



PEPSI BLOCKS _ BUILDING B

PORTLAND, OR

EA 23-075072 DA | DESIGN ADVICE REQUEST | October 19, 2023

Pepsi B
SECURITY PROPERTIES
© Ankrom Moisan Architects, Inc

lango.hansen LANDSCAPE ARCHITECTS PC



EA 23-075072 DA
OCTOBER 19, 2023

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BUILDING HEIGHT 8 STORIES (85 FT TOTAL)
 2 LEVELS BELOW GRADE PARKING

RESIDENTIAL APARTMENTS 160 UNITS TOTAL (13 AFFORDABLE UNITS*)

UNIT MIX

- 30 STUDIOS
- 73 ONE BEDROOMS
- 36 TWO BEDROOMS
- 21 ONE BED TOWNHOMES

PARKING

- 121 AUTO STALLS (0.76 : 1 RATIO TO UNITS)
- 253 LONG TERM BIKE PARKING (1.58 PER UNIT)
- 249 STANDARD + 4 ACCESSIBLE
- 8 SHORT TERM BIKE PARKING

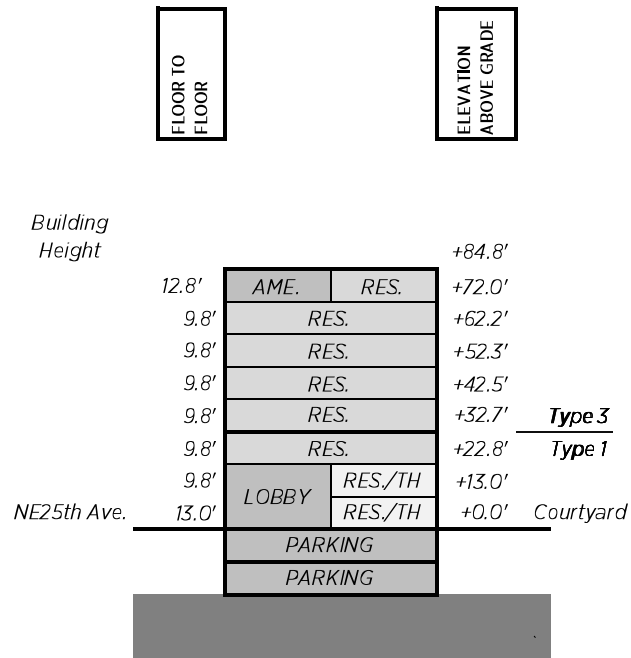
AMENITIES

- L1-L2 LEASING, LOUNGE AND FITNESS
- L8 CLUB ROOM
- GROUND LEVEL COURTYARD
- ROOFTOP AMENITY WITH VIEWS TO THE WEST HILLS

* 8% OF TOTAL UNITS RESERVED FOR HOUSEHOLDS EARNING NO MORE THAN 60% OF AREA MEDIAN INCOME.

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- ARCHITECT
 - DON SOWIEJA
 - JASON JONES
 - ANKROM MOISAN ARCHITECTS
 - 38 NW DAVIS, SUITE 300
 - PORTLAND, OR 97209
 - 503.245.7100
- CLIENT
 - GUS BAUM
 - SECURITY PROPERTIES
 - 701 FIFTH AVE, SUITE 5700
 - SEATTLE, WA 98104
 - 206.787-8481

Area Summary



Site Area 31967 SF

FLOOR	BUILDING B		PARKING			NON-REVENUE				RESIDENTIAL			
	TOTAL GROSS AREA PER FLOOR	TOTAL FAR AREA PER FLOOR	RESIDENTIAL PARKING AREA	STALLS	BIKE PARKING	AMENITY & COMMUNITY	LEASABLE STORAGE	B.O.H / CORRIDOR/ STAIR	LOBBY/ LEASING	BALCONIES & PATIOS	RENTABLE RES. AREA	EFFICIENCY	UNIT COUNT
ROOF	1536 SF	1536 SF						1536 SF					
LEVEL 8	21594 SF	22427 SF				1903 SF	249 SF	2969 SF		833 SF	16473 SF	76.3%	21 UNITS
LEVEL 7	21594 SF	22485 SF					249 SF	2826 SF		892 SF	18518 SF	85.8%	23 UNITS
LEVEL 6	21594 SF	22485 SF					249 SF	2826 SF		892 SF	18518 SF	85.8%	23 UNITS
LEVEL 5	21594 SF	22485 SF					249 SF	2826 SF		892 SF	18518 SF	85.8%	23 UNITS
LEVEL 4	21594 SF	22485 SF					249 SF	2826 SF		892 SF	18518 SF	85.8%	23 UNITS
LEVEL 3	21594 SF	22485 SF					249 SF	2826 SF		892 SF	18518 SF	85.8%	23 UNITS
LEVEL 2	14439 SF	14439 SF				409 SF		1699 SF			12330 SF	85.4%	3 UNITS
GROUND LEVEL / LOBBY	18757 SF	18757 SF				3501 SF		4417 SF	1768 SF	1069 SF	10839 SF	57.8%	21 UNITS
LEVEL P1	24643 SF		18543 SF	55 STALLS	2835 SF			3264 SF					
LEVEL P2	27760 SF		22321 SF	66 STALLS	1413 SF			4026 SF					
TOTAL	216697 SF		40864 SF	121 STALLS	4248 SF	5813 SF	1495 SF	32043 SF	1768 SF	6359 SF	132233 SF	81.0%	160 UNITS

FAR TOTAL	169585 SF
	5.305

PKG. RATIO	
UNITS	160 UNITS
PARKING	121 STALLS
RATIO	0.76
AVG AREA ST	338 SF

Avg Unit	826 SF
----------	--------

*Elevator and mechanical shafts area is deducted from total gross area

*Balcony areas are added to the FAR areas

Unit Mix (160 Unit Total)

BUILDING B RESIDENTIAL	
FLOOR	UNIT COUNT
ROOF	
LEVEL 8	21 UNITS
LEVEL 7	23 UNITS
LEVEL 6	23 UNITS
LEVEL 5	23 UNITS
LEVEL 4	23 UNITS
LEVEL 3	23 UNITS
LEVEL 2	3 UNITS
GROUND LEVEL / LOBBY	21 UNITS
LEVEL P1	
LEVEL P2	
TOTAL	160 UNITS

UNITS															
STUDIO		1 BED					2 BED				TOWNHOMES				
ST-A	UB-A	1BR-B	1BR-B.1	1 BR-C	1 BR-D	1 BR-D.2	2 BR-B	2 BR-C	2 BR-D	2 BR-D.1	TH-1A	TH-1A.1	TH-1A.3	TH-2A	TH-2C.1
510 SF	580 SF	717 SF	738 SF	742 SF	830 SF	820 SF	1128 SF	1066 SF	1197 SF	1224 SF	879 SF	996 SF	957 SF	1468 SF	1497 SF
3.8%	15.0%	27.5%	3.8%	7.5%	3.8%	3.1%	8.1%	7.5%	3.8%	3.1%	8.8%	1.9%	1.3%	0.6%	0.6%
1	4	7	1	2	1		2	2	1						
1	4	7	1	2	1	1	2	2	1	1					
1	4	7	1	2	1	1	2	2	1	1					
1	4	7	1	2	1	1	2	2	1	1					
1	4	7	1	2	1	1	2	2	1	1					
		2					1								
											14	3	2	1	1
6 UNITS	24 UNITS	44 UNITS	6 UNITS	12 UNITS	6 UNITS	5 UNITS	13 UNITS	12 UNITS	6 UNITS	5 UNITS	14 UNITS	3 UNITS	2 UNITS	1 UNITS	1 UNITS
18.8%				45.6%					22.5%						13.1%

3060 SF	13920 SF	31548 SF	4430 SF	8900 SF	4982 SF	4099 SF	14658 SF	12793 SF	7183 SF	6121 SF	12302 SF	2989 SF	1914 SF	1468 SF	1497 SF
16980 SF		53959 SF					40755 SF				20170 SF				
30 UNITS		73 UNITS					36 UNITS				21 UNITS				
566 SF AVG		739 SF AVG					1132 SF AVG				960 SF AVG				

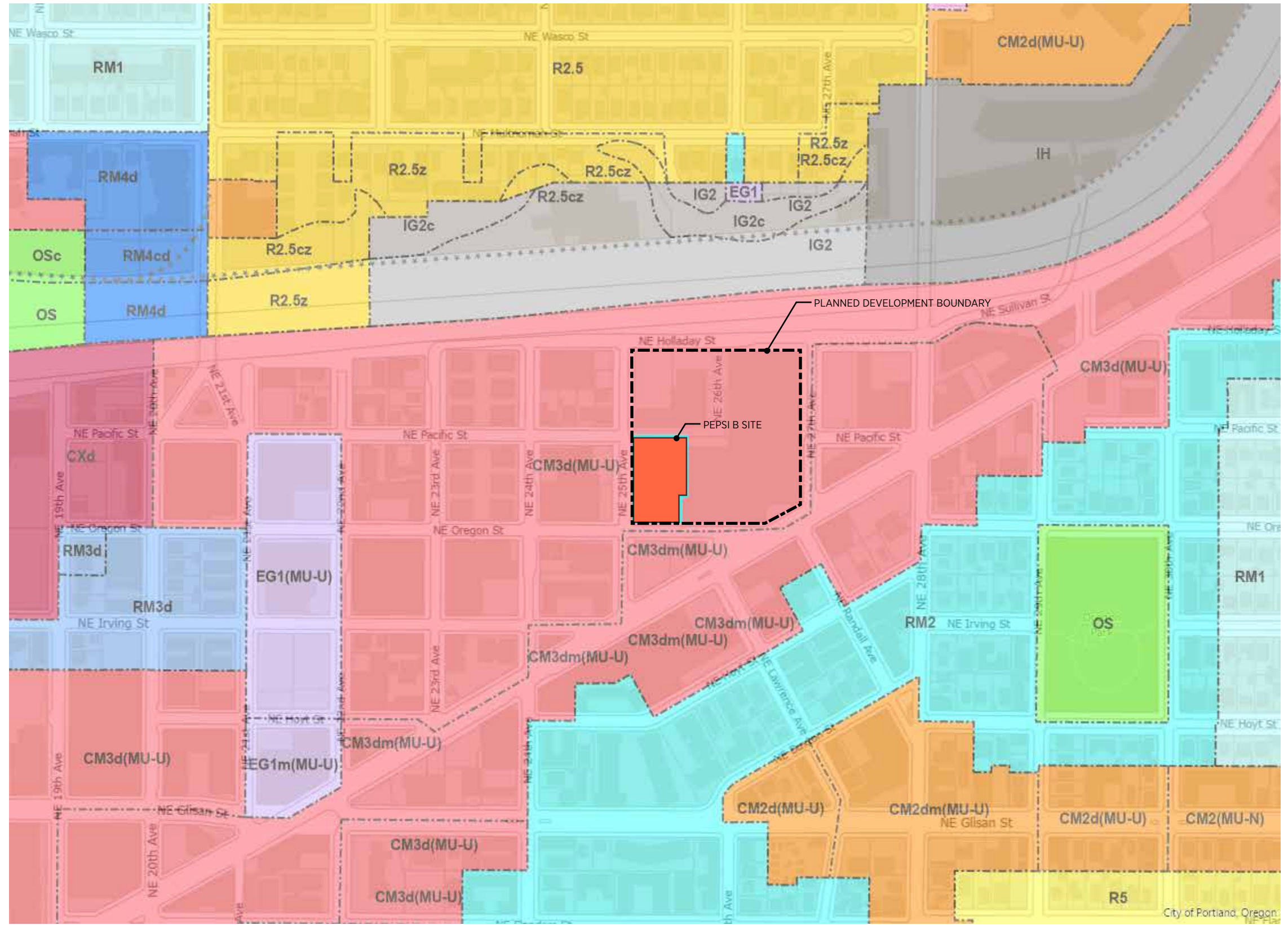
01 SITE ANALYSIS

EXISTING PROPERTY INFORMATION

Address : NEC/ Oregon and NE 25th AVE
 Portland, OR 97232
 Property ID Number : R699248
 Lot Area : 31,967 sq. ft.
 Neighborhood : Kerns
 Jurisdiction : Portland/Multnomah

ZONING INFORMATION

Base : CM3 - Commercial Mixed Use 3
 Overlay : d - Design
 Base Overlay Combo : CM3d(MU-u)
 Comp Plan : MU-U - Mixed Use -Urban Center



Zoning Massing Impacts

PROPERTY ID : R699248	
SITE AREA	31,967 sf Total
ZONING	Overlay: D - Design (Chapter 33.420) Base Overlay Combo: (CM3d(Mu-U) (Chapter 33.130) Comp Plan: Mu-U - Mixed U-Urban Center
TYPICAL USES	Specific Allowable Uses : Retail Sales and Services, Office Space, Household Living, Vehicle Repair, Institutional Uses, and Limited Manufacturing or Other Low-Impact Industrial Uses.
PLANNED DEVELOPMENT	Approval Date: December 6, 2018 Title: Sandy Boulevard Planned Development Reference Number: LU 18-248691 PDBM PC # 18-131409
PLANNED DEVELOPMENT	Approval Date: September 19, 2019 Title: Pepsi Planned Development - Phase One Reference Number: LU 19-183735 DZM AD PC # 18-180700
FAR	Code Section 33.130.205 Max.-3:1, 5:1 with Inclusionary Housing Bonus Mandatory and Voluntary Inclusionary housing bonuses are applicable
DENSITY	Min.- 1 unit per 1000sq.ft. of site area - 32 Units (Code Section - 33.130.209)
HEIGHT	Code Section 33.130.210 Base: 65-Feet Max. With Bonuses: 87-Feet Per Planned Development Review Findings
STEP-DOWN HEIGHT	n/a. No lot lines abutting residential zones (33.130.210.B.2.a)

PROPERTY ID : R699248	
DESIGN REVIEW	Design Review Required (Code Section - 33.130.205)
BONUSES	Code Section 33.245 Inclusionary Housing Bonus Options Apply (Code Section - 33.245)
SETBACKS	Code Section 33.130.220 Min. : 0 ft Street Lot Line : 0 ft Street Lot Line Abutting Civic Corridor : 0 ft Lot Line Abutting --- Zone : n/a Max. : 10 ft Street Lot Line : 10 ft Street Lot Line Abutting Civic Corridor : 10 ft Transit Street Or Pedestrian District : 10 ft
MAX. BUILDING COVERAGE	Code Section - 33.130.220 100% of site area max. Site is in Inner Pattern Area.
MIN. LANDSCAPE AREA	15%
LANDSCAPE BUFFER	Abutting an RF - RH or RMP Zoned Lots :
BUILDING LENGTH AND FACADE ARTICULATION	Code Section 33.130.222 Building Length: The maximum building length for the portion of a building located within 20 feet of a street lot line is 200 feet. Portion of buildings must be separated by 20' Facade Articulation: 25% of the area of a street-facing facade within 20' must be divided into facade plane that are off-set by at least 2' in depth from the rest of the facade.

PROPERTY ID : R699248	
PARKING	<p>Code Section 33.266</p> <p>Standard B for C zones</p> <p>Max for Commercial/Mixed-Use or Multi Dwelling = 1.35 spaces per unit</p> <p>No minimum of parking spaces required.</p> <p>Parking space size: 8'-6" x 16'. Minimum aisle width: 20'.</p> <p>In a building with more than 5 dwelling units and more than 7 parking spaces, 6 or 50% - whichever is more - of the parking spaces must include electrical conduit adjacent to the parking spaces for installation of at least a Level 2 vehicle charger.</p>
BIKE PARKING	<p>Code Section 33.266.200</p> <p>Long Term: 1.5 per unit (Standard A) for household living.</p> <p>Short Term: 1 per 20 units (Standard A) for household living.</p>
LOADING	<p>Code Section 33.266.310</p> <p>One loading space meeting Standard A, or two (2) meeting Standard B</p> <p>Standard A - 35' Long X 10' wide X 13' tall</p> <p>Standard B - 18' Long X 9' wide X 10' tall</p>
DISCLOSURES	<p>Information provided within this Study generated from Portland, Oregon Development Code 33.130 and Multnomah Tax Maps applicable at time study.</p>

ZONING CODE SUMMARY (SITE AREA 31,967 SF)

	BASE ZONE AND PLANNED DEVELOPMENT CODE REQUIREMENTS	PROPOSED BUILDING
FAR	Max. 5:1 (Planned development allows for 10% variation = 5.5:1 Max.)	169,585 sf / 31,967 sf = 5.3:1 (Planned development allows for 10% variation = 5.5:1 Max.)
DENSITY	Min. 1 Unit per 1,000 sf of site area _ 31,967 sf / 1,000sf = 32 UNITS	160 UNITS
HEIGHT	Max. 87 ft per planned development.	85 ft
SETBACK	Min. None Max. 10 ft	NE OREGON ST. = 1'-6" Max. NE 25TH AVE. = 8'-6" Max. NE PACIFIC ST (NOT A PUBLIC RIGHT OF WAY) = 5'-0" Max.
BUILDING COVERAGE	Max. 100%	BUILDING FOOTPRINT 22,485 sf / 31,967 sf = 70.3 % *EXCLUDING UNDERGROUND PARKING
BUILDING LENGTH AND FAÇADE ARTICULATION	Max. 200 ft for the portion of the building located within 20 ft a of steet lot line A portion of the building must be separated by 20 ft 25% of the area of a street-facing facade within 20 ft must be divided into facade plane that are off-set by at least 2 ft in depth from the rest of the facade. No Ground floor active use is required.	SEE ELEVATION DIAGRAMS BELOW



