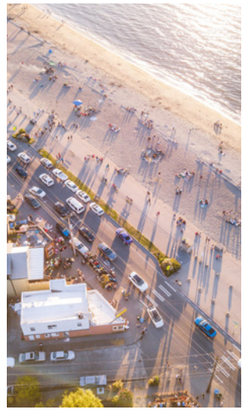
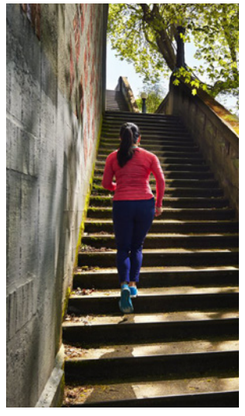




ATELIER DROME
architecture + interior design

PROJECT #3034147-EG
3417 HARBOR AVE SW, SEATTLE, WA 98126
DESIGN RECOMMENDATION | DRAFT

2.0 CONTENTS | index

PROJECT INFORMATION

site address	3405/3411/3417 Harbor Ave SW
parcel numbers	7987400130, 7987400140, 7987400150
project number	3034147-EG

PROJECT TEAM

architect	atelier drome architecture
	112 prefontaine pl s
	seattle, wa 98104
contact	michelle linden
	michelle@atelierdrome.com
builder	STS Construction
owner	??

PROJECT CRITERIA

zoning	C1-55 (M)
overlays	outer transitional surface
	parking flexibility
abutting zones	IG2 U/85 (east)
	SF5000 (west)
current use	(1) existing office building
lot area	3405 Harbor Ave: 3,957 sf
	3411 Harbor Ave: 3,957 sf
	3417 Harbor Ave: 7,918 sf
	15,832 sf TOTAL
allowable FAR	59,370.6sf (3.75)
ECAs	40% steep slope, potential slide, liquefaction, landfill
parking	57 stalls required

PROJECT PROPOSAL

gross building floor area	59,497 sf
proposed residential area	47,538 sf
proposed residential units	115 units (preferred scheme)
proposed parking	65 stalls (preferred scheme)
no. of stories	5 stories of residential with 1 partially below-grade level of parking
demolition	existing office building to be demolished

CONTEXT + SITE

The neighborhood is in transition, with most of the new development occurring as new, higher density residential units. The majority of the commercial activity is across Harbor Ave SW in the industrial zone. On the west side of the site is a smaller scale, single family residential neighborhood. The steep slope of the lot in the east/west direction provides opportunity for views across the industrial zone to the east, towards the Duwamish Waterway and the downtown skyline. It also allows for reduced massing in deference to the single family homes. The site will be shaded from the sun by the hillside to the west at varying times of day throughout the year. Morning sun will be most consistent throughout the day and year as there are no buildings or landscape immediately blocking the light.

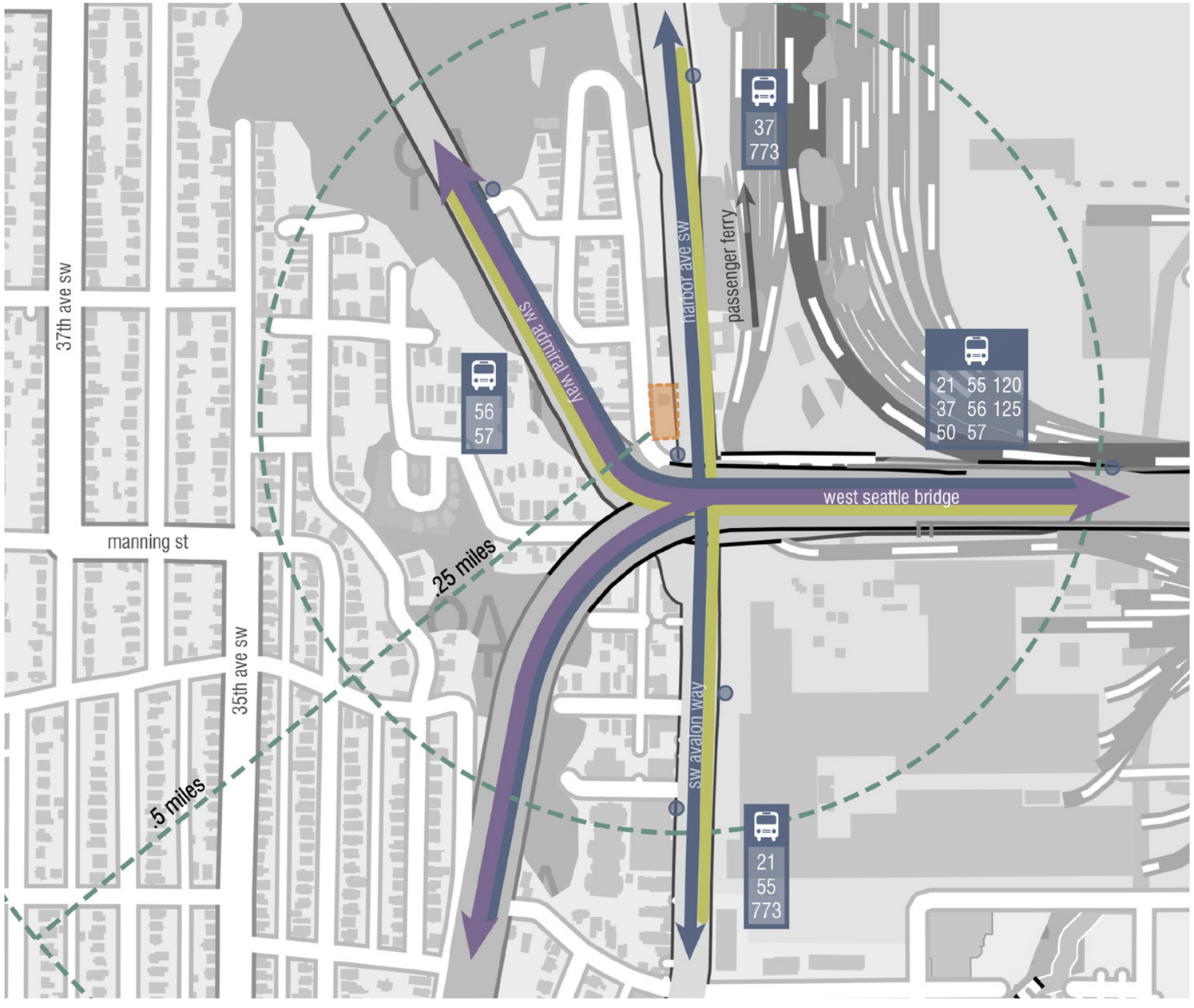
The site is well served by transit in the north-south direction, providing connections to Alki, downtown Seattle, and beyond. Public bus, bicycle, and main vehicular routes are provided immediately adjacent to the site along Harbor Ave, with a pedestrian bike/walking path across the street on Harbor Ave. The pedestrian bike path on the east side of Harbor Ave also affords easy access to Alki and the passenger ferry terminal. There is a pedestrian hillclimb stair connecting the residential neighborhoods to the southwest. Bridge access is directly to the south, allowing quick vehicular and bus access to downtown Seattle.

DEVELOPMENT PROPOSAL

This project proposes to create a multi-family building with 5 stories of apartments over 1 partially below grade story of parking. The existing office building will be demolished.

DEVELOPMENT OBJECTIVES

objective 1: provide modulated massing to create a respectful transition between zones
objective 2: maximize light and views
objective 3: provide comfortable and economic housing for a growing neighborhood, in a growing city



LEGEND

- project site
- arterials
- bus route
- bus stop
- bike path
- walking radius

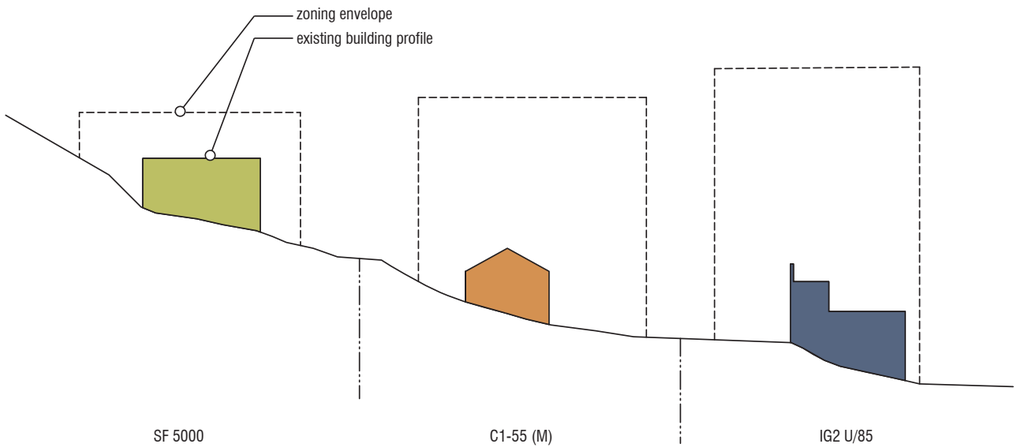
north

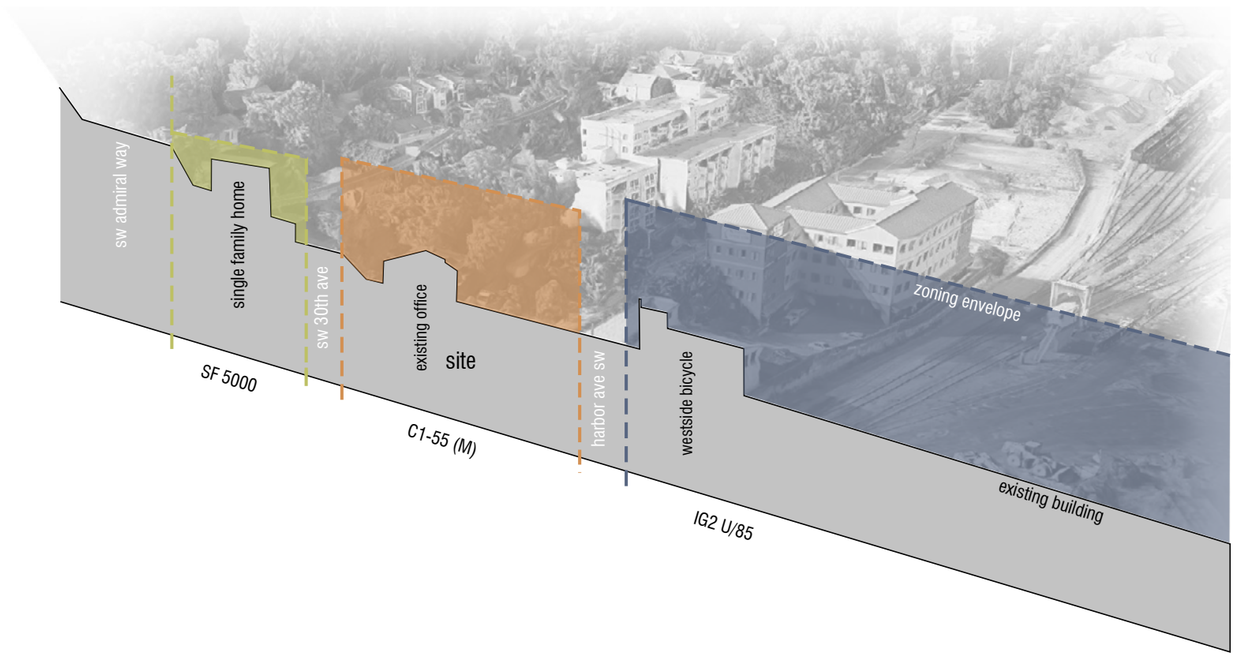
LOCAL AMENITIES

1 project site
2 luna park cafe
3 west seattle branch public library
4 delridge community center
5 pathfinder k-8 school
6 west seattle high
7 lafayette elementary
8 madison middle school
9 west seattle stadium
10 dragonfly garden
11 delridge playfield
12 puget park
13 hiawatha playfield
14 jack block park
15 chi franciscan health
16 trader joe's
17 qfc
18 safeway
19 metropolitan market
20 whole foods
21 safeway
22 chase bank
23 wells fargo bank
24 umpqua bank
25 bank of america
26 becu

SITE ZONING

The site is located in a strip of a commercial zone (C1-55 M), bordered by an industrial zone (IG2-U/85) to the east and single-family zoning (SF5000) to the west.





7.0 ZONING DATA

ZONE	ABUTS	INCENTIVES	RESTRICTIONS	OVERLAY	SITE AREA
C1-55(M)	IG2 U/85, SF5000	frequent transit	liquefaction, steep slope, potential slide, landfill	outer transitional surface	15,832sf

LAND USE CODE	DESIGN TEAM RESPONSE	
USES PERMITTED OUTRIGHT 23.47A.004 TABLE A		
• Residential uses	• The project proposes 115 residential units	**COMPLIES**
STREET-LEVEL DEVELOPMENT STANDARDS 23.47A.008		
• Blank segments of street-facing facades between 2 - 8 feet above the sidewalk may not exceed 20 feet in width. Facades with screening or landscaping are not considered blank. • The total of all blank facade segments may not exceed 40% of the facade width of the structure along the street. • Street-level, street-facing facades shall be located within 10 feet of the street lot line unless wider sidewalks, plazas, or other approved landscaped or open spaces are provided. • At least one of the street-level, street-facing facades containing a residential use shall have a visually prominent pedestrian entry. • The floor of a dwelling unit located along the street-level, street-facing facade shall be at least 4 feet above or 4 feet below sidewalk grade or be set back at least 10 feet from the sidewalk.	• The proposed street-level, street-facing facade abutting Harbor Ave SW incorporates a combination of glazing, green screens, and decorative art screens. The blank segments along this street total 69.75' or 37% of the facade, which is less than 40% max allowed. Additionally, the longest blank segment width is 17.42' which is less than the maximum of 20'. • Along 30th Ave SW, the proposed street-level, street-facing facade features residential unit windows and balconies. The blank segments along this street total 45.15' or 24% of the facade, which is less than 40% max allowed. Additionally, the longest blank segment width is 11.4' which is less than the maximum of 20'. • The Harbor Ave SW facade is located within 10 feet of the street lot line, with building setbacks varying from 3 inches to 11 feet. Although the 30th Ave SW facade is greater than 10 feet from the street lot line, a terraced and landscaped open space sits between the building and the street. • Both street-facing facades feature visually prominent pedestrian entries. The Harbor Ave SW facade features two lobbies, one at each corner. A pedestrian entry is provided at the northwest corner of the building at the 30th Ave SW side. • Residential units are located along the street-level, street-facing facade of 30th Ave SW but are set back from the street lot line 10 feet to 28 feet, averaging greater than the 10 foot requirement.	**COMPLIES**
PARKING LOCATION & ACCESS 23.47A.004 TABLE A		
• One garage door is permitted for each curb cut. • When a lot fronts on two or more streets, the Director will determine which of the streets will be considered the front lot line. • Parking shall be screened.	• The project proposes one garage door for the curb cut at Harbor Ave SW. • The project site fronts both Harbor Ave SW and 30th Ave SW and has received approval to treat Harbor Ave SW as the "front" lot line in order to determine access requirements. • All proposed parking will be enclosed in a garage at the basement level of the building.	**COMPLIES**
MAXIMUM STRUCTURE HEIGHT 23.47A.012		
• Maximum structure height = 55 feet • Certain rooftop features may also extend beyond the height limit (in particular, a stair or elevator penthouse may extend an additional 16 feet), however, some of these features must be located at least 10 feet from the north edge of the roof. • Open railings, planters, clerestories, and parapets may extend up to 4 feet above the height limit.	• The proposed structure height is 53.79 feet, less than the 55 feet maximum allowed. The two stair penthouses and one elevator penthouse extend 3.71 feet above the structure height, less than the 16 feet maximum allowed.	**COMPLIES**
MAXIMUM FAR 23.47A.013		
• 3.75 on a lot outside of the Station Overlay District lot area: 15,832 sf max. FAR: 59,370 sf • Area exempt from FAR: underground stories, portions of a story that extend no more than 4 feet above grade, rooftop greenhouse area.	• The proposed FAR is 59,344 sf. The sub-basement and portions of the basement level are either completely underground or do not extend more than 4 feet above grade and therefore are exempt from FAR.	**COMPLIES**

7.0 ZONING DATA

ZONE	ABUTS	INCENTIVES	RESTRICTIONS	OVERLAY	SITE AREA
C1-55(M)	IG2 U/85, SF5000	frequent transit	liquefaction, steep slope, potential slide, landfill	outer transitional surface	15,832sf

LAND USE CODE

DESIGN TEAM RESPONSE

SETBACK REQUIREMENTS 23.47A.014

Front (Harbor Ave SW): none
Front (30th Ave SW): none
Side (north): none (does not abut a residential zone)
Side (south): none (does not abut a residential zone)

- A minimum 5 foot landscaped setback may be required under certain conditions and for certain uses per 23.47A.016
- Structures permitted in required setbacks: decks, balconies, eaves, cornices, gutters, ramps, fences, underground structures, dumpsters (except trash compactors)

- While no setbacks are required by code, the project proposes the following setbacks:
  - Front (Harbor Ave SW):
  - Front (30th Ave SW):
  - Side (north):
  - Side (south):

COMPLIES

LANDSCAPING & SCREENING STANDARDS 23.47A.016

- A greenfactor score of 0.3 or greater is required (functionally equivalent to landscaping 30% of lot)
  **Note: Credit is awarded for green roofs, planters, green walls. Landscaping, and plantings in the adjacent right-of-way.*
  **Note: Street trees are required and are counted towards the greenfactor requirement.*

- The project proposes a greenfactor score of 0.625. Street trees are proposed along both Harbor Ave SW and 30th Ave SW.

COMPLIES

REQUIRED AMENITY AREA 23.47A.024

- 5% of the total gross floor area in residential use required (area excludes mech equipment and parking)
- Bioretention facilities qualify as amenity areas.
- All residents shall have access to at least one common or private amenity area.
- Amenity areas shall not be enclosed.
- No amenity area shall be less than 250 sf and shall have a minimum horizontal dimension of 10 feet.
- Private balconies and decks shall have a minimum area of 60 sf and no horizontal dimension shall be less than 6 feet.

- The project proposes 2,761 sf of amenity area using a combination of a common roof deck, private patios and balconies, bioretention planters, and a common ground level courtyard.

COMPLIES

PARKING LOCATION & ACCESS 23.47A.032.B

- Within a structure, street-level parking shall be separated from street-level, street-facing facades by another permitted use.

- While several residential uses, such as the mail room and entry lobbies, are located between the facade and the street-level parking, the proposed design does propose a departure from the code.

DEPARTURE PROPOSED

REQUIRED PARKING 23.54.015

- Residential uses = 1 vehicular space per dwelling unit, 0.5 per SEDU
  Residential uses = 1 bicycle space per dwelling units (long-term), 1 space per 20 dwelling units (short-term)
  23.54.020.F.2
- Minimum parking reduced by 50% if site is located within a frequent transit service area

- The project site is located within a frequent transit service area. 65 vehicular parking spaces and 121 bicycle parking spaces are provided.

COMPLIES

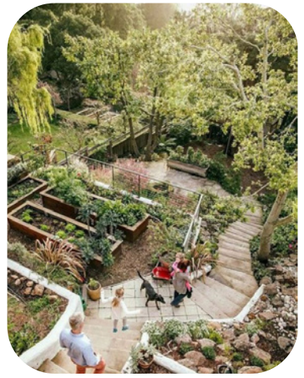
MANDATORY HOUSING AFFORDABILITY 23.58C.040 TABLE B

- Medium area
- Zones with a (M) suffix - $14.46 / sf developer contribution

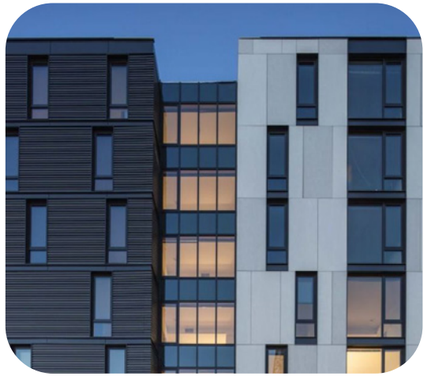
- As part of the City's Mandatory Housing Affordability program, the project will contribute $858,114.24 to the program.

COMPLIES

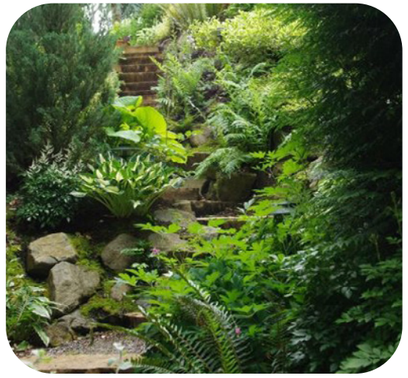
modulated massing



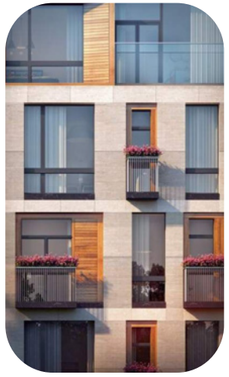
activated courtyard



facade patterns



terraced landscape



zone reflective scale

corner residential entry

CS1 NATURAL SYSTEMS & SITE FEATURES

D1 ON-SITE FEATURES

Incorporate on-site natural habitats and landscape elements such as: existing trees, native plants species or other vegetation into project design and connect those features to existing networks of open spaces and natural habitats wherever possible. Consider relocating significant trees and vegetation if retention is not feasible.

The scheme creates a landscaped courtyard that descends down the hillside and speaks to the adjacent residential neighborhood character. Terraced areas are planted with native landscape with bright pops of color that change seasonally, for year-round interest. This scheme incorporates built elements such as benches and steps in order to activate the courtyard and to help provide a physical and visual connection to the residents on 30th Ave. At Harbor Ave, ground and vertical greenscape provides texture, seasonal interest, and garage screening.

E1 ADDING INTEREST WITH PROJECT DRAINAGE

Use project drainage systems as opportunities to add interest to the site through water-related design elements. Features such as trees, rain gardens, bioswales, green roofs, fountains of recycled water, and/or water art installations can create movement and sound, air cooling, focal points for pedestrians, and habitats which may already be required to manage on-site stormwater and allow reuse of potable water for irrigation

This project incorporates two cascading bio-retention planters at the northwest and southwest corners. These cascading planters will create a water fountain effect, adding visual interest and providing a trickling water sound that will help to mitigate the highway noise. At the southwest corner of the building, exposed downspouts relate to the gasketing of the mass, and create a visual and logical connection between the roof drainage above and bioretention planters below.

CS2 URBAN PATTERN & FORM

A1 SENSE OF PLACE

Emphasize attributes that give Seattle, the neighborhood, and/or the site its distinctive sense of place. Design the building and open spaces to enhance areas where a strong identity already exists, and create a sense of place where the physical context is less established. Examples of neighborhood and/or site features that contributed to a sense of place include patterns of streets or blocks, slopes, sites with prominent visibility, relationships to bodies of water or significant trees, natural areas, open spaces, iconic buildings or transportation junctions, and land seen as a gateway to the community.

At the edge of North Admiral and Alki, this site ties into the local fabric and speaks to the neighborhood identity through its main corner entry, response to the zoning changes, and relationship to the streets The strong street edge along Harbor Ave is maintained, while the massing is broken up along 30th Ave to relate to the residential zone.

The building's corner establishes a gateway to the neighborhood, with the building's main residential entry at the street-level. Additionally, the project responds directly to the two abutting zones – holding the edge along the busy transit-oriented Harbor Ave, while providing a more modulated, pedestrian scale along 30th Ave. The residential neighborhood to the west feels tucked into the hillside and woods, and the landscaped courtyard will reflect that neighborhood characteristic. The frontage along Harbor Ave SW responds directly to the typical typology of the neighborhood apartment buildings, with an orthogonal form above a plinth-like garage base.

CS2 URBAN PATTERN & FORM

B2 CONNECTION TO THE STREET

Identify opportunities for the project to make a strong connection to the street and carefully consider how the building will interact with the public realm. Consider the qualities and character of the streetscape – its physical features (sidewalk, parking, landscape strip, street trees, travel lanes, and other amenities) and its function (major retail street or quieter residential street) – in siting and designing the building

The proposed project has street frontages along its two long sides – both with distinctly different characteristics. With the building's mass weighted towards the commercial and industrial zones along Harbor Ave, the building holds the line along the busier street – providing recesses at the entries in order to aid in breaking up the façade as well as providing a comfortable and direct entry sequence. The use of planters and greenscreens in conjunction with the street trees adds to the character along Harbor Ave.

