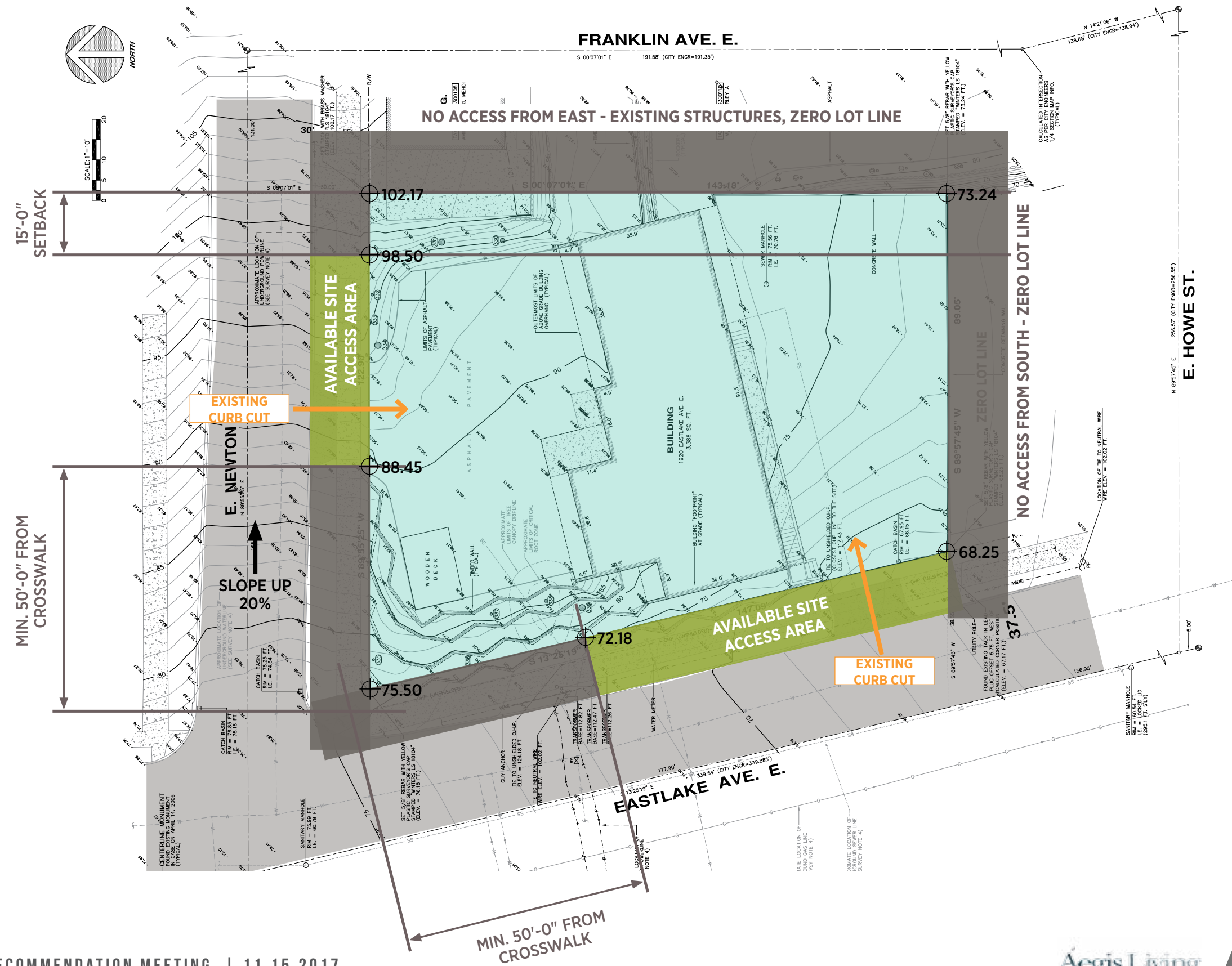
- Existing curb cut enters the site at far south end of west property line. Curb cut of property to south is from south property line (E Howe Street).
- Site access from Eastlake Avenue E enables underground parking and loading.

E Newton Street:

- Approximate slope at E Newton Street = 20%
- Existing curb cut enters site at approximately Level 2.
- Available site access area from E Newton Street requires loading and parking garage entry from Level 2.

Roosevelt to Downtown High Capacity Transit (HCT):

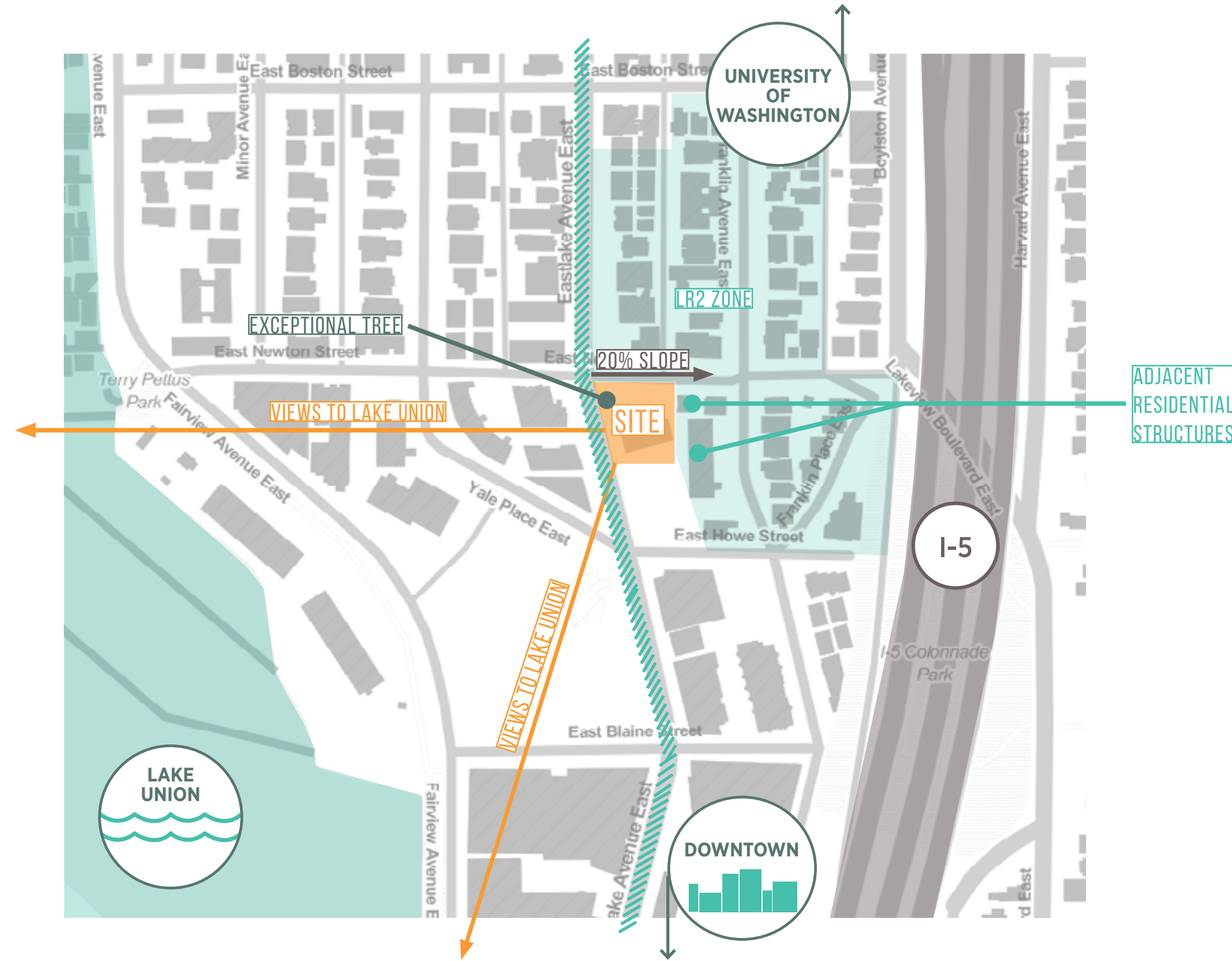
- Preferred site access from existing Eastlake Avenue E curb cut. Care to be taken to design and create a safe pedestrian and cyclist zone at garage access crossing per proposed HCT street cross section at site.



OPPORTUNITIES & CONSTRAINTS

LEGEND

- EASTLAKE FUTURE HIGH CAPACITY TRANSIT (HCT) CORRIDOR IMPROVEMENTS (SEE PAGE 12)
- STEEP TOPOGRAPHY
- EXCEPTIONAL TREE
- VIEWS
- ADJACENT LR ZONE
- ADJACENT RESIDENTIAL BUILDINGS

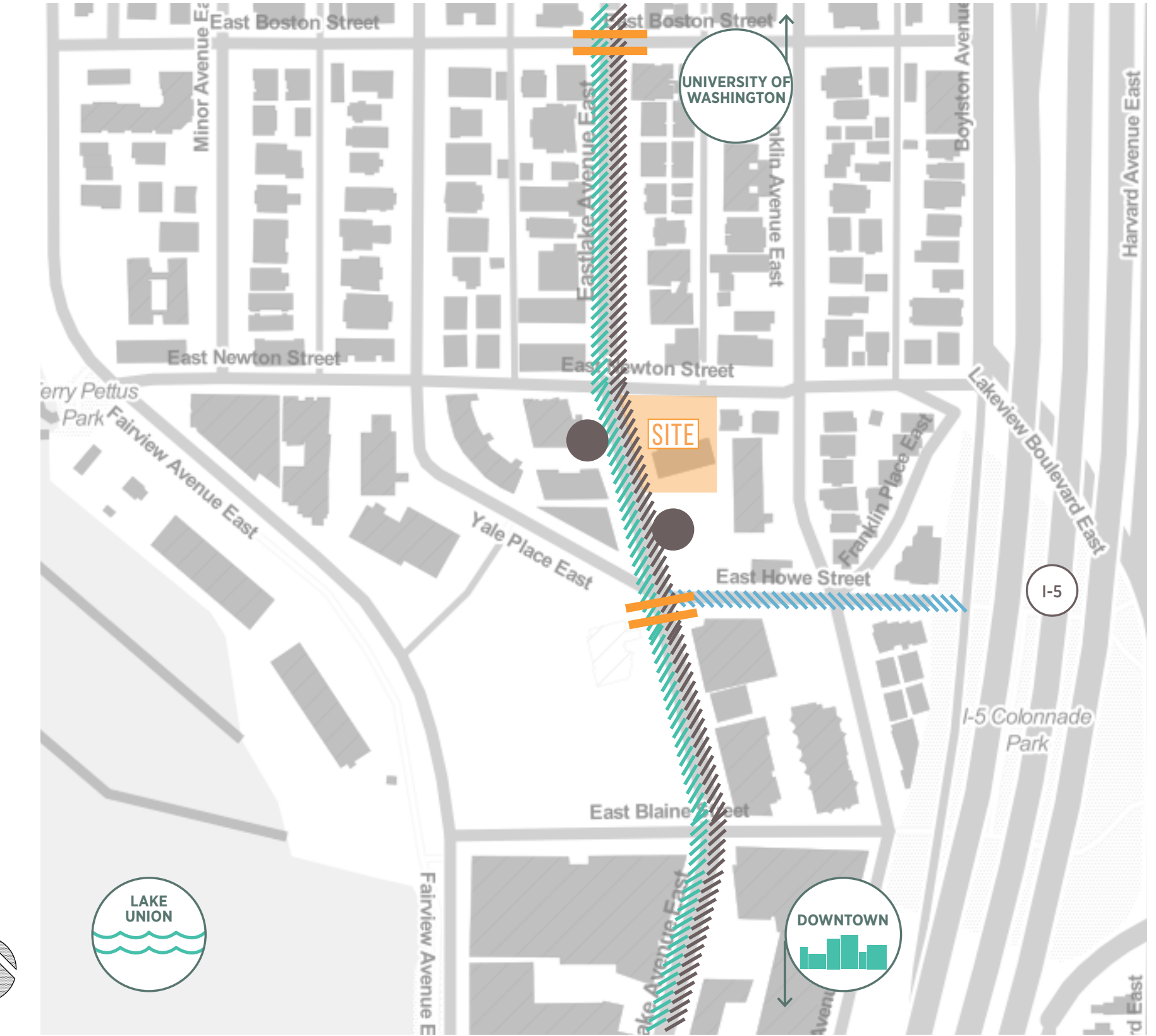
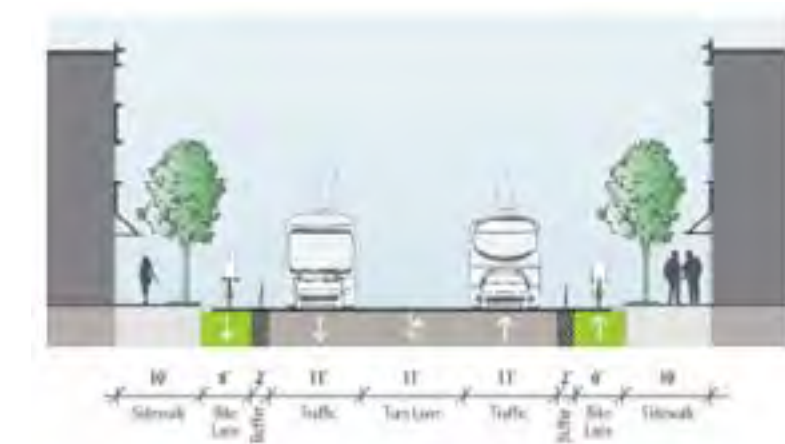


TRAFFIC & CONNECTIONS

USES

- SIGNED BICYCLE ROUTE
- UNMARKED, UNSIGNED CONNECTORS
- BUS ROUTE (70/83)
- BUS STOP (70/83)
- CROSS WALK

NOTES:
 Eastlake Avenue East:
 • Principal Arterial Street
 • SEPA Scenic Route
 • Frequent Transit
 • Future High Capacity Transit (HCT) Route (proposed street section adjacent to site shown below)



DESIGN CUES & SITE CONTEXT

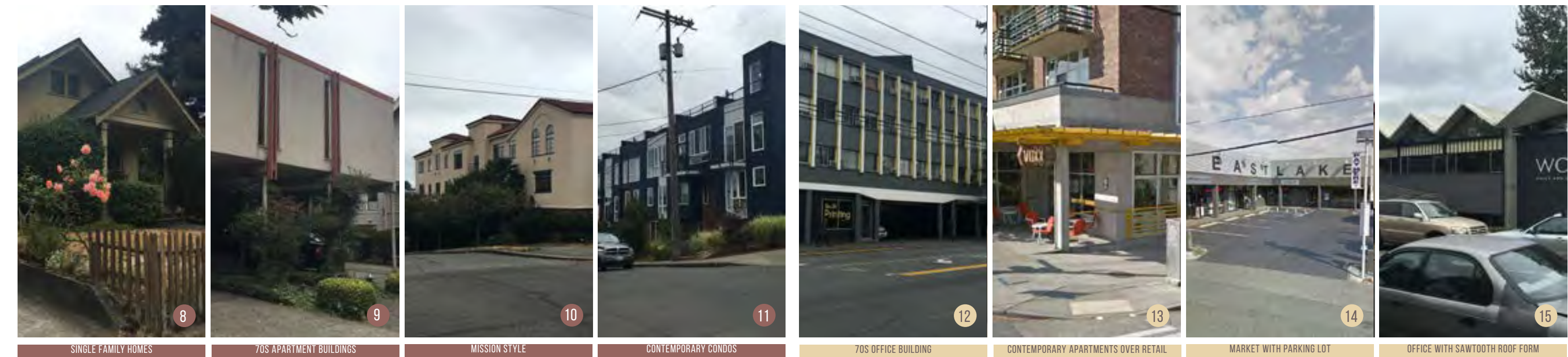
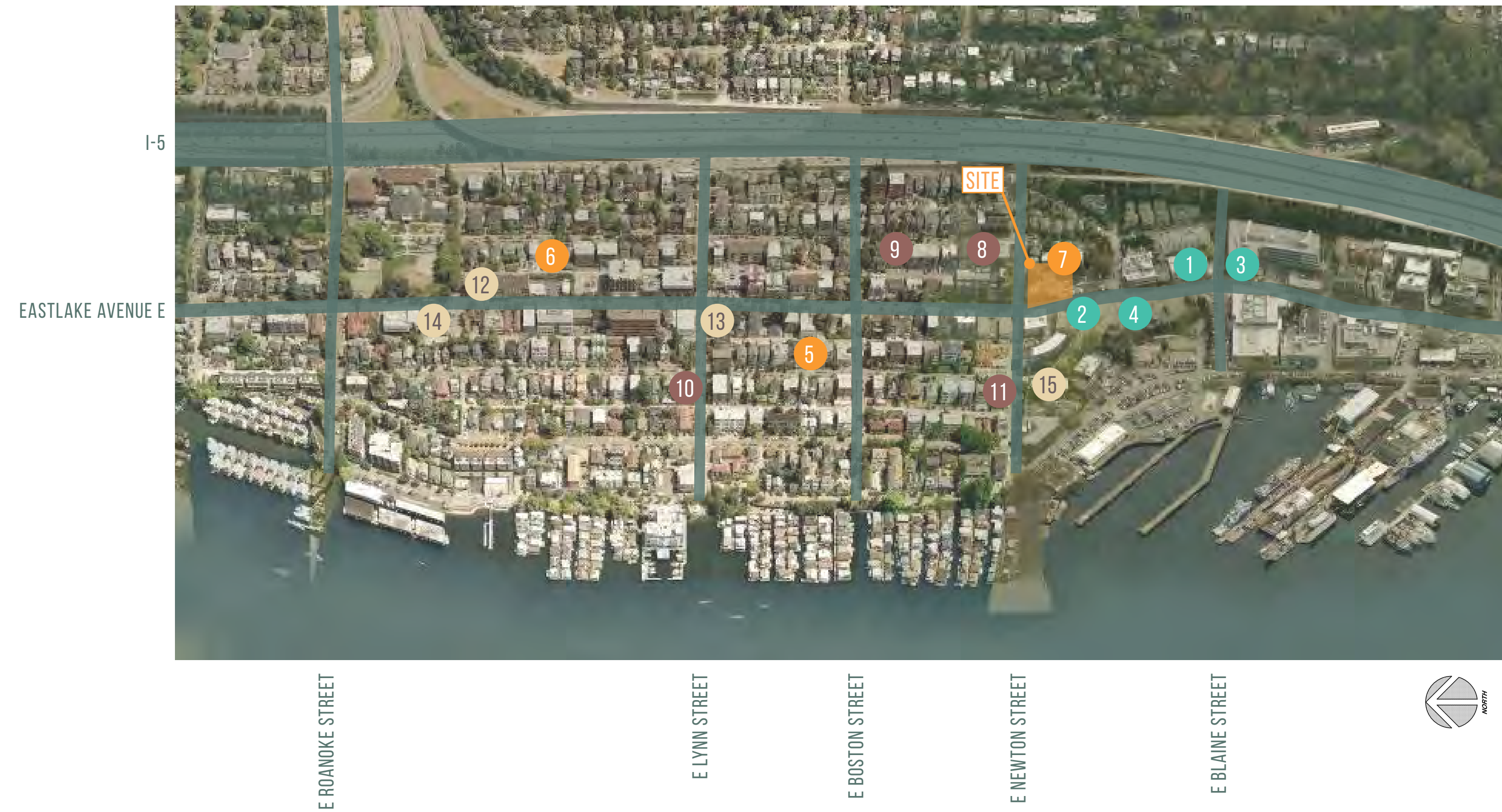