NORTH (NE PACIFIC ST.) *NOT A PUBLIC RIGHT OF WAY
HIGHLIGHTED AREA _ SETBACK GREATER THAN 2FT = 40%



WEST (NE 25TH AVE.)
HIGHLIGHTED AREA _ SETBACK GREATER THAN 2FT = 27%



SOUTH (NE OREGON ST.)
HIGHLIGHTED AREA _ SETBACK GREATER THAN 2FT = 25%

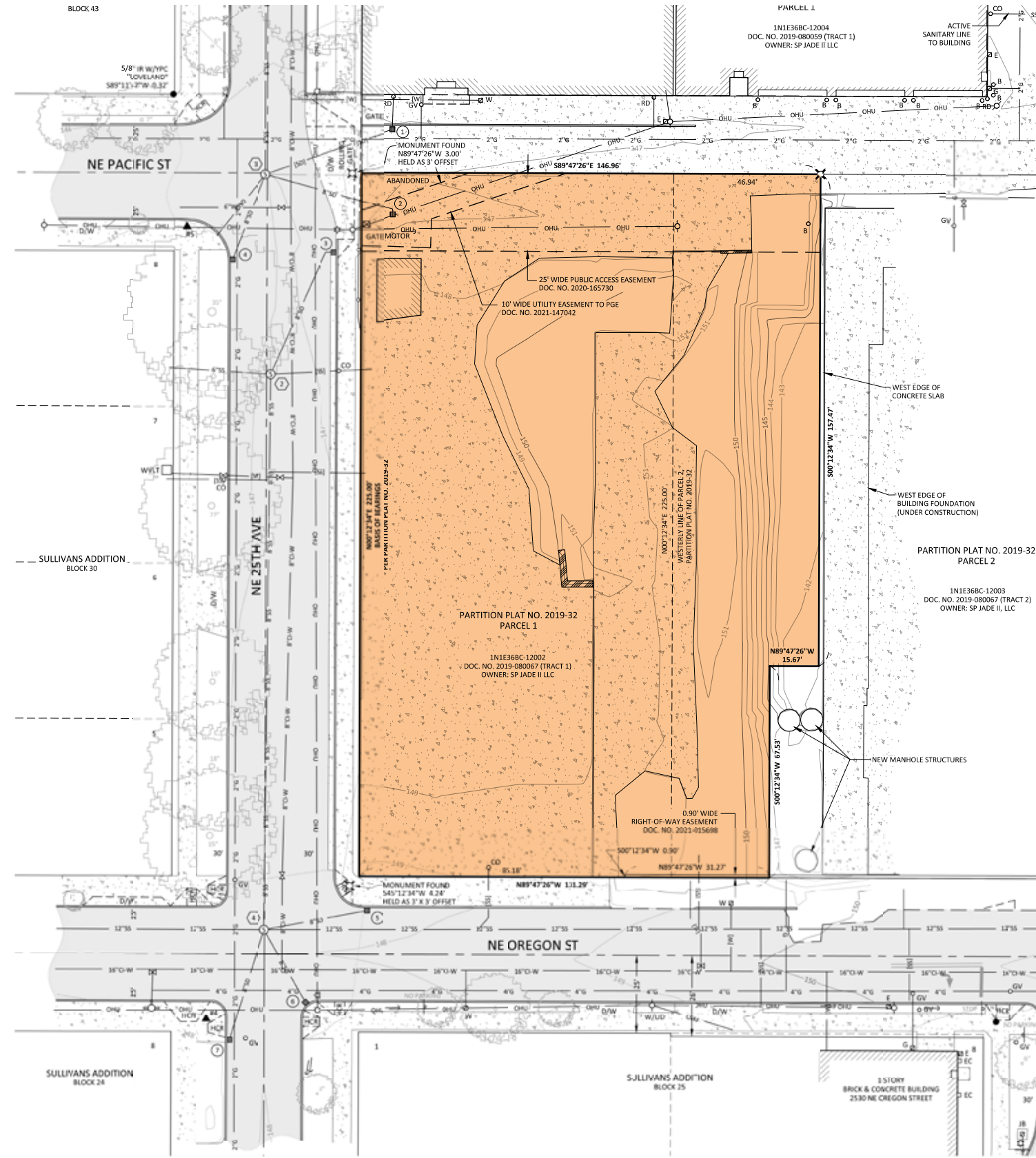
ZONING CODE SUMMARY (SITE AREA 31,967 SF)		
	BASE ZONE AND PLANNED DEVELOPMENT CODE REQUIREMENTS	PROPOSED BUILDING
LANDSCAPED AREAS	15% of site = 4,800 sf 1/3 (1,500 sf) may be used by recreational use or by pedestrians.	2,760 sf L1 STANDARD AT GROUND FLOOR. 540 sf OF ROOF TERRACE PLANTING. 1,500 sf OF RECREATIONAL OR PEDESTRIAN USE AT THE GROUND FLOOR. TOTAL = 4,800 sf
REQUIRED OUTDOOR AREAS	Min. 48 sf per unit = 7,680 sf	PRIVATE DECKS AND TOWNHOMES STOOPS = 6,359 sf L1 COURTYARD = 5,970 sf L8 INDOOR CLUB ROOM = 1,903 sf ROOFTOP = 5,905 sf TOTAL = 20,137 sf
WINDOWS	Street facing facades = NE Oregon St. 40%, other streets 25% Ground floor windows (2ft to 10ft above finish grade) 40% glazing.	STREET FACING FACADES NE OREGON ST. = 40% NE 25TH AVE. = 36% NE PACIFIC ST (NOT A PUBLIC RIGHT OF WAY) = 32% GROUND FLOOR NE OREGON ST. = 56% NE 25TH AVE. = 57% NE PACIFIC ST (NOT A PUBLIC RIGHT OF WAY) = 32%
SCREENING	Mechanical equipment on ground floor level = Screened by walls, fences, or vegetation to L2 or F2 standards.	NO MECHANICAL EQUIPMENT ON THE GROUND FLOOR.
TRANSIT STREET MAIN ENTRANCE	Not required if not on a transit street.	SITE HAS NO FRONTAGE ON A TRANSIT STREET
PARKING	No minimum of parking spaces required.	RESIDENTIAL PARKING 118 + 3 ACCESSIBLE = 121 STALLS (AS SHOWN ON DRAWINGS)
BIKE PARKING	Long Term 1.5 per unit = 240 Stalls Short Term 1 per 20 units = 8 Stalls	LONG TERM = 249 + 4 ACCESSIBLE = 253 STALLS SHORT TERM = 8 STALLS
LOADING	One loading space standard A or two standard B A = 35 ft x 10 ft x 13 ft Tall B = 18 ft x 9 ft x 10 ft Tall	TWO TYPE B LOADING STALLS PROVIDED ON NE PACIFIC ST.

General Code Information

PROPERTY ID : R699248

CODES	<p>Building Code 2022 OSSC Mechanical Code 2022 OSMC Plumbing Code 2021 OPSC Energy Code 2021 OEESC Electrical Code 2021 OESC, 2020 NEC based on NFPA 70 Fire Code 2022 PFC Accessibility 2010 ADA, 2022 OSSC Chapter 11, ICC A117.1 (2017), FHA Elevator 2011 Oregon Elevator Specialty Code based on 2010 ASME A17.1 Sprinkler NFPA 13 (2019) Standpipes NFPA 14 (2019) Fire Pumps NFPA 20 (2019) Fire Alarm NFPA 72 (2019) Identify building codes applicable to this project. Emergency & Standby Power Systems NFPA 111 (2019)</p>
OCCUPANCY	<p>302.1 The following occupancy groups will be included in this project: A-3, B, R-2, S-2</p>
CONSTRUCTION TYPE	<p>Type IIIA over type IA construction.</p>
ALLOWABLE HEIGHT AND BUILDING	<p>The proposed building will not exceed max allowable building height of 85 feet for type IIIA Construction.</p>
ACCESSIBILITY	<p>2010 ADA, 2022 OSSC Chapter 11, ICC A117.1 (2017), FHA</p>

Site Survey Plan



NOTES:

- VERTICAL DATUM: CITY OF PORTLAND
BENCHMARK: 2-1/2 INCH BRASS DISK AT THE SOUTHEAST QUADRANT OF THE INTERSECTION OF NE SANDY BOULEVARD AND NE 28TH AVENUE.
BENCHMARK NO. 3774 ELEVATION = 155.933'
- BASIS OF BEARINGS FOR THIS SURVEY IS THE OREGON COORDINATE REFERENCE SYSTEM (OCRS), PORTLAND ZONE, AS ESTABLISHED FROM FOUND AND HELD MONUMENTS PER PARTITION PLAT NO. 2019-32.
- BOUNDARY AND EASEMENTS SHOWN HEREON ARE BASED ON PRELIMINARY TITLE REPORT ORDER NO. 322300110, EFFECTIVE DATE 4/4/2023, BY LAWYERS TITLE OF OREGON, LLC. ALL PLOTTABLE EASEMENTS DESCRIBED IN SAID REPORT ARE SHOWN HEREON. OTHER BLANKET TYPE EASEMENTS AFFECT THE SUBJECT PROPERTY PER DOCUMENT NO. 2021-156730 AND DOCUMENT NO. 2022-082944.
- UTILITY LOCATIONS SHOWN ARE PER FIELD LOCATED UTILITY PAINT MARKS & REFERENCE MAPS MADE AVAILABLE BY THE VARIOUS UTILITY PROVIDERS. UNLESS INDICATED, DEPTHS OF UTILITY LINES ARE NOT AVAILABLE. ALL UTILITY LOCATIONS SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
- THIS SURVEY WAS PERFORMED TO PROVIDE MAPPING OF CURRENT CONDITIONS OF PARCEL 1N1E36BC-12002. INFORMATION SHOWN THAT IS NOT WITHIN OR IMMEDIATELY ADJACENT TO SAID PARCEL IS BASED ON PREVIOUS WORK AND MAY BE OBSOLETE.

SANITARY TABLE:

- COMBINED MANHOLE
RIM = 146.96'
IE IN (NE) NOT VISIBLE
IE 8" IN (E) = 136.56'
IE 8" IN (SE) = 134.66'
IE 8" IN (SSW) = 136.56'
IE 8" IN (SW) = 139.71'
IE 8" OUT (N) = 133.56'
- COMBINED MANHOLE
RIM = 147.15'
IE 6" IN (W) = 142.05'
IE 8" IN (NE) = 141.85'
IE 8" IN (E) = 142.05'
IE 8" OUT (S) = 141.45'
- COMBINED MANHOLE
RIM = 150.80'
IE 10" IN (N) = 141.60'
IE 6" IN (NE) = 141.50'
IE 10" IN (E) = 141.00'
IE 8" IN (SE) = 144.10'
IE 8" IN (S) = 143.90'
IE 12" OUT (W) = 140.80'
- COMBINED MANHOLE
RIM = 147.85'
IE 8" IN (N) = 139.85'
IE 8" IN (NE) = 141.55'
IE 12" IN (E) = 139.35'
IE 8" IN (SE) = 141.85'
IE 8" IN (SW) = 141.75'
IE 12" OUT (W) = 139.25'

LEGEND:

- BUILDING OUTLINE WITH DOOR
- CONCRETE SURFACE
- ASPHALT SURFACE
- BUILDING OVERHANG
- CURB LINE
- EASEMENT LINE
- RIGHT-OF-WAY LINE
- RIGHT-OF-WAY CENTERLINE
- PLATTED LOT LINE
- SUBJECT PROPERTY LINE
- ELECTRICAL LINE
- SD
- STORM LINE
- SANITARY SEWER LINE
- WATER LINE
- G
- GAS LINE
- OHU
- OVERHEAD UTILITY LINES
- UNDERGROUND LINE PER RECORD
- SIGN
- BOLLARD
- DRIVEWAY ENTRY
- HANDICAP RAMP
- ROOF DRAIN
- ELECTRICAL MANHOLE
- ELECTRICAL JUNCTION BOX
- ELECTRICAL METER
- ELECTRICAL CABINET
- GUY ANCHOR
- LUMINAIRE
- POWER POLE
- OVERHEAD LIGHT
- POWER POLE/OVERHEAD LIGHT
- WITH UTILITY DROP
- GAS METER
- GAS VALVE
- SANITARY MANHOLE
- STORM MANHOLE
- CATCH BASIN
- AREA DRAIN
- SANITARY/STORM CLEAN OUT
- TRAFFIC SIGNAL BOX
- PEDESTRIAN CONTROL SIGNAL ARM
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- FIRE DEPARTMENT CONNECT
- WATER MANHOLE
- WATER VAULT
- HOSE BIB
- DECIDUOUS TREE
- PERIMETER REPRESENTS DRIPLINE
- CONIFEROUS TREE
- PERIMETER REPRESENTS DRIPLINE
- FOUND MONUMENT AS NOTED
- FOUND 5/8" IR W/PC "KPFF INC.", HELD
- FOUND 1-1/8" BRASS DISK "KPFF INC.", HELD

STORM TABLE:

- CATCH BASIN (SUMP TYPE)
RIM = 146.06'
WATER LEVEL = 145.34'
- CATCH BASIN (SUMP TYPE)
RIM = 146.62'
WATER LEVEL = 145.97'
- CATCH BASIN
RIM = 146.58'
IE 8" OUT (W) = 143.88'
- CATCH BASIN
RIM = 146.29'
IE 8" OUT (NNE) = 144.34'
- CATCH BASIN
RIM = 147.48'
IE 8" OUT (SW) = 145.28'
- CATCH BASIN
RIM = 147.18'
IE 8" OUT (NW) = 145.08'
- CATCH BASIN
RIM = 147.29'
IE 8" OUT (NE) = 144.99'

PROJECT CONTROL:

STATION	DESCRIPTION	NORTHING	EASTING	ELEVATION
4	1-1/8" BRASS CAP "KPFF CONTROL"	174459.68	356159.27	147.84'
5	1-1/8" BRASS CAP "KPFF CONTROL"	174713.32	356153.05	147.08'

REGISTERED PROFESSIONAL LAND SURVEYOR

Schuyler Dury 2023.04.14
15.31.39-07'00"

OREGON
MARCH 14, 2017
SCHUYLER JOEL DURY
78326
RENEWAL 12/31/2023

NORTH

SCALE

1 INCH = 20 FEET

REV.	DATE	BY	DESCRIPTION



111 SW Fifth Ave., Suite 2400
Portland, OR 97204
O: 503.227.3251
F: 503.226.4681
www.kpff.com

SURVEYED BY:	NF
DRAWN BY:	SD
CHECKED BY:	NA
PROJECT NO.:	2300079
FILE:	2300079-SB.DWG

BOUNDARY & TOPOGRAPHIC SURVEY
PHASE II - PARCEL B
SECURITY PROPERTIES
CITY OF PORTLAND / MULTNOMAH COUNTY / OREGON

DATE:	APRIL 14, 2023
CONTOUR INTERVAL:	1 FOOT
SHEET NO.	1 OF 1

VIEW 1



VIEW 2



VIEW 3



VIEW 4



VIEW 1



VIEW 2



VIEW 3



VIEW 4



Current Context (Splash_Under Construction)



Future Context (Splash_Rendering)



02 APPROVED PLANNED DEVELOPMENT

Approved Planned Development Criteria



PRINCIPLES

- KEEP THE PAVILION
- IMPROVE CONNECTIVITY**
- VARIETY OF OPEN SPACE**
- BLOCK THE FREEWAY
- A RANGE OF BUILDING HEIGHTS
- WOONERF STREET
- MINIMIZE INTERIOR VEHICULAR ACCESS

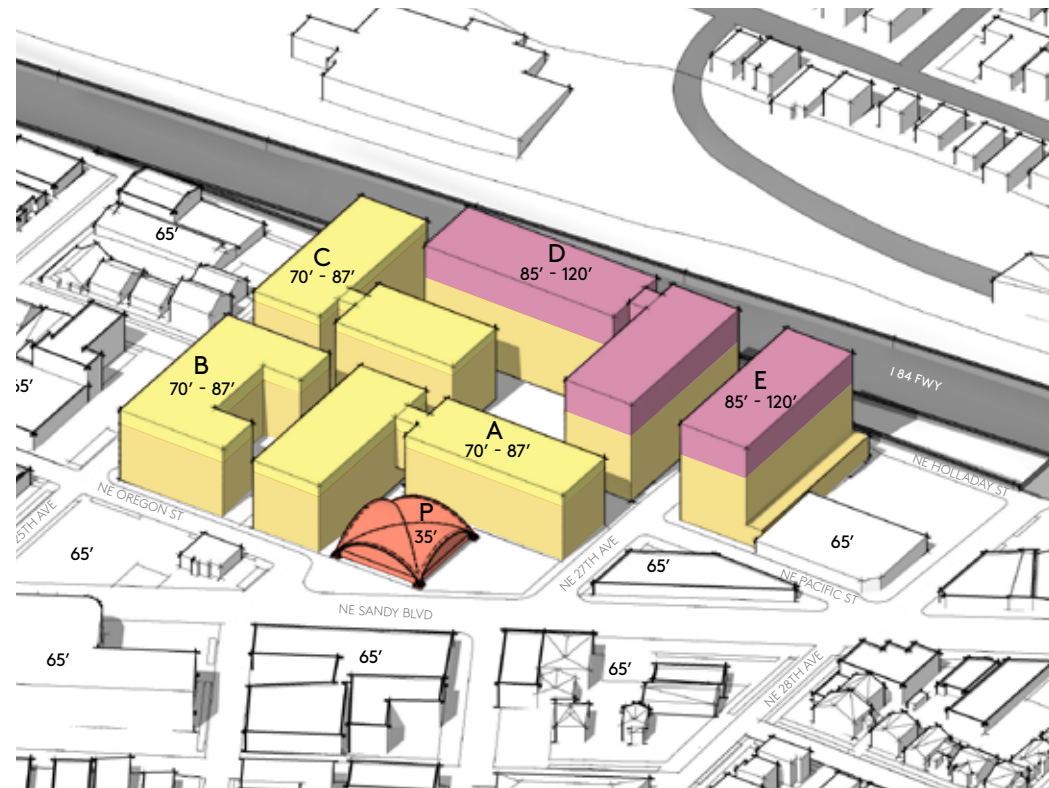
SITE AERIAL

KERN'S NEIGHBORHOOD
 PORTLAND BOTTLING COMPANY
 SANDY BOULEVARD ARCHITECTURE

- COMMUNITY INPUT**
- COHESIVE STYLE FOR DEVELOPMENT**
 - PATTERNS OF THE PAVILION
 - NO MID CENTURY ARCHITECTURE
 - NO GLASS TOWER
 - GREEN-UP SANDY**
 - SANDY METAMORPHOSIS
 - CURVES ARE NICE
 - THEATER CULTURE
 - PLACE TO GATHER
 - MORE FAMILY UNITS**



Approved Planned Development Criteria



LEGEND

- 65' (BASE HEIGHT)
- 70' - 87'
- 85' - 120'

SITE DEVELOPMENT CAPACITY
 224,448 SITE AREA
 5.0 FAR
 1,122,240 TOTAL ABOVE GRADE GSF

MINIMUM DEVELOPMENT CAPACITY
 224,448 SITE AREA
 3.6 FAR
 809,669 TOTAL ABOVE GRADE GSF

* THIS APPLICATION PROPOSES A MAXIMUM AND MINIMUM HEIGHT RANGE FOR EACH BLOCK. THE APPLICANT MAY CHANGE THIS BUILDING HEIGHT IN THE DESIGN REVIEW APPROVAL PROCESS FOR EACH VERTICAL DEVELOPMENT. IF THE CHANGE IN HEIGHT FROM THE MINIMUM OR MAXIMUM RANGE IS 10% OR LESS, THE CHANGE WILL NOT REQUIRE AN AMENDMENT TO THE PLANNED DEVELOPMENT APPROVAL.