Along 30th Ave (a quieter residential street), the building is set back from the lot edge which reduces the impact of the structure towering over the streetscape. Secondary features along this façade reflect the qualities of the single family residences across the street. A smaller, resident only entry/exit has been provided to directly connect the building to the street with a stair and runnel – allowing residents to connect with the bike paths along Admiral as well as facilitate an improved connection with their neighbors. An additional meandering path from the patios to 30th Ave accommodates playful residents in keeping with the quality of the neighborhood.


neighborhood typology


residential scale massing


secondary facade elements


identify entry


corner statement

PL2 WALKABILITY

D1 DESIGN AS WAYFINDING

Use design features as a means of wayfinding wherever possible, and provide clear directional signage where needed

Large awnings have been provided at each entry, with the scale of awning directly related to the hierarchical importance of each entry. Wood detailing and similar material palettes at each entry aid in a visual distinction, contributing to clear wayfinding.

PL4 ACTIVE TRANSPORTATION

B3 BIKE CONNECTIONS

Facilitate connections to bicycle trails and infrastructure around and beyond the project. Design bicycling access points so that they relate to the street grid and include information about connections to existing trails and infrastructure where possible. Also consider signage, kiosks, building lobbies, and bicycle parking areas, where provided, as opportunities to share bicycling information

The northeast lobby, as well as the residential entry/exit along the northwest façade are both geared towards bicycle transit. The entry/exit to the northwest incorporates a bike runnel adjacent to the stair and directs residents to the bike lane along Admiral Way (directly above the project site and beyond) and additional bus routes. Signage indicating bike and bus routes will be posted inside, directly adjacent to this entry/exit. The northeast lobby is directly adjacent to the frequent use bicycle parking. This bicycle parking will be easily accessed by anyone traveling to/from Harbor Ave (and the associated multi-use trail), from the passenger ferry, or from cyclists coming from the south along Avalon Way. With this heavily glazed bicycle parking fronting Harbor Ave, the importance of bicycle travel is reinforced. Additional information on trails and infrastructure will be provided inside the bicycle parking rooms.

DC2 ARCHITECTURAL CONCEPT

B1 FACADE COMPOSITION

Design all building facades - including alleys and visible roofs - considering the composition and architectural expression of the building as a whole. Ensure that all facades are attractive and well-proportioned through the placement and detailing of all elements, including bays, fenestration, and materials, and any patterns created by their arrangement. On sites that abut an alley, design the alley facade and its connection to the street carefully. At a minimum, consider wrapping the treatment of the street-facing facade around the alley corner of the building.

The building façade has been developed intentionally, with awareness to material texture, patterning, and fenestration. Careful detailing particularly at the southeast corner allows the windows and panels sizes to align. Special attention has been given to the interaction with the residential neighborhood to the north, with the scale of material detailing reflective of the zone transition.

DC2 ARCHITECTURAL CONCEPT

C1 VISUAL DEPTH AND INTEREST

Add depth to facades where appropriate by incorporating balconies, canopies, awnings, decks, or other secondary elements into the façade design. Add detailing at the street level in order to create interest for the pedestrian and encourage active street life and window shopping (in retail areas). Detailing may include features such as distinctive door and window hardware, projecting window sills, ornamental tile or metal, and other high-quality surface materials and finishes

Balconies and wood screens have been incorporated into the façade design along 30th Ave. These secondary elements provide a level of detail and materiality respective of the single family zone the project fronts. Along the Harbor Ave frontage, the addition of balconies as a secondary element help to break up the long façade. Additional secondary elements include awnings at each entry, with their size respective of the importance of each. Throughout the north and south nodes, the windows and doors have been recessed to aid in the distinction of the masses while providing additional visual interest. Directly adjacent to the main (southeast) entry, an art screen incorporating the signage adds visual interest along the street level. High quality board-formed concrete is also proposed along the Harbor Ave street façade.

Scheme 3: INTERLOCK (PREFERRED)

Scheme 3 is the preferred scheme. It breaks up the building's mass and provides a landscaped courtyard element facing 30th Ave, while providing a reduced bulk towards the southern edge of the property. The southern mass is shorter than the northern masses, helping to create a transition in building scale and increasing the building's legibility. The lobby is located at the southern corner, with garage access off of Harbor Ave on the north end of the site.

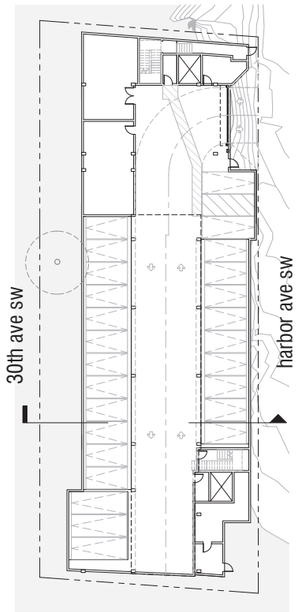
NO. OF UNITS: 126 apartments
PARKING: 71 stalls

BENEFITS:
- Gestures towards the assumed corner shared with SPU property to the south.
- Responds to site topography, stepping with the slope in the north and south direction.
- Locates the bulk of the massing away from the 30th Ave residential zone.
- Larger courtyard allows for usable landscaped areas for increased eyes on the street and connections with the neighborhood.

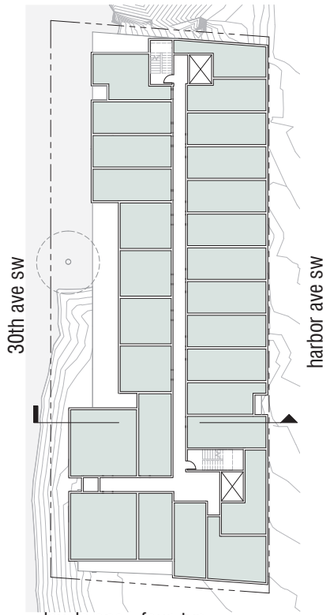
CONCERNS:
- Tallest portion of mass faces the adjacent neighboring multi-family building to the north.

POTENTIAL DEPARTURES:
- Exceptional tree
- Street-level parking

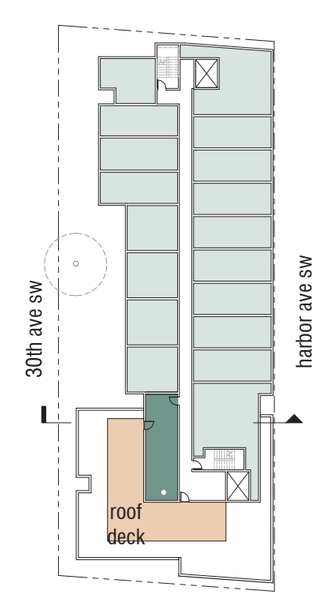
COMMUNITY OUTREACH INTEGRATION:
- Provide dog waste receptacles along 30th Ave.
- Significantly increased parking over code compliant proposal (42 parking stalls in "hinge" scheme)
- Roof deck set back from edge of building.
- Large landscaped courtyard encourages engagement with residents of 30th Ave.
- Lower level terraces accommodates this engagement while setting the building back from property edge helps to maintain privacy of residential neighbors as requested.



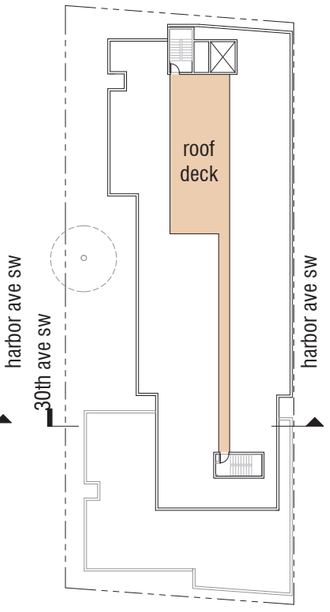
basement



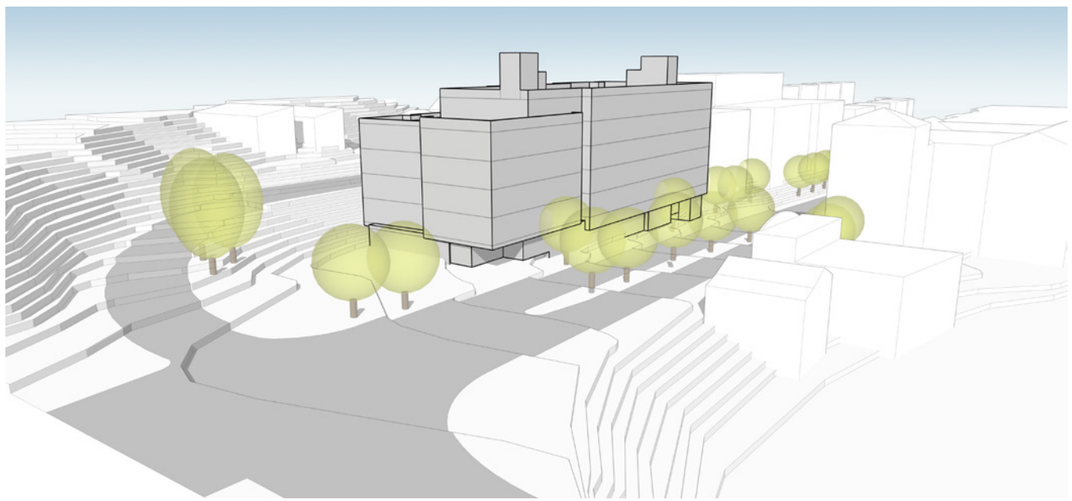
levels one - four, typ

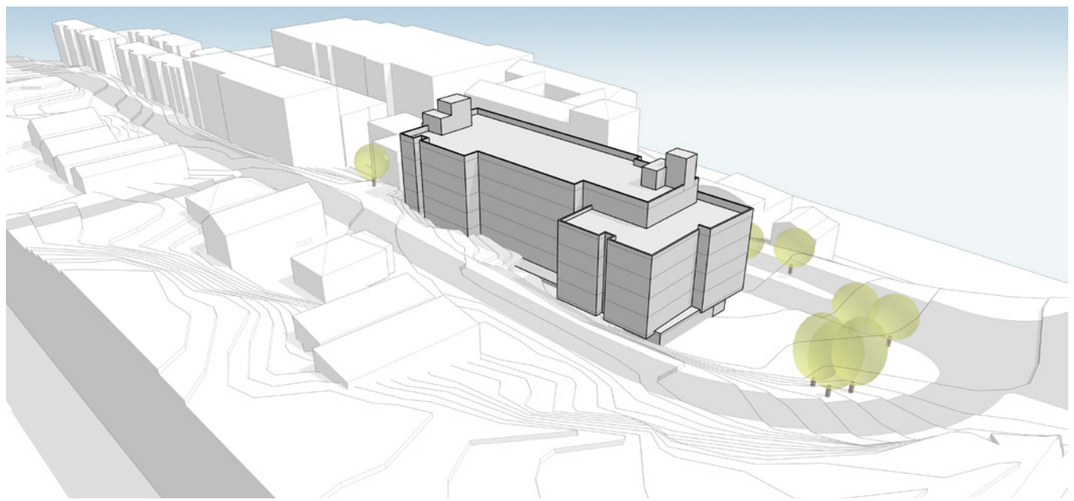


level five



roof


aerial view from West Seattle Bridge


aerial view north along 30th Ave

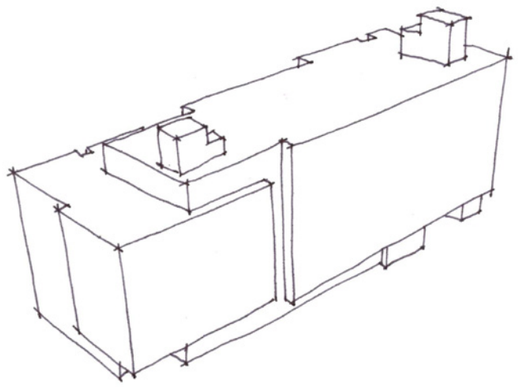
massing evolution

3417 Harbor Ave is a new 5 story over basement garage apartment complex. The building is comprised of 91 1-bedroom and 24 2-bedroom apartments, as well as parking for 65 vehicles. A common roof deck is located on the north end of the building. Located on a steeply sloping lot straddling multiple zones, the project aims to respond to the neighboring residential neighborhood to the west as well as the industrial neighborhood to the east. Directly to the north is another multi-family structure comprised of 57 units.

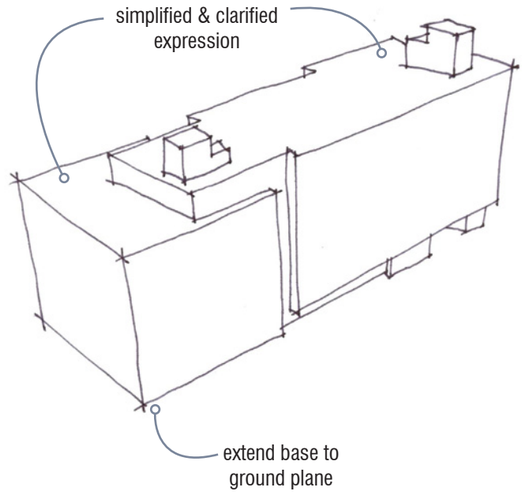
Following the EDG meeting, the Board recommended Scheme 3 to be explored and developed further. The Board offered specific guidance, and in conjunction with the design team's exploration, the overall massing has evolved as illustrated here. See pages 14-22 for itemized responses.

The developed scheme shifts the hierarchy of the mass in order to provide a more prominent corner condition at the southeast edge, while stepping down the mass toward the adjacent structure to the north. The building now has a main public entry at the southeast corner, a residential entry (connecting to the bike parking, mail room, and garage) at the northeast corner, and a residential pedestrian exit at the northwest corner, connecting to the ROW above.

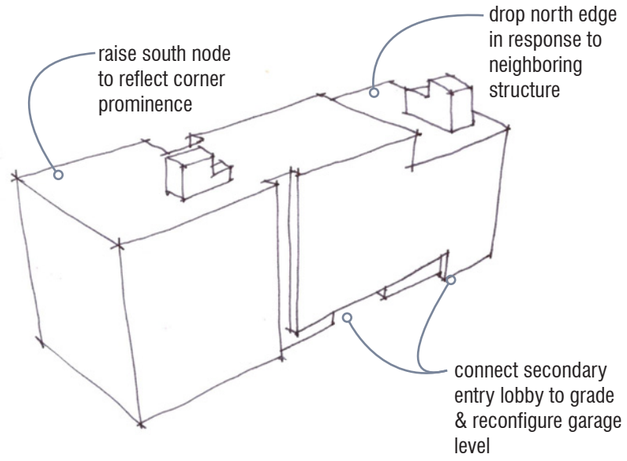
Due to the long frontage along both Harbor Ave and 30th Ave SW, the mass has been broken into three sections; the north and south nodes are connected by the central bar, and the materiality is expressed accordingly. Equitone panels are carefully detailed along the two nodes, with the patterning adjusted between the corner entry condition and the residential facing facades. Windows are recessed along these facades, with deeper metal trim provided at the corner expression. The central bar reflects the residential neighborhood, with horizontal lap siding reinforcing the horizontal bar. Secondary architectural features and materials reflect the building's place between two zones, with the wood responsive to the abutting neighborhood, and the corten steel a nod to the industrial zone.



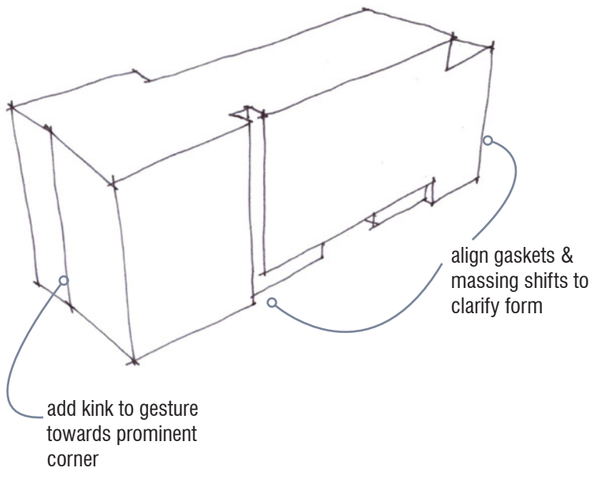
massing @ EDG



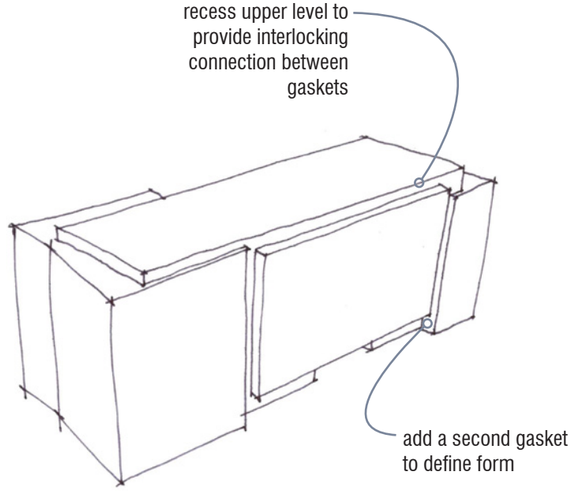
simplify the overall mass



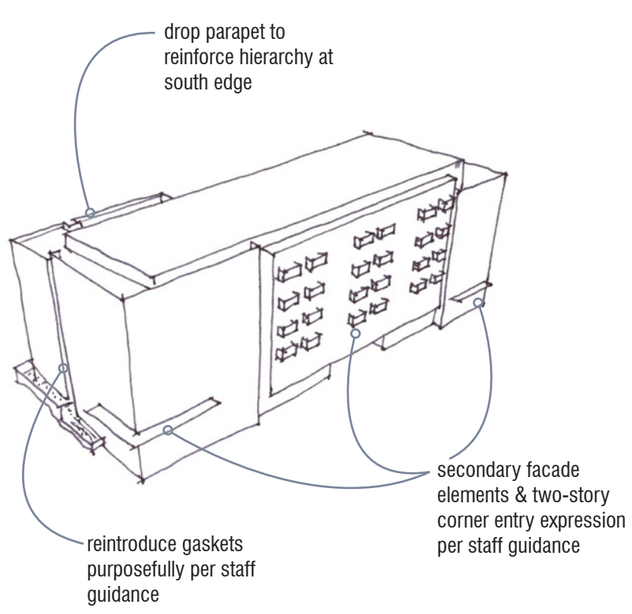
provide a hierarchy in massing & height



provide order & logic to mass



clarifying massing concept



final massing

board guidance

Southeast Corner - The Board was supportive of the beginnings of the southeast corner expression but would like to see the corner be treated as more of a gateway with greater presence through material detailing and perhaps massing refinements. The Board suggested simplifying the massing from a split form to a singular massing volume on the south façade (CS2-A, CS2-D).

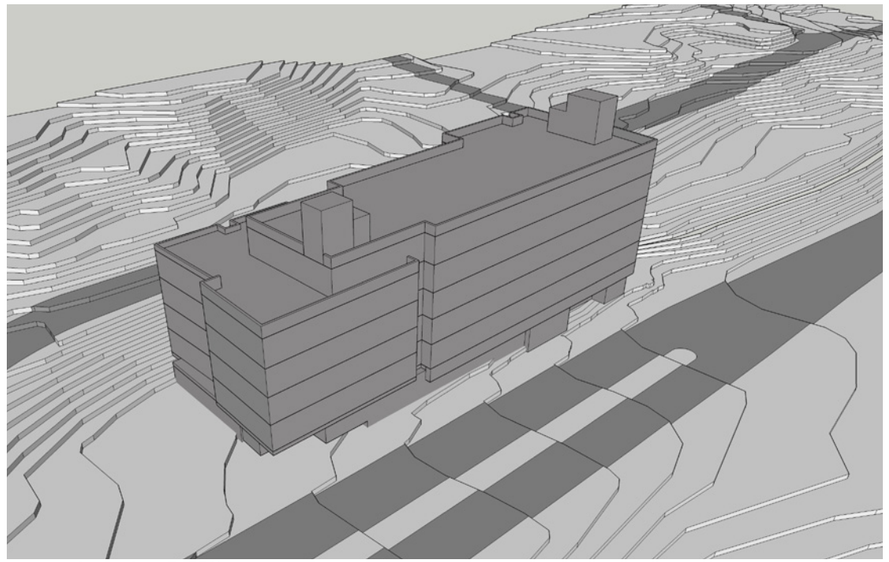
design response

Following the Board's guidance, the design team explored a refined and simplified overall massing, particularly at the southwest corner expression. Rather than maintaining a dropped massing at this southwest corner per the EDG proposal, the corner element has been extended vertically by extending to the 5th floor, and continuing the mass down to the grade plane. The modulation of the split form has been simplified, initially with a singular massing volume. Per staff guidance, subsequent development of the massing has reintroduced the gaskets at the south and west facades, but maintains the taller, clarified massing. Larger glazing panels in an expressive pattern, wood accents, and a simple siding pattern (related to, but not identical to the rest of the mass) strengthens the south corner and gateway expression.

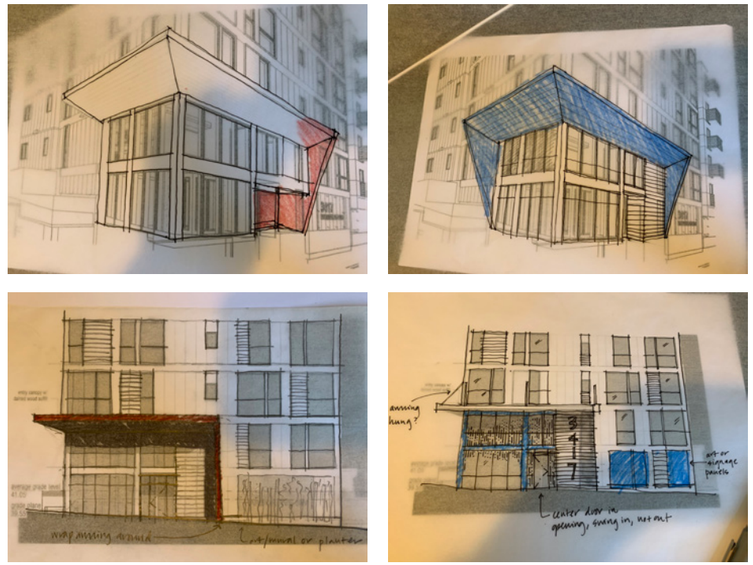
- The taller, unified massing expression at the south corner helps to signify its prominence as the main entry and a gateway expression.
- The mass is extended to the grade plane in order to help ground the mass.
- A large feature awning has been added to reinforce the corner expression.
- The massing's kink (amplified by the gasket) gestures towards the corner, allowing the materiality of the corner to be expressed differently than the rest of the mass.
- Windows and doors throughout the façade are stacked vertically, with the exception of the southeast corner. The staggered windows allow for the incorporation of wood panels related to, but distinct from the rest of the building. This distinct compositional order reinforces the corner element.

design guidelines

CS2-A Location in the City and Neighborhood
CS2-D Height, Bulk, and Scale
CS1-E2 Adding Interest with Project Drainage
PL2-D1 Design as Wayfinding
DC2-A Massing



proposed massing @ EDG



sketches of corner designs

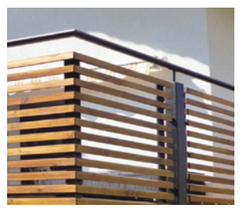
proposed massing

board formed concrete

equitone pictura panel

corten steel

wood siding



balcony railing

cementitious lap siding

board guidance

Harbor Ave - Related to the corner expression, the Board provided guidance to enhance the expression of the lobby entrance at the southeast corner exploring greater height, size, seating, lighting or other means of enhancing legibility of the entrance. In addition, the Board would like to see the north end exit along Harbor Avenue become a secondary lobby rather than an egress only (CS2-B2, PL3-A).

design response

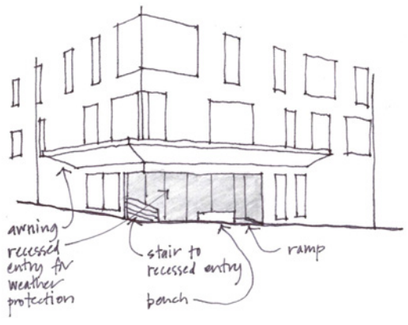
Previously, the proposal included a recessed residential entry at the southeast corner, with an exit-only condition at the northeast. The plan has been reworked in order to accommodate a primary entry at the southeast corner and secondary entry at the northeast corner. These entries relate to each other visually, but prominence is given to the southeast entry (as the corner expression) through massing and detailing. The scale, detailing, and proximity to the bus stop of the southeast entry identifies it to visitors as the main public entry, while the northeast entry has been modified and enlarged to function primarily as a resident entry.

