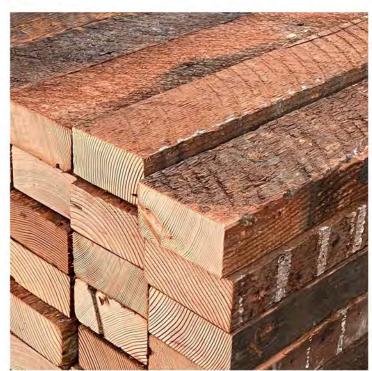


A deconstruction in Beacon Hill from 2019

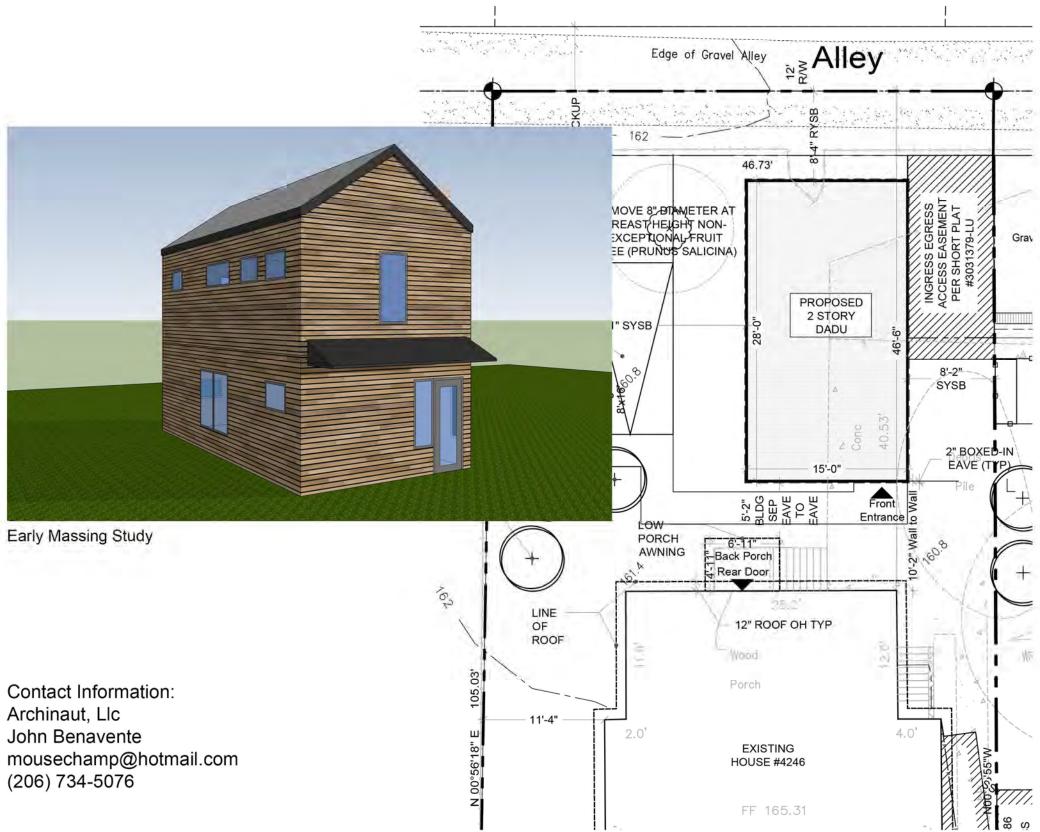


A stack of deconstructed 2x4s ready for delivery



Our first DADU built with reclaimed lumber in Columbia City

DESIGN FOR A DETACHED ACCESSORY DWELLING UNIT BUILT FROM DECONSTRUCTED SEATTLE HOMES APPLICATION FOR THE SEATTLE PRE-APPROVED DADU PLAN PROGRAM ARCHINAUT, FEBRUARY 17, 2020



What is it?

Project Description:

The Seattle Cottage is an economical and efficient detached accessory dwelling unit built from the deconstructed material from local Seattle homes.

A similar version of the Cottage was recently permitted as a standard plan (but we wish to change the dimensions in this application) and will be built in the next few months. The plans shown at the end of this document are from that permit set. Construction is set to begin next month.