PHOTO MONTAGE: EASTLAKE AVENUE E

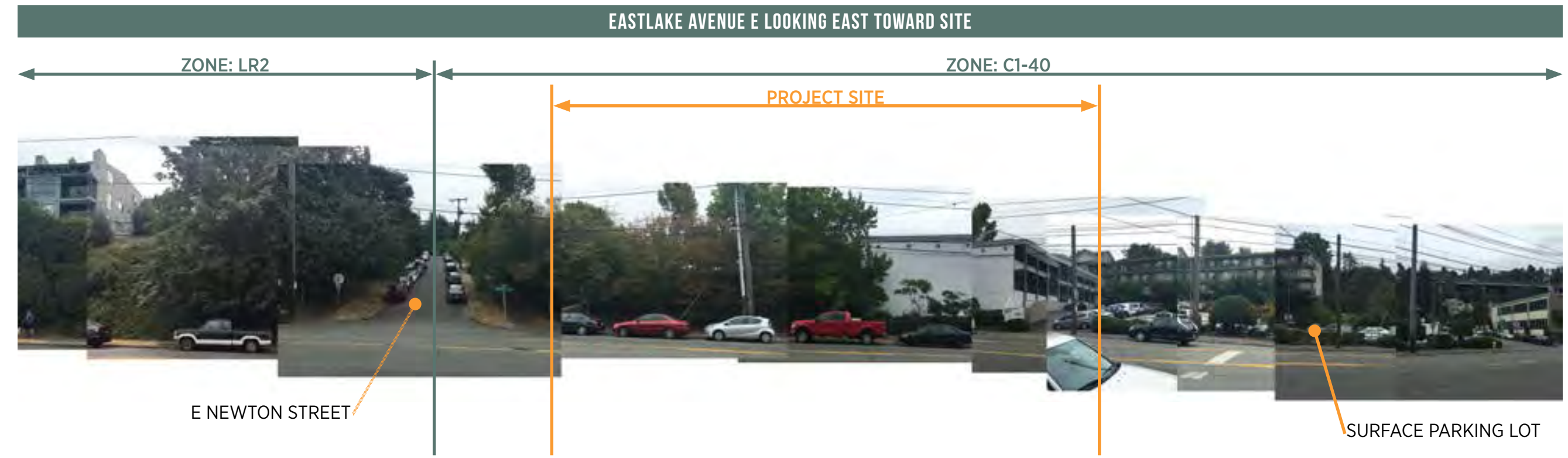


PHOTO MONTAGE: E NEWTON STREET





Aegis Lake Union

Design Development Building Performance Report

August 11, 2017
pae-engineers.com

Table of Contents

- 1.0 Project Description
- 2.0 Benchmarking
- 3.0 Target Performance Path
- 4.0 Energy Performance Options
- 5.0 Overview of Energy Conservation Measures to Achieve Living Building Pilot Program

Project Directory

Owner	Aegis								
Architect	Ankrom Moisan 1505 5th Ave, Suite 300 Seattle, WA 98101 206-576-1600								
Mechanical and Electrical Engineer	PAE 1501 E Madison St, Suite 300 Seattle, WA 98122 206-596-8606								
	<table border="0"> <tr> <td>Allan Montpellier, PE, LEED AP Principal in Charge allan.montpellier@pae-engineers.com</td> <td>Sergey Kisel Electrical Lead sergey.kisel@pae-engineers.com</td> </tr> <tr> <td>David Mead Project Manager david.mead@pae-engineers.com</td> <td>Jordan Fisk, PE, LEED AP Mechanical Engineer of Record Mechanical Lead jordan.fisk@pae-engineers.com</td> </tr> <tr> <td>Michael Kim, PE, LEED AP Electrical Engineer of Record michael.kim@pae-engineers.com</td> <td>Carmen Cejudo, PE, LEED AP Plumbing Lead carmen.cejudo@pae-engineers.com</td> </tr> <tr> <td>Carley Heinen Project Coordinator carley.heinen@pae-engineers.com</td> <td></td> </tr> </table>	Allan Montpellier, PE, LEED AP Principal in Charge allan.montpellier@pae-engineers.com	Sergey Kisel Electrical Lead sergey.kisel@pae-engineers.com	David Mead Project Manager david.mead@pae-engineers.com	Jordan Fisk, PE, LEED AP Mechanical Engineer of Record Mechanical Lead jordan.fisk@pae-engineers.com	Michael Kim, PE, LEED AP Electrical Engineer of Record michael.kim@pae-engineers.com	Carmen Cejudo, PE, LEED AP Plumbing Lead carmen.cejudo@pae-engineers.com	Carley Heinen Project Coordinator carley.heinen@pae-engineers.com	
Allan Montpellier, PE, LEED AP Principal in Charge allan.montpellier@pae-engineers.com	Sergey Kisel Electrical Lead sergey.kisel@pae-engineers.com								
David Mead Project Manager david.mead@pae-engineers.com	Jordan Fisk, PE, LEED AP Mechanical Engineer of Record Mechanical Lead jordan.fisk@pae-engineers.com								
Michael Kim, PE, LEED AP Electrical Engineer of Record michael.kim@pae-engineers.com	Carmen Cejudo, PE, LEED AP Plumbing Lead carmen.cejudo@pae-engineers.com								
Carley Heinen Project Coordinator carley.heinen@pae-engineers.com									

1.0 Project Description

Executive Summary

On July 19th, 2017 PAE received responses from Aegis for the Energy Assumption memos. Aegis provided very helpful feedback on all the energy memos but PAE has found that some items impact energy and need to be addressed. The project is 15.6 EUI (kBtu/SF/yr) over the energy budget set by the living building pilot program after the design development documents and feedback from Aegis were incorporated into the energy model. PAE has studied energy conservation measures that will bring the project back on track with its energy budget. Section 4.0 "Energy Performance Options" summarizes the items that have the largest impact on the building EUI along with steps that need to be taken to get the project back on budget.

Owner Controlled Energy Impacts

It is critical that Aegis takes direct ownership over their operational energy usage as the majority of energy use will be controlled through how Aegis staff operate the building. In order to meet the LBPP energy target, Aegis staff and residents will need to carefully operate the building to conserve energy.

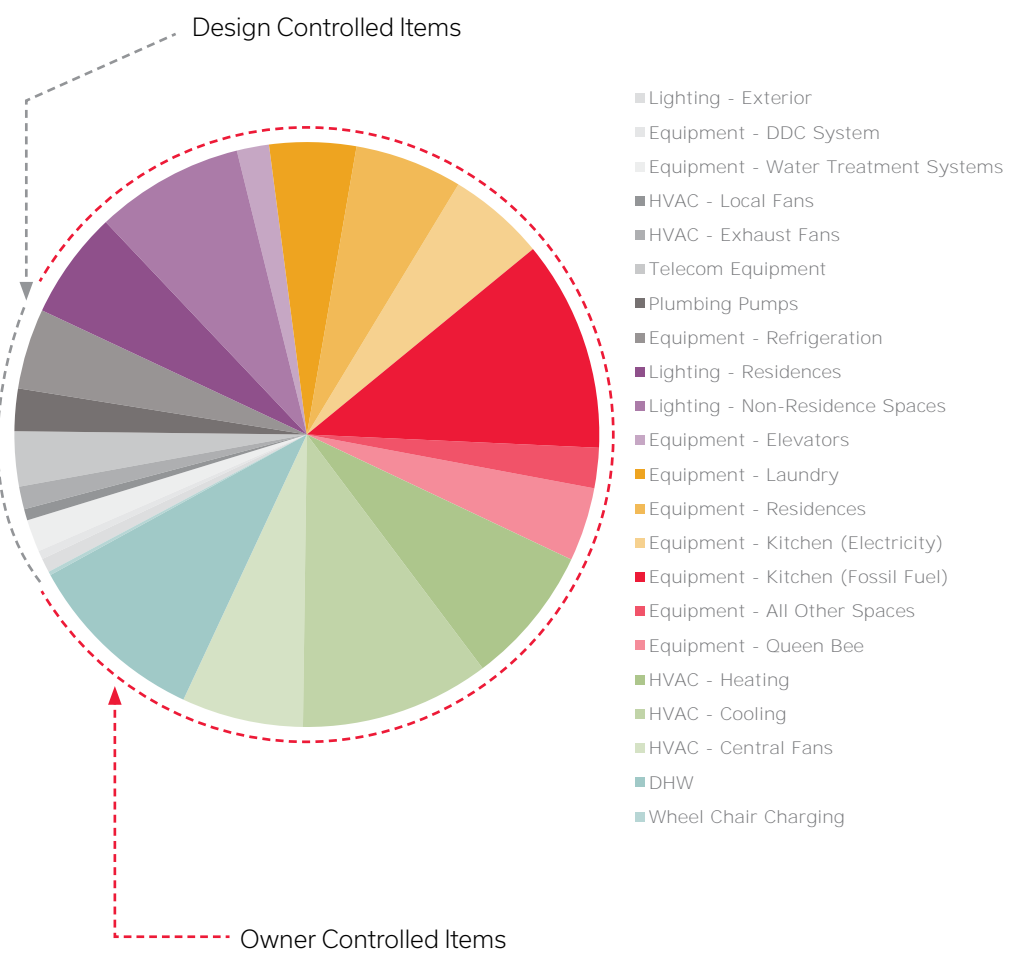
With the 100% DD energy results Aegis staff and residents will have control of the majority of energy use. The 'control' means Aegis staff and residents can influence the energy performance through how they choose to operate the building. Even items like the heating, cooling and ventilation can be effected when staff and residents change the intended operation of the building. For example, if a resident opens a window on a cool day, the heating energy will increase.

The two largest energy users are the kitchen and laundry operations based on survey feedback from Aegis. Prior to additional energy efficiency measures the kitchen accounts for 9.9 EUI alone and laundry 10.7 EUI. These do not include plug loads in residential and common spaces or the Queen Bee loads. To meet the energy targets Aegis needs to commit implementing efficient operating procedures in the kitchen and laundry in addition to completing the items listed in this memo. The energy usage from the these categories must be tracked through submetering post occupancy so improvements can be made during the energy performance period.

Note, the energy model currently does not have operable windows opening and closing. Depending on how residents operate the windows, it could significantly impact the energy performance of the building.

In addition, the miscellaneous plug loads for the residents and the amenity spaces are estimates. If these spaces have more equipment brought in and operated it will increase the overall energy use.

The pie chart below illustrates what is energy usage items are controlled by the design versus the owner. Please note how the majority of the usage is in control by how the staff and residents use the building.



Energy Budget

Sustainable design requires a careful analysis of the building's energy use and the source of that energy. Since senior living buildings use roughly twice the energy of a similar scale multi-family building, they present many opportunities to reduce energy consumption. Ideally, a sustainable building would produce its own power without generating any pollution or purchase its power from a renewable source (i.e. "fish friendly" hydro, "bird friendly" wind, photovoltaics, etc.). In addition, it would use no fossil fuels.

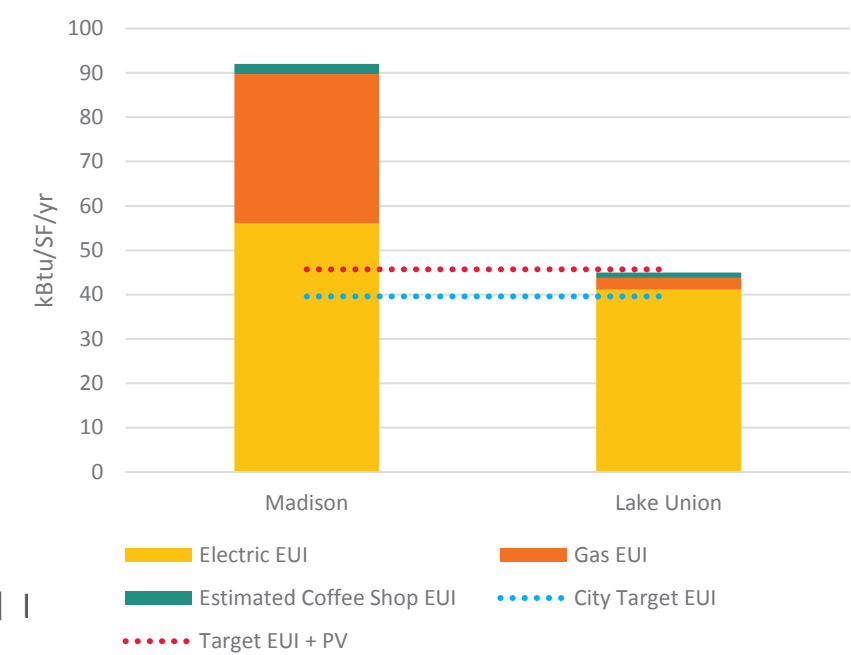
A highly sustainable building would use no more energy than the amount present on the site, which may include solar, wind, geothermal, tidal, etc. The solar energy that hits the roof of our building would be adequate to meet the energy needs of the building.

Designing a building that uses significantly less energy requires focusing on many elements; envelope, lighting, mechanical and electrical equipment, and equipment used by the occupants. By implementing some of the systems described in this narrative, the energy used could be reduced by over 50% compared with a typical senior living building.

The following chart illustrates the measure of performance needed to achieve the LBC Pilot Program. Note how the existing Aegis Madison building had an (EUI) energy use intensity of around 90 and the city's target performance is about 40.

Adding PV to the roof moves the baseline up by about an EUI of 6. The solar array plus the energy efficiency measures in the building are then able to offer a path of performance to achieve the LBC Pilot Program.

Lake Union Design Compared to Aegis Madison



2.0 Benchmarking

Summary

DESCRIPTION OF THE SEATTLE LIVING BUILDING PILOT PROGRAM (LBPP)

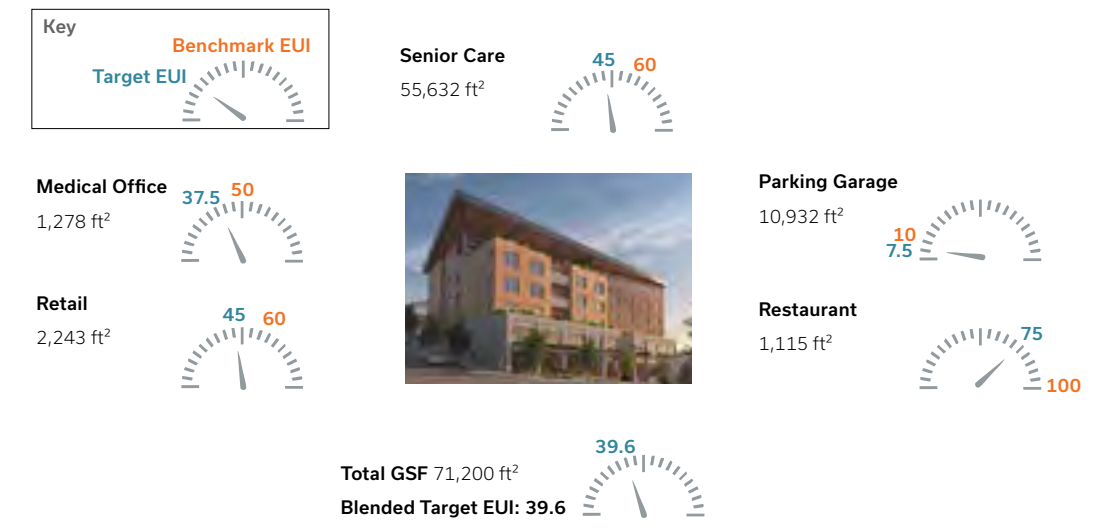
The new ordinance of the LBPP includes an Energy Use Reduction Requirement that requires the building to use 75% or less of the energy use targets established in the 2012 Seattle Energy Code's Target Performance Path. The new ordinance of the LBPP also includes a Water Use Reduction Requirement that requires that no potable water shall be used for non-potable uses.