*CANOPIES, BAYS, ORIEL WINDOWS, OVERHANGS, SIGNAGE, ARCHITECTURAL FEATURES, ROOFTOP EQUIPMENT AND SIMILAR ELEMENTS ARE IN ADDITION TO THESE OVERALL DIMENSIONS. ITEMS RELATED TO FACADE ARTICULATION WILL BE DEFINED AS PART OF THE VERTICAL DESIGN PHASE AS REQUIRED PER TITLE 33.

SITE DEVELOPMENT MASSING DIAGRAM



228,169 TOTAL SITE AREA TO BE DEVELOPED (INCLUDES SANDY POINT ROW)
 224,908 SITE AREA WITHIN PROPERTY LINE
 - 23,023 50' DEDICATION
 201,885 FINAL SITE AREA MINUS DEDICATION

15%	30,282	OPEN SPACE REQUIRED FOR PD
12.13%	24,481	REQUIRED PUBLICLY ACCESSIBLE OPEN SPACE
6.77%	13,665	PARK
4.30%	8,684	PLAZA
1.06%	2,134	PACIFIC PARK
4.40%	8,880	ADDITIONAL PUBLICLY ACCESSIBLE OPEN SPACE
4.40%	8,880	MEV'S
16.52%	33,361	TOTAL PUBLICLY ACCESSIBLE OPEN SPACE (NO ROW)
7.02%*	16,017	OPEN SPACE IN THE ROW PROVIDED
5.59%*	12,756	WOONERF
1.43%*	3,261	SANDY POINT
21.64%*	49,378	TOTAL PUBLICLY ACCESSIBLE OPEN SPACE IN DEVELOPED AREA (INCLUDES ROW)
9.17%	18,509	ADDITIONAL OPEN SPACE
6.03%	12,172	NORTH GARDEN
3.14%	6,337	SOUTH GARDEN

LEGEND

- REQUIRED PUBLICLY ACCESSIBLE PARK OR PLAZA
- ADDITIONAL PUBLICLY ACCESSIBLE OPEN SPACE
- ADDITIONAL OPEN SPACE
- IMPROVED PUBLIC OPEN SPACE IN ROW
- ROW DEDICATION WITHIN VACATED PACIFIC STREET
- * PRIMARY BUILDING ENTRANCE

OPEN SPACE PLAN * Publicly Accessible Pacific Park (1.06% of the 15% total PD requirement)

1.2 - PLANNED DEVELOPMENT APPROVAL CRITERIA

[REF. 33.854.310]

PLANNED DEVELOPMENT PURPOSE

[REF 33.270.010]

Flexibility and increased intensity of development if the proposed development is well-designed and can be successfully integrated into the neighborhood and provides public benefits.

PD is intended to promote:

- High quality design integrated into the broader urban fabric, and complements existing character
- Pedestrian- and transit-oriented development
- Bulk, height, and orientation that ensures that light and air within the public realm, and that public view corridors are protected
- A safe and vibrant public realm, with buildings and uses that are oriented to activate key public gathering spaces, be they public open space, transit stations, or the Willamette River
- Open space areas that include gathering spaces and passive and/or active recreation opportunities
- Affordable housing
- Energy efficient development

BONUS

- 2 to 1 additional FAR
- 55 feet additional height

APPROVAL CRITERIA

A. Urban design and development framework

1. The proposed overall scheme and site plan provide a framework for development that meets applicable Community Design Guidelines and will result in development that complements the surrounding area
2. Scale and massing of the development addresses the context of the area, including historic resources, and provides appropriate scale and massing transitions to the adjacent uses and development specifically at the edges of the Master Plan area
3. Proposed plazas, parks, or open areas are well located to serve the site and public, and are designed to address safety and comfort of users
4. The site plan promotes active ground floor uses on key streets to serve the development and surrounding neighborhood

B. Transportation system

The transportation and circulation system provides multi-modal connections that support the development of the site, limit impacts to adjacent neighborhoods.

C. Stormwater Management

The Planned Development meets the requirements of the Stormwater Management Manual or describes a phased approach to meet the requirements.

PLANNED DEVELOPMENT REQUIREMENTS

[REF 33.270.200]

A. Affordable housing. (Mandatory Inclusionary Housing (per 33.130.212.C.1) or Voluntary Inclusionary Housing (per 33.130.212.C.2)

B. Plaza or park. At least 15% of the total PD site area must be a publicly accessible plaza or park, meeting the following:

1. The plaza or park must be:
 - a. Located outside on the site
 - b. Located adjacent to a public street
 - c. Open and accessible to the public from 7am to 9pm
2. The plaza must have a minimum dimension of 50 feet by 50 feet.
3. Open space used to meet required residential outdoor area standards cannot be used to meet this requirement.
4. Abutting building walls must meet ground floor window standards, and there must be at least one building entrance facing the plaza or park.
5. The property owner must execute a covenant with the City ensuring the preservation, maintenance, and continued operation of the plaza or park.

C. Energy efficient buildings. All buildings (except for accessory structures), must meet the energy efficiency requirements of the BPS.

D. Design Review.

D. Phasing Plan

The Planned Development establishes coordinated phasing of development that demonstrates how the site will be developed over time and how any required development elements will be met.

E. Configure the site and development to visually integrate both natural and built features of the site and the natural and built features of the surrounding area. Aspects to be considered include:

1. Orienting the site and development to the public realm, while limiting less active uses of the site such as parking and storage areas along the public realm
2. Preservation of natural features on the site, such as stands of trees, water features or topographical elements
3. Inclusion of architectural features that complement positive characteristics of surrounding development, such as similar building scale and style, building materials, setbacks, and landscaping
4. Mitigation of differences in appearance through means such as setbacks, screening, landscaping, and other design features
5. Minimizing potential negative effects on surrounding residential uses
6. Preservation of any City-designated scenic resources

Approved Planned Development Criteria _ Materiality & Form

SINGULARITY OF MATERIAL & SIMPLE FORMS



Approved Planned Development Criteria _ Materiality & Form

OPENINGS | BUILDING BODY



Approved Planned Development Criteria _ Materiality & Form

OPENINGS | PEDESTRIAN INTERFACE



Approved Planned Development Criteria _ Materiality & Form
ELEMENTS ADDITIVE TO FORM

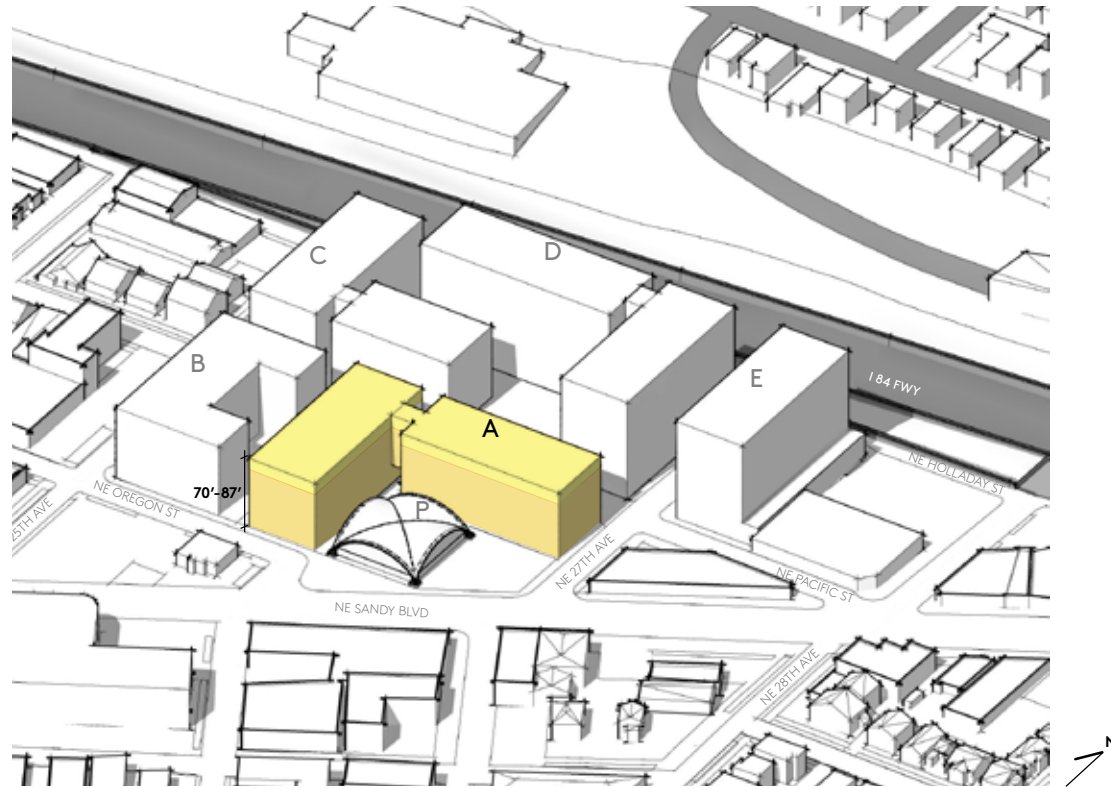


Approved Planned Development Criteria _ Architectural Principles

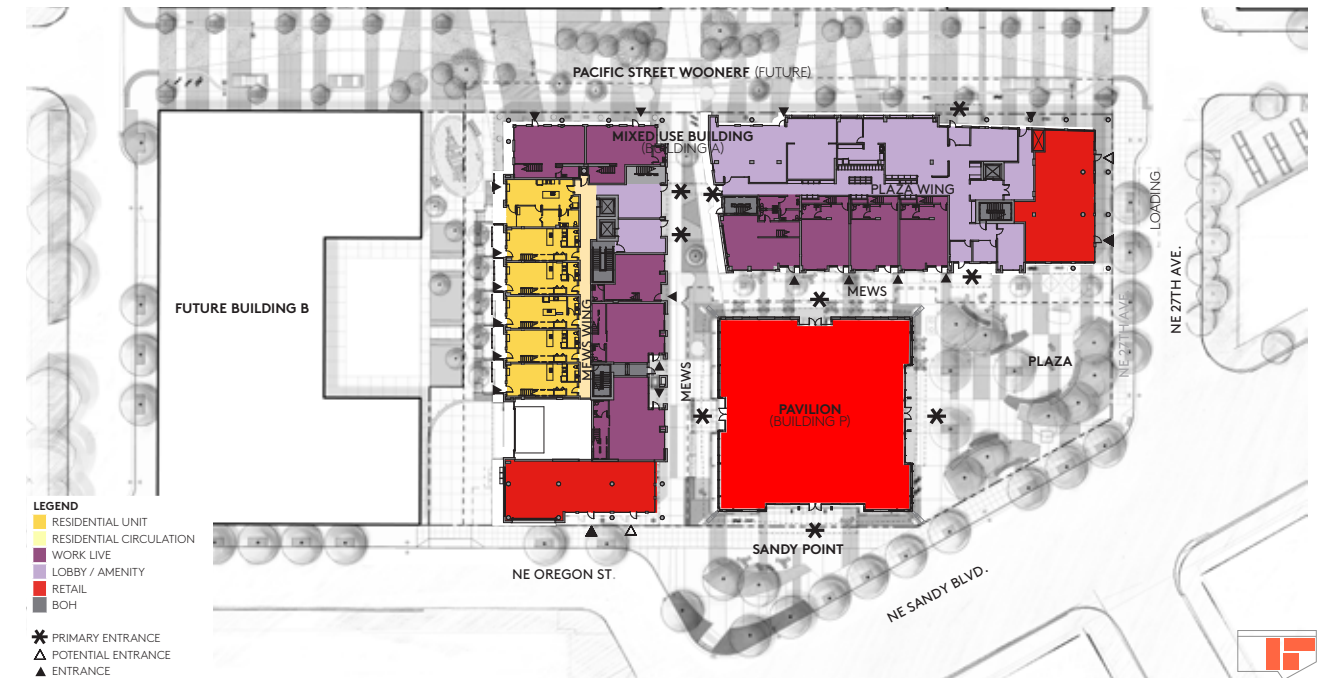


- PREDOMINANTLY SIMPLE SINGULAR FORMS
- PREDOMINANTLY SINGULAR IN MATERIALITY
- STUCCO/CEMENTITIOUS, BRICK, METAL
- WOOD AS ACCENT
- PREDOMINANTLY PUNCHED WINDOWS IN SOLID BODY
- GLAZED, PUNCHED, OR OPERABLE AT BASE
- PREDOMINANTLY ADDITIVE DECKS & ELEMENTS
- PAVILION IS THE FOLLY

Approved Pepsi Blocks Phase 1A



BUILDING A MASSING DIAGRAM



PRINCIPLES

PAVILION IS THE STAR.

BALANCE ACTIVE & PASSIVE USES IN THE PLAZA.

ACTIVATE THE GROUND FLOOR EDGES.

RESPOND TO PLANNED DEVELOPMENT DESIGN PRINCIPLES.

ENSURE VIABILITY OF CONTINUED USE OF EXISTING BUILDINGS.

PROVIDE SIGNIFICANT AFFORDABLE HOUSING, INCLUDING 3 BEDROOM UNITS.



Planned Development Diagrams _ Building B



BUILDING B MASSING DIAGRAM

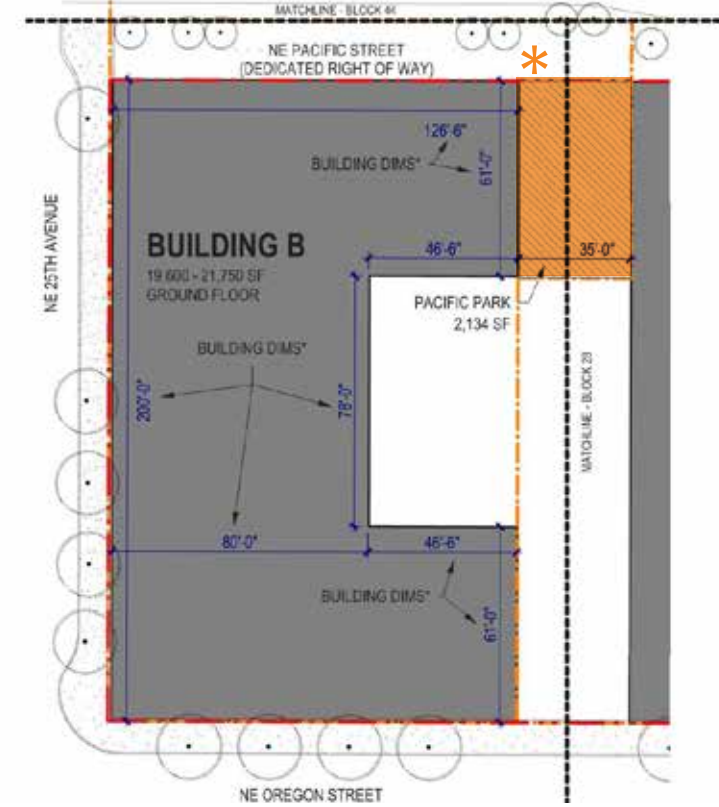
- LEGEND**
- 65' (BASE HEIGHT)
 - 70' - 87'
 - 85' - 120'

118,530 BUILDING B MINIMUM FLOOR AREA
161,710 BUILDING B MAXIMUM FLOOR AREA
6-8 STORIES

NOTE: SEE SECTION 3.4 FOR BUILDING FOOTPRINT DIMENSIONS

* THIS APPLICATION PROPOSES A MAXIMUM AND MINIMUM HEIGHT RANGE FOR EACH BLOCK. THE APPLICANT MAY CHANGE THIS BUILDING HEIGHT IN THE DESIGN REVIEW APPROVAL PROCESS FOR EACH VERTICAL DEVELOPMENT. IF THE CHANGE IN HEIGHT FROM THE MINIMUM OR MAXIMUM RANGE IS 10% OR LESS, THE CHANGE WILL NOT REQUIRE AN AMENDMENT TO THE PLANNED DEVELOPMENT APPROVAL.

* CANOPIES, BAYS, ORIEL WINDOWS, OVERHANGS, SIGNAGE, ARCHITECTURAL FEATURES, ROOFTOP EQUIPMENT AND SIMILAR ELEMENTS ARE IN ADDITION TO THESE OVERALL DIMENSIONS. ITEMS RELATED TO FACADE ARTICULATION WILL BE DEFINED AS PART OF THE VERTICAL DESIGN PHASE AS REQUIRED PER TITLE 33.

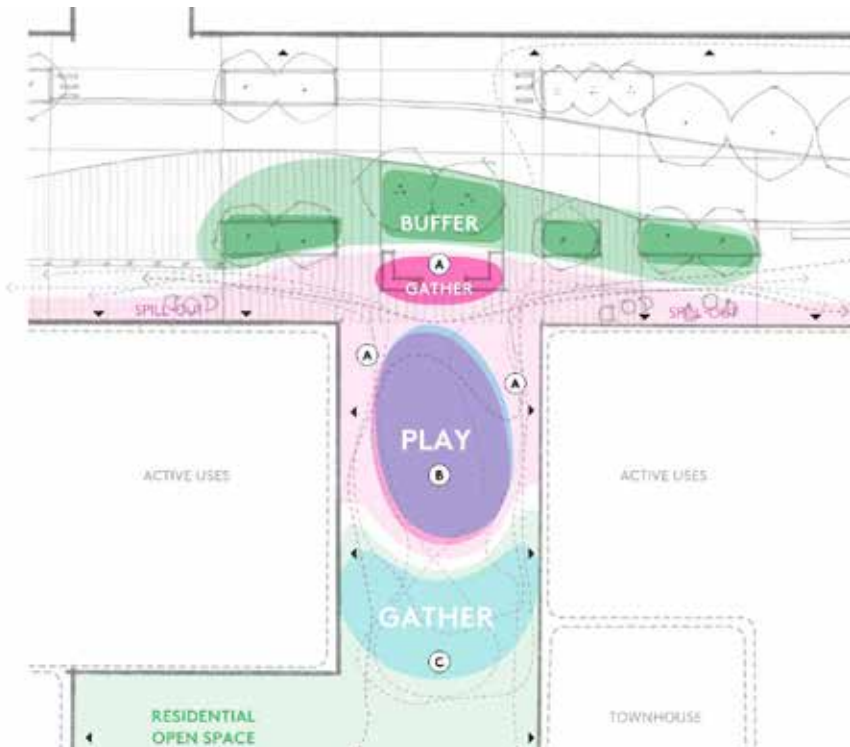


BUILDING B SITE DIAGRAM * Publicly Accessible Pacific Park (1.06% of the 15% total PD requirement)

- PROPERTY LINE
- PHASE BOUNDARY
- MATCH LINE
- GROUND FLOOR FOOTPRINT
- REQUIRED PUBLICLY ACCESSIBLE OPEN SPACE
- ADDITIONAL PUBLICLY ACCESSIBLE OPEN SPACE

*Ground floor footprints as represented are diagrammatic. Actual building articulation including canopies, bays, overhangs, signage, architectural features, rooftop equipment and similar elements will be proposed with individual building land use applications, and may vary in either direction from what is shown in the diagrams and may extend as allowed by Title 33 over ROW areas, and similarly over the publicly accessible open spaces.