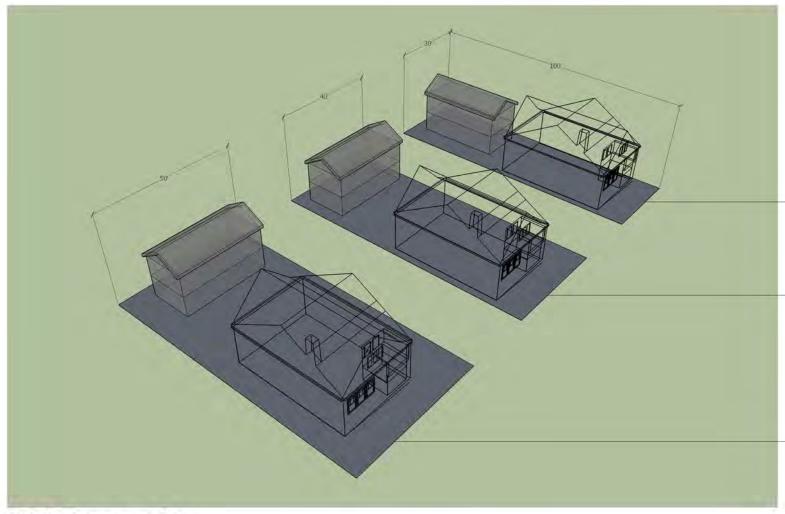
2 story DADU 2 bedrooms 1.5 bathrooms 1000 sf 16' by 32' footprint

Who are we?

We partner with deconstruction & reclaimed materials companies to provide the framing and finish materials. We have deconstructed over 20 homes and have built 2 DADU's, 2 hybrid single family homes, and 2 new single family homes; all using reclaimed framing and finish material.

We want to encourage demolition companies and developers to deconstruct homes rather than demolish, and to use that material in new construction (and any other way).

What Fits? A site plan study.



a 30' wide by 100' lot

a 40' wide by 100' lot

a 50' wide by 100' lot

By rotating and adding a 1-hour fire wall (where needed), and relocating the front entry, the cottage can work in many different lots.

DADU categories Family-friendly DADUs

The cottage has two bedrooms and 1.5 bathrooms and will work for:

- individuals
- two person households
- small families

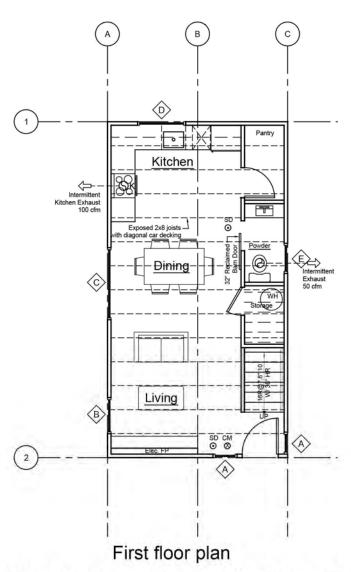
Low-cost DADUs

Affordability is important for us. That is why we want to offer different pricing options for different home-owners.

- a "shell" price: walls, windows, and roof. We would like to encourage home-owners to play a larger role in the construction of their home and give them the opportunity to lower the initial costs
- a full option: the whole package, site work, framing, finishes
- a la carte options: within the whole package we want to offer more economical HVAC and finish packages to suit different budgets

We achieve more affordability by:

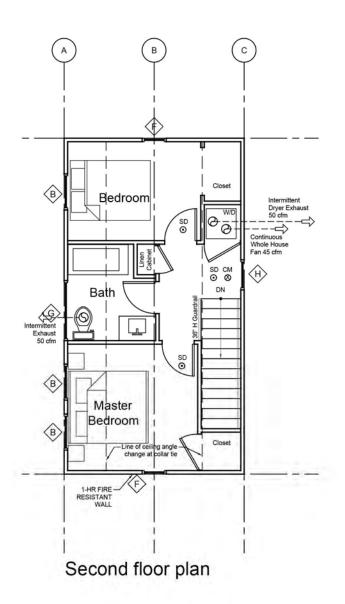
- simple, modular design based upon 4'x8' plywood panels
- flat-pack delivery to the job site and assembly in as little as 2-3 days, drastically reducing the price of framing labor