The design as proposed at MUP included a sunken entry and a pitched awning at the southeast entry in order to provide additional height. Staff guidance suggested that this created a pinched condition rather than a grandeur entry expression and requested that we evaluate a two-story option. Following that guidance, we evaluated several options including a 1.5 story entry and 2 story entry. However, due to the small unit size above the lobby and the compact lobby itself, this resulted in an awkwardly tall lobby experience while also resulting in the loss of a unit. Focusing on the staff guidance to provide a grandeur entry expression, we have raised the awning, enlarged the lobby to align with the floor above, and treated the fenestration of the unit above in the same manner as the lobby. This design allows for a two-story expression commiserate with the scale of the building

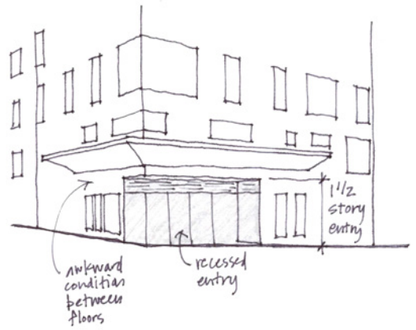
- The taller southern massing, with the larger corner awning, storefront glazing, and wood siding immediately identifies itself as the public entrance.
- The awning at the southern massing angles upwards in order to enhance the height and volume of the entry sequence, again signifying it as the main entry.
- The awning at the northern entry reflects the same material palette, in a more modest scale, prioritizing function.
- Exterior signage and lighting have been provided at both entries, with a priority in size given to the southeast entry.

design guidelines

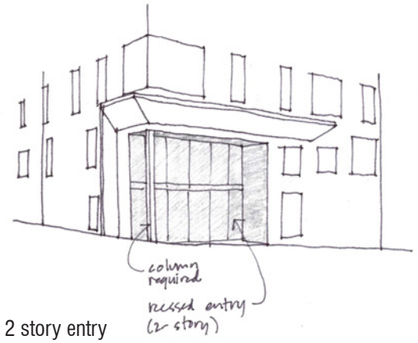
CS2-B-2. Connection to the Street
PL3-A Entries
CS2-A Location in the City and Neighborhood
PL2-D1 Design as Wayfinding
PL4-B3 Bike Connections



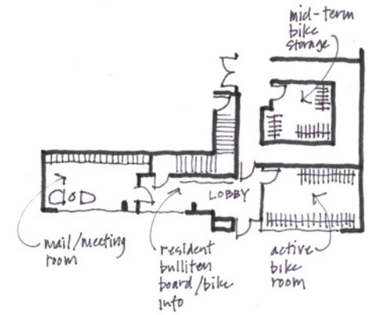
mup entry



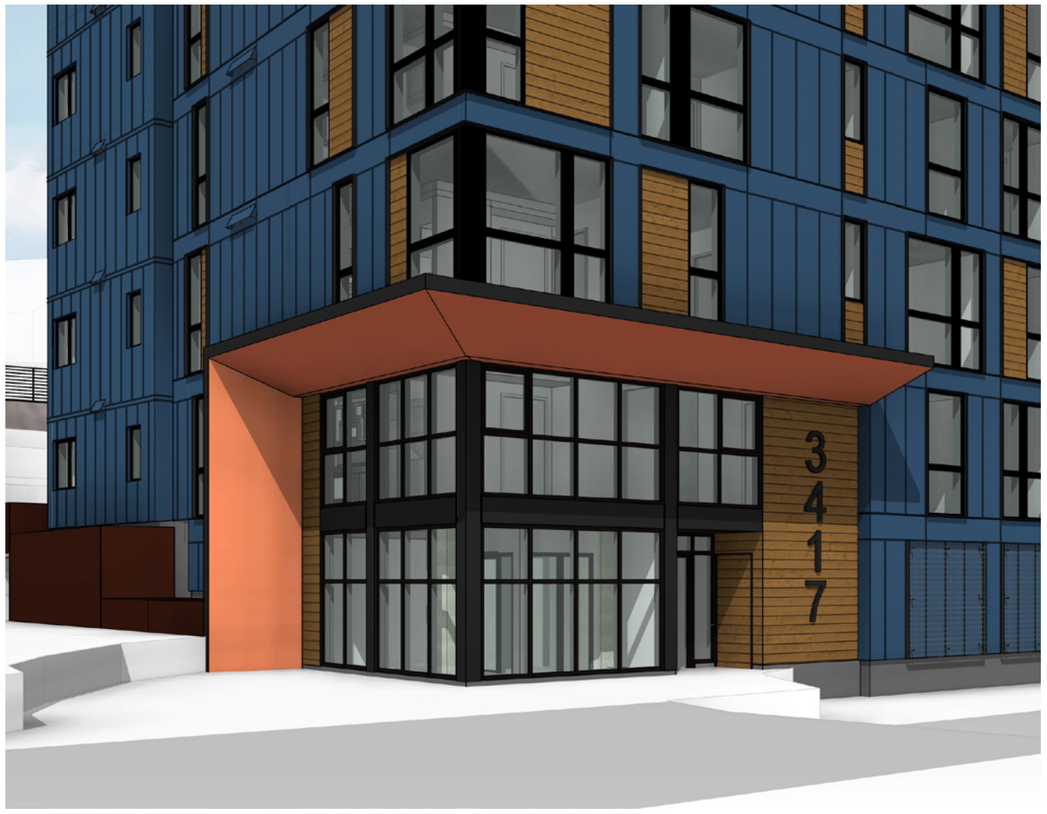
1.5 story entry



2 story entry



north lobby plan



view of south lobby

view of north lobby

board guidance

Harbor Ave - The Board was concerned with the 126' façade length along Harbor Avenue. At the next meeting the Board expects to see material application and secondary detailing to break up and provide a smaller scale to this long street frontage (CS2-D, DC2-A, DC2-B1)

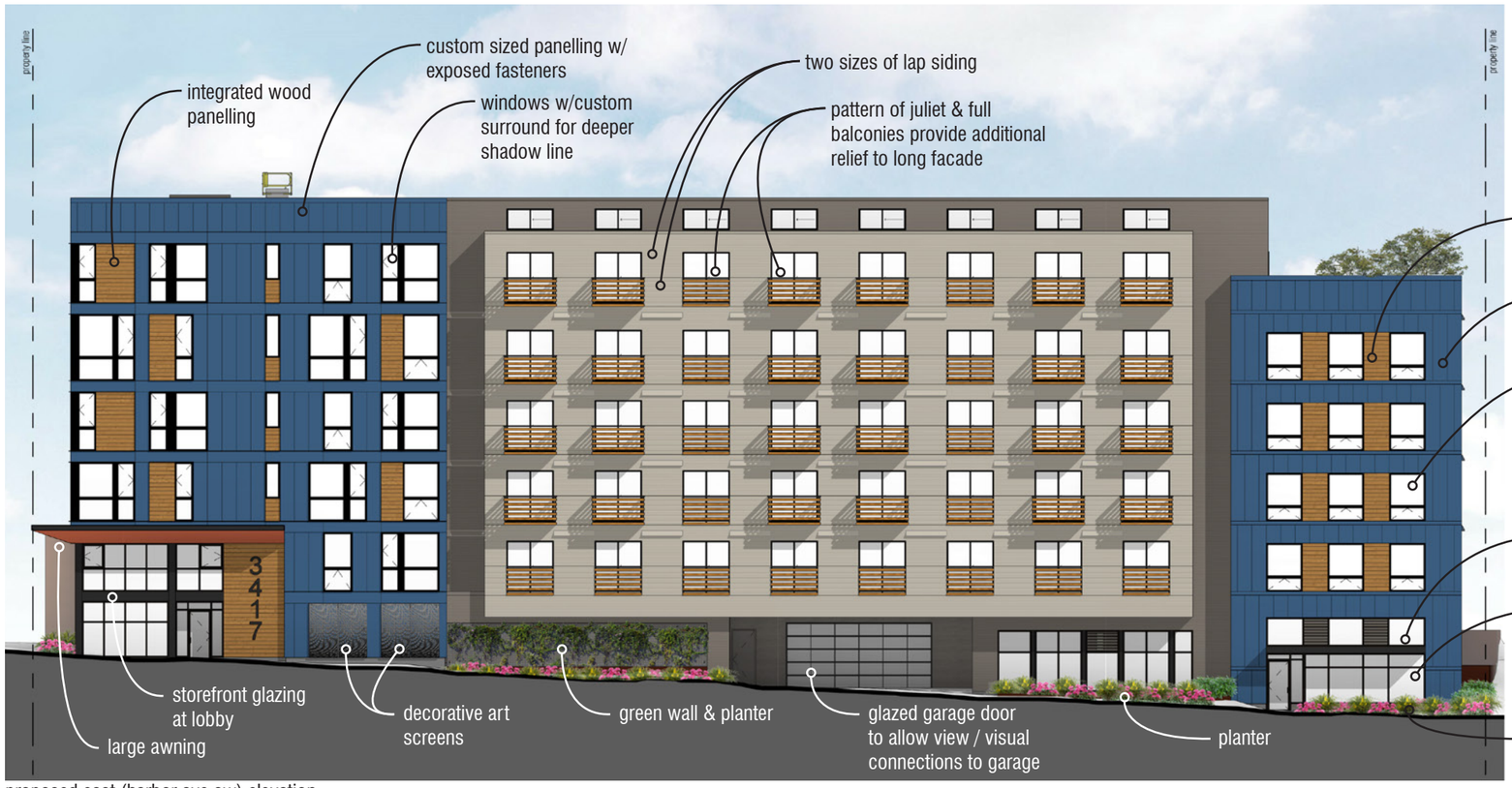
design response

In response to the Board's guidance regarding the massing of the southeast corner expression, stepping down the massing at the north edge, and providing a secondary northeast entry, the massing has now been broken into three, with the northern and southern nodes connected by a central interlocking bar. Additionally, gaskets have been provided, separating each mass, which aids in further breaking up the overall length of the façade. The addition of balconies and juliets as secondary elements at the center mass help to further break down the length of the façade. At the ground level, programmatic elements have been rearranged to accommodate additional glazing and visual interest.

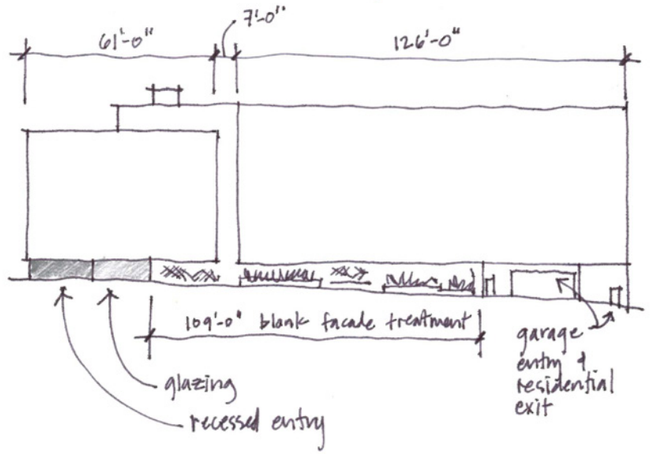
- The proposal seeks to use different siding and fenestration languages to create visual interest and movement along the street frontage; the north node uses a lively siding pattern with regimented windows, while the southeast corner expression uses a regimented siding pattern with lively fenestration and wood paneling. The central interlocking bar utilizes a connective horizontal banding pattern for the floors above, and horizontal board formed concrete for the garage level.
- On the upper floors, siding type and detailing such as recessed windows and doors on the north and south nodes bookend the structure. Secondary detailing is provided with balconies and juliets.
- The north and south nodes' glazed entries and landscaping adding visual interest at the ground level.
- The quantity of car parking fronting the street façade has been reduced, with a communal mail room and bike parking provided at the ground level. This allows for increased fenestration and visual activity.
- The section of wall without fenestration has been significantly reduced from the EDG proposal. Greenscreens and planters are provided along this section, which will help break up the façade length while contextually responding to similar planters in the neighborhood.

design guidelines

CS2-A Location in the City and Neighborhood
CS2-D Height, Bulk, and Scale
CS1-E2 Adding Interest with Project Drainage
PL2-D1 Design as Wayfinding
DC2-A Massing



proposed east (harbor ave sw) elevation



The east elevation (harbor ave) at EDG had long sections of facade, up to 126'. The revised design breaks the facade down into smaller sections and also provides additional sectionary detailing to provide a smaller scale to this long facade.

Early community feedback requested the project incorporate public art as a nod to the culture of public art in the neighborhood. This project is working with local Seattle artists/makers to provide decorative metal art screens, which will provide visual interest along the long façade, as well as firmly connect this building to the neighborhood.

Examples of art screens

DRAFT

board guidance

Harbor Ave - The Board was concerned with blank wall along the parking garage level and provided guidance to further explore alternative layouts of the floor plan with the goal of improving visual interest and activation along the street-level. The Board suggested swapping out the bicycle storage and parking spaces (DC2-B2, DC1-C2).

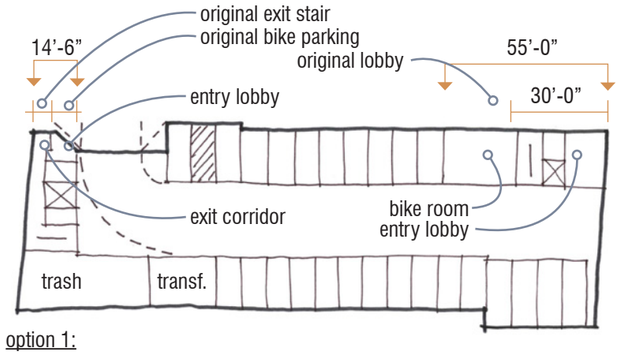
design response

Per the Board's guidance, we evaluated several new parking layouts that would accommodate reduced parking fronting the street façade. In particular, it was suggested that we flip some of the car parking and bike parking, so that there could be a more active front façade. We evaluated several different options for the parking layout, and ultimately revised the plan in response to the Board's guidance.

- By rearranging the parking, we were able to reduce the parking at the front façade from 98' to 61' (for a reduction of 38%)
- We eliminated the interior storage and exit-only corridor on the north end of the building in favor of a new secondary lobby, mailroom, and bike storage all with fenestration to help activate the façade.
- The blank wall directly in front of the parking is mitigated with the addition of planters and green screens.
- The section of wall without fenestration has been significantly reduced from the EDG proposal. Greenscreens, planters, and an art screen incorporating signage are provided along this section, which will help break up the façade length while contextually responding to similar planters in the neighborhood.
- In an effort to provide even more transparency, the garage door (which will remain mainly closed) will be open grate for transparency. Additional safety features at the garage entry/exit include full sight triangles (no request for reduction) and patterned/ grooved pavement at the garage entrance to alert pedestrians of this access point.

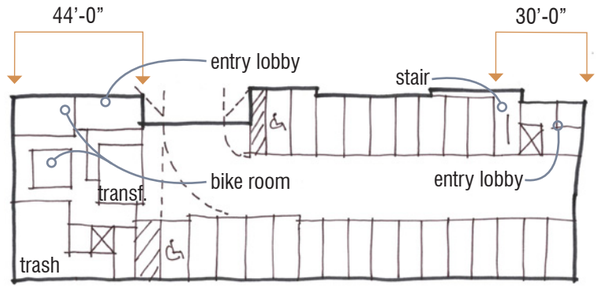
design guidelines

DC2-B2 Blank Walls
DC1-C2 Visual Impacts
PL4-B3 Bike Connections
DC4-A1 Exterior Finish Materials



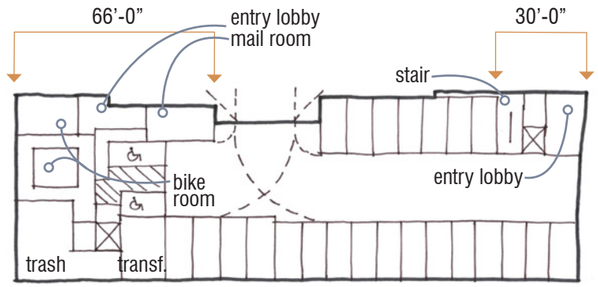
<u>option 1:</u>

- move bike storage to front facade
- provide new lobby @ north stair
- decrease in car parking facing Harbor of 9%



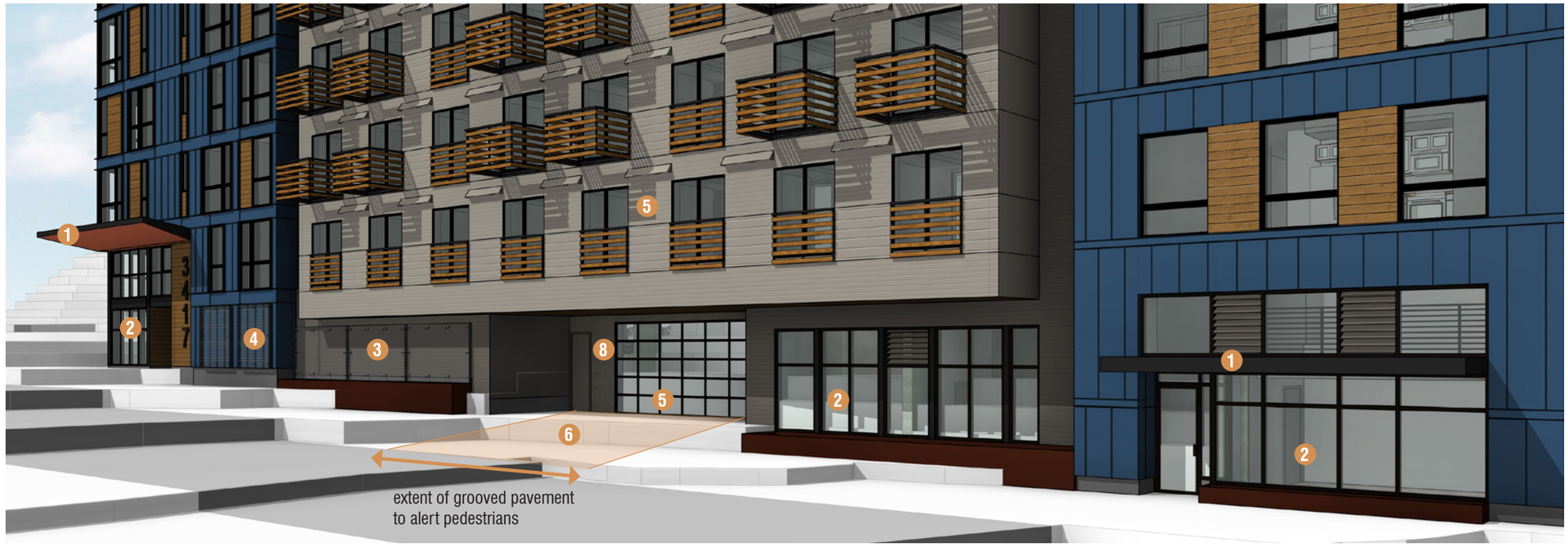
<u>option 2:</u>

- shift drive south to enlarge south lobby
- provide bike parking facing Harbor
- decrease in car parking facing Harbor of 13%



<u>option 3 (proposed):</u>

- shift drive south to enlarge south lobby & provide active mail room
- provide bike parking facing Harbor
- decrease in car parking facing Harbor of 38%



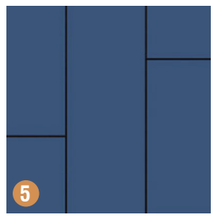
harbor ave garage entry

wood siding

storefront

green screen

decorative metal art screen



equitone pictura panel

grooved pavement

garage door

board formed concrete

board guidance

30th Ave SW - Along 30th Avenue SW the Board would like to see further refinement that creates a more neighborly response, perhaps creating a connection to the courtyard or common residential entry, terracing slope down to the courtyard and patios, and clarifying both the landscaping and fall protection along this edge (DC2-A1, CS1-C).

design response

The steep slope located between our property line and the edge of the road provides a variety of challenges. As part of the SIP review process, the design team has been coordinating directly with SDOT on the required street improvements. As such, these improvements have an impact on the relationship between the street on 30th ave, the steep slope, and the project's intended courtyard.

- In coordination with SDOT, the sidewalk will be provided on the west side of the street, in order to connect safely to the greater sidewalk network. The street will also be widened in an effort to better support the existing neighborhood, as well as provide safe transit for fire and medical vehicles. The west side of the street will have a curb, and where required a retaining wall with safety guard along the edge of the slope.
- The landscape design along 30th Ave employs a variety of pre-cast concrete sculptural landscape elements which help to terrace the landscape and provide benches and steps in order to activate the courtyard and visually connect it to 30th Ave.
- The landscape design along this façade continues to develop the layering concept proposed at EDG, softening the hillside with layers of planting, adding texture and color for both the building's residents and neighbors to enjoy. Bioretention planters double as retaining walls in order to help provide softer grade transitions.
- Several of the 1st floor units have access to patios, and the majority of the upper level units have balconies which help to activate the façade and provide a direct visual connection to 30th Ave.
- A residential entry has been added to the northwest node as recommended by the board. A stair and associated bike runnel have been provided in order to allow residents a neighborly, and easy access to 30th and beyond.

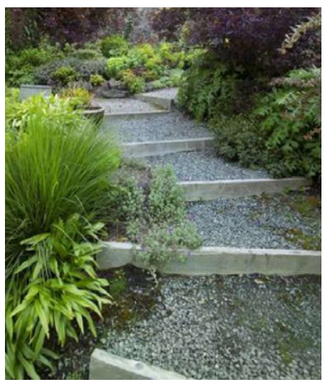
design guidelines

DC2-A1. Site Characteristics and Uses, CS1-C Topography


terraced landscape


runnel at stair


vehicular barrier per SDOT/AASHTO standards


terraced landscape

board guidance

North Edge - Echoing public comment, the Board was unclear on the relationship of the proposed massing to the adjacent building to the north. At the next meeting, clarify this condition with sections and window privacy studies. In addition, the Board noted it may be more beneficial to provide a step down in massing at this edge than at the south end and would expect to see exploration of this at the next meeting (CS2-D5).

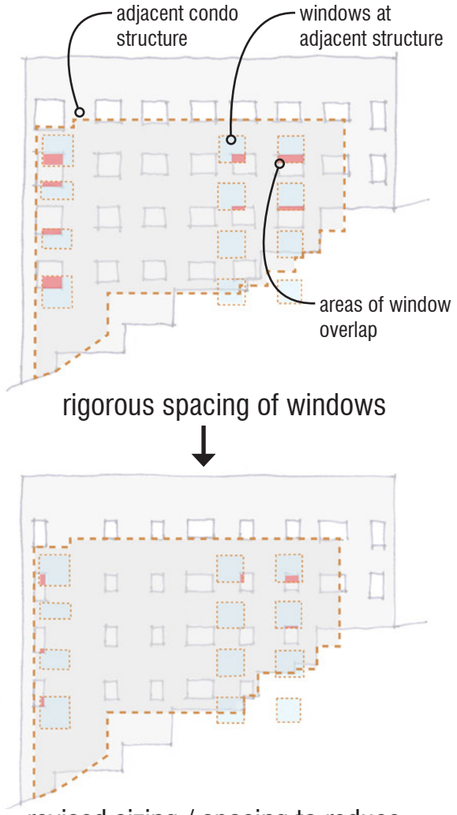
design response

Per the Board's guidance, the taller more prominent corner of the building has been relocated to the south edge, allowing the building to step down adjacent to the neighboring structure. Care has been taken to reduce the impact of the new structure on the neighboring building. A variety of roof deck locations were explored, however programmatically we believe it is important to locate the roof deck connected to an indoor amenity space in order to be more usable throughout the year and various weather conditions. With the dropped massing along the north per the Board's guidance, the roof deck is located to the north as well.