*Building dimensions may range +/- 10% from what is shown.



DESIGN FRAMEWORK

GENERAL NOTES

- Create a smaller, more intimate pocket park, away from the noise of Sandy Boulevard, with some of the family-focused amenities of the Park.
 - Create an environment that is safe day and night; encourage "eyes on the street" from adjacent ground floor uses; do not create visual barriers; provide pedestrian level lighting.
 - Create a multi-generational space that considers the needs of residents of all ages.
 - Continue paving treatment from pedestrian spaces of woodruff to create a seamless flow of spaces. Keep the spaces on the same general elevation as the woodruff.
 - Provide a minimum 1' width on building facades to accommodate corner edges. Allow for site furnishings, street signage, movable carts, furnishings and short-term bike parking.
 - Create a gradient of spaces from public, to semi-public. Use the edge to the residential open space or a place for more landscape buffer.
- A. GATHER (PUBLIC)**
- Provide generous circulation space near entrances, with benches or other seating, to allow people to linger and gather in small groups.
 - Locate smaller gathering spaces to encourage pedestrian flow into the central park space.
- B. PLAY**
- Create a unique and safe play area that is welcoming to the neighborhood.
- C. GATHER (SEMI-PUBLIC)**
- Provide landscaped open space that creates a visual screen to residential space beyond, but also allows for small gatherings. Incorporate pockets for trees with adequate soil depth.
 - Design to accommodate movable furnishings.

03 DESIGN EXPLORATION



ZEN LIFE

WELLNESS_CALM_QUIET
SUSTAINABLE LIVING
BALANCE



SECRET GARDEN

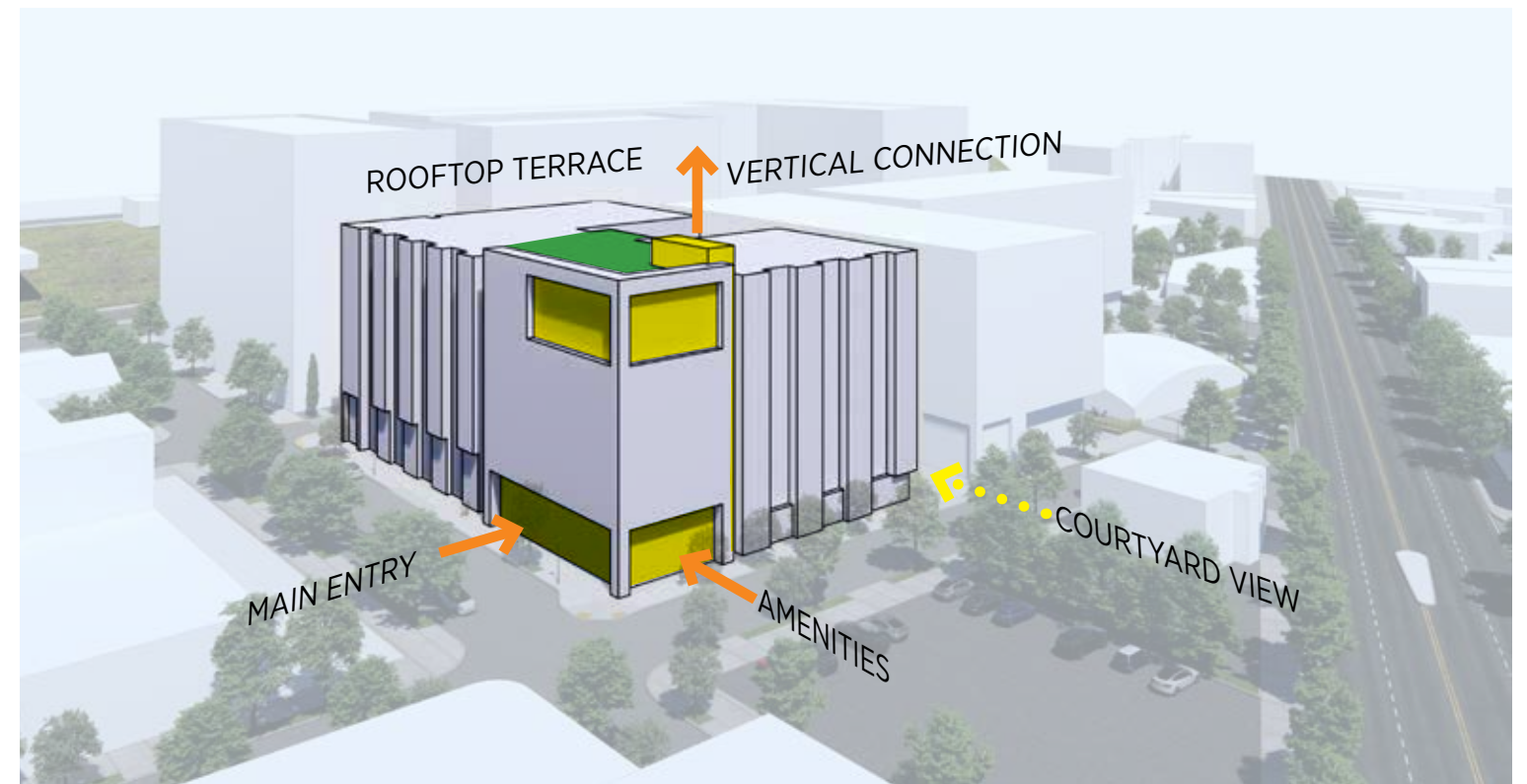
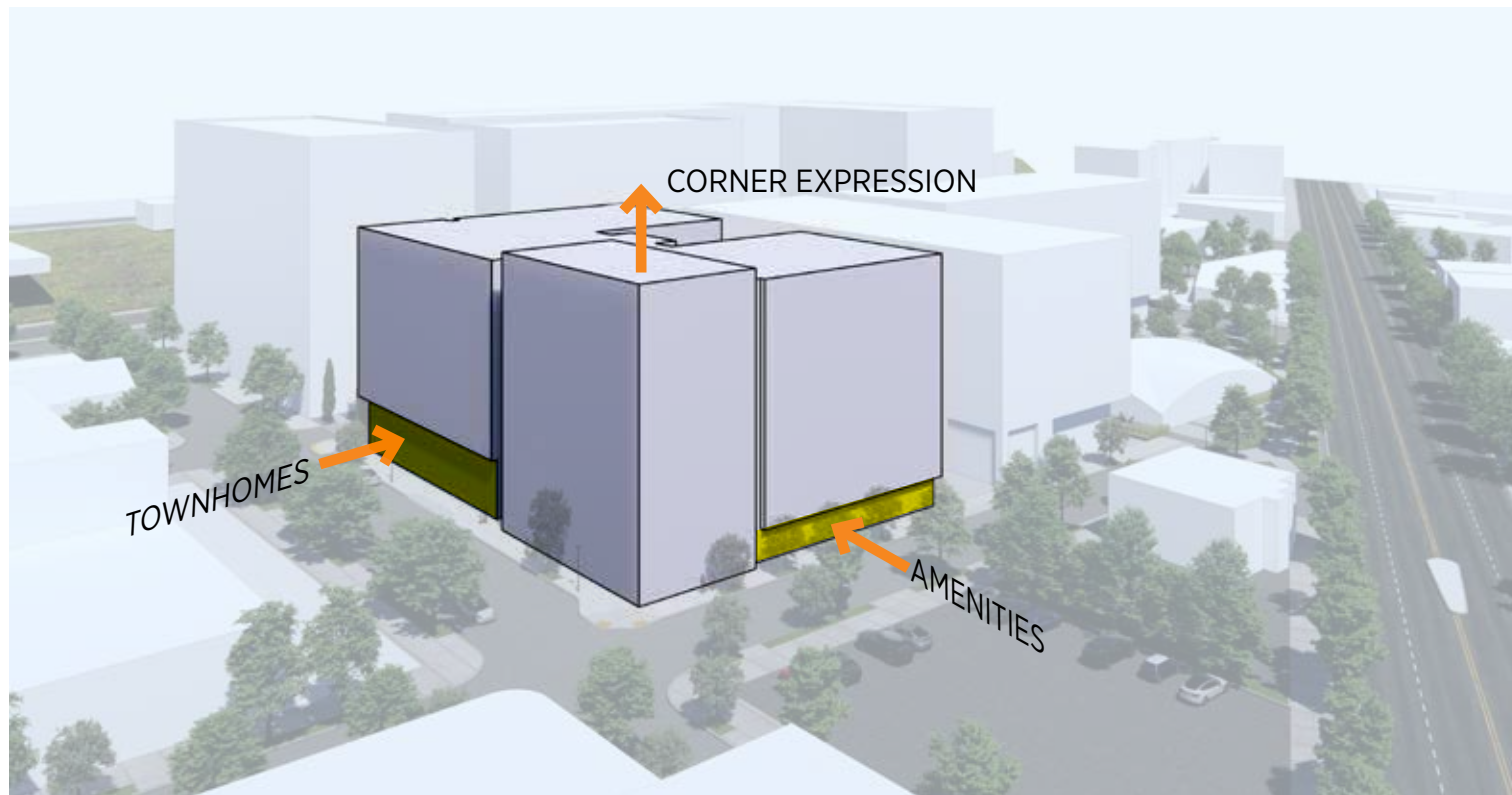
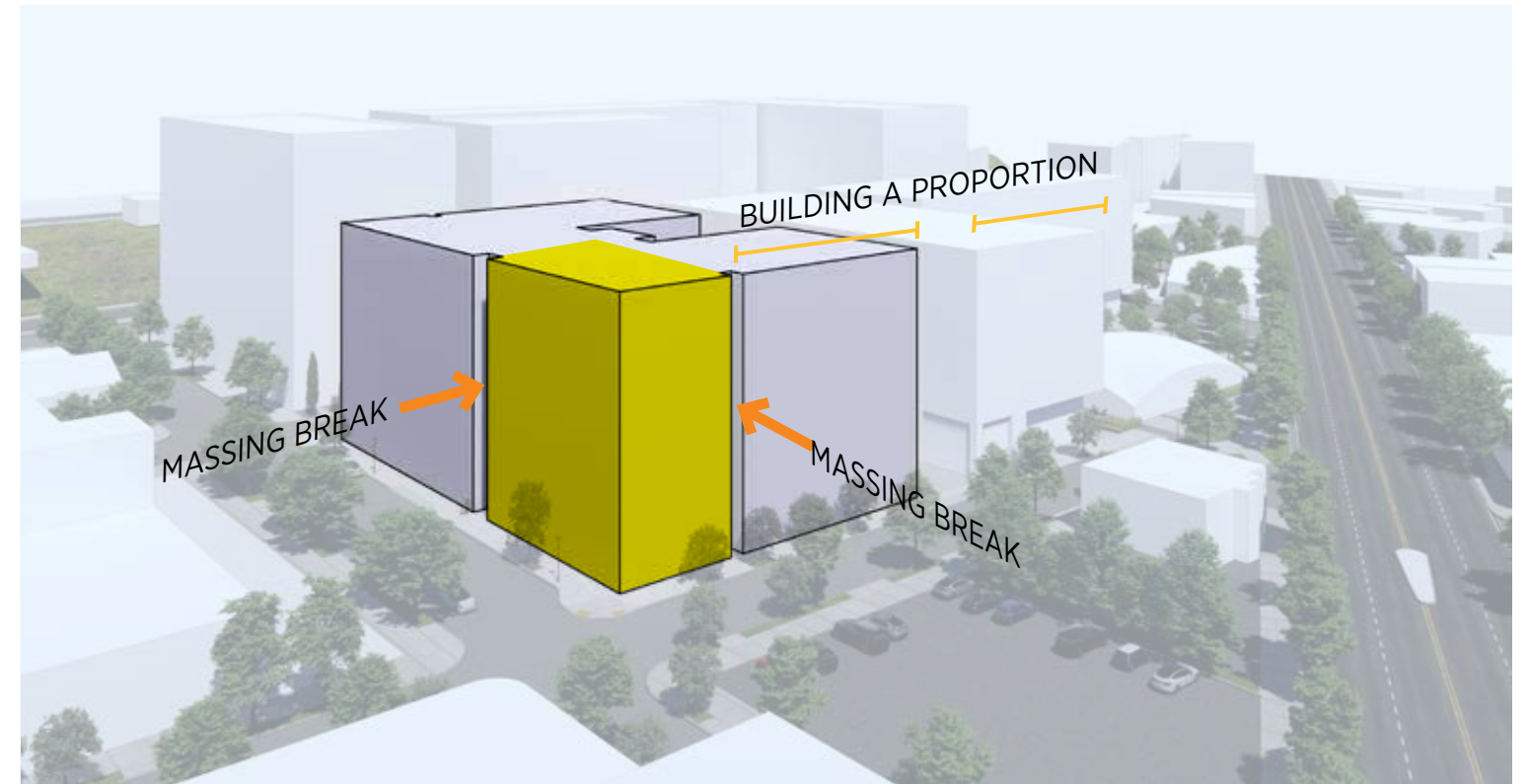
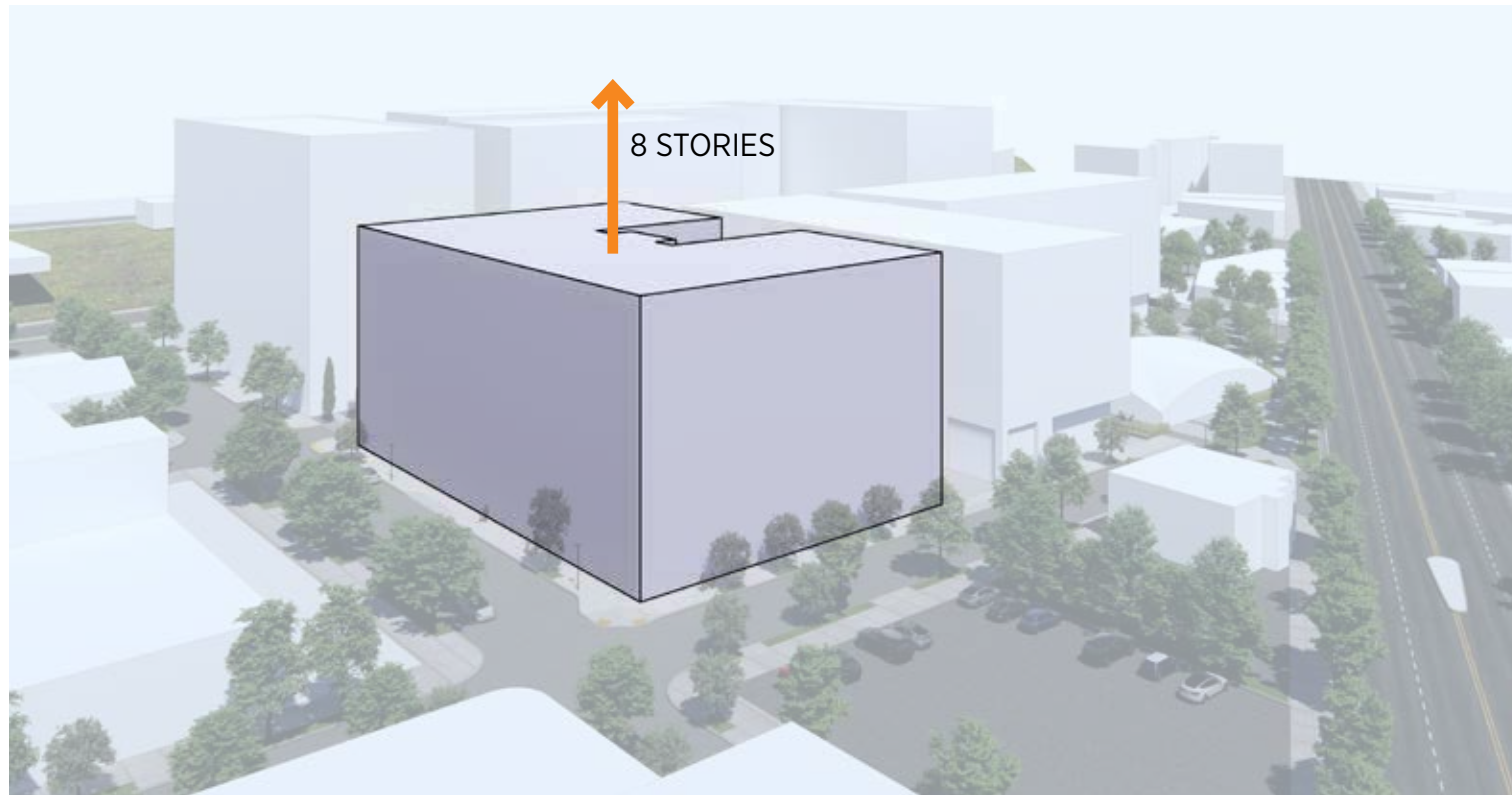
WONDER
REVEAL_DISCOVER
BIOPHILIC DESIGN



REPETITION - ORDER - ELEGANCE

SIMPLE FORMS
COHESIVE COLOR PALETTE
COMPLEMENT BUILDING A

Architectural Concept _ Massing Articulation





04 ARCHITECTURAL CONCEPT

Architectural Concept



FACADE DIAGRAM

MAIN CHARACTERISTICS

RESPONDS TO THE LARGER CONTEXT.

VIEW FROM SANDY.

BUILDING AS A BEACON FOR THE PEPSI BLOCKS LARGER DEVELOPMENT.

RESIDENTIAL BALCONY AS CHARACTER INFORMANT.

DOUBLE HEIGHT FRAMED ENTRY.

TOWNHOMES AT NE 25TH AVE. AND NE PACIFIC ST.



