



schemata
workshop

capitol hill urban cohousing

1720 12th avenue | seattle, washington

early design guidance

13 june 2012 rev 1

A/P # 3013374

property development objectives

The proposed, mid-block project is a six-story, mixed-use apartment building with 12 dwelling units over a street level commercial space. The site is within a 5-minute walk of the Capitol Hill Light Rail Station, and between two key pedestrian streets that provide access to Cal Anderson Park one-block to the east. The current owner acquired the property in 2008, and later that year received a building permit for an innovative two-story, pre-fabricated, component building on the open portion of the site that would retain the existing building fronting 12th Avenue. That temporary building was intended as a 5-10 year interim use that would eventually be relocated off-site and replaced with a larger, permanent building. The proposal described here fast-forwards past that temporary structure to a long term, 250-year vision for the community.

The property is being developed around the Danish model of "cohousing", a term that simply applies to the concept of future residents intentionally organizing and collectively building a community. This specific group began meeting in Spring 2010 with the interest in developing a highly sustainable, urban community in a central Capitol Hill location. The physical building is very similar to any other multi-family building, with the addition of extensive common areas that provide for opportunities to create a stronger sense of community within. This occurs through a regularly occurring "supper club", shop space, laundry room, guest room,

and outdoor common areas. Future residents have already committed to sustainability at multiple levels. We believe this project will have a positive impact on Capitol Hill goals for neighborhood sustainability as a high-performance energy and water district (or, "ecodistrict"), as well as making small steps toward building strength and resiliency in our city.

The ground level of all four schemes eliminates the existing vehicular curb cut onto 12th Avenue and consists of a residential lobby, commercial/retail space, and storage for the building residents at the east, below-grade portion of the site. The site ascends about a story to the unimproved alley on the east, so the proposed building is perceived as 5-stories above grade from both 12th Avenue and the alley. The pedestrian experience will be enriched by thoughtful design and appropriate materials at both street and alley frontages. Sidewalk improvements will enhance the public right of way and establish a civic context for future development on the block.

The residential unit mix is comprised of two and three-bedroom units, with no more than three units per floor. An urban farm will occupy both roof levels.

development summary

Lot size	4,520 SF
Base FAR	4.0
Base Allowable area	18,080 SF
Commercial Space	1,500 SF
12 Residences	

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developers/future residents



living building challenge summary



The Living Building Challenge

In an attempt to raise the bar for sustainable practices adopted in the field of design and construction, the Living Building Challenge puts forth mandatory "Imperatives" for building compliance. The certification is performance-based and hence the buildings are evaluated after one year of being operational. The Challenges are divided into seven "Petals" and further sub-divided into twenty "Imperatives".

Seattle's Living Building Pilot Program

This program was envisioned to assist projects attempting to meet the requirements of the Living Building Challenge. The Pilot program will accept twelve projects in the span of three years to participate. The projects will go through a typical Design Review process as currently required by the Seattle Municipal Code, however, they will be allowed departures from code requirements that might otherwise discourage the project from meeting the Challenge. According to the Living Building Pilot Ordinance, City Council adopted Ordinance 123206 in December 2009 to establish the Living Building Pilot Program as a part of the Land Use Code.

Project Goals

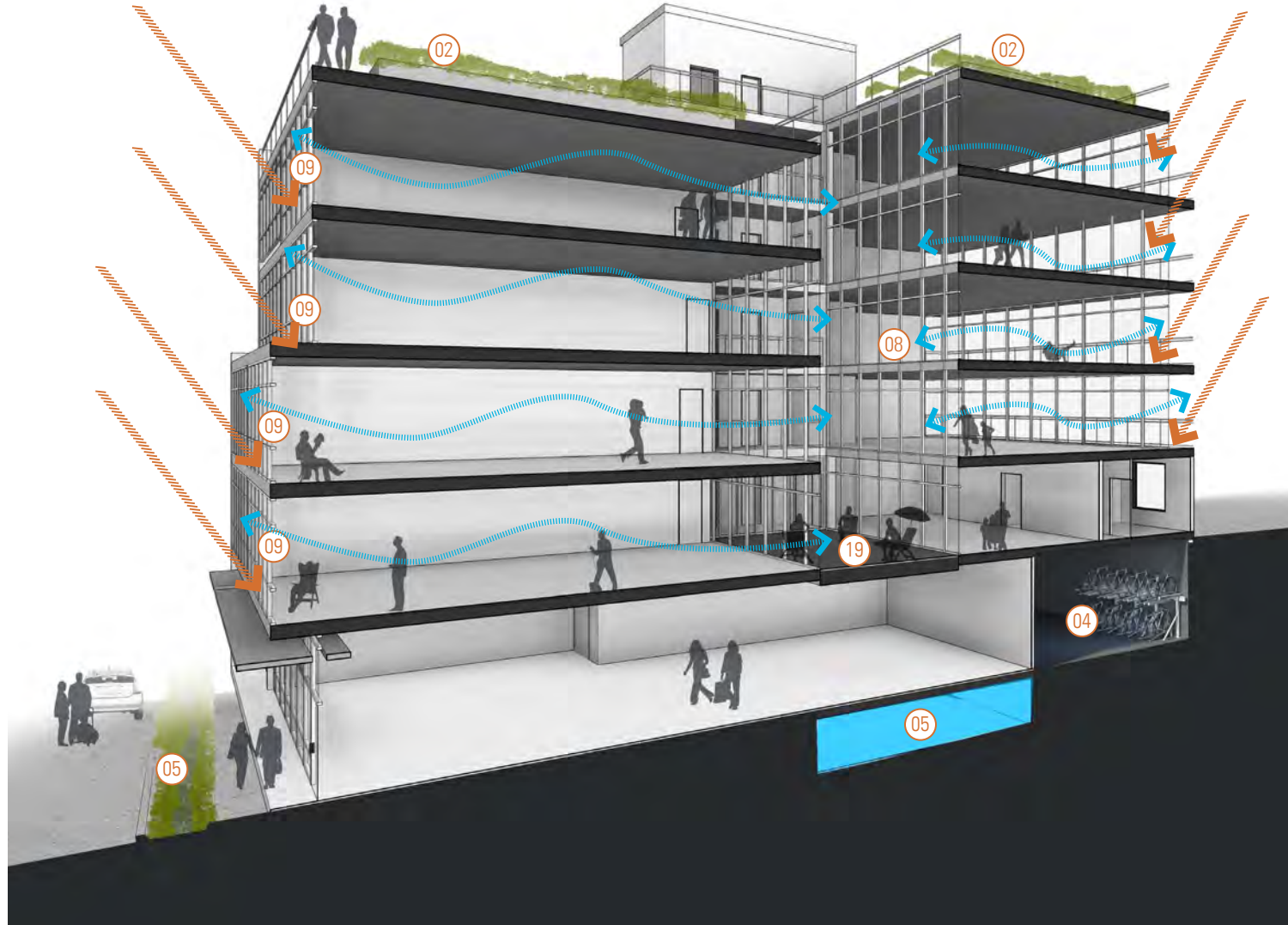
- Per the Living Building Pilot Ordinance, following are the minimum standards for the project:
- A minimum of 60% of the Living Building Challenge prerequisites
 - Total Building Energy usage (less energy generated on site) is 25% or less of the average energy usage for a comparable building not in the Living Building Program
 - Total building water usage (less harvested rainwater) is 25 percent or less of the average water usage for a comparable building not in the Living Building Program
 - At least 50 percent of stormwater is captured and used on site.

petal	imperative	anticipated compliance with LBPO			
		25%	50%	75%	100%
site	01 limits to growth				
	02 urban agriculture				
	03 habitat exchange				
	04 car free living				
water	05 net zero water				
	06 ecological water flow				
energy	07 net zero energy				
health	08 civilized environment				
	09 healthy air				
	10 biophilia				
materials	11 red list				
	12 embodied carbon footprint				
	13 responsible industry				
equity	14 appropriate sourcing				
	15 conservation + reuse				
	16 human scale + humane places				
	17 democracy + social justice				
	18 rights to nature				
beauty	19 beauty + spirit				
	20 inspiration + education				
compliance strategy legend		25%	50%	75%	100%

living building challenge



02



04



13



05



08



09



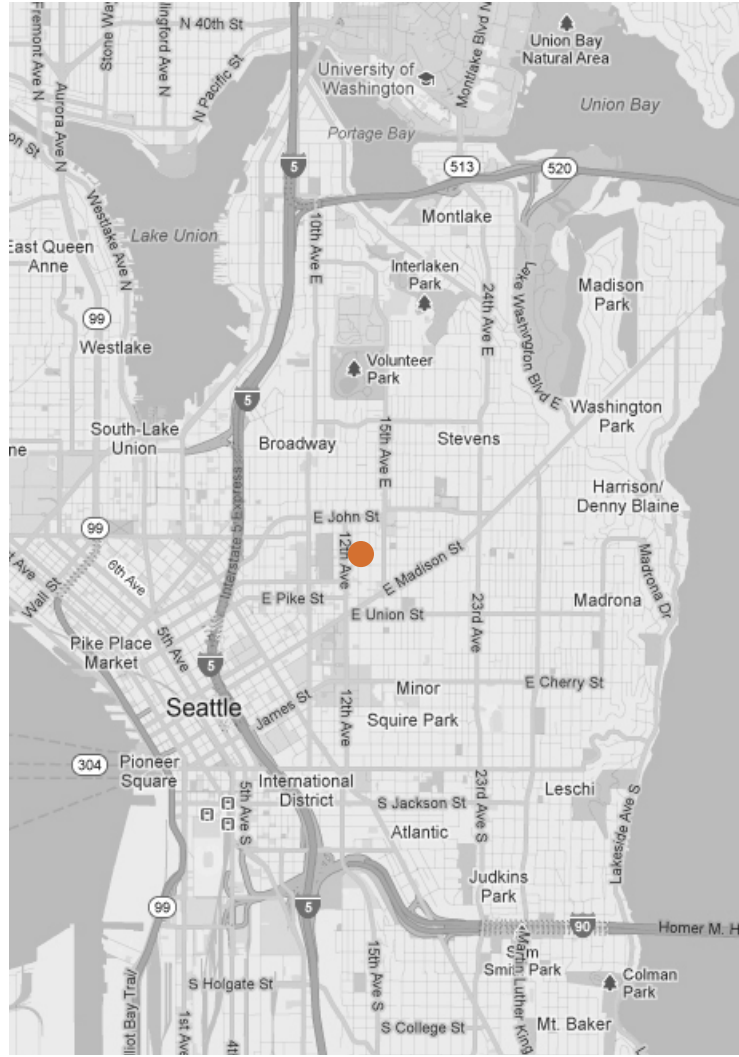
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The project intends to meet or exceed the petal goals of the Living Building Challenge per the Pilot Program. Some of the specific petal goals and strategies are highlighted below, see detailed response to the LBC petals in the Appendix:

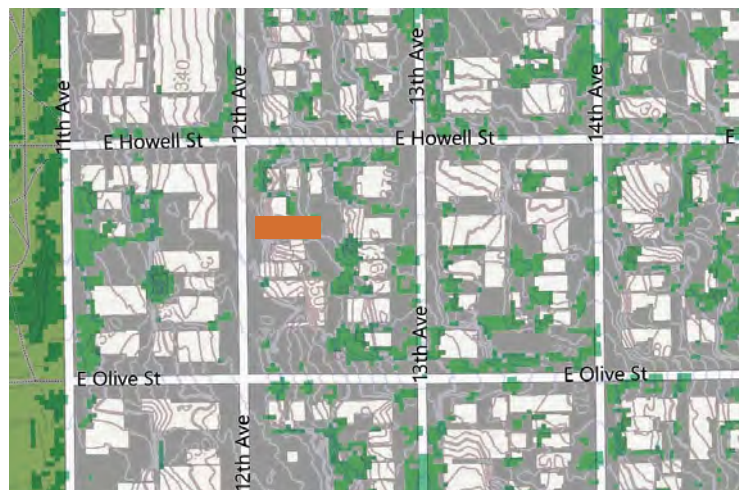
- 02 urban agriculture - The residents are committed to urban agriculture through the rooftop urban farms.
- 04 car free living - No parking is proposed in the development.
- 05 water - Rainwater will be harvested for irrigation and flushing.
- 07 energy - Energy demand will be optimized.
- 08 civilized environment - Operable windows shall be provided in all units.
- 09 healthy air - Cross-ventilation is provided in all units through an internal courtyard.
- 13 responsible industry - Type IV (heavy timber) construction is proposed to reduce the building's embodied energy.
- 19 beauty + spirit - the building will help facilitate a strong sense of social cohesion and community within the building and neighborhood.

urban design analysis

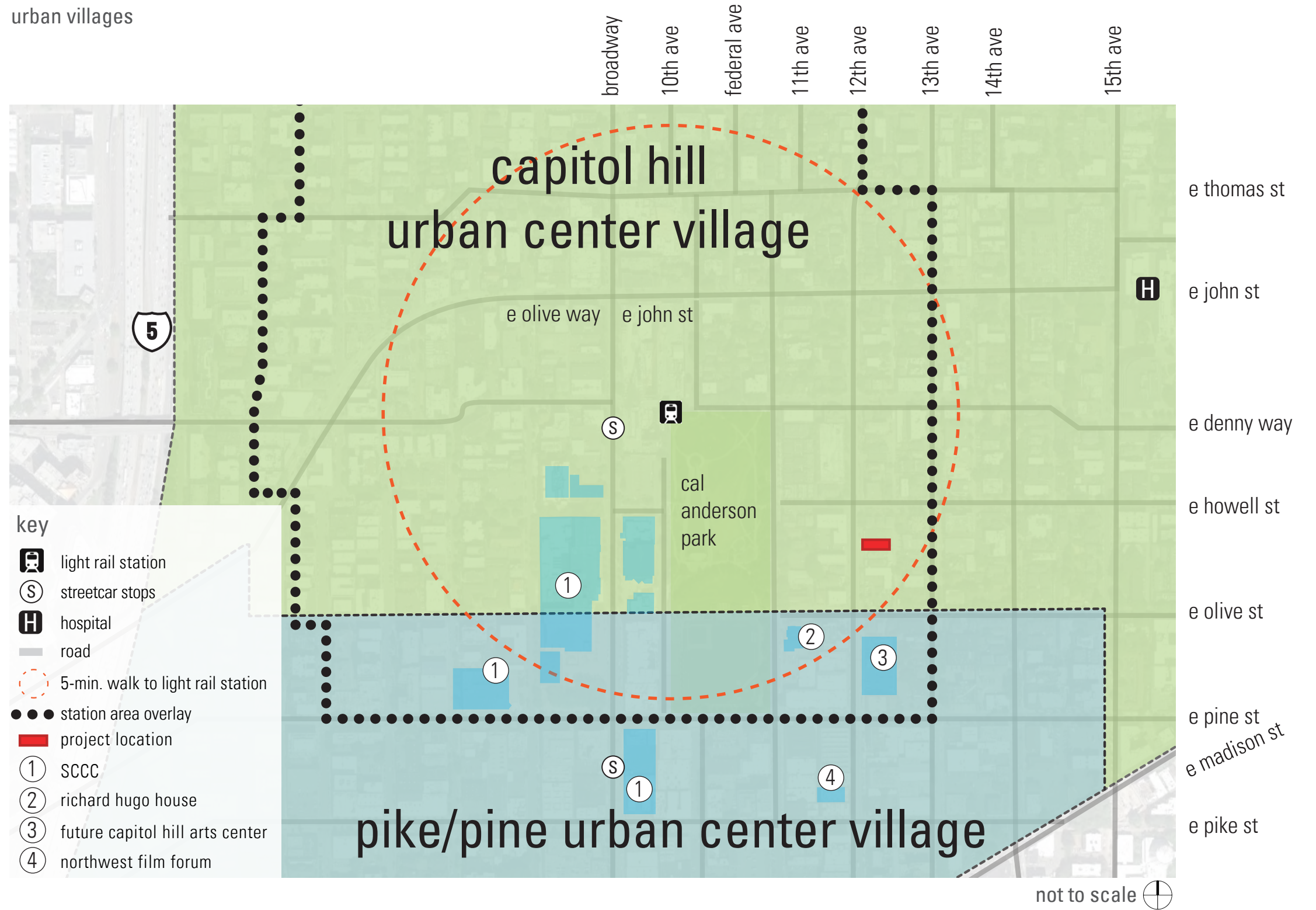
vicinity map



tree cover (from DPD GIS)