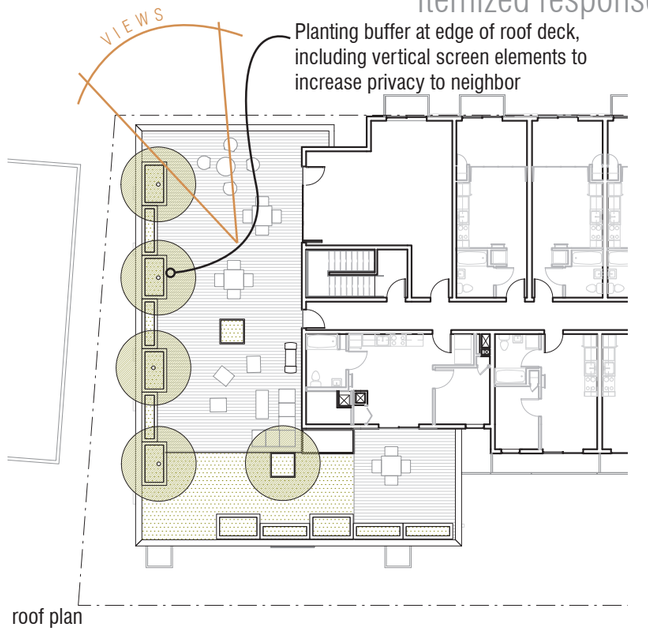
- Previously, the massing was located 5' from the property line on the north side, and was a full 5 stories over a basement tall. In response to the Board's guidance and neighborhood comments, building has been shifted and now tapers from 4'-4" (adjacent to the section of blank wall) to 7'-5" (adjacent to neighboring windows) from the shared property line . Landscaped planters/bioretention planters have been located between the building and property line edge to further mitigate the impact of the building.
- The massing has been modified to step down at the northern edge, in response to the neighboring building.
- Glazing on the north façade has been minimized and studied to avoid conflict with the neighboring windows as much as possible, and per neighborhood comment no private balconies are proposed along this facade.
- A landscape buffer including trees is provided on the roof deck to screen the neighboring property from the public amenity space, keeping residents away from the edge and further from the neighboring structure.

design guidelines

CS2-D Height, Bulk, and Scale



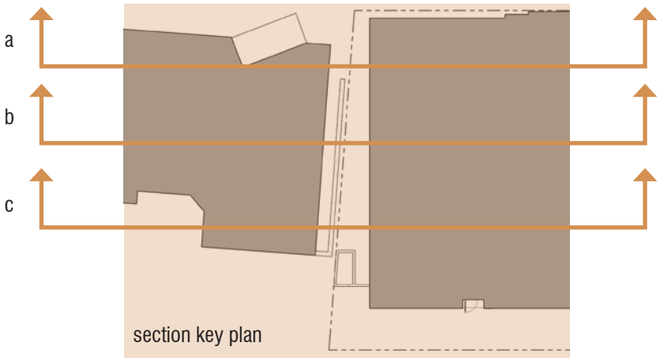
final strategy

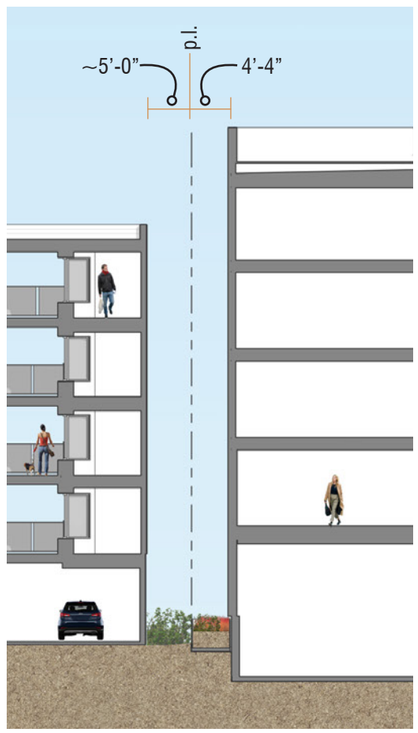


roof plan

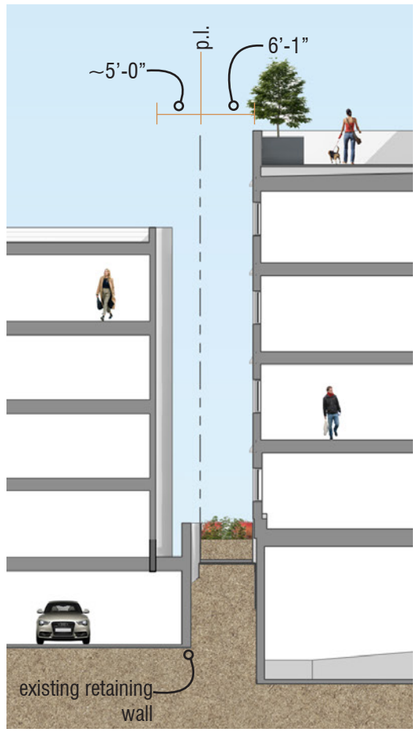
The new structure is held off the property line and moves further away from the existing structure as it moves west, providing the greatest distance between buildings where the neighboring structure's windows are located.

enlargement area

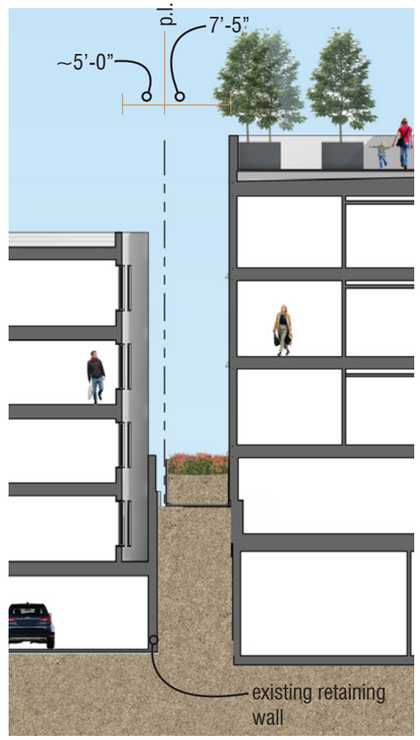




section a



section b



section c

board guidance

Landscaping - The Board appreciated the sketches and precedent images provided; however, the Board would like to see a more accurate depiction of relationship between the sidewalk and the project's courtyard and patios. In addition, explore how terracing and landscaping could be designed to create a more gradual transition along the steep slope (DC2-A1, CS1-C).

design response

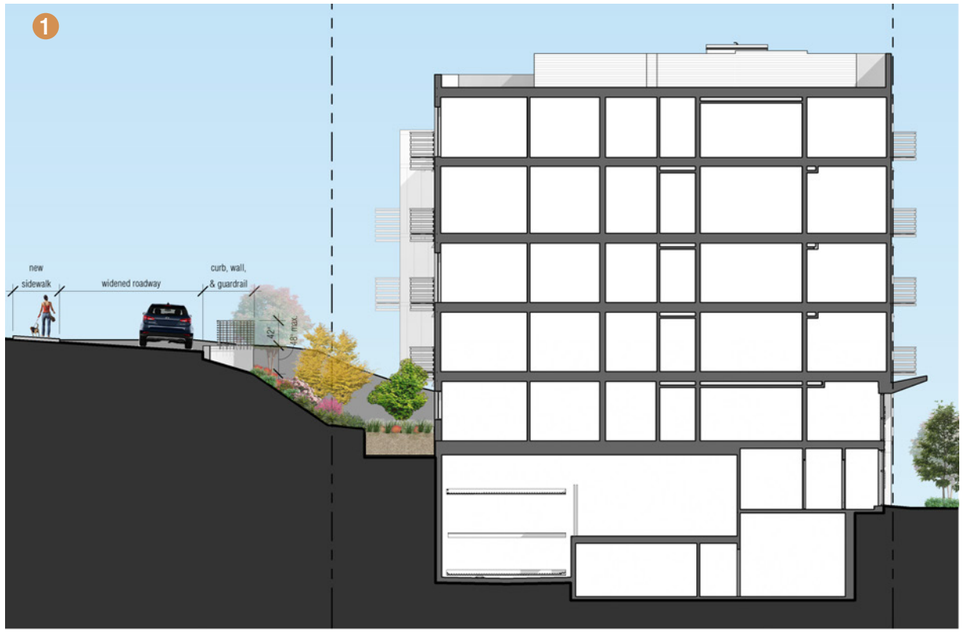
The steep slope located between our property line and the edge of the road provides a variety of challenges. As part of the SIP review process, the design team has been coordinating directly with SDOT on the required street improvements. As such, these improvements have an impact on the relationship between the street on 30th ave, the steep slope, and the project's intended courtyard.

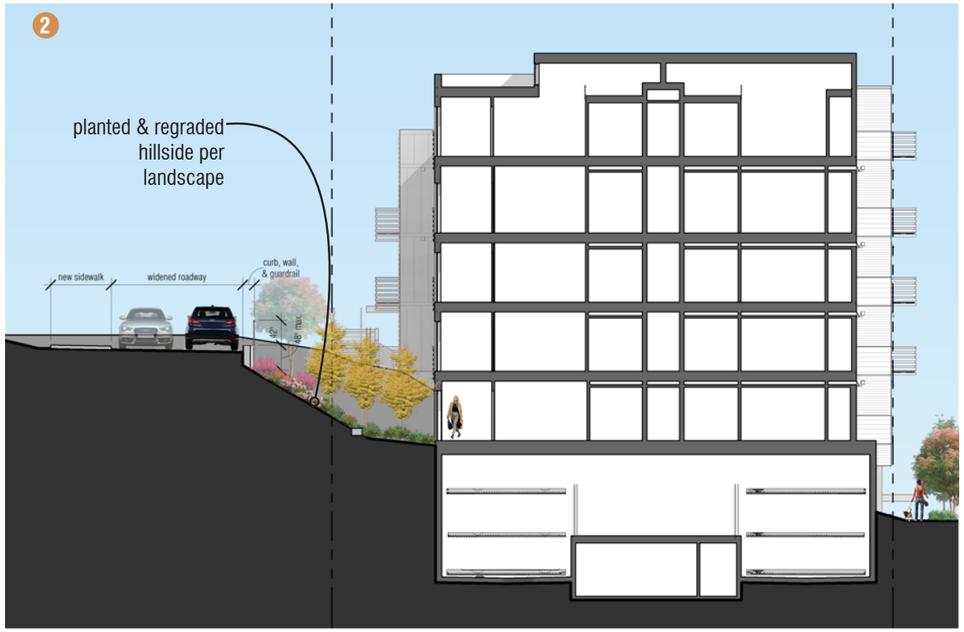
- In coordination with SDOT, the sidewalk will be provided on the west side of the street, in order to connect safely to the greater sidewalk network. The street will also be widened in an effort to better support the existing neighborhood, as well as provide safe transit for fire and medical vehicles. The west side of the street will have a curb, and where required a retaining wall with safety guard along the edge of the slope.
- The landscape design along 30th Ave employs a variety of pre-cast concrete sculptural landscape elements which help to terrace the landscape and provide benches and steps in order to activate the courtyard and visually connect it to 30th Ave.
- The landscape design along this façade continues to develop the layering concept proposed at EDG, softening the hillside with layers of planting, adding texture and color for both the building's residents and neighbors to enjoy. Bioretention planters double as retaining walls in order to help provide softer grade transitions.
- Several of the 1st floor units have access to patios, and the majority of the upper level units have balconies which help to activate the façade and provide a direct visual connection to 30th Ave.
- A residential entry has been added to the northwest node as recommended by the board. A stair and associated bike runnel have been provided in order to allow residents a neighborly, and easy access to 30th and beyond.

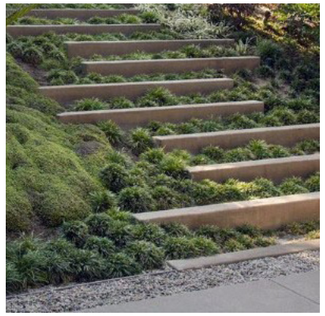
In addition to the direct access from the residential entry to 30th, a second meandering pathway extends from the courtyard patios to the sidewalk on 30th.

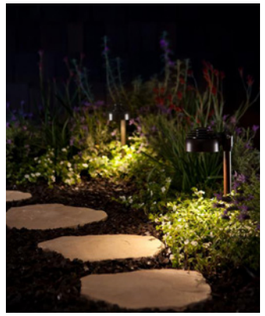
design guidelines

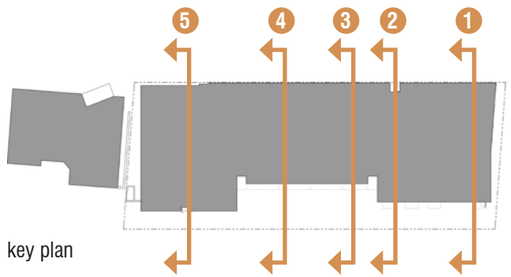
DC2-A1. Site Characteristics and Uses
CS1-C Topography

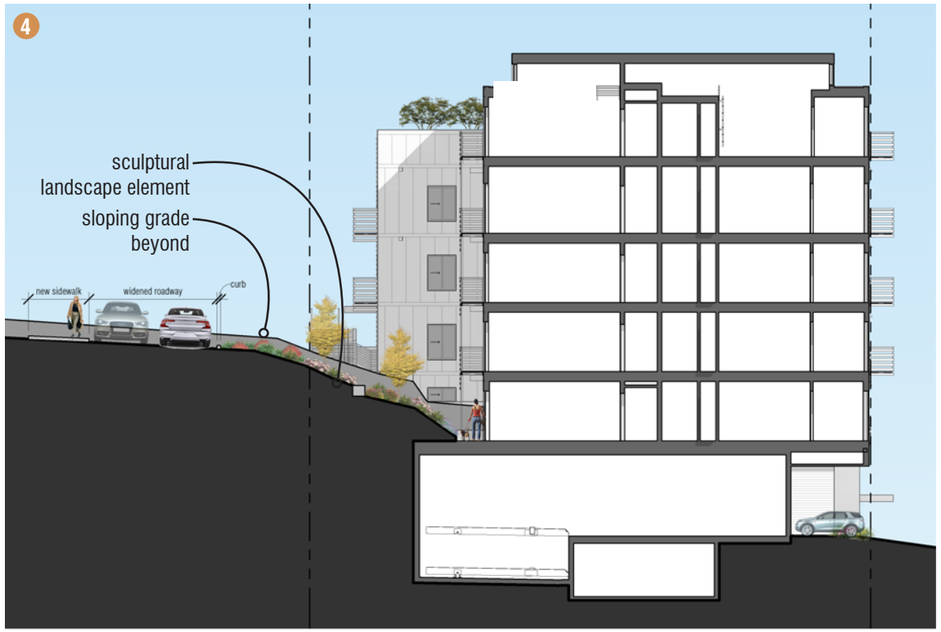


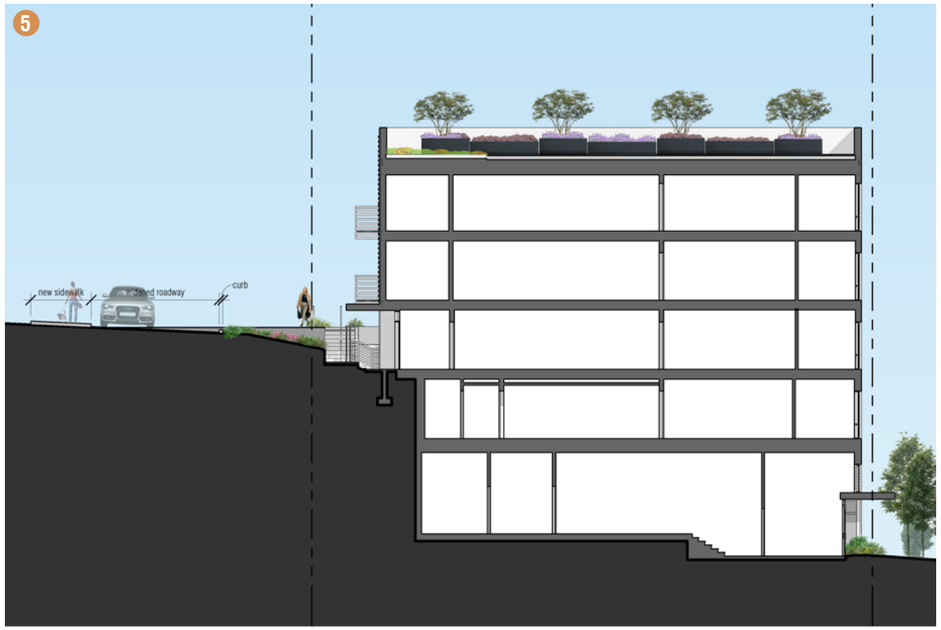




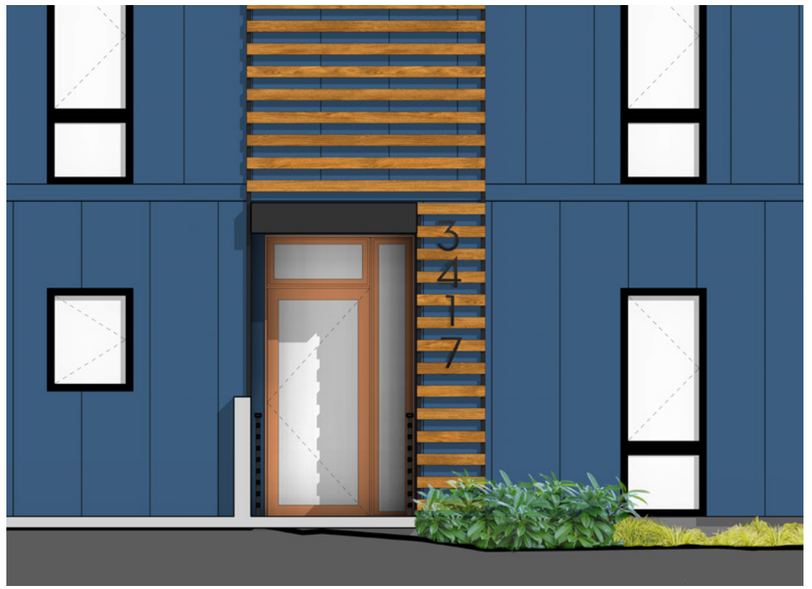




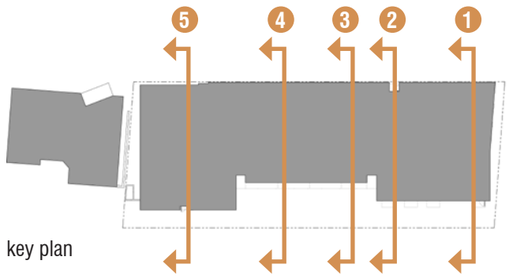




30TH AVENUE ENTRY



A resident-only entrance/exit has been provided facing 30th Ave SW. This allows for a neighborly pedestrian and bike connection to 30th Ave SW and SW Admiral Way beyond with a stair and runnel connection. The entrance takes its material cues from the lobby entrances on Harbor Ave SW, using wood accents, a metal awning, and a pop of color with coral door and windows, while still maintaining a more residential scale.



board guidance

Landscaping - The Board was inclined to support removal of the Exceptional tree to accommodate the project's new landscaping and courtyard but before recommending approval of this design, they would like to hear a summary of the SDCI tree reviewer's feedback regarding the health of the existing tree (DC2-A1, CS1-C).

design response

While this tree meets the threshold diameter for a tree to be considered exceptional per Director's Rule 16-2008, it does not meet the definition of an exceptional tree. The arborist's report (Hailey Mackay, ASLA of Moss Studio) indicates that there is "no evidence to suggest it has historical value, and from a type 1 evaluation it does not appear to have ecological or aesthetic value." Please see attached report dated 17 April 2020. The report designates the tree as being in poor condition, as follows:

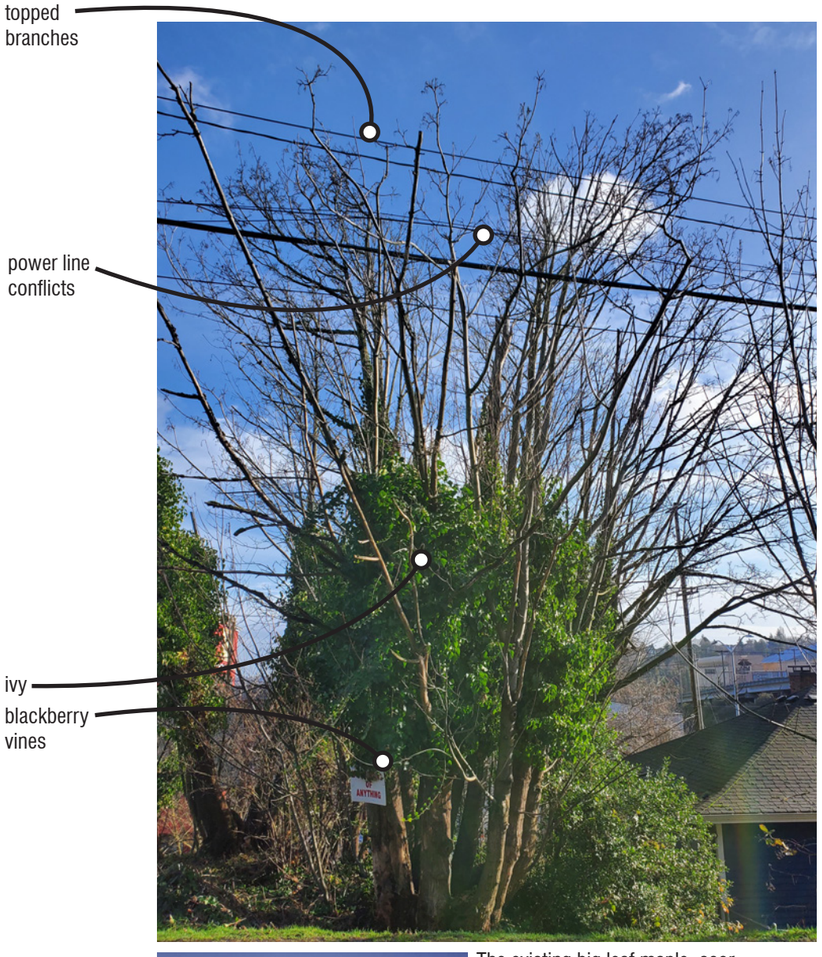
The tree appears to have been infested with ivy and blackberry for many years, as ivy is present in the upper canopy, and the canopy is very sparse with many dead branches. It is my opinion that this tree would be unlikely to survive impacts from construction, even if a tree protection area was erected around the dripline for the duration of construction activities. This tree may even pose a potential hazard to proposed structures and people on site if the tree or any large limbs were to fail during or after construction. I recommend the removal of this tree, to be replaced on site by 3 native or adapted tree species at minimum 2" caliper for deciduous and broadleaf, and minimum 7' height for conifers.

Removing the tree allows for healthy growth of new trees and plants on the site, native species as recommended by the report and selected by the landscape architect.

Note: SDCI tree reviewer provided no additional feedback.