Both of these metrics need clarification for the Aegis project as its usage type does not directly fit into the current pilot program metrics. This is due to the fact that the 2012 SEC does not have a benchmark EUI value for senior living facilities within the target performance path. The water requirement also needs clarification as the size of the building makes flushing fixtures with rainwater alone potentially impossible which means treated graywater may be needed for flushing fixtures. There isn't a clear path through the current building code to use graywater to flush fixtures in a senior care facility.

The following sections outline the proposed energy solutions to meet the LBPP requirements.

Energy

The building has many usage types within it including senior living, medical (senior living) office, retail, parking and a coffee shop. The table below shows the different building types that could apply to the project based on the target performance path data and the 2015 City of Seattle Benchmarking data.



Building Type	2015 City of Seattle	EUI from Target Performance	Proposed Target Performance Path	LBPP 75%
	Benchmarking	Path	Value	
Median Building	kBtu/ft ² /yr	kBtu/ft ² /yr	kBtu/ft ² /yr	kBtu/ft ² /yr
Medical Office	80	50	n/a	37.5
Multi-family	33	35	n/a	26.25
Retail	56	60	n/a	45
Parking Garage	n/a	10	n/a	7.5
Restaurant (Coffee Shop)	151	n/a	100	75
Senior Care Community	66	n/a	60	45

Note how the 2015 benchmarking median building data is slightly lower than the target performance path EUI values for multi-family. The target performance path is actually higher than the median retail value from the benchmarked data.

The project proposes using a similar comparison for senior care communities and restaurants having them be lower than the median benchmarked value similar to the above categories. This shows the proposed target value for a restaurant (coffee shop for Aegis) at 100 and the senior care community at 60. Existing Aegis buildings have an average EUI of close to 80 so this is still significantly better than other facilities. The Aegis facilities are also close to hotels which have a median benchmarked value of 77. For example, this project is planning to include a full-size commercial kitchen, equipped with a walk-in cooler and freezer, separate barber and salon, a small woodshop, commercial laundry services, a theater, a juice bar, and a yoga/fitness area. The building will also include a separate café space.

Beyond the additional building services, senior care facilities tend to have higher energy usage than residential buildings due to their occupancy schedule. In a typical residence, the occupants leave to go to school or work and may only be home 2/3rds of the time. Residents in a senior care facility are more likely to be home all of the time. This means there is more time to have lights and other electronics operating. Furthermore, senior care centers also have staff around the clock to provide care for the residents. This also results in more hours requiring lights, electronic equipment, and HVAC operation.

Compared to a typical residential building, all daily activities are operated in this building. Where in typical multifamily housing, residents would spread their energy use across other buildings throughout the city as they perform daily activities, all of that use is concentrated in this one building for assisted living and memory care seniors. These residents will rarely, if ever, leave the building as three meals are cooked for all residents in the commercial kitchen. In addition to this, entertainment and health related amenities are in the building including a movie theater, juice bar, fitness/yoga room, barber, salon and a bar.

The project proposes that instead of assuming one occupancy type and EUI target for the entire building a weighted average approach is used to calculate the target EUI for this facility. This calculated average could be determined by applying different EUI targets to the different occupancy types in the facility. Their weight towards the target for the whole facility will be based on the square footage of each occupancy type compared to the total square footage. The summary of this is shown in the diagram to the left with a blended target EUI of 39.6.

CONCLUSION

The Lake Union Aegis project is hoping to meet the LBPP ordinance. The City of Seattle has agreed to use the blended target EUI methodology outlined. Based on discussions with the City, the project is currently using the 39.6 kBtu/ft²/yr as a target performance metric. The final EUI value may change pending the building program and further discussions with the City.

It is also requested that the City identifies a way to meet or allow exception to the water reduction portion of the LBPP ordinance if the DOH determines greywater reuse cannot be used in this facility.

3.0 Target Performance Path

Target Performance Path

SUMMARY

This section outlines the requirements of Target Performance Path within SEC 2015. The primary energy requirement is to meet the blended EUI target of 39.6 kBtu/ft²/yr per the agreed baseline with the City of Seattle.

TARGET PERFORMANCE PATH REQUIREMENTS

Below are the target performance path requirements along with relevant compliance information:

- The area-weighted average U-value for all fenestration must be less than 0.40. This project far exceeds this requirement as all fenestration is currently triple pane glazing.
- The mechanical systems will comply with all control requirements outlined in 2015 SEC section C403.2.4.
- The envelope will comply with the requirements set in 2015 SEC section C402.5. This includes having a continuous air barrier throughout the building envelope, the appropriate dampers at openings, weather seals and vestibules. A building leakage test will be performed prior to occupancy and will comply with 2015 SEC section C402.5.1.2.
- The project will comply with all commissioning requirements outlined in 2015 SEC section C408. This includes having a commissioning plan and a final commissioning report that documents the system commissioning results.
- In order to meet the energy targets of the LBPP it is important to meter, measure and monitor energy uses per 2015 SEC section C409.
- Walk-in coolers and freezers in the project will comply with 2015 SEC section C410.

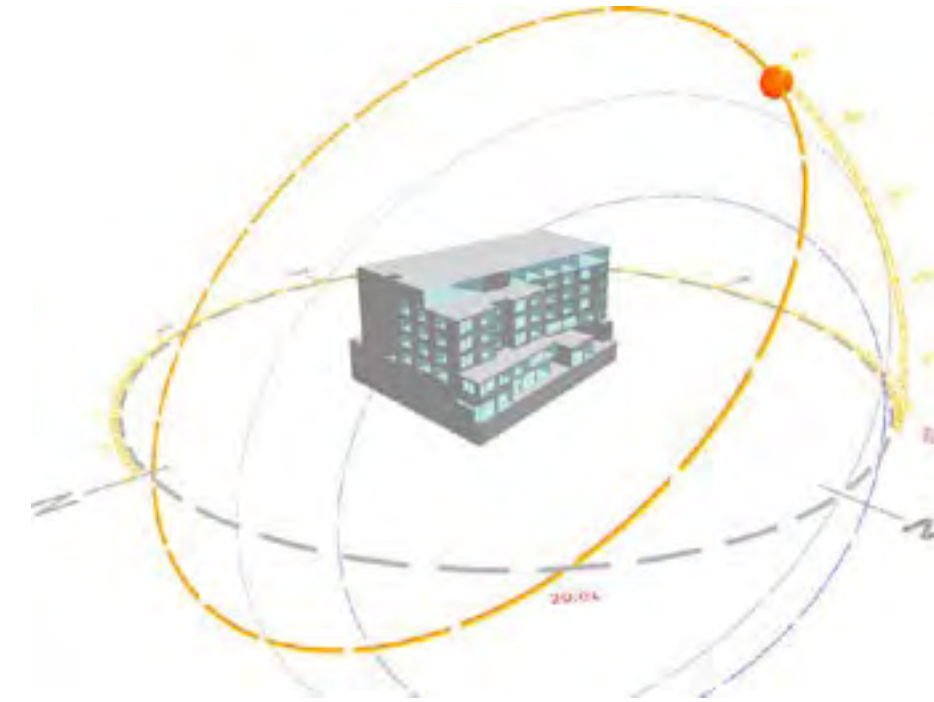
In design development the loads and schedules will be coordinated and finalized with the equipment consultants and Aegis. If these loads or schedules deviate beyond 80-120% of those listed in the 2015 SEC Appendix B, they will need to be sent to the code official for approval.

ENERGY REPORTING

The final documentation submitted to the city will include a compliance report documenting all the energy model inputs, outputs and results. This report will follow the requirements of 2015 SEC C407.4.1 and Appendix E. It will include a summary of the principal building characteristics that are above or below the prescriptive energy code.

A part of this analysis will include a sensitivity analysis that will test the affects of the EUI based on varying the occupant density by +/- 20%, lighting power density by +/- 20%, miscellaneous load power density by +/- 20%, infiltration rates by +/- 20%, and temperature setpoints by +/- 2°F. These results will be included in the final documentation to help understand how the model assumptions affect the EUI.

Utility data will be sent to the code official via the portfolio manager for the first three years of occupancy.



4.0 Energy Performance Options

Overview of Energy Assumption Memo Feedback

On July 19th, 2017 PAE received responses from Aegis for the Energy Assumption memos. Aegis provided feedback on all of the energy memos but PAE has found some items impact energy performance and need to be addressed. Assumptions to note are highlighted in the text to the right showing items that have a large impact on the building EUI.

After these comments were updated in the energy model, the 100% design development EUI went up to 59.7 without PV and 54.6 including a 111 kW PV array. Based on this, the project is 10.4 EUI over-budget even when taking the PV array into account. This increase in energy usage is driven by operational input from Aegis. Though the 10.4 EUI is significant, a path to meet the energy target is outlined in this memo. This included both design and operational elements for the project to consider.

It is critical these items are adopted and implemented for the project to achieve the energy target set by the Living Building Pilot Program. The actual performance of the facility will be mostly dependent on how Aegis chooses to operate it. Staff education and operational changes will be required to achieve this goal. PAE has outlined a path to compliance in this report but the final performance is in the hands of Aegis after occupancy. PAE cannot guarantee the building will be operated as outlined in these results and we recommend the project implement commissioning and ongoing measurement and verification after occupancy to ensure the project is on the path toward compliance.

Energy Input Items to Note (from Surveys)

LAUNDRY EQUIPMENT

- Cut sheets were provided for commercial gas washer and dryers. The overall number of loads in the large commercial washer increased. This also increased the domestic hot water energy.

WHEEL CHAIR CHARGING

- Three wheel chair charging station needs to be added to the energy budget.

KITCHEN

- Updated usage hours were provided. There was no comment on meeting the LEED v4 Appendix 3 Table 1 prescriptive performance values. The energy model currently reflects the kitchen equipment meeting this requirement.

RESIDENTIAL UNITS

- Refrigerator wattage increased.
- TV's will not be standardized, the assumed TV wattage increased. The number of hours used were updated to match comments.
- Number of minutes that microwaves will be used in a day.
- Cable boxes and alarm clocks were added to each room.
- No controlled outlets, lighting controls and vacancy sensors will be pursued

ELEVATOR

- Number of daily trips decreased which has reduced energy usage.

LIGHTING

- LPD's to be confirmed by lighting designer in CD's

DOMESTIC HOT WATER CONSUMPTION

- Number of staff members washing hands and the duration of handwashing increased.
- Laundry water consumption increased due to the commercial equipment selected.

COFFEE SHOP

- Number of coffees decreased, the operational equipment energy increased.

4.0 Energy Performance Options

Energy Conservation Measure Required to Achieve the Living Building Pilot Program

The table below outlines what was in the SD model, feedback from Aegis based on the energy surveys and the energy conservation measures (ECMs) that are currently required to achieve the LBPP energy target. The EUI impacts of the ECMs are highlighted on the right.

SD Energy Model	Feedback from Aegis Based on Energy Assumption Memo	Action Item to Meet Energy Target	EUI Impact of Change (Equivalent EUI Savings)
Residential Energy Star washers and heat pump dryers.	Gas fired commercial washers and dryers, additional loads in the commercial laundry room	HEAT PUMP DRYERS & RESIDENTIAL W/D All electric laundry equipment. Commercial grade electric washer and heat pump dryer shall be used in the staff and LN laundry room. The smaller additional equipment shall be residential Energy Star electric washers and residential Energy Star heat pump dryers. Commercial Washer: Dexter T-650 Express. Commercial Heat Pump Dryer: Speed Queen SHP*285. Residential Washer: LG WM3050. Residential Heat Pump Dryer: LG DLHX4072	7.5
Piranha waste water heat recovery was an alternate.	None	PIRANHA HEAT RECOVERY Piranha waste water heat recovery should be included in the project to meet the energy target.	2.6
Common space lighting controls were included.	Not desired per Aegis	COMMON SPACE LIGHTING CONTROLS The Seattle Energy Code requires daylighting controls that will automatically dim and turn off lights when areas are adequately lit with natural daylight. It also required vacancy sensors in restrooms, janitor closets, mechanical/electrical rooms and storage rooms which will turn off the lights when nobody is in the room. In addition, timeclocks should be used to shut off lights in common spaces on level one at night when they are not in use.	1.2
No façade lighting. Exterior lighting controlled by a photo sensor.	None	REDUCE EXTERIOR LIGHTING In addition to having exterior lighting be controlled by a photo sensor and not having façade lighting, the exterior lighting power shall be reduced by 20% from Seattle Energy Code allowance. LED exterior lighting will be required to meet this target.	0.1
Standard enthalpy wheel heat recovery used for the ventilation air.	None	PREMIUM HEAT RECOVERY Premium heat recovery is available up to 90% with manufacturers such Ventacity. These DOAS units come in smaller capacities that required for this project. Multiple units could share a common manifold to serve the main ventilation shafts. There is a cost premium associated with the extra DOAS units. Another option to incorporate these units would be to have a unit on each floor rather than central units on the roof. This would require louver and mechanical space on each floor.	0.7
Residential daylighting controls and vacancy sensor were included.	Not desired per Aegis	RESIDENTIAL DAYLIGHTING CONTROLS Rooms should include daylighting controls that will automatically dim lights when the room is adequately lit with natural daylight. This should be included meet the energy target.	0.3
No cable boxes were included.	72 cable boxes to be included in the residential rooms.	NO CENTRAL CABLE OR INDIVIDUAL CABLE BOXES (IP TV STREAMING ONLY) Rather than provided central cable or individual cable boxes, IP TV streaming could be provided. Streaming services such as SlingTV could be purchased by Aegis rather than cable. Residents would use smart TV apps or application based stream devices such as Roku to access their TV channels. These devices use much less energy than cable boxes.	1.1
Energy efficient equipment used, ASHRAE usage values.	Operational hours updated for equipment.	OPTIMIZE KITCHEN OPERATIONS Kitchen equipment shall meet the energy requirements listed in LEED v4 Appendix 3 Table 1 under prescriptive performance. In addition kitchen exhaust demand control ventilation that senses the cooking activity and varies the exhaust rates accordingly. Most importantly Aegis staff shall optimize their kitchen operations to be as efficient as possible when using the equipment. This is the key component to meeting the energy target, optimizing kitchen operation.	2.5

4.0 Energy Performance Options

Introduction

The chart below shows energy conservation measures (ECM) that have been explored to achieve the energy performance target for the LBC Pilot Program.

Proposed DD System

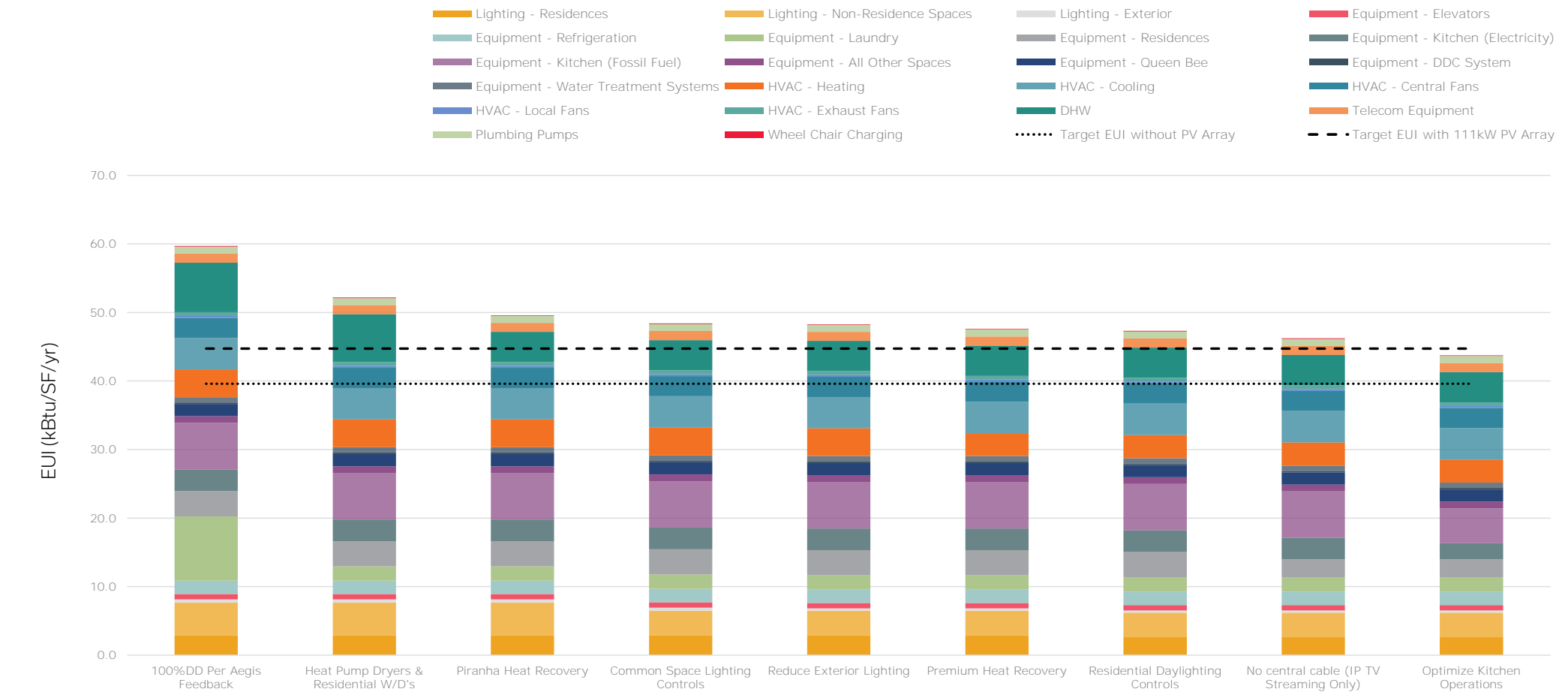
The first stacked bar in the chart reflects the design development documents and Aegis feedback in the Energy Assumptions memo. There were several items in the memo that negatively impacted energy consumption. As you can see at this point the over the energy budget by 15.6 EUI (excluding PV production).