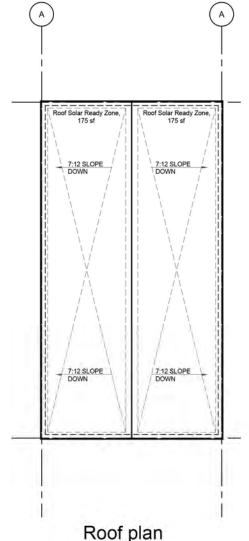


Phase one review, selection criteria

Low cost

- Simple, rectangular floor plan with easily adjustable roofline options
- . Option of buying shell only, but also further options to do a complete packages
- Modular design & construction
- · Performance based energy efficiency. We are achieving 20% higher energy efficiency using 2x4 exterior walls (as one example)





Green building and design

- · Salvaged framing lumber & finishes from Seattle homes slated for demolition
- · Waste reduction: we reduce waste by cutting the members to size as we deconstruct and assemble the new walls/finishes. This reduces waste at all stages of construction
- · Future Disassembly: we design and build these with future deconstruction in mind

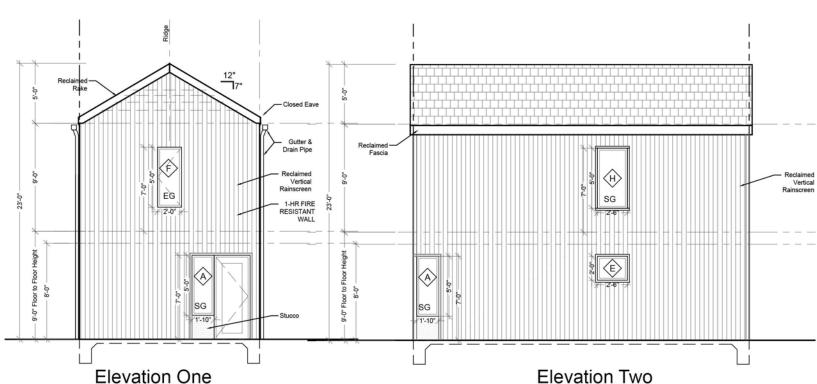
The Floor Plans

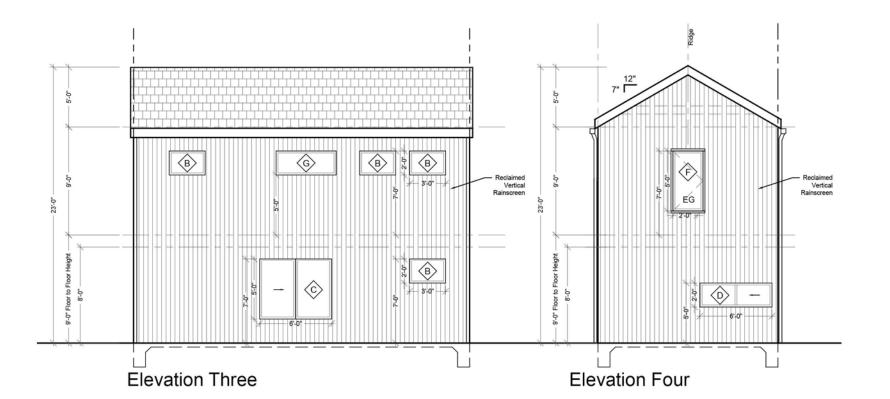
The simple, modular floor plan fits on many potential sites and can be rotated to work on shorter sites, sites with exceptional trees or ECAs, or sites where the existing house is further back on the lot.

The 16' by 32' footprint allows for modular construction and meets the 1000 sf allowed for DADUs.



Example of a DADU we built with no drywall. All material came from an 1896 Beacon Hill home.





The Elevations

Phase one review, selection criteria continued

Privacy & Context

We attempted to address privacy & context by making a simple, utilitarian design. We hope the design will work in many contexts by simply changing the roofline and exterior finishes.