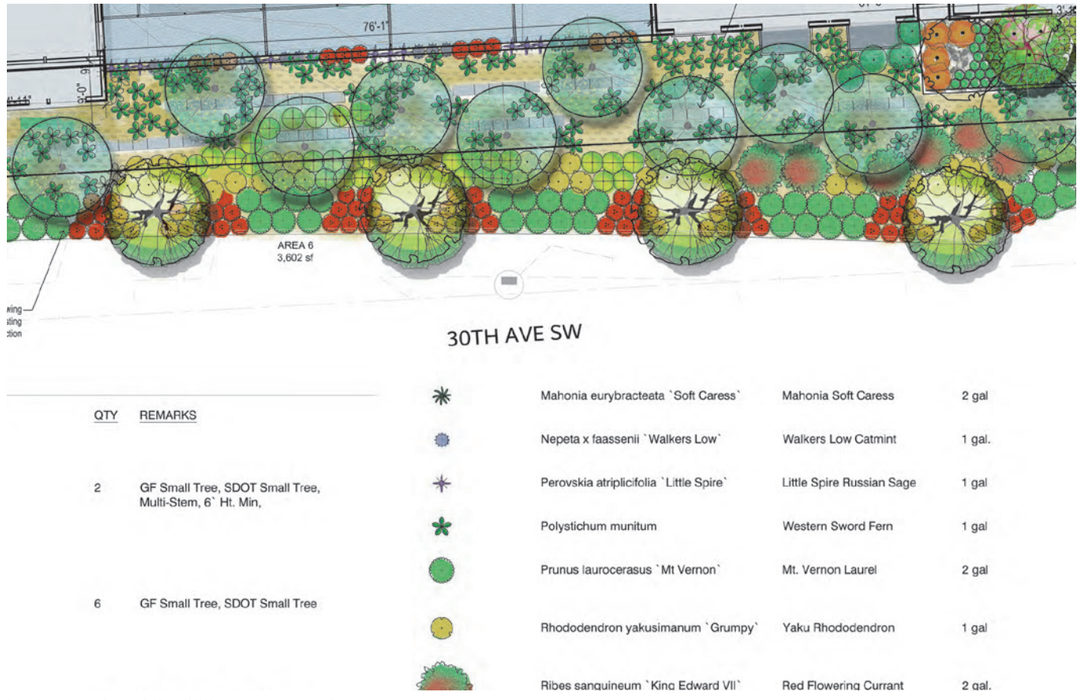
design guidelines

DC2.A1 site characteristics & uses
DC2.A2 reduced perceived mass
DC3.C2 amenities & features
DC3.C3 support natural areas

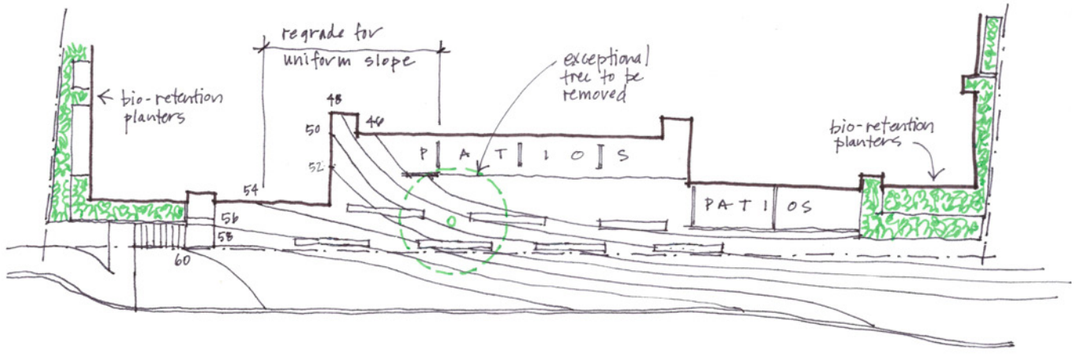


A healthy big leaf maple

The existing big leaf maple, *acer macrophyllum*, that is located on the west side of the site. The maple has been poorly maintained and topped many times. In addition to being topped, an overgrowth of ivy, blackberry vines, and tangled power lines have contributed to its poor condition. This poor condition has been verified by a certified arborist.



landscape plan of the 30th ave courtyard



- Re-grade allows for patios at lowest level and maintains a lower perceived mass at north node, as structure is buried below grade.
- Removing trees allows for sculptural landscape elements and new healthy trees

board guidance

Materials - As noted above, the Board expects to see material application and detailing which further breaks down the height, bulk, and scale of the simple massing form (DC2-B1, DC2-C1, DC4-A1).

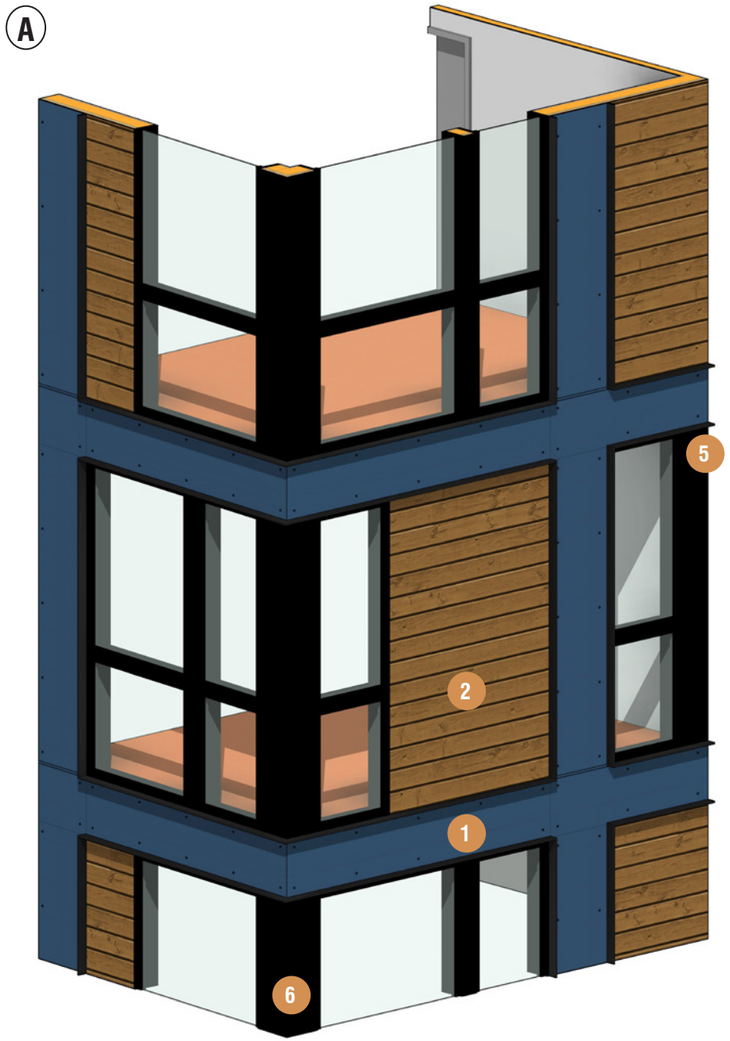
design response

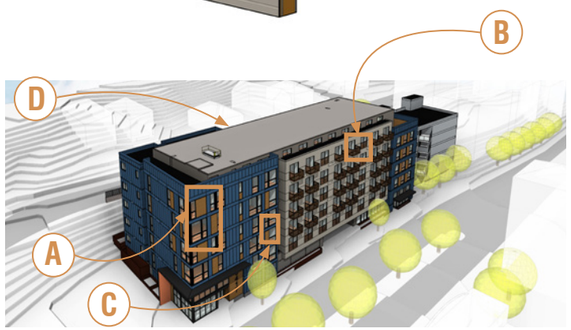
The project continues to explore material options and detailing to break down the building's massing. Regimented panel seams and a lively window pattern are used to create a playful expression at the north corner. The remainder of the north and south modes uses the same material palette, but with an offset panel seam pattern and regimented windows and doors. At the center interlocking bar form, simple window patterns and plank siding quiet this center mass. The use of wood railings and screens further reinforces the residential scale. The architectural expression of the north and south nodes are further distinguished from the center mass through the detailing.

- Windows and doors on the north and south node are recessed to provide an expression distinct from the center interlocking mass.
- Careful attention has been made to apply a logical panel seam rhythm to the windows, particularly at the southwest corner element where all windows and wood panels fit within the panel seams.
- The scale of the siding at the central mass reflects the adjacent residential neighborhood, allowing the north and south nodes to act as anchoring masses.
- The gaskets along Harbor Ave are fully expressed (without balconies disguising the change in plane) which contribute to a massing concept scaled appropriately to fit with the industrial and commercial zones it abuts. Alternatively, the gaskets along 30th Ave are connected to the longer balcony expression in response to the residential scale of the adjacent zone.
- High quality materials exterior materials are provided.

design guidelines

DC2-B-1. Façade Composition
DC2-C-1. Visual Depth and Interest
DC4-A-1. Exterior Finish Materials





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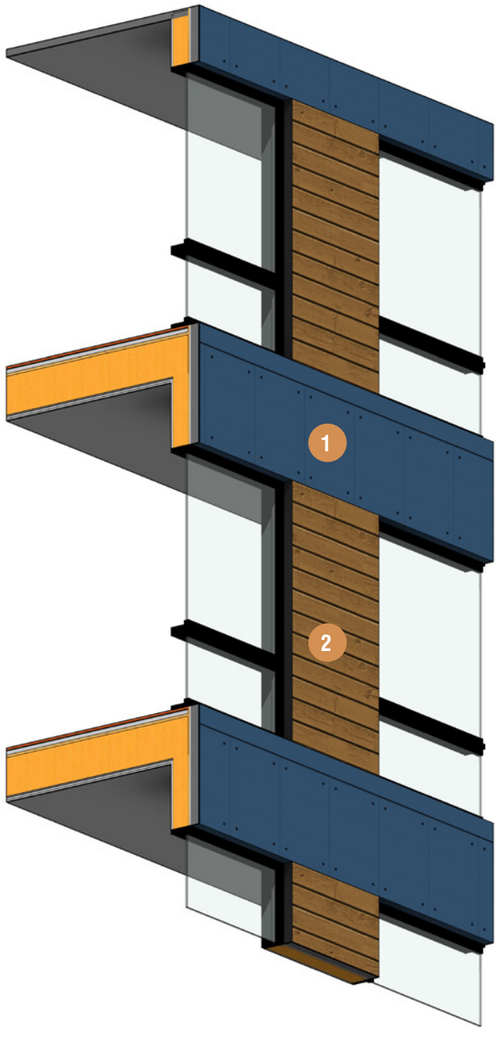

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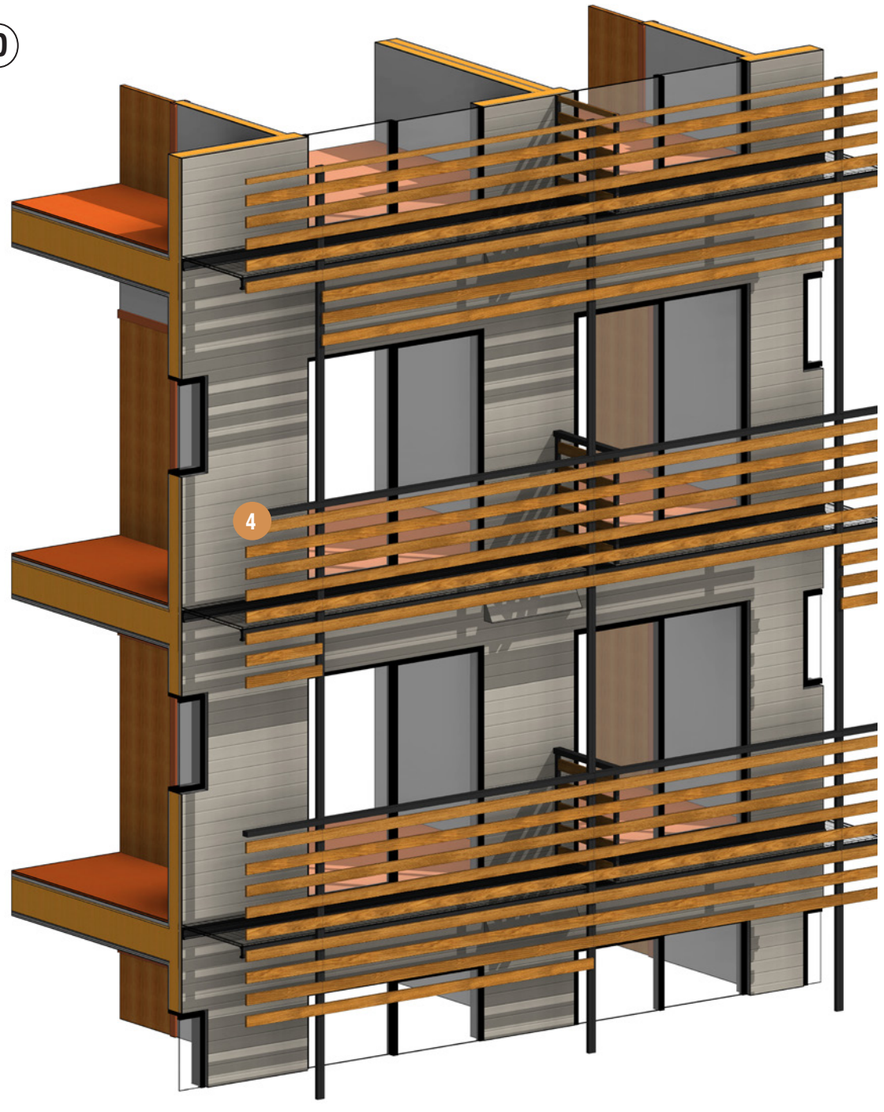
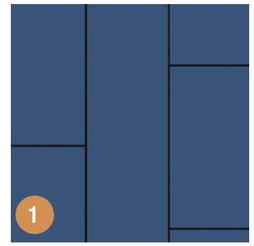
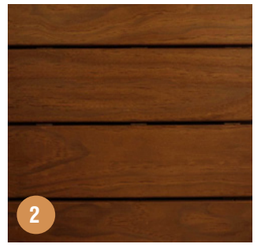


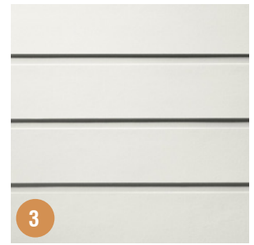
MATERIALS



Equitone Pictura PG444, 3/8" reveal with exposed fasteners



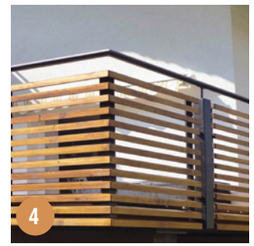
Stained cedar siding w/reveal



4" & 8" Cementitious Board Lap Siding w/1/2" integrated reveal

Siding Paint A: Sherman Williams, Dovetail

Siding Paint B: Sherman Williams, Dorian Gray



Custom metal balconies with stained wood horizontal rails

Black vinyl windows with extended frame

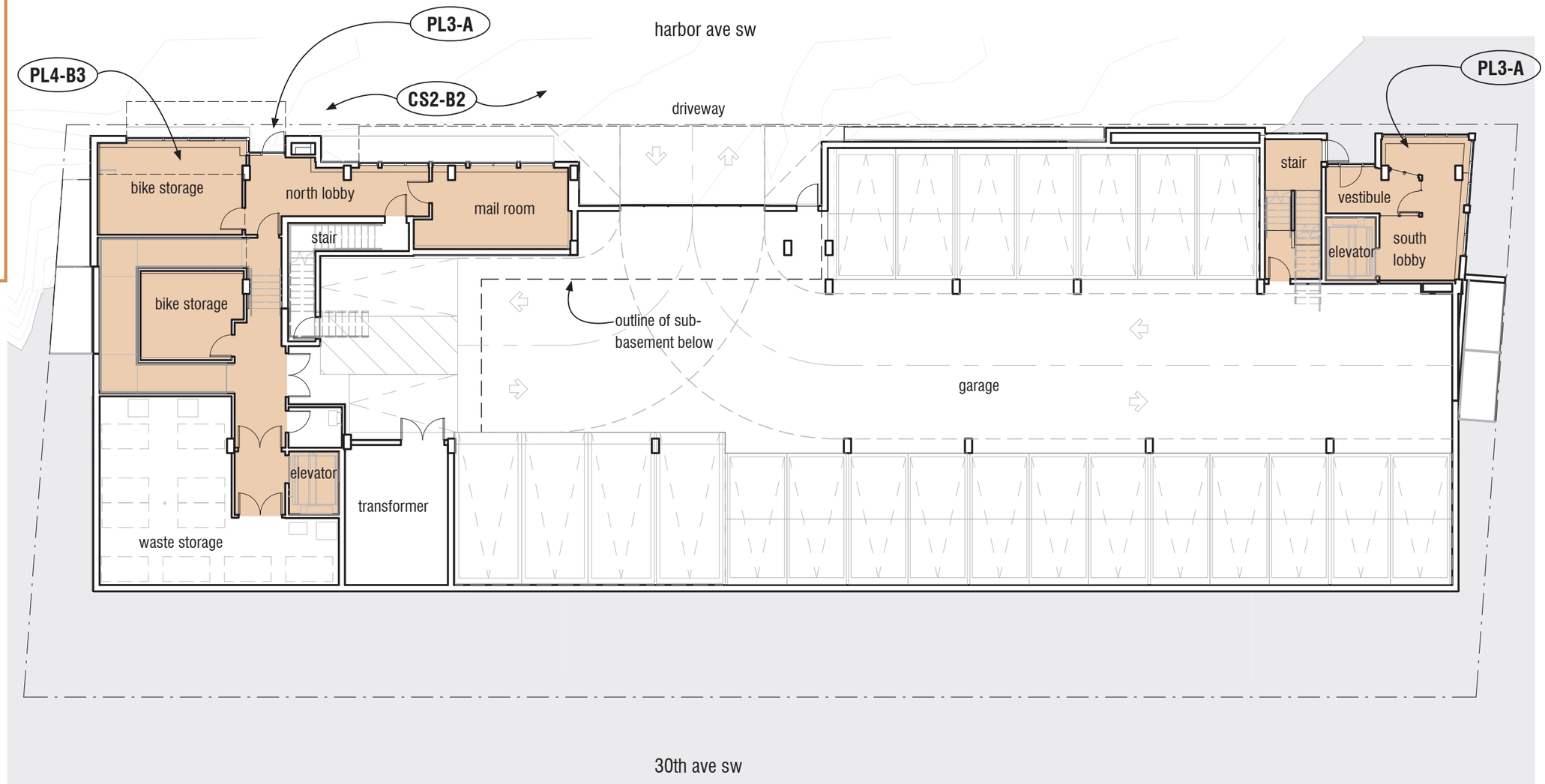
Metal accent panels, black to match window assemblies

Custom metal vent shroud

Metal panels painted Benjamin Moore, Autumn Cove

design guideline key

CS1-C1 Land Form
CS1-C2 Elevation Changes
CS1-D1 On-site Features
CS1-E2 Adding Interest with Project Drainage
CS2-A Location in the City & Neighborhood
CS2-B2 Connection to Street
CS2-D Height, Bulk, & Scale
PL2-D1 Design as Wayfinding
PL3-A Entries
PL4-B3 Bike Connections
DC1-C2 Visual Impacts
DC2-A1 Site Characteristics & Uses
DC2-A2 Reducing Perceived Mass
DC2-B1 Façade Composition
DC2-B2 Blank Walls
DC2-C1 Visual Depth & Interest
DC4-A1 Exterior Finish Materials



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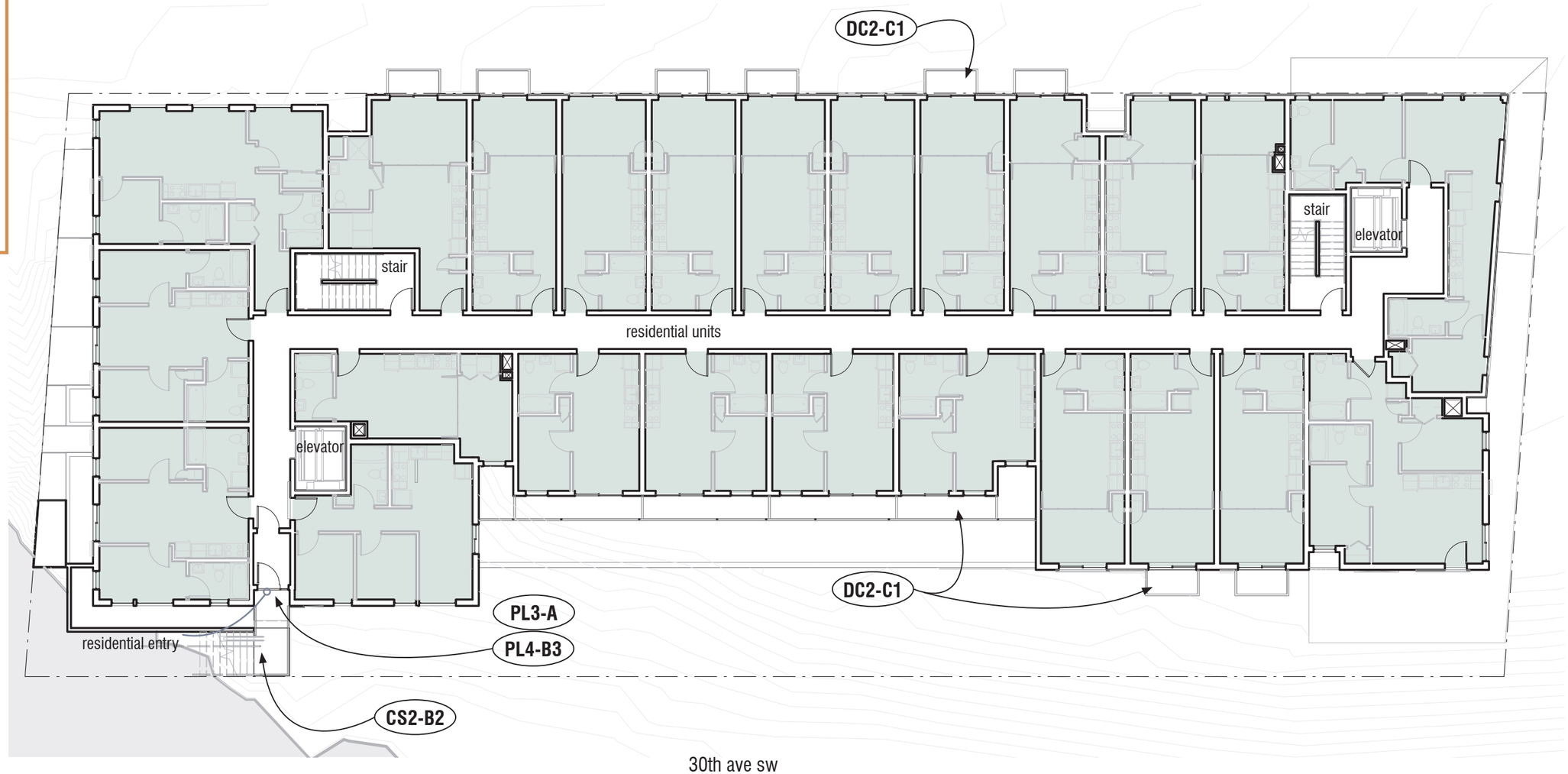
DC2-C1 Visual Depth & Interest
DC4-A1 Exterior Finish Materials



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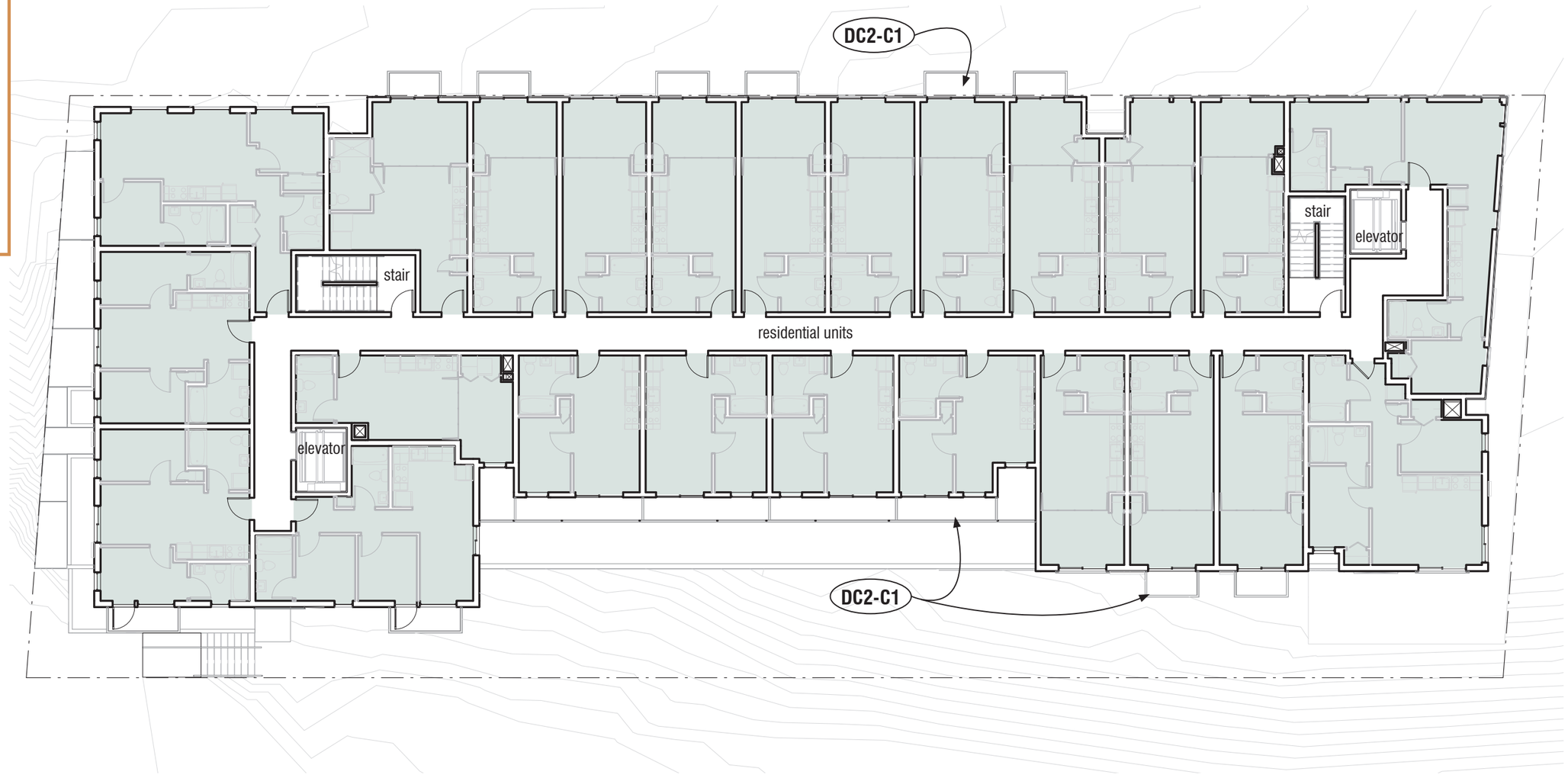
DC2-B2 Blank Walls
DC2-C1 Visual Depth & Interest
DC4-A1 Exterior Finish Materials