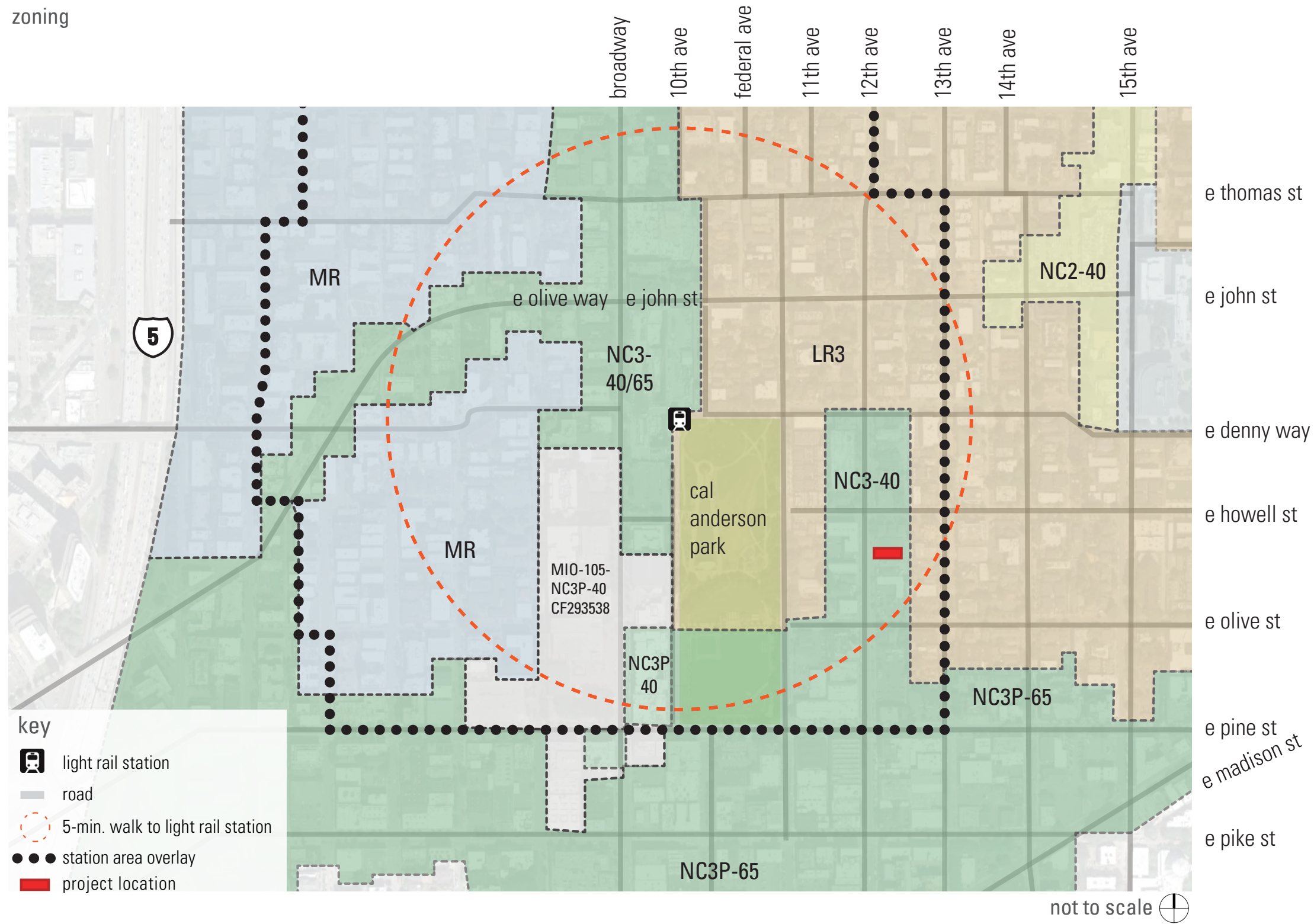


urban villages



urban design analysis - zoning

zoning



urban design analysis - site access

vehicular access

The site fronts 12th Avenue, a major north/south arterial on Capitol Hill. There is vehicular and pedestrian access available via an alley between E Howell and E Olive streets.

The site is less than two blocks from Pine Street and the Pike/Pine corridor that connects Capitol Hill with Downtown and I-5.

transit access

The site is well served by transit, with major bus routes along 12th Avenue, Pine, E John, E Madison, and is located a few blocks away from the planned Capitol Hill Link Light Rail station, to be completed in 2016.

bicycle access

12th Avenue is a marked bike route, and has designated bicycle lanes for travel in both directions. It is linked to a greater network of bicycle routes via E Pine St., and E. Denny Way, and is well traveled by Seattle cyclists.

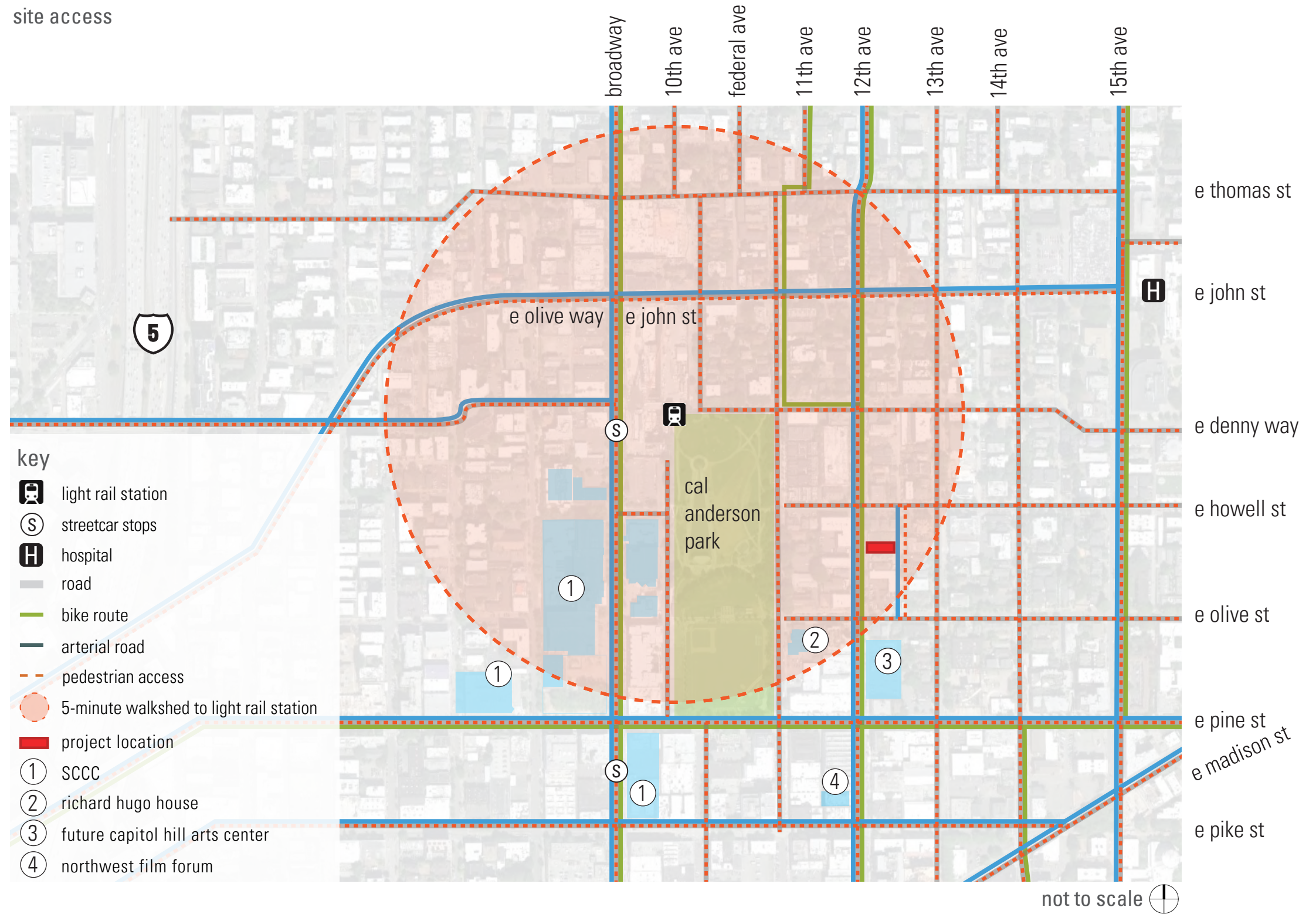
pedestrian access

Capitol Hill has an extensive network of sidewalks, and is one of the most densely developed neighborhoods in Seattle. Both Olive and Howell streets were designated in the Neighborhood Plan as key pedestrian access paths to and through the Cal Anderson Park. The mix of uses, high density and Walkscore of 97 ("Walker's Paradise") make this area one of the most pedestrian friendly in the city.

access constraints

There are no access constraints to this site.

site access



urban design analysis - neighborhood

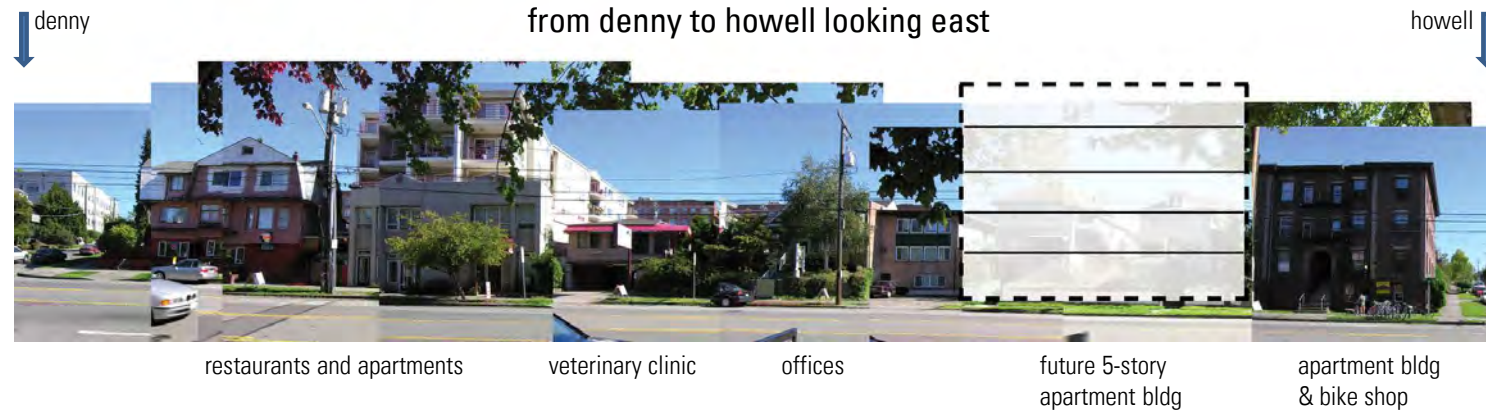


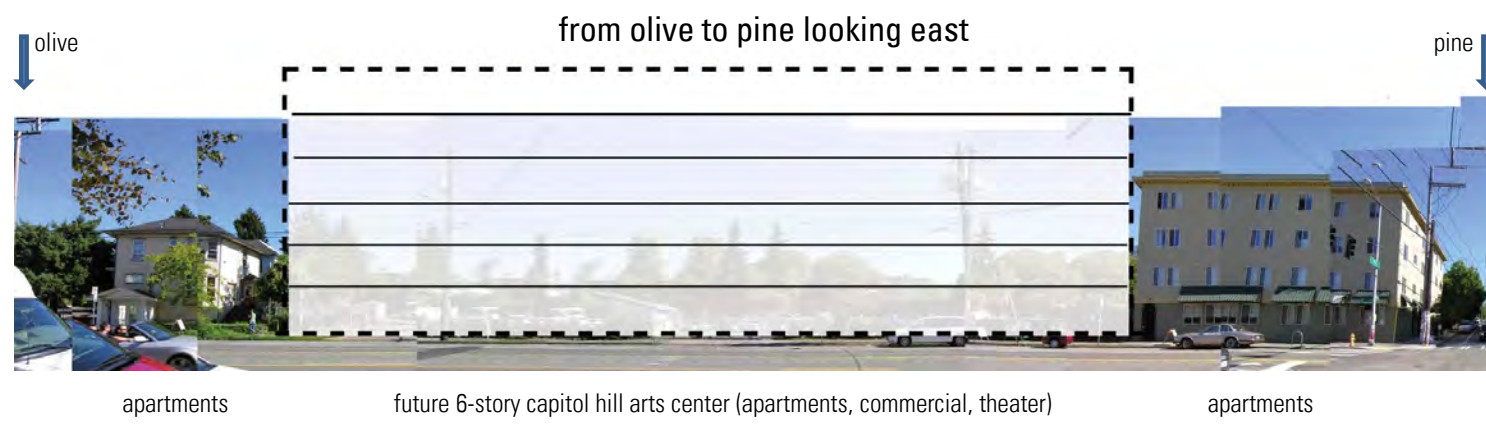
map key

- ① Artist Trust Building
- ② Apartment Building/12th Avenue Bicycles and Collectables
- ③ Single Family Homes
- ④ Cafe Argento/Condominium Building
- ⑤ Greek Orthodox Church
- ⑥ Future Capitol Hill Arts Center
- ⑦ Future mixed-use apartment building 1711 12th Avenue
- ⑧ Russian Orthodox Cathedral
- ⑨ German United Church of Christ
- ⑩ 1828 12th Avenue



urban design analysis - streetscape



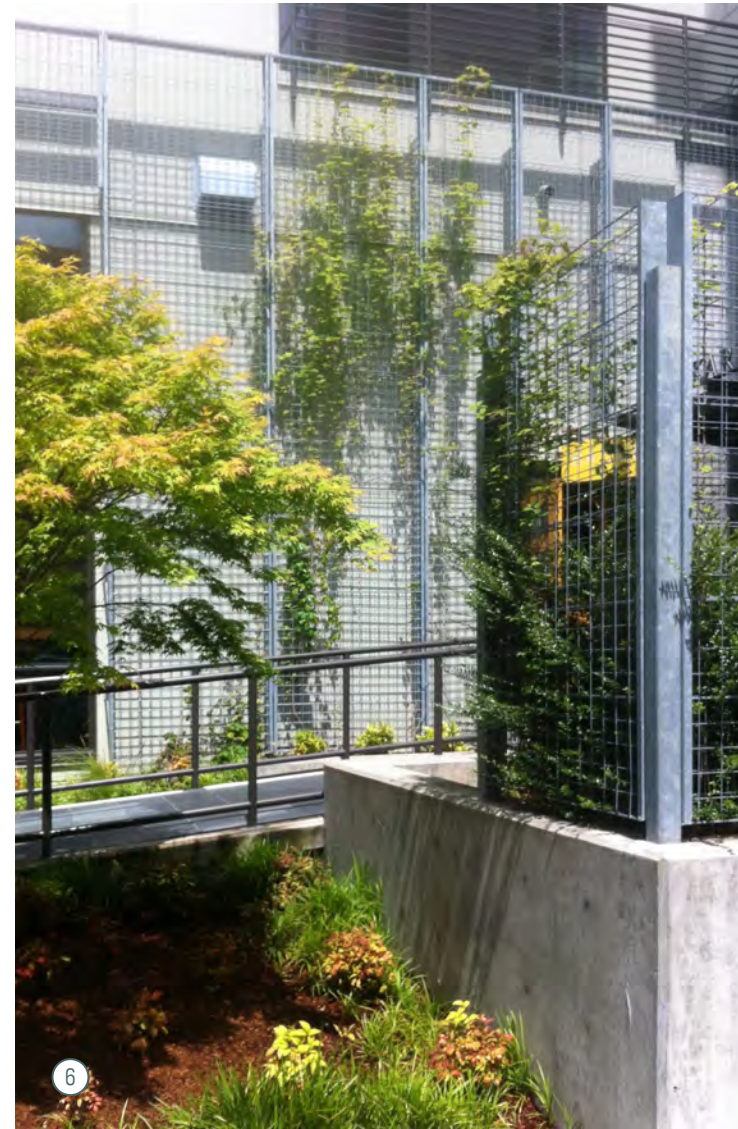


alley looking southwest



alley looking northeast

urban design analysis - design cues





- ① The Chloe Apartments / interface with sidewalk
- ② The Pearl Apartments / simplicity of form
- ③ The Broadway Building / durable materials at base
- ④ 1720 12th Ave / enhanced pedestrian experience
- ⑤ Apartment building & 12th Avenue Hair and Spa / scale only
- ⑥ The Packard Building / green screen
- ⑦ The Bullitt Center / 250 year presence & sustainable strategies
- ⑧ Piston & Ring/Plum / connection to sidewalk

