FEASIBILITY STUDY + TEST FIT PLAN

8849 NESBIT AVENUE NORTH
SEATTLE, WA 98103

05 MARCH 2021

dean alan architects pllc

1511 third avenue, suite 301, seattle, wa 98101
deanalanarchitects.com | 206.783.4086

TABLE OF CONTENTS

Property Information

Address: 8849 Nesbit Avenue North
Seattle, WA 98103

Parcel Number: 0993000515

Lot Number: 7-8

Legal Description: BOULEVARD PLACE ADD E 100 FT
Plat Block: 9
Plat Lot: 7-8

Existing Building SF: 2,016

Land SF: 5,000
Per King County Plat Map: 50'x100'

Zoning Information

Zone: NC3P-75 (M)
Neighborhood Commercial 3; Pedestrian; 75FT Height Limit; Mandatory Housing Affordability

Village: Aurora-Licton Springs Residential Urban Village

No Village specific overlay requirements.

Land Use Code: Seattle Municipal Code 23.47A

Building Code: Apartments: 2018 Seattle Building Codes (to be adopted on March 15, 2021)
Townhomes: 2015 Seattle Residential Code

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Summary

This report is a summary of our research, test fit plan, and recommendations for the property located at 8849 Nesbit Avenue North, Seattle, Washington.

Property Review

The property located at 8849 Nesbit Avenue North is well positioned to benefit from recent zoning changes, access to reliable public transportation, and a continued demand for housing in the Seattle area.

According to a recent report by Up For Growth, Washington state underproduced housing by approximately 225,600 units from 2000 to 2015.* The City of Seattle is most affected by this underproduction as the local economy and population continue to grow year over year. Located on a major transit thoroughfare just outside of the downtown area, the Nesbit Property can help alleviate this disparity by increasing the built footprint and unit density currently on the property.

In 2019 the City of Seattle rezoned the Nesbit Property from C1-65 to NC3P-75 (M). Fortunately, this change allows for taller and denser developments in the neighborhood. At most, the new zoning standards allow for 75FT tall buildings, a Floor Area Ratio (FAR) of 5.5, no setback requirements, and a required Green Factor Score of 0.3. However, the zone change does not affect other limiting factors required by the Seattle Building Code and the Seattle Residential Building Code. The requirements present in these codes also dictate the allowable height, footprint, and number of units allowed on the property. The following is a summary of our findings regarding all requirements by the City:

Height

The height of the structure is restricted by the Seattle Municipal Code, Seattle Building Code, and the Seattle Residential Code. Section 23.47A.012 of the Seattle Municipal Code dictates that the greatest allowable height in the neighborhood is 75 FT with 10 FT setbacks from the property line for any portion of the building above 65 FT. The Seattle building code allows multifamily developments to utilize all 75 FT of the development when utilizing a Horizontal Building Separation in accordance with Section 510.2. This is colloquially referred to as “five over two” construction. Residential developments such as townhomes are restricted to three stories and a basement per section R301.2.2.3.1.

Area

The maximum area a structure is allowed to occupy on a property is also dictated by the Seattle Municipal Code and the Seattle Building Code. According to Section 23.47A.013 of the Seattle Municipal Code the Nesbit Property has a Floor Area Ratio (FAR) of 5.5. Given that the lot is 5,000 SF, the maximum total developable SF of the project is 27,500. The FAR is the limiting factor for developable area on this project.

Occupancy

For a project of this size and scope, the limiting occupancy factor for a multifamily development is dictated by market standards and the Minimum Room Area requirements detailed in Section R304 of the Seattle Residential Code. This code requires habitable rooms to have a total floor area not less than 70 SF and not less than 7 SF in any horizontal dimension.

Green Factor

In addition, a Green Factor Score of 0.3 is required for all development types under Section 23.47A.016 of the Seattle Municipal Code. Landscaping elements in the right-of-way between the lot line and the roadway may be counted, provided that they are approved by the Director of the Department of Transportation. Pending this approval, the options presented in this report will meet the green requirements for development. If the landscaping elements in the right-of-way between the lot line and the roadway are not approved by the Director of the Department of Transportation then additional green spaces will need to be considered such as green roofs or vegetated walls.

Parking

According to Section 23.47A.030 of the Seattle Municipal Code, parking is not required for any new development within NC3P-75 (M) zones. This is due to the neighborhood being located in walkable areas near high frequency public transport options. The Nesbit Property is approximately 0.2 miles from the nearest RapidRide and 1 mile from the closest full-service grocery store. In addition, on street parking is allowed for residents with vehicles.

Mandatory Housing Affordability

In an effort to address the current housing shortage in Seattle, all Commercial and Neighborhood Commercial zones are required to provide affordable housing options under Seattle Municipal Code 23.47A.017. According to the Mandatory Housing Affordability Fee Areas mapped by the City, the Nesbit property is located in a zone that requires the lowest contribution. This either will come in the form of a payment option to the City of $7.00 a square foot of development or a performance option of 5% of the total unit count. With the performance option, a specified percentage of homes in new multifamily residential buildings will be reserved for income-eligible households and have restricted rents. These affordable homes will be comparable to market-rate units (e.g., size, number of bedrooms, and lease terms). With the payment option, developer contributions enable the Seattle Office of Housing to leverage other funds to produce more affordable housing overall.

Many other factors such as accessibility requirements, egress requirements, and amenity requirements influence the size and number of units allowable for the property. A more detailed review of these requirements can be found starting on page 21 of this report.

**https://www.upforgrowth.org/sites/default/files/2020-01/HousingUnderproductionInWashingtonState2020-01-10.pdf*

Options Analysis

After a comprehensive review of relevant land use codes and building requirements, we compared both apartment and townhome options in an effort to maximize the development potential of the property. Below is a summary of these findings and an options analysis that compares factors such as lot coverage, unit matrix, and parking.

Apartment Summary

Lot Area	Max Gross Area Allowed	Max Height Allowed	Max Stories Allowed	Maximum Floor Area Allowances Per Occupant	Set back Requirements	Parking Requirements	Green Factor Score
5,000 SF	27,500 SF	75' – Utilizing five over two construction	5 Floors of Type V + 2 Floors of Type IA (+ Basement)	200 Gross	First Floor dwelling unit must be 4' above or 10' back from street	Not Required	0.3

Townhome Summary

Lot Area	Max Gross Area Allowed	Max Height Allowed	Max Stories Allowed	Maximum Floor Area Allowances Per Occupant	Set back Requirements	Parking Requirements	Green Factor Score
5,000 SF	27,500 SF	34.75' per residential code R301.3	3 + Basement	NA	First Floor dwelling unit must be 4' above or 10' back from street	Not Required	0.3

Options Analysis

VERSION	% OF LOT COVER	GROSS BLDG. AREA	# OF STUDIO UNITS	STUDIO UNIT AREA	# OF 1-BED UNITS	1-BED UNIT AREA	# OF 2-BED UNITS	2-BED UNIT AREA	# OF 3-BED UNITS	3-BED UNIT AREA	PARKING	# OF GARAGES
Apartments	68.7	27,464 SF	16	6,184 SF	22	11,352 SF	NA	NA	NA	NA	Street	NA
Townhomes	68	9,418.5 SF	NA	NA	NA	NA	8	9,418.5 SF	NA	NA	Street	NA
Luxury Townhomes	64	8,628 SF	NA	NA	NA	NA	NA	NA	3	8,628 SF	Onsite	3

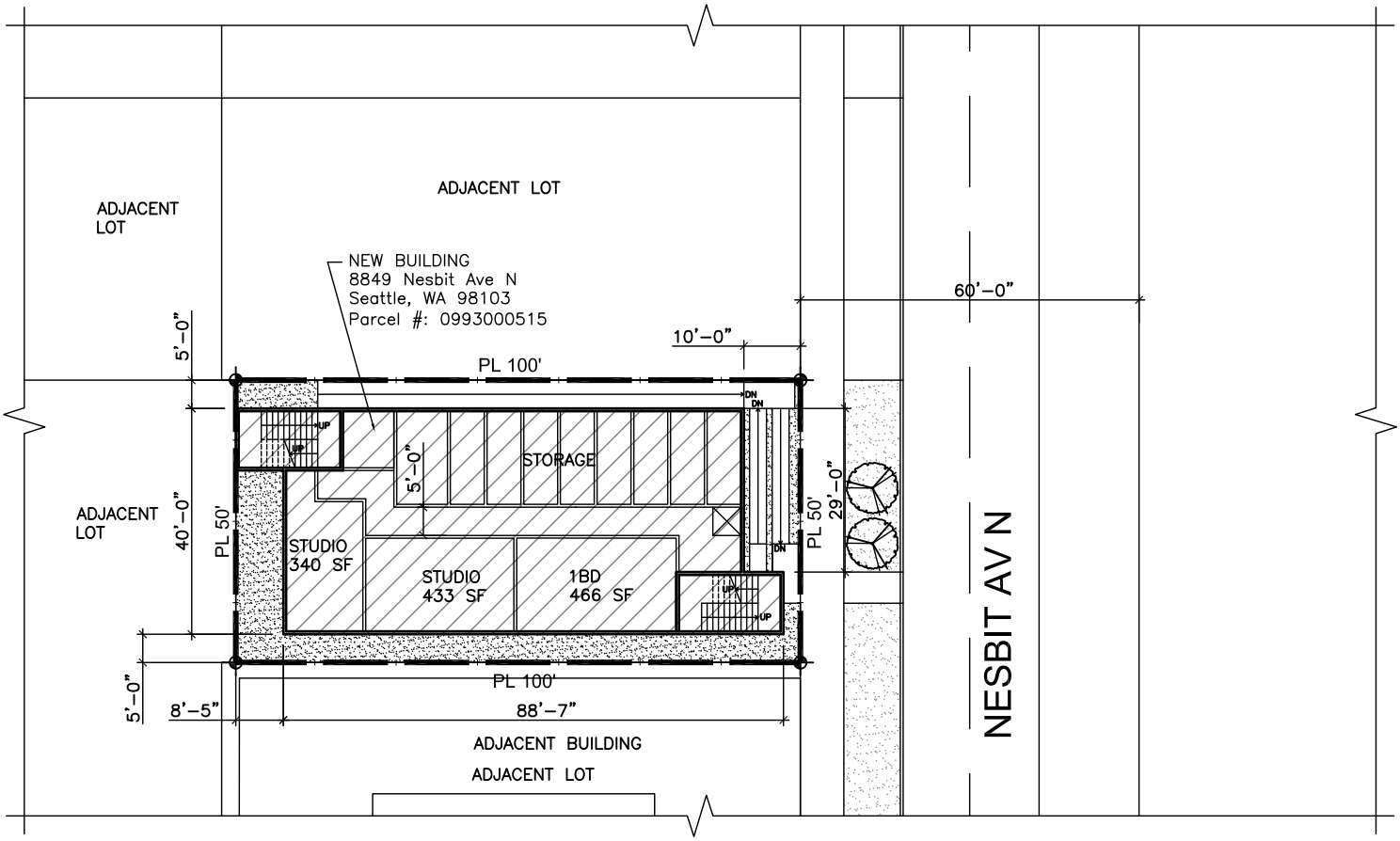
Recommendations

Based on our research and options analysis, we believe that the highest and best use for the property located at 8849 Nesbit Avenue North, Seattle, Washington is a multifamily apartment development. This option maximizes the allowable building height, building area, and occupant density for the property. Traditionally, maximizing these factors correlates to greater potential value. Although the townhome options are unable to maximize the available space, they may be a good option if you are seeking a faster project completion time, especially when considering the smaller and less technical build.

According to our test fit plan, the apartment option will have 16 studio units and 22 1-bedroom units for a total of 17,536 leasable square feet. Historically, increased unit density correlates with increased rental income and an overall increase in property value. By comparison, the townhome options dramatically decrease occupant density and usable area. This is namely due to design limitations and the Seattle Building Code restricting townhome developments to three stories. The luxury option provides 3 large townhomes with parking while the standard option provides 8 smaller townhomes with no parking. Monetarily, we believe that both options will garner a similar value on the market due to the similar usable areas.

Test Fit Plan

(continue to following page)



68.7% LOT COVERAGE

BUILDING INFORMATION
BUILDING AREA (FOOTPRINT): 3,433 SF
GROSS BUILDING AREA: 27,464 SF
BUILDING HEIGHT: 70'–0"
NUMBER OF FLOORS: 8
TOTAL NUMBER OF UNITS: 38

BASEMENT
STUDIO – 340 SF
STUDIO – 433 SF
1 BD – 466 SF
10 STORAGE UNITS

1ST FLOOR
STUDIO – 340 SF
STUDIO – 433 SF
1 BD – 446 SF (UNIT TYPE A)
1 BD – 577 SF (UNIT TYPE A)
1 BD – 515 SF

2ND – 7TH FLOOR
STUDIO – 340 SF
STUDIO – 433 SF
1 BD – 466 SF
1 BD – 577 SF
1 BD – 515 SF

APARTMENTS – BASEMENT FLOOR PLAN

1/32" = 1'–0"

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dean alan architects
1511 3rd Avenue, Suite 301
Seattle, Washington 98101
Telephone (206)783-4086

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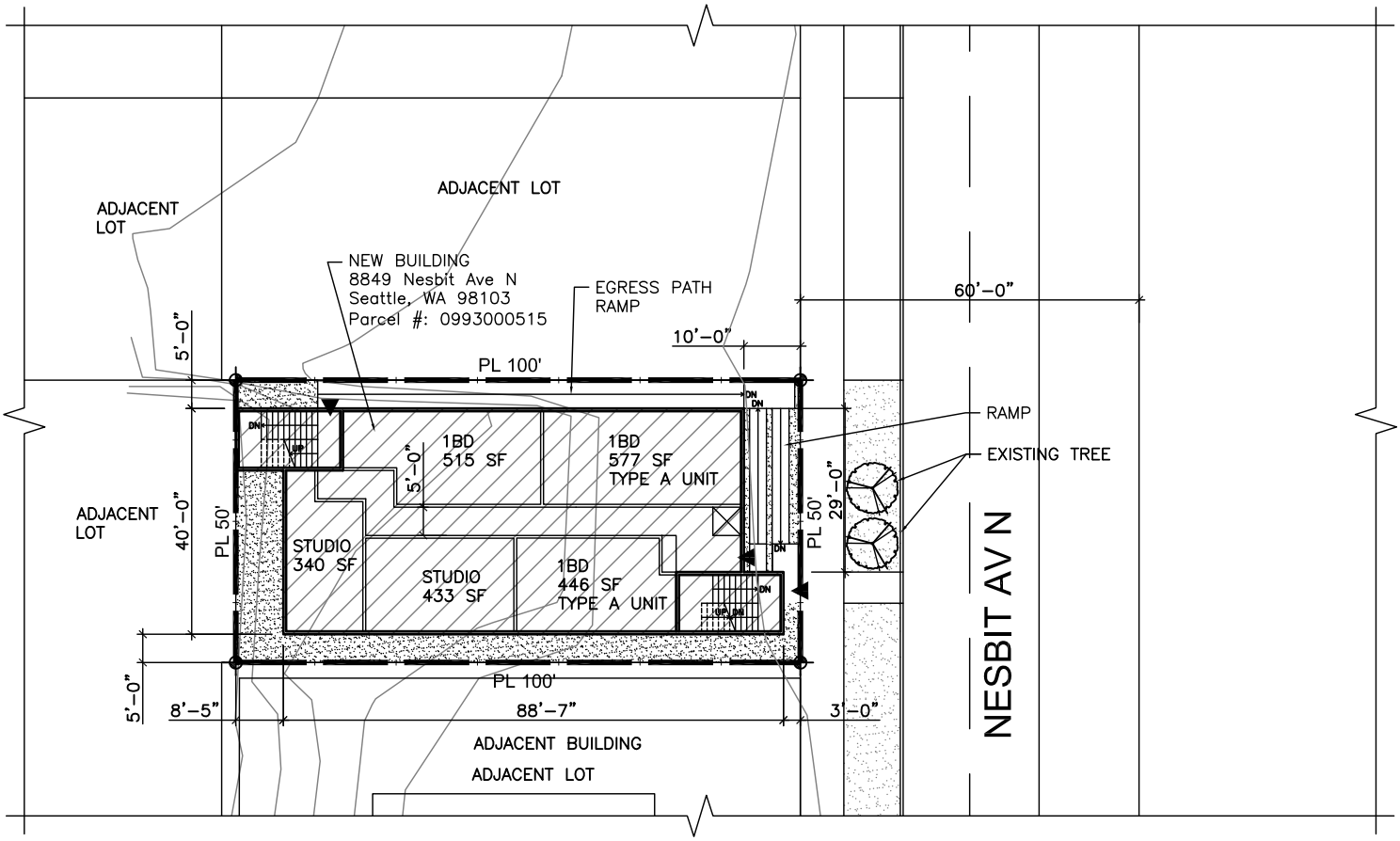