PRECEDENT IMAGES

Architectural Concept



WEST ELEVATION (25TH AVE)



SOUTH ELEVATION (OREGON ST)





Architectural Concept

EAST ELEVATION (COURTYARD)



NORTH ELEVATION (PACIFIC ST)



SOUTHWEST



SOUTHEAST



NORTHEAST



NORTHWEST





Architectural Concept _ Renderings



Architectural Concept _ Renderings



Architectural Concept _ Elevations

WEST ELEVATION



SOUTH ELEVATION



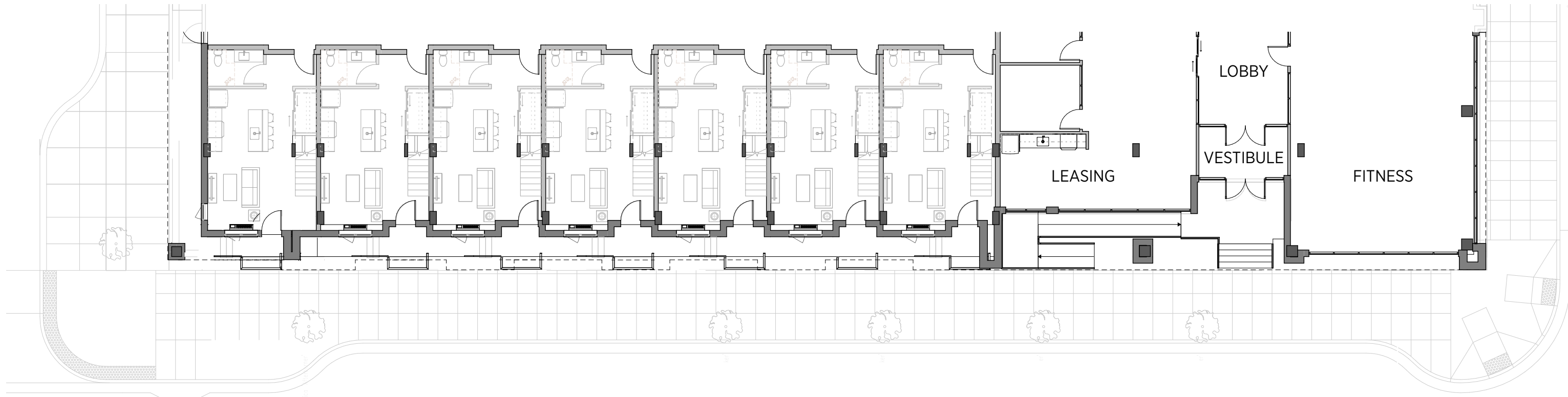
NORTH ELEVATION



WEST ELEVATION _ GROUND FLOOR



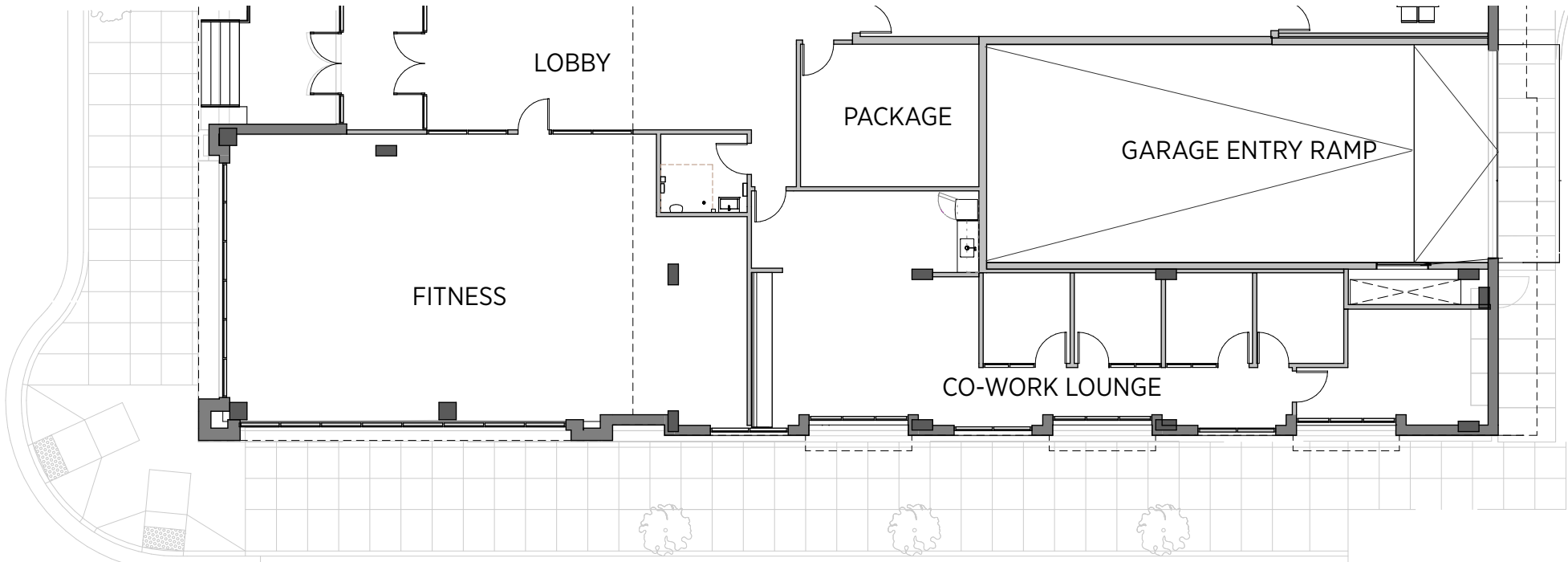
← WOONERF NORTH STOOPS WEST STOOPS MAIN ENTRY / LOBBY / AMENITIES



NE 25TH AVE.

SCALE: 1"=15'

SOUTH ELEVATION _ GROUND FLOOR

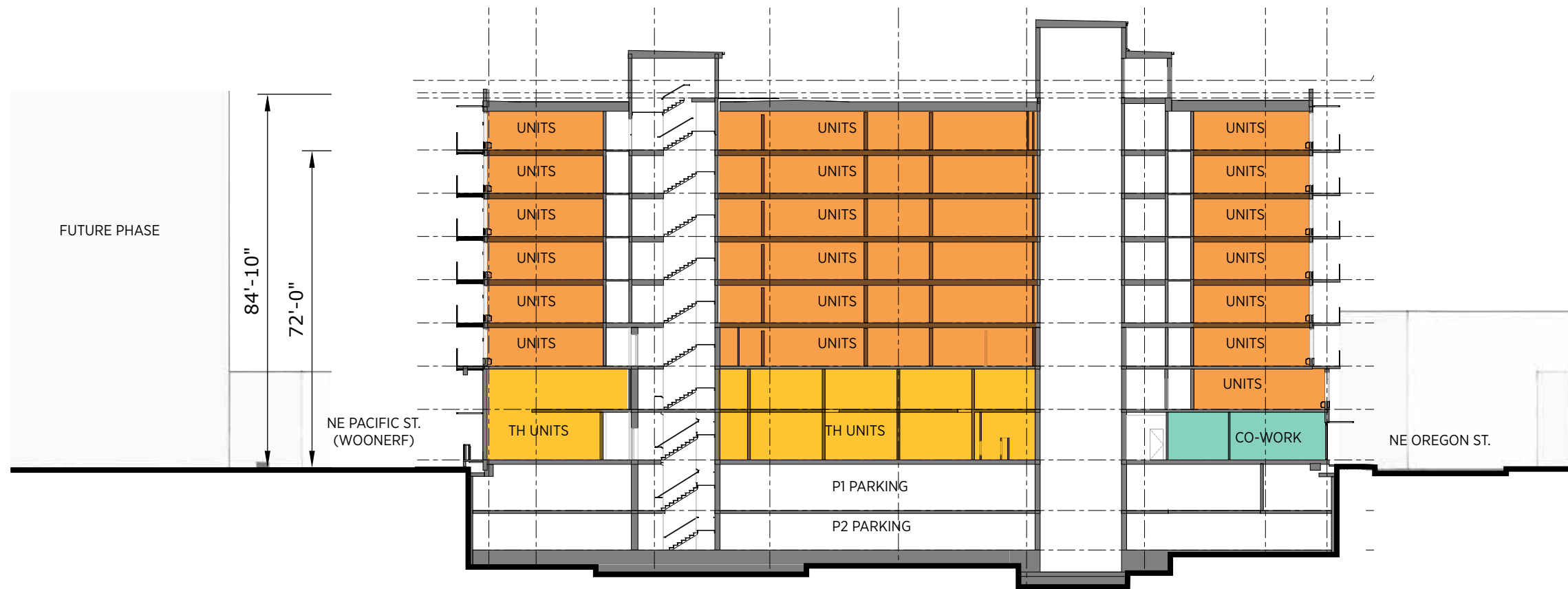
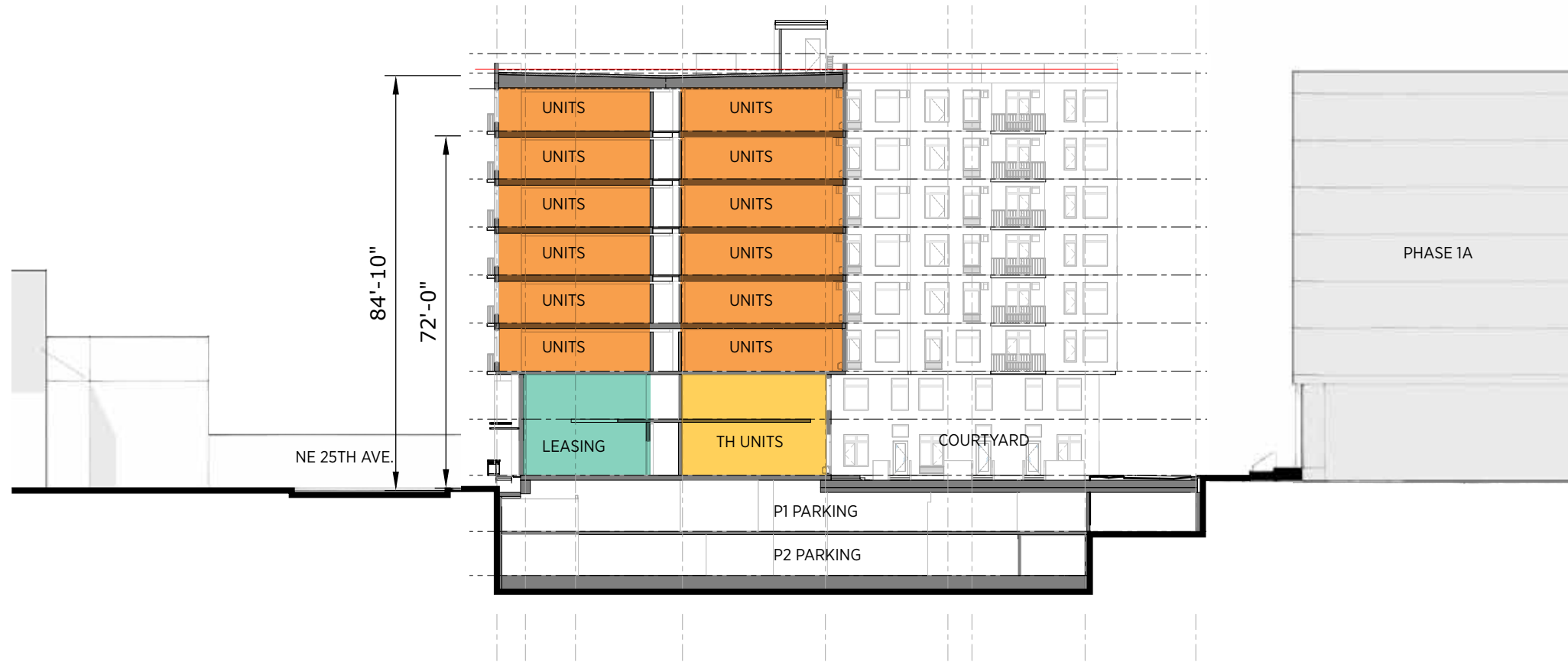


NE OREGON ST.

SOUTH ELEVATION



Architectural Concept _ Sections



PORTLAND PERSONALITY GUIDELINES

P1: Community Plan Area Character	NOT APPLICABLE
P2: Historic and Conservation Districts	NOT APPLICABLE
P3: Gateways	NOT APPLICABLE

PEDESTRIAN EMPHASIS GUIDELINES

E1: Pedestrian Networks	APPLICABLE
E2: Stopping Places	APPLICABLE
E3: The Sidewalk Level of Buildings	APPLICABLE
E4: Corners that Build Active Intersections	APPLICABLE
E5: Light, Wind and Rain	APPLICABLE

PROJECT DESIGN GUIDELINES

D1: Outdoor Areas	APPLICABLE
D2: Main Entrances	APPLICABLE
D3: Landscape Features	APPLICABLE
D4: Parking Areas and Garages	APPLICABLE
D5: Crime Prevention	APPLICABLE
D6: Architectural Integrity	NOT APPLICABLE
D7: Blending into the Neighborhood	APPLICABLE
D8: Interest, Quality and Composition	APPLICABLE

Portland Community Design Guidelines



E1 - Pedestrian Networks.

Paving patterns and landscape design consistent with the larger development.

Northeast corner parklet with art installation.

E2 - Stopping Places.

Covered main entry with landscaping, bike parking and seating.

Amenity rooms and canopies facing NE Oregon Ave.

E3 - The Sidewalk Level of Buildings.

Townhome style two story units with raised stoops.

Stoops engaged with the sidewalk without a landscape as a barrier.

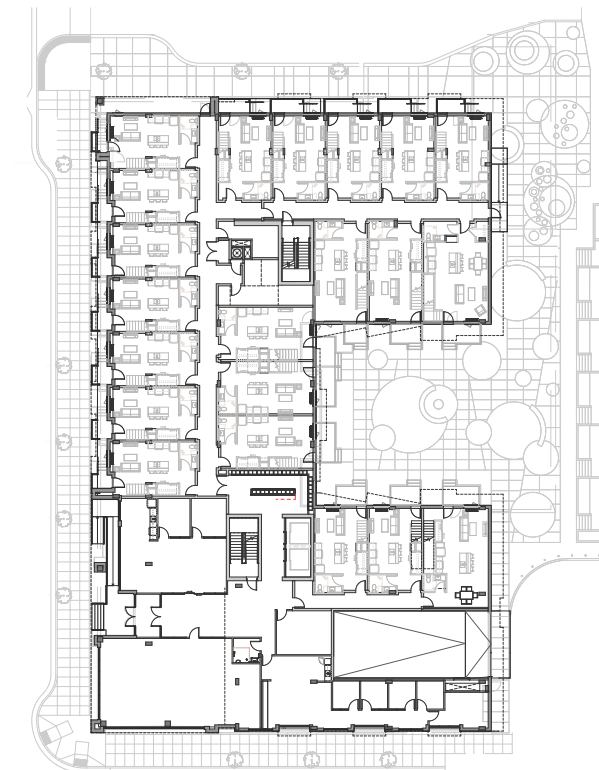
E4 - Corners that Build Active Intersections.

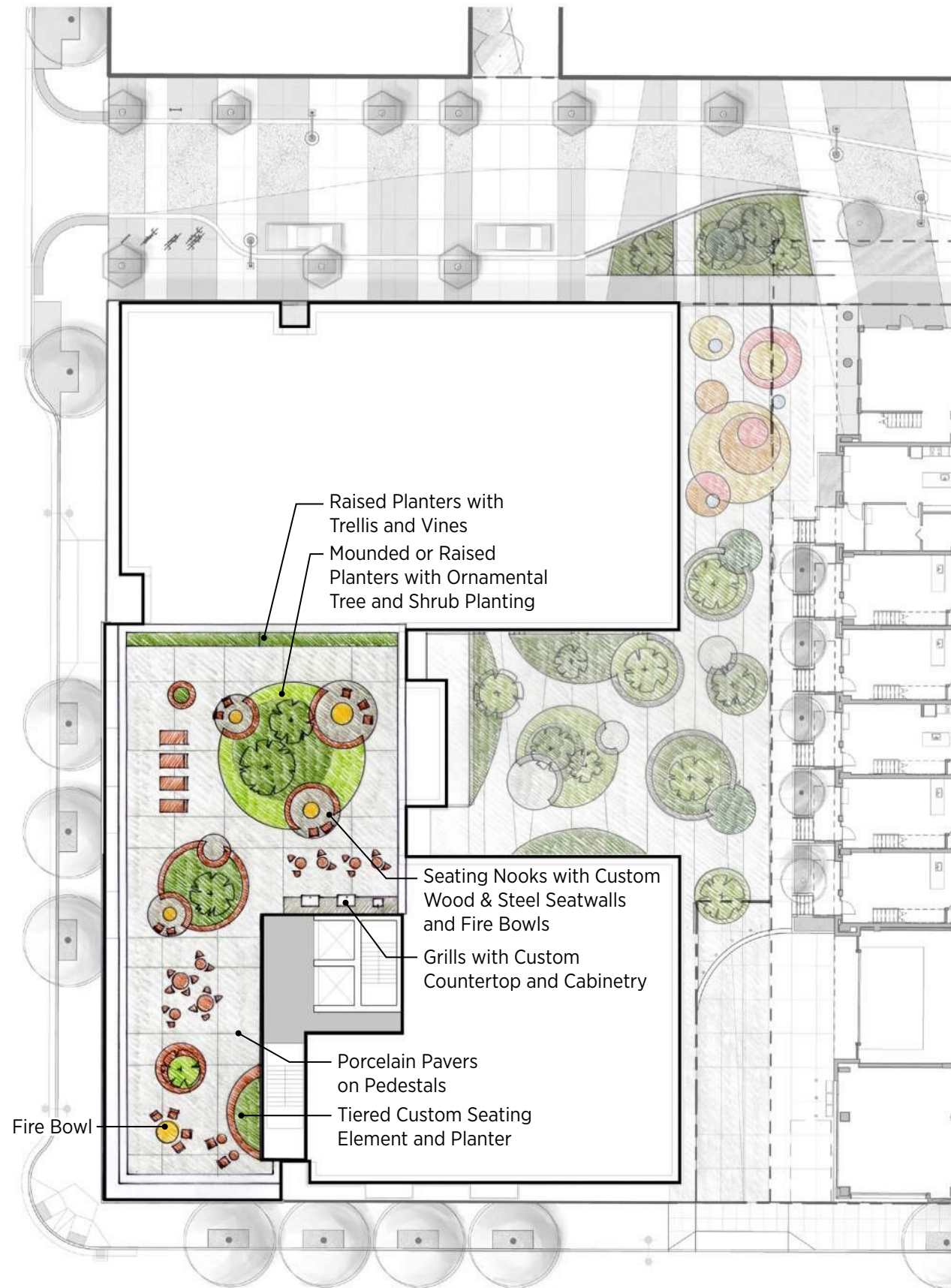
Southeast corner main entry expression.

E4 - Light, Wind and Rain.

Covered main entry with landscaping.

Canopies facing NE Oregon Ave. and at townhomes entries.





LANDSCAPE CONCEPT | ROOF TERRACE PLAN | 1/16"=1'-0"

D1 - Outdoor Areas.

NE Pacific St. Woonerf.
 Northeast parklet and courtyard open to the public.
 Townhomes stoops and balconies.
 Rooftop ammenity.