However, PAE has explored options or energy conservation measures that can help the project get back under budget. Some items are design team options, others are operational procedures that Aegis will have to implement and track upon occupying the building. A detailed description of the items were shown in a table on the previous page.

The table to the right shows several values which are described below:

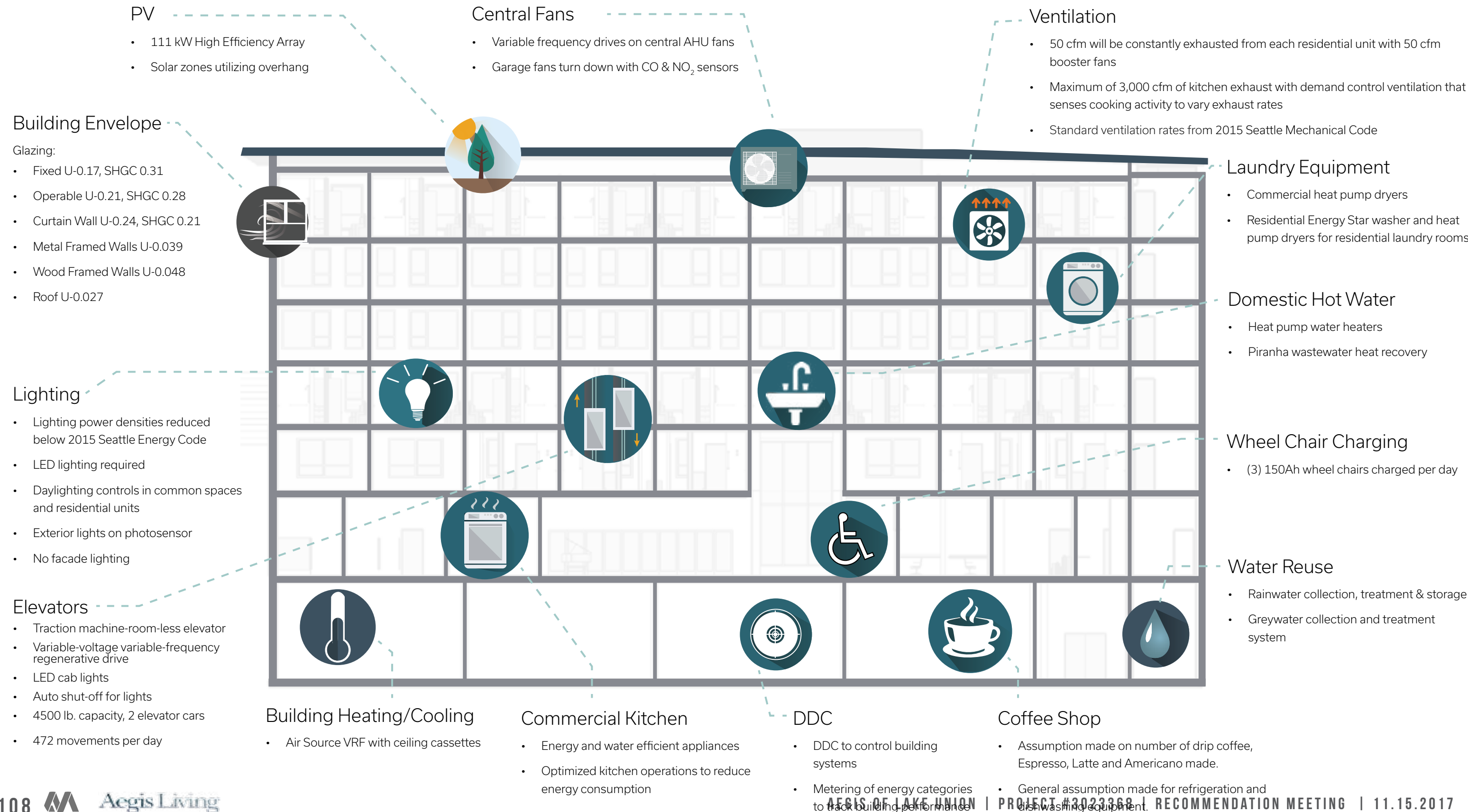
- “Building EUI without PV” is the measured on-site energy consumption.
- “Building EUI with 111 kW PV Array” is the measured on-site energy consumption minus the energy production on-site from the PV panels. The 111 kW PV panel is predicted to produce what is equivalent to 5.1 EUI of energy over the course of one year.
- “Energy Efficiency Measure EUI Impact” is the amount of energy saved by implementing the listed energy efficiency measure expressed as EUI.
- “LBPP Target EUI without PV Array” is the required EUI to meet the requirements of the living building pilot program.
- “LBPP Target EUI with 111 kW PV Array” is EUI target for the living building pilot program with the on-site energy production from the PV array added. It is the adjusted target.
- “EUI Above LBPP Target” is how the project compares the LBPP target EUI listed earlier. If the number is red, it is not achieving the target by the number listed. If the number is green then it is achieving the LBPP

Note, we advise projects normally have a 5-20% energy safety factor when there are energy performance targets. Running so close to the thresholds creates risk in the operations as it could be easy to go over.



End Use	EUI Breakdown								
	100% DD Per Aegis Feedback	Heat Pump Dryers & Residential W/D's	Piranha Heat Recovery	Common Space Lighting Controls	Reduce Exterior Lighting	Premium Heat Recovery	Residential Daylighting Controls	No Central Cable (IP TV Streaming Only)	Optimize Kitchen Operations
Building EUI without PV	59.7	52.2	49.6	48.4	48.3	47.6	47.3	46.2	43.7
Building EUI with 111kW PV Array	54.6	47.1	44.5	43.3	43.2	42.5	42.2	41.1	38.6
Energy Efficiency Measure EUI Impact	-	7.5	2.6	1.2	0.1	0.7	0.3	1.1	2.5
LBPP Target EUI without PV Array	39.6	39.6	39.6	39.0	39.6	39.6	39.6	39.6	39.6
LBPP Target EUI with 111kW PV Array	44.7	44.7	44.7	44.1	44.7	44.7	44.7	44.7	44.7
EUI Above LBPP Target	15.0	7.5	4.9	3.7	3.6	2.9	2.6	1.5	1.0

5.0 Overview of Energy Conservation Measures to Help Achieve Living Building Pilot Program



TECHNICAL MEMORANDUM

Date: July 19, 2017 **TG:** 16528.00
To: John Shaw – Seattle Department of Construction & Inspections
From: Kevin L. Jones, P.E., PTOE – Transpo Group
cc: Walter Braun and Bryon Ziegler – Aegis Senior Communities
 David Webb and Amanda Ingmire – Ankrom Moisan Architects
Subject: Transportation and Parking Study for 1916 Eastlake Avenue E (SDCI #3023368)

This memo summarizes the transportation and parking study completed for the proposed assisted living project located east of Eastlake Avenue E and south of E Newton Street. It includes a project description, summary of the adjacent transportation network, anticipated trip generation and future traffic volumes, and evaluation of traffic safety, access, transportation concurrency and parking.

Project Description

The project site is located at 1916 Eastlake Avenue E on the southeast corner of Eastlake Avenue E and E Newton Street in the City of Seattle. The proposed development would demolish an existing 6,300-square foot office building and construct an 86-bed assisted living facility (77 dwelling units) with a 19-stall parking garage. Access is proposed via a full-turning movement driveway on Eastlake Avenue E as far south of E Newton Street as possible. The project would be constructed and occupied by 2019. The first-floor site plan is illustrated in Figure 1.

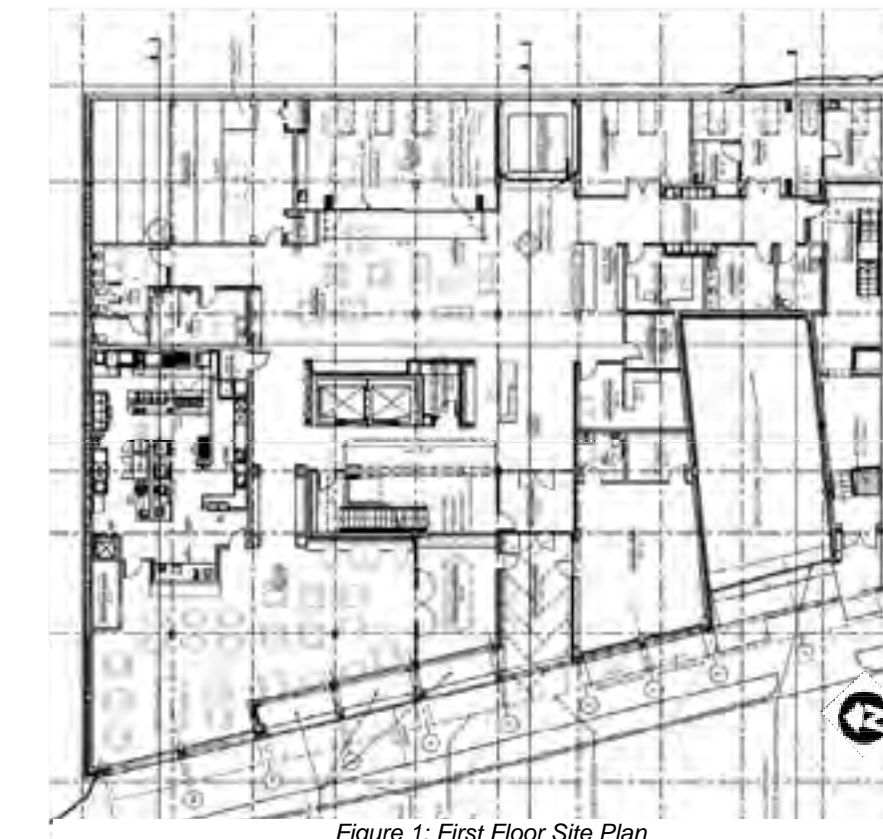


Figure 1: First Floor Site Plan

12131 113th Avenue NE, Suite 203, Kirkland, WA 98034 | 425.821.3665 | transpogroup.com

Transportation Network

The following summarizes the key adjacent roadways.

Eastlake Avenue E is classified as a principal arterial by the City of Seattle and accommodates northbound and southbound through traffic as well as left-turning traffic by way of a center two-way left-turn lane. Parking and sidewalk exist on both sides of the street within the site vicinity.

King County Metro operates two routes with stops near the proposed project along Eastlake Avenue E. Route 70 operates at approximately 10-minute headways depending on the time of day. This route connects downtown Seattle with the South Lake Union, Eastlake, and University District neighborhoods. Route 83 is a night owl bus and runs during late night hours between approximately 2 a.m. and 4:30 a.m., operating 2 buses during this 2.5-hour period.

E Newton Street is classified as an access street by the City of Seattle and accommodates two-way traffic with on-street parking and sidewalk on both sides of the street. The street has an approximate 20 percent slope throughout the entirety of the block face. It should be noted that in locations with vehicles parked on both sides of the street, the effective width of E Newton Street decreases from 25 feet to approximately 12 feet, rendering E Newton Street one-directional.

Planned Improvements

A major improvement currently being explored by the Seattle Department of Transportation (SDOT) and King County Metro is the transition of Eastlake Avenue E to a future high-capacity transit bus rapid transit (BRT) corridor with separated bicycle lanes. It is anticipated that BRT services would run along the Eastlake Avenue E corridor between the University Bridge and E Garfield Street, including the section along the project frontage. The proposed Eastlake Avenue E BRT would provide transit between Northgate, Roosevelt, University District, Eastlake, South Lake Union, and downtown Seattle with connectivity to both existing and future Link Light Rail and Center-City Streetcar facilities.

It is anticipated that as part of the implementation of the BRT and separated bicycle lanes, parallel parking would be removed along Eastlake Avenue E from E Garfield Street to Fuhrman Avenue E. Preliminary design concepts show Eastlake Avenue E would remain a three-lane arterial¹ at mid-block locations and would include improved and increased turn lanes at intersections.

Although the buildout of the proposed project would likely precede the completion of the Eastlake BRT and separated bicycle lanes, the new channelization was included for future (2019) with-project conditions to better model future movements and potential conflicts.

Trip Generation

Development generated traffic was forecast using trip generation rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (9th Edition, 2012). Note that although the existing land use could be classified as General Office Building (LU #710), for trip generation purposes, traffic counts were collected at both existing access driveways and the existing trip generation has been calculated from those counts. Trip generation for the proposed assisted living use was completed using Assisted Living (LU #254) trip rates by occupied beds.

A 70 percent vehicle mode split was assumed for the proposed development. The most recent Commute Trip Report (CTR) data supports this mode split as a conservative estimate based on nearby Seattle areas. Assuming that most trips to and from the site would be staff and not

¹ One travel lane in each direction with one center two-way left-turn.



residents, use of the CTR data to inform mode splits is appropriate. A comparable mode split was applied to another Aegis assisted living development in a similarly transit-oriented neighborhood (Aegis Madison, Seattle DPD #6300813). Trip generation estimates are shown in Table 1. Detailed trip generation calculations are provided in Attachment A.

Land Use	Size	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips			
			In	Out	Total	In	Out	Total	
Proposed Use									
Assisted Living	86 Occupied Beds	160	8	3	11	7	10	17	
Existing Use									
Office Building	6,300 sf	120	17	2	19	2	10	12	
Net New Trips			40	-9	1	-8	5	0	5

1. Trips rates from ITE Trip Generation Manual, 9th Edition, adjusted for localized mode splits.

As shown in Table 1, the development is expected to generate approximately 40 net new weekday daily trips with a net decrease during the weekday AM peak hour and net increase of 5 trips during the weekday PM peak hour.

Traffic Volumes

Weekday AM and PM peak hour traffic counts were collected at the existing site access driveways in January 2017. Detailed intersection traffic counts are provided in Attachment B.

Future horizon year (2019) without-project volumes were estimated by increasing the existing weekday AM and PM peak hour traffic volumes by an annual growth rate and adding in project trips from other developments in the project vicinity. Based on coordination with SDCI staff, an annual growth rate of 2 percent was applied to the existing intersection traffic volumes to account for smaller developments and general background traffic growth in the area. Larger developments were specifically accounted for in the future (2019) without-project analysis by including traffic generated by the following eight pipeline projects:

- 1823 Eastlake Avenue E / 1903 Yale Place E (SDCI #3015480 / #3014468)
- 2203 Eastlake Avenue E (SDCI #3016024)
- 2037 Yale Avenue E (SDCI #3022641)
- 2539 Franklin Ave E (SDCI #3016711)
- 2303 Franklin Ave E (SDCI #3021063)
- 2227 Yale Ave E (SDCI #3023021)
- 1901 Franklin Ave E (SDCI #3023286)
- 1924 Franklin Ave E (SDCI #3025745)

Project trips were assigned to the roadway network in the project vicinity and existing work travel patterns of workers employed within one-quarter mile of the site.² It was assumed that trips from the project site's zip code would use non-motorized facilities or transit as means of transportation. It is anticipated that 70 percent of vehicle traffic would travel to/from the north while 30 percent would travel to/from the south. The project-generated driveway traffic was added to future without-

² Based on the US Census Bureau's *OnTheMap* online mapping tool. Provided data is based on the Census Bureau's American Community Survey and Longitudinal Employer-Household Dynamics programs. As most of the trips from the proposed project would be staff, the Aegis facility was treated as a place of employment as opposed to a residential location.

project weekday peak hour traffic volumes to form the basis of the with-project analysis at the proposed site access. Figure 2 denotes the anticipated distribution, assignment of driveway trips, and future (2019) with-project volumes.