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APARTMENTS – 1ST FLOOR PLAN

1/32" = 1'-0"

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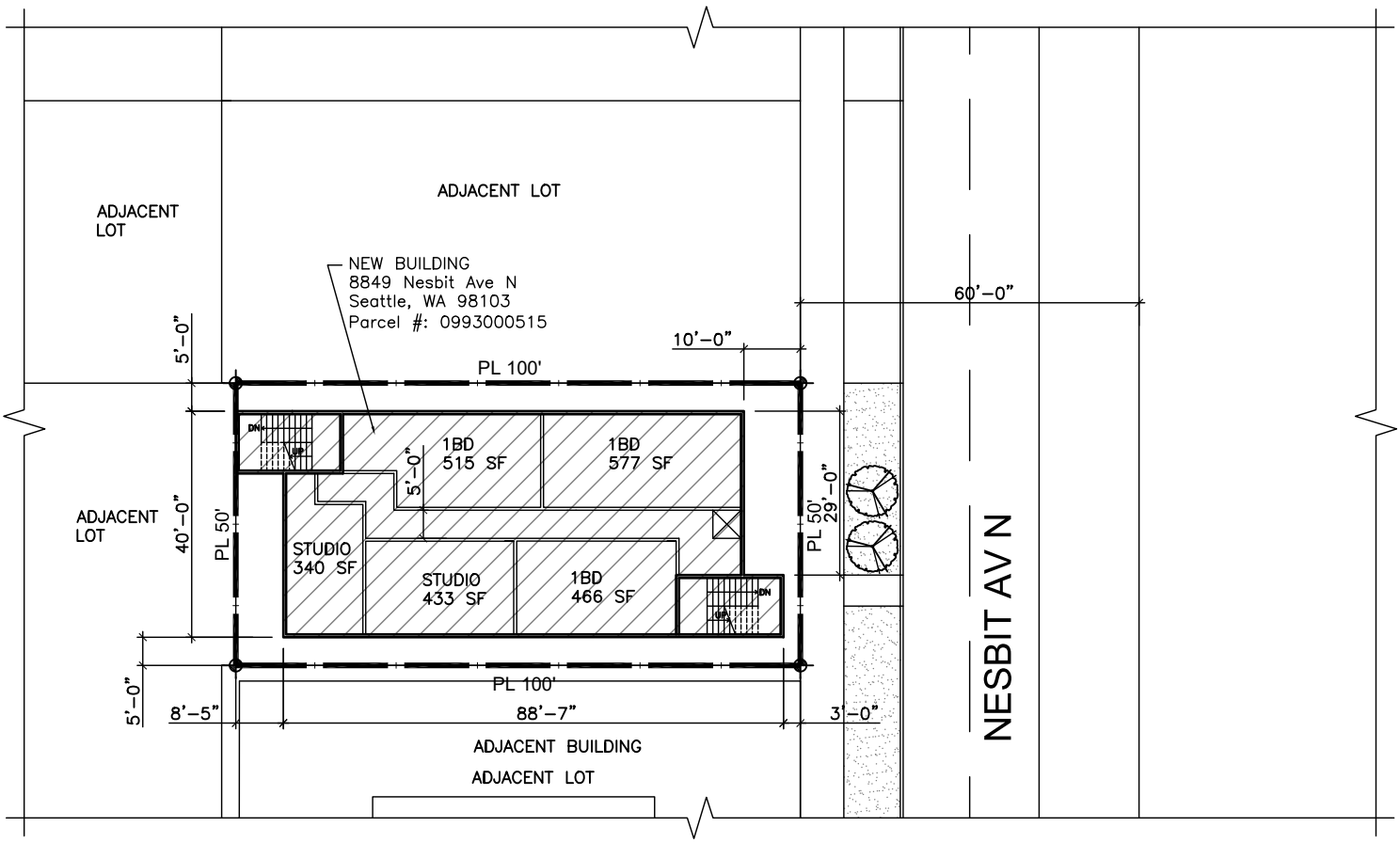

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2ND – 7TH FLOOR
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APARTMENTS – 2ND – 4TH FLOOR PLAN

1/32" = 1'-0"

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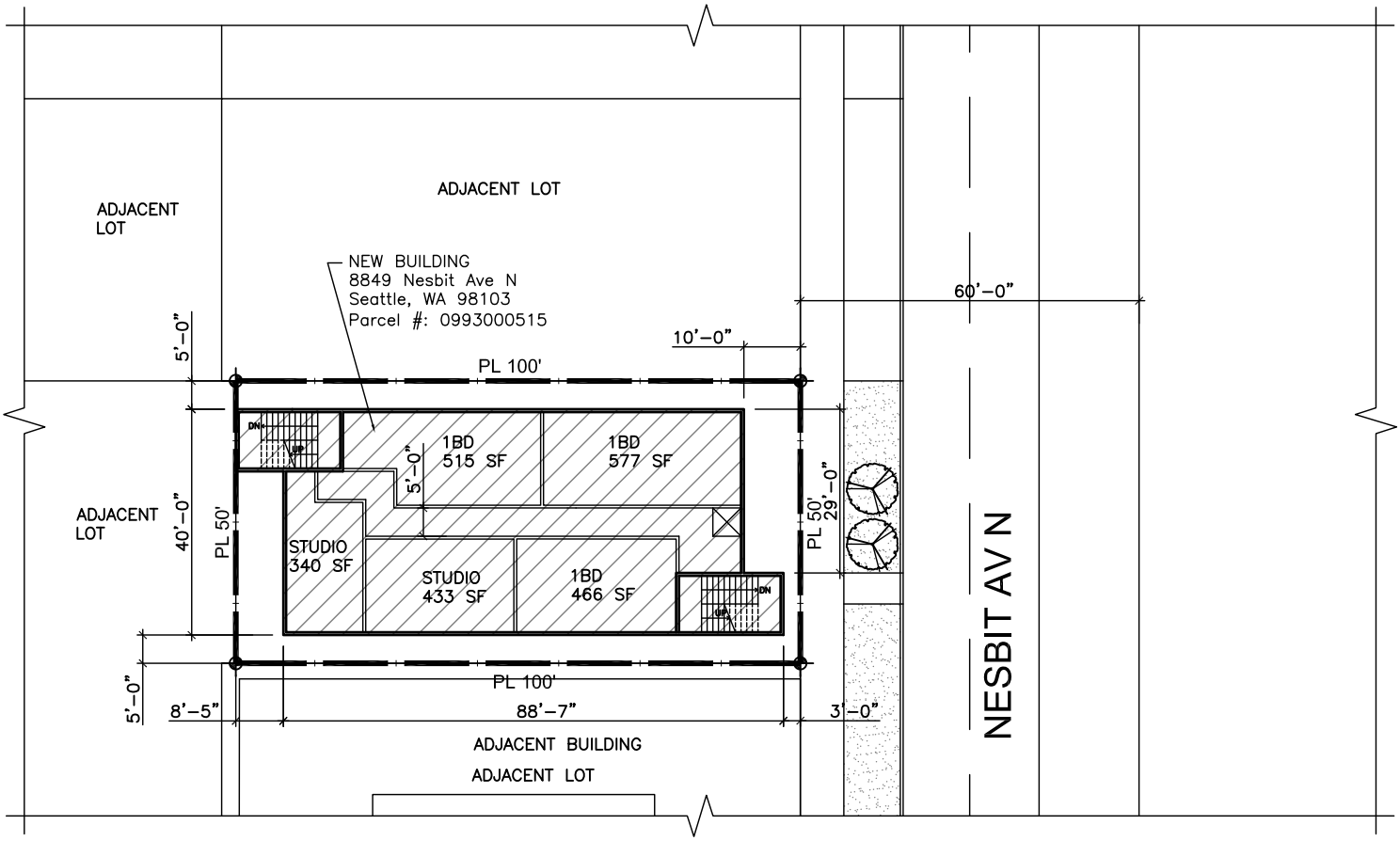

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2ND – 7TH FLOOR
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APARTMENTS – 5TH – 7TH FLOOR PLAN

1/32" = 1'–0"

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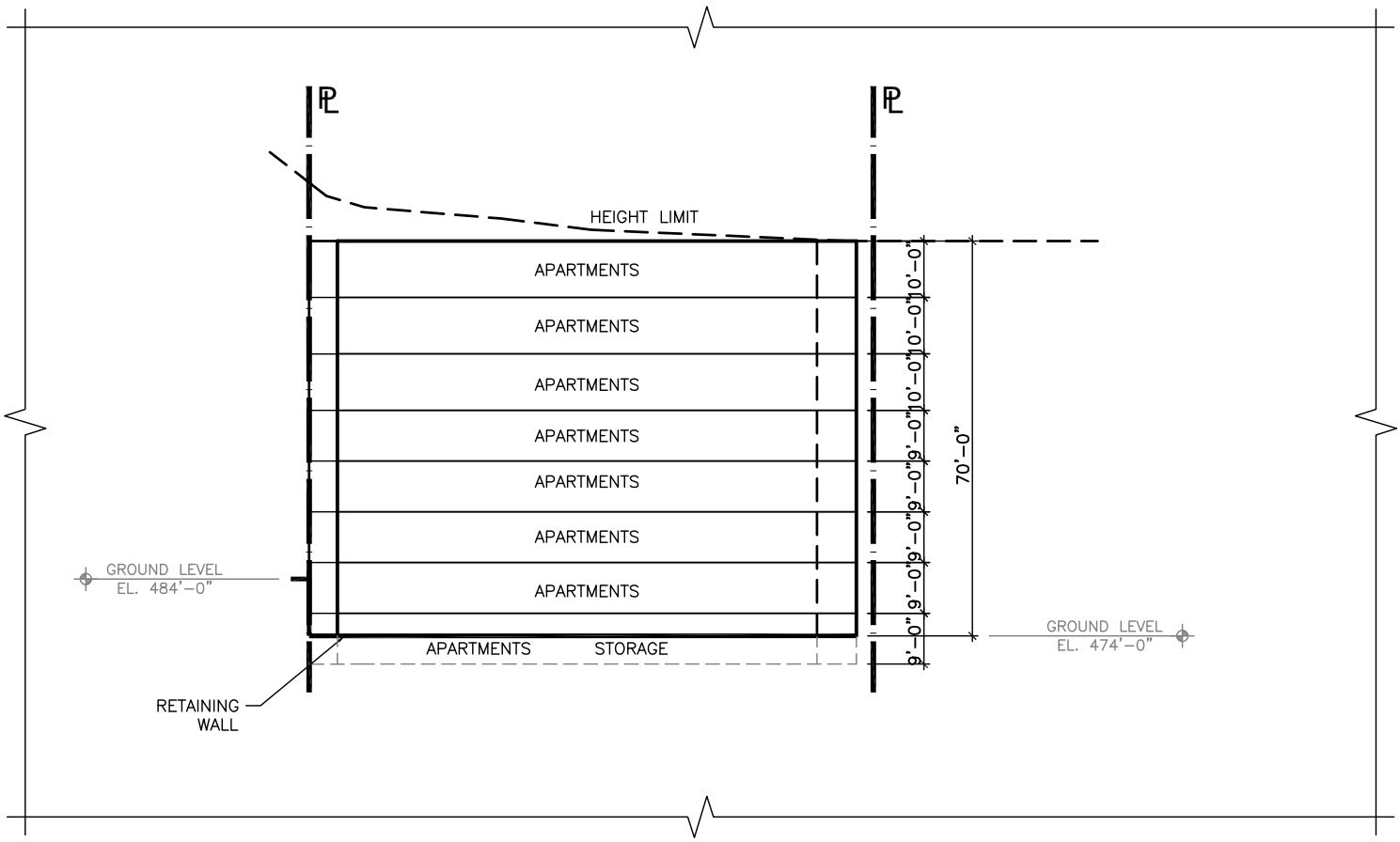

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APARTMENTS – SOUTH SECTION

1/32" = 1'-0"

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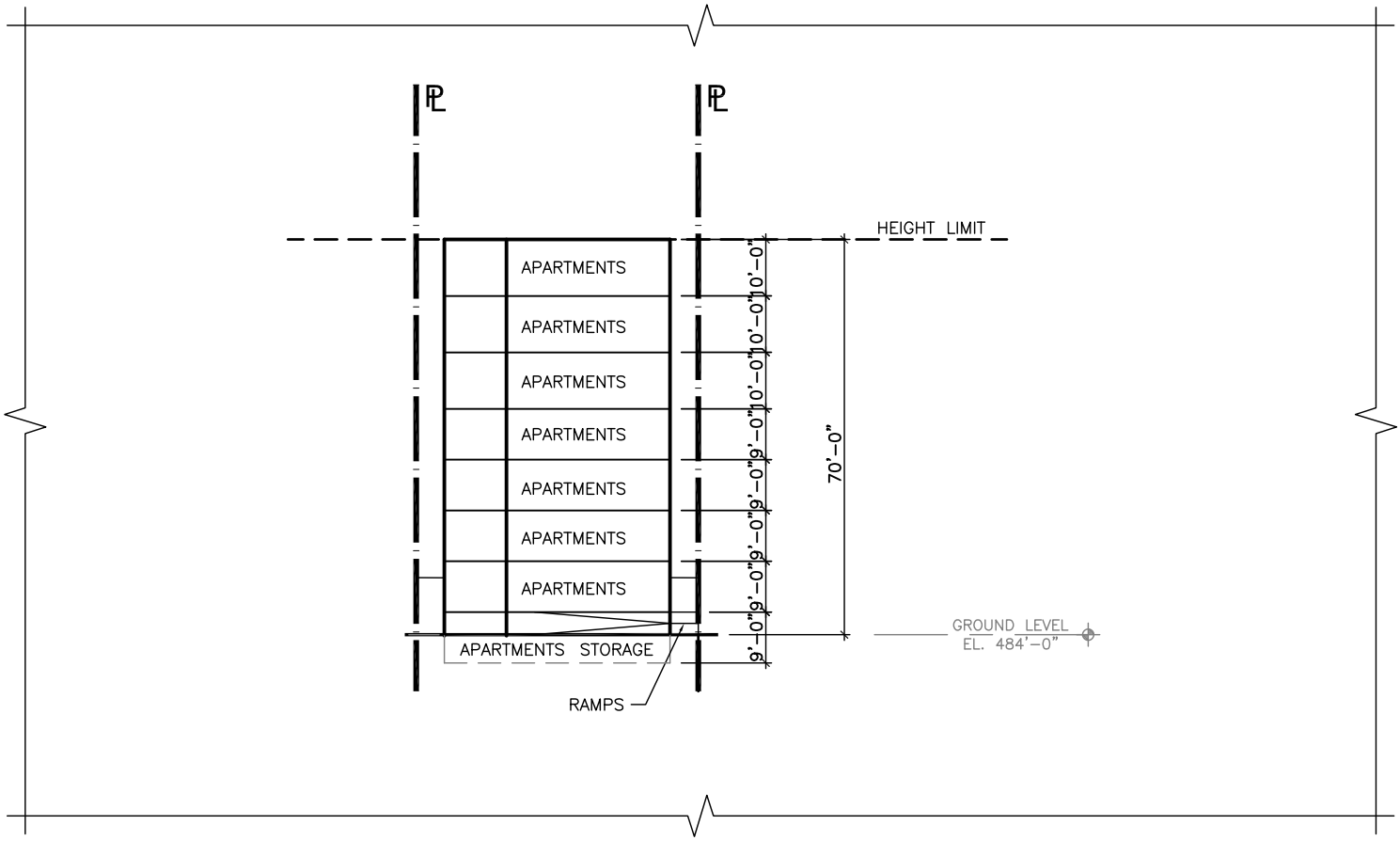