D2 - Main Entrances.

Southwest corner expression.
 Main Entry, Lobby/amenities, and rooftop located on southwest corner.

D3 - Landscape Features.

NE Pacific St. Woonerf.
 Ground floor amenities setback.
 Townhomes stoops landscaping.
 Northeast parklet and courtyard open to the public.

D4 - Parking Areas and Garages.

Garage entries consolidated and not facing the street.



Portland Community Design Guidelines



D5 - Crime Prevention.

Townhome style two story units with raised stoops.
Stoops engaged with the sidewalk without a landscape as a barrier.
Active ground level uses oriented to NE Oregon Ave. / NE Sandy Blvd.

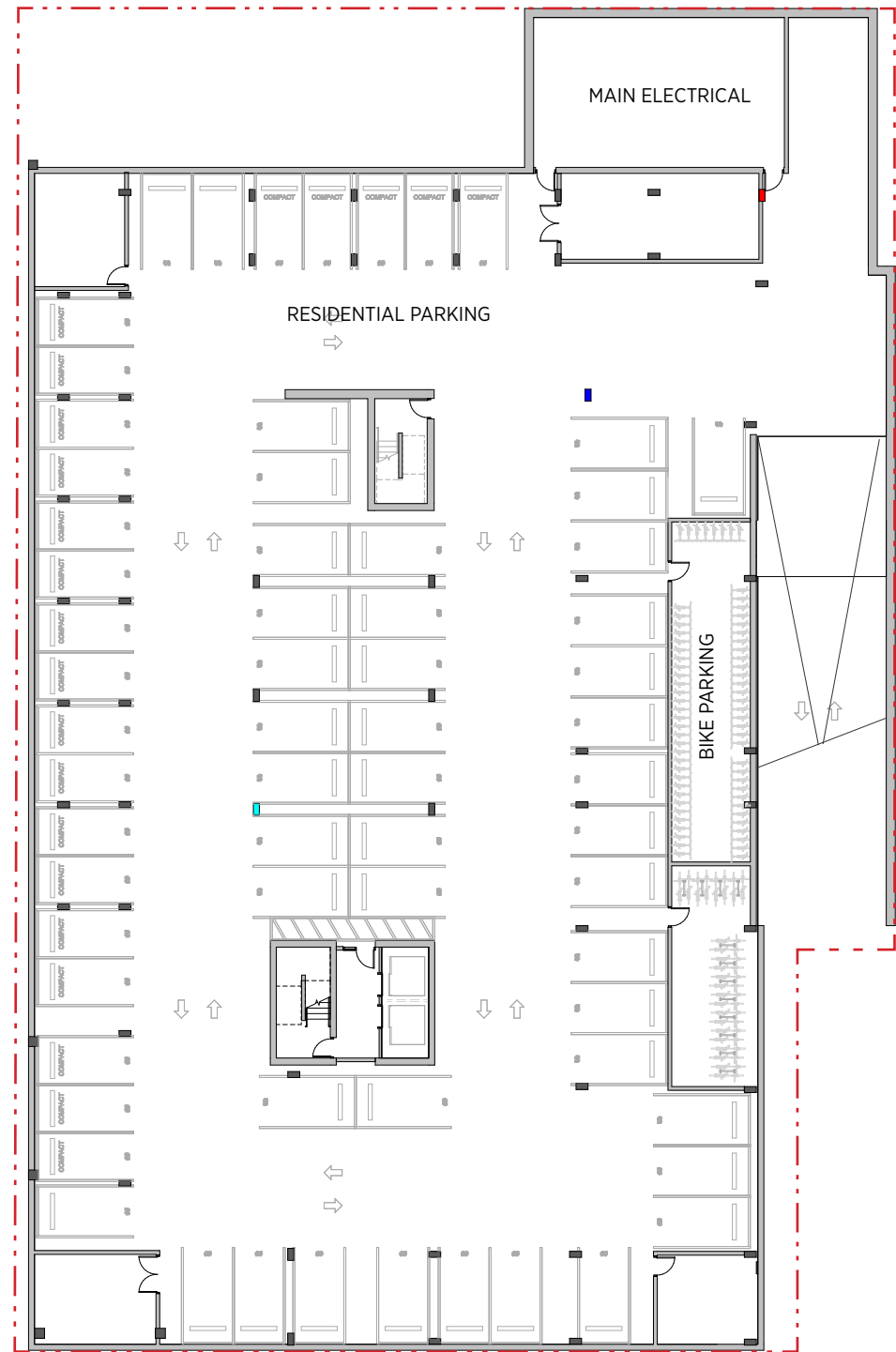
D7 - Blending into the Neighborhood.

Responds to Planned Development criteria.
Townhomes stoops on NE 25th Ave. and NE Pacific St.
Stoops engaged with the sidewalk without a landscape as a barrier.
Main Entry architectural and landscaping features.

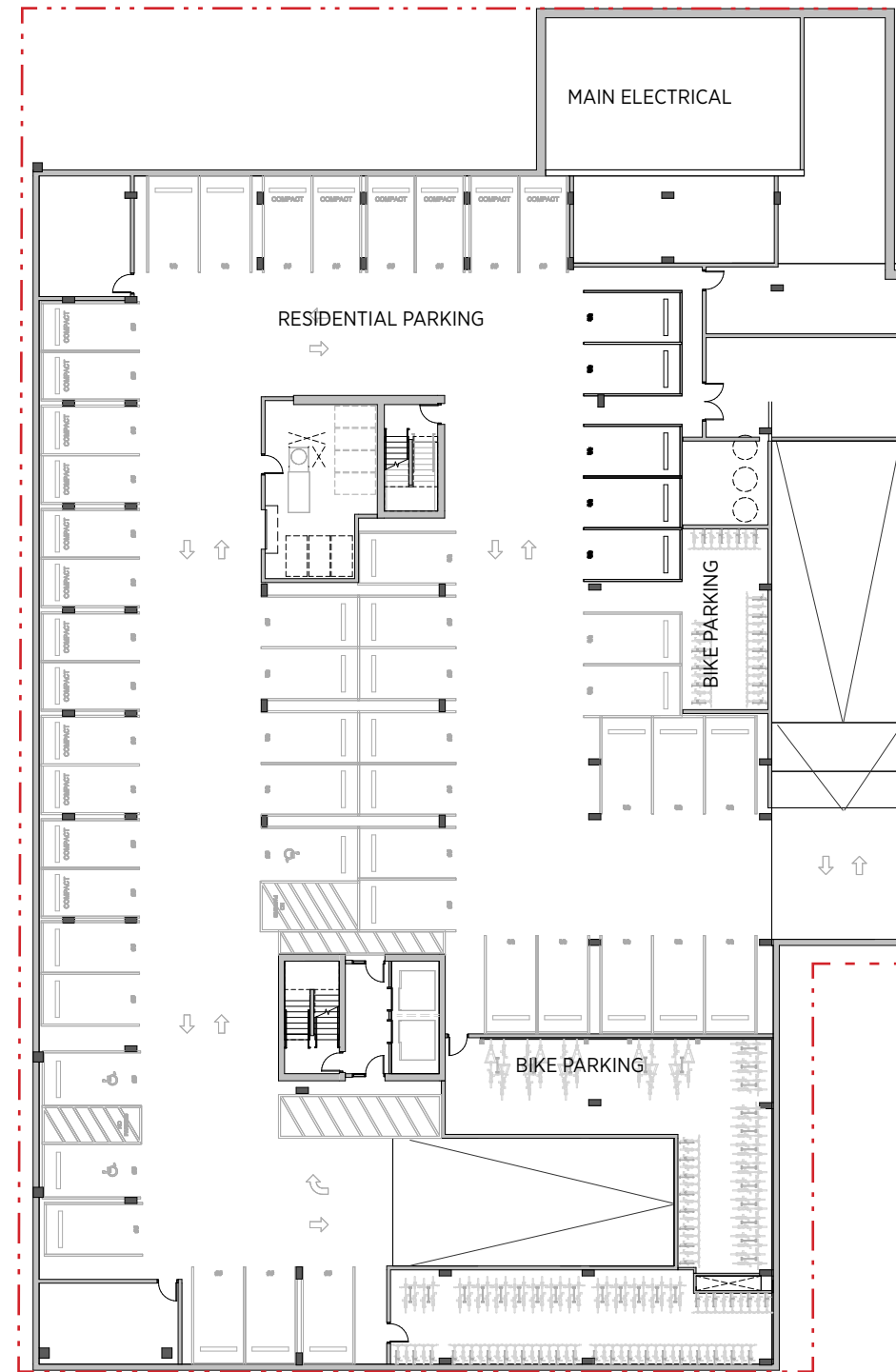
D8 - Interest, Quality and Composition.

Singular architectural expression.
Cohesive color palette.
Use of quality materials like brick, wood and metal.