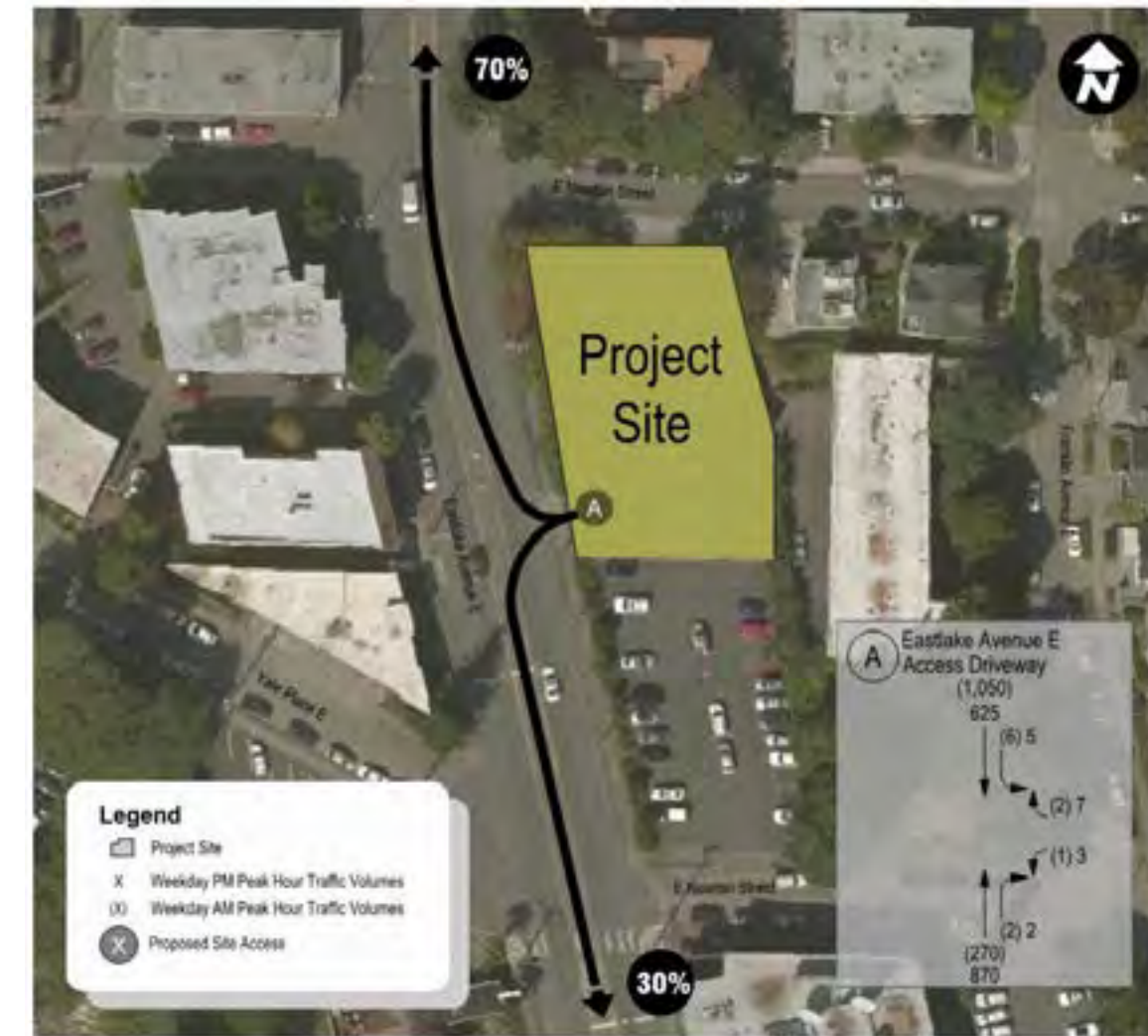


Figure 2: Project Trip Distribution and Future (2019) With-Project Traffic Volumes

Traffic Safety

Recent collision records were reviewed within the study area to identify existing traffic, pedestrian, and bicycle safety issues. The most recent three-year summary of accident data from SDOT is for the period between January 1, 2014 and December 31, 2016. No collisions were reported on Eastlake Avenue E between E Newton and Howe Streets during the three-year period, which suggests there is not an existing safety issue along the project frontage with Eastlake Avenue E nor is this mid-block location classified as a high accident location.

Site Access Analysis

Traffic operations at the site access for future (2019) with-project weekday AM and PM peak hour conditions are summarized in Table 2. LOS definitions are included in Attachment C and detailed LOS worksheets are included in Attachment D.

Intersection	Traffic Control	AM Peak Hour			PM Peak Hour		
		LOS ¹	Delay ²	WM ³	LOS	Delay	WM
1. Eastlake Avenue E/Driveway Access	Unsignalized	B	14	WB	C	22	WB

1. Level of Service (A – F) as defined by the *Highway Capacity Manual* (TRB, 2010)
 2. Average delay per vehicle in seconds.
 3. Worst movement or approach that would experience the most average delay (WB = westbound approach).

As shown in Table 2, the proposed site access driveway would operate at LOS C or better during future (2019) with-project AM and PM peak hour conditions.

As noted previously in the study, the proposed site access would be provided via Eastlake Avenue E. Although E Newton Street is the preferred access location based on Seattle's access hierarchy³, access on Eastlake Avenue E was supported by the design review board at EDG. In addition, for several reasons, SDOT agrees that access via Eastlake Avenue E is a more viable alternative than access via E Newton Street.

Among the reasons noted by SDOT, the grade, effective width, and sight distance of E Newton Street contribute to the proposed departure from the standard access hierarchy. E Newton maintains an approximate 20 percent slope and 12-foot effective width when cars are parked on both sides of the street.⁴ The presence of parked vehicles on such a heavily sloped street would limit sight distance and could impair "safe conditions for pedestrian, bicyclists, and drivers" as noted in the City's Design Standards. Additionally, because the project site does not have alley access, commercial and collection (garbage, compost, and recycling) vehicles would encounter severe challenges accessing via E Newton Street based on the reasons outlined above. Considering the planned removal of on-street parking and less significant grade along Eastlake Avenue E, the proposed access is not anticipated to have sight distance and/or safety concerns as compared with access via E Newton Street.

The number of potential conflicts with access via Eastlake Avenue E would be minimal due to the small amount of anticipated driveway trips. As noted previously and in Attachment A, the access would experience less than 17 potential vehicle-bicycle conflicts per hour (since not all vehicle and bicycle trips would occur simultaneously). This number of potential conflicts is less than most comparable examples in Seattle because of the project's relatively low vehicle trip generation. The number of potential conflicts would also be less during the AM peak hour and less still during non-peak hours. Potential conflicts would also be minimized by way of design treatments. These treatments could include the use of colored pavement across driveways, flashing visual treatments for exiting vehicles, and proper signage. Specific design elements will be developed in collaboration with and ultimately approved by SDOT.

³ SMC 23.49.019 subsection H1c

⁴ A 12-foot street width would effectively render E Newton Street one-way. The uniqueness of the proposed use should also be considered here, such that assisted living would likely require more frequent access by emergency vehicles when compared to other land uses.

Transportation Concurrency

The City of Seattle has implemented a Transportation Concurrency system to comply with one of the requirements of the Washington State Growth Management Act (GMA). The system, described in the DPD *Director's Rule 5-2009* and the City's Land Use and Zoning Code, is designed to provide a mechanism that determines whether adequate transportation facilities would be available "concurrent" with proposed development projects.

Screenlines are imaginary lines drawn across primary roadways to monitor traffic going from one side to the other. The screenlines closest to the project site were chosen for review. The screenlines that were analyzed for concurrency review include Ship Canal between University and Montlake Bridges (5.16) and South of Lake Union (8). As a conservative estimate, it was assumed that all project-generated traffic traveling in the direction of the screenline would extend across the screenline included in this analysis.

SL# ¹	Location	Dir ²	Capacity	2008 Volume	Project Traffic	V/C Ratio w/ Project	LOS Standard
5.16	Ship Canal between University and Montlake Bridges	NB	4,030	3,833	0	0.95	1.2
		SB	4,070	3,571	3	0.88	1.2
		EB	6,000	4,509	2	0.75	1.2
8	South of Lake Union	WB	3,600	3,020	0	0.84	1.2

1. SL# = Screenline Number
 2. Direction: EB = Eastbound, WB = Westbound, NB= Northbound, SB= Southbound

As shown in Table 3, the transportation concurrency analysis indicates that with traffic generated by the project, the screenlines included in this analysis would have v/c ratios that are less than the City v/c threshold; thus, the proposed project would meet the City's concurrency requirements.

Parking Analysis

The following sections describe the proposed parking supply, estimated peak parking demand of the project, and parking code requirements.

Parking Code Requirements

The proposed assisted living project includes a total of 19 on-site parking stalls. Per Seattle Municipal Code (SMC) 23.54.015, there is no minimum parking requirement for the development as the project is located within the Eastlake Residential Urban Village and is within 1,320 walking distance to a frequent transit stop.⁵ Thus, the proposal exceeds all automobile parking code requirements.

Demand

The peak parking demand for the proposed project was estimated based on data provided in ITE *Parking Generation* (4th Edition) and local mode of travel data consistent with the trip generation analysis. This approach is like approved transportation studies conducted in the site vicinity.

It should be noted that while trip generation calculations were completed using occupied beds as the independent variable, the estimation of peak parking demand required the use of dwelling units. Detailed calculations are provided in Attachment E.

⁵ A summary of transit service headways at the northbound Eastlake Avenue E/ E Newton Street transit stop consistent with City of Seattle frequent transit service criteria (SMC 23.54.015 Table B) are provided in Attachment F.

Table 4. Estimated Peak Parking Demand			
Land Use	Size	Rate ¹	Demand
Assisted Living (LU #254)	77 DUs	0.29	23 vehicles
Supply			19 spaces
Potential Deficiency			-4 vehicles

DU = dwelling units
1. Parking demand rate incorporates local mode split data based on 2014 Seattle CTR surveys.

As shown in Table 4, the peak parking demand associated with the assisted living building is anticipated to be approximately 23 vehicles and would occur at 11:00 a.m. based on hourly distribution of parking demand. Although the parking demand estimates a 4-vehicle deficiency could occur, the assisted living parking rate contained in *Parking Generation* incorporates both suburban and urban sites. In an urban setting, well-served by transit and non-motorized facilities, it is anticipated that the parking demand shown in Table 4 is likely high and that actual parking demand would likely be less.

It should also be noted that the 2014 CTR data used in the parking generation estimate does not consider the anticipated Eastlake BRT and separated bicycle lanes. This improved transit and non-motorized investment would likely reduce vehicle demand at the site and would contribute to a lower peak parking demand than estimated in Table 4.

Attachment A. Detailed Trip Generation Calculations

Trip Generation

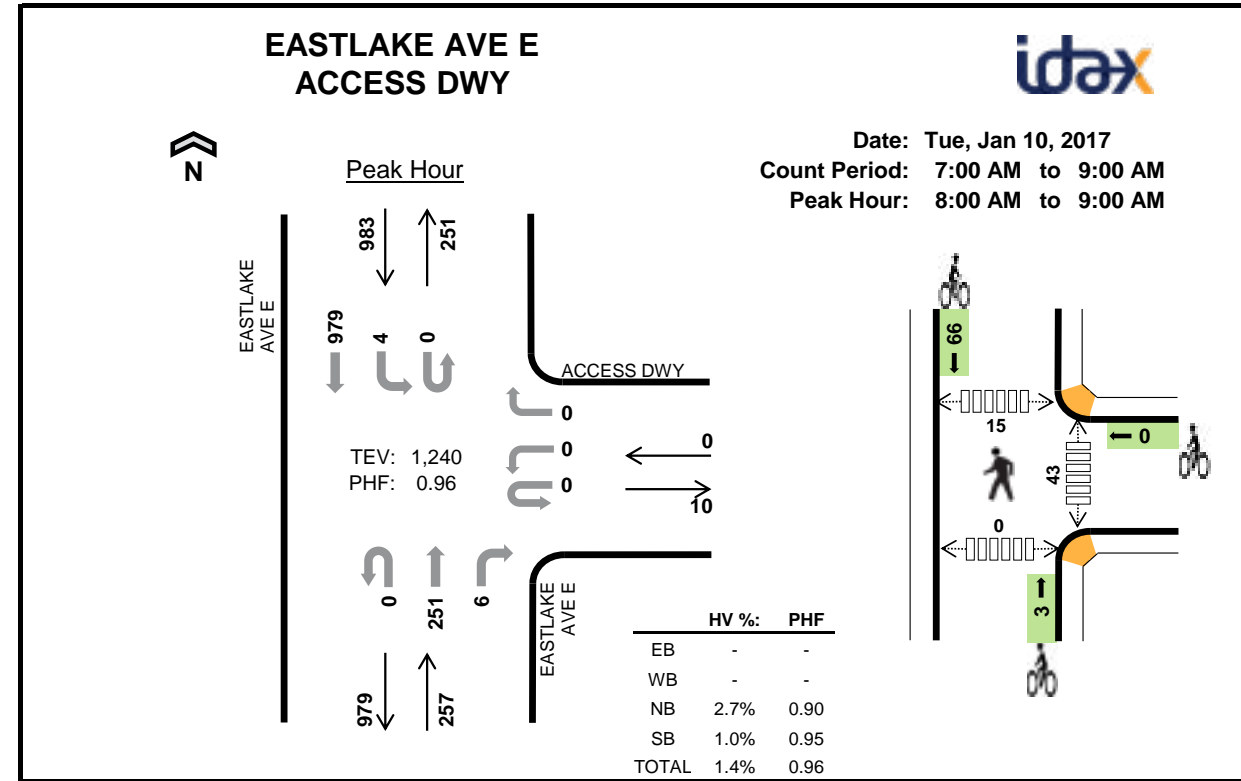
Aegis Living Lake Union						Aegis Living Lake Union								
Person Trips						Person Trips by Mode of Travel								
Land Use	Size	Trip Rate ²	Inbound %	AWO Rate ³	Person Trips	Trip Generation Summary	Percent By Mode ⁴	Daily Person Trips	AM Peak Hour			PM Peak Hour		
								in	out	total	in	out	total	
Assisted Living (LU 254)	77 DUs	0.29	50%	1.00	240	Walk, Bike, Other Trips	15%	40	1	1	2	2	2	4
Daily		2,740	50%		15	Transit Trips	15%	40	1	1	2	2	2	4
AM Peak Hour		0.380	60%		25	Person Trips by Vehicle	70%	160	8	8	16	11	11	22
PM Peak Hour		0.290	60%		25	Total	100%	240	10	5	15	11	14	25
Office Building (LU 710)⁵	6,300 sf					Walk, Bike, Other Trips	0%	0	0	0	0	0	0	0
Daily						Transit Trips	0%	0	0	0	0	0	0	0
AM Peak Hour						Person Trips by Vehicle	100%	112	2	10	12	2	10	12
PM Peak Hour						Total	100%	112	2	10	12	2	10	12
Net New Project Person Trips						Walk, Bike, Other Trips		40	1	1	2	2	2	4
Daily						Transit Trips		40	1	1	2	2	2	4
AM Peak Hour						Person Trips by Vehicle		40	4	7	11	5	10	15
PM Peak Hour						Total		100	7	8	15	9	14	23

Notes:
1. Trip rates based on Institute of Transportation Engineers' (ITE) Trip Generation Manual (9th Edition average trip rate as shown for the land uses noted).
2. AWO is average vehicle occupancy. AWO conservatively assumed to be 1 for proposed assisted living land use.
3. Trip generation for the existing office land use was estimated by existing traffic counts at both current access driveways.
4. Mode split for the proposed assisted living land use was based on data found in the 2014 Center City Columbia Walk-Split Survey. The mode share was estimated based on comparison of neighboring South West on the walkway of downtown South Lake Union and Olympic, which ranged from 15-40% vehicle mode share respectively. Considering that there is less transit mode at the project site, a 10% vehicle mode share was assumed.
5. Existing land use AM and PM peak hour Trip Generation by land observation. Daily trip generation was estimated by multiplying PM peak hour generation by a factor of 10.
6. Average vehicle occupancy (AWO) for assisted living assumed to be 1.