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2ND – 7TH FLOOR
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1 BD – 577 SF
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APARTMENTS – EAST SECTION

1/32" = 1'-0"

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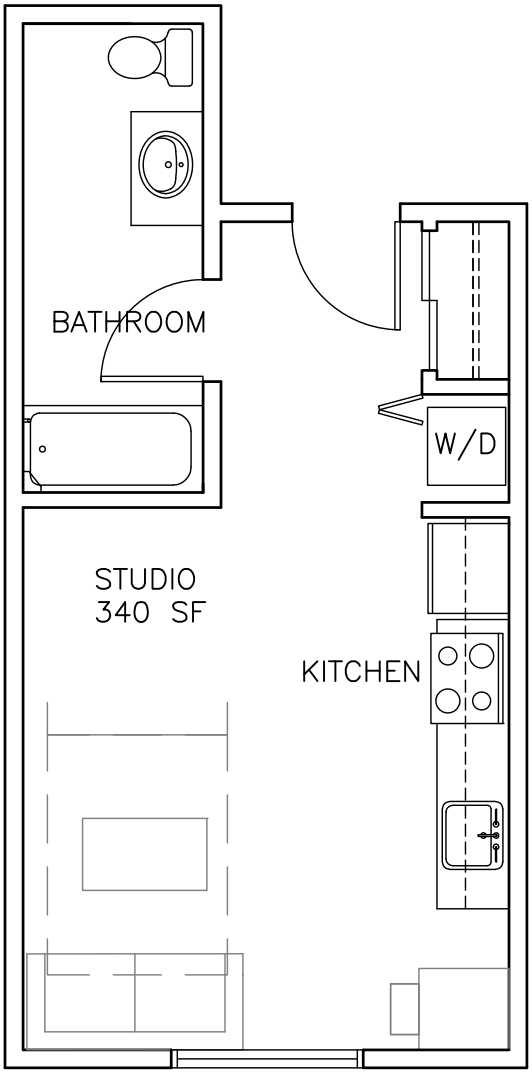

APARTMENT – STUDIO FLOOR PLAN

3/16" = 1'-0"

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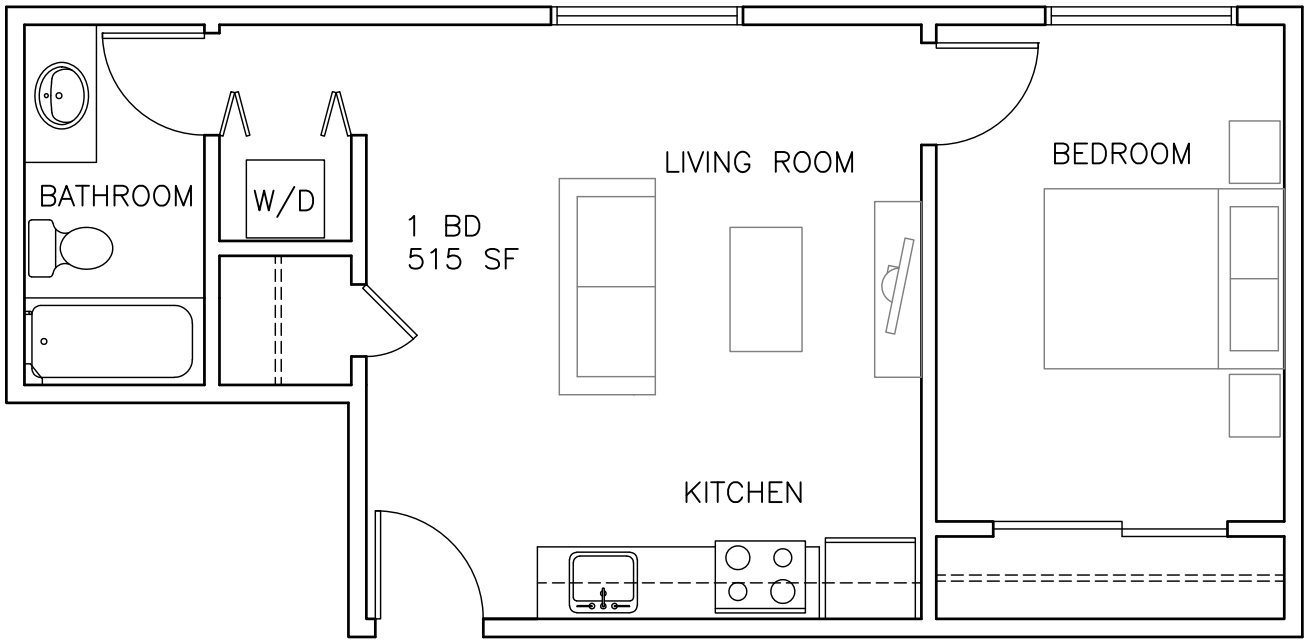

APARTMENT – 1BD FLOOR PLAN

3/16" = 1'-0"

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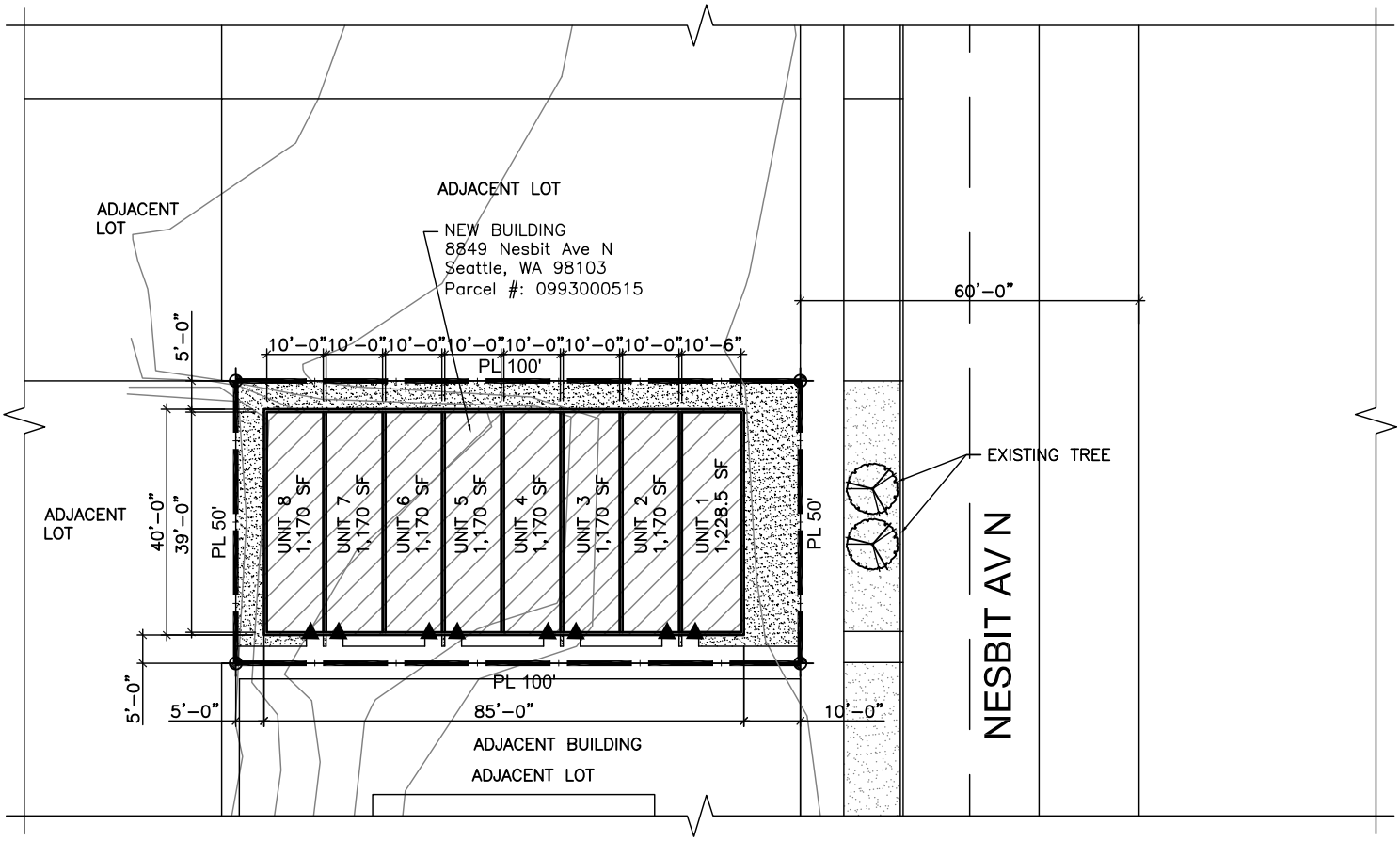

68% LOT COVERAGE

BUILDING INFORMATION
BUILDING AREA (FOOTPRINT): 3,400 SF
BUILDING HEIGHT: 29'-4"
NUMBER OF FLOORS: 3
TOTAL AMOUNT OF UNITS: 8
- UNIT 1 GROSS AREA – 1,228.5 SF
- UNIT 2 GROSS AREA – 1,170 SF
- UNIT 3 GROSS AREA – 1,170 SF
- UNIT 4 GROSS AREA – 1,170 SF
- UNIT 5 GROSS AREA – 1,170 SF
- UNIT 6 GROSS AREA – 1,170 SF
- UNIT 7 GROSS AREA – 1,170 SF
- UNIT 8 GROSS AREA – 1,170 SF

UNIT 1 INFORMATION
GROSS AREA – 1,228.5 SF
1ST FLOOR AREA – 409.5 SF
INCLUDES:
- ENTRY
- KITCHEN
- LIVING RM

2ND FLOOR AREA – 409.5 SF
INCLUDES:
- BEDROOM
- BATHROOM
- WORKING AREA
- W/D

3RD FLOOR AREA – 409.5 SF
INCLUDES:
- MAIN SUITE
- BATHROOM

UNIT 2 – 8 INFORMATION
GROSS AREA – 1,170 SF
1ST FLOOR AREA – 390 SF
INCLUDES:
- ENTRY
- KITCHEN
- LIVING RM

2ND FLOOR AREA – 390 SF
INCLUDE:
- BEDROOM
- BATHROOM
- WORKING AREA
- W/D

3RD FLOOR AREA – 390 SF
INCLUDES:
- MAIN SUITE
- BATHROOM

TOWNHOMES PLAN – OPTION 1

1/32" = 1'-0"

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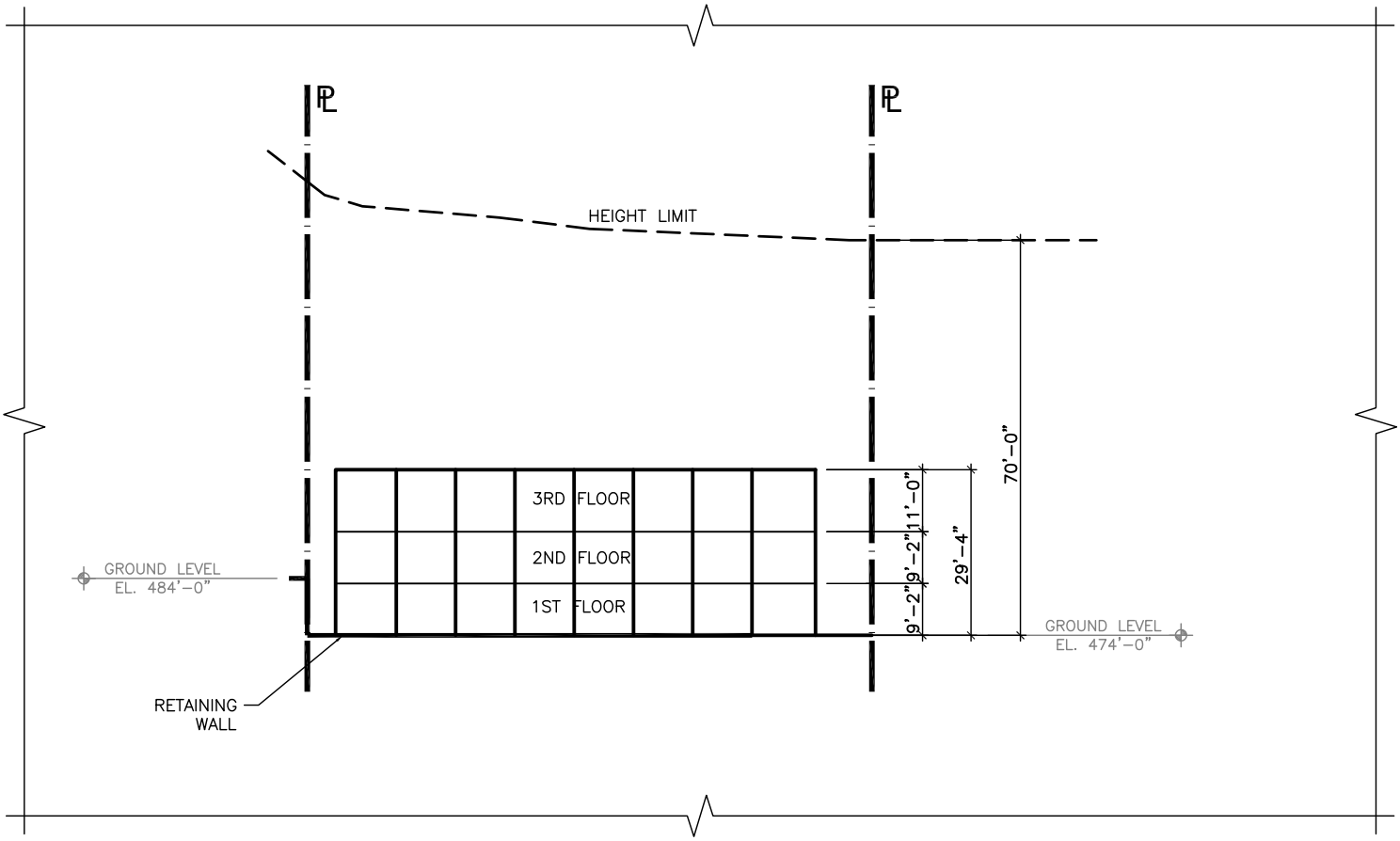

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UNIT 8 GROSS AREA – 1,170 SF

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1ST FLOOR AREA – 409.5 SF
INCLUDES:
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KITCHEN
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2ND FLOOR AREA – 409.5 SF
INCLUDES:
BEDROOM
BATHROOM
WORKING AREA
W/D
3RD FLOOR AREA – 409.5 SF
INCLUDES:
MAIN SUITE
BATHROOM

UNIT 2 – 8 INFORMATION
GROSS AREA – 1,170 SF
1ST FLOOR AREA – 390 SF
INCLUDES:
ENTRY
KITCHEN
LIVING RM
2ND FLOOR AREA – 390 SF
INCLUDE:
BEDROOM
BATHROOM
WORKING AREA
W/D
3RD FLOOR AREA – 390 SF
INCLUDES:
MAIN SUITE
BATHROOM

TOWNHOMES SOUTH SECTION – OPTION 1

1/32" = 1'-0"