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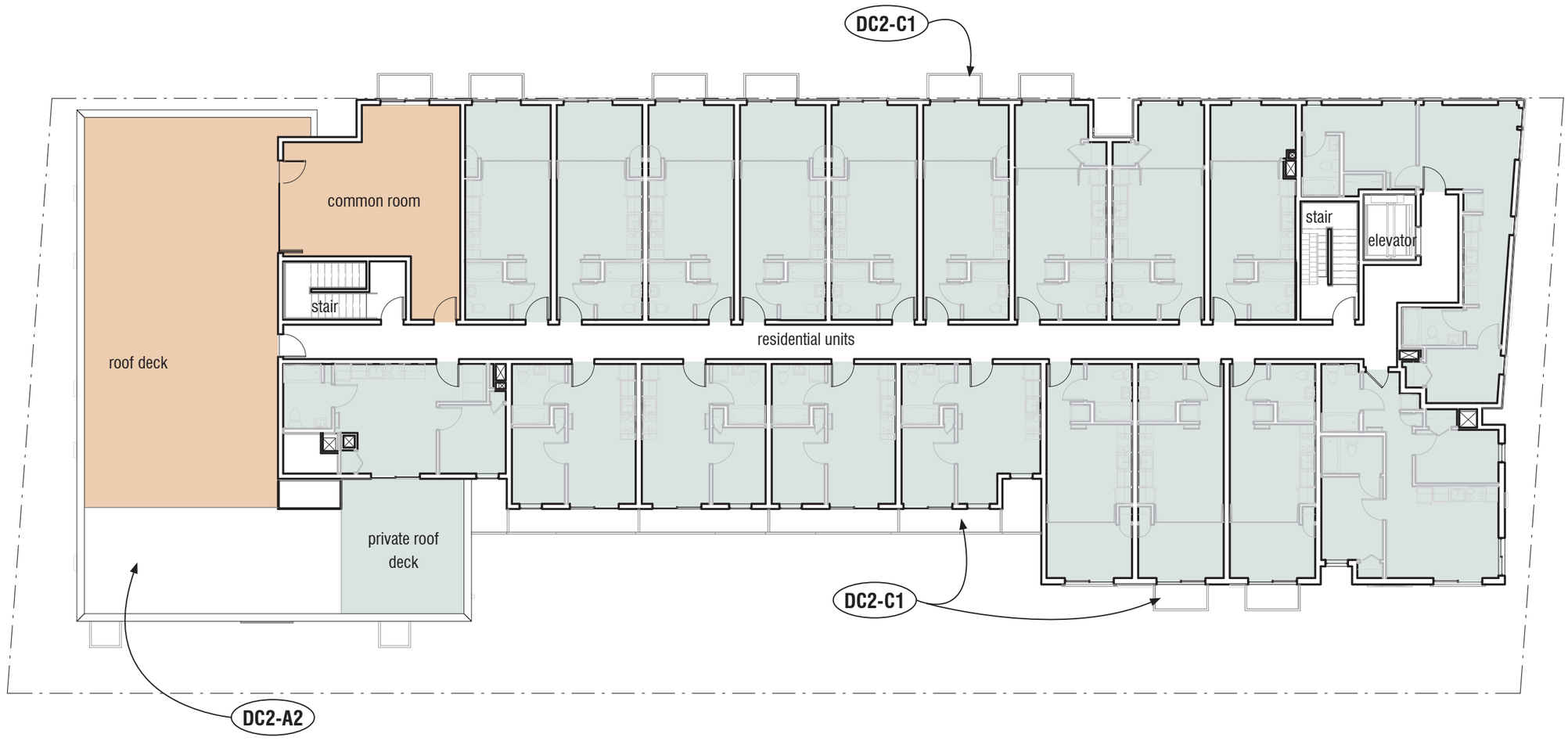
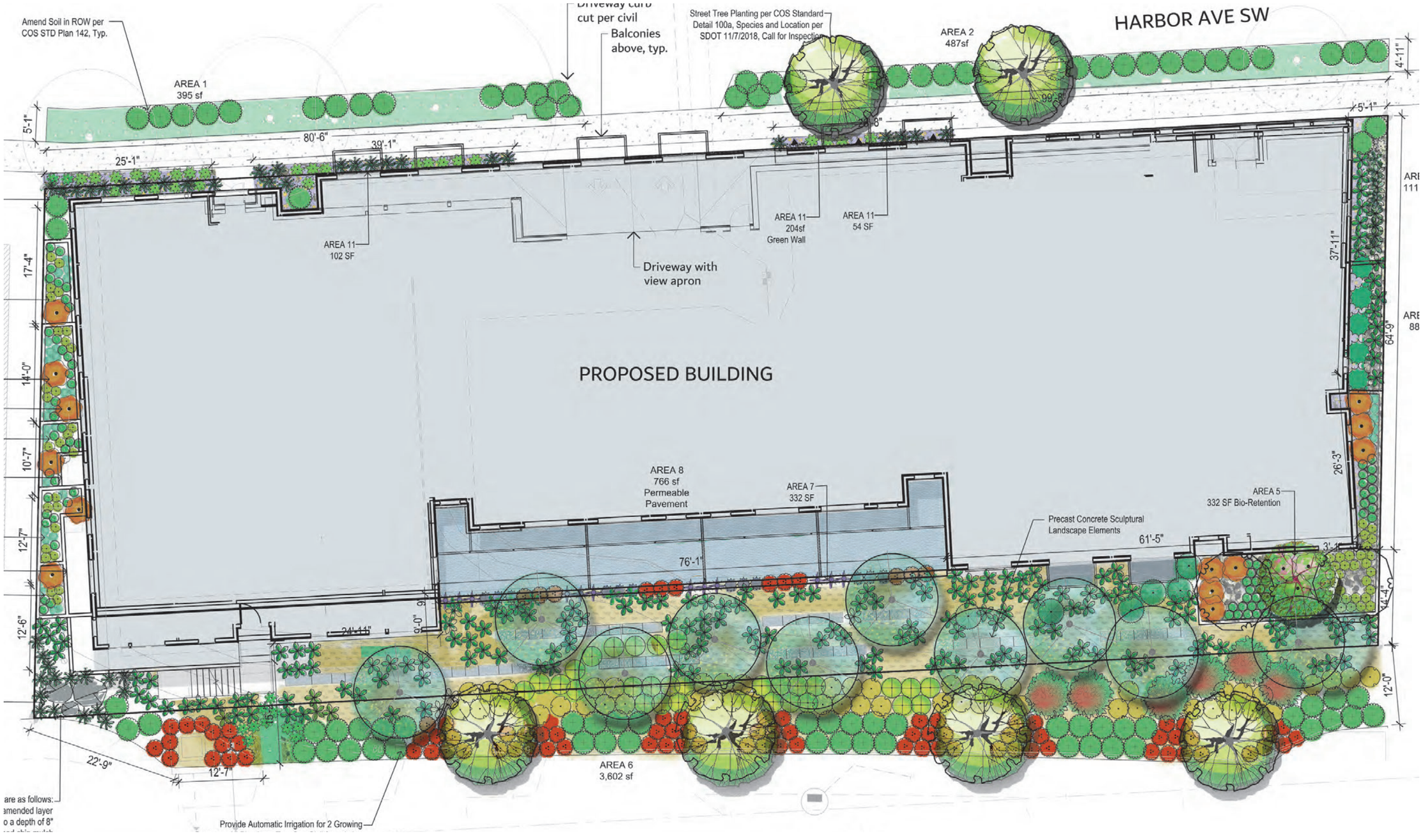
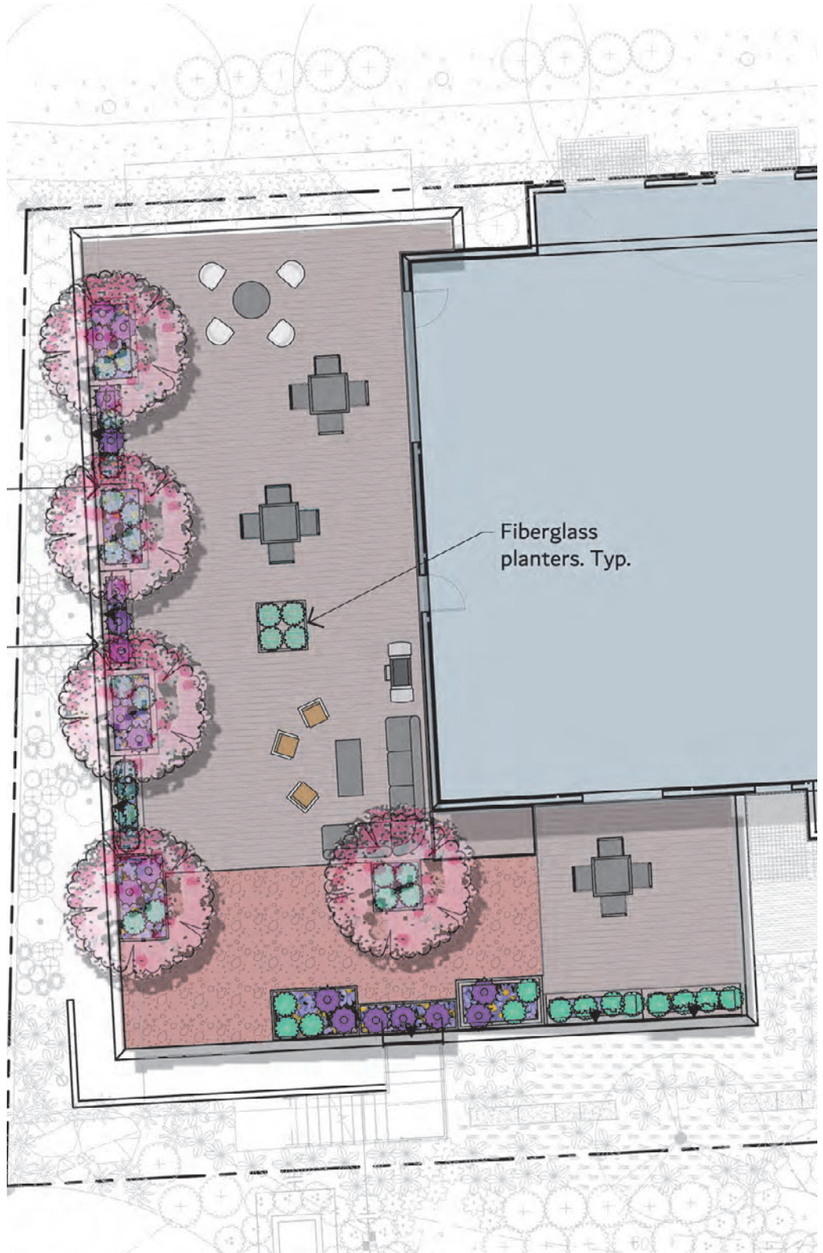
DC2-C1 Visual Depth & Interest
DC4-A1 Exterior Finish Materials




HARBOR AVE SW
Amend Soil in ROW per COS STD Plan 142, Typ.
AREA 1
395 sf
Balconies above, typ.
Street Tree Planting per COS Standard Detail 100a, Species and Location per SDOT 11/7/2018, Call for Inspection
AREA 2
487sf
5'-1"
80'-6"
39'-1"
25'-1"
AREA 11
102 SF
AREA 11
204sf
Green Wall
AREA 11
54 SF
Driveway with view apron
4'-11"
5'-1"
37'-11"
64'-9"
PROPOSED BUILDING
17'-4"
14'-0"
10'-7"
12'-7"
12'-6"
AREA 8
766 sf
Permeable
Pavement
AREA 7
332 SF
AREA 5
332 SF Bio-Retention
Precast Concrete Sculptural Landscape Elements
61'-5"
76'-1"
24'-11"
9'-0"
26'-3"
14'-4"
12'-0"
22'-9"
12'-7"
AREA 6
3,602 sf
Provide Automatic Irrigation for 2 Growing




evergreen clematis


red flowering currant


paperbark maple


spanish lavender


swordleaf rush


golden variegated sweet flag


midwinter fire dogwood


ruby stella daylilly


princeton sentry ginkgo

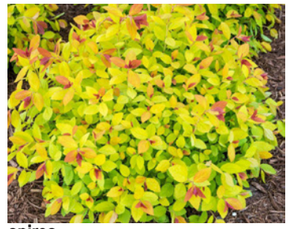

small fruited bulrush


sweet box


kelseyi dogwood


red barrenwort


serviceberry


spirea


mt. vernon laurel


little spire russian sage


evergreen huckleberry


western sword fern


yaku rhododendron

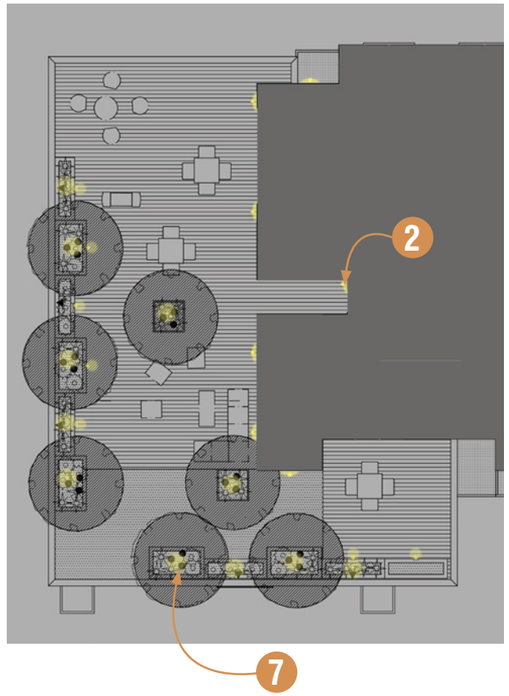

vine maple

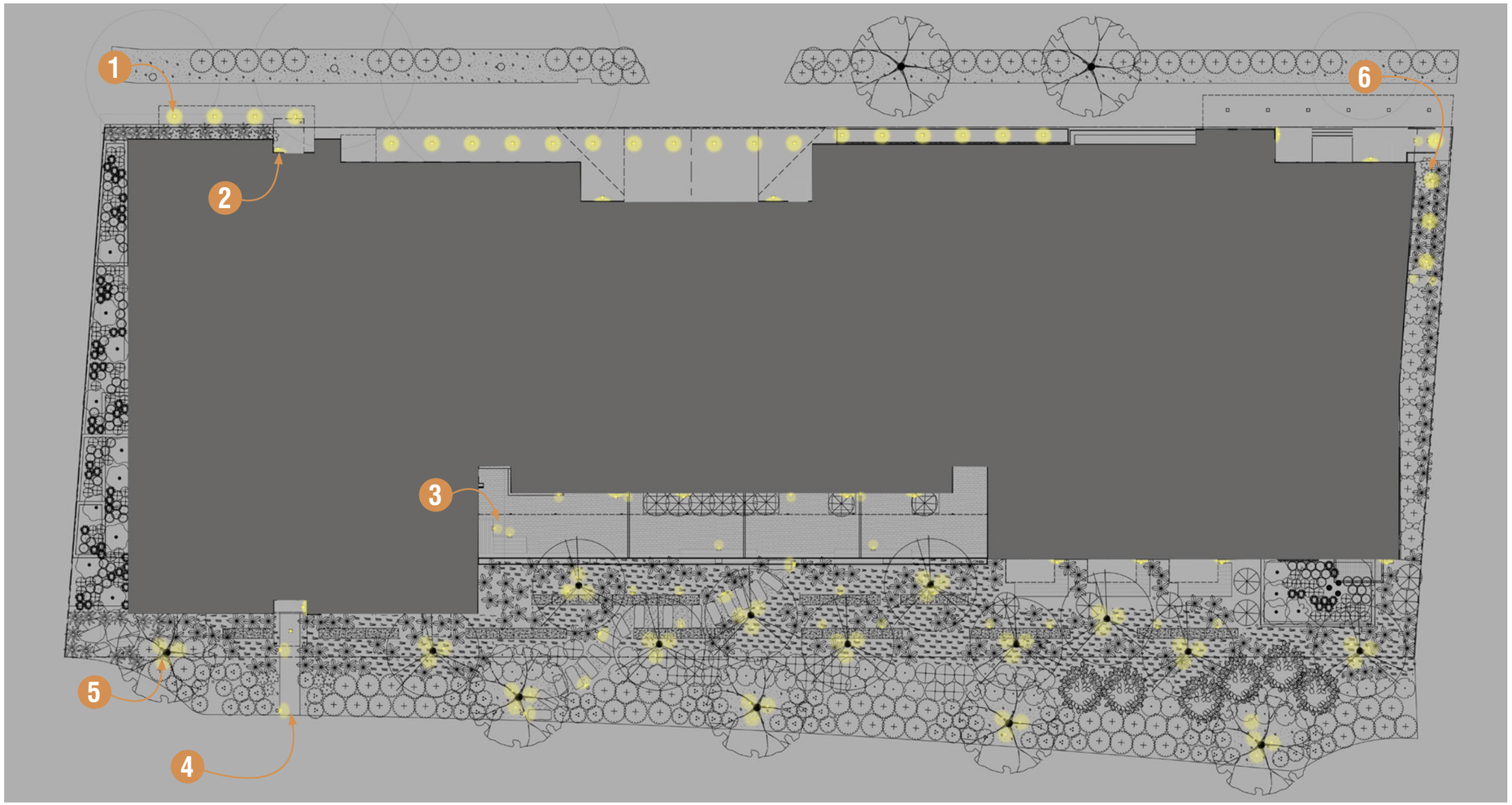

mahonia soft caress

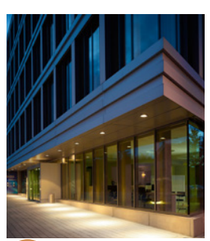

soft rush

lighting strategy

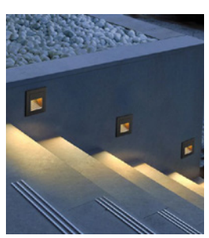
The lighting strategy seeks to provide illumination for wayfinding and security while being mindful of the residential neighbors. The types of fixtures selected focus light downward, targeting specific areas, rather than spilling light upwards.



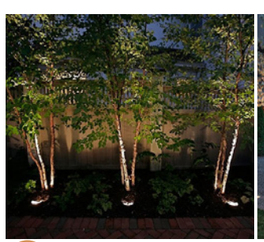


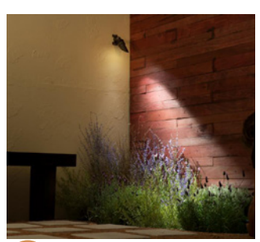

1 downlight

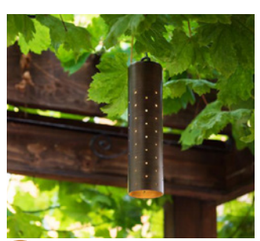

2 wall sconce


3 step light


4 bollard


5 landscape accent


6 bio planter/water feature accent


7 landscape accent

design guideline key

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PL3-A Entries
PL4-B3 Bike Connections
DC1-C2 Visual Impacts
DC2-A1 Site Characteristics & Uses
DC2-A2 Reducing Perceived Mass
DC2-B1 Façade Composition
DC2-B2 Blank Walls
DC2-C1 Visual Depth & Interest
DC4-A1 Exterior Finish Materials

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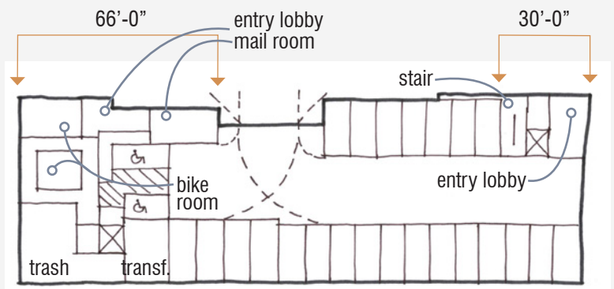
DRAFT - TO BE RENDERED FOR FINAL
3417
BICYCLES

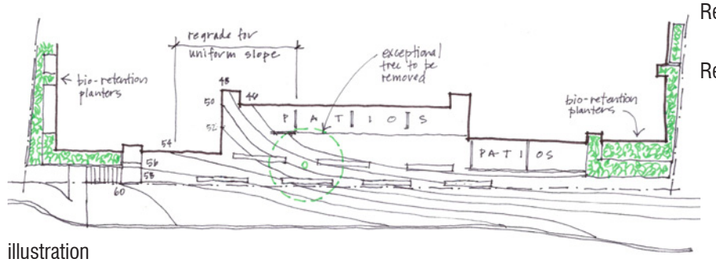
12.0 REQUESTED DEPARTURES | departure matrix

LAND USE CODE REQUIREMENT	PROPOSED REQUEST	PROPOSED RATIONALE	DESIGN GUIDELINES
STREET-LEVEL PARKING 23.47A.032.B.1.b			
Within a structure, street-level parking shall be separated from street-level, street-facing facades by another permitted use. This requirement does not apply to access to parking meeting the standards of smc 23.47A.032.a	The project proposes a portion of the street-level facade to be street-level parking without an intervening permitted use.	The project is located in the C1 zone, which is an auto-oriented, primarily retail/service zone that serves surrounding neighborhoods. When a development contains residential uses, their parking must meet NC1 standards, which requires street level parking to be separated from the facade by another permitted use. Providing a permitted use such as a narrow access corridor in front of the street-level parking would require that we push the entire edge of the building to the property line, with no modulation or relief and still without a visually interesting use. The parking cannot be further pushed westward due to shoring constraints. By allowing the garage to be along the street-facing façade for a portion of the facade, the edge of the building can be stepped back from the property line to allow a separation between the building and sidewalk. This modulation provides an opportunity for visual interest which enhances the pedestrian experience and space. Rather than provide a hard, foreboding edge wall at the entire sidewalk, a landscaped and pedestrian-oriented buffer accommodates artwork, green walls & planters and provides a more viable separation between the garage and street. In response to the Board's early design guidance comments, we have studied the garage layout and reconfigured it to significantly reduce the amount of non-conformance by making the following revisions to the design: 1. We have located the residential bike parking along Harbor Ave, as requested by the Board, to support this mode of transportation, based on PL4-B2. This will provide ease of use for bicycle users by giving them a direct and convenient path from the street to the storage room, encouraging the room's accessibility, and supporting bicycles as a means of transportation. This heavily glazed bike room will further support bike transport, provide an interesting visual for passersby, and relate to the bike shop directly across the street. 2. We have provided a lobby with an elevator and mail/meeting room on the north side of the building to reduce the amount of blank wall previously proposed. This lobby will encourage pedestrian use and access and bicycle use, and create a welcoming entry that encourages community, which supports design guidelines PL3-A1 Street-Level Interaction and PL4-B3 Bike Connections. 3. We have provided modulation and visual interest along the Harbor Ave SW facade, with a variety of materials, heavily glazed entries and community spaces, custom art screens, green walls, and planters that will provide visual interest and variety while enhancing the pedestrian environment per DC2-B-2 Blank Walls and DC1-C2 Visual Impacts. It also allows for increased setbacks along Harbor Ave, providing a more generous streetscape to encourage interaction with the building, per CS2-B2.	CS2.B2 connection to the street PL1.A1 enhancing open space DC2.D2 texture DC3.C2 amenities & features