- ⑨ Roosevelt Apartment building / maintains street edge
- ⑩ Stumptown & Cafe Presse / connection to sidewalk
- ⑪ Light Rail Station / future connectivity and need for density
- ⑫ Momiji / street level human-scaled windows and transparency
- ⑬ Apartment building & Fleurish / scale & rich urban fabric



building analysis - history



1919: Construction Year



1952: Remodel

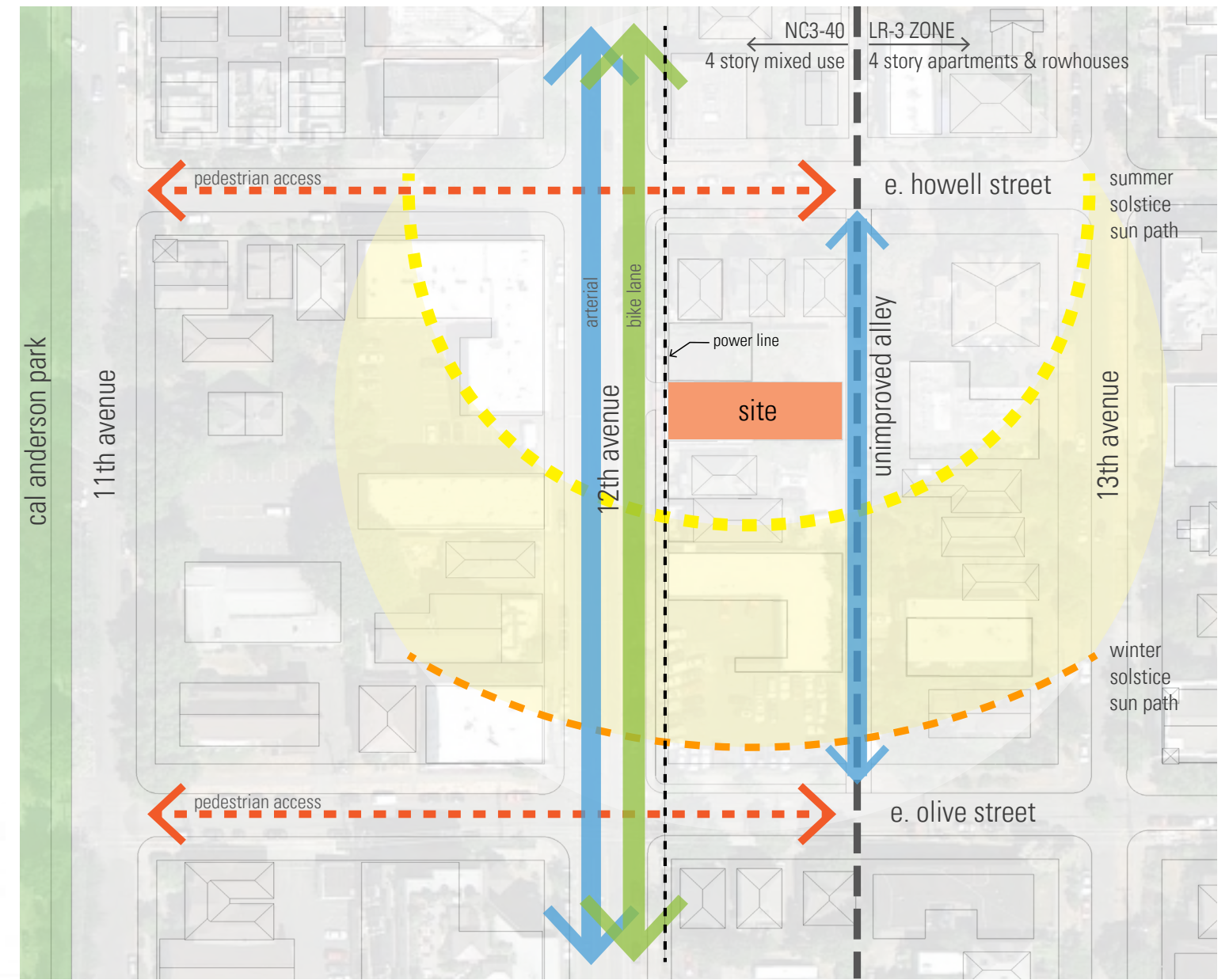
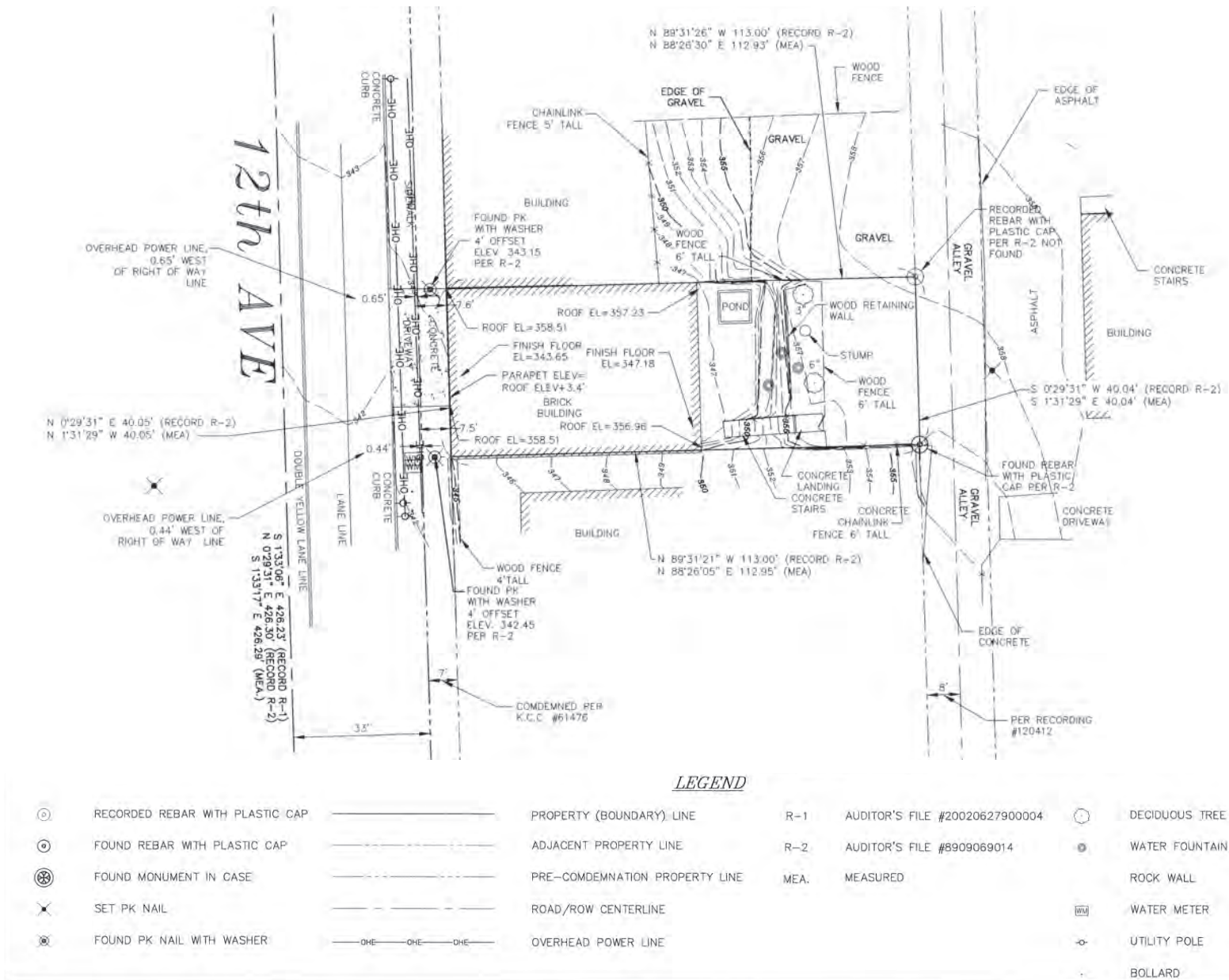


2012: Current

Historic Summary

While we value and acknowledge the cultural value and heritage of historical buildings, there are several reasons working against the preservation of the existing building: the poor current condition of the structural elements and existing facade, its not being historically intact, and that its preservation would not achieve preserving a larger, continuous fabric of like structures as little of the neighboring building fabric is of like buildings nor of preservation quality themselves. Our aspirations for the proposed building are that it provides an improved pedestrian realm through a widened sidewalk and quality design and construction. The existing building will be de-constructed and existing materials will be recycled, with some re-used in the proposed building.

site analysis



not to scale

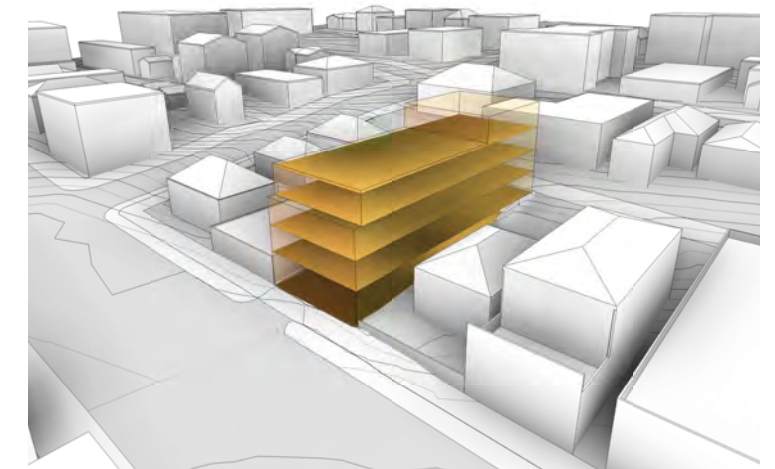
description: existing site

Located at 1720 12th Avenue, the site fronts one main arterial; 12th Avenue. The site is encompassed by E Howell, located perpendicular to 12th and a gravel alley directly east. The topography creates a distinctive characteristic due to the vertical rise from east to west which positions the existing one-story building into the incline. The 4,520sf site is currently occupied by a 1 story brick building.

zoning and land use code analysis

Address	1720 12th Avenue, Seattle, WA 98122
Site Area	4,520 sf
Site Zoning	NC3-40
Overlay	Station Area Overlay, Capitol Hill Urban Village
Adjacent Zoning	LR-3 (East), NC3-40 (North), NC3-40 (South)
Permitted Uses	Residential, Commercial and Urban Farm
Pedestrian zone	No
Street-level development standards (23.47A.008)	<p>B.2 Transparency.</p> <ul style="list-style-type: none"> a. Sixty percent of the street-facing facade between 2 feet and 8 feet above the sidewalk shall be transparent. b. Transparent areas of facades shall be designed and maintained to allow unobstructed views from the outside into the structure or, in the case of live-work units, into display windows that have a minimum 30-inch depth. <p>B.3 The following height and depth provisions apply to new structures or new additions to existing structures:</p> <ul style="list-style-type: none"> a. Nonresidential uses shall extend an average of at least 30 feet and a minimum of 15 feet in depth from the street-level street-facing facade. If the combination of the street-facing facade requirement of subsection 23.47A.008.D.1 and this depth requirement would result in a requirement that an area greater than 50 percent of the structure's footprint be dedicated to nonresidential use, the Director may modify the street-facing facade or depth requirements, or both, so that no more than 50 percent of the structure's footprint is required to be nonresidential b. Nonresidential uses at street level shall have a floor-to-floor height of at least 13 feet. <p>D. The provisions of this subsection apply to structures with residential uses located along a street-level street-facing facade:</p> <ol style="list-style-type: none"> 1. Residential uses are limited to 20% of the street-level street-facing facade under section 23.47.005.D; 2. At least one of the street-level street-facing facades containing a residential use shall have a visually prominent pedestrian entry.
Structure Height (23.47A.012)	40 feet + 4 feet for 13 foot high street level = 44 feet
Rooftop Features (23.47A.012)	<p>C.4 - The following rooftop features are permitted to extend up to 15 feet above the applicable height limit: a) Solar collectors, b) Mechanical equipment f) Stair and elevator penthouses.</p> <p>C.6 - Greenhouses that are dedicated to food production are permitted to extend 15 feet above the applicable height limit if the combined total coverage of all features gaining additional height listed in this subsection 23.47A.012.C does not exceed 50 percent of the roof area, and the greenhouse adheres to the setback requirements in subsection 23.47A.012.C.7.</p>
Required Setbacks (23.47A.014)	<p>B.3 - For a structure containing a residential use, a setback is required along any side or rear lot line that abuts a lot in a residential zone or that is across an alley from a lot in a residential zone, as follows:</p> <ul style="list-style-type: none"> a. Fifteen feet for portions of structures above 13 feet in height to a maximum of 40 feet; and b. For each portion of a structure above 40 feet in height, additional setback at the rate of 2 feet of setback for every 10 feet by which the height of such portion exceeds 40 feet (Exhibit C for 23.47A.014). <p>B.4 - One-half of the width of an abutting alley may be counted as part of the required setback. For the purpose of this Section 23.47A.014, the alley width and the location of the rear lot line shall be determined prior to any dedication that may be required for alley improvement purposes.</p>
Required Parking and loading (23.47A.030)	No minimum requirement for Residential uses in commercial and multifamily zones within urban centers or within the Station Area Overlay District
Landscaping and screening standards (23.47A.016)	<p>Green factor score of 0.30 required for NC3 zone</p> <p>Green factor score of 0.40 required for DPD Priority Green permitting process/Living Building Pilot Program</p>

base maximum building envelope



design guidelines

A-1 Responding to site characteristics

The siting of buildings should respond to specific site conditions and opportunities such as non-rectangular lots, location on prominent intersections, unusual topography, significant vegetation and views or other natural features.

Response: This urban in-fill project occupies a sloping site in an underdeveloped portion of 12th Avenue. The main pedestrian entrances to the building will be off 12th Avenue which is a very pedestrian-friendly street. There will be no automobile parking provided in this project.

A-2 Streetscape compatibility

The siting of buildings should acknowledge and reinforce the existing desirable spatial characteristics of the right-of-way.

Capitol Hill-specific Supplemental Guidance:

- Retain or increase the width of sidewalks.
- Vehicle entrances to buildings should not dominate the streetscape.
- For buildings that span a block and “front” on two streets, each street frontage should receive individual and detailed site planning and architectural design treatments to complement the established streetscape character.
- New development in commercial zones should be sensitive to neighboring residential zones. Examples include lots on Broadway that extend to streets with residential character, such as Nagle Place or 10th or Harvard Avenues East. While a design with a commercial character is appropriate along Broadway, compatibility with residential character should be emphasized along the other streets.

Response: The sidewalk width along 12th Avenue will be increased and substantially enhanced. Rain gardens will be designed to enhance the sidewalk landscape character and enhance subsurface drainage. As there will be no vehicular access along 12th Avenue, the existing curbcut will be removed.

A-3 Entrances Visible to the Street

Entries should be clearly identifiable and visible from the street.

Response: The primary residential entrance to the building off 12th Avenue will be designed to have a visual connection to the residential floors above and to be distinct from the entries into the commercial space. The entrances will have overhead weather protection.

A-4 Human Activity

New development should be sited and designed to encourage human activity on the street.

Capitol Hill-specific supplemental guidance:

- Provide for sidewalk retail opportunities and connections by allowing for the opening of the storefront to the street and displaying goods to

the pedestrian.

- Provide for outdoor eating and drinking opportunities on the sidewalk by allowing for the opening the restaurant or café windows to the sidewalk and installing outdoor seating while maintaining pedestrian flow.
- Install clear glass windows along the sidewalk to provide visual access into the retail or dining activities that occur inside. Do not block views into the interior spaces with the backs of shelving units or with posters.

Response: The building will have commercial/retail spaces for lease at the ground level. The retail facade will be designed with transparency to allow a visual connection to the sidewalk. The increased sidewalk width will allow for seating opportunities and an “art bench” in the raingarden adjacent to the street.



A-5 Respect for Adjacent Sites

Buildings should respect adjacent properties by being located on their sites to minimize disruption of the privacy and outdoor activities of residents in adjacent buildings.

Response: Majority openings on the building are on the east and west facades, thereby minimizing disruption to the privacy of adjacent neighbors.

A-6 Transition Between Residence and Street

For residential projects, the space between the building and the sidewalk should provide security and privacy for residents and encourage social interaction among residents and neighbors.

Response: The ground level facade of the building will be set back from the property line to widen the sidewalk and create a better, more secure transition for residents between the building and the street. Overhead weather protection will also be provided.

A-7 Residential Open Space

Residential projects should be sited to maximize opportunities for creating usable, attractive, well-integrated open space.

Capitol Hill-specific supplemental guidance:



- Use landscape materials that are sustainable, requiring minimal irrigation or fertilizer.

Response: The proposed in-fill development will include a courtyard at the second level as an amenity and social focus for the residents. An urban farm is proposed for the top floors of the building as an amenity with designated areas on each roof for resident use. As there are no street trees along the lot width on 12th Avenue, none will need to be removed for development. A raingarden is proposed at the street level.

A-8 Parking and Vehicle Access

Siting should minimize the impact of automobile parking and driveways on the pedestrian environment, adjacent properties and pedestrian safety.

Capitol Hill-specific supplemental guidance:

- Preserve and enhance the pedestrian environment in residential and commercial areas by providing for continuous sidewalks that are unencumbered by parked vehicles and are minimally broken within a block by vehicular access.

Response: No parking is proposed in this building, so there will be no vehicular impact to pedestrians and adjoining property. The existing curbcut will be removed. The alley is envisioned as a pedestrian/people place.

B-1 Height, Bulk and Scale Compatibility

Projects should be compatible with the scale of development anticipated by the applicable Land Use Policies for the surrounding area and should be sited and designed to provide a sensitive transition to near-by, less-intensive zones. Projects on zone edges should be developed in a manner that creates a step in perceived height, bulk and scale between the anticipated development potential of the adjacent zones.

Capitol Hill-specific supplemental guidance:

- Break up building mass by incorporating different façade treatments to give the impression of multiple, small-scale buildings, in keeping with the established development pattern.
- Consider existing views to downtown Seattle, the Space Needle, Elliott Bay and the Olympic Mountains, and incorporate site and building design features that may help to preserve those views from public rights-of-way.
- Design new buildings to maximize the amount of sunshine on adjacent sidewalks throughout the year.

Response: Redevelopment at the scale of the project contributes to a rich, urban fabric. The proposed development will hold the street edge and provide street-level improvement to enhance the pedestrian experience. The design team will explore options for the North and South party walls with elements of landscape (green screens), change in materiality and/or art. The balconies on the east side set the building back from the alley.



C-1 Architectural Context

New buildings proposed for existing neighborhoods with a well-defined and desirable character should be compatible with or complement the architectural character and siting pattern of neighboring buildings.