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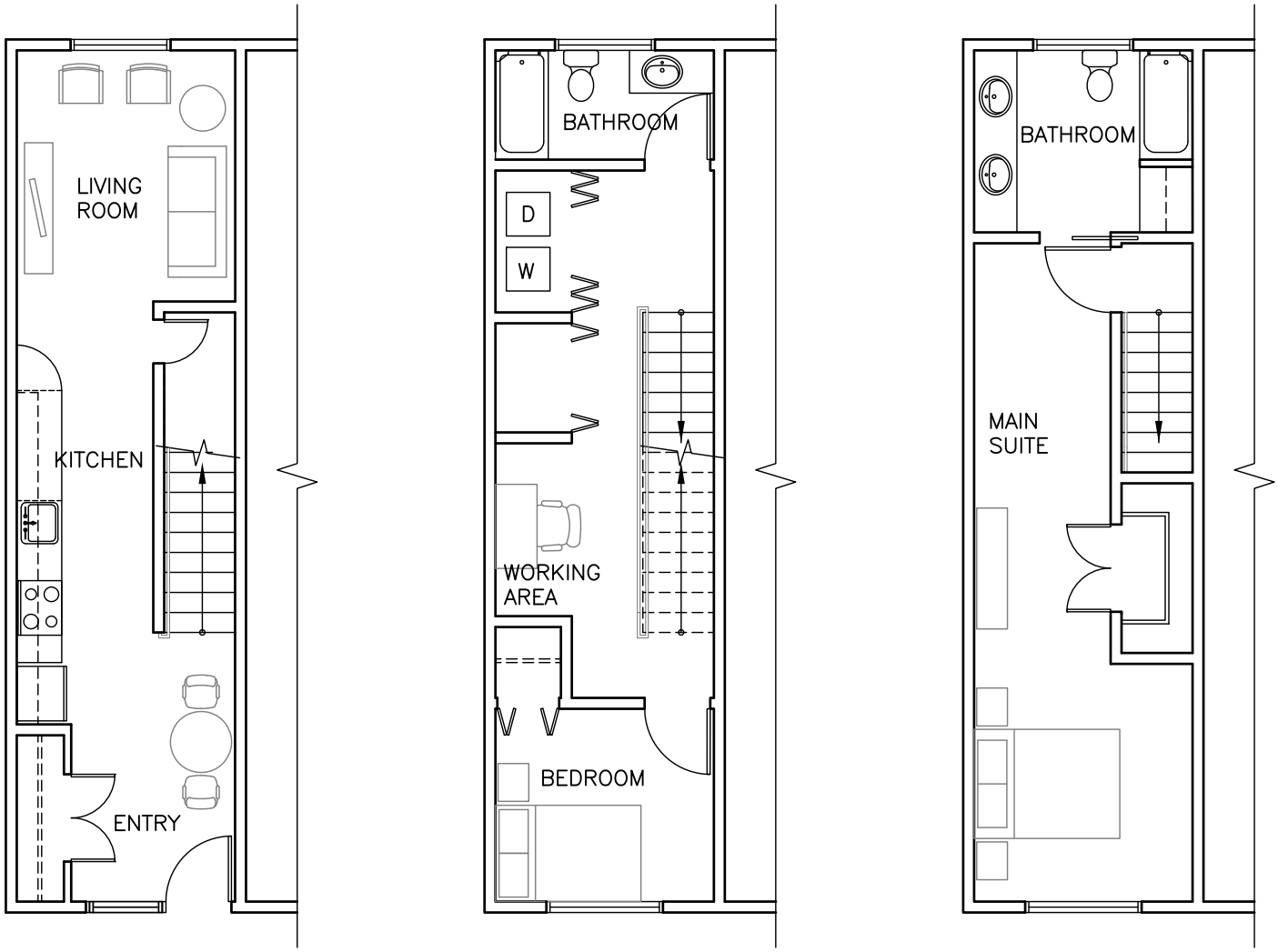

1ST FLOOR | 2ND FLOOR | 3RD FLOOR

TOWNHOME UNIT PLANS – OPTION 1

1/8" = 1'-0"

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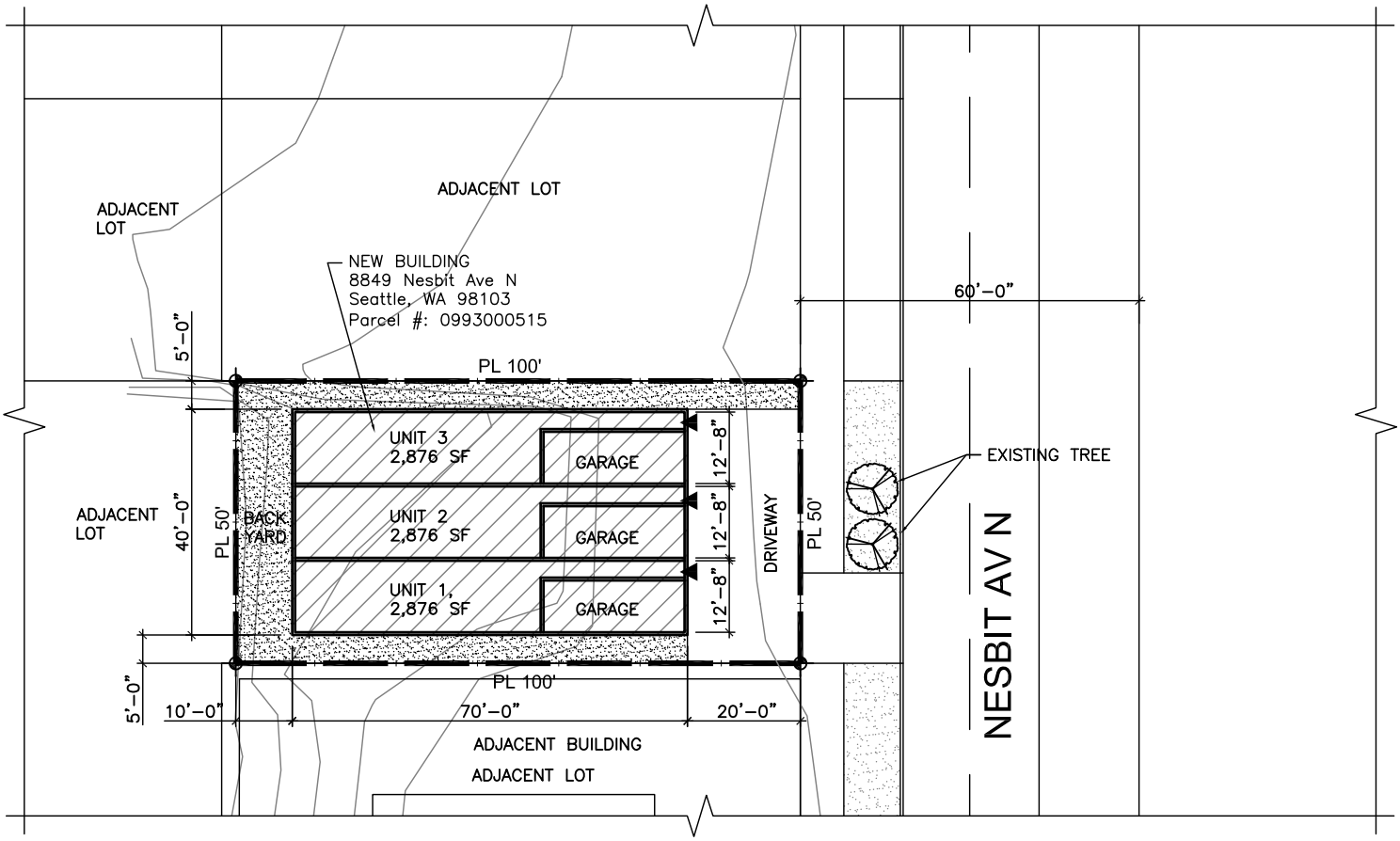

64% LOT COVERAGE

BUILDING INFORMATION
BUILDING AREA (FOOTPRINT): 3,200 SF
BUILDING HEIGHT: 31'-6"
NUMBER OF FLOORS: 3
TOTAL AMOUNT OF UNITS: 3
UNIT 1 GROSS AREA – 2,876 SF
UNIT 2 GROSS AREA – 2,876 SF
UNIT 3 GROSS AREA – 2,876 SF

UNIT INFORMATION
GROSS AREA – 2,876 SF
1ST FLOOR AREA – 874 SF
INCLUDES:
GARAGE
ENTRY
BATHROOM
BEDROOM
2ND FLOOR AREA – 1,001 SF
INCLUDES:
LIVING ROOM
KITCHEN
DINING AREA
WORKING AREA
POWDER ROOM
3RD FLOOR AREA – 1,001 SF
INCLUDES:
MAIN BEDROOM W/BATHROOM
BEDROOM W/BATHROOM
W/D

TOWNHOMES 1ST FLOOR PLAN – OPTION 2

1/32" = 1'-0"

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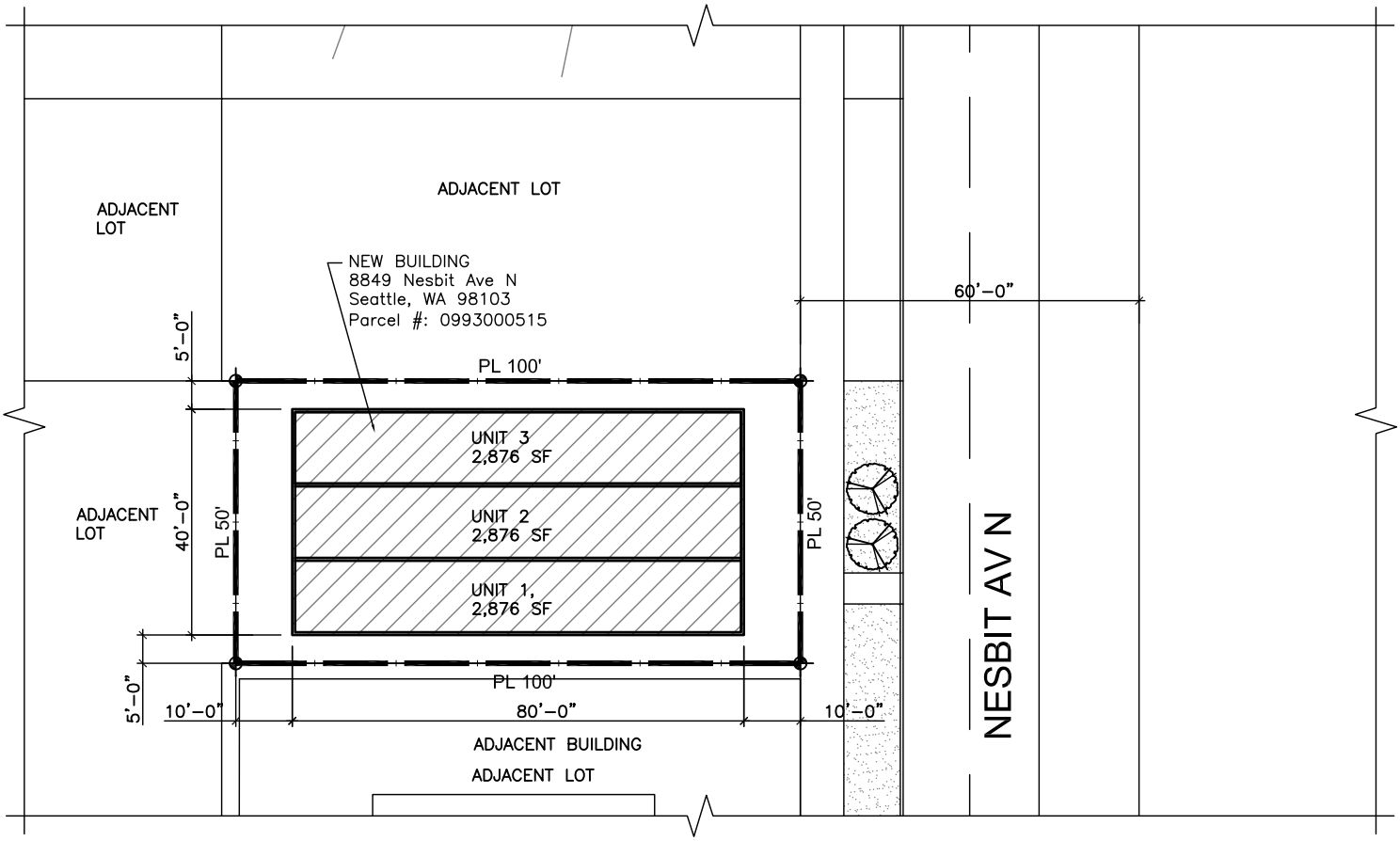

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WORKING AREA
POWDER ROOM
3RD FLOOR AREA – 1,001 SF
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MAIN BEDROOM W/BATHROOM
BEDROOM W/BATHROOM
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TOWNHOMES 2ND FLOOR PLAN – OPTION 2

1/32" = 1'–0"

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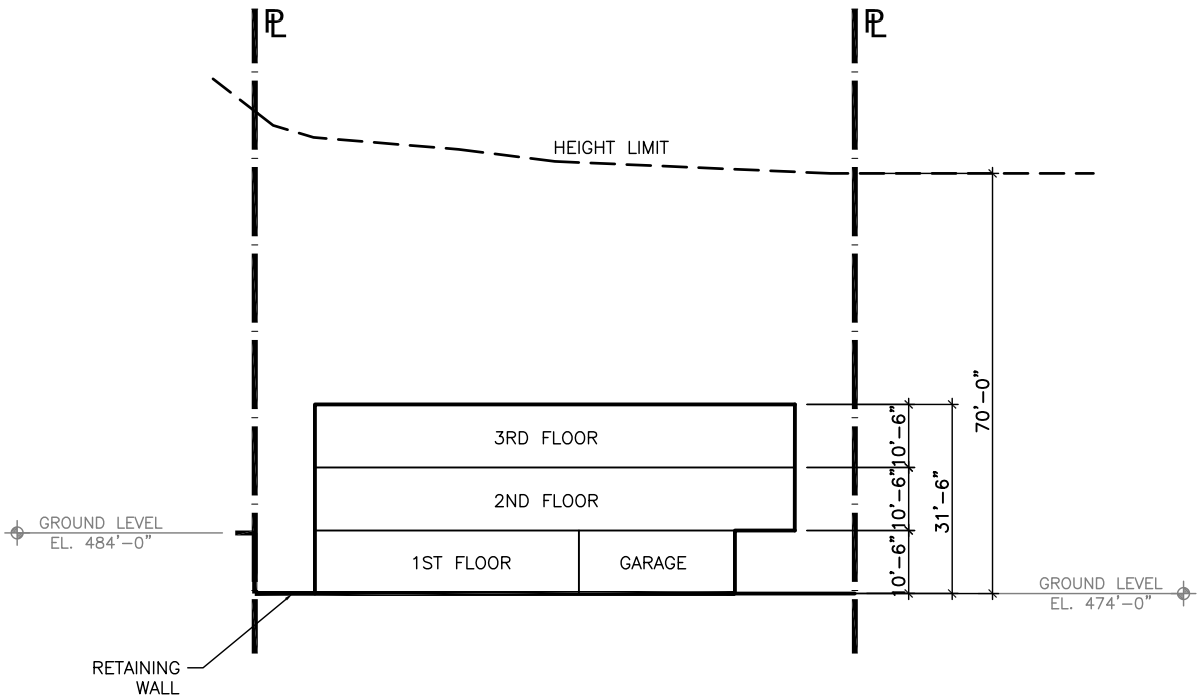


64% LOT COVERAGE

BUILDING INFORMATION
BUILDING AREA (FOOTPRINT): 3,200 SF
BUILDING HEIGHT: 31'-6"
NUMBER OF FLOORS: 3
TOTAL AMOUNT OF UNITS: 3
UNIT 1 GROSS AREA – 2,876 SF
UNIT 2 GROSS AREA – 2,876 SF
UNIT 3 GROSS AREA – 2,876 SF

UNIT INFORMATION
GROSS AREA – 2,876 SF
1ST FLOOR AREA – 874 SF
INCLUDES:
GARAGE
ENTRY
BATHROOM
BEDROOM
2ND FLOOR AREA – 1,001 SF
INCLUDES:
LIVING ROOM
KITCHEN
DINING AREA
WORKING AREA
POWDER ROOM
3RD FLOOR AREA – 1,001 SF
INCLUDES:
MAIN BEDROOM W/BATHROOM
BEDROOM W/BATHROOM
W/D

TOWNHOMES SOUTH ELEVATION – OPTION 2

1/32" = 1'-0"