M:\1816528-00 - Aegis Living, Lake Union\Traffic Analysis\Trip Generation\Aegis Living Trip Generation (LU 710)

7/19/2017

Attachment B. Detailed Traffic Counts



Two-Hour Count Summaries

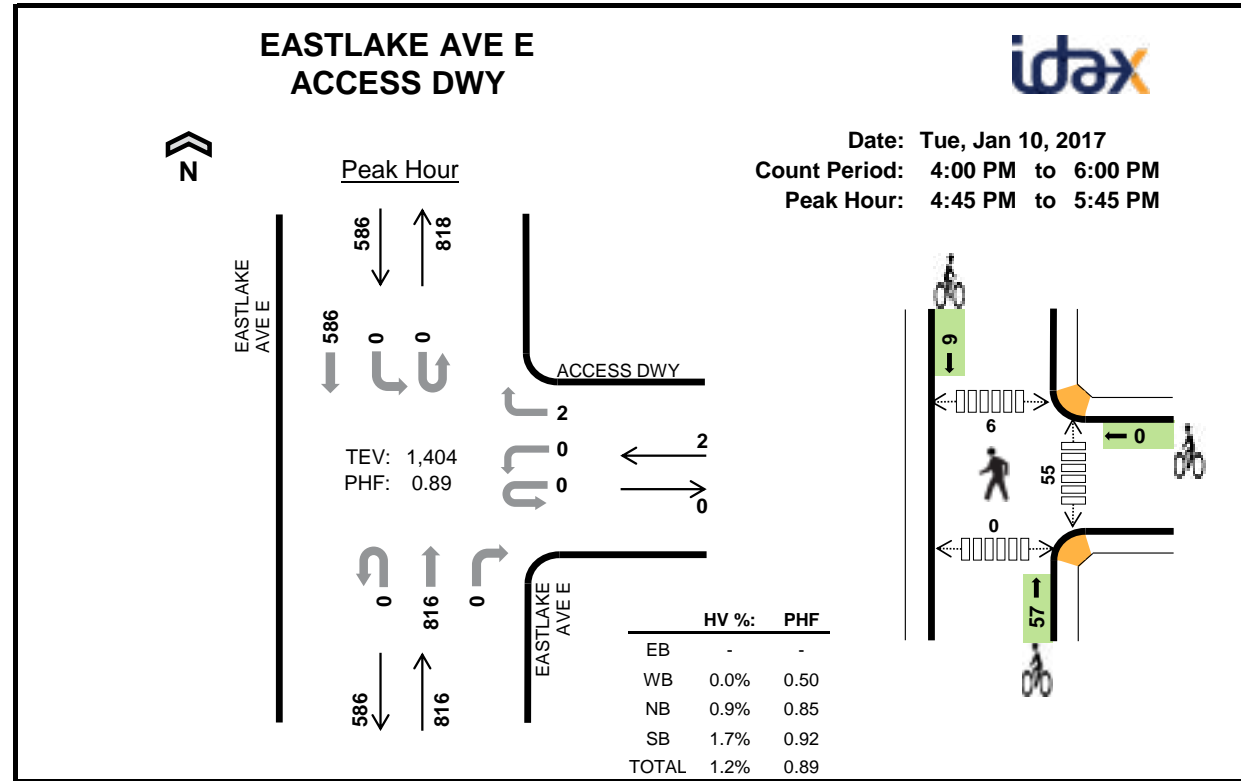
Interval Start	0				ACCESS DWY				EASTLAKE AVE E				EASTLAKE AVE E				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	40	0	0	0	107	0	147	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	41	0	0	1	136	0	178	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	49	0	0	0	156	0	205	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	39	0	0	0	186	0	225	755
8:00 AM	0	0	0	0	0	0	0	0	0	0	71	0	0	2	226	0	299	907
8:15 AM	0	0	0	0	0	0	0	0	0	0	63	1	0	1	236	0	301	1,030
8:30 AM	0	0	0	0	0	0	0	0	0	0	55	1	0	1	259	0	316	1,141
8:45 AM	0	0	0	0	0	0	0	0	0	0	62	4	0	0	258	0	324	1,240
Count Total	0	0	0	0	0	0	0	0	0	0	420	6	0	5	1,564	0	1,995	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	251	6	0	4	979	0	1,240	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles				Pedestrians (Crossing Leg)						
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total	
7:00 AM	0	0	2	1	3	0	0	1	1	2	3	3	2	0	0	8
7:15 AM	0	0	1	2	3	0	0	1	6	7	6	2	0	0	0	8
7:30 AM	0	0	2	2	4	0	0	1	10	11	3	4	2	0	9	
7:45 AM	0	0	0	1	1	0	0	3	21	24	10	2	3	0	15	
8:00 AM	0	0	2	2	4	0	0	0	20	20	5	4	2	0	11	
8:15 AM	0	0	3	3	6	0	0	0	19	19	11	6	4	0	21	
8:30 AM	0	0	1	3	4	0	0	1	13	14	11	1	5	0	17	
8:45 AM	0	0	1	2	3	0	0	2	14	16	16	7	4	0	27	
Count Total	0	0	12	16	28	0	0	9	104	113	65	29	22	0	116	
Peak Hr	0	0	7	10	17	0	0	3	66	69	43	18	15	0	76	

Mark Skaggs: (425) 250-0777

mark.skaggs@idaxdata.com



Two-Hour Count Summaries

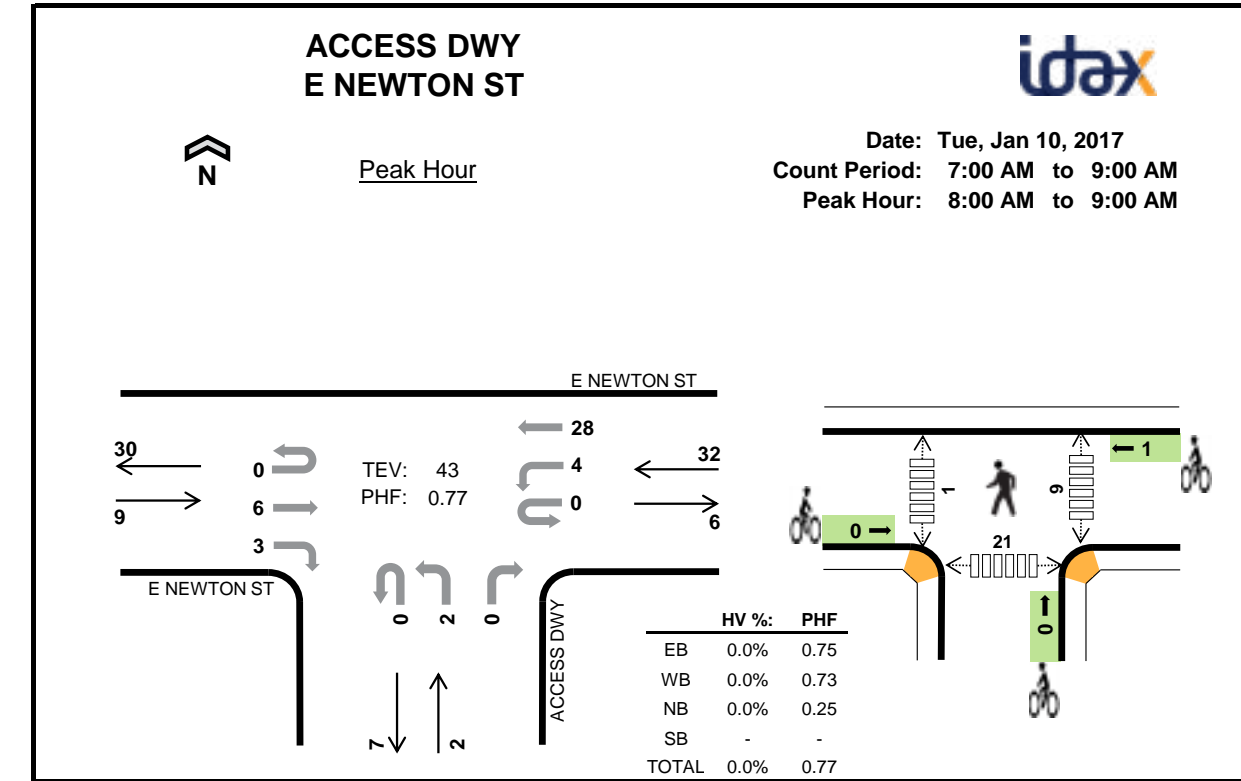
Interval Start	0				ACCESS DWY				EASTLAKE AVE E				EASTLAKE AVE E				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	180	0	0	1	142	0	323	0
4:15 PM	0	0	0	0	0	0	0	1	1	0	165	0	0	0	126	0	293	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	215	0	0	0	124	0	340	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	197	0	0	0	135	0	332	1,288
5:00 PM	0	0	0	0	0	0	0	1	0	0	239	0	0	0	154	0	394	1,359
5:15 PM	0	0	0	0	0	0	0	0	0	0	198	0	0	0	138	0	336	1,402
5:30 PM	0	0	0	0	0	0	0	1	0	0	182	0	0	0	159	0	342	1,404
5:45 PM	0	0	0	0	0	1	0	0	0	0	149	0	0	0	105	0	255	1,327
Count Total	0	0	0	0	0	1	0	4	1	0	1,525	0	0	1	1,083	0	2,615	0
Peak Hour	0	0	0	0	0	0	0	2	0	0	816	0	0	0	586	0	1,404	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles				Pedestrians (Crossing Leg)					
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	2	1	3	0	0	6	0	6	5	4	0	0	9
4:15 PM	0	0	1	2	3	0	0	9	4	13	2	5	0	0	7
4:30 PM	0	0	2	2	4	0	0	3	0	3	10	6	0	0	16
4:45 PM	0	0	2	2	4	0	0	11	2	13	14	5	2	0	21
5:00 PM	0	0	1	1	2	0	0	14	3	17	11	10	1	0	22
5:15 PM	0	0	3	5	8	0	0	15	3	18	15	14	2	0	31
5:30 PM	0	0	1	2	3	0	0	17	1	18	15	5	1	0	21
5:45 PM	0	0	2	1	3	0	0	23	1	24	9	10	4	0	23
Count Total	0	0	14	16	30	0	0	98	14	112	81	59	10	0	150
Peak Hr	0	0	7	10	17	0	0	57	9	66	55	34	6	0	95

Mark Skaggs: (425) 250-0777

mark.skaggs@idaxdata.com



Two-Hour Count Summaries

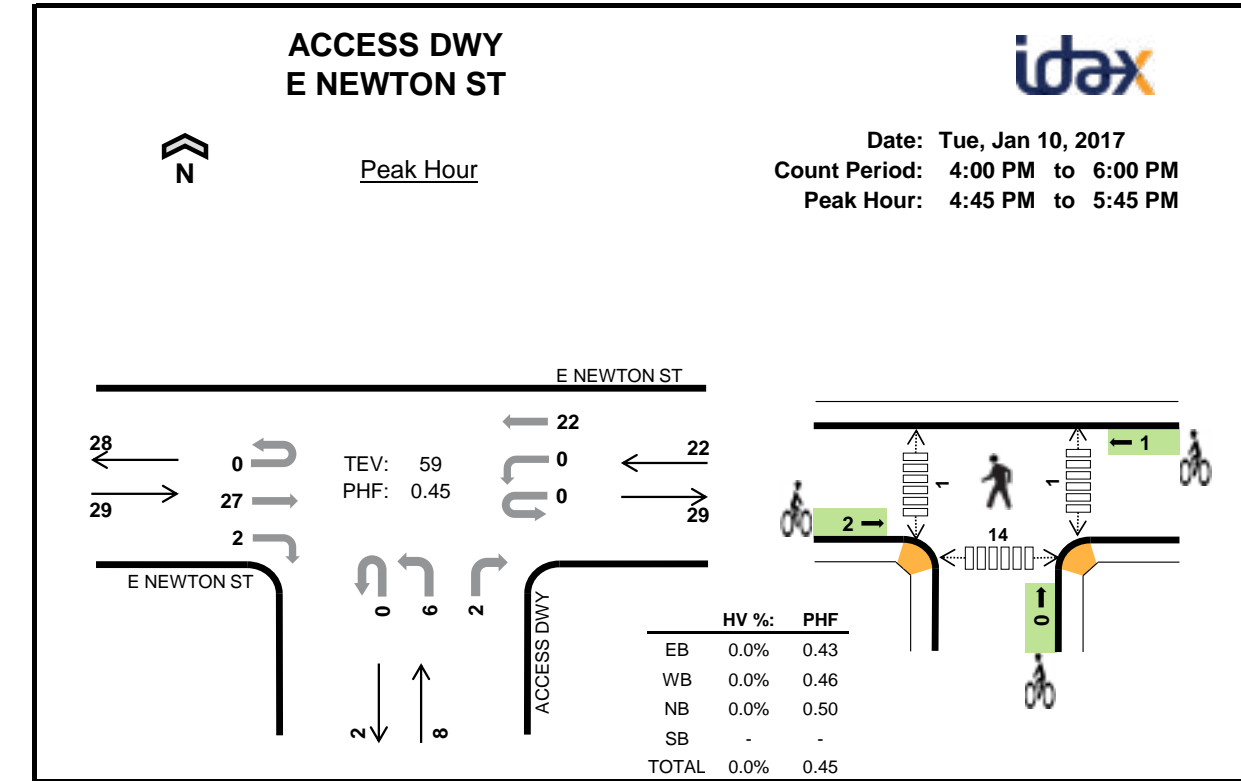
Interval Start	E NEWTON ST				E NEWTON ST				ACCESS DWY				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0	5	0
7:15 AM	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	7	0
7:30 AM	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5	0
7:45 AM	0	0	2	0	0	0	0	9	0	0	0	0	0	0	0	0	11	28
8:00 AM	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	5	28
8:15 AM	0	0	1	2	0	2	4	0	0	2	0	0	0	0	0	0	11	32
8:30 AM	0	0	2	1	0	0	11	0	0	0	0	0	0	0	0	0	14	41
8:45 AM	0	0	3	0	0	0	10	0	0	0	0	0	0	0	0	0	13	43
Count Total	0	0	9	3	0	4	53	0	2	0	0	0	0	0	0	0	71	0
Peak Hour	0	0	6	3	0	4	28	0	2	0	0	0	0	0	0	0	43	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles				Pedestrians (Crossing Leg)						
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	1	4	4
8:00 AM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	5	6
8:15 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	4	8	8
8:30 AM	0	0	0	0	0	0	0	0	0	0	3	1	0	4	8	8
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	8	9	9
Count Total	0	0	0	0	0	0	1	0	0	1	13	1	0	28	42	42
Peak Hr	0	0	0	0	0	0	1	0	0	1	9	1	0	21	31	31

Mark Skaggs: (425) 250-0777

mark.skaggs@idaxdata.com



Two-Hour Count Summaries

Interval Start	E NEWTON ST				E NEWTON ST				ACCESS DWY				0				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	3	0
4:15 PM	0	0	3	0	1	0	3	0	0	0	0	0	0	0	0	0	0	7	0
4:30 PM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	0
4:45 PM	0	0	3	0	0	0	4	0	0	2	0	0	0	0	0	0	0	9	23
5:00 PM	0	0	7	0	0	0	5	0	0	0	0	0	0	0	0	0	0	12	32
5:15 PM	0	0	15	2	0	0	12	0	0	3	0	1	0	0	0	0	0	33	58
5:30 PM	0	0	2	0	0	0	1	0	0	1	0	1	0	0	0	0	0	5	59
5:45 PM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	54
Count Total	0	0	34	2	1	0	31	0	0	6	0	3</							

Attachment C. LOS Definitions

Signalized intersection level of service (LOS) is defined in terms of a weighted average control delay for the entire intersection. Control delay quantifies the increase in travel time that a vehicle experiences due to the traffic signal control as well as provides a surrogate measure for driver discomfort and fuel consumption. Signalized intersection LOS is stated in terms of average control delay per vehicle (in seconds) during a specified time period (e.g., weekday PM peak hour). Control delay is a complex measure based on many variables, including signal phasing and coordination (i.e., progression of movements through the intersection and along the corridor), signal cycle length, and traffic volumes with respect to intersection capacity and resulting queues. Table 1 summarizes the LOS criteria for signalized intersections, as described in the *Highway Capacity Manual 2010* (Transportation Research Board, 2010).

Level of Service	Average Control Delay (seconds/vehicle)	General Description
A	≤10	Free Flow
B	>10 – 20	Stable Flow (slight delays)
C	>20 – 35	Stable flow (acceptable delays)
D	>35 – 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 – 80	Unstable flow (intolerable delay)
F ¹	>80	Forced flow (congested and queues fail to clear)

Source: *Highway Capacity Manual 2010*, Transportation Research Board, 2010.
 1. If the volume-to-capacity (v/c) ratio for a lane group exceeds 1.0 LOS F is assigned to the individual lane group. LOS for overall approach or intersection is determined solely by the control delay.

Unsignalized intersection LOS criteria can be further reduced into two intersection types: all-way stop and two-way stop control. All-way stop control intersection LOS is expressed in terms of the weighted average control delay of the overall intersection or by approach. Two-way stop-controlled intersection LOS is defined in terms of the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns. This approach is because major-street through vehicles are assumed to experience zero delay, a weighted average of all movements results in very low overall average delay, and this calculated low delay could mask deficiencies of minor movements. Table 2 shows LOS criteria for unsignalized intersections.

Level of Service	Average Control Delay (seconds/vehicle)
A	0 – 10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F ¹	>50

Source: *Highway Capacity Manual 2010*, Transportation Research Board, 2010.
 1. If the volume-to-capacity (v/c) ratio exceeds 1.0, LOS F is assigned an individual lane group for all unsignalized intersections, or minor street approach at two-way stop-controlled intersections. Overall intersection LOS is determined solely by control delay.