Response: The architectural styles along 12th Avenue are varied and many are in disrepair. The proposed building will be designed and detailed to complement desirable characteristics of buildings in the neighborhood. The architectural treatment of the facade will distinguish the commercial spaces at the ground level and the residential floors above.

design guidelines

C-2 Architectural Concept and Consistency

Building design elements, details and massing should create a well-proportioned and unified building form and exhibit an overall architectural concept. Buildings should exhibit form and features identifying the functions within the building. In general, the roofline or top of the structure should be clearly distinguished from its façade walls.

Capitol Hill-specific supplemental guidance:

- Incorporate signage that is consistent with the existing or intended character of the building and the neighborhood.
- Solid canopies or fabric awnings over the sidewalk are preferred.
- Avoid using vinyl awnings that also serve as big, illuminated signs.
- Use materials and design that is compatible with the structures in the vicinity if those represent the desired neighborhood character.

Response: The design of the building creates a heightened sense of community at the core of the building where residential kitchens all overlook the courtyard space as a focal point for the residents. The 12th Avenue and alley facades aspire for an elegantly simply form with appropriate detail at the street level and within view of pedestrians to support the civic scale of the street.

C-3 Human Scale

The design of new buildings should incorporate architectural features, elements and details to achieve a good human scale.

Capitol Hill-specific supplemental guidance:

- Incorporate building entry treatments that are arched or framed in a manner that welcomes people and protects them from the elements and emphasizes the building's architecture.
- Improve and support pedestrian-orientation by using components such as: non-reflective storefront windows and transoms; pedestrian-scaled awnings; architectural detailing on the first floor; and detailing at the roof line

Response: The ground level of the building will be set back from the property line to provide an opportunity for raingardens and seating opportunities. The commercial space will engage to the pedestrian at the sidewalk with a positive, appropriately-scaled experience.

D-1 Pedestrian Open Spaces and Entrances

Convenient and attractive access to the building's entry should be provided. To ensure comfort and security, paths and entry areas should be sufficiently lighted and entry areas should be protected from the weather. Opportunities for creating lively, pedestrian-oriented open space should be considered.

Capitol Hill-specific supplemental guidance:

- Provide entryways that link the building to the surrounding landscape.
- Create open spaces at street level that link to the open space of the sidewalk.
- Building entrances should emphasize pedestrian ingress and egress as opposed to accommodating vehicles.
- Minimize the number of residential entrances on commercial streets



where non-residential uses are required. Where residential entries and lobbies on commercial streets are unavoidable, minimize their impact to the retail vitality commercial streetscape.

Response: As also mentioned in the response to A-3, pedestrian entrances to the building will be designed to be distinct from commercial space entrances.

D-2 Blank Walls

Buildings should avoid large blank walls facing the street, especially near sidewalks. Where blank walls are unavoidable, they should receive design treatment to increase pedestrian comfort and interest.

Response: Street-facing facades will be highly transparent and dynamically changing due to the shading needed for resident comfort. The North and South party walls of the building that are a result development of a compact, urban in-fill site will be articulated with a change in materials, landscape elements and art.

D-6 Screening of Dumpsters, Utilities, and

Service Areas

Building sites should locate service elements like trash dumpsters, loading docks and mechanical equipment away from the street front where possible. When elements such as dumpsters, utility meters, mechanical units and service areas cannot be located away from the street front, they should be situated and screened from view and should not be located in the pedestrian right-of-way.

Capitol Hill-specific supplemental guidance:

- Consolidate and screen dumpsters to preserve and enhance the pedestrian environment.

Response: All dumpsters and service areas are located within the building with access from the alley.

D-7 Personal Safety and Security

Project design should consider opportunities for enhancing personal safety and security in the environment under review.

Capitol Hill-specific supplemental guidance:

Consider:

- pedestrian-scale lighting, but prevent light spillover onto adjacent properties
- architectural lighting to complement the architecture of the structure
- transparent windows allowing views into and out of the structure—thus incorporating the “eyes on the street” design approach
- Provide a clear distinction between pedestrian traffic areas and commercial traffic areas through the use of different paving materials or colors, landscaping, etc.

Response: The design of the resident entrances on 12th Avenue will incorporate adequate features to ensure the safety of the residents. The ground level of the building will be designed with adequate transparency to allow a visual connection to the sidewalk.

D-9 Commercial Signage

Signs should add interest to the street front environment and should be appropriate for the scale and character desired in the area.

Response: Street-level signage will be designed to complement the building facade at the appropriate scale for the neighborhood.

D-10 Commercial Lighting

Appropriate levels of lighting should be provided in order to promote visual interest and a sense of security for people in commercial districts during evening hours. Lighting may be provided by incorporation into the building façade, the underside of overhead weather protection, on and around street



furniture, in merchandising display windows, in landscaped areas, and/or on signage.

Response: Adequate light levels will be provided to vitalize the commercial spaces and create interest.

D-11 Commercial Transparency

Commercial storefronts should be transparent, allowing for a direct visual connection between pedestrians on the sidewalk and the activities occurring on the interior of a building. Blank walls should be avoided.

Response: The ground level commercial space facade will be designed with adequate transparency. There will be no blank walls at the level of the sidewalk.

D-12 Residential Entries and Transitions

For residential projects in commercial zones, the space between the residential entry and the sidewalk should provide security and privacy for residents and a visually interesting street front for pedestrians. Residential buildings should enhance the character of the streetscape with small gardens, stoops and other elements that work to create a transition between the public sidewalk and private entry.

Response: As also mentioned in the responses to A-3 and D-1, the transition between the sidewalk and a residential entrance will be designed with features that provide visual distinction.

E-1 Landscaping to Reinforce Design Continuity

with Adjacent Sites

Where possible, and where there is not another overriding concern, landscaping should reinforce the character of neighboring properties and abutting streetscape.

Response: The project intends to participate in the Green Streets project through SPU/SDOT to provide raingardens along 12th avenue. This will provide landscape continuity between adjacent sites.

E-2 Landscaping to Enhance the Building and/or

Site

Landscaping including living plant material, special pavements, trellises, screen walls, planters, site furniture and similar features should be appropriately incorporated into the design to enhance the project.

Response: While there is not much site area to provide landscaping in this urban infill project, landscape design elements will be introduced to enhance the project.

scheme 1

description

This scheme adopts a conventional approach of maximizing floor area for the unit layouts. The ground level has commercial/retail spaces and a storage space for residents. Tandem parking spaces are provided on level two with access from the alley. Levels three and four have four units each while level five has two units with an outdoor patio amenity for residents.

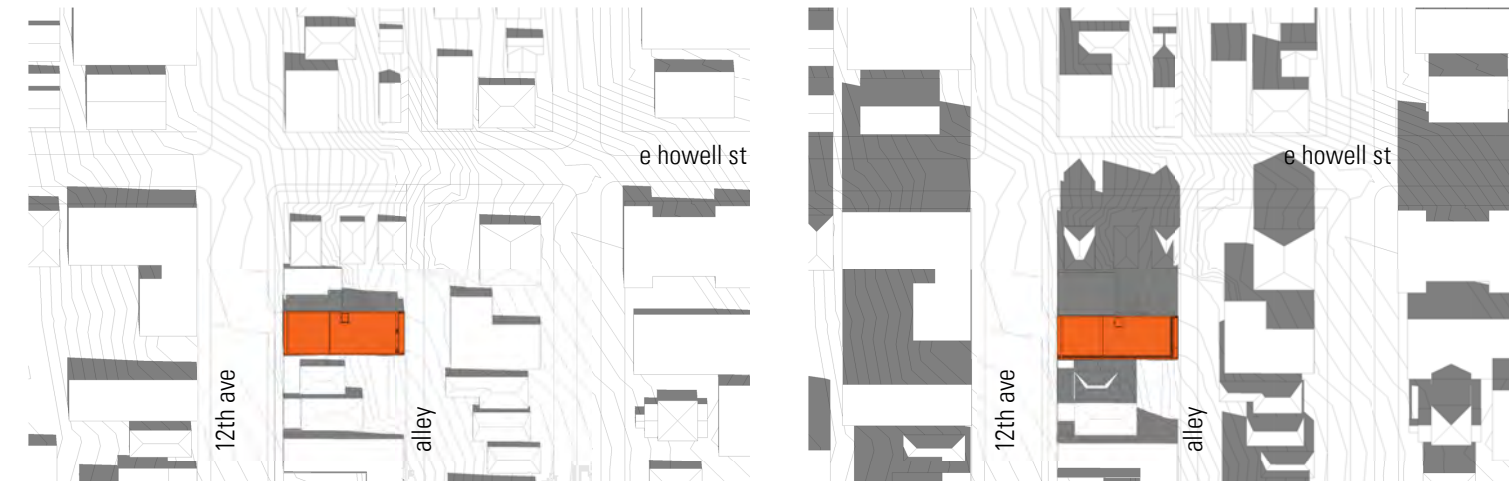
pros

- reinforces the street edge with the full height, west facade
- code compliant
- maximizes buildable area
- parking off alley in lieu of using curb cut onto 12th Avenue

cons

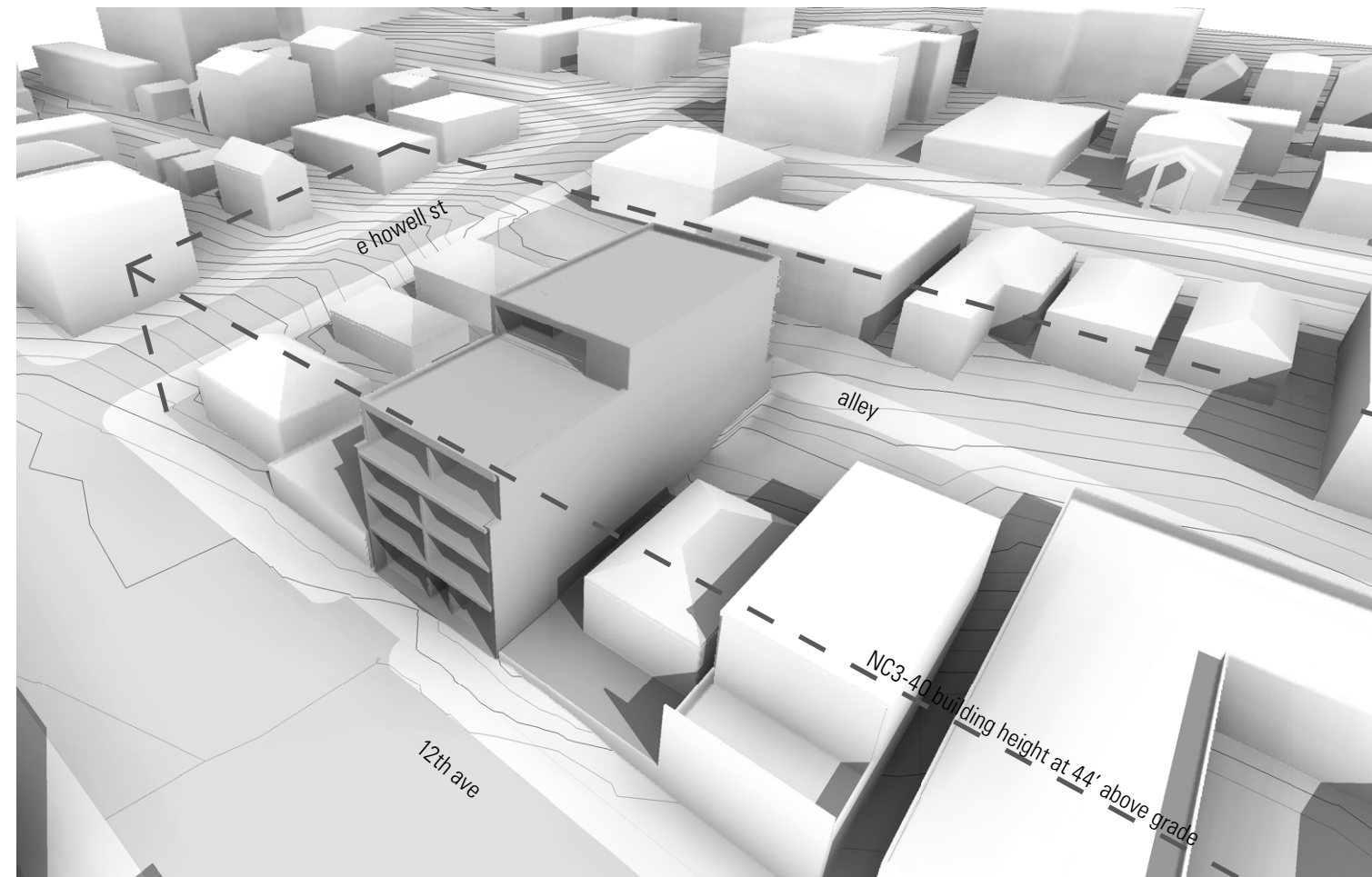
- bulky massing due to maximizing floor area
- no central community space
- no internal courtyard
- single-loaded floor plan with no through ventilation
- floor layout does not support the community aspect of cohousing
- floor configuration creates long, shoebox residential units with daylight from one side only
- limited flexibility for commercial space due to residential access corridor that splits the space in half.

shadow study

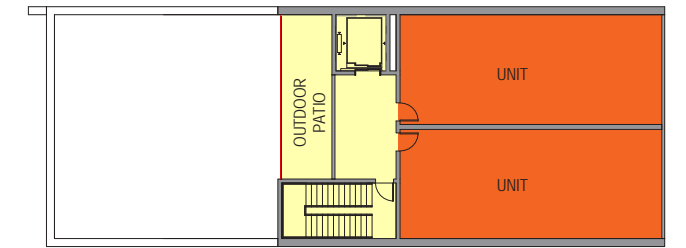


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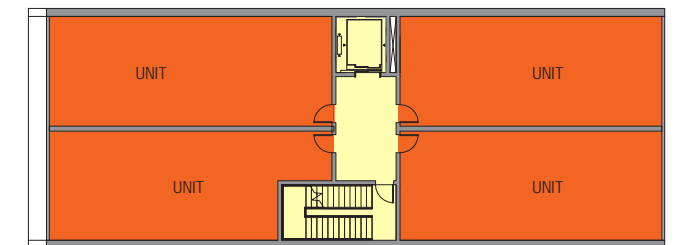
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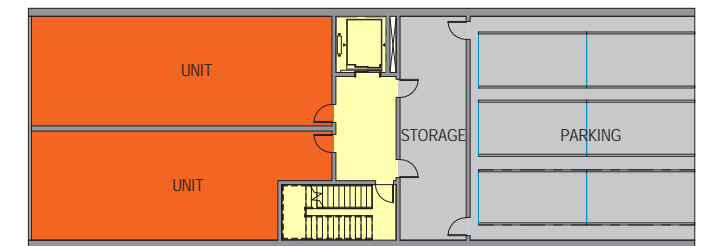
conceptual view looking northeast



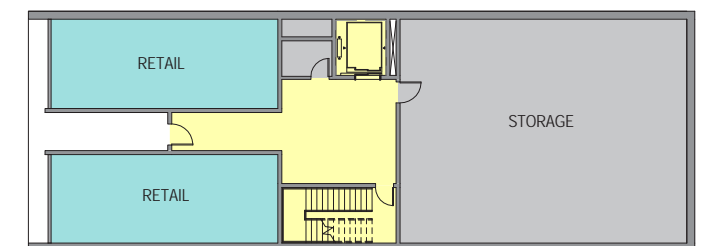
fifth floor



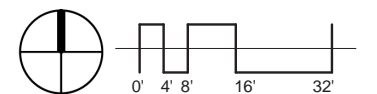
third and fourth floor



second floor



ground floor



scheme 2

description

This scheme steps back from the street providing extensive outdoor spaces for residents at upper levels. The ground level remains commercial/retail spaces with storage similar to Scheme 1. Tandem parking spaces are provided on level two with access from the alley. Floors have varying number of units due to a considerable reduction in floor area due to stepping back.