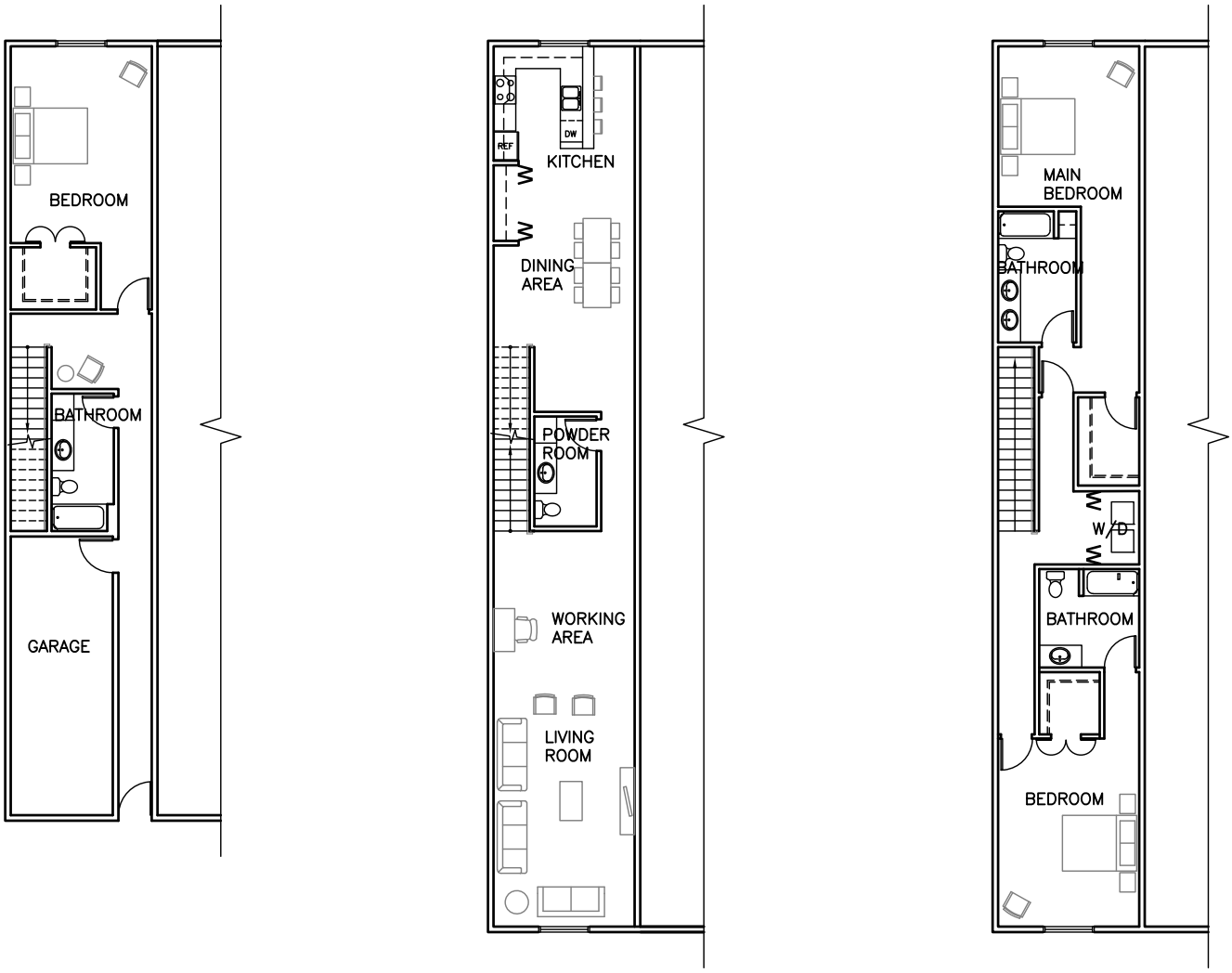
PAGE 14

dean alan architects
1511 3rd Avenue, Suite 301
Seattle, Washington 98101
Telephone (206)783-4086

FEASIBILITY STUDY

8849 NESBIT AVE N
SEATTLE, WA 98103

5 FEBRUARY 2021



1ST FLOOR | 2ND FLOOR | 3RD FLOOR

TOWNHOME UNIT PLANS – OPTION 2

1/8" = 1'-0"

dean alan architects
1511 3rd Avenue, Suite 301
Seattle, Washington 98101
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FEASIBILITY STUDY

8849 NESBIT AVE N
SEATTLE, WA 98103

5 FEBRUARY 2021

Seattle Municipal Land Use Code Review

23.47A.005 Street-level uses

Nesbit Property is not located on a "principal pedestrian" street and is not required to designate street level use for a specified cause.

23.47A.006 Conditional uses

Not Applicable

23.47A.007 Major Phased Developments

Not Applicable

23.47A.008 Street-level development standards

2. Blank facades

a. For purposes of this Section 23.47A.008, facade segments are considered blank if they do not include at least one of the following:

1)Windows;
2)Entryways or doorways;
3)Stairs, stoops, or porticos;
4)Decks or balconies; or
5)Screening and landscaping on the facade itself.

b. Blank segments of the street-facing facade between 2 feet and 8 feet above the sidewalk may not exceed 20 feet in width.

c. The total of all blank facade segments may not exceed 40 percent of the width of the facade of the structure along the street.

3. 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.

4.Overhead weather protection

b. The covered area shall have a minimum width of 6 feet, unless there is a conflict with existing or proposed street trees or utility poles, in which case the width may be adjusted to accommodate such features as provided in subsection 23.47A.008.C.4.f.

5. Maximum width and depth limits

a. The maximum width and depth of a structure, or of a portion of a structure for which the limit is calculated separately according to subsection 23.47A.008.C.5.b, is 250 feet, except as otherwise provided in subsection 23.47A.008.C.5.c. Structure width may exceed 250 feet if the structure complies with the modulation standards in subsection 23.47A.014.D.

23.47A.009 Standards applicable to specific areas

Not Applicable

23.47A.010 Maximum size of nonresidential use.

Not Applicable

23.47A.011 Outdoor activities

Not Applicable

23.47A.012 Structure height

A. The height limit for structures in NC zones or C zones is as designated on the Official Land Use Map, Chapter 23.32. Structures may not exceed the applicable height limit, except as otherwise provided in this Section 23.47A.012.

b. The height of a structure may exceed the otherwise applicable limit by up to 7 feet, subject to subsection 23.47A.012.A.1.c, provided all of the following conditions are met:

1) Residential and multi-purpose retail sales uses are located in the same structure;

2) The total gross floor area of at least one multi-purpose retail sales use exceeds 12,000 square feet;

3) A floor-to-floor height of 16 feet or more is provided for the multi-purpose retail sales use at street level;

4) The additional height allowed for the structure will not allow an additional story beyond the number that could be built under the otherwise applicable height limit if a floor-to-floor height of 16 feet were not provided at street level; and

5) The structure is not allowed additional height under subsection 23.47A.012.A.1.a

4. Except as provided below, the following rooftop features may extend up to 15 feet above the applicable height limit, as long as the combined total coverage of all features gaining additional height listed in this subsection 23.47A.012.C.4, including weather protection such as eaves or canopies extending from rooftop features, does not exceed 20 percent of the roof area, or 25 percent of the roof area if the total includes stair or elevator penthouses or screened mechanical equipment:

a. Solar collectors;

b. Mechanical equipment;

c. Play equipment and open-mesh fencing that encloses it, as long as the fencing is at least 15 feet from the roof edge;

d. Wind-driven power generators;

e. Minor communication utilities and accessory communication devices, except that height is regulated according to the provisions of Section 23.57.012; and

f. Stair and elevator penthouses may extend above the applicable height limit up to 16 feet.

23.47A.013
Floor area ratio
Floor Area Ratio (FAR) FAR is the relationship between a structure's total floor area and the size of the lot on which it was built. An FAR of 2 limits the floor area to 2 times the area of the lot. The applicable FAR is determined by the height limit and location within or outside a Station Area Overlay District.

5. Floor area ratio (FAR) limits. Except as provided in subsections 23.47A.013.C and 23.47A.013.D, FAR limits apply in C zones and NC zones as shown in Table A for 23.47A.013 and Table B for 23.47A.013. The applicable FAR limit applies to the total chargeable floor area of all structures on the lot.

Table A for 23.47A.013
Floor area ratio (FAR) limit outside of the Station Area Overlay District

Height limit (in feet)	**FAR**
75	5.5
Total Build in SF	27,500

Footnotes to Table A for 23.47A.013
[1] Except that zones without a mandatory housing affordability suffix have a maximum FAR of 3.25
[2] Except that within the First Hill/Capitol Hill Urban Center, the maximum FAR is 12 if the development contains at least 4 FAR of residential uses.

B. The following gross floor area is not counted toward FAR:

1. All stories, or portions of stories, that are underground;
2. All portions of a story that extend no more than 4 feet above existing or finished grade, whichever is lower, excluding access;
7. The floor area of required bicycle parking for small efficiency dwelling units or congregate residence sleeping rooms, if the bicycle parking is located within the structure containing the small efficiency dwelling units or congregate residence sleeping rooms. Floor area of bicycle parking that is provided beyond the required bicycle parking is not exempt from FAR limits; and

23.47A.014
Setback requirements

C. Upper-level setbacks for street-facing facades. For zones with a height limit of 75 feet, 85 feet, or 95 feet, the street-facing facade shall be set back as follows:

1. For zones with a height limit of 75 feet, portions of structures above 65 feet must be set back from the front lot line by an average depth of 8 feet.

E. A minimum 5-foot landscaped setback may be required under certain conditions and for certain uses according to Section 23.47A.016, Screening and landscaping standards.

G. Structures and projections in required setbacks

1. Decks and balconies

a. Decks with open railings may extend into the required setback, but are not permitted within 5 feet of a lot in a residential zone, except as provided in subsection 23.47A.014.G.1.b.

b. Decks that are accessory to residential uses and are no more than 18 inches above existing or finished grade, whichever is lower, are permitted within 5 feet of a lot in a residential zone.

2. Eaves, cornices, and gutters projecting no more than 18 inches from the structure facade

are permitted in required setbacks.

3. Ramps or other devices necessary for access for the disabled and elderly, which meet Seattle Building Code, Chapter 11, are permitted in required setbacks.

8. Dumpsters and other trash receptacles, except for trash compactors, located outside of structures are not permitted within 10 feet of any lot line that abuts a residential zone and must be screened per the provisions of Section 23.47A.016.

23.47A.015 View corridors.

Not Applicable

23.47A.016 Landscaping and screening standards

A. Landscaping requirements

2. Landscaping that achieves a Green Factor score of 0.3 or greater, pursuant to Section 23.86.019, is required for any lot with:

a. development containing more than four new dwelling units or a congregate residence; or

b. development, either a new structure or an addition to an existing structure, containing more than 4,000 new square feet of non-residential uses; or

c. any parking lot containing more than 20 new parking spaces for automobiles.

23.86.019 - Green Factor measurement

A. Development standards for certain areas require landscaping that meets a minimum Green Factor score. All required landscaping shall meet standards promulgated by the Director to provide for the long-term health, viability, and coverage of plantings. These standards may include, but are not limited to, the type and size of plants, spacing of plants, depth, and quality of soil, use of drought-tolerant plants, and access to light and air for plants. The Green Factor score shall be calculated as follows:

1. Identify all proposed landscape elements, sorted into the categories presented in Table A for 23.86.019.

2. Multiply the square feet, or equivalent square footage where applicable, of each landscape element by the multiplier provided for that element in Table A for 23.86.019, according to the following provisions:

a. If multiple elements listed on Table A for 23.86.019 occupy the same area (for example, groundcover under a tree), count the full square footage or equivalent square footage of each element.

b. Landscaping elements in the right-of-way between the lot line and the roadway may be counted, provided that they are approved by the Director of the Department of Transportation.

c. Elements listed in Table A for 23.86.019 that are provided to satisfy any other requirements of this Title 23 may be counted.

d. For trees, large shrubs, and large perennials, use the equivalent square footage of each tree or shrub according to Table B for 23.86.019.

e. For vegetated walls, use the square footage of the portion of the wall covered by vegetation. All vegetated wall structures, including fences counted as vegetated walls, shall be constructed of durable materials, provide adequate planting area for plant health, and provide appropriate surfaces or structures that enable plant coverage.

f. For all elements other than trees, large shrubs, large perennials, and vegetated walls, square footage is determined by the area of the portion of a horizontal plane that lies over or under the element.

g. All permeable paving and structural soil credits together may not count for more than one third of the lot's Green Factor score.

3. Add together all the products calculated under subsection 23.86.019.A.2 to determine the Green Factor numerator.

4. Divide the Green Factor numerator by the lot area to determine the Green Factor score.

Table A for 23.86.019 Green Factor landscape elements	
Green Factor landscape elements	Multiplier
A. Planted areas (choose one of the following for each planting area)	
1. Planted areas with a soil depth of 24 inches or more:	0.6
2. Bioretention facilities meeting standards of the Stormwater Code, Title 22, Subtitle VIII	1.0
B. Plants	
1. Mulch, ground covers, or other plants normally expected to be less than 2 feet tall at maturity	0.1
2. Medium shrubs or other perennials at least 2 feet tall, but less than 4 feet tall, at maturity	0.3
3. Large shrubs or other perennials at least 4 feet tall at maturity	0.3
4. Small trees	0.3
5. Small/medium trees	0.5
6. Medium/large trees	0.7
7. Large trees	0.9
8. Preservation of existing trees at least 6 inches in diameter at breast height	1.0
C. Green roofs	
1. Planted over at least 2 inches but less than 4 inches of growth medium	0.4

2. Planted over at least 4 inches but less than 8 inches of growth medium	0.6
3. Planted over at least 8 inches of growth medium	0.8
D. Vegetated walls in C and NC zones only	0.4
E. Permeable paving	
1. Installed over at least 6 inches and less than 24 inches of soil and/or gravel	0.2
2. Installed over at least 24 inches of soil and/or gravel	0.5
F. Structural soil	0.5
G. Bonuses applied to Green Factor landscape elements:	
1. Landscaping that consists entirely of drought- tolerant or native plant species	0.1
2. Landscaping that receives at least 50 percent of its irrigation through the use of harvested rainwater	0.2
3. Landscaping visible from adjacent rights-of-way or public open space	0.2
4. Landscaping in food cultivation	0.1

Table B for 23.86.019
Equivalent square footage of trees and large shrubs

Landscape elements	Equivalent square feet
Medium shrubs or other perennials at least 2 feet tall, but less than 4 feet tall, at maturity	9 per plant
Large shrubs or other perennials at least 4 feet tall at maturity	36 per plant
Small trees	75 per tree

Small/medium trees	150 per tree
Medium/large trees	250 per tree
Large trees	350 per tree
Existing trees Our trees are approximately 18in. and there are two trees present	20 per inch of trunk diameter 4.5 feet above grade

B. Street tree requirements

1. Street trees are required when any development is proposed, except as provided in subsection 23.47A.016.B.2 and Section 23.53.015. Existing street trees shall be retained unless the Director of Transportation approves their removal. The Director, in consultation with the Director of Transportation, will determine the number, type and placement of street trees to be provided:

3. When an existing structure is proposed to be expanded by more than 1,000 square feet, one street tree is required for each 500 square feet over the first 1,000 square feet of additional structure, up to the maximum number of trees that would be required for new construction.

4. If it is not feasible to plant street trees in a right-of-way planting strip, a 5-foot setback shall be planted with street trees along the street property line or landscaping other than trees shall be provided in the planting strip, subject to approval by the Director of Transportation. If, according to the Director of Transportation, a 5-foot setback or landscaped planting strip is not feasible, the Director of the Seattle Department of Construction and Inspections may reduce or waive this requirement.