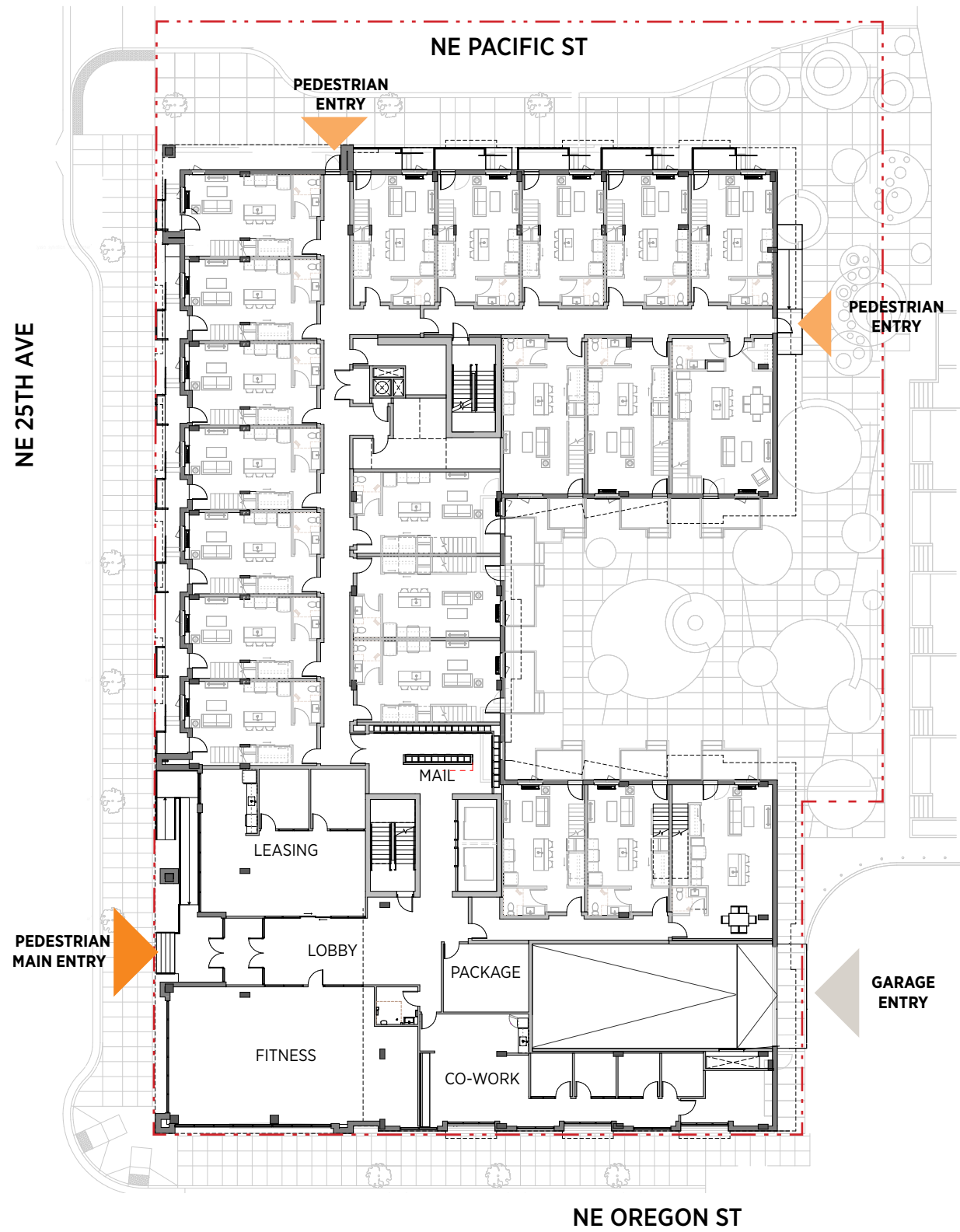
LEVEL P2



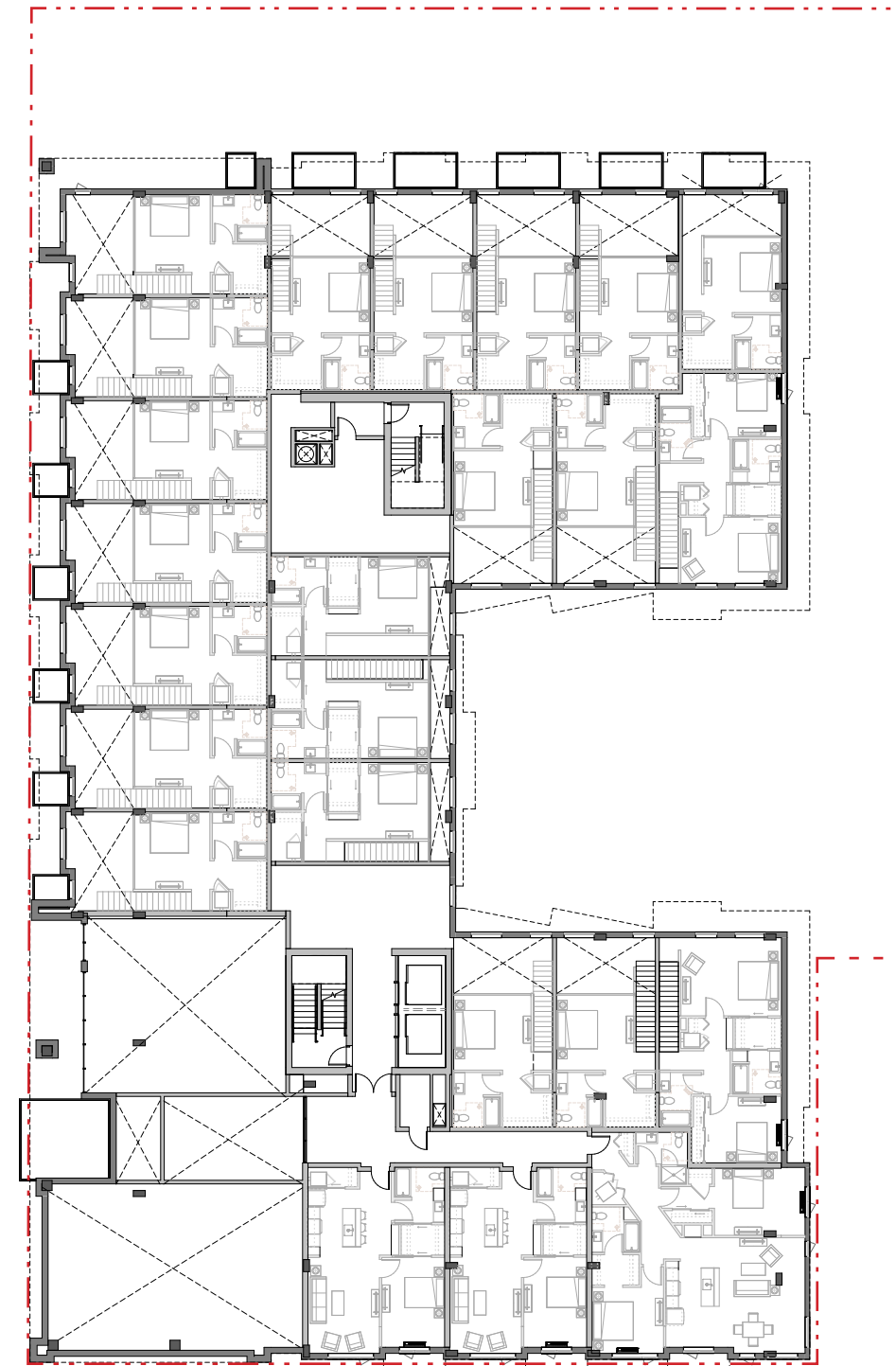
LEVEL P1



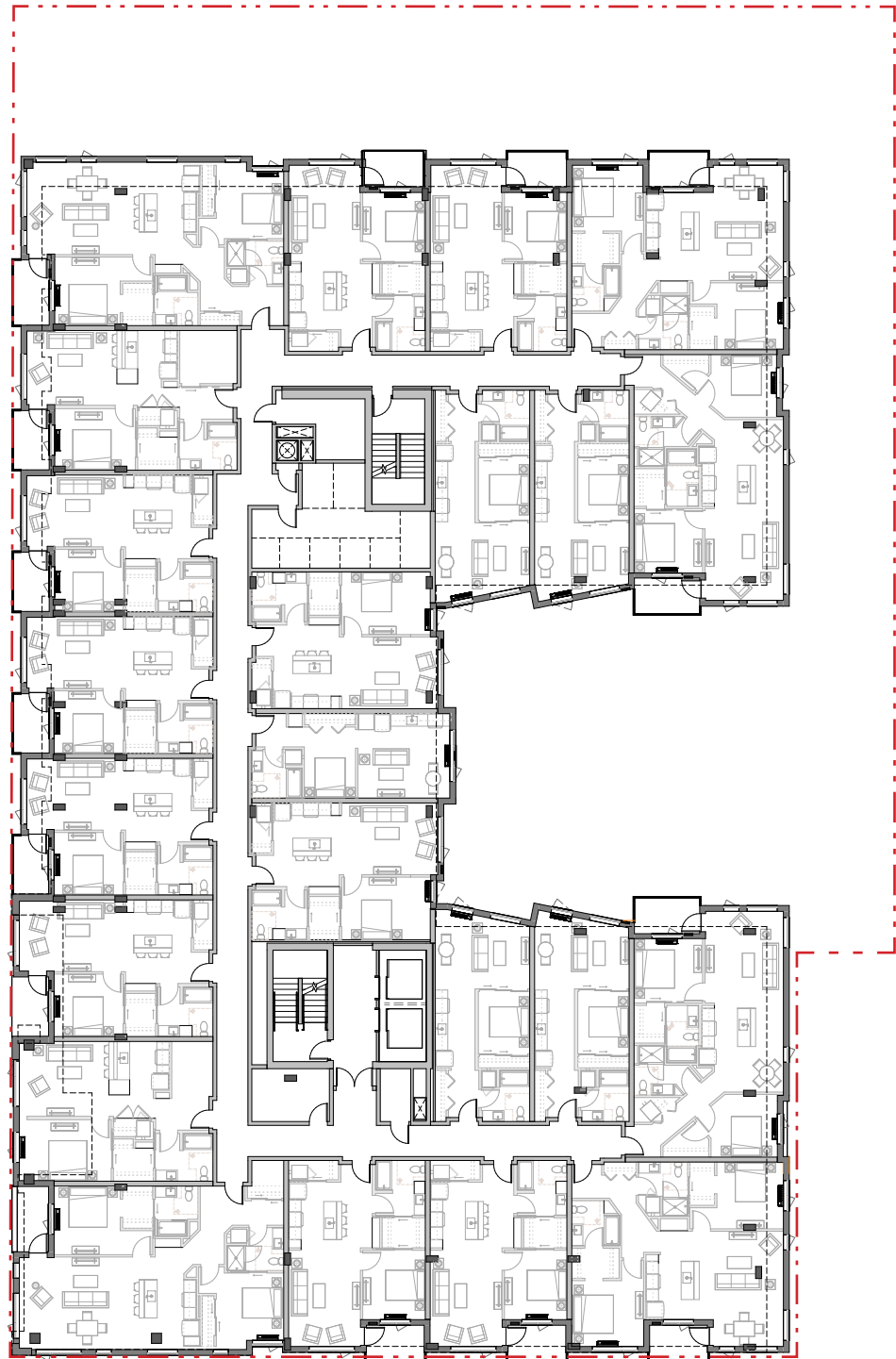
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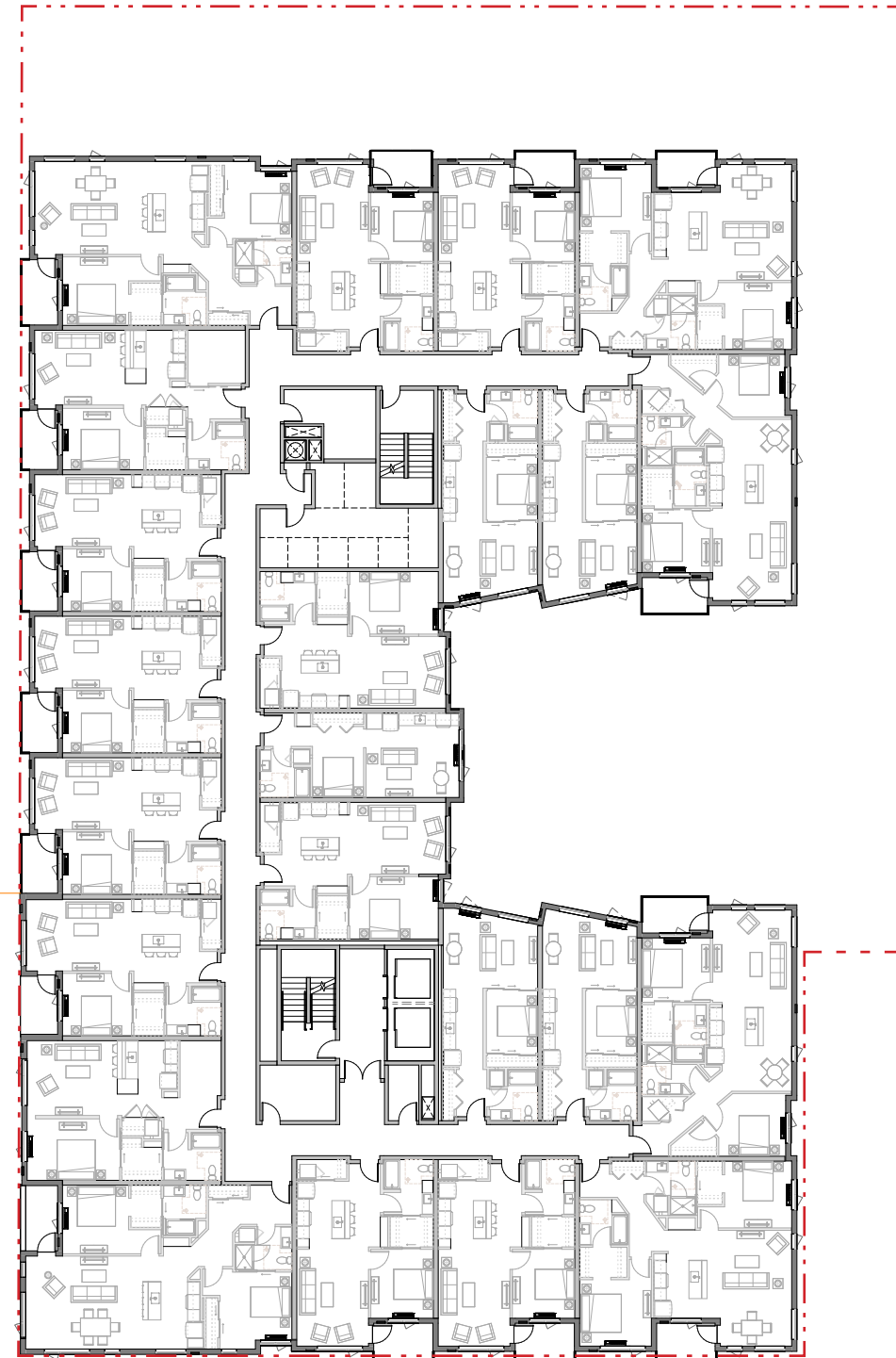
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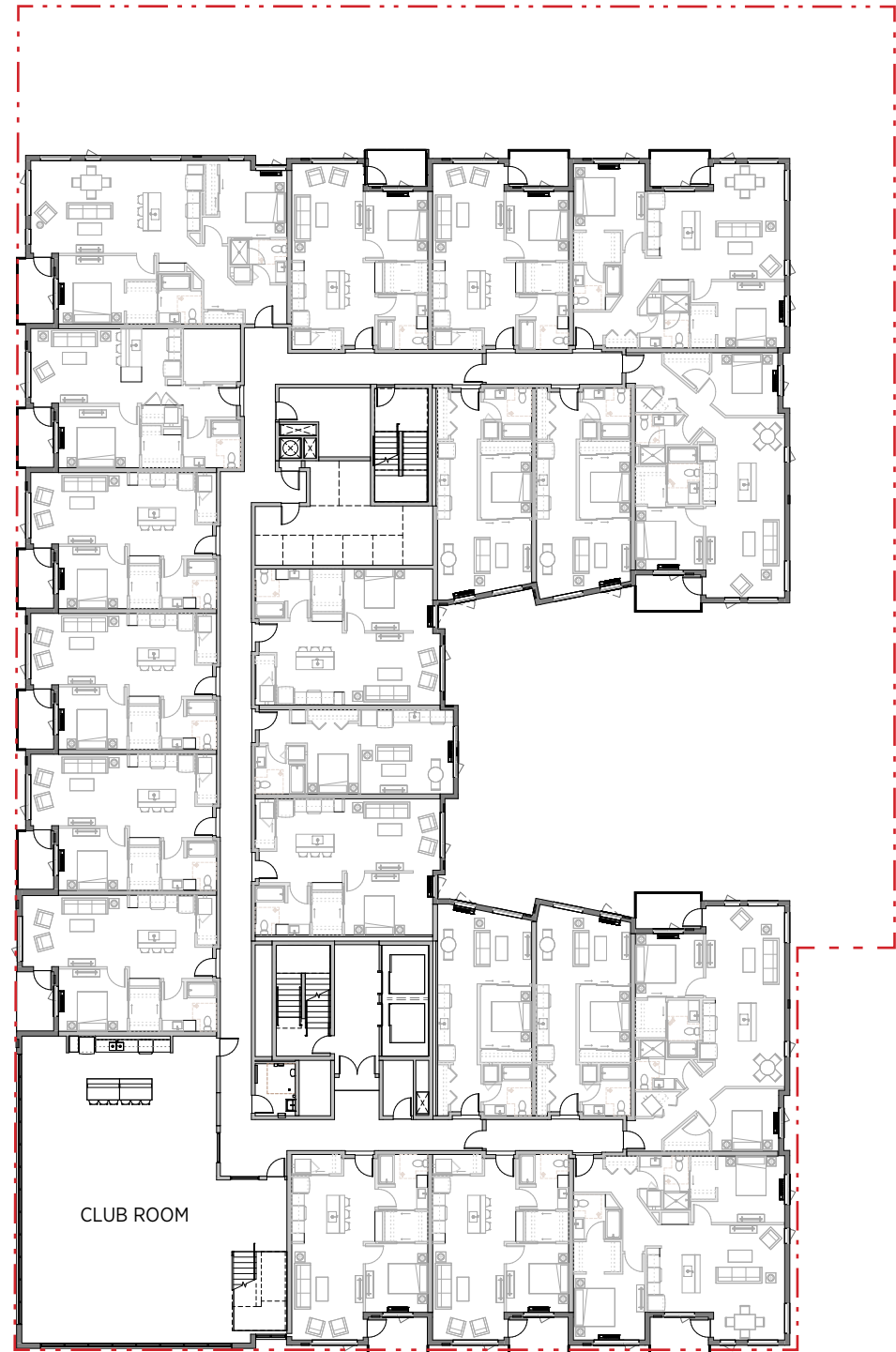
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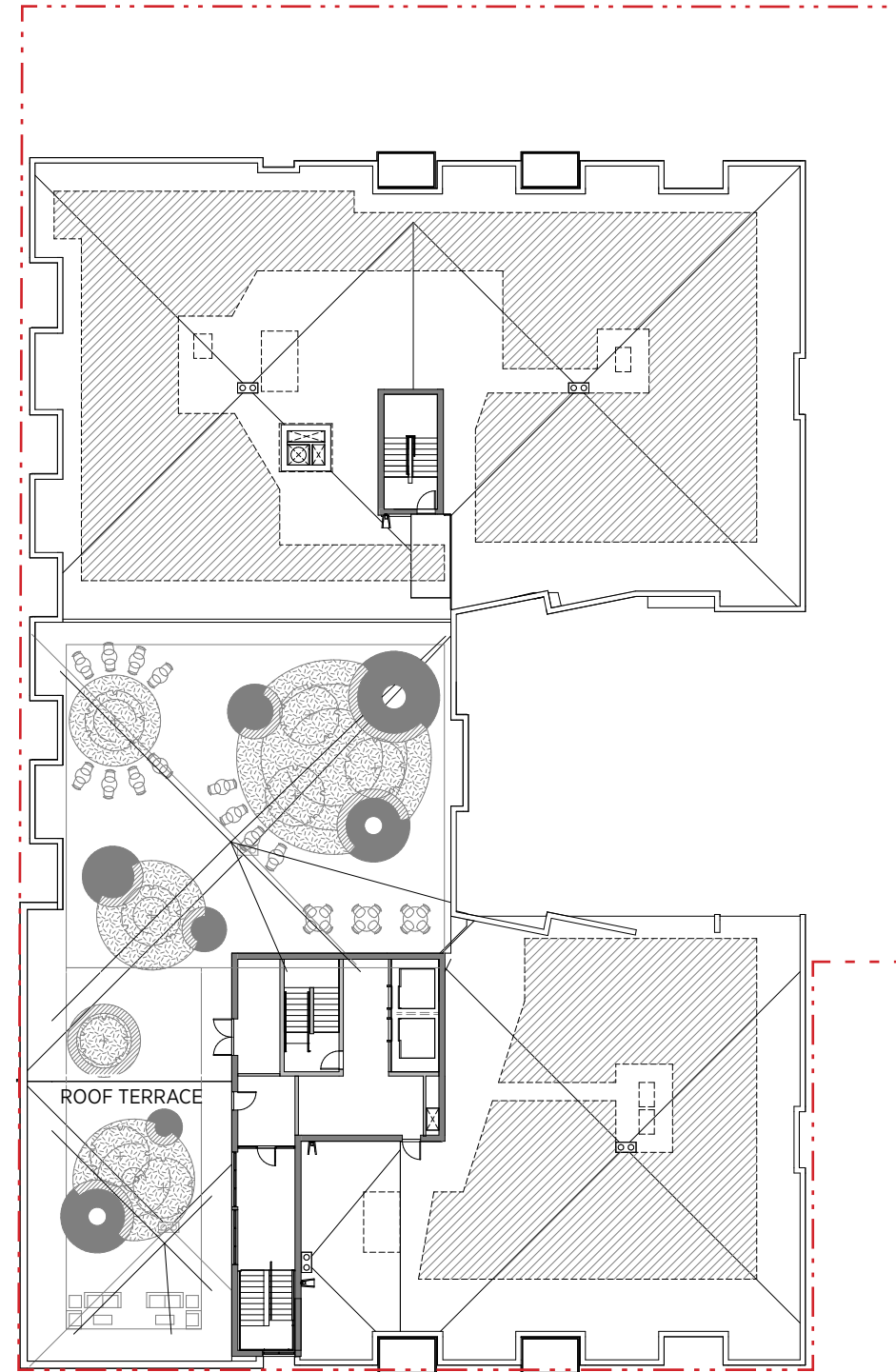
LEVEL 4-7



LEVEL 8



ROOF



Executive Summary

This preliminary energy model and report have been created to verify that the Pepsi Blocks project is on track to meet the maximum Energy Use Intensity (EUI) required by the Energy Efficient Building Requirements for Planned Development Bonuses established by the City of Portland.

To qualify for the Planned Development Bonus, the project must achieve a design EUI equal to or less than the EUI Standards listed in Table 1 based on building type. For Multifamily buildings, this maximum EUI is 27.7 kBtu/sf/yr.

Table 1: Energy Efficiency Standards for Planned Development Bonus

Use Type	Baseline EUI (kBtu/sf)	Baseline Reduction (percentage)	EUI Standard (kBtu/sf)
Residential			
Multifamily Dwelling	55.3	50	27.7
Commercial			
Financial Office*	73.1	70	21.9
Fitness Center	42.6	70	12.8
Hotel	69.3	70	20.8
Medical Office*	77.5	70	23.2
Office*	79.3	70	23.8
Retail*	72.0	70	21.6
Institutional			
Adult Education	71.0	70	21.3
College	131.9	70	39.6
K-12 School*	71.1	70	21.3
Library	103.6	70	31.1
Meeting Hall	30.7	70	9.2
Performing Arts	37.4	70	11.2
Preschool	73.2	70	22.0
Residence Hall*	74.2	70	22.2
Senior Care	107.5	70	32.2
Vocational School	63.1	70	18.9

Table 2: Summary of Key Package Items

	Key Energy Conservation Measures (ECMs) for Package to Comply with the Planned Development Bonus
Compliance Package:	<ul style="list-style-type: none"> 40% gross WWR Typical Double Pane Vinyl glazing package ENERGY STAR rated Panasonic Whole House fans Energy Recovery Ventilation for the Corridor Units Reverse Cycle Chiller Plant meeting 100% of the DHW load Energy Star Appliances (Dishwasher/Clothes Washer/Refrigerator) Assumed all LED lighting package in Dwelling Units Assumed better than code lighting in common areas and parking garage

Conclusion: The project can achieve the required 27.7 EUI by applying the compliance package of measures described in this report. It is important for the project team to stay closely coordinated to ensure that the final design still achieves the required energy savings.

NOTE:

This document was taken from Pepsi Phase 1A and used as a guidepost for the approach.

Starting Point Building Parameters

Table 3: Summary of Starting Point Proposed Design Parameters

	Proposed Description (New Construction)
Starting Point Package	40% gross Window to Wall Ratio (WWR) (Window area / gross wall ratio) Glazing System: Vinyl, Double Pane, Argon filled IGU, Low-e
	2014 OEEESC Prescriptive Compliant Constructions (2x6 Wood Framing, R-21 Batt for typical wall)
	Baseline Code Space by Space Lighting Power Density, no controls
	Dwelling unit living spaces and bedrooms conditioned by electric resistance
	Rooftop Heat Pump Conditioning Unit for Corridor
	Corridor Ventilation to Pressurize Hallways (~12 CFM/apt)
	In apartments, Whole House Fans (WHFs) provide ventilation, PTHP cycle to meet load.
	Central Domestic Hot Water heating. Gas Boiler, 80% Efficient.
	No Onsite Renewable Energy systems
	Standard Plumbing Fixtures (2.5 GPM showerhead, 2.2 GPM Lavs)
Residential Plug Load Density at 1 W/sf (Includes Standard Appliances: Dishwasher, Clothes Washer, Refrigerator, Dryer, and Misc. Loads)	

Table 4: Key Energy Conservation Measures

ECM#	Proposed Description (New Construction)	Energy Use Intensity Impact (kBtu/SF/yr)	Energy Savings Impact
0	Proposed Starting Point	38.1	
1	ENERGY STAR rated Panasonic WHF (7.4 CFM/W)	-0.7	1.8%
2	Bedrooms Conditioned by Package Terminal Heat Pumps	-0.4	0.9%
3	Reverse Cycle Chiller supplement DHW boilers, meet 100% of DHW load with annual COP = 2.2	-8.2	21.4%
4	Low Flow Plumbing Fixtures (1.75 GPM Showerhead, 1.5 GPM Lavs)	-2.9	7.6%
5	Energy Star Appliance Package (DW/CW/Ref)	-0.5	1.2%
6	Add Energy Recovery Ventilation to Rooftop Corridor Unit (DOAS).	-0.2	0.5%
7	Dwelling Unit LED Lighting Design (APT/BR = 0.65 W/sf, hardwired + plugin lighting)	-0.1	0.4%
8	Common Area Reduced Lighting Design: (Amenities = 0.52W/sf, Lobby = 0.65 W/sf, Corridor = 0.41 W/sf, Retail = 1.14 W/sf, Elec/Mech Rms = 0.68 W/sf)	-0.1	0.3%
9	Parking Garage Reduced Lighting Design (PKG = 0.14 W/sf)	-0.5	1.2%
Combined ECMs (1-9)		26.8*	29.5%*

Additional ECMs to Consider			
X1	Triple Pane Glazing (U-0.16)	-0.9	2.4%
X2	Improved Envelope (2x8 Wood Frame Walls)	-0.2	0.5%
X3	On-site Photovoltaic PV System (200 kW)- Requires 55% of roof area, and 530 panels. System size is scalable.	-3.3	8.4%
X4	Energy Star Heat Pump Dryers	-1.2	3.1%
X5	Reduced Air Leakage (0.025cfm/sf)	-0.1	0.3%

* Individual measure savings do not add up directly overall package savings, because of interactive effects

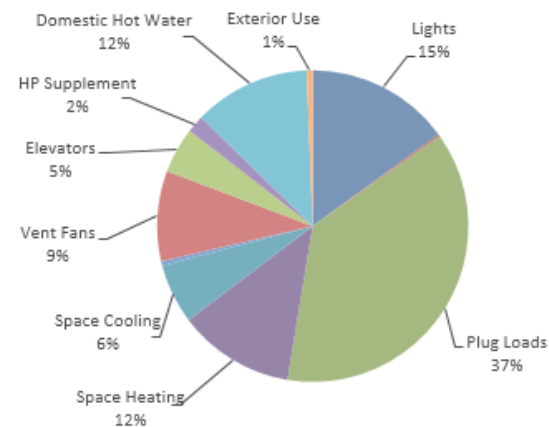


Figure 1. Proposed Combined ECM Energy Pie

NOTE:

This document was taken from Pepsi Phase 1A and used as a guidepost for the approach.