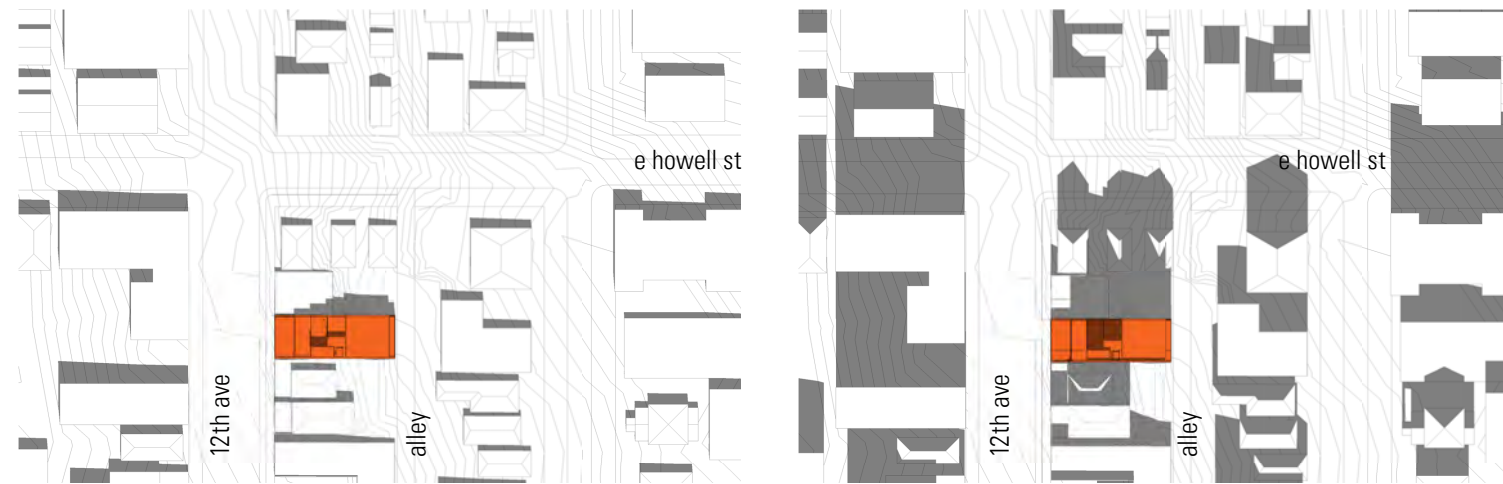
pros

- code compliant
- allows more daylight to the sidewalk by stepping back from the street
- less bulky massing due to stepping back from the street
- parking off alley thereby minimizing impact to 12th avenue facade

cons

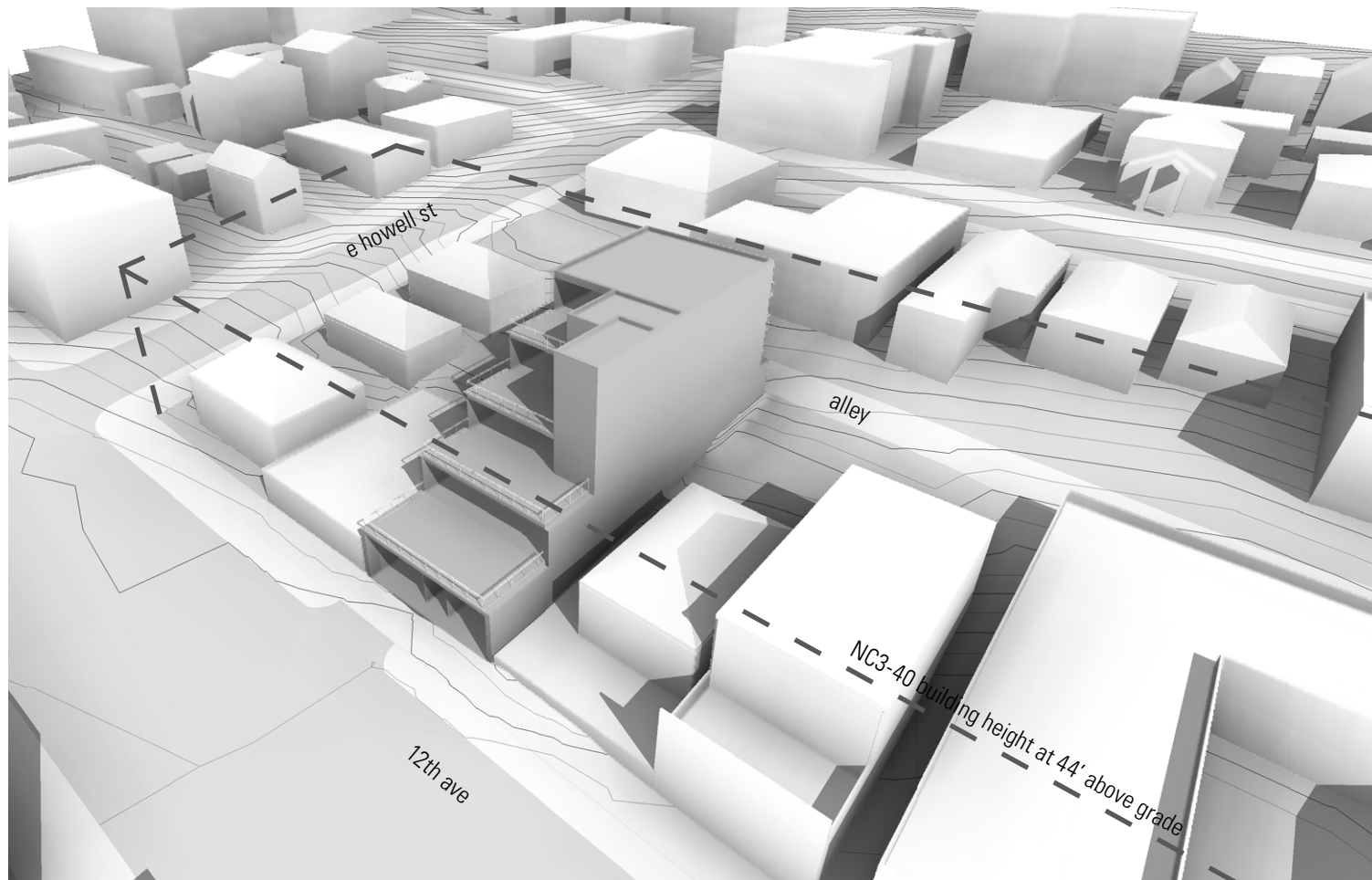
- does not hold the street edge, thereby not reinforcing urban character
- no central community space
- no internal courtyard
- no possibility of through ventilation
- floor layout does not support the community aspect of cohousing
- not a financially viable project due to low number of residential units
- second floor, alley side residential units are not attractive due to direct alley frontage
- stair and elevator shade outdoor space and eliminate opportunities for windows

shadow study

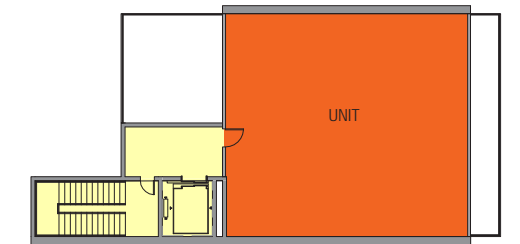


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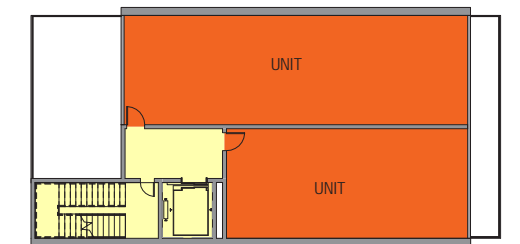
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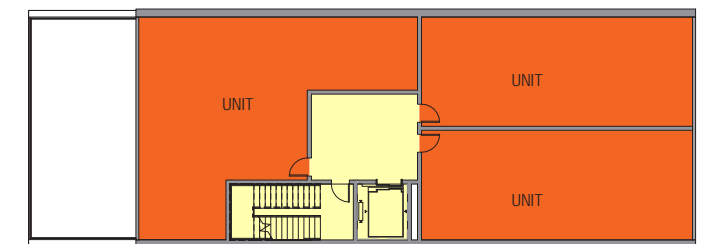
conceptual view looking northeast



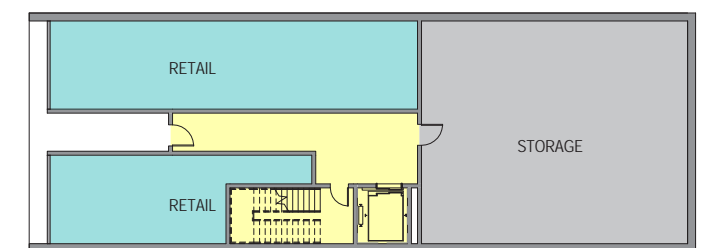
fifth floor



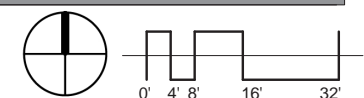
third and fourth floor



second floor



ground floor



scheme 3

description

This scheme adopts an approach that begins focus on passive energy strategies. The introduction of a lightwell in the middle of the floor plate provides more daylight and through ventilation to the units. The ground level remains commercial/retail spaces with storage similar to Scheme 1. A interior community space for resident use is provided on the east end of level two in lieu of parking. Typical floors have four units each and the topmost floor has two units with a rooftop urban farm as an amenity for the residents.

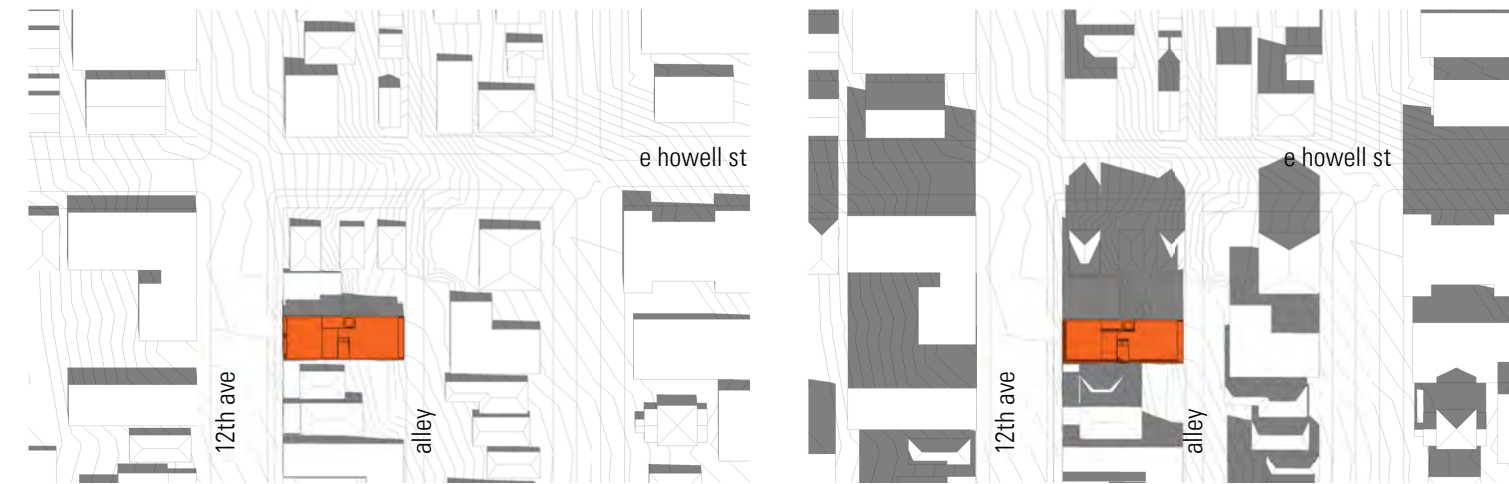
pros

- more daylight and through ventilation in units
- large number of units in the building could begin to support a rooftop farm
- reinforces the street edge with the full height, west facade
- community space located between alley and lightwell makes better use of this space, versus residences

cons

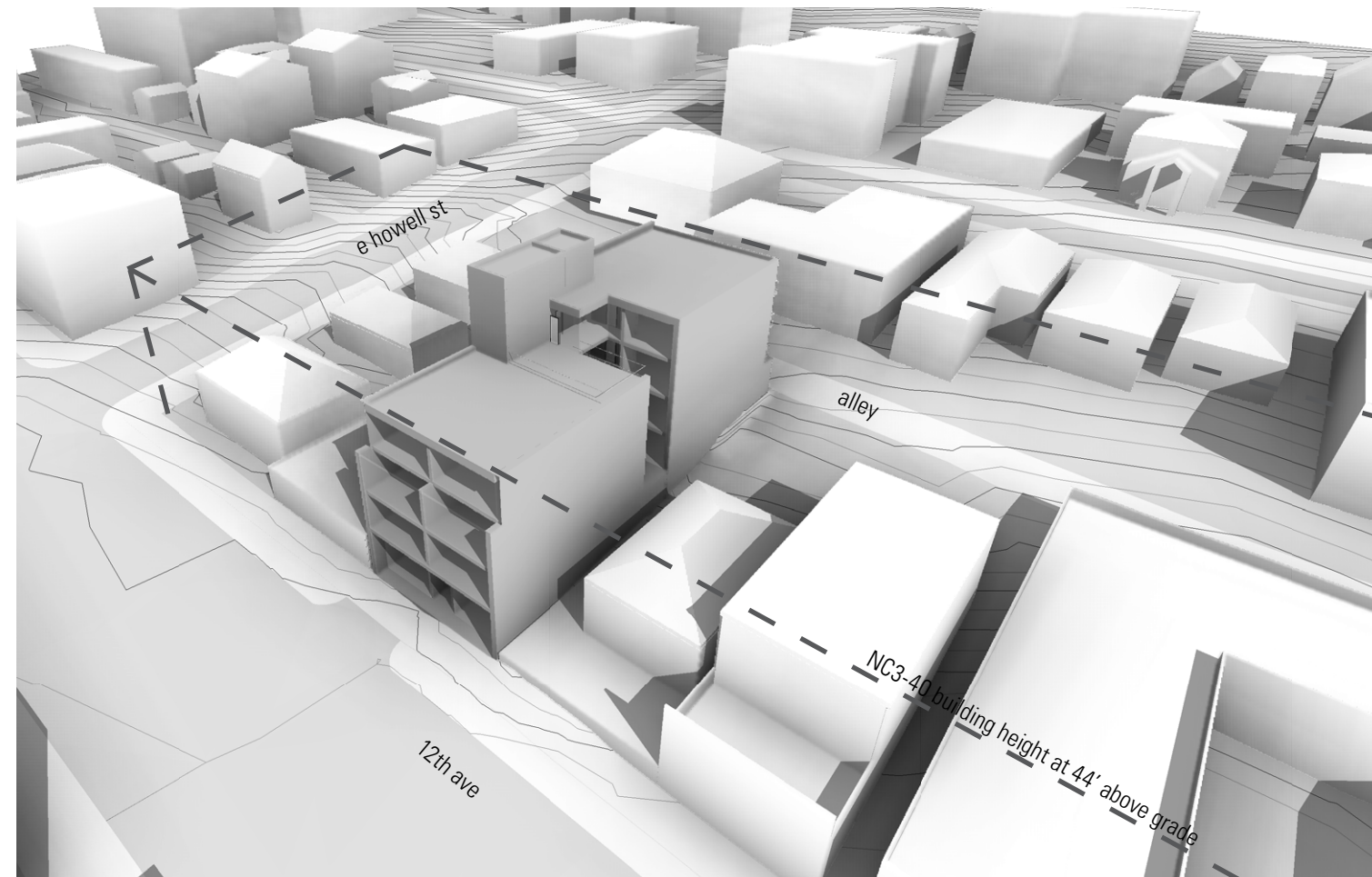
- light well inadequate to function as a community feature
- loss of floor area for units due to lightwell

shadow study

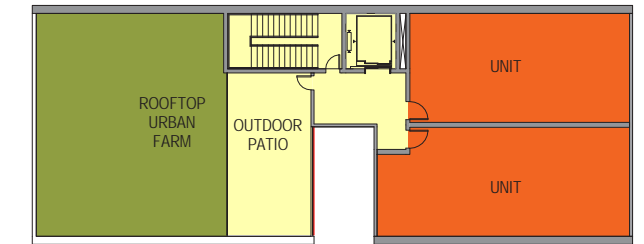


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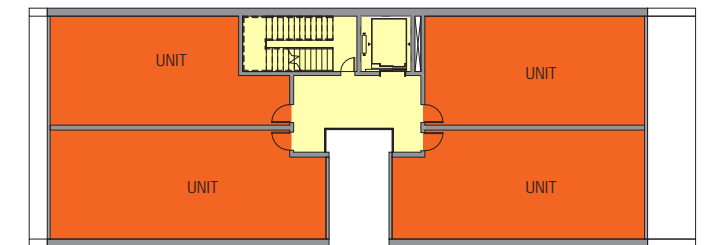
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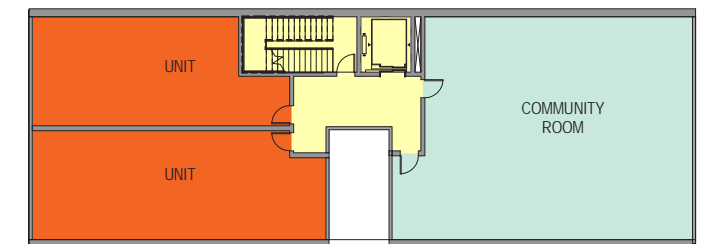
conceptual view looking northeast



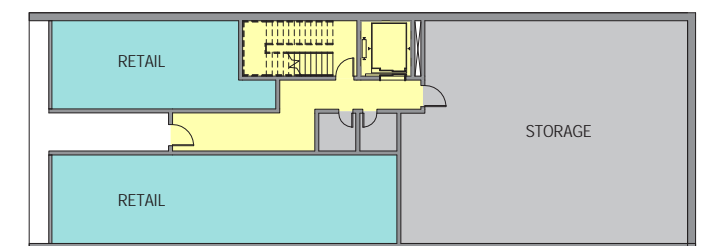
fifth floor



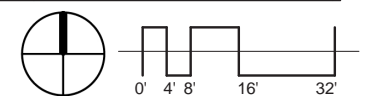
third and fourth floor



second floor



ground floor



scheme 4 (preferred)

description

Our preferred scheme seeks to further enhance the community-focused approach of Scheme 3 by participating in the Living Building Pilot Program. As a part of the Program, a detention vault for rainwater collection will be constructed below ground level. A larger courtyard is provided to better augment the social principles of cohousing while enhancing daylighting and through ventilation for the units. The ground level retains commercial/retail spaces to activate the sidewalk, while storage is provided on the east end for resident use. The community space on level two uses the enlarged courtyard as an outdoor gathering space and provides adequate distance between residential units on the courtyard to configure kitchens as semi-public areas of the home clustered around this common area.