C. General standards for screening and landscaping where required for specific uses

3. Other uses or circumstances. Screening and landscaping is required according to Table B for 23.47A.016:

Table B for 23.47A.016	
Use or circumstance	Minimum requirement
c. Garbage cans in NC1, NC2, or NC3 zones, or associated with a structure containing a residential use in C1 or C2 zones	3-foot-high screening along areas where garbage cans are located
d. Garbage dumpsters in NC1, NC2, or NC3 zones, or associated with structures containing a residential use in C1 or C2 zones	6-foot-high screening
i. Outdoor storage in a C1 zone; or Outdoor dry boat storage in NC2, NC3 or C1	Screened from all lot lines by the facade of the structure or by 6-foot- high

zones in the Shoreline District	screening; and 5-foot-deep landscaped area between all street lot lines and the 6-foot-high screening (Exhibit C for 23.47A.016)

23.47A.017 Mandatory housing affordability in C and NC zones

C and NC zones with a mandatory housing affordability suffix are subject to the provisions of Chapters 23.58B and 23.58C.

Chapter 23.58C - MANDATORY HOUSING AFFORDABILITY FOR RESIDENTIAL DEVELOPMENT

23.58C.025 - Applicability and general requirements

A. General. If an applicant seeks approval of a permit for development as described according to subsection 23.58C.025.B, the applicant shall comply with this Chapter 23.58C, either through the payment option according to Section 23.58C.040 or the performance option according to Section 23.58C.050.

23.58C.040 - Affordable housing—payment option

A. Payment amount

1. An applicant complying with this Chapter 23.58C through the payment option shall provide a cash contribution to the City, calculated by multiplying the payment calculation amount per square foot according to Table A or Table B for 23.58C.040 and Map A for 23.58C.050, as applicable, by the total gross floor area in the development, excluding the floor area of parking located in stories, or portions of stories, that are underground, and excluding any floor area devoted to a domestic violence shelter, as follows:

Table B for 23.58C.040
Payment calculation amounts:
Outside Downtown, SM-SLU, SM-U 85, and SM-NG zones

Zone	Payment calculation amount per square foot		
	Low	Medium	High
Zones with an (M) suffix	$7.00	$13.25	$20.75

23.58C.050 - Affordable housing—performance option

A. Performance amount

1. An applicant complying with this Chapter 23.58C through the performance option shall provide, as part of the units to be developed in each structure, a number of units that meet the requirements according to subsection 23.58C.050.C calculated by multiplying the percentage set aside according to Table A or Table B for 23.58C.050 and Map A for 23.58C.050, as applicable, by the total number of units to be developed in each structure, excluding units in a domestic violence shelter.

Table B for 23.58C.050 Performance calculation amounts Outside Downtown, SM-SLU, SM-U 85, and SM-NG zones			
Zone	Percentage set-aside per total number of units to be developed in each structure		
	Low	Medium	High
Zones with an (M) suffix	5.0%	6.0%	7.0%

23.47A.018 Noise standards

Not Applicable

23.47A.020 Odor standards

A. The venting of odors, vapors, smoke, cinders, dust, gas, and fumes shall be at least 10 feet above finished sidewalk grade, and directed away to the extent possible from uses within 50 feet of the vent.

23.47A.022 Light and glare standards

A. Exterior lighting must be shielded and directed away from adjacent uses.

D. Height.

1. Exterior lighting on poles is permitted up to a maximum height of thirty (30) feet from finished grade. In zones with a forty (40) foot or greater height limit, exterior lighting on poles is permitted up to a height of forty (40) feet from finished grade, provided that the ratio of watts to area is at least twenty (20) percent below the maximum exterior lighting level permitted by the Energy Code.

23.47A.024 Amenity area

A. Amenity areas are required in an amount equal to 5 percent of the total gross floor area in residential use, except as otherwise specifically provided in this Chapter 23.47A. Gross floor area, for the purposes of this subsection 23.47A.024.A, excludes areas used for mechanical equipment and accessory parking. For the purposes of this subsection 23.47A.024.A, bioretention facilities qualify as amenity areas.

B. Required amenity areas shall meet the following standards, as applicable:

1. All residents shall have access to at least one common or private amenity area.
2. Amenity areas shall not be enclosed.
3. Parking areas, vehicular access easements, and driveways do not qualify as amenity areas, except that a woonerf may provide a maximum of 50 percent of the amenity area if the design of the woonerf is approved through a design review process pursuant to Chapter 23.41.
4. Common amenity areas shall have a minimum horizontal dimension of 10 feet, and no common amenity area shall be less than 250 square feet in size.
5. Private balconies and decks shall have a minimum area of 60 square feet, and no horizontal dimension shall be less than 6 feet.
6. Rooftop areas excluded because they are near minor communication utilities and accessory communication devices, pursuant to subsection 23.57.012.C.1.d, do not qualify as amenity areas.

23.47A.027

Not Applicable

Landmark Districts and designated landmark structures

23.47A.028 Standards for drive-in businesses.

Not Applicable

23.47A.030 Required parking and loading.

A. Off-street parking spaces may be required as provided in Section 23.54.015, Required parking.

23.54.015 - Required parking and maximum parking limits

A. Required parking. The minimum number of off-street motor vehicle parking spaces required for specific uses is set forth in Table A for 23.54.015 for non-residential uses other than institutional uses, Table B for 23.54.015 for residential uses, and Table C for 23.54.015 for institutional uses, except as otherwise provided in this Chapter 23.54.

Table B for 23.54.015 Required parking for residential uses		
Use		Minimum parking required
II. Residential use requirements for specific areas		
M.	All residential uses in commercial, RSL and multifamily zones within urban villages that are not within urban center or the Station Area Overlay District, if the residential use is located within a frequent transit service area [1, 4]	No minimum requirement

Footnotes to Table B for 23.54.015

[1] The minimum amount of parking prescribed by Part I of Table B for 23.54.015 does not apply if a use, structure, or development qualifies for a greater or a lesser amount of minimum parking, including no parking, under any other provision of this Section 23.54.015. If more than one such provision may apply, the provision requiring the least amount of minimum parking applies, except that if item O in Part II of Table B for 23.54.015 applies, it shall supersede any other applicable requirement in Part I or Part II of this Table B for 23.54.015. The minimum amount of parking prescribed by Part III of Table B for 23.54.015 applies to individual units within a use, structure, or development instead of any requirements in Parts I or II of Table B for 23.54.015.

[4] Except as provided in Part III of Table B for 23.54.015, the minimum amounts of parking prescribed by Part 1 of Table B for 23.54.015 apply within 1,320 feet of the Fauntleroy Ferry Terminal.

23.47A.032 Parking location and access	Not Applicable

2015 Seattle Building Code Review

Chapter 1 Administration	Not Relevant to Feasibility
Chapter 2 Definitions	Not Relevant to Feasibility
Chapter 3 Use and Occupancy Classification	310.4 Residential Group R-2 Residential group R-@ Occupancies containing units or more than two dwelling units where the occupants are primarily permanent in nature, including: • Apartment houses • Assisted living facilities • Boarding houses with more than 16 occupants • Congregate living facilities • Convents • Dormitories • Fraternities and sororities • Hotels • Building than contain three or more live work units • Monasteries • Motels • Residential treatment facilities • Vacation timeshare properties
Chapter 4 Special Detailed Requirements Based on Use and Occupancy	Notes: Section 420 Groups I-1, R-1, R-2, R-3, and R-4 **Section 420.1 General.** Occupancies in Groups R-2 shall comply with the provisions of sections 420.1-420.6 and all other applicable provisions of this code. **420.2 Separation Walls.** Walls separating dwelling units in the same building, walls separating sleeping units in the same building, and walls separating dwelling or sleeping units from other occupancies contiguous to them in the same building shall be constructed as fire partitions in accordance with section 708. **420.3 Horizontal Separation.** Floor assemblies separating dwelling units in the same building, floor assemblies separating dwelling units in the same building and floor assemblies separating dwelling or sleeping units from other occupancies contiguous to them in the same building shall be constructed as horizontal assemblies in accordance with section 711 **420.5 Automatic Sprinkler System.** Group R occupancies shall be equipped throughout with

an automatic sprinkler system in accordance with section 903.2.8.

420.6 Fire Alarm Systems and Smoke Alarms. Fire alarm systems and smoke alarms shall be provided in Group R-2 occupancies in accordance with sections 907.2.6, 907.2.8, 907.2.10 respectively.

Chapter 5 General Building Heights and Areas

Section 504 Building Height and Number of Stories

Table 504.3 Allowable Building Height in Feet Above Grade Plane

Occupancy Classification	Fire Sprinklers	Type 1A	Type 1B	Type 2A	Type 2B	Type 3A	Type 3b	Type 4	Type 5A	Type 5B
R	Building Not Equipped	Unlimited	160’	55’	55’	65’	55’	65’	50’	40’
	Building Equipped throughout in accordance to Section 903.3.1.1	60’	60’	60’	60’	60’	60’	60’	60’	60’
	Building Equipped throughout in accordance to Section 903.3.1.2	Unlimited	180’	85’	75’	85’	75’	85’	70’	60’

Type 5A

Table 504.4 Allowable Number of Stories Above Grade Plane

Occupancy Classification	Fire Sprinklers	Type 1A	1B	2A	2B	3A	3B	4	5A	5B
R-2	Building Not Equipped	Unlimited	11	4	4	4	4	4	4	2
	Building Equipped throughout in accordance to Section 903.3.1.1	4	4	4	4	4	4	5	4	3
	Building Equipped	Unlimited	12	5	5	5 6	5	4	5 [plus	2

	throughout in accordance to Section 903.3.1.2					per **Section 510.10**			basement]	

Section 506 Building Area

506.2 Allowable Area Determination The allowable area of a building shall be determined in accordance with the applicable provisions of Sections 506.2.1 through 506.2.4 and section 506.3

506.2.4 Mixed-Occupancy, Multistory Buildings

Each story pf a mixed use building with more than one story above grade plane shall individually comply with the applicable requirements of Section 508.1. for buildings with more than three stories above grace plane, the total building area shall be such that the aggregate sum of the ratios of the actual area of each story divided by the allowable area of such stories, determined in accordance with equation 5-3 based on the applicable provisions of section 508.1, shall not exceed three.

$$\boldsymbol{A_a = A_t + (NS * I_f)}$$

$A_a = allowable\ surface\ area$
$A_t = tabular\ allowable\ area\ factor$
$(NS, S13E\ or\ SM\ Value, as\ applicable) in\ accordance\ with\ table\ 506.2$
$NS = tabular\ allowable\ area\ factor\ in\ accordance\ with\ Table\ 506.2\ for\ nonsprinkled\ building\ (regardless\ of\ whether\ the\ building\ is\ sprinklered)$
$I_f = area\ factor\ increase\ due\ to\ frontage\ as\ calculated\ in\ accordance\ with\ Section\ 506.3$

Table 506.2 Allowable Area Factor

Occupancy Classification	Fire Sprinklers	Type 1A	1B	2A	2B	3A	3b	4	5A	5B
R	(NS) Building Not Equipped	UL	UL	24k	16k	24k	16k	20.5k	12k	7k
	S13R	UL	UL	24k	16k	24k	16k	20.5k	12k	7k

	S1	UL	UL	96k	64k	96k	64k	82k	48k	28k
	SM	UL	UL	72k	48k	72k	48k	61.5k	36k	21k

SM = Building two or more stories above grade plane equipped throughout with an automatic sprinkler system in accordance with Section 903.1.1

506.3 Frontage Increase. Every building shall adjoin or have access to a public way to receive an area factor an area factor increase based on frontage. Area factor increase shall be determined in accordance with sections 506.3.1 through 506.3.3

506.3.1 Minimum Percentage of perimeter. To qualify for an area factor increase based on frontage, a building shall have not less than 25% of its perimeter on a public way or open space. Such open space shall be either on the same lot or dedicated for public use and shall be accessed from a street or approved fire lane.

506.3.2 Minimum Frontage Distance. To qualify for an area factor increase based on frontage, the public way or open space adjacent to the building perimeter shall have a minimum distance (w) of 20 feet measured at right angles from the building face to any of the following:

- The closest interior lot line
- The entire width of a street, alley or public way
- The exterior face of an adjacent building on the same property

Where the value of W is greater than 30FT a value of 30 a value of 30FT shall be used in calculating the building area increase based on frontage, regardless of the actual width of the public way or open space. Where the value of W varies along the perimeter of the building, the calculation performed in accordance with Equation 5-5 shall be based on the weighted average calculated in accordance with equation 5-4

$$W = \frac{L_1 * w_1 + L_2 * w_2 + L_3 * w_3 \ldots}{F}$$

$W = Calculated\ width\ of\ public\ way\ or\ open\ space$

$L_n = Length\ of\ a\ portion\ of\ the\ exterior\ perimeter\ wayy$

$w_n = width\ (> 20 feet) of\ a\ public\ way\ or\ open$
$space\ associated\ with\ that\ portion\ of\ the\ exterior\ perimieter\ wall$

$F = Building\ perimeter\ that\ fronts\ on\ a\ public\ way\ or\ open$
$space\ having\ a\ width\ of\ 20\ FT\ or\ more$

506.3.3 Amount Increase The area factor increase based on frontage shall be determine in accordance 5-5

$$I_f = \frac{\left[\frac{F}{P} - 0.25\right] W}{30}$$

$$I_f = Area\ factor\ increase\ due\ to\ frontage$$
$$F = Building\ perimeter\ that\ front\ on\ a\ public\ way\ or\ open\ space\ having\ minimum\ distance of\ 20FT$$
$$P = perimeter\ of\ entire\ building$$
$$W = Width\ of\ public\ way\ or\ open\ space\ in\ accoradance\ with\ section\ 506.3.2$$

510.2 Horizontal building separation allowance. A *building* shall be considered as separate and distinct *buildings* for the purpose of determining area limitations, continuity of *firewalls*, limitation of number of *stories* and type of construction where all of the following conditions are met:

1. The *buildings* are separated with a *horizontal assembly* having a *fire-resistance rating* of not less than 3 hours.
2. The building below and including the *horizontal assembly* is of Type IA construction.
3. *Shaft, stairway, ramp* and escalator enclosures through the *horizontal assembly* shall have not less than a 2-hour *fire-resistance rating* with opening protectives in accordance with Section 716.5.

   Exception: Where the enclosure walls below the *horizontal assembly* have not less than a 3-hour *fire- resistance rating* with opening protectives in accordance with Section 716.5, the enclosure walls extending above the *horizontal assembly* shall be permitted to have a 1-hour *fire-resistance rating,* provided:

   1. The *building* above the *horizontal assembly* is not required to be of Type I construction;
   2. The enclosure connects fewer than four *stories*; and
   3. The enclosure opening protectives above the *horizontal assembly* have a *fire protection rating* of not less than 1 hour.

4. *Stairways* permitted to be constructed of wood above the *horizontal assembly* are also permitted to be constructed of wood below the *horizontal assembly*. See Section 202 for the definition of *stairway*.
5. The *building* or buildings above the *horizontal assembly* shall be permitted to have any of the following occupancies:
   - 5.1 Multiple Group A occupancy uses, each with an occupant load of less 300;
   - 5.2 Group B;
   - 5.3. Group I-1, Condition 2 licensed care facilities;
   - 5.4 Group M;
   - 5.5. Group R;
   - 5.6. Group S-2 parking garage used for the parking and storage of private motor vehicles; and
   - 5.7. Uses incidental to the operation or serving occupants of the *building* (including entry lobbies, mechanical rooms, storage areas and simi-lar uses.
6. The building below the *horizontal assembly* is permitted to be any occupancy allowed by this code except Group H.

7. The maximum *building height* in feet (mm) shall not exceed the limits set forth in Section 504.3 for the *building* having the smaller allowable height as measured from the *grade plane*.

8. All portions of the *buildings* above and below the three-hour *horizontal assembly* shall be protected throughout with an *automatic sprinkler system* that complies with Section 903.3.1.1.

9. Occupied floors shall be not more than 75 feet above the lowest level of fire department vehicle access.

10. Where the structure above the horizontal assembly is of Type V construction, and the structure or any portion of the structure is 7 *stories above grade plane*

11. Where the structure above the horizontal assembly is not of Type V construction, interior exit stairways that connect more than 6 *stories* above the level of exit discharge for the stairway shall be pressurized in accordance with Section 909.20.6 for low-rise stairways.