Residential Plug Load Sensitivity Analysis

Rushing used the methodology of the Energy Star Multifamily High-Rise Simulation Guidelines to estimate the plug load energy use for the dwelling units. For the Energy Conservation Measures being explored that impact the plug-load, the following peak Watts/SF have been calculated:

- 1.1 W/sf with a standard appliance package.
- 1.0 W/sf with Energy Star dishwasher, clothes washer, refrigerator package
- 0.8 W/sf with Energy Star dishwasher, clothes washer, refrigerator, and heat pump dryer

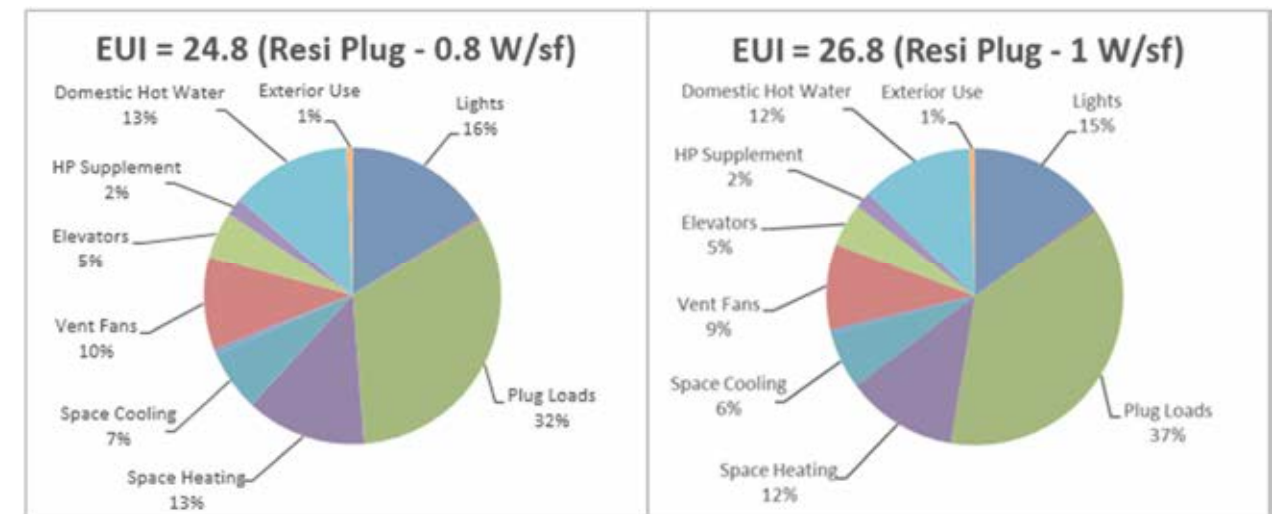











Figure 2. Residential Plug Load Sensitivity- Both graphs include the full set of ECMs 1-9, but the left graph also includes the additional upgrade to heat-pump clothes dryers, further reducing plug load

Air-to-Water Heat Pumps + Condensing Boilers

Rushing is recommending a full Colmac Reverse Cycle Chiller (also known as Air-to-Water Heat Pump) system serving 100% of domestic hot water load. Another design option uses a smaller Air-to-Water Heat Pump plant sized to meet 50-66% of the DHW load and Condensing Natural Gas Boilers to meet the remaining load, which reduces heat pump cost.

It would likely take multiple additional ECMs to hit the target EUI with the partial AWHP plant. The two most obvious measures being switching to heat pump dryers AND making up the remaining deficit with a significant onsite PV system. Because of the cost of PV, the savings from downsizing the DHW heat pumps get eaten up quickly, but this could be further explored as a VE option.

POTENTIAL MEASURES TO DECREASE BUILDING EUI

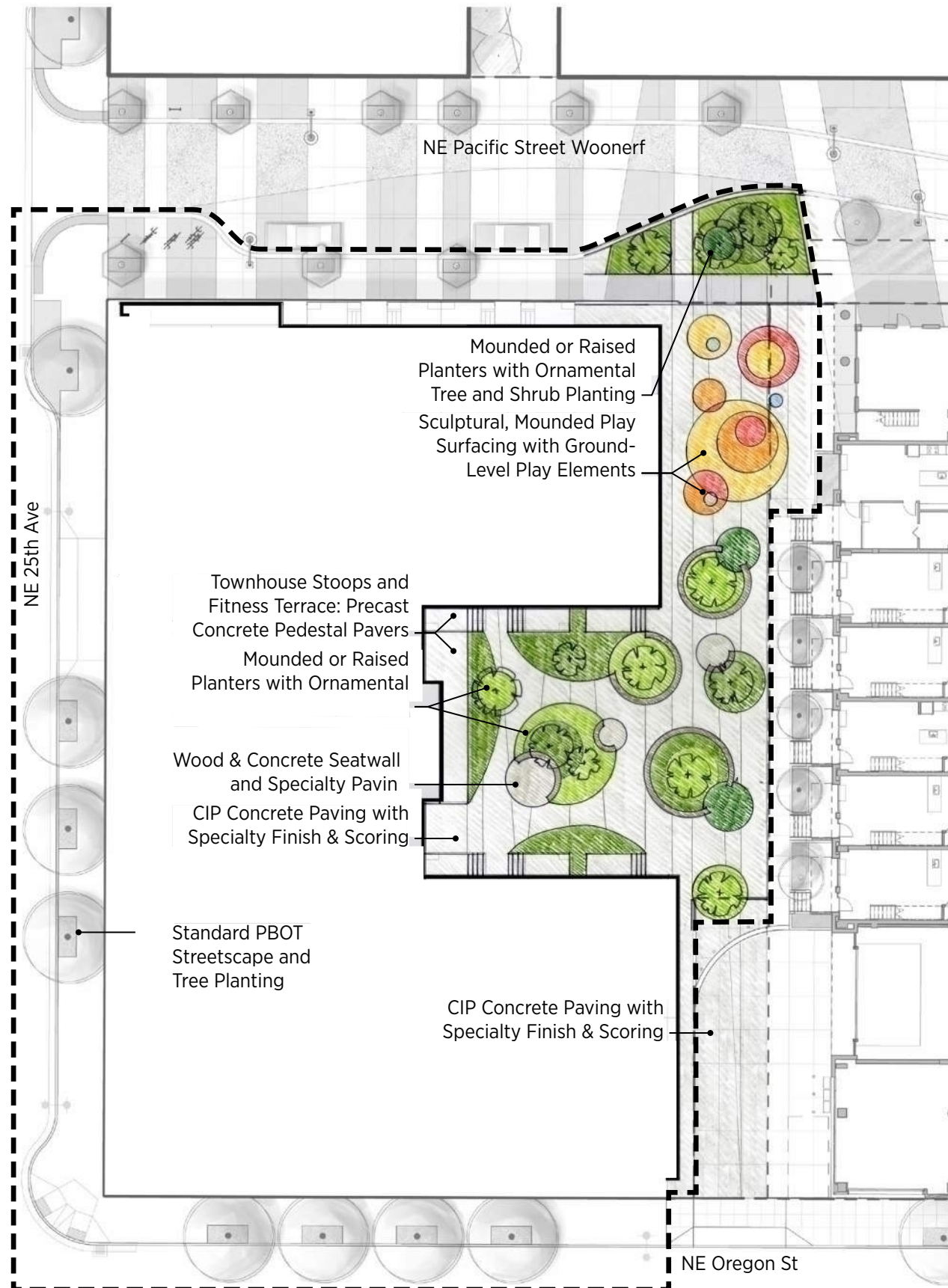
Pepsi Block B		EUI Measures							INTERFACE ENGINEERING 100 SW Main Street, Suite 1600, Portland, OR 97204 503.382.2266	
Potential Measures to Decrease Building EUI	Measure #1	Measure #2	Measure #3	Measure #4	Measure #5	Measure #6	Measure #7	Measure #8	Measure #9	
<p>Potential Measures to Decrease Building EUI</p> <p>July 13, 2023</p> <p>Project EUI Target: 27.7</p> <p>Notes:</p> <p>1. EUI = Energy Use Index. This is a measure of a building's energy usage, in units of kBtu per square foot of floor area per year. A lower EUI indicates a building uses less energy than a building with a higher EUI.</p> <p>2. Items described at right are MEP measures that Interface has implemented on past projects as a means of reducing the building EUI. Energy modeling must be used to determine the resulting EUI of the implemented measures.</p> <p>Shaded measures at right are those currently implemented.</p>	<p>Energy Recovery Ventilators Serving Living Units</p> <p>Energy Recovery Ventilator</p> 	<p>High Efficiency PTHP</p> <p>Packaged Terminal Heat Pump</p> 	<p>Energy Recovery Ventilators Serving Common Areas</p> <p>Energy Recovery Ventilator</p> 	<p>Dedicated Outdoor Air Supply (DOAS) w/ Energy Recovery</p> <p>DOAS Unit</p> 	<p>Variable Refrigerant Flow</p> <p>VRF System</p> 	<p>High-Efficiency Mini-Split System (Single or Multi-Zone)</p> <p>Mini-Split Cooling System</p> 	<p>Programmable Thermostats in Living Units</p> 	<p>Garage Exhaust Gas Detection System</p> <p>Gas Detection System</p> 	<p>Heat Pump Water Heaters</p> 	
System Description	Energy recovery ventilator (ERV) is mounted in the ceiling space and provides ventilation air to living unit. Unit also exhausts bathroom(s).	PTHP unit located below the window in bedroom. Unit is provided with DX Cooling, heat pump heating, and electric strip heat for use only during defrost cycle.	Energy recovery ventilator (ERV) is mounted in the ceiling space and provides ventilation air to common space(s). Unit can also be used to exhausts bathroom(s), eliminating ceiling fans.	Rooftop dedicated outdoor air supply (DOAS) unit provides tempered air (70-75°F) to corridors, and exhaust corridors at an approximately equivalent rate.	Variable refrigerant flow (VRF) systems use refrigerant rather than water to transport heating and cooling through the building. The refrigerant is conditioned by an outdoor heat recovery condensing unit mounted on the roof. Depending on the manufacturer, two or three refrigerant lines are routed to branch controller boxes in the occupied space that control refrigerant flow to ducted fan coil units. Fan coil units provide heating and cooling via ducted supply air to each temperature control zone.	Cooling is provided by a mini-split cooling system consisting of an outdoor condensing unit and indoor fan coil. Ductless wall mount fan coils are typical for this application, with ductless fan coil units mounted on the wall within each space requiring cooling.	Programmable thermostats allow for occupants to increase/reduce space temperatures during unoccupied periods. Programmable thermostats are typically provide	Gas detection system in the garage allows supply and exhaust fans to operate at minimal speed when CO+NO2 concentrations are below a set threshold. Fan will increase to the maximum airflow only when CO or NO2 concentrations exceed the set threshold.	Heat pump water heaters extract heat from ambient air in lieu of burning fossil fuels to create heat. The system consists of outdoor heat pumps located in the garage, paired with storage tanks for the hot water.	
Area(s) Served	Living Units	Living Units	Common Spaces	Corridors	Common Spaces	MDF/IDF/Elec	Living Units	Garage	Whole Building	
How This System Achieves Energy Savings	Unit is equipped with a ventilation air supply fan, an exhaust fan, and an integral energy recovery core. This core transfers heat from the exhaust airstream to the ventilation air supply airstream (during heating conditions) to pre-heat ventilation supply air. This pre-heating reduces the heating and cooling load associated with ventilation air, reducing overall energy usage. Code requires energy recovery ventilators in living units ≥ 500 sq. ft., however providing in living units < 500 sq. ft. will further reduce the building EUI.	Units with SEER efficiency ratings above Code baseline will achieve additional energy savings compared to a Code baseline unit. Given the quantity of PTHP units that will be provided for the project, a small increase in SEER rating could have a significant impact on the building EUI.	Unit is equipped with a ventilation air supply fan, an exhaust fan, and an integral energy recovery core. This core transfers heat from the exhaust airstream to the ventilation air supply airstream (during heating conditions) to pre-heat ventilation supply air. This pre-heating reduces the heating and cooling load associated with ventilation air, reducing overall energy usage.	The DOAS unit is equipped with a ventilation air supply fan, an exhaust fan, heat pump heating and cooling, and an integral energy recovery wheel or flat plate heat exchanger. This heat exchanger transfers heat from the exhaust airstream to the ventilation air supply airstream (during heating conditions) to pre-heat ventilation supply air. This pre-heating reduces the heating and cooling load associated with ventilation air, reducing overall energy usage.	VRF with integral heat recovery transfers heat rejected from one portion of the building to another. Spaces in cooling mode reject heat from the space into the refrigerant, with this heating energy then transferred to spaces calling for heating. This provides an overall reduction in energy associated with heating/cooling.	Units with SEER efficiency ratings above Code baseline will achieve additional energy savings compared to a Code baseline unit.	Programmable thermostats will provide energy savings over non-programmable thermostats. Wall heaters are most often provided with line voltage single pole thermostats, which do not allow for temperature setbacks unless manually adjusted by the occupant. A programmable thermostat for baseboard heaters will automate this temperature setback, providing an overall reduction in building energy usage.	CO+NO2 concentrations will rarely exceed the set threshold in the space, allowing the fans to operate at minimum speed at most times. This provides a significant reduction in fan energy usage compared to a system that operates continuously at the maximum speed and airflow rate.	Heat pumps are a significantly more effective means of transferring heat into domestic water than fossil fuels, leading to an overall reduction in energy usage associated with the heating of domestic water.	

05 LANDSCAPE CONCEPT



LANDSCAPE CONCEPT | BLOCK CONTEXT PLAN

Landscape Concept



LANDSCAPE CONCEPT | GROUND FLOOR PLAN | 1/16"=1'-0"



Mounded Planters with Tree and Shrub Planting



Sculptural, Mounded Play Surfacing and Play Elements

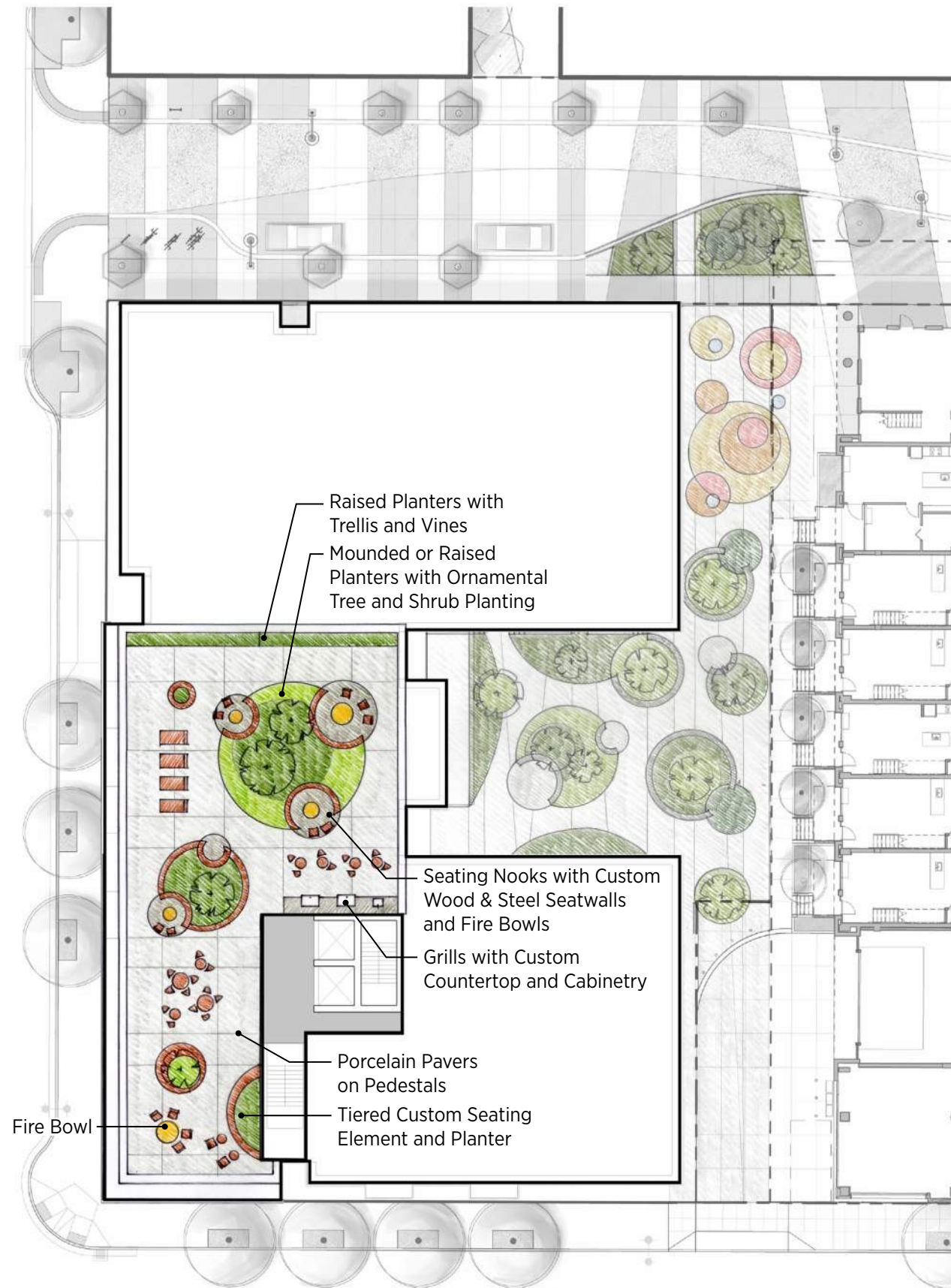


Seating Nooks with Custom Seatwalls



Mounded Planters with Specialty Paving

Landscape Concept



Mounded Planters with Tree and Shrub Planting



Seating Nooks with Custom Seatwalls



Terrace Furnishings with Grills and Custom Cabinetry



Fire Bowls

LANDSCAPE CONCEPT | ROOF TERRACE PLAN | 1/16"=1'-0"