pros

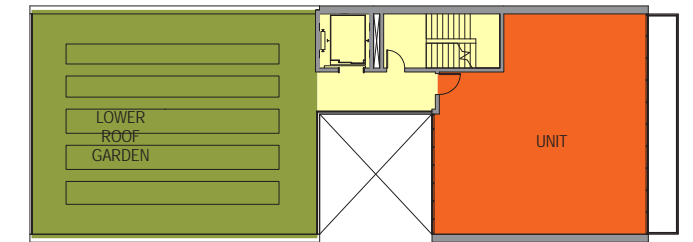
- reinforces the street edge with the full height, west facade
- increased daylighting through larger courtyard
- larger number of units in the building supports a greater sense of community in the building.
- commercial space at street level is one, contiguous space that provides for tenant flexibility
- increased through ventilation through larger courtyard
- buildable floor area given to the courtyard is compensated for with additional FAR and height, as allowed per the LBP.
- larger roof farm area to support urban agricultural program
- larger number of units in the building supports a much more extensive energy and water strategy
- loss of floor area for units due to lightwell

cons

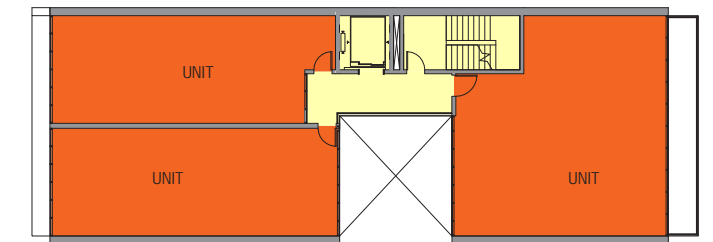
- exceeds allowable FAR and building height except under the provisions of the LBP



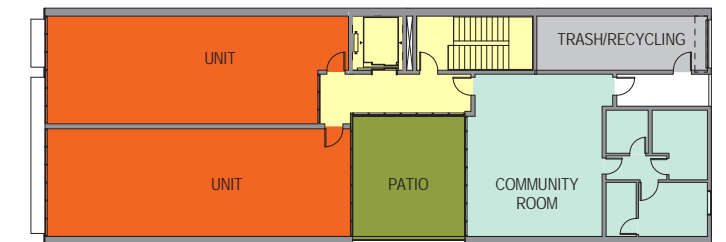
conceptual view looking northeast



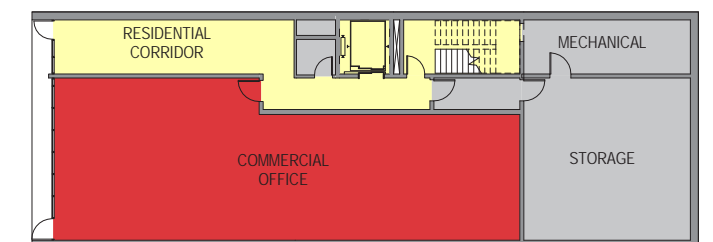
sixth floor



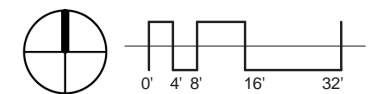
third, fourth and fifth floor



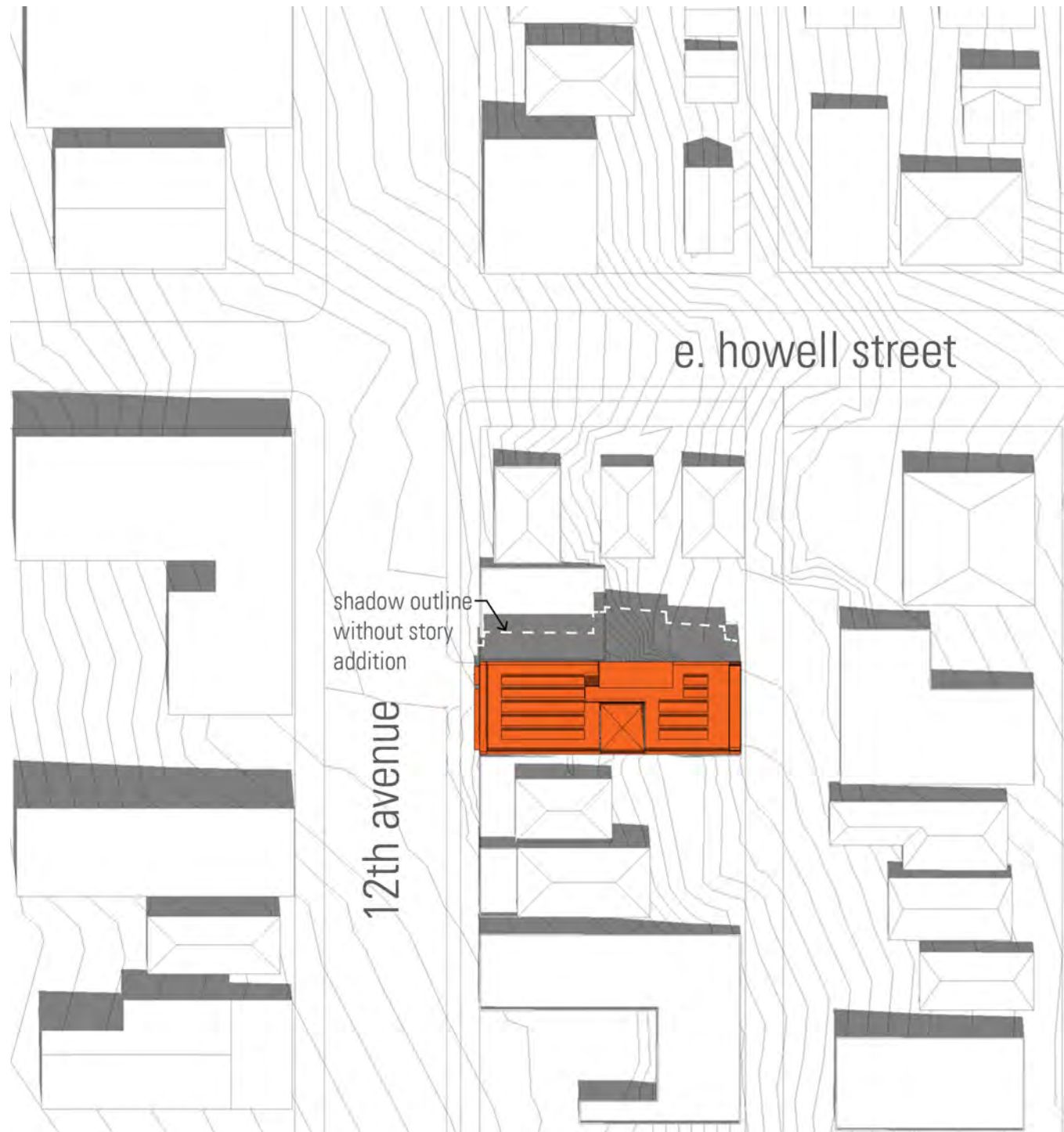
second floor



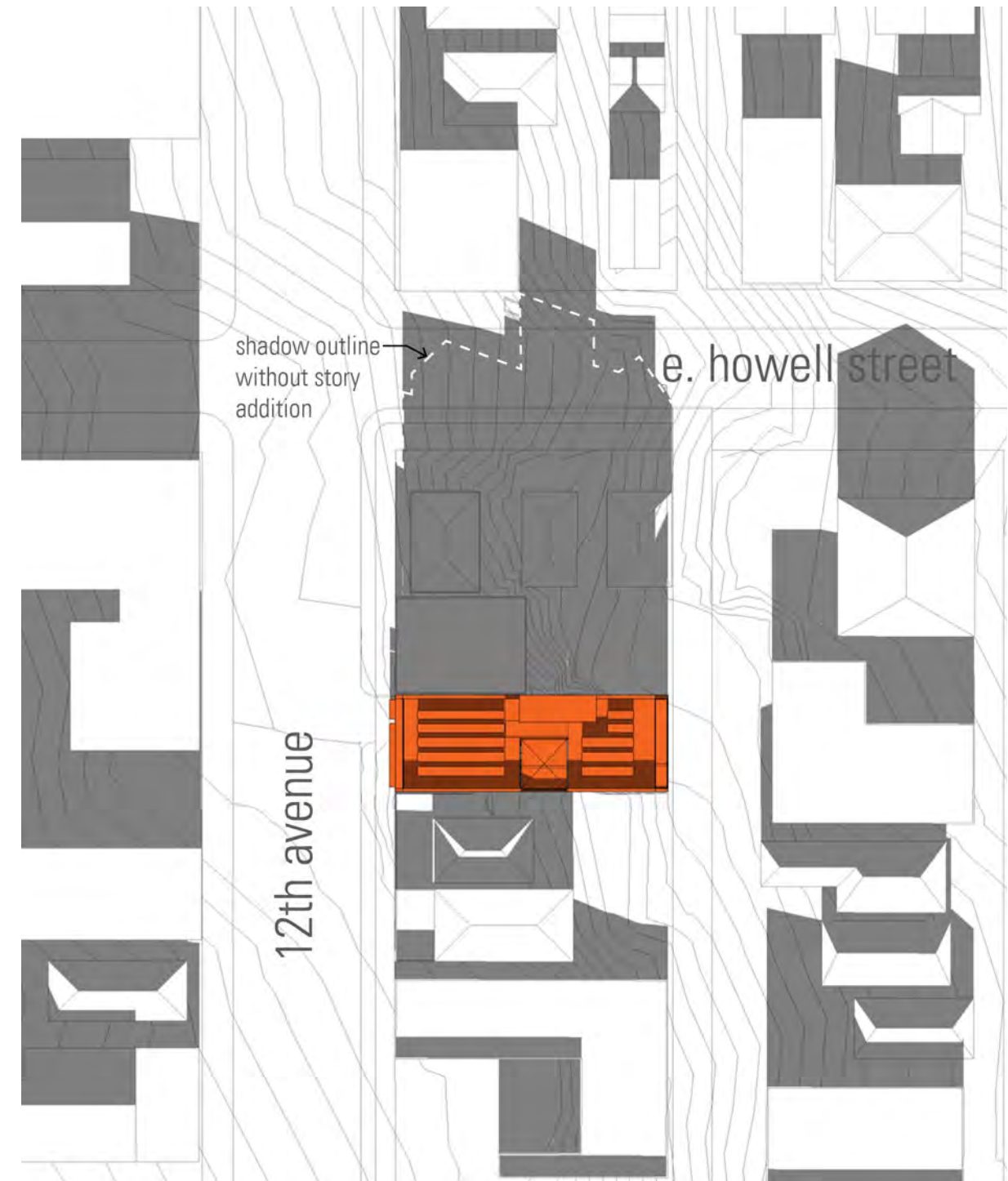
ground floor



scheme 4 - shadow studies

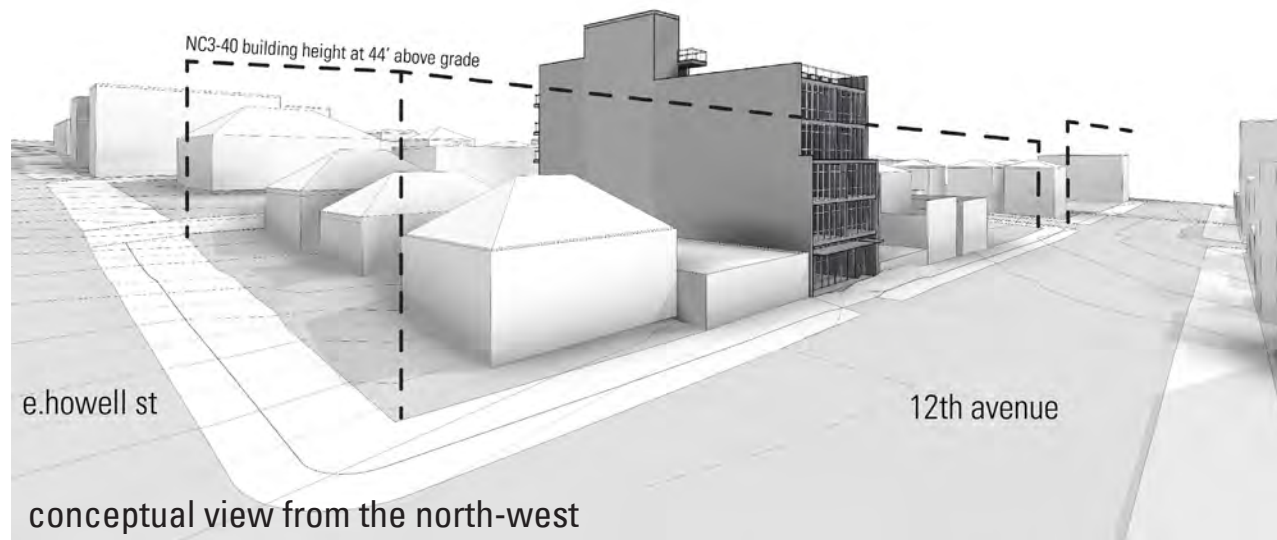
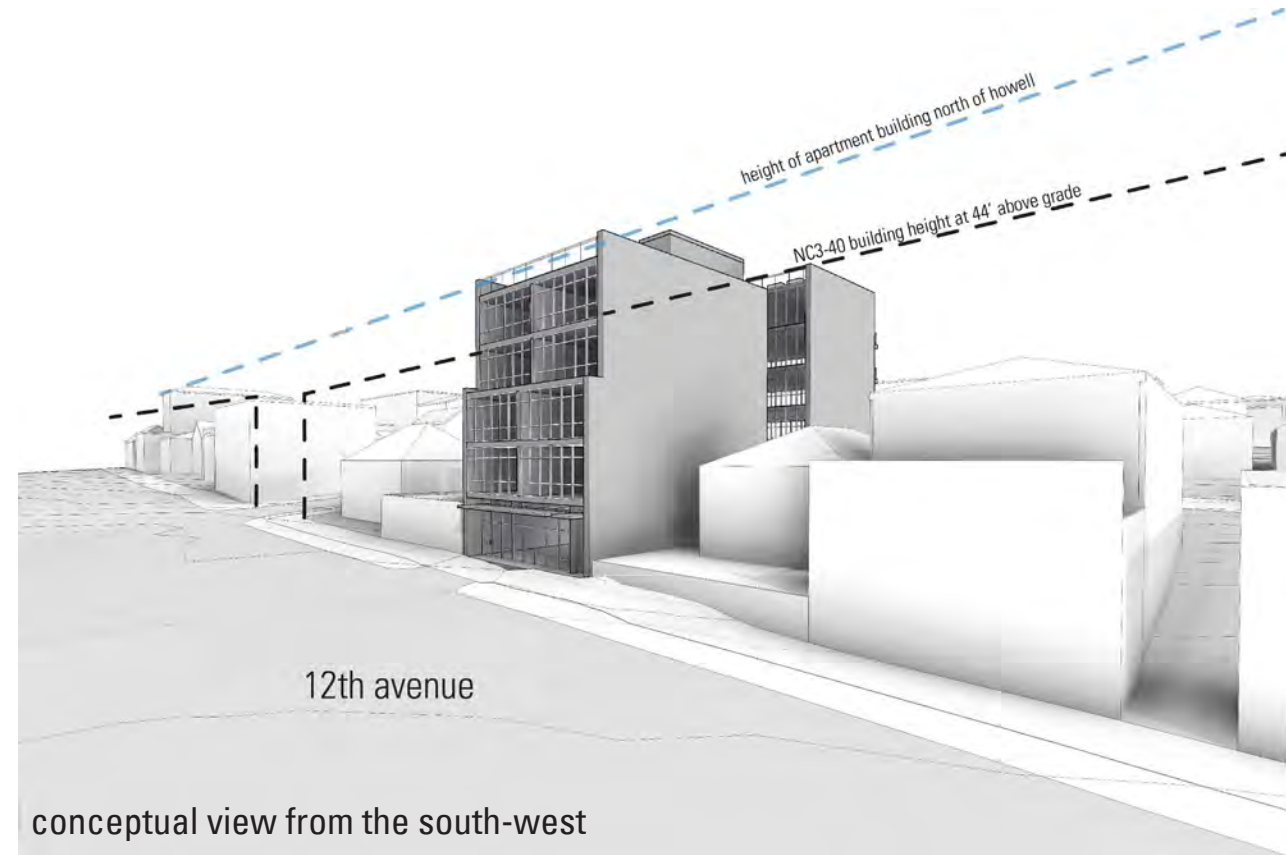
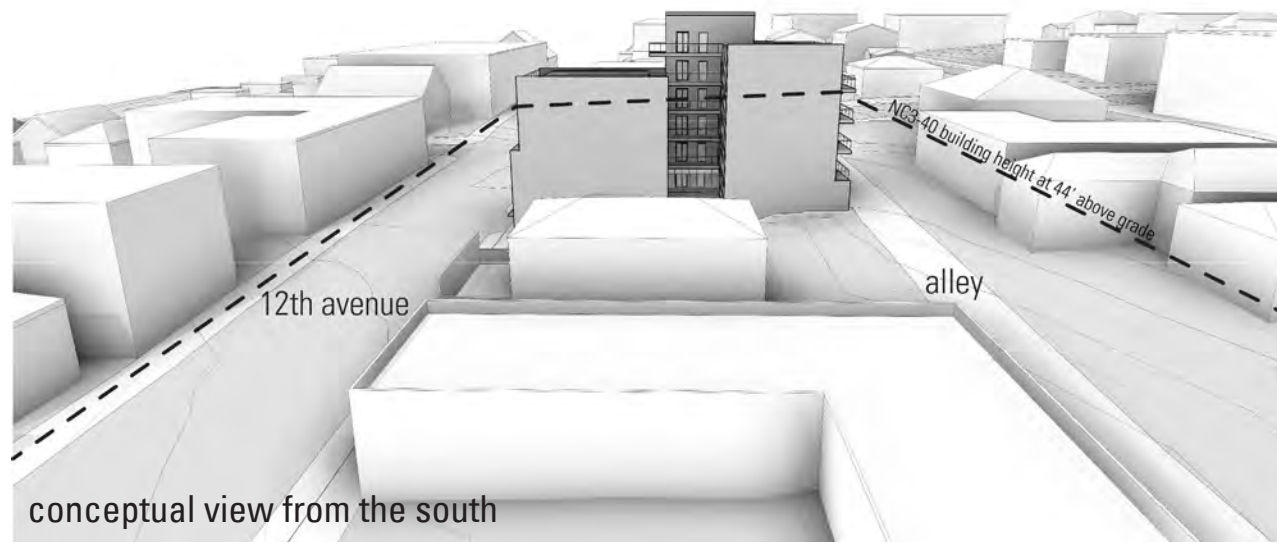