Attachment D. Detailed LOS Worksheets

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	1	2	270	2	6	1050
Future Vol, veh/h	1	2	270	2	6	1050
Conflicting Peds, #/hr	43	58	0	43	58	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	3	3	1	1
Mvmt Flow	1	2	281	2	6	1094

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1489	398	0 0 341 0
Stage 1	340	-	- - - -
Stage 2	1149	-	- - - -
Critical Hdwy	6.4	6.2	- - - 4.11 -
Critical Hdwy Stg 1	5.4	-	- - - -
Critical Hdwy Stg 2	5.4	-	- - - -
Follow-up Hdwy	3.5	3.3	- - - 2.209 -
Pot Cap-1 Maneuver	138	656	- - - 1224 -
Stage 1	725	-	- - - -
Stage 2	305	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	124	586	- - - 1156 -
Mov Cap-2 Maneuver	231	-	- - - -
Stage 1	685	-	- - - -
Stage 2	291	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 387	1156	-
HCM Lane V/C Ratio	-	- 0.008	0.005	-
HCM Control Delay (s)	-	- 14.4	8.1	-
HCM Lane LOS	-	- B	A	-
HCM 95th %tile Q(veh)	-	- 0	0	-

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	3	7	870	2	5	625
Future Vol, veh/h	3	7	870	2	5	625
Conflicting Peds, #/hr	55	61	0	55	61	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	1	1	2	2
Mvmt Flow	3	8	978	2	6	702

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1808	1101	0 0 1041 0
Stage 1	1040	-	- - - -
Stage 2	768	-	- - - -
Critical Hdwy	6.4	6.2	- - 4.12 -
Critical Hdwy Stg 1	5.4	-	- - - -
Critical Hdwy Stg 2	5.4	-	- - - -
Follow-up Hdwy	3.5	3.3	- - 2.218 -
Pot Cap-1 Maneuver	88	260	- - 668 -
Stage 1	344	-	- - - -
Stage 2	461	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	78	231	- - 629 -
Mov Cap-2 Maneuver	204	-	- - - -
Stage 1	324	-	- - - -
Stage 2	433	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	22.1	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 222	629	-
HCM Lane V/C Ratio	-	- 0.051	0.009	-
HCM Control Delay (s)	-	- 22.1	10.8	-
HCM Lane LOS	-	- C	B	-
HCM 95th %tile Q(veh)	-	- 0.2	0	-

Attachment E. Parking Demand Worksheets

Attachment E - Parking Demand

Seattle Assisted Living Parking Demand Rate Calculation	
Project Information	
Project:	Aegis Lake Union
Project No:	16528.00
Retail Size:	
77 Dwelling Units	
Commercial Space	
77 Dwelling Units	
Local Mode Split Data1:	
Vehicle	70%
Walk / Bicycle	15%
Transit	15%
	100%
Parking Demand Rate2:	
0.41	stalls / dwelling unit (Land Use 254)
Localized Parking Demand Rate:	
Parking Demand Rate x Vehicle Mode Split	0.29 vehicles / dwelling unit
Parking Demand:	
Office Size x Localized Parking Demand Rate	23 vehicles

- Notes:
- Person trip mode splits for Retail use based 2014 CTR Data
 - Based on ITE Parking Generation (4th Edition, 2010) Assisted Living land use 254.

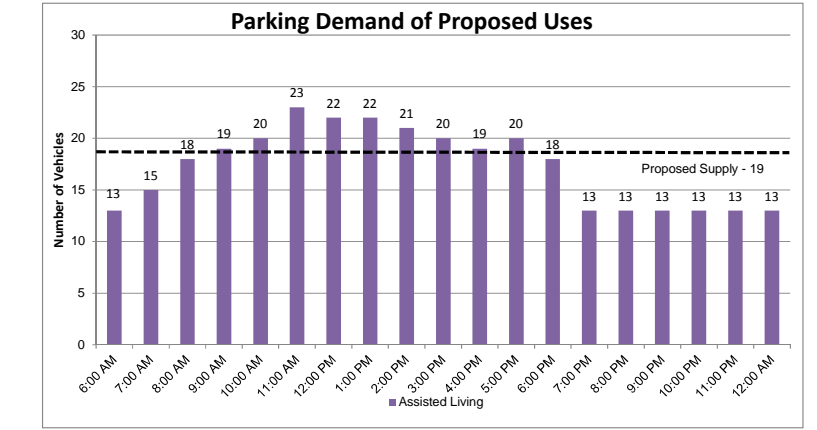
Attachment E - Parking Demand

Use Size	Assisted Living	Hourly Shared Parking Demand
Peak Demand (spaces)	77 sf	23
% Hourly Demand ¹	Hourly Demand	
6:00 AM	55%	13
7:00 AM	65%	15
8:00 AM	78%	18
9:00 AM	81%	19
10:00 AM	87%	20
11:00 AM	100%	23
12:00 PM	95%	22
1:00 PM	97%	22
2:00 PM	92%	21
3:00 PM	86%	20
4:00 PM	81%	19
5:00 PM	87%	20
6:00 PM	77%	18
7:00 PM	55%	13
8:00 PM	55%	13
9:00 PM	55%	13
10:00 PM	55%	13
11:00 PM	55%	13
12:00 AM	55%	13
		23

Note: sf = square-feet, DU = dwelling units

- Peak demand for each individual use based on parking demand calculations. Residential visitors are assumed to park off-site.
- Based on the ITE Parking Generation, 4th Edition weekday hourly distribution and urban data where available.

■ = Estimated value, no data provided



Attachment F. Frequent Transit Worksheets

Attachment F - Frequent Transit Service for 1916 Eastlake Avenue

Route 70: To Downtown Seattle

Benchmark Stop: Eastlake Ave E / Harvard Ave E

Target Bus Stop: Eastlake Ave E / Newton Ave (+4 minutes driving time)

	Time (Hours:Minutes)	Pass/Fail?
<= 15 minutes for 12 hours?	17:50	Pass
<= 30 minutes for 18 hours	20:52	Pass

Schedule Review

Weekdays							
Route 70	Headway	Route 70	Headway	Route 70	Headway	Route 70	Headway
To Downtown Seattle		To Downtown Seattle		To Downtown Seattle		To Downtown Seattle	
5:13:00 AM		10:56:00 AM	16	5:34:00 PM	11	11:42:00 PM	15
5:38:00 AM	25	11:11:00 AM	15	5:43:00 PM	9	11:57:00 PM	15
6:03:00 AM	25	11:26:00 AM	15	5:50:00 PM	7	12:12:00 AM	15
6:28:00 AM	25	11:41:00 AM	15	5:58:00 PM	8	12:27:00 AM	15
6:48:00 AM	20	11:56:00 AM	15	6:06:00 PM	8	12:42:00 AM	15
7:06:00 AM	18	12:11:00 PM	15	6:14:00 PM	8	12:57:00 AM	15
7:16:00 AM	10	12:26:00 PM	15	6:24:00 PM	10	1:12:00 AM	15
7:26:00 AM	10	12:41:00 PM	15	6:34:00 PM	10	1:35:00 AM	23
7:36:00 AM	10	12:56:00 PM	15	6:44:00 PM	10	2:05:00 AM	30
7:46:00 AM	10	1:11:00 PM	15	6:54:00 PM	10		
7:53:00 AM	7	1:26:00 PM	15	7:03:00 PM	9		
8:01:00 AM	8	1:41:00 PM	15	7:13:00 PM	10		
8:08:00 AM	7	1:56:00 PM	15	7:23:00 PM	10		
8:16:00 AM	8	2:11:00 PM	15	7:33:00 PM	10		
8:23:00 AM	7	2:26:00 PM	15	7:43:00 PM	10		
8:31:00 AM	8	2:41:00 PM	15	7:57:00 PM	14		
8:38:00 AM	7	2:56:00 PM	15	8:12:00 PM	15		
8:46:00 AM	8	3:10:00 PM	14	8:27:00 PM	15		
8:53:00 AM	7	3:25:00 PM	15	8:42:00 PM	15		
9:00:00 AM	7	3:37:00 PM	12	8:57:00 PM	15		
9:07:00 AM	7	3:49:00 PM	12	9:12:00 PM	15		
9:15:00 AM	8	4:02:00 PM	13	9:27:00 PM	15		
9:22:00 AM	7	4:13:00 PM	11	9:42:00 PM	15		
9:30:00 AM	8	4:23:00 PM	10	9:57:00 PM	15		
9:37:00 AM	7	4:33:00 PM	10	10:12:00 PM	15		
9:45:00 AM	8	4:43:00 PM	10	10:27:00 PM	15		
9:55:00 AM	10	4:53:00 PM	10	10:42:00 PM	15		
10:10:00 AM	15	5:03:00 PM	10	10:57:00 PM	15		
10:25:00 AM	15	5:13:00 PM	10	11:12:00 PM	15		
10:40:00 AM	15	5:23:00 PM	10	11:27:00 PM	15		

Attachment F - Frequent Transit Service for 1916 Eastlake Avenue

Route 70: To Downtown Seattle

Benchmark Stop: Eastlake Ave E / Harvard Ave E

Target Bus Stop: Eastlake Ave E / Newton Ave (+4 minutes driving time)

	Time (Hours:Minutes)	Pass/Fail?
<= 15 minutes for 12 hours?	18:27	Pass
<= 30 minutes for 18 hours	19:43	Pass

Schedule Review

Saturdays					
Route 70	Headway	Route 70	Headway	Route 70	Headway
To Downtown Seattle		To Downtown Seattle		To Downtown Seattle	
6:21:00 AM		1:52:00 PM	16	9:06:00 PM	15
6:36:00 AM	15	2:07:00 PM	15	9:21:00 PM	15
6:51:00 AM	15	2:22:00 PM	15	9:36:00 PM	15
7:06:00 AM	15	2:37:00 PM	15	9:51:00 PM	15
7:21:00 AM	15	2:52:00 PM	15	10:06:00 PM	15
7:36:00 AM	15	3:07:00 PM	15	10:21:00 PM	15
7:51:00 AM	15	3:22:00 PM	15	10:36:00 PM	15
8:06:00 AM	15	3:37:00 PM	15	10:51:00 PM	15
8:21:00 AM	15	3:52:00 PM	15	11:06:00 PM	15
8:36:00 AM	15	4:07:00 PM	15	11:21:00 PM	15
8:51:00 AM	15	4:22:00 PM	15	11:36:00 PM	15
9:06:00 AM	15	4:37:00 PM	15	11:51:00 PM	15
9:21:00 AM	15	4:52:00 PM	15	12:06:00 AM	15
9:36:00 AM	15	5:07:00 PM	15	12:21:00 AM	15
9:51:00 AM	15	5:22:00 PM	15	12:36:00 AM	15
10:06:00 AM	15	5:37:00 PM	15	12:51:00 AM	15
10:21:00 AM	15	5:52:00 PM	15	1:04:00 AM	13
10:36:00 AM	15	6:07:00 PM	15	1:34:00 AM	30
10:51:00 AM	15	6:22:00 PM	15	2:04:00 AM	30
11:06:00 AM	15	6:37:00 PM	15		
11:21:00 AM	15	6:51:00 PM	14		
11:36:00 AM	15	7:06:00 PM	15		
11:51:00 AM	15	7:13:00 PM	7		
12:06:00 PM	15	7:21:00 PM	8		
12:21:00 PM	15	7:36:00 PM	15		
12:36:00 PM	15	7:51:00 PM	15		
12:51:00 PM	15	8:06:00 PM	15		
1:06:00 PM	15	8:21:00 PM	15		
1:21:00 PM	15	8:36:00 PM	15		
1:36:00 PM	15	8:51:00 PM	15		

Attachment F - Frequent Transit Service for 1916 Eastlake Avenue

Route 70: To Downtown Seattle

Benchmark Stop: Eastlake Ave E / Harvard Ave E

Target Bus Stop: Eastlake Ave E / Newton Ave (+4 minutes driving time)

	Time (Hours:Minutes)	Pass/Fail?
<= 15 minutes for 12 hours?	18:27	Pass
<= 30 minutes for 18 hours	19:51	Pass

Schedule Review

Sundays					
Route 70	Headway	Route 70	Headway	Route 70	Headway
To Downtown Seattle		To Downtown Seattle		To Downtown Seattle	
6:11:00 AM		1:44:00 PM	15	9:13:00 PM	15
6:26:00 AM	15	1:59:00 PM	15	9:28:00 PM	15
6:41:00 AM	15	2:14:00 PM	15	9:43:00 PM	15
6:56:00 AM	15	2:29:00 PM	15	9:58:00 PM	15
7:11:00 AM	15	2:44:00 PM	15	10:13:00 PM	15
7:26:00 AM	15	2:59:00 PM	15	10:28:00 PM	15
7:42:00 AM	16	3:14:00 PM	15	10:43:00 PM	15
7:57:00 AM	15	3:29:00 PM	15	10:58:00 PM	15
8:12:00 AM	15	3:44:00 PM	15	11:13:00 PM	15
8:27:00 AM	15	3:59:00 PM	15	11:28:00 PM	15
8:42:00 AM	15	4:14:00 PM	15	11:41:00 PM	13
8:57:00 AM	15	4:29:00 PM	15	11:56:00 PM	15
9:12:00 AM	15	4:44:00 PM	15	12:11:00 AM	15
9:29:00 AM	17	4:59:00 PM	15	12:26:00 AM	15
9:44:00 AM	15	5:14:00 PM	15	12:41:00 AM	15
9:59:00 AM	15	5:29:00 PM	15	12:56:00 AM	15
10:14:00 AM	15	5:44:00 PM	15	1:11:00 AM	15
10:29:00 AM	15	5:59:00 PM	15	1:32:00 AM	21
10:44:00 AM	15	6:14:00 PM	15	2:02:00 AM	30
10:59:00 AM	15	6:29:00 PM	15		
11:14:00 AM	15	6:44:00 PM	15		
11:29:00 AM	15	6:58:00 PM	14		
11:44:00 AM	15	7:13:00 PM	15		
11:59:00 AM	15	7:28:00 PM	15		
12:14:00 PM	15	7:43:00 PM	15		
12:29:00 PM	15	7:58:00 PM	15		
12:44:00 PM	15	8:13:00 PM	15		
12:59:00 PM	15	8:28:00 PM	15		
1:14:00 PM	15	8:43:00 PM	15		
1:29:00 PM	15	8:58:00 PM	15		

Route 70

University District to Eastlake to Downtown Seattle

Effective 3-11-17 thru 9-22-17

Weekday: To Downtown Seattle

University District Brooklyn Ave NE & NE 50th St	Eastlake Ave E & Harvard Ave E	Fairview Ave N & Thomas St	Downtown Seattle 3rd Ave & Union St
5:01 AM	5:09 AM	5:22 AM	5:29 AM
5:26 AM	5:34 AM	5:47 AM	5:54 AM
5:51 AM	5:59 AM	6:12 AM	6:19 AM
6:16 AM	6:24 AM	6:37 AM	6:44 AM
6:36 AM	6:44 AM	6:57 AM	7:05 AM
6:51 AM	7:02 AM	7:16 AM	7:24 AM
7:01 AM	7:12 AM	7:26 AM	7:34 AM
7:11 AM	7:22 AM	7:36 AM	7:44 AM
7:21 AM	7:32 AM	7:46 AM	7:54 AM
7:38 AM	7:49 AM	7:56 AM	8:04 AM
7:46 AM	7:57 AM	8:03 AM	8:11 AM
7:53 AM	8:04 AM	8:11 AM	8:19 AM
8:01 AM	8:12 AM	8:18 AM	8:26 AM
8:08 AM	8:19 AM	8:25 AM	8:34 AM
8:16 AM	8:27 AM	8:33 AM	8:41 AM
8:23 AM	8:34 AM	8:41 AM	8:49 AM
8:31 AM	8:42 AM	8:48 AM	8:53 AM
8:38 AM	8:49 AM	8:56 AM	9:01 AM
8:46 AM	8:56 AM	9:03 AM	9:08 AM
8:53 AM	9:03 AM	9:10 AM	9:15 AM
9:01 AM	9:11 AM	9:17 AM	9:22 AM
9:08 AM	9:18 AM	9:25 AM	9:30 AM
		9:32 AM	9:37 AM

University District Brooklyn Ave NE & NE 50th St	Eastlake Ave E & Harvard Ave E	Fairview Ave N & Thomas St	Downtown Seattle 3rd Ave & Union St
9:16 AM	9:26 AM	9:40 AM	9:45 AM
9:23 AM	9:33 AM	9:47 AM	9:52 AM
9:31 AM	9:41 AM	9:55 AM	10:00 AM
9:41 AM	9:51 AM	10:05 AM	10:10 AM
9:56 AM	10:06 AM	10:20 AM	10:25 AM
10:11 AM	10:21 AM	10:35 AM	10:40 AM
10:26 AM	10:36 AM	10:50 AM	10:58 AM
10:41 AM	10:52 AM	11:05 AM	11:13 AM
10:56 AM	11:07 AM	11:20 AM	11:28 AM
11:11 AM	11:22 AM	11:35 AM	11:43 AM
11:26 AM	11:37 AM	11:50 AM	11:58 AM
11:36 AM	11:52 AM	12:05 PM	12:13 PM
12:11 PM	12:22 PM	12:20 PM	12:28 PM
12:26 PM	12:37 PM	12:35 PM	12:43 PM
12:41 PM	12:52 PM	12:50 PM	12:58 PM
12:56 PM	1:07 PM	1:05 PM	1:13 PM
1:11 PM	1:22 PM	1:20 PM	1:28 PM
1:26 PM	1:37 PM	1:35 PM	1:43 PM
1:41 PM	1:52 PM	1:50 PM	1:58 PM
1:56 PM	2:07 PM	2:05 PM	2:13 PM
2:11 PM	2:22 PM	2:20 PM	2:28 PM
2:26 PM	2:37 PM	2:35 PM	2:43 PM
2:42 PM	2:52 PM	2:50 PM	2:58 PM
2:56 PM	3:06 PM	3:06 PM	3:14 PM
3:11 PM	3:21 PM	3:20 PM	3:28 PM
3:23 PM	3:33 PM	3:35 PM	3:43 PM
3:35 PM	3:45 PM	3:59 PM	4:07 PM
3:48 PM	3:58 PM	4:12 PM	4:20 PM
3:59 PM	4:09 PM	4:23 PM	4:31 PM
4:09 PM	4:19 PM	4:35 PM	4:43 PM
4:19 PM	4:29 PM	4:45 PM	4:53 PM