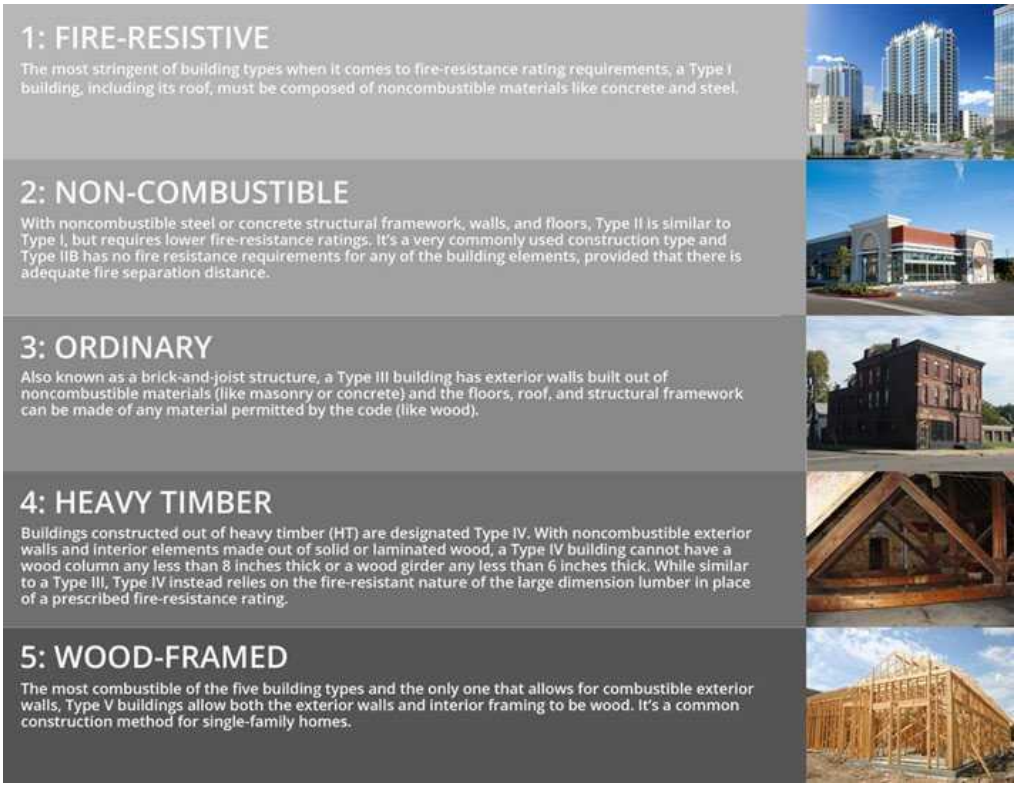
Chapter 6
Types of Construction

602.2 Types 1 and 2
Types 1 and 2 construction are those types of construction in which the building elements listed in table 601 are of noncombustible materials, except as permitted in Section 603 and elsewhere in this code.

602.3 Type 3
Type 3 construction is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code. Fire-retardant-treated wood framing complying with Section 2303.2 shall be permitted within exterior wall assemblies of a 2-hour rating or less.

602.4 Type 4
Type 4 construction (Heavy Timber) is that type of construction in which the exterior walls are noncombustible materials and the interior building elements are of solid or laminated wood without concealed spaces. The details of type 4 construction shall comply with provisions of this section and section 2304.11. Exterior walls complying with sections 602.4.1 or 602.4.2 shall be permitted. Minimum solid sawn nominal dimensions are required for structured built using type 4 construction. For glued laminated members and structural composite lumber members, the equivalent net finished width and depths corresponding to the minimum nominal width and depths corresponding to the minimum nominal width and depths of solid sawn lumber are required as specified in Table 602.4. Cross-laminated timber dimensions used in these sections are actual dimensions.

602.5 Type 5 type 5 construction is that type of construction in which the structural element, exterior walls and interior walls are any materials permitted in this code.



Chapter 7
Fire and Smoke Protection Features

Not Relevant to Feasibility

Chapter 8
Interior Finishes

Not Relevant to Feasibility

Chapter 9
Fire Protection Systems

903.3.1.1 NFPA 13 Sprinkler Systems Sprinklers installed throughout building in accordance with NFPA 13

903.3.1.2 NFPA 13R Sprinkler Systems Automatic Sprinkler Systems in Group R occupancies up to 4 stories or 60'

Chapter 10
Means of Egress

SECTION 1001 ADMINISTRATION

1001.1 General. Buildings or portions thereof shall be provided with a means of egress system as required by this chapter. The provisions of this chapter shall control the design, construction and arrangement of means of egress components required to provide an approved means of egress from structures and portions thereof.

SECTION 1003 GENERAL MEANS OF EGRESS

1003.1 Applicability. The general requirements specified in Sections 1003 through 1015 shall apply to all three elements of the means of egress system, in addition to those specific requirements for the exit access, the exit and the exit discharge detailed elsewhere in this chapter.

1003.2 Ceiling Height: The means of egress shall have a ceiling height not less than 7'6" with exceptions

SECTION 1004 OCCUPANT LOAD

1004.1 Design occupant load. In determining means of egress requirements, the number of occupants for whom means of egress facilities are provided shall be determined in accordance with this section.

1004.1.1 Cumulative occupant loads. Where the path of egress travel includes intervening rooms, areas or spaces, cumulative *occupant loads* shall be determined in accordance with this section.

1004.1.1.1 Intervening spaces or accessory areas. Where occupants egress from one or more rooms, areasor spaces through others, the design *occupant load*shall be the combined *occupant load* of interconnected accessory or intervening spaces. Design of egress path capacity shall be based on the cumulative portion of *occupant loads* of all rooms, areas or spaces to that point along the path of egress travel

Table 1004.1.2 Maximum Floor Area Allowances Per Occupant

Function of Space	Occupant Load Factor
Residential	200 Gross

SECTION 1005 MEANS OF EGRESS SIZING

1005.1 General. All portions of the means of egress system shall be sized in accordance with this section.

1005.2 Minimum width based on component. The minimum width, in inches (mm), of any means of egress components shall be not less than that specified for such component, elsewhere in this code. The width at any point in the path of egress travel shall not be less than the width required for doors in Section 1010.

1005.3 Required capacity based on occupant load. The required capacity, in inches (mm), of the means of egress for any room, area, space or story shall be not less than that determined in accordance with Sections 1005.3.1 and 1005.3.2:

1005.3.1 Stairways: The capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairways by a means of egress capacity factor of 0.3" per occupant.

1005.3.2 Other Egress Components: the capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.2" per occupant.

1005.6 Egress convergence. Where the means of egress from stories above and below converge at an intermediate level, the capacity of the means of egress from the point of convergence shall be not less than the largest minimum width or the sum of the required capacities for the stairways or ramps serving the two adjacent stories, whichever is larger.

SECTION 1006 NUMBER OF EXITS AND EXIT ACCESS DOORWAYS

1006.1 General. The number of exits or exit access doorways required within the means of egress system shall comply with the provisions of Section 1006.2 for spaces, including mezzanines, and Section 1006.3 for stories.

1006.3.1 Egress based on occupant load. Each story and occupied roof shall have the minimum number of independent exits, or access to exits, as specified in Table 1006.3.1. A single exit or access to a single exit shall be permitted in accordance with Section 1006.3.2. The required number of exits, or exit access stairways or ramps providing access to exits, from any story or occupied roof shall be maintained until arrival at the exit discharge or a public way.

Table 1006.3.1 Minimum Number of Exits or Access to Exits per Story

Occupant Load Per Story	Minimum Number of Exits or Access to Exits from Story
1-500	2

1006.3.2 Single exits. A single *exit* or access to a single *exit* shall be permitted from any *story* or occupied roof where one of the following conditions exists:

7. Not more than 5 *stories* of Group R-2 occupancy are permitted to be served by a single exit under the following conditions:
   - 7.1 The building has not more than six *stories above grade plane*.
   - 7.2 The building does not contain a *boardinghouse*.
   - 7.3 There shall be no more than four *dwelling units* on any floor.
   - 7.4 The building shall be of not less than one- hour fire-resistive construction and shall also be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1. Residential-type sprinklers shall be used in all habitable spaces in each *dwelling unit*.
   - 7.5 There shall be no more than two single exit stairway conditions on the same property.
   - 7.6 An exterior stairway or interior exit stairway shall be provided. The interior exit stairway, including any related *exit passageway*, shall be pressurized in accordance with Section 909.20. Doors in the stairway shall swing into the interior exit stairway regardless of the occupant load served, provided that doors from the interior exit stairway to the building exterior are permitted to swing in the direction of exit travel.
   - 7.7 A *corridor* shall separate each *dwelling unit* entry/exit door from the door to an interior exit stairway, including any related *exit passageway*, on each floor. *Dwelling unit* doors shall not open directly into an interior exit stairway. *Dwelling unit* doors are permitted toopen directly into an exterior stairway.
   - 7.8 There shall be no more than 20 feet (6096 mm) of travel to the exit stairway from the entry/exit door of any

dwelling unit.

7.9 Travel distance measured in accordance with Section 1017 shall not exceed 125 feet.

7.10 The exit shall not terminate in an egress *court* where the *court* depth exceeds the *court* width unless it is possible to exit in either direction to the public way.

7.11 Elevators shall be pressurized in accordance with Section 909.21 or shall open into elevator lobbies that comply with Section 713.14. Where *approved* by the *building official*, natural ventilation is permitted to be substituted for pressurization where the ventilation would prevent the accumulation of smoke or toxic gases.

7.12 Other occupancies are permitted in the same building provided they comply with all the requirements of this code. Other occupancies shall not communicate with the Group R occupancy portion of the building or with the single-exit stairway.

Exception: Parking garages accessory to the Group R occupancy are permitted to communicate with the exit stairway.

7.13 The exit serving the Group R occupancy shall not discharge through any other occupancy, including an accessory parking garage.

7.14 There shall be no openings within 10 feet (3048 mm) of unprotected openings into the stairway other than required exit doors having a one-hour fire-resistance rating.

SECTION 1009 ACCESSIBLE MEANS OF EGRESS

1009.1 Accessible means of egress required. Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress are required by Section 1006.2 or 1006.3 from any accessible space, each accessible portion of the space shall be served by not less than two accessible means of egress.

1009.3 Stairways. In order to be considered part of an accessible means of egress, a stairway between stories shall have a clear width of 48 inches (1219 mm) minimum between handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from an area of refuge complying with Section 1009.6. Exit access stairways that connect levels in the same story are not permitted as part of an accessible means of egress.

SECTION 1011 STAIRWAYS

1011.1 General. *Stairways* serving occupied portions of a building shall comply with the requirements of Sections 1011.2 through 1011.13. *Alternating tread devices* shall com- ply with Section 1011.14. Ships ladders shall comply with Section 1011.15. Ladders shall comply with Section 1011.16

1011.2 Width and capacity. The required capacity of *stair- ways* shall be determined as specified in Section 1005.1, but the minimum width shall be not less than 44 inches (1118 mm). See Section 1009.3 for accessible *means of egressstairways*.

1011.3 Headroom. Stairways shall have a headroom clearance of not less than 80 inches (2032 mm) measured vertically from a line connecting the edge of the nosings. Such headroom shall be continuous above the stairway to the point where the line intersects the landing below, one tread depth beyond the bottom riser. The minimum clearance shall be maintained the full width of the stairway and landing.

SECTION 1017 EXIT ACCESS TRAVEL DISTANCE

1017.1 General. Travel distance within the *exit access* portion of the *means of egress* system shall be in accordance with this section.

1017.2 Limitations. Exit access travel distance shall not exceed the values given in Table 1017.2.

TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)	WITH SPRINKLER SYSTEM (feet)
A, E, F-1, M, R, S-1	200	250[b]

SECTION 1019

SECTION 1020 CORRIDORS

1020.2 Width and capacity. The required capacity of corridors shall be determined as specified in Section 1005.1, but the minimum width shall be not less than that specified in Table 1020.2.

Table 1020.3 Minimum Corridor Width

Occupancy	Minimum Width (inches)
Any facilities not listed below	44
With an occupancy load less than 50	36

Chapter 11 Accessibility

1107.6.2.2.1 Type A Units In Group R-2 Occupancies Containing more than 10 dwelling units shall contain 5%, but not less than one, type A unit
Type A is Fully Accessible Type B is Accessible friendly for visitors

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Chapter 3 Building Planning

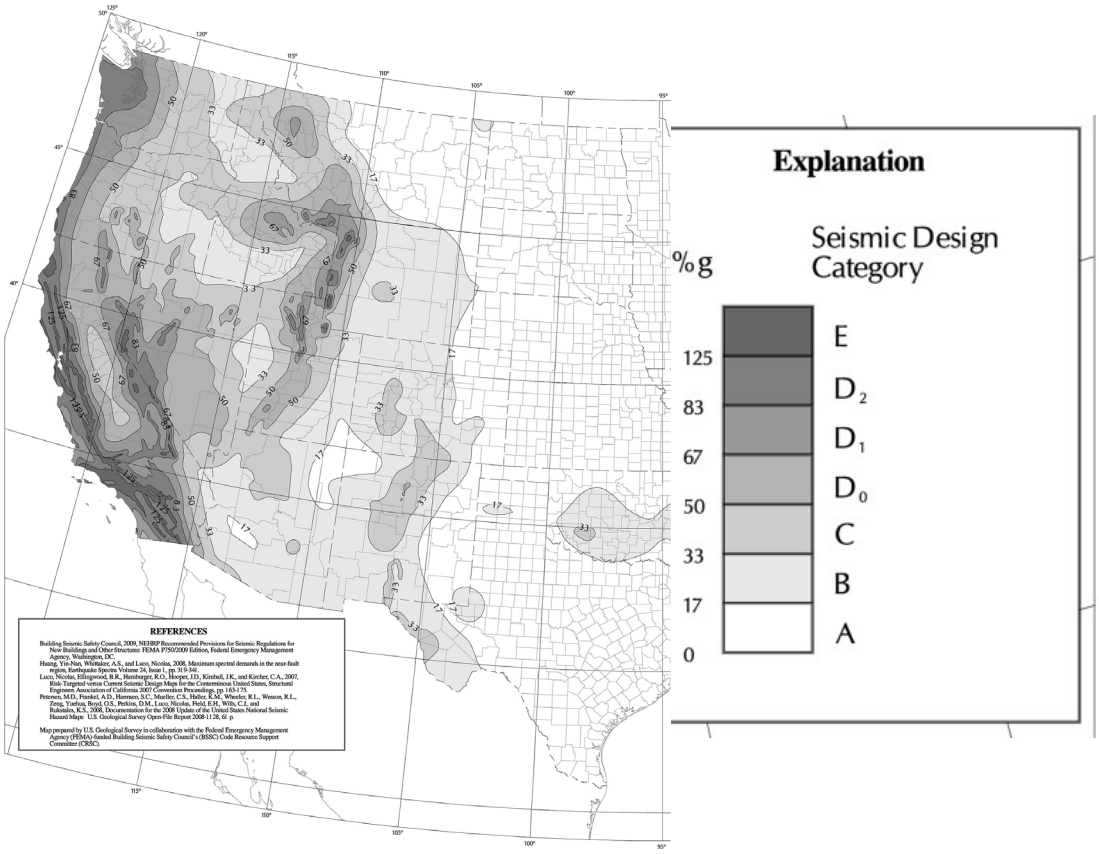
SECTION R301 DESIGN CRITERIA

R301.1 Application. Buildings and structures, and parts thereof, shall be constructed to safely support all loads, including dead loads, live loads, roof loads, flood loads, snow loads, wind loads and seismic loads as prescribed by this code. The construction of buildings and structures in accordance with the provisions of this code shall result in a system that provides a complete load path that meets the requirements for the transfer of loads from their point of origin through the load-resisting elements to the foundation. Buildings and structures constructed as prescribed by this code are deemed to comply with the requirements of this section.

R301.2.2 Seismic provisions. The seismic provisions of this code shall apply as follows:

1. Townhouses in Seismic Design Categories C, D0, D1 and D2.

R301.2.2.1 Determination of seismic design category. Buildings shall be assigned a seismic design category in accordance with Figure R301.2(2) shown below.