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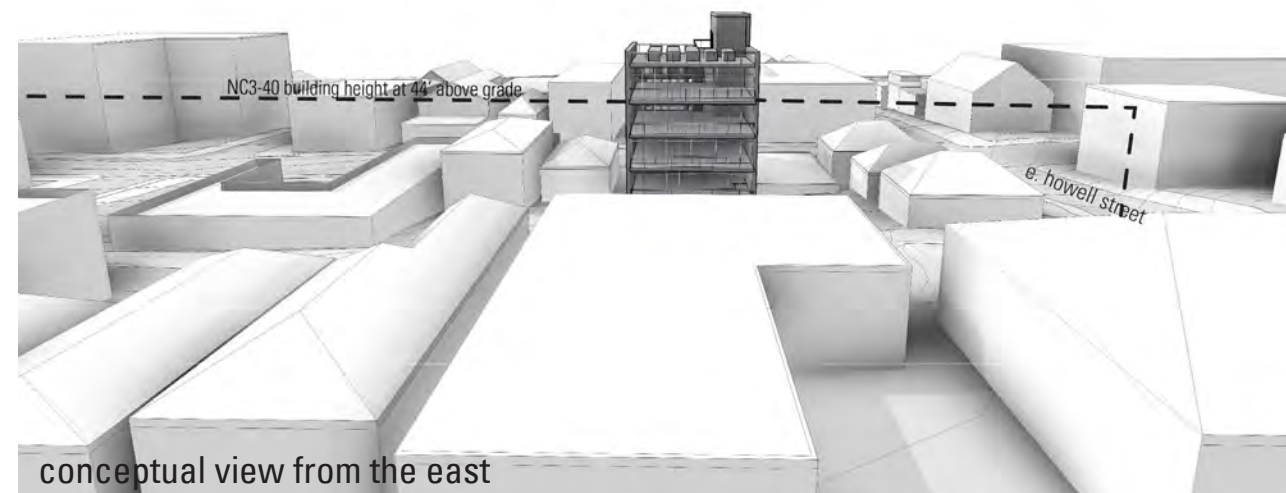
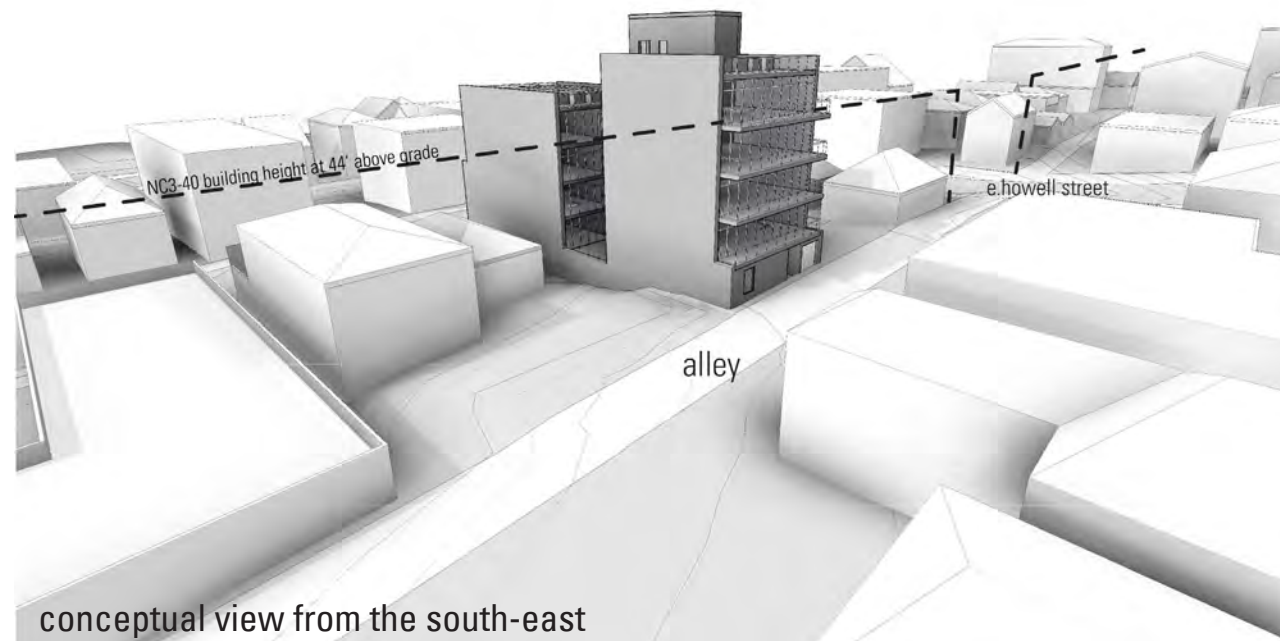
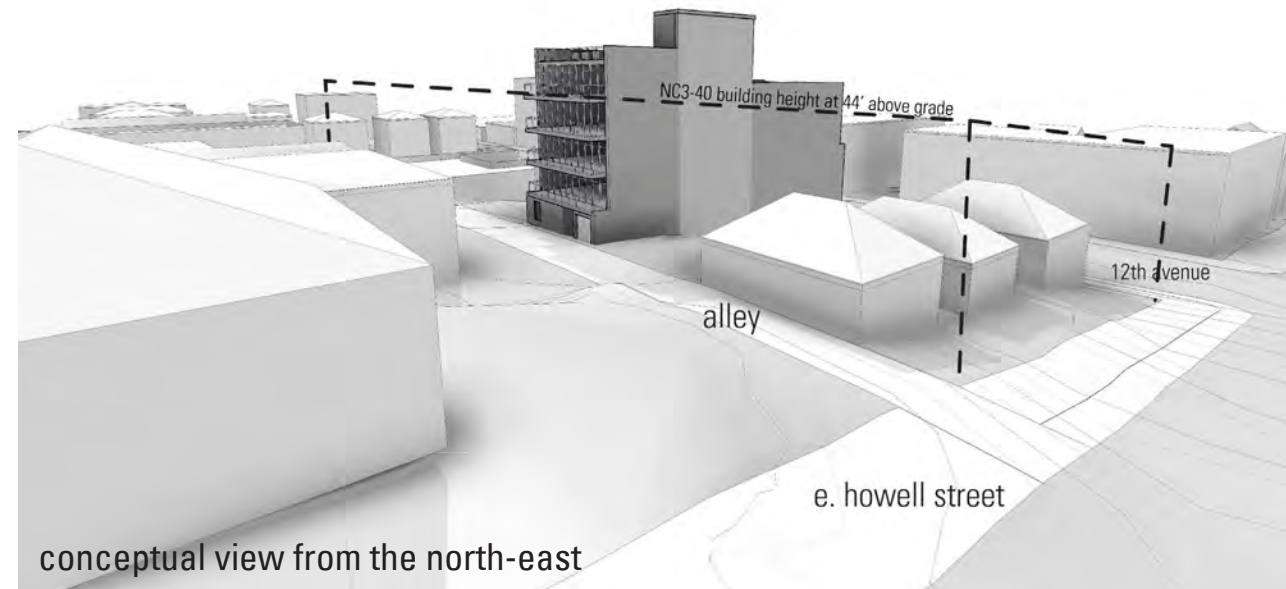
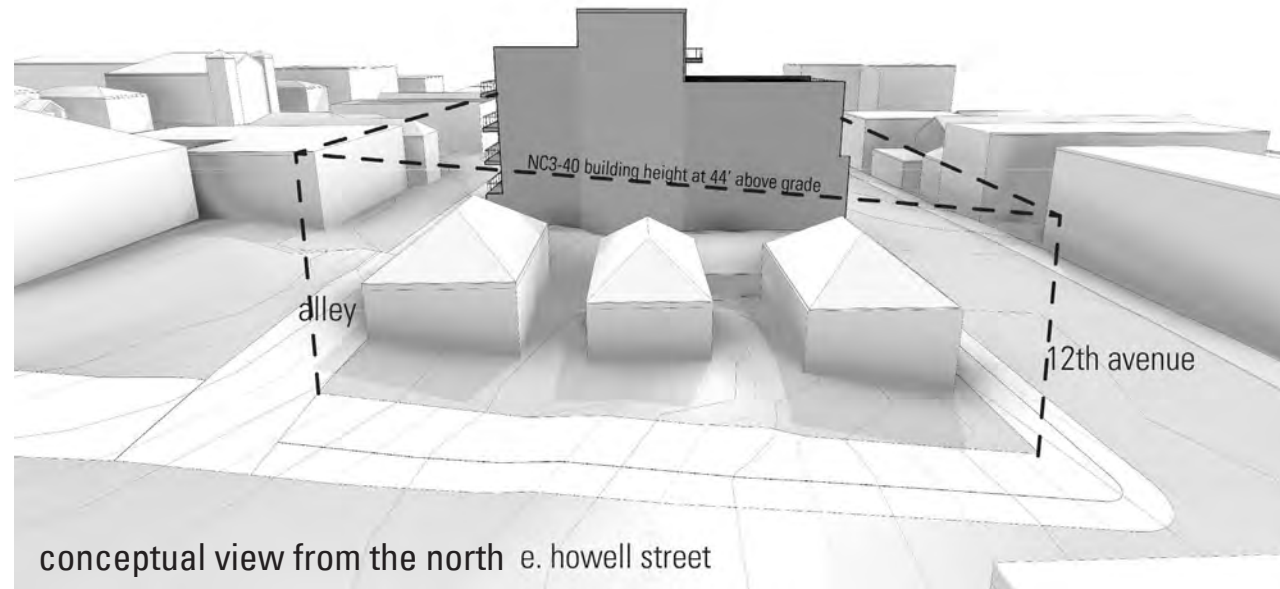


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conceptual views



conceptual views



street level



conceptual view looking south on 12th avenue



conceptual view looking north on alley



example - rain garden



example - street front character



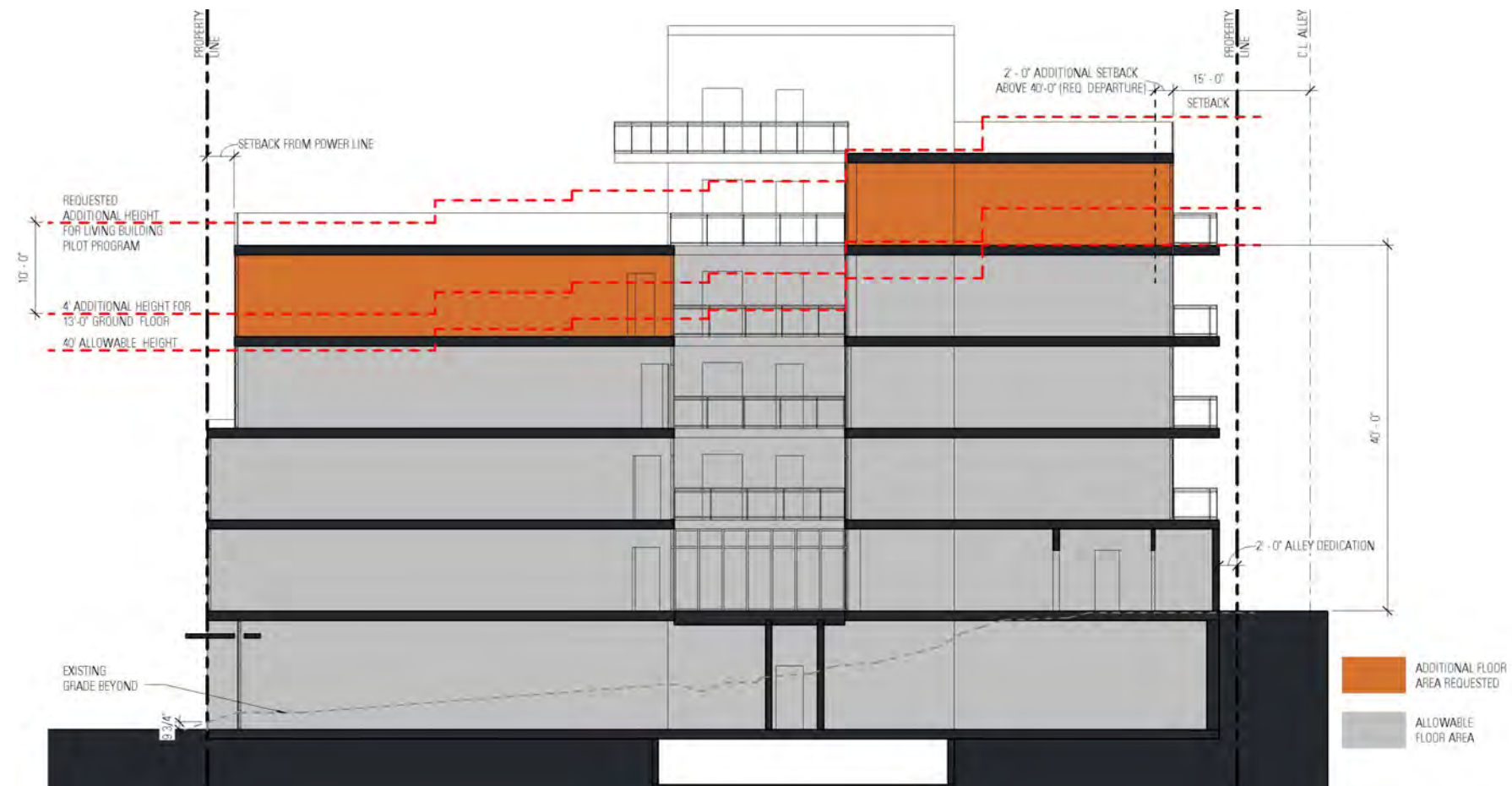
example - alley character



example - alley character

potential departures

	Code Reference	Existing Standard	Proposed Departure	Rationale	code compliant			
					Scheme 1	Scheme 2	Scheme 3	Scheme 4 (preferred)
LIVING BUILDING PILOT ORDINANCE	SMC 23.47A.012 Structure height	Maximum building height in NC3-40 zone is 40 feet	We propose 10 feet above the 44 foot limit (for a total of 54 feet). See SMC 23.41.012.2.F	Projects participating in the Living Building Pilot Program are permitted up to 10 feet above the applicable limit. This additional height offsets the loss of floor area due to the sustainable energy strategies achieved with the courtyard.	N/A	N/A	N/A	YES
	SMC 23.47A.013 Floor area ratio	C. Maximum FAR allowed in NC zones or C zones within the Station Area Overlay District is shown in Table B for 23.47A.013	We propose an FAR increase of 15% for a total allowable building square footage of 20,792 sf.	Projects participating in the Living Building Pilot Program may be allowed a 15% increase above the otherwise allowable limit. See SMC 23.41.012.D. This additional FAR offsets the loss of floor area due to the sustainable energy strategies achieved with the courtyard.	N/A	N/A	N/A	YES
SEATTLE MUNICIPAL CODE	SMC 23.47A.013 Floor area ratio	B.3 - For a structure containing a residential use, a setback is required along any side or rear lot line that abuts a lot in a residential zone or that is across an alley from a lot in a residential zone, as follows: b. For each portion of a structure above 40 feet in height, additional setback at the rate of 2 feet of setback for every 10 feet by which the height of such portion exceeds 40 feet (Exhibit C for 23.47A.014).	We propose to continue the 15'-0" setback (from the centerline of alley) for the entire height of the east facade of the building.	Maintaining the same setback along the east facade of the building allows a more unified treatment of the facade. It is our belief that the balconies provided on the east facade help break down the size of the east facade and do not adversely affect the LR-3 zone buildings on the opposite side of the alley.	N/A	N/A	N/A	YES



appendix: living building challenge - 20 petals



site petal - restoring a healthy coexistence with nature

01 limits to growth

Projects may only be built on greyfields or brownfields – previously developed sites that are not on or adjacent to sensitive ecological habitats.

Response:
The project site is located in the Capitol Hill Urban Village, within the 5-minute walkshed of the Broadway Light Rail Station. On the site presently is an unreinforced masonry building built in 1919 that replaced a single-family house.