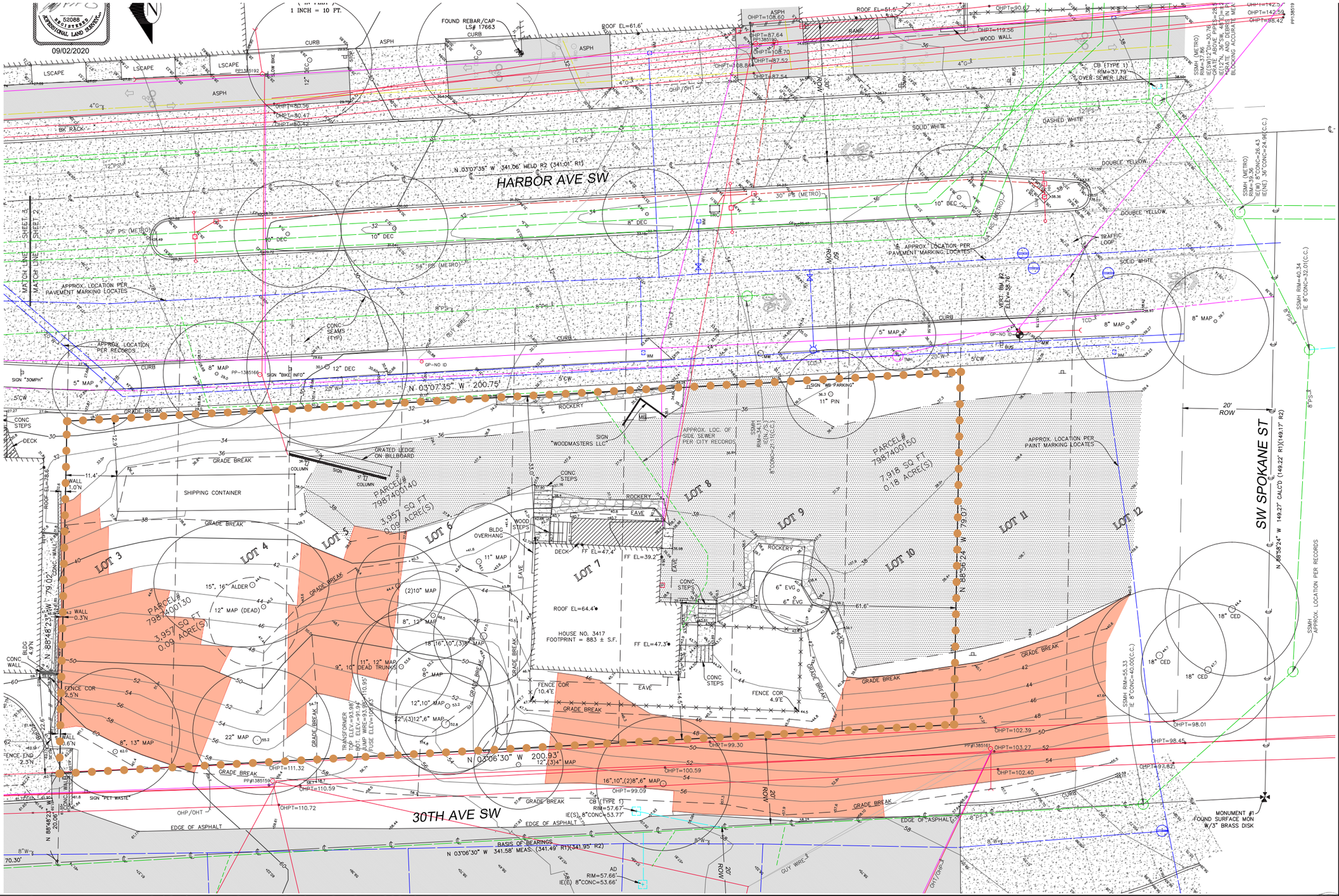
illustration

EXCEPTIONAL TREE SMC25.11.080.A.2 SMC25.05.675.n.2.c			
Seattle Municipal Code Chapter 25.11 provides protection for trees that are considered exceptional, defined under Director's Rule 16-2008.	The project proposes to remove the existing exceptional tree and replace it with native trees and landscaping as recommended by the Arborist and the Landscape Architect.	While this tree meets the threshold diameter for a tree to be considered exceptional per Director's Rule 16-2008, it does not meet the definition of an exceptional tree. The arborist's report (Hailey Mackay, ASLA of Moss Studio) indicates that there is "no evidence to suggest it has historical value, and from a type 1 evaluation it does not appear to have ecological or aesthetic value." Please see attached report dated 17 April 2020. Note: SDCI tree reviewer provided no additional feedback. Of note, the University of Washington has been studying Big Leaf Maple trees such as ours, as their health has been declining all over the Pacific Northwest without improvement. Removing the tree allows for healthy growth of new trees and plants on the site, with native species as recommended by the report and selected by the landscape architect. Removal of this tree will support a variety of design guidelines. By removing the tree the project 1. Better supports natural areas, as the entire 30th Ave landscaping can be treated as a whole, with healthy plantings that support each other and are selected for longevity 2. Without having to protect the trees' root system, we are able to regrade the hill in order to provide a more uniform slope, accommodate patios on the first floor, and still maintain a "buried" condition at the north node in order to reduce the perceived mass. 3. The regraded area can also better support a healthy landscape, as well as landscape features/amenities such as the concrete sculptural landscape elements.	DC2.A1 site characteristics & uses DC2.A2 reduced perceived mass DC3.C2 amenities & features DC3.C3 support natural areas



illustration

appendix



Terrai
10801 Main Street, Suite 102, Bellevue, W.
phone 425.458.4488 support@ter
www.ter

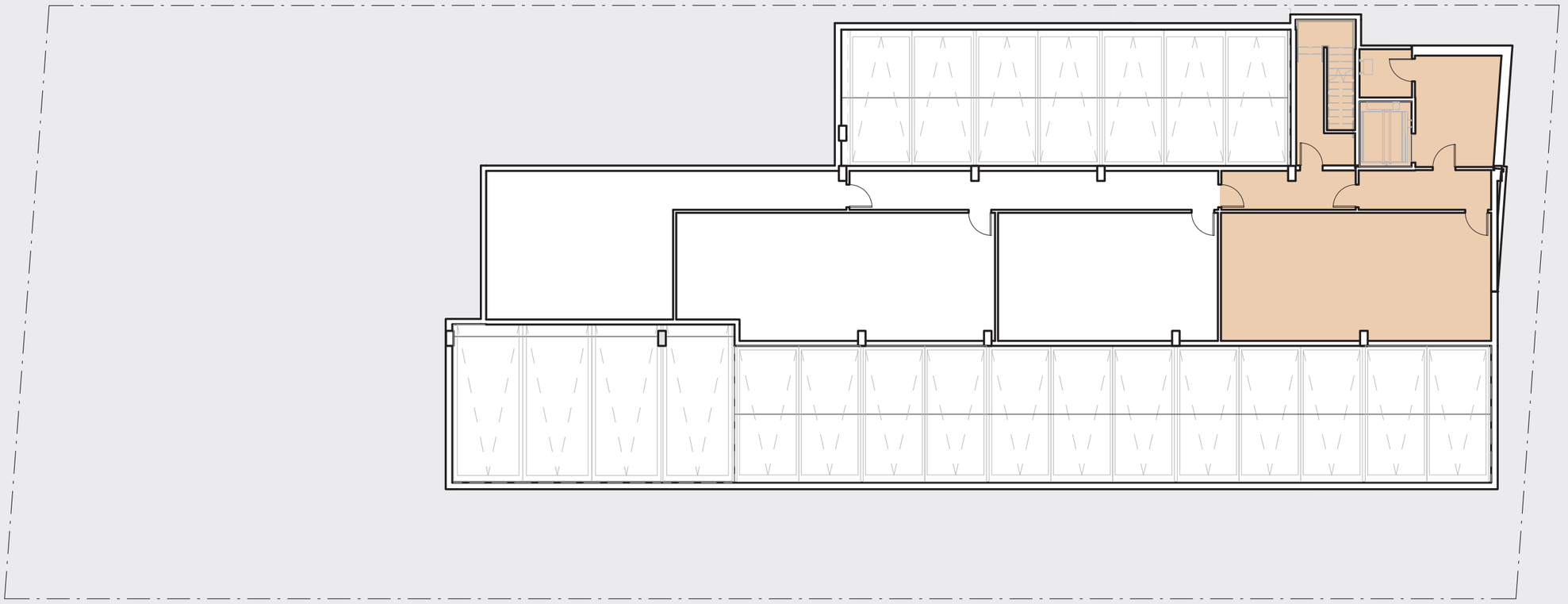
NO	REVISION	DATE
1	UPDATE SEWER INVERT INFORMATION	06/02/20
2	UPDATE SEWER INVERT INFORMATION	09/02/2020

TOPOGRAPIC & BOUNDARY SURVEY
NW 1/4 OF NW 1/4 SEC 13, TWP. 24N., RGE 03E., W.M.
STS HARBOR AVE PROJECT
3405, 3411, 3417 HARBOR AVE SW
SEATTLE WA

JOB NO.:	190630
DATE:	2/20/20
DRAFTED BY:	TLR
CHECKED BY:	JPS
SCALE:	1" = 10'
2	OF 3

north

09/02/2020



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April 17, 2020

Atelier Drome
c/o Michelle Linden
112 Prefontaine Place S.
Seattle, WA 98104

Re: Tree Inventory, Exceptional Tree Designation - 3417 Harbor Ave SW, Seattle

Dear Michelle,

This report summarizes information gathered during the tree inventory conducted on site at the property address 3417 Harbor Ave SW in Seattle, WA. Please see the attached tree inventory map in reference to this report. This report has been updated to include more detailed information of the exceptional tree located on site, section 4.0 for an assessment of the exceptional tree.

Contents:

1.0 Site Conditions

The property is located on a main street at the northwest end of the West Seattle Bridge between a small commercial area, single family residential area and industrial area. The property has one business currently located on site, as well as a gravel parking lot. The landscape is primarily gravel, unmaintained grass, blackberries, ivy and Big Leaf Maples and contains a 40% Steep Slope Environmentally Critical Area (ECA).

2.0 Tree Inventory

I conducted a type 1 visual evaluations of all trees on site according to International Society of Arboriculture (ISA) standards, adhering to the ISA code of ethics and best practices. I inspected the trunks and general growing conditions of trees on site from close range and observed tree canopy

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conditions from afar. Hacking through dense ivy and blackberry was required in order to measure and inspect trunks of many of the trees on site. In inspecting each tree, I recorded the following information:

- Tree Species
- Trunk Diameter at Breast Height (DBH)
- Crown Spread Diameter (CSD)
- Location and Growing Conditions

The City of Seattle regulations regarding trees on private property are specified in Director's Rule 16-2008 which dictates threshold diameters for trees to be considered exceptional. Trees in the right-of-way do not qualify for exceptional tree status but are to be retained and protected throughout development.

The following list records information based on measurements and observations made for 14 trees located on site and 5 trees located in the right-of-way with driplines that extend onto the property. Tree numbers in the left column correspond to numbers shown on the attached survey for location reference (tree inventory map). The column DBH shows Diameter at Breast Height for each tree, CSD shows Crown Spread Diameter for each tree. For trees listed as multi-trunk (MT), the DBH has been calculated per Director's Rule 16-2008. The trees were not tagged.

#	Species	DBH	CSD	Status and Condition Notes
1	Bigleaf Maple (*Acer macrophyllum*)	11"	28'	Multi-trunk (MT). Fair condition, base of tree covered with ivy, crown infested with fallopia vine. Not exceptional.
2	Bigleaf Maple (*Acer macrophyllum*)	22"	13'	Fair condition, base of tree covered in ivy. Not exceptional.
3	Bigleaf Maple (*Acer macrophyllum*)	12"	14'	Dead. Tree covered in ivy, no leaves present.
4	Red Alder (*Alnus rubra*)	23"	20'	MT. Fair condition, base of tree covered in ivy. Dead and broken branches in canopy. Not exceptional.
5	Bigleaf Maple (*Acer macrophyllum*)	14"	9'	MT. Fair condition, base of tree covered in ivy and blackberry. Not exceptional.
6	Bigleaf Maple (*Acer macrophyllum*)	14"	20'	MT. Poor condition, base and trunks of tree covered in ivy and blackberry, broken and dead branches in canopy. Not exceptional.
7	Bigleaf Maple (*Acer macrophyllum*)	16"	22'	MT. Poor condition, base and trunks of tree covered in ivy and blackberry, broken and dead branches in canopy. Two of four trunks appear dead, covered in ivy. Not exceptional.

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8	Bigleaf Maple (*Acer macrophyllum*)	8"	30'	Poor condition. Base and trunk of tree covered in ivy, dead and broken branches in canopy. Not exceptional.
9	Bigleaf Maple (*Acer macrophyllum*)	15.5"	31'	MT. Poor condition. Base and trunks of tree covered in ivy, dead and broken branches in canopy. Not exceptional.
10	Bigleaf Maple (*Acer macrophyllum*)	31"	20'	MT. Poor condition, base and trunks of tree covered in ivy and blackberry, very few live leaves, uneven canopy, many broken and dead branches in canopy. Meets DBH threshold for exceptional trees.
11	Bigleaf Maple (*Acer macrophyllum*)	29.5"	22'	MT. Poor condition. Base and trunks of tree covered in ivy, dead and broken branches in canopy. Not exceptional.
12	Bigleaf Maple (*Acer macrophyllum*)	11"	15'	Poor condition. Trunk heavily leaning, dead and broken branches in canopy. Not exceptional.
13	Shore Pine (*Pinus contorta*)	11"	20'	Good condition. Not exceptional.
14	Windmill Palm (*Trachycarpus fortunei)*	16"	17'	MT. Good condition. Not exceptional.
	Right-of-Way Trees			
A	Bigleaf Maple (*Acer macrophyllum*)	14"	20'	ROW. MT. Poor condition, dead and broken branches in canopy.
B	Bigleaf Maple (*Acer macrophyllum*)	23"	30'	ROW. MT. Poor condition, dead and broken branches in canopy.
C	Sunset Maple (*A. truncatum x platanoides)*	5"	20'	ROW. Fair condition.
D	Sunset Maple (*A. truncatum x platanoides)*	8"	24'	ROW. Good condition.
E	Sunset Maple (*A. truncatum x platanoides)*	12"	36'	ROW. Good condition.

3.0 Required Tree Protection and Retention

One tree on site (#10) meets the DBH threshold to be classified as exceptional and will require a permit to remove. Street trees, though not classified as exceptional, should be retained and protected throughout development. Because the site contains a 40% Steep Slope ECA, trees 6" or larger in diameter may not be removed from undeveloped land without a permit. On developed land, no more than three trees 6" or larger in diameter may be removed in a one-year period without a permit. For the removal of trees greater than 24" in diameter, each tree must be replaced at a rate of 1:1 with a tree that will provide the same canopy coverage at maturity.

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4.0 Exceptional Tree Designation

One tree on site (#10) meets the DBH threshold to be classified as exceptional. While this tree technically meets the exceptional DBH threshold as calculated using Director's Rule 2008-16, it does not meet the criteria for exceptional trees as intended in the narrative description below.

Director's Rule 16-2008
Page 2 of 6 pages

Seattle Municipal Code Chapter 25.11, Tree Protection, provides means for protecting trees in Seattle. Under this chapter, exceptional trees are given particular protections and are broadly defined as follows:

> "Exceptional tree" means a tree or group of trees that because of its unique historical, ecological, or aesthetic value constitutes an important community resource, and is determined as such by the Director according to standards and procedures promulgated by the Department of Planning and Development.

This Director's Rule provides clarification for determining trees that should be considered for exceptional status as well as the standards and procedures for this determination.

Tree #10 is a multi-trunk Bigleaf Maple that is in very poor condition. I found no evidence to suggest it has historical value, and from a type 1 evaluation it does not appear to have ecological or aesthetic value. The tree appears to have been infested with ivy and blackberry for many years, as ivy is present in the upper canopy, and the canopy is very sparse with many dead branches. It is my opinion that this tree would be unlikely to survive impacts from construction, even if a tree protection area was erected around the dripline for the duration of construction activities. This tree may even pose a potential hazard to proposed structures and people on site if the tree or any large limbs were to fail during or after construction. I recommend the removal of this tree, to be replaced on site by 3 native or adapted tree species at minimum 2" caliper for deciduous and broadleaf, and minimum 7' height for conifers.

5.0 Use of This Report

This report provides Atelier Drome detailed information about trees on, or directly adjacent to, the site for the purpose of addressing the City of Seattle's requirements for trees on private property. It is important to note that trees are dynamic, and their conditions can be affected by weather events and environmental changes. Therefore, this report exclusively warrants the conditions of the trees at the time of my evaluation on site. Additionally, Hailey Mackay and Moss Studio cannot be held liable for any damage that results from the failure of any trees or their parts, or the death or decline of any trees on site before, during or after construction.

Best,

Hailey Mackay, ASLA

ISA Certified Arborist #PN-8777A

ISA Tree Risk Assessment Qualified

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4

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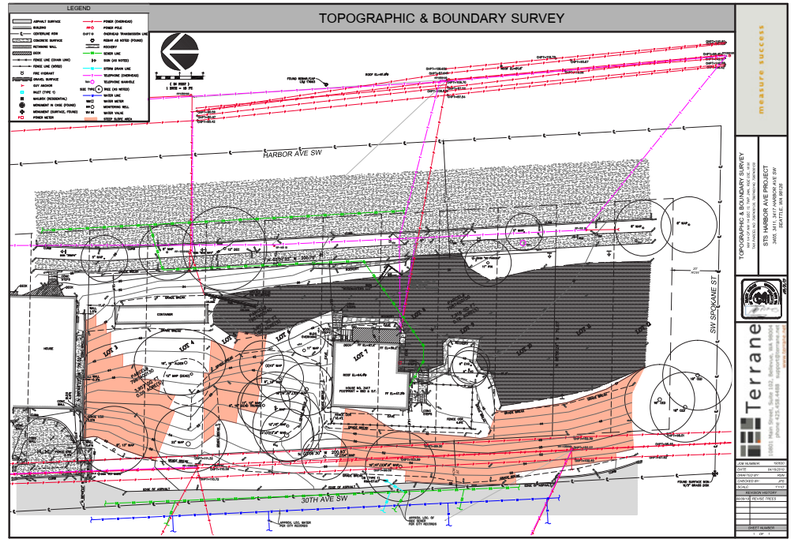
6.0 Photos of Exceptional Tree

1.

2.

Photo 1: winter, ivy infestation in canopy

Photo 2: summer, sparse canopy, dead and broken branches



Data Sheet

WÖHR COMBILIFT 543-2,0

Suitable for condominium and office buildings. For permanent use only!

In case of short time user (e.g. for offices, hotels, a.s.o.) technical adjustments are required. Please contact WÖHR!

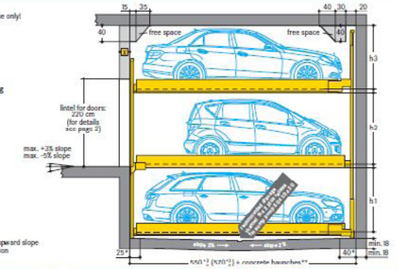
Platforms are in horizontal position to drive on.

Load per platform max. 2000 kg
(load per wheel max. 800 kg)

Special reinforced units for higher parking platform load are available (see 543-2,6).

A1 = Door offset (see page 2 for details)

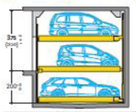
Dimensions in cm



* In this zone, 0% of downward/upward slope in longitudinal and cross direction

** acc notice, point 5

Standard type 543 · 2000 kg

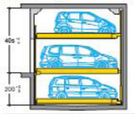


car height	distance
UL Cars/Station wagons up to 175 cm	h3 = 180
EL Cars/Station wagons up to 175 cm	h2 = 180
LL Cars/Station wagons up to 175 cm	h1 = 180

UL = upper level, EL = entrance level
LL = lower level

* If cars and station wagons with a height of up to **190 cm** are parked on the **upper level**, a clear height of **350 cm** above the entrance level is sufficient.

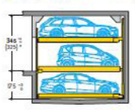
Comfort type 543 · 2000 kg



car height	distance
UL Cars/Station wagons up to 175 cm	h3 = 180
EL Cars/Vans up to 205 cm	h2 = 210
LL Cars/Station wagons up to 175 cm	h1 = 180
Cars/Vans up to 2000 kg max.	

With greater h3 height-values, respectively higher cars can be parked on the upper level. Car heights cannot be greater than 205 cm.

Compact type 543 · 2000 kg



car height	distance
UL Cars/Station wagons up to 140 cm	h3 = 155
EL Cars/Station wagons up to 170 cm	h2 = 175
LL Cars/Station wagons up to 150 cm	h1 = 155

* If cars and station wagons with a height of up to **150 cm** are parked on the **entrance level**, a clear height of **325 cm** above the entrance level is sufficient.

Please attend to restricted car- and platform distance height!

Width dimensions

Space required B	B1	gives clear platform width
260	250	230
270	260	240
280	**270**	**250**
290	**280**	**260**
300	**290**	**270**

One entry/exit is required on entrance level for each grid.

Notes

1. Pits must always be protected by a sliding shutterdoor (even in underground garages).
2. Arrangements start with 2 grids for 6 cars, 3 grids for 8 cars.
3. Installation length of 550 cm for car length of a max. of 500 cm. Clear platform width of 250 cm for car widths of 190 cm. For large touring sedans we recommend a clear platform width of at least 260–270 cm.
4. For large touring sedans an installation length of 570 cm is recommended. This length offers larger safety distances for potential future developments or projects with short term parkers such as hotels or similar.
5. It is not possible to have channels or undercuts and/or concrete haunches along the pit's rear and front floor-to-wall joints. In the event that channels or undercuts are necessary, the pit length needs to be increased based on the dimensions of said channels or undercuts.
6. The manufacturer reserves the right to construction or model modifications and/or alterations. Furthermore, the right to any subsequent part modification and/or variations and amendments in procedures and standards due to technical and engineering progresses in the art or due to environmental regulation changes, are also hereby reserved.

WÖHR Autoparksysteme GmbH | Ölgrabenstr. 14 | 71292 Friolzheim | Germany
+49 [0] 7044 46-0 | +49 [0] 7044 46-149 | info@woehr.de | www.woehr.de

01

Doors

According EN 14010, the Combilift 543 must be closed with shutterdoors. The door controls are integrated in the overall system. That means:

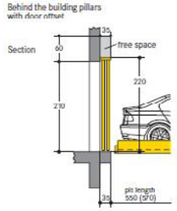
a) The doors are electro-mechanically interlocked.
b) The doors can only be opened when the selected parking place has reached the entry/exit position.
c) Any gills are closed in the entrance area.

Local requirements for electrical doors regarding the technology, maintenance and revision are not subject of our delivery. These matters have to be observed and carried out by the customer, according to the local regulations.

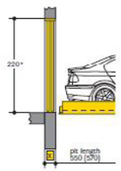
Door types:
Manually operated sliding shutterdoors
- for underground garages with galvanized fence filling
- above ground with powder coated metal sheets (RAL 7030)

Alternatively, sliding shutterdoors can be supplied with electrical drive.

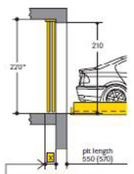
Installation: Behind the building pillars with door offset



Installation: Below the lintel between the building pillars



Installation: In front of the building pillars



A = 25 cm for manually operated sliding shutterdoors
A = 35 cm for automatic shutterdoors

Ground plan

Space required B3	B4	Gives clear platform width
230	480	230
240	500	240
250	**520**	**250**
260	**540**	**260**
270	**560**	**270**

* The lintel of 220 cm is absolutely necessary. With differing heights, additional fixings are required at a surcharge. If no lintel is provided, the gates need to be fitted onto a steel frame (subject to surcharges).

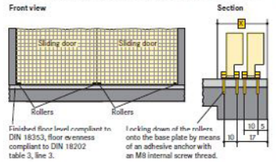
Sliding door floor guides in underground garages

The evenness or flatness of the floor in the bottom floor guide section is required to comply with the DIN 18202, Table 3, line 3, standard requirements.