R301.2.2.1.2 Alternative determination of Seismic Design Category E. Buildings located in Seismic Design Category E in accordance with Figure R301.2(2) are permitted to be reclassified as being in Seismic Design Category D2 provided that one of the following is done:

1. A more detailed evaluation of the seismic design category is made in accordance with the provisions and maps of the International Building Code. Buildings located in Seismic Design Category E in accordance with Table R301.2.2.1.1, but located in Seismic Design Category D in accordance with the International Building Code, shall be permitted to be designed using the Seismic Design Category D2 requirements of this code.

2. Buildings located in Seismic Design Category E that conform to the following additional restrictions are permitted to be constructed in accordance with the provisions for Seismic Design Category D2 of this code:

2.1. All exterior shear wall lines or braced wall panels are in one plane vertically from the foundation to the uppermost story.
2.2. Floors shall not cantilever past the exterior walls.
2.3. The building is within the requirements of Section R301.2.2.2.5 for being considered as regular.

R301.2.2.3 Seismic Design Categories D0, D1 and D2.
Structures assigned to Seismic Design Categories D0,
D1 and D2 shall conform to the requirements for Seismic Design Category C and the additional requirements of this section.

R301.2.2.3.1 Height limitations. Wood-framed buildings shall be limited to three stories above grade plane or the limits given in Table R602.10.3(3). Cold-formed, steel-framed buildings shall be limited to less than or equal to three stories above grade plane in accordance with AISI S230. Mezzanines as defined in Section R202 that comply with Section R325 shall not be considered as stories. Structural insulated panel buildings shall be limited to two stories above grade plane.

R301.2.2.4 Seismic Design Category E. Buildings in Seismic Design Category E shall be designed to resist seismic loads in accordance with the International Building Code, except where the seismic design category is reclassified to a lower seismic design category in accordance with Section R301.2.2.1. Components of buildings not required to be designed to resist seismic loads shall be constructed in accordance with the provisions of this code.

R301.3 Story height. The wind and seismic provisions of this code shall apply to buildings with story heights not exceeding the following:

1. For wood wall framing, the story height shall not exceed 11 feet 7 inches (3531 mm) and the laterally unsupported bearing wall stud height permitted by Table R602.3(5).

R302.2 Townhouses. Each townhouse shall be considered a separate building and shall be separated by one of the following methods:

1. A common 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 and a fire sprinkler system in accordance with Section P2904 in both townhouses shall be provided. The cavity of the common wall shall not contain plumbing or mechanical equipment, ducts or vents. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.
2. A common 2-hour fire-resistance-rated wall assembly tested in accordance

with ASTM E 119 or UL 263 shall be provided. The cavity of the common wall shall not contain plumbing or mechanical equipment, ducts or vents. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.

3. Two wall assemblies meeting the requirements of Section R302.1 for exterior walls shall be provided.

R302.2.1 Continuity. The fire-resistance-rated wall or assembly separating townhouses shall be continuous from the foundation to the underside of the roof sheathing, deck or slab. The fire-resistance rating shall extend the full length of the wall or assembly, including wall extensions through and separating attached enclosed accessory structures.
Where a story extends beyond the exterior wall of a story below:

1. The fire-resistance-rated wall or assembly shall extend to the outside edge of the upper story (see Figure R302.2.(1)); or
2. The underside of the exposed floor-ceiling assembly shall be protected as required for projections in Section R302 (see Figure R302.2(2)).

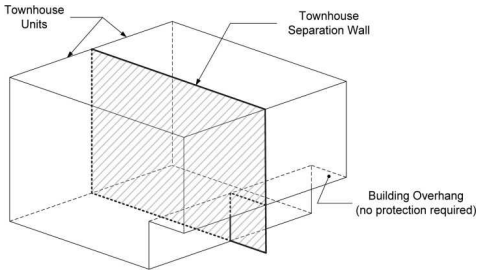


FIGURE R302.2(1) EXTENDED TOWNHOUSE SEPARATION WALL

R302.2.2 Parapets for townhouses. Parapets constructed in accordance with Section R302.2.3 shall be constructed for townhouses as an extension of exterior walls or common walls in accordance with the following:

1. Where roof surfaces adjacent to the wall or walls are at the same elevation, the parapet shall extend not less than 30 inches (762 mm) above the roof sur- faces.
2. Where roof surfaces adjacent to the wall or walls are at different elevations and the higher roof is not more than 30 inches (762 mm) above the lower roof, the parapet shall extend not less than 30 inches (762 mm) above the lower roof surface.

Exception: A parapet is not required in the preceding two cases where the roof covering com- plies with a minimum Class C rating as tested in accordance with ASTM E 108 or UL 790 and the roof decking or sheathing is of noncombustible materials or approved fire-retardant-treated wood for a distance of 4 feet (1219 mm) on each side of the wall or walls, or one layer of 5/8-inch (15.9 mm) Type X gypsum board is installed directly beneath the roof decking or sheathing, supported by not less than nominal 2-inch (51 mm) ledgers attached to the sides of the roof framing members, for a distance of not less than 4 feet (1219 mm) on each side of the wall or walls and any openings or penetrations in the roof are not within 4 feet (1219 mm) of the common walls.

3. A parapet is not required where roof surfaces adjacent to the wall or walls are at different elevations and the higher roof is more than 30 inches (762 mm)

above the lower roof. The common wall construction from the lower roof to the underside of the higher roof deck shall have not less than a 1-hour fire-resistance rating. The wall shall be rated for exposure from both sides.

SECTION R304 MINIMUM ROOM AREAS

R304.1 Minimum area. Habitable rooms shall have a floor area of not less than 70 square feet (6.5 m2).

Exception: Kitchens.

R304.2 Minimum dimensions. Habitable rooms shall be not less than 7 feet (2134 mm) in any horizontal dimension.

Exception: Kitchens.

R304.3 Height effect on room area. Portions of a room with a sloping ceiling measuring less than 5 feet (1524 mm) or a furred ceiling measuring less than 7 feet (2134 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required habitable area for that room.

SECTION R305 CEILING HEIGHT

R305.1 Minimum height. Habitable space, hallways and portions of basements containing these spaces shall have a ceiling height of not less than 7 feet (2134 mm). Bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6 feet 8 inches (2032 mm).

Exceptions:

1. For rooms with sloped ceilings, the required floor area of the room shall have a ceiling height of not less than 5 feet (1524 mm) and not less than 50 percent of the required floor area shall have a ceiling height of not less than 7 feet (2134 mm).
2. The ceiling height above bathroom and toilet room fixtures shall be such that the fixture is capable of being used for its intended purpose. A shower or tub equipped with a showerhead shall have a ceiling height of not less than 6 feet 8 inches (2032 mm) above an area of not less than 30 inches (762 mm) by 30 inches (762 mm) at the showerhead.
3. Beams, girders, ducts or other obstructions in basements containing habitable space shall be permitted to project to within 6 feet 4 inches (1931 mm) of the finished floor.

SECTION R309 GARAGES AND CARPORTS

R309.1 Floor surface. Garage floor surfaces shall be of approved noncombustible material. The area of floor used for parking of automobiles or other vehicles shall be sloped to facilitate the movement of liquids to a drain or toward the main vehicle entry doorway.

R309.2 Carports. Carports shall be open on not less than two sides. Carport floor surfaces shall be of approved noncombustible material. Carports not open on two or more sides shall be considered to be a garage and shall comply with the provisions of this section for garages.

Exception: Asphalt surfaces shall be permitted at ground level in carports.

The area of floor used for parking of automobiles or other vehicles shall be sloped to facilitate the movement of liquids to a drain or toward the main vehicle entry doorway.

R309.3 Flood hazard areas. For buildings located in flood hazard areas as established by Table R301.2(1), garage floors shall be:

1. Elevated to or above the design flood elevation as determined in accordance with Section R322; or
2. Located below the design flood elevation provided that the floors are at or above grade on not less than one side, are used solely for parking, building access or storage, meet the requirements of Section R322 and are otherwise constructed in accordance with this code.

R309.4 Automatic garage door openers. Automatic garage door openers, if provided, shall be listed and labeled in accordance with UL 325.

SECTION R310 EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 Emergency escape and rescue opening required. *Basements, habitable attics* and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where *basements* contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a *yard* orcourt that opens to a public way.

Exception: Storm shelters and *basements* used only to house mechanical *equipment* not exceeding a total floor area of 200 square feet (18.58 m^2).

R310.1.1 Operational constraints and opening control devices. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge. Window opening control devices complying with ASTM F 2090 shall be permitted for use on windows serving as a required emergency escape and rescue opening.

R310.2 Emergency escape and rescue openings. Emergency escape and rescue openings shall have minimum dimensions as specified in this section.

R310.2.1 Minimum opening area. Emergency and escape rescue openings shall have a net clear opening of not less than 5.7 square feet (0.530 m^2). The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. The net clear height opening shallbe not less than 24 inches (610 mm) and the net clear widthshall be not less than 20 inches (508 mm).

Exception: *Grade* floor or below *grade* openings shallhave a net clear opening of not less than 5 square feet (0.465 m^2).

R310.2.2 Windowsill height. Where a window is pro- vided as the emergency escape and rescue opening, it shallhave a sill height of not more than 44 inches (1118 mm) above the floor; where the sill height is below *grade*, it shall be provided with a window well in

accordance with Section R310.2.3.

R310.2.3 Window wells. The horizontal area of the window well shall be not less than 9 square feet (0.9 m^2), with a horizontal projection and width of not less than 36 inches (914 mm). The area of the window well shall allow the emergency escape and rescue opening to be fully opened.

Exception: The ladder or steps required by Section R310.2.3.1 shall be permitted to encroach not more than 6 inches (152 mm) into the required dimensions of the window well.

R310.2.3.1 Ladder and steps. Window wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with Sections R311.7 and R311.8. Ladders or rungs shall have an inside width of not less than 12 inches (305 mm), shall project not less than 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the window well.

R310.2.3.2 Drainage. Window wells shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section R405.1 or by an approved alternative method.

Exception: A drainage system for window wells is not required where the foundation is on well-drained soil or sand-gravel mixture soils in accordance with the United Soil Classification System, Group I Soils, as detailed in Table R405.1.

SECTION R311 MEANS OF EGRESS

R311.1 Means of egress. *Dwellings* shall be provided with a means of egress in accordance with this section. The means of egress shall provide a continuous and unobstructed path of vertical and horizontal egress travel from all portions of the *dwelling* to the required egress door without requiring travel through a garage. The required egress door shall open directly into a public way or to a *yard* or court that opens to a public way.

R311.2 Egress door. Not less than one egress door shall be provided for each *dwelling* unit. The egress door shall be side-hinged, and shall provide a clear width of not less than 32 inches (813 mm) where measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). The clear height of the door opening shall be not less than 78 inches (1981 mm) in height measured from the top of the threshold to the bottom of the stop. Other doors shall not be required to comply with these minimum dimensions. Egress doors shall be readily openable from inside the *dwelling* without the use of a key or special knowledge or effort.

R311.3 Floors and landings at exterior doors. There shall be a landing or floor on each side of each exterior door. The width of each landing shall be not less than the door served. Every landing shall have a dimension of not less than 36 inches (914 mm) measured in the direction of travel. The slope at exterior landings shall not exceed $^1/_4$ unit vertical in 12 units horizontal (2 percent).

Exception: Exterior balconies less than 60 square feet (5.6 m^2) and only accessible from a door are permitted to have a landing less than 36 inches (914 mm) measured in the direction of travel.

R311.3.1 Floor elevations at the required egress doors. Landings or finished floors at the required egress door shall be not more than $1^1/_2$ inches (38 mm) lower than the top of the threshold.

Exception: The landing or floor on the exterior side shall be not more than $7^3/_4$ inches (196 mm) below the top of the threshold provided the door does not swing over the landing or floor.

Where exterior landings or floors serving the required egress door are not at *grade*, they shall be provided with access to *grade* by means of a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

R311.3.2 Floor elevations for other exterior doors. Doors other than the required egress door shall be provided with landings or floors not more than $7^3/_4$ inches (196 mm) below the top of the threshold.

Exception: A top landing is not required where a stair-way of not more than two risers is located on the exterior side of the door, provided that the door does not swing over the stairway.

R311.3.3 Storm and screen doors. Storm and screen doors shall be permitted to swing over exterior stairs and landings.

[W]R311.4 Vertical egress. Egress from habitable levels including habitable *attics* and *basements* not provided with an egress door in accordance with Section R311.2 shall be by a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

Exception: Stairs or ladders inside an individual *dwelling unit* used for access to areas of 200 square feet (18.6 m^2) or less, and not containing the primary bathroom or kitchen.

R311.5 Construction.

R311.5.1 Attachment. Exterior landings, decks, balconies, stairs and similar facilities shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be self-supporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal.

R311.6 Hallways. The width of a hallway shall be not less than 3 feet (914 mm).

R311.7 Stairways.

R311.7.1 Width. Stairways shall be not less than 36 inches (914 mm) in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 41/2 inches (114 mm) on either side of the stairway and the clear width of the stairway at and below the handrail height, including treads and landings, shall be not less than 311/2 inches (787 mm) where a handrail is installed on one side and 27 inches (698 mm) where handrails are provided on both sides.

Exception: The width of spiral stairways shall be in accordance with Section R311.7.10.1.

R311.7.2 Headroom. The headroom in stairways shall be not less than 6 feet 8 inches (2032 mm) measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway.

Exceptions:
Where the nosings of treads at the side of a flight extend under the edge of a floor opening through which the stair passes, the floor opening shall be allowed to project horizontally into the required headroom not more than $4^3/_4$ inches (121 mm).
The headroom for spiral stairways shall be in accordance with Section R311.7.10.1.

R311.7.3 Vertical rise. A flight of stairs shall not have a vertical rise larger than 147 inches (3734 mm) between floor levels or landings.

R311.7.4 Walkline. The walkline across winder treads shall be concentric to the curved direction of travel through the turn and located 12 inches (305 mm) from the side where the winders are narrower. The 12-inch (305 mm) dimension shall be measured from the widest point of the clear stair width at the walking surface of the winder. If winders are adjacent within the flight, the point of the widest clear stair width of the adjacent winders shall be used.

R311.7.5 Stair treads and risers. Stair treads and risers shall meet the requirements of this section. For the purposes of this section, dimensions and dimensioned surfaces shall be exclusive of carpets, rugs or runners.

R311.7.5.1 Risers. The riser height shall be not more than $7^3/_4$ inches (196 mm). The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). Risers shall be vertical or sloped from the underside of the nosing of the tread above at an angle not more than 30 degrees (0.51 rad) from the vertical. Open risers are permitted provided that the openings located more than 30 inches (762 mm), as measured vertically, to the floor or grade below do not permit the passage of a 4-inch- diameter (102 mm) sphere.

Exceptions:
1. The opening between adjacent treads is not limited on spiral stairways.
2. The riser height of spiral stairways shall be in accordance with Section R311.7.10.1.

R311.7.5.2 Treads. The tread depth shall be not less than 10 inches (254 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

R311.7.6 Landings for stairways. There shall be a floor or landing at the top and bottom of each stairway. The width perpendicular to the direction of travel shall be not less than the width of the flight served. Landings of shapes other than square or rectangular shall be permitted provided that the depth at the walk line and the total area is not less than that of a quarter circle with a radius equal to the required landing width. Where the stairway has a straight run, the depth in the

direction of travel shall be not less than 36 inches (914 mm).

Exception: A floor or landing is not required at the top of an interior flight of stairs, including stairs in an enclosed garage, provided that a door does not swing over the stairs.

SECTION R320 ACCESSIBILITY

R320.1 Scope. Where there are four or more dwelling units or sleeping units in a single structure, the provisions of Chapter 11 of the International Building Code for Group R-3 shall apply.

R320.1.1 Guestrooms. A dwelling with guestrooms shall comply with the provisions of Chapter 11 of the International Building Code for Group R-3. For the purpose of applying the requirements of Chapter 11 of the International Building Code, guestrooms shall be considered to be sleeping units.
Exception: Owner-occupied lodging houses with five or fewer guestrooms constructed in accordance with the International Residential Code are not required to be accessible.