02 urban agriculture

Projects must integrate opportunities for agriculture appropriate to the scale and density of the project using its floor area ratio as the basis for calculation.

Response:
Residents are committed to being stewards of urban agriculture and making a positive contribution to a local food network. Toward that goal, the future residents have partnered with nearby Seattle University and Seattle Central Community College under the management of an urban farmer to oversee the farm, food production and distribution. While LBC does not have a mandatory area requirement on a site of this transect, we will be providing a substantial area for the farm at both roof levels.



03 habitat exchange

For each hectare of development, an equal amount of land must be set aside in perpetuity as part of a habitat exchange.

Response:
An equal area of land shall be set aside in perpetuity as part of a habitat exchange through a Community Land Trust organization.

04 car free living

The project should contribute towards the creation of walkable, pedestrian-oriented communities.

Response: Residents have selected this location for its proximity to transit and will provide no automobile parking in the building. Future residents and the commercial space tenant are primarily already living car-free, and are long-term members of local car-sharing organizations and avid cyclists. Bicycle use will be encouraged through easily accessible and secure bicycle storage (including tandems, trailers, cargo bikes), and bicycle workshop space. Showers and lockers will be available to commuters in the commercial space..

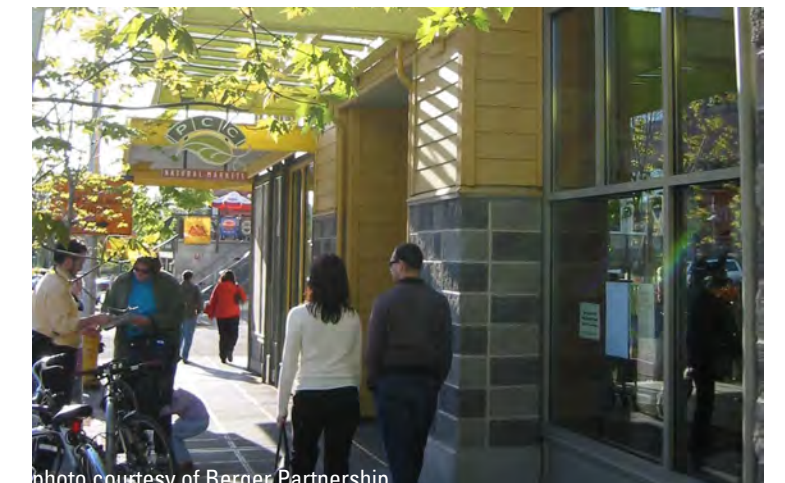


photo courtesy of Berger Partnership

water petal - creating water independent sites, buildings and communities

05 net zero water

One hundred percent of the project's water needs must be supplied by captured precipitation or other natural closed loop water systems that account for downstream ecosystem impacts.

Response:
Residents are committed to reducing water consumption in the community. The small roof top area limits the amount of water collected, and the agricultural use will consume a majority of water collected. Rainwater will be used for toilet flushing, irrigation and clothes washing in order to minimize negative downstream ecosystem impacts.

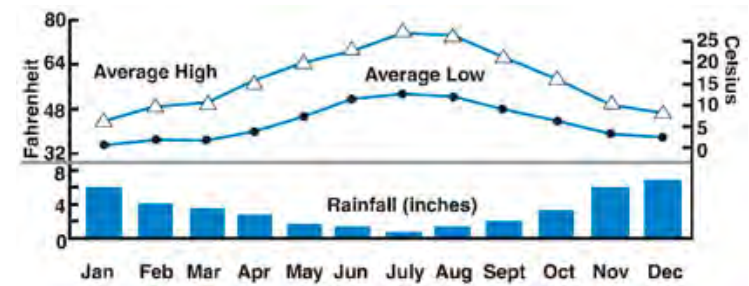


photo courtesy of Berqer Partnership

06 ecological water flow

One hundred percent of storm water and used, project water discharge must be managed onsite to feed the project's internal water demands or released onto adjacent sites for management through acceptable natural time-scale surface flow, groundwater recharge, agricultural use or adjacent property needs.

Response:
All the rainwater that can be collected on the site will be used for agricultural use, and internal plumbing use. Stormwater that exceeds storage capacity will be discharged into streetside raingardens for groundwater recharge. The design team is exploring opportunities for rainwater collection from the rooftop of an adjacent property.



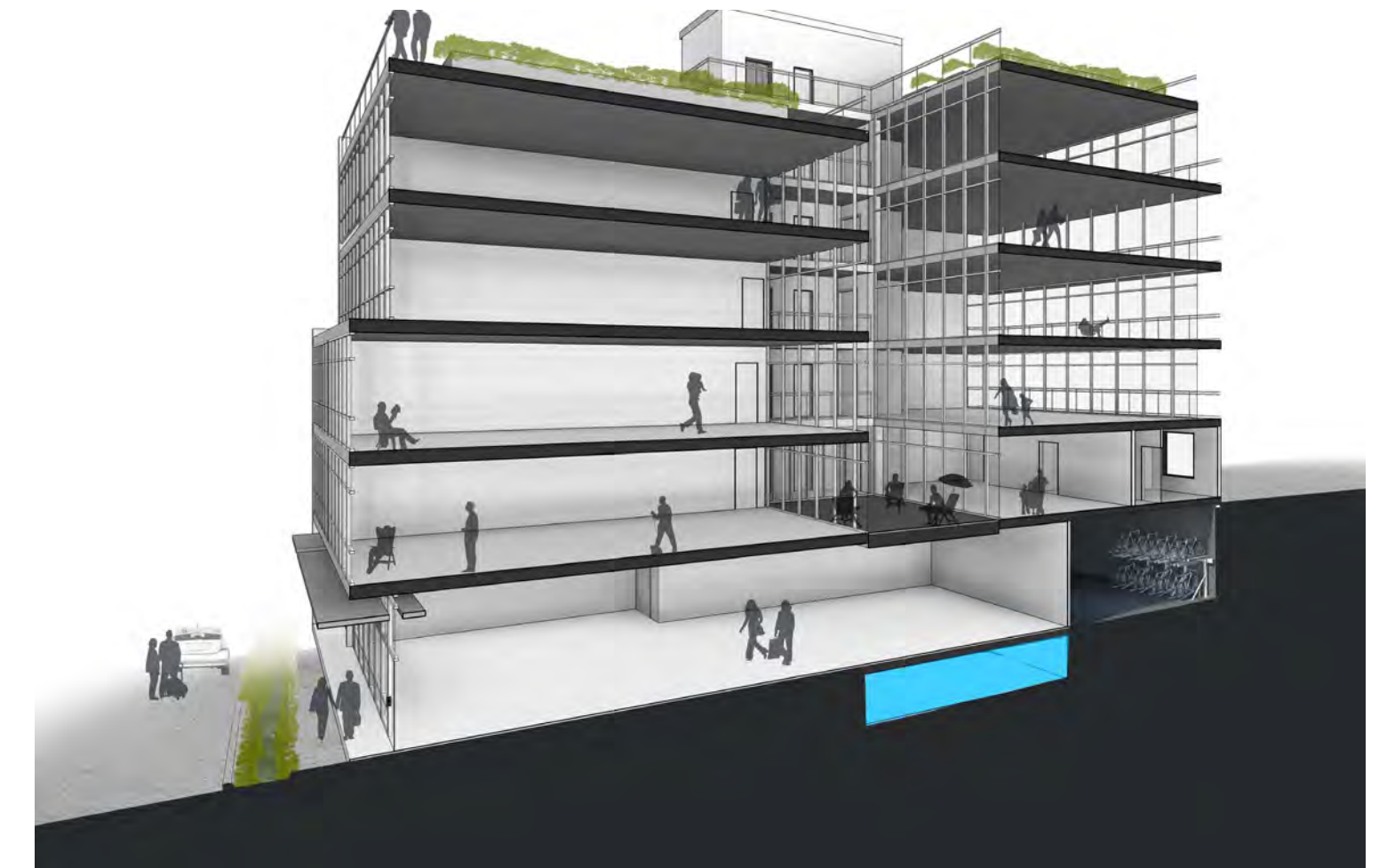
energy petal - relying only on current solar income

07 net zero energy

One hundred percent of the project's energy needs must be supplied by on-site renewable energy on a net annual basis.

Response:
Residents and the commercial tenant are committed to reducing their energy use in the building. Optimized methods to do so include the following:

- Exterior insulative envelope to reduce heating load (Passivhaus guidelines).
- Optimized daylighting through unit configuration and window locations.
- Commercial tenant with maximum wattage allocation.
- High-efficiency light fixtures and appliances throughout the building..



health petal - maximizing physical and psychological health and well being

08 civilized environment

Every occupiable space must have operable windows that provide access to fresh air and daylight.

Response:

All homes are organized such that daylight is brought into the space from opposite sides of the building and cross-ventilation is available in all homes.

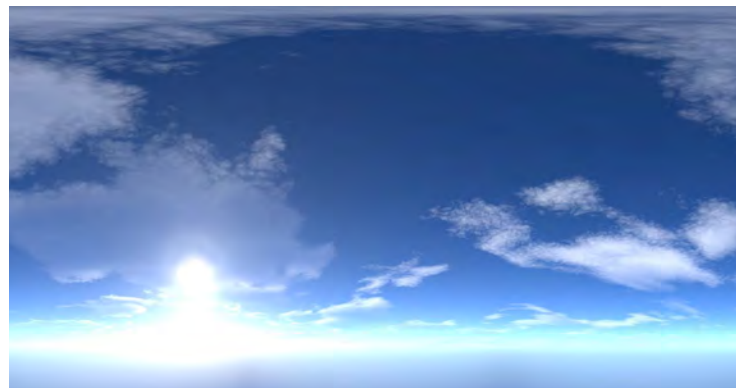


09 healthy air

To promote good indoor air quality, buildings must meet the criteria for external and internal dirt track-in systems; wet areas and chemical storage spaces must be separately ventilated and exhaust directly to outside air; ventilation rates must be designed to comply with ASHRAE 62.1-2007; smoking must be prohibited within the project boundary.

Response:

Residents are committed to healthy air. All homes are organized such that cross-ventilation is available in all homes. All required mechanical ventilation will be provided. Smoking has already been prohibited within the project boundary.



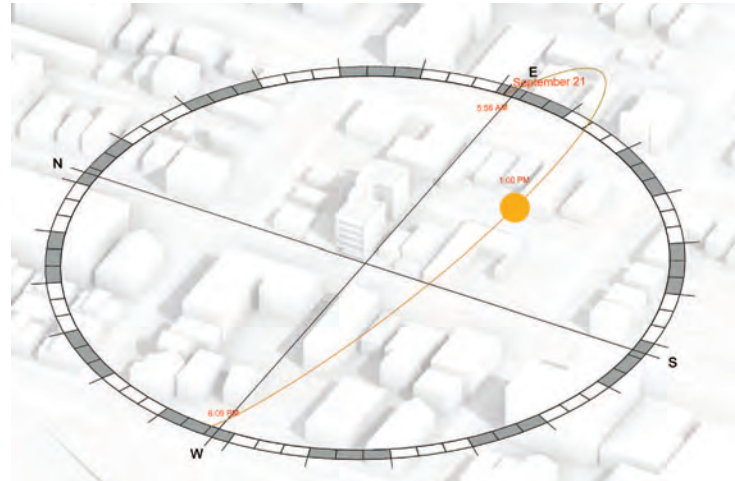
10 biofilia

The project must be designed to include elements that nurture the innate human attraction to natural systems and processes:

- Environmental features
- Natural shapes and forms
- Natural patterns and processes
- Light and space
- Place-based relationships
- Evolved human-nature relationships

Response:

A multiple-layer, dynamic facade allows residents to adapt their home to environmental conditions. This is currently anticipated to include operable exterior window walls, and a glass-shading system to mitigate the primarily east & west facade exposure. Water collection from rooftop hardscape will be conveyed visibly to an underground cistern. Landscape from the rooftop may extend over to the vertical facades of the building to provide a visual cue of the agricultural use.



materials petal - endorsing products and processes that are safe for all species through time

11 red list

The project cannot contain any of the following Red List materials or chemicals.

- Asbestos
- Cadmium
- Chlorinated Polyethylene and Chlorosulfonated Polyethylene
- Chlorofluorocarbons (CFCs)
- Chloroprene (Neoprene)
- Formaldehyde (added)
- Halogenated Flame Retardants
- Hydrochlorofluorocarbons (HCFCs)
- Lead (added)
- Mercury
- Petrochemical Fertilizers and Pesticides
- Phthalates
- Polyvinyl Chloride (PVC)
- Wood treatments containing Creosote, Arsenic or Pentachlorophenol

Response:

The project will apply best practices learned from current LBC projects, in balance with the economic viability for the project. Residents are committed to the long-term elimination of toxins from the community.

12 embodied carbon footprint

The project must account for the total footprint of embodied carbon (tCO2e) from its construction and projected replacement parts through a one-time carbon offset tied to the project boundary.

Response:

A one-time carbon offset will be accounted for.

13 responsible industry

The project must advocate for the creation and adoption of third-party certified standards for sustainable resource extraction and fair labor practices. Applicable raw materials include stone and rock, metal, and timber.

Response:

The project will apply best practices learned from current LBC projects, in balance with the economic viability for the project.



14 appropriate sourcing

The project must incorporate place-based solutions and contribute to the expansion of a regional economy rooted in sustainable practices, products and services.

Response:

The project design team has been aggressively been pursuing best practices learned from current LBC projects, in balance with the economic viability for the project. Primary structure is anticipated to be locally-sourced, FSC-certified heavy timber framing.



15 conservation + reuse

All projects teams must strive to reduce or eliminate the production of waste during design, construction, operation, and end of life in order to conserve natural resources. All projects must comply with the following:

Project teams must create a material conservation management plan that explains how the project optimizes materials in each of the following phases:

- Design Phase, including the consideration of appropriate durability in product specification
- Construction Phase, including product optimization and collection of wasted materials
- Operation Phase, including a collection plan for consumables and durables
- End of Life Phase, including a plan for Adaptable Reuse and Deconstruction.

Response:

Residents are committed to an intensive, ongoing conservation and reuse program. The existing building will be deconstructed and much of the material re-used on site. Building design, construction, and operation will reflect best practices learned from current LBC projects. While the primary structure of the building is designed for a 250+ year life, future upgrades and deconstruction will be accommodated for through a clarity of building systems and structure. Residents will manage a food pantry for staples that can be purchased in bulk to minimize expense and material waste associated with food and beverage consumption. Common meals that occur regularly throughout the week provide for efficient meal production with minimal waste.

equity petal

- supporting a just, equitable world

16 human scale + places

The project must be designed to create human-scaled rather than automobile-scaled places, so that the experience brings out the best in humanity and promotes culture and interaction. In context of the character of each Transect, there are specific maximum (and sometimes minimum) requirements for paved areas, street and block design, building scale and signage that contribute to livable places.

Response:

Homes are organized such that there is a clear public-to-private gradient in the lives of Residents. The courtyard provides a human-scale, intimate urban space and moving further into the homes provides for more privacy and seclusion.

The Common House located on the second floor and directly adjacent to the patio, will function as a hearth/heart of the community and provide for the following activities:

- Communal meal preparation and dining
- Formal gatherings and an impromptu "third place"
- Celebrations
- Intellectual and community inspiration

17 democracy + social justice

All primary transportation, roads and non-building infrastructure that are considered externally focused must be equally accessible to all members of the public regardless of background, age and socioeconomic class including the homeless, with reasonable steps taken to ensure that all people can benefit from the project's creation.

Response:

Residents are of a variety of backgrounds and are committed to social justice. The intent is to establish rent-controlled leases that fix rent for an extended duration. High quality, affordable meals will be provided to and created by residents on a regular basis. A social support network among residents has already been established over the past two-years and is further being developed as the group continues to build.

In lieu of a democratic model, the Residents are committed to a model of consensus. Senior members of the community will take part in raising the children of the community, and are committed to sharing their life-long knowledge with all residents. All residents will collectively manage the community.



18 rights to nature

The project may not block access to, nor diminish the quality of, fresh air, sunlight and natural waterways for any member of society or adjacent developments.

Response:

As an urban infill project on a Transect-6 classified site, the proposed building is allowed to shade up to 20m/65' of an adjacent property. The proposed project provides a density of community and mixed-use building that is appropriate for its urban village, transit-focused location and establishes an important precedent for future development in the neighborhood.



beauty petal

- celebrating design that creates transformative change

19 beauty + spirit

The project must contain design features intended solely for human delight and the celebration of culture, spirit and place appropriate to its function.

Response:

Residents are committed to building a community that is rooted in the greater neighborhood. Personalization will allow for representing the culture and spirit of residents. The courtyard will incorporate numerous elements that satisfy a variety of types and scales of perception. The exterior balconies visible from the street will provide a publicly visible cue to the community within the building.



20 inspiration + education

Educational materials about the performance and operation of the project must be provided to the public to share successful solutions and to motivate others to make change. Non-sensitive areas of Building, Landscape + Infrastructure and Neighborhood projects must be open to the public at least one day per year to facilitate direct contact with the Living Building Challenge.

Response

Residents have already partnered with nearby Seattle University and Seattle Central Community College under the management of an urban farmer to oversee the farm, food production and distribution. In the spirit of both cohousing and the LBC, monthly opportunities to learn about the community will be available to the general public.