The bottom floor guides are constituted by plastic rollers, locked down onto floor mounted base plates.

Dowel borehole depth to be approx. 9 cm.

Note: In the event that floor filling needs to be laid into the door section to the purpose of reaching the required floor evenness, the borehole depth needs to be increased by the thickness of the floor fill (for a max of 4 cm).



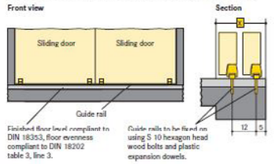
Sliding door floor guides in above ground garages

The evenness or flatness of the floor in the bottom floor guide section is required to comply with the DIN 18202, Table 3, line 3, standard requirements.

The bottom floor guides are constituted by guide rails, locked down onto the floor.

Dowel borehole depth to be approx. 8 cm.

Note: In the event that floor filling needs to be laid into the door section to the purpose of reaching the required floor evenness, the borehole depth needs to be increased by the thickness of the floor fill (for a max of 4 cm).

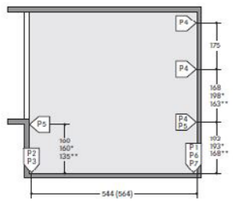


02

Width dimensions and statics

All dimensions shown are millimim. Constructional tolerances must be taken into consideration. **All dimensions in cm.**

Section



() dimensions in brackets for longer units
* dimensions for comfort type
** dimensions for compact type

P1 = +70,0 kN §)
P2 = +49,0 kN
P3 = +76,0 kN
P4 = ± 5,0 kN
P5 = ± 2,5 kN
P6 = ±30,0 kN
P7 = ±15,0 kN

§) all static loadings include the weight of the car

Bearing loads are transmitted by wall plates with min. 30 cm² surface and to the floor by base plates with min. 350 cm² surface.

Wall and base plates to be fixed by heavy duty anchor bolts to a drilling depth of 10-12 cm. When fixing to the waterproof concrete floors chemical anchors are employed (to be advised by WÖHR).

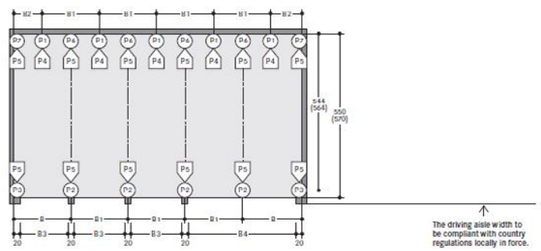
Base plate thickness min. 18 cm. Rearwall and base plate must be formed of concrete and must have a flat surface without protrusions.

Concrete quality according to the static building requirements, however for the dowel fixing concrete quality of min. C20/25 is required.

The specified lengths to the support points are mean values. Please contact WÖHR Agent for exact positions for any variations on the standard units.

Please contact WÖHR Agent for clarity the door widths/widths of columns. Grid width of 260/260/270/280/290 cm must be observed.

Ground plan



The driving aisle width to be compliant with country regulations locally in force.

B	Space required D1	D2	D3	D4	gives clear platform width
260	250	135	230	480	230
270	260	140	240	500	240
280	**270**	**145**	**250**	**520**	**250**
290	**280**	**150**	**260**	**540**	**260**
300	**290**	**155**	**270**	**560**	**270**

Notice:
If the width of the pillars is more than 20 cm, then the width of the drive through will be reduced accordingly to the above mentioned width dimensions. In order to avoid this, we recommend to extend the distances between the pillars (B3 and B4) accordingly. Please contact WÖHR.

03

Hydraulic power packs

The hydraulic power pack is positioned within the system.

Switch cabinet

The switch cabinet is positioned within the system at the rearwall.

Electrical data

Connections 230/400 V, 50 Hz, 3 phases. Power consumption max. 3.0 kW. Fuse or circuit breaker 3 x 16 A slow blow (according to DIN VDE 0100 part 430) and supply line 3 Ph + N + PE according to local EVU provisions up to the main switch, and connection of the supply line generally performed by the customer.

Grounding and potential equalisation:
- to be performed by the customer compliant to DIN EN 60204
- connections required every 10 metres

General product information

The entrance level parking place row has one place less than the upper and lower level. This empty space always stays on entrance floor level.
The platforms at the entrance floor level are shifted sideways by one space so that the empty space is above the lower level platform to be raised, or below the upper floor platform to be lowered.

Hotel garage

If used by hotel guests, the installation requires special planning and construction. Please ask for details.

Noise protection

Basis is the German DIN 4109 "Noise protection in buildings".

With the following conditions required 30 dB (A) in rooms can be provided:
- noise protection package from our accessory
- insulation figure of the construction of min. R'_w = 57 dB
- walls which are bordering the parking systems must be done as single wall and deflection resistant with min. m' = 300 kg/m²
- solid ceiling above the parking systems with min. m' = 400 kg/m²

At differing constructional conditions additional sound absorbing measures are to be provided by the customer.

The best results are reached by separated sole plates from the construction.

Increased noise protection:
If increased noise protection must be provided planning has to be confirmed on a project basis by WÖHR.

Temperature

The installation is designed to operate between +5°and +40°C. Atmospheric Humidity: 50% at +40°C. If the local circumstances differ from the above please contact WÖHR.

Conformity test

All our systems are checked according to EC machinery directive 2006/42/EC and EN 14010.

Illumination

Illumination has to be considered acc. to local requirements by the customer.

Numbering of the parking spaces

1. The empty space of the Combilift is always on the left in the entrance level.
2. The numbering is as follows:

UL	1	3	6	9	12
EL		4	7	10	13
LL	2	5	8	11	14

3. The numbering for each system starts with 1 as above.
4. Different numbering of parking spaces is possible at a surcharge (software changes are necessary).

04

Free spaces

Special drawings for free spaces to accommodate air ducts or other pipes can be requested at WÖHR Agent!

Railings

If walkways are arranged directly to the side or behind the systems, railings have to be provided by the customer acc. to local requirements, height min. 200 cm - this is applicable during the construction phase too.

Drainage

We recommend providing gutter in the pit centre and connecting the gutter either to a gully or a drainage pit 50x 50 x 70 cm. If the pump sump is not accessible for manual drainage, the client must provide a pump on site to empty the pump sump. Lateral slope only within the gutter.

To prevent hazards for the ground water, we recommend giving the pit floor an oil-resistant coating as a means of protecting the environment.
If this is to be connected to the sewage system, it is advisable to provide oil and/or petrol seperators.

Maintenance

WÖHR and its foreign partners have an assembly and customer network. Annual maintenance is performed at conclusion of a maintenance contract.

Protection against corrosion

Independent of a maintenance workings has to be carried out acc. to WÖHR Cleaning and Maintenance Instruction regularly.

Clean up galvanized parts and platforms of dirt and road salt as well as other pollution (corrosion danger)!

Pit must always be ventilated and dearated well.

Parking place width

We recommend a clear platform width of at least 250 cm.

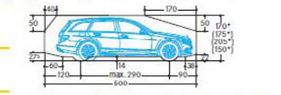
Dimensions

All dimensions shown are minimum. Construction tolerances must be taken into consideration. All dimensions in cm.

Fire safety

Each and every fire safety requirement and all possible mandatory item(s) and equipment(s), fire extinguishing systems and fire alarm systems, etc.) are to be provided by the customer.

Clearance profile (standard saloon/estate car)



* The total car height includes roof rail and antenna fixture and must not exceed the mentioned max. height dimension.

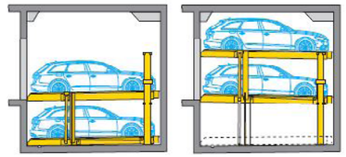
Notes

We recommend providing wiring conduits leading to operating panels, particularly in above-ground garages.

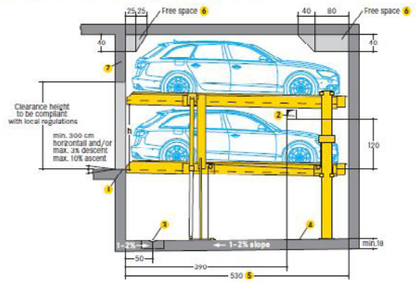
The wiring conduits should placed 120 cm above entrance level in a support in the middle of the area.

Data Sheet
WÖHR PARKLIFT 450

- **Single units: 2 cars**
  Double units: 4 cars
- **Platform load options:**
  - max. 2000 kg, load per wheel 500 kg
  - max. 2600 kg, load per wheel 650 kg
- **Platform slopes for drive-on:**
  - upper level: 1% – 2% ascent
  - lower level: 1% – 2% descent
  Platform slopes help drainage



Length dimensions underground car park (height dimensions see page 2)



1 Yellow-black safety marking:
- compliant to ISO 3864, 10 cm wide, along the pit edges (see page 4 »Static calculations and construction works requirement«)

2 In case of intermediate walls:
- 15 x 15 cm opening for electric and hydraulic system cables and piping
- after installation, do not close the opening

3 Recommended drainage channels:
- 10 x 2 cm, with a 50 x 50 x 20 cm drainage pit
- in case of emergency or a sump pump, it is necessary to comply with the drainage pit dimensions specified by the pump manufacturer

4 Channels or undercuts/concrete haunches:
- not allowed along the pit floor-to-wall joints
should channels or undercuts be necessary, the system width needs to be reduced or the pit needs to be wider

5 500 cm vehicle length + 530 cm pit length
- for longer vehicles:
vehicle length + 30 cm safety distance = pit length
(pit length max. 550 cm)

6 Free spaces for any connections performed by the customer:
- please ask WÖHR for the dimension sheets

7 Lintel

Dimensions
- all dimensions specified are the minimum, finished dimensions
- tolerances must be taken into consideration
- all dimensions are given in cm

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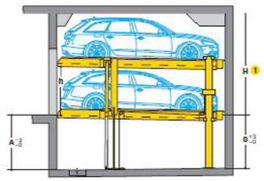
+49 [0] 7044 46-0 | +49 [0] 7044 46-149 | info@woehr.de | woehr.de

Height dimensions Standard type

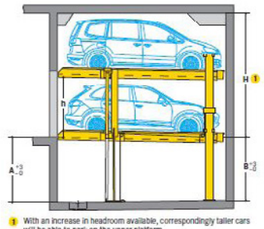


Type	Height (H) 1	Pit depth A	Pit depth B	Vehicle height 2 UL	Vehicle height 2 LL	Platform distance (h)
450-170	320	170	165	L+S: 150	L+S: 150	155
450-175	325	175	170	L+S: 150	L+S: 155	160
	330	175	170	L+S: 155	L+S: 155	160
450-180	330	180	175	L+S: 150	L+S: 160	165
	340	180	175	L+S: 160	L+S: 160	165
450-185	335	185	180	L+S: 150	L+S: 165	170
	350	185	180	L+S: 165	L+S: 165	170
450-190	340	190	185	L+S: 150	L+S: 170	175
	360	190	185	L+S: 170	L+S: 170	175
450-195	345	195	190	L+S: 150	L+S: 175	180
	370	195	190	L+S: 175	L+S: 175	180
450-200	350	200	195	L+S: 150	L+S: 180	185
	380	200	195	L+S: 180	L+S: 180	185

1 With an increase in headroom available, correspondingly taller cars will be able to park on the upper platform.

2 UL= upper level / LL= lower level
L= Limousine / S= Station wagon

Height dimensions Premium type

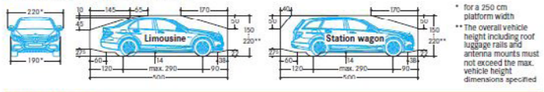


Type	Height (H) 1	Pit depth A	Pit depth B	Vehicle height 2 UL	Vehicle height 2 LL	Platform distance (h)
450-205	355	205	200	L+S: 150	L+S: 185	190
	390	205	200	L+S: 185	L+S: 185	190
450-210	360	210	205	L+S: 150	L+S: 190	195
	400	210	205	L+S: 190	L+S: 190	195
450-215	365	215	210	L+S: 150	L+S: 195	200
	410	215	210	L+S: 195	L+S: 195	200
450-220	370	220	215	L+S: 150	L+S: 200	205
	420	220	215	L+S: 200	L+S: 200	205
450-225	375	225	220	L+S: 150	L+S: 205	210
	430	225	220	L+S: 205	L+S: 205	210
450-230	380	230	225	L+S: 150	L+S: 210	215
	440	230	225	L+S: 210	L+S: 210	215
450-235	385	235	230	L+S: 150	L+S: 215	220
	450	235	230	L+S: 215	L+S: 215	220
450-240	390	240	235	L+S: 150	L+S: 220	225
	460	240	235	L+S: 220	L+S: 220	225

1 With an increase in headroom available, correspondingly taller cars will be able to park on the upper platform.

2 UL= upper level / LL= lower level
L= Limousine / S= Station wagon

Clearance profile (for standard vehicles)



Width dimensions

Platform widths:
250 cm (single units), 500 cm (double units):
- for 190 cm vehicle width (without outside mirror)

260–270 cm (single units), 520–540 cm (double units):
- for vehicles wider than 190 cm (without outside mirror)
- for units with intermediate walls
- for units at the end of the driving aisle

For comfortable parking, entry and exit conditions platform widths upon 250 cm are recommended. Reduced platform width means reduced parking comfort depending on the vehicle width, vehicle type, individual driving style, access situation of the garage.

Width dimensions (underground car park)

Intermediate walls

Single unit (2 cars)

Space requirements B	clear platform width
260	230
270	240
280	**250**
290	**260**
300	**270**

Double unit (4 cars)

Space requirements B	clear platform width
490	460
510	480
530	**500**
550	**520**
570	**540**

Combined unit (6 cars)

Space requirements B	clear platform width
750	460+230
780	480+240
810	**500+250**
840	**520+260**
870	**540+270**

The driving aisle width must comply with local regulations

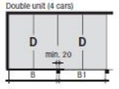
It is possible to combine different widths

Columns external to the pit

Single unit (2 cars)

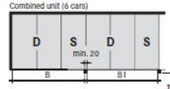
Space requirements wall-column B	column-column B1	clear platform width
250	240	230
260	250	240
270	**260**	**250**
280	**270**	**260**
290	**280**	**270**

Double unit (4 cars)



Space requirements wall-column B	column-column B1	clear platform width
480	470	460
500	490	480
520	**510**	**500**
540	**530**	**520**
560	**550**	**540**

Combined unit (6 cars)



Space requirements wall-column B	column-column B1	clear platform width
740	730	460+230
770	760	480+240
800	**790**	**500+250**
830	**820**	**520+260**
860	**850**	**540+270**

The driving aisle width must comply with local regulations

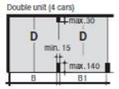
It is possible to combine different widths

Columns in the pit

Single unit (2 cars)

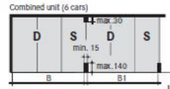
Space requirements wall-column B	column-column B1	clear platform width
255	245	230
265	255	240
275	**265**	**250**
285	**275**	**260**
295	**285**	**270**

Double unit (4 cars)



Space requirements wall-column B	column-column B1	clear platform width
485	475	460
505	495	480
525	**515**	**500**
545	**535**	**520**
565	**555**	**540**

Combined unit (6 cars)

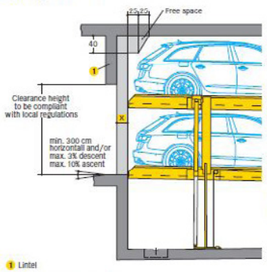


Space requirements wall-column B	column-column B1	clear platform width
745	735	460+230
775	765	480+240
805	**795**	**500+250**
835	**825**	**520+260**
865	**855**	**540+270**

The driving aisle width must comply with local regulations

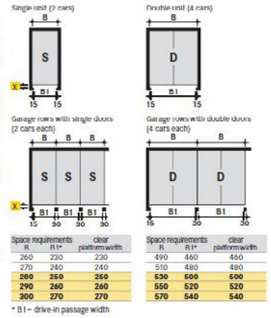
It is possible to combine different widths

Garages with doors



1 Lintel
X = 10/ 15 cm for roller shutters

Dimension X to be defined by customer with the door supplier.

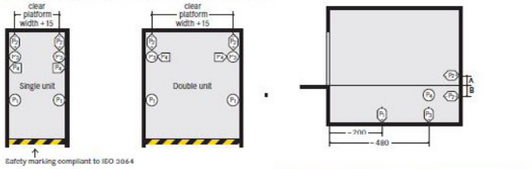


Space requirements B	B1*	clear platform width
260	230	230
270	240	240
290	**250**	**250**
290	**260**	**260**
300	**270**	**270**

Space requirements B	B1*	clear platform width
490	460	460
510	480	480
530	**500**	**500**
550	**520**	**520**
570	**540**	**540**

* B1 = drive-in passage width

Static calculations and construction works requirement



Safety marking compliant to ISO 3864

P1	+ 45 kN* – 15 kN
P2	+ 4 kN – 4 kN
P3	+ 12 kN – 4 kN
P4	+ 3 kN

P1	+ 80 kN* – 30 kN
P2	+ 4 kN – 4 kN
P3	+ 30 kN –
P4	+ 3 kN

* specified load bearing data includes the vehicle weight

Standard type	A	B
Parklift 450-170	–	0
Parklift 450-175	–	5
Parklift 450-180	–	10
Parklift 450-185	–	15
Parklift 450-190	–	20
Parklift 450-195	–	25
Parklift 450-200	–	30

Premium type	A	B
Parklift 450-205	20	–
Parklift 450-210	15	–
Parklift 450-215	10	–
Parklift 450-220	5	–
Parklift 450-225	–	0
Parklift 450-230	–	5
Parklift 450-235	–	10
Parklift 450-240	–	15

Fixing of the system frames to the floor slab:
- using base plates (approx. 140 cm²)
- using adhesive anchor bolts
- hole depth to 12 - 14 cm
- concrete thickness of at least 18 cm

Concrete quality grade:
- compliant to the static requirements of the construction
- min. C20/25 grade (for dowel fastening)

Walls:
- front drive-in wall and rear wall in concrete
- perfectly flat wall surfaces
- without protruding sections such as border edgings, pipes and tubes, etc.

Frame bearing points:
- the specified lengths are expressed as mean value
- for the exact data, specific TÜV-tested data sheets are available

Extra space for hydraulic power packs

Dimensions in cm	1–5 Parklifts	6– 10 Parklifts
Length:	100	100
Height:	140	140
Depth:	35	35

Hydraulic power pack placement options:
- located either on the top platform so that it moves with unit or on the wall
- where this is not possible, it is necessary to arrange for an extra space above drive-in level (i.e. for a wall recess or a niche)

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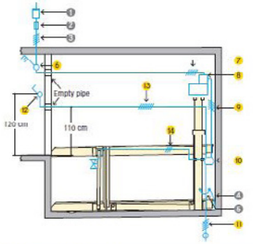
Electrical specifications

Installation diagram



Ladwig preparation to be performed by the customer:
- up to the main switch to be in place prior to starting the installation operations
- connection to the main switch during installation
- system functional check testing can be performed by WÖHR together with the electrician provided by the customer
- if requested at a later date, functional check testing can be performed by WÖHR at extra-cost

Grounding and potential equalisation:
- to be performed by the customer compliant to DIN EN 60204
- connections required every 10 metres

To be performed by the customer

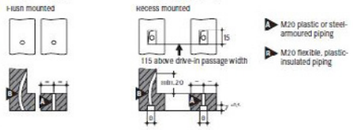
Item	Quantity	Description	Position	Recurrence
1	1 piece	power meter	in the feed cable	
2	1 piece	fuse protection or automatic circuit breaker compliant to DIN VDE 0100 part 430: - 3 x 16 A slow blow for 3,0 kW power pack - 3 x 25 A slow blow for 5.5 kW power pack	in the feed cable	1 x per power pack
2	based on site conditions	compliant to local power supply regulations 3 phases + N + PE * 230/400 V, 50 Hz	feed cables to main switch	1 x per power pack
4	every 10 m	grounding and potential equalisation lead-out connection	along pit floor edges/ rear wall	
5	1 piece	grounding and potential equalisation compliant to DIN EN 60204	from lead-out connection to system	1 x per system

* to DIN VDE 0100 sections 410 and 430 (no permanent load) 3 phases + N+ PE (three phase current)
Note: for garages with doors the door manufacturer must be consulted before the electrical feed cabling is laid.

Scope of delivery by WÖHR (unless otherwise specified)

Item	Description
6	Lockable main switch
7	5 x 2,5² PVC control cable leading from the main switch to the power pack
8	Hydraulic power pack with three-phase motor, 3.0 or 5.5 kW. Ready-wired switching cabinet with motor safety contactor
9	5 x 1,5² PVC control cable
10	Branch connector
11	5 x 1,5² PVC control cable lead-out to the system alongside
12	UP/down operating unit with EMERGENCY STOP. Possibly located on the left, but always out of the platform's range of movement. Cable feed-in strictly from below leading upwards (2 keys for each parking space).
13	7 x 1,5² PVC control cable
14	3 x 1,5² control cable for the cylinder valve lead

Operating panel recessed and empty piping requirements



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Notes and directions

Scope of application
- suitable for residential buildings, office buildings and business premises, hotels
- only for long-term users that have been instructed on how to use the system for frequently changing users (e.g. for office, hotel and business premises or similar):
  - only parking on top platform
  - performance of technical system adjustments is necessary
  - consultation with WÖHR is mandatory

Noise protection
Basis is the German DIN 4109 "Noise protection in buildings".
With the following conditions required 30 dB (A) in rooms can be provided:
- noise protection package from our accessory
- insulation figure of the construction of min. R_W = 57 dB
- walls which are bordering the parking systems must be done as single wall and deflection resistant with min. m' ~ 300 kg/m²
- solid ceiling above the parking systems with min. m' ~ 400 kg/m²

At differing constructional conditions additional sound absorbing measures are to be provided by the customer.
The best results are reached by separated sole plates from the construction.
increased noise protection:
If increased noise protection must be provided planning has to be confirmed on a project basis by WÖHR.

Drainage
Water leaks into the pit:
- in the winter, up to 40 litres of snow water can possibly come with the wheel housings in just one parking process

Recommended drainage channels:
- along the front end sections of the pit
- connecting to a floor drain or drainage pit (500 x 500 x 200 mm)
- with manual emptying out of the drainage pit
- alternatively installation of a pump or drainage channel into the sewerage system, to be performed by the customer

Sideways slope drainage:
- only into a gutter
- not possible in the remaining pit section

Lengthways slope drainage:
- provided according to specified construction dimensions

Environmental safety:
- coating of the pit flooring is recommended
- installation of an oil and/or petrol separator unit between the drainage connection and the main sewerage system is recommended

Temperature
- system operating range: - 10° to +40° C (with unloaded platforms lowering speed is reduced if less than +5° C)
- humidity: 50% at +40° C
- in the event of changes to system conditions please consult with WÖHR

Lighting
- sufficient lighting of the driving aisle and of the parking places must be performed by the customer

Fire safety
- as fire safety requirements and as mandatory equipment (fire extinguisher and fire alarm systems, etc.) must be performed by the customer

Conformity examination (TÜV)
- voluntary conformity assessment by the TÜV SÜD

The parking systems are compliant to:
- EC Machinery Directive 2006/42/EC
- DIN EN 14010

Railings
The units need to be provided acc. EN ISO 13857 with safety railings if the gap between unit and wall exceeds 20cm. If walkways are arranged directly to the side or behind the systems, railings have to be provided by client acc. to local requirements, height min. 200 cm - this is applicable during the construction phase too.

Maintenance
- WÖHR and all the WÖHR partners abroad provide an installation and customer service network
- regular, annual maintenance is provided subject to the stipulation of a maintenance agreement

Prevention of corrosion damage
- all operations listed in the WÖHR Cleaning and Maintenance instructions are to be performed regularly (independently of maintenance operations)
- zinc-plated parts, components and platforms are to be kept clean of dirt, road-salt and any other debris (due to corrosion hazards)
- always keep the garage well ventilated and deaerated

Surface protection
- please consider the information on surface protection!

Tender specification
- please consider the specifications!

Parking Place-Profile
- please consider the product information Parking Place-Profile!

Construction formalities
- the documentation necessary for construction permit applications is provided by WÖHR on demand

Construction alterations and/or modifications
- the right to construction or model modifications and/or variations is hereby reserved
the right to any subsequent part modification and/or variation and amendments in procedures and standards due to technical and engineering progresses or due to environmental regulation changes is also hereby reserved