University District Brooklyn Ave NE & NE 50th St	Eastlake Ave E & Harvard Ave E	Fairview Ave N & Thomas St	Downtown Seattle 3rd Ave & Union St
4:29 PM	4:39 PM	4:55 PM	5:03 PM
4:39 PM	4:49 PM	5:05 PM	5:13 PM
4:49 PM	4:59 PM	5:15 PM	5:23 PM
4:59 PM	5:09 PM	5:25 PM	5:33 PM
5:09 PM	5:19 PM	5:35 PM	5:43 PM
5:20 PM	5:30 PM	5:46 PM	5:54 PM
5:29 PM	5:39 PM	5:55 PM	6:03 PM
5:36 PM	5:46 PM	6:01 PM	6:09 PM
5:44 PM	5:54 PM	6:09 PM	6:17 PM
5:51 PM	6:02 PM	6:17 PM	6:25 PM
5:59 PM	6:10 PM	6:25 PM	6:33 PM
6:09 PM	6:20 PM	6:35 PM	6:43 PM
6:19 PM	6:30 PM	6:45 PM	6:52 PM
6:29 PM	6:40 PM	6:55 PM	7:02 PM
6:39 PM	6:50 PM	7:01 PM	7:08 PM
6:49 PM	6:59 PM	7:10 PM	7:17 PM
6:59 PM	7:09 PM	7:20 PM	7:27 PM
7:09 PM	7:19 PM	7:30 PM	7:37 PM
7:19 PM	7:29 PM	7:40 PM	7:47 PM
7:29 PM	7:39 PM	7:50 PM	7:57 PM
7:43 PM	7:53 PM	8:04 PM	8:11 PM
7:56 PM	8:08 PM	8:19 PM	8:26 PM
8:13 PM	8:23 PM	8:34 PM	8:41 PM
8:28 PM	8:38 PM	8:49 PM	8:56 PM
8:43 PM	8:53 PM	9:04 PM	9:11 PM
8:58 PM	9:08 PM	9:19 PM	9:26 PM
9:13 PM	9:23 PM	9:34 PM	9:41 PM
9:28 PM	9:38 PM	9:49 PM	9:56 PM
9:43 PM	9:53 PM	10:04 PM	10:11 PM
9:58 PM	10:08 PM	10:19 PM	10:26 PM
10:13 PM	10:23 PM	10:34 PM	10:41 PM
10:28 PM	10:38 PM	10:49 PM	10:56 PM

University District Brooklyn Ave NE & NE 50th St	Eastlake Ave E & Harvard Ave E	Fairview Ave N & Thomas St	Downtown Seattle 3rd Ave & Union St
10:43 PM	10:53 PM	11:04 PM	11:11 PM
10:58 PM	11:08 PM	11:19 PM	11:26 PM
11:13 PM	11:23 PM	11:34 PM	11:41 PM
11:28 PM	11:38 PM	11:49 PM	11:56 PM
11:43 PM	11:53 PM	12:04 AM	12:11 AM
11:58 PM	12:08 AM	12:19 AM	12:26 AM
12:13 AM	12:23 AM	12:34 AM	12:41 AM
12:28 AM	12:38 AM	12:49 AM	12:56 AM
12:43 AM	12:53 AM	1:04 AM	1:11 AM
12:58 AM	1:08 AM	1:19 AM	1:26 AM
1:21 AM	1:31 AM	1:42 AM	1:49 AM
1:51 AM	2:01 AM	2:12 AM	2:19 AM

Special Service Information

On Saturday, due to the University District Farmers Market being staged on University Way NE at NE 50th St, Route 70 will be rerouted to an alternate terminal on 12th Ave NE at NE 47th St. Please catch the bus there, or eastbound on NE 45th St at University Way NE. To avoid confusion for riders, the reroute will remain in effect all day, even though the Market is in session from 9:00 AM to 2:00 PM, only. Questions? Please call Metro at 206-553-3000.

This route has improved service thanks to Seattle voters.



Route 70

University District to Eastlake to Downtown Seattle

Effective 3-11-17 thru 9-22-17

Saturday: To Downtown Seattle

University District Brooklyn Ave NE & NE 50th St	Eastlake Ave E & Harvard Ave E	Fairview Ave N & Thomas St	Downtown Seattle 3rd Ave & Union St
6:09 AM	6:17 AM	6:25 AM	6:31 AM
6:24 AM	6:32 AM	6:40 AM	6:46 AM
6:39 AM	6:47 AM	6:55 AM	7:01 AM
6:54 AM	7:02 AM	7:10 AM	7:16 AM
7:09 AM	7:17 AM	7:25 AM	7:31 AM
7:24 AM	7:32 AM	7:40 AM	7:46 AM
7:39 AM	7:47 AM	7:55 AM	8:01 AM
7:54 AM	8:02 AM	8:10 AM	8:16 AM
8:09 AM	8:17 AM	8:25 AM	8:31 AM
8:24 AM	8:32 AM	8:40 AM	8:46 AM
8:39 AM	8:47 AM	8:55 AM	9:01 AM
8:54 AM	9:02 AM	9:10 AM	9:16 AM
9:09 AM	9:17 AM	9:25 AM	9:31 AM
9:24 AM	9:32 AM	9:40 AM	9:46 AM
9:39 AM	9:47 AM	9:55 AM	10:01 AM
9:54 AM	10:02 AM	10:10 AM	10:17 AM
10:09 AM	10:17 AM	10:25 AM	10:32 AM
10:24 AM	10:32 AM	10:41 AM	10:47 AM
10:39 AM	10:47 AM	10:56 AM	11:02 AM
10:54 AM	11:02 AM	11:11 AM	11:17 AM
11:09 AM	11:17 AM	11:26 AM	11:32 AM
11:24 AM	11:32 AM	11:41 AM	11:47 AM
11:39 AM	11:47 AM	11:56 AM	12:02 PM

University District Brooklyn Ave NE & NE 50th St	Eastlake Ave E & Harvard Ave E	Fairview Ave N & Thomas St	Downtown Seattle 3rd Ave & Union St
11:54 AM	12:02 PM	12:12 PM	12:19 PM
12:09 PM	12:17 PM	12:27 PM	12:34 PM
12:24 PM	12:32 PM	12:42 PM	12:49 PM
12:39 PM	12:47 PM	12:57 PM	1:04 PM
12:54 PM	1:02 PM	1:12 PM	1:19 PM
1:09 PM	1:17 PM	1:27 PM	1:34 PM
1:24 PM	1:32 PM	1:42 PM	1:49 PM
1:39 PM	1:48 PM	1:58 PM	2:05 PM
1:54 PM	2:03 PM	2:13 PM	2:20 PM
2:09 PM	2:18 PM	2:28 PM	2:35 PM
2:24 PM	2:33 PM	2:43 PM	2:50 PM
2:39 PM	2:48 PM	2:58 PM	3:05 PM
2:54 PM	3:03 PM	3:13 PM	3:20 PM
3:09 PM	3:18 PM	3:28 PM	3:35 PM
3:24 PM	3:33 PM	3:43 PM	3:50 PM
3:39 PM	3:48 PM	3:58 PM	4:05 PM
3:54 PM	4:03 PM	4:12 PM	4:19 PM
4:09 PM	4:18 PM	4:27 PM	4:34 PM
4:24 PM	4:33 PM	4:42 PM	4:49 PM
4:39 PM	4:48 PM	4:57 PM	5:04 PM
4:54 PM	5:03 PM	5:12 PM	5:19 PM
5:09 PM	5:18 PM	5:27 PM	5:34 PM
5:24 PM	5:33 PM	5:42 PM	5:49 PM
5:39 PM	5:48 PM	5:57 PM	6:04 PM
5:54 PM	6:03 PM	6:12 PM	6:19 PM
6:09 PM	6:18 PM	6:27 PM	6:34 PM
6:24 PM	6:33 PM	6:42 PM	6:49 PM
6:39 PM	6:47 PM	6:56 PM	7:03 PM
6:54 PM	7:02 PM	7:11 PM	7:18 PM
7:09 PM	7:09 PM	7:18 PM	7:25 PM
7:24 PM	7:17 PM	7:26 PM	7:33 PM
	7:32 PM	7:41 PM	7:47 PM

University District Brooklyn Ave NE & NE 50th St	Eastlake Ave E & Harvard Ave E	Fairview Ave N & Thomas St	Downtown Seattle 3rd Ave & Union St
7:39 PM	7:47 PM	7:56 PM	8:02 PM
7:54 PM	8:02 PM	8:11 PM	8:17 PM
8:09 PM	8:17 PM	8:26 PM	8:32 PM
8:24 PM	8:32 PM	8:41 PM	8:47 PM
8:39 PM	8:47 PM	8:56 PM	9:02 PM
8:54 PM	9:02 PM	9:11 PM	9:17 PM
9:09 PM	9:17 PM	9:26 PM	9:32 PM
9:24 PM	9:32 PM	9:41 PM	9:47 PM
9:39 PM	9:47 PM	9:56 PM	10:02 PM
9:54 PM	10:02 PM	10:11 PM	10:17 PM
10:09 PM	10:17 PM	10:26 PM	10:32 PM
10:24 PM	10:32 PM	10:41 PM	10:47 PM
10:39 PM	10:47 PM	10:56 PM	11:02 PM
10:54 PM	11:02 PM	11:11 PM	11:17 PM
11:09 PM	11:17 PM	11:26 PM	11:32 PM
11:24 PM	11:32 PM	11:41 PM	11:47 PM
11:39 PM	11:47 PM	11:56 PM	12:02 AM
11:54 PM	12:02 AM	12:11 AM	12:17 AM
12:09 AM	12:17 AM	12:26 AM	12:32 AM
12:24 AM	12:32 AM	12:41 AM	12:47 AM
12:39 AM	12:47 AM	12:56 AM	1:02 AM
12:52 AM	1:00 AM	1:09 AM	1:15 AM
1:22 AM	1:30 AM	1:39 AM	1:45 AM
1:52 AM	2:00 AM	2:09 AM	2:15 AM

Special Service Information

On Saturday, due to the University District Farmers Market being staged on University Way NE at NE 50th St, Route 70 will be rerouted to an alternate terminal on 12th Ave NE at NE 47th St. Please catch the bus there, or eastbound on NE 45th St at University Way NE. To avoid confusion for riders, the reroute will

is in session from 9:00 AM to 2:00 PM, only. Questions?

3 voters.



Route 70

University District to Eastlake to Downtown Seattle

Effective 3-11-17 thru 9-22-17

Sunday: To Downtown Seattle

University District Brooklyn Ave NE & NE 50th St	Eastlake Ave E & Harvard Ave E	Fairview Ave N & Thomas St	Downtown Seattle 3rd Ave & Union St
6:00 AM	6:07 AM	6:15 AM	6:21 AM
6:15 AM	6:22 AM	6:30 AM	6:36 AM
6:30 AM	6:37 AM	6:45 AM	6:51 AM
6:45 AM	6:52 AM	7:00 AM	7:06 AM
7:00 AM	7:07 AM	7:15 AM	7:21 AM
7:15 AM	7:22 AM	7:30 AM	7:36 AM
7:30 AM	7:38 AM	7:46 AM	7:52 AM
7:45 AM	7:53 AM	8:01 AM	8:07 AM
8:00 AM	8:08 AM	8:16 AM	8:22 AM
8:15 AM	8:23 AM	8:31 AM	8:37 AM
8:30 AM	8:38 AM	8:46 AM	8:52 AM
8:45 AM	8:53 AM	9:01 AM	9:07 AM
9:00 AM	9:08 AM	9:16 AM	9:22 AM
9:15 AM	9:23 AM	9:33 AM	9:39 AM
9:30 AM	9:40 AM	9:48 AM	9:54 AM
9:45 AM	9:55 AM	10:03 AM	10:09 AM
10:00 AM	10:10 AM	10:19 AM	10:25 AM
10:15 AM	10:25 AM	10:34 AM	10:40 AM
10:30 AM	10:40 AM	10:49 AM	10:55 AM
10:45 AM	10:55 AM	11:04 AM	11:10 AM
11:00 AM	11:10 AM	11:19 AM	11:25 AM
11:15 AM	11:25 AM	11:34 AM	11:40 AM
11:30 AM	11:40 AM	11:49 AM	11:55 AM

University District Brooklyn Ave NE & NE 50th St	Eastlake Ave E & Harvard Ave E	Fairview Ave N & Thomas St	Downtown Seattle 3rd Ave & Union St
11:45 AM	11:55 AM	12:04 PM	12:11 PM
12:00 PM	12:10 PM	12:20 PM	12:27 PM
12:15 PM	12:25 PM	12:35 PM	12:42 PM
12:30 PM	12:40 PM	12:50 PM	12:57 PM
12:45 PM	12:55 PM	1:05 PM	1:12 PM
1:00 PM	1:10 PM	1:20 PM	1:27 PM
1:15 PM	1:25 PM	1:35 PM	1:42 PM
1:30 PM	1:40 PM	1:50 PM	1:57 PM
1:45 PM	1:55 PM	2:05 PM	2:12 PM
2:00 PM	2:10 PM	2:20 PM	2:27 PM
2:15 PM	2:25 PM	2:35 PM	2:42 PM
2:30 PM	2:40 PM	2:50 PM	2:57 PM
2:45 PM	2:55 PM	3:05 PM	3:12 PM
3:00 PM	3:10 PM	3:20 PM	3:27 PM
3:15 PM	3:25 PM	3:35 PM	3:42 PM
3:30 PM	3:40 PM	3:50 PM	3:57 PM
3:45 PM	3:55 PM	4:05 PM	4:12 PM
4:00 PM	4:10 PM	4:19 PM	4:26 PM
4:15 PM	4:25 PM	4:34 PM	4:41 PM
4:30 PM	4:40 PM	4:49 PM	4:56 PM
4:45 PM	4:55 PM	5:04 PM	5:11 PM
5:00 PM	5:10 PM	5:19 PM	5:26 PM
5:15 PM	5:25 PM	5:34 PM	5:41 PM
5:30 PM	5:40 PM	5:49 PM	5:56 PM
5:45 PM	5:55 PM	6:04 PM	6:11 PM
6:00 PM	6:10 PM	6:19 PM	6:26 PM
6:15 PM	6:25 PM	6:34 PM	6:41 PM
6:30 PM	6:40 PM	6:49 PM	6:56 PM
6:45 PM	6:54 PM	7:03 PM	7:10 PM
7:00 PM	7:09 PM	7:18 PM	7:25 PM
7:15 PM	7:24 PM	7:33 PM	7:39 PM
7:30 PM	7:39 PM	7:48 PM	7:54 PM

University District Brooklyn Ave NE & NE 50th St	Eastlake Ave E & Harvard Ave E	Fairview Ave N & Thomas St	Downtown Seattle 3rd Ave & Union St
7:45 PM	7:54 PM	8:03 PM	8:09 PM
8:00 PM	8:09 PM	8:18 PM	8:24 PM
8:15 PM	8:24 PM	8:32 PM	8:38 PM
8:30 PM	8:39 PM	8:47 PM	8:53 PM
8:45 PM	8:54 PM	9:02 PM	9:08 PM
9:00 PM	9:09 PM	9:17 PM	9:23 PM
9:15 PM	9:24 PM	9:32 PM	9:38 PM
9:30 PM	9:39 PM	9:47 PM	9:53 PM
9:45 PM	9:54 PM	10:02 PM	10:08 PM
10:00 PM	10:09 PM	10:17 PM	10:23 PM
10:15 PM	10:24 PM	10:32 PM	10:38 PM
10:30 PM	10:39 PM	10:47 PM	10:53 PM
10:45 PM	10:54 PM	11:02 PM	11:08 PM
11:00 PM	11:09 PM	11:17 PM	11:23 PM
11:15 PM	11:24 PM	11:32 PM	11:38 PM
11:30 PM	11:37 PM	11:45 PM	11:51 PM
11:45 PM	11:52 PM	12:00 AM	12:06 AM
12:00 AM	12:07 AM	12:15 AM	12:21 AM
12:15 AM	12:22 AM	12:30 AM	12:36 AM
12:30 AM	12:37 AM	12:45 AM	12:51 AM
12:45 AM	12:52 AM	1:00 AM	1:06 AM
1:00 AM	1:07 AM	1:15 AM	1:21 AM
1:21 AM	1:28 AM	1:36 AM	1:42 AM
1:51 AM	1:58 AM	2:06 AM	2:12 AM

Special Service Information

On Saturday, due to the University District Farmers Market being staged on University Way NE at NE 50th St, Route 70 will be rerouted to an alternate terminal on 12th Ave NE at NE 47th St. Please catch the bus there, or eastbound on NE 45th St at University Way NE. To avoid confusion for riders, the reroute will

is in session from 9:00 AM to 2:00 PM, only. Questions?

e voters.





PORTLAND
6720 SW Macadam Avenue
Suite 100
Portland, OR 97219
T 503.255.7100

SEATTLE
1505 5th Avenue
Suite 300
Seattle, WA 98101
T 206.576.1600

SAN FRANCISCO
1014 Howard Street
San Francisco, CA 94103
T 415.252.7063



© 2016
Nothing shown here may be reproduced in any way
without the consent of Ankrom Moisan Architects.

www.ankrommoisan.com