To address privacy, we recognized that the structure will need to rotate, the front entry will need to work on either Elevations One, Two, or Four depending on site placement.

We have chosen small, strategically placed windows which are functional and connect to their interior spaces while allowing opportunities to engage with outside space depending upon the lot.

Constructability

We want this cottage to be easy to build using quality materials while still meeting as many needs as possible. We don't know who the future occupants will be.

In the design of this cottage we considered scenarios for potential home owners. The Shell scenario: DIY home owners want to keep their budget down and desire to do their own management. The Shell plus select services: Again, DIY home owners, but need assistance (foundation, assembly, finishes). The Whole Package: we provide full services.

We also planned for future disassembly. Because we are using a modular panel system, we can disassemble this structure far more easily than a traditionally constructed home. We can perform, or advise, when a time comes to alter or deconstruct the cottage.

1 THE COTTAGE Owner Example Budget for shell only Total Square Feet 1,000 # of Units 1

COSTS	Estimated		/FT	Average/Unit		Actual
GENERAL CONDITIONS						
1 Skilled Labor	\$	- 2- 1		\$		
2 General Labor	\$			\$		
3 Temp. Utilities/Dump Fees	\$		-	\$	•	
4 Misc Supplies	\$	(2)	11.00	\$		
5 Cleaning- Final	\$	1,000	1.00	\$	1,000	
SITEWORK						
9 pipe piles	\$	- 1	-	\$		
10 Excavation/Sewer Util	\$		16	\$		
EXTERIOR	100	1,4,4,5	1000			
20 Roof	\$	5,000	5.00	\$	5,000	
21 Gutters and Downspouts	\$	1,000	1.00	\$	1,000	
22 Paint	\$	10,000	10.00	\$	10,000	
23 Landscape/rockeries/walkways	\$		1,41	\$		
24 Fence	\$	G (1)		\$	-	
25 Foundation/Concrete/Paving	\$		197	\$		
26 Framing Labor	\$	17,000	17.00	\$	17,000	
27 Lumber	\$	15,000	15.00	\$	15,000	
28 Insulation	\$	2,200	2.20	\$	2,200	
29 Siding - Labor & Materials	\$	-	-	\$	-	
30 Exterior Doors	\$	2,500	2.50	\$	2,500	
31 Windows	\$	6,500	6.50	\$	6,500	
32 Garage Doors	\$	-	-	\$	-	
NTERIOR			-			
40 Electric- Rough	\$	7,500	7.50	\$	7,500	
41 Plumbing- Rough	\$	8,500	8.50	\$	8,500	
42 HVAC	\$	4,000	4.00	\$	4,000	
43 Drywall/Plaster	\$	9,000	9.00	\$	9,000	
44 Waterproofing	\$	1,000	1.00	\$	1,000	
45 Paint	\$	5,000	5.00	\$	5,000	
46 Hardwood and Stairs	\$	-	-	Ś	-	
47 Tile	\$	-	-	\$	- 2	
48 Carpet	\$	-	-	\$	-	
49 Countertops	\$	-		\$		
50 Cabinets	\$			\$		
51 Millwork	\$			\$		
52 Mirrors, Closets, Finish Hardware	\$		- 1	\$		
53 Fireplaces	\$			\$	-	
54 Appliances	\$			\$		
55 Plumbing Fixtures/Trim	\$		- 2	\$		
56 Electric Fixtures & Trim	\$	-	-	\$	-	
57 Low Voltage	\$		-	\$	- 1	
58 Gas Piping	\$	-	- 7	\$	-	
59 Waterproof Deck	\$			\$		
	\$		•	\$		
60 Railings & Ironwork	2	-		\$	-	
61 Sprinkler CONTINGENCY		15,000	15.00	\$	15,000	
	\$	15,000	15.00		15,000	
WA STATE SALES TAX @ 10.1%	\$	11,130	11.13	\$	11,130	
TOTAL HARD COSTS	\$	121 220	121.22	ć	121 220	
TOTAL HARD COSTS	>	121,330	121.33	\$	121,330	

Example budget for a shell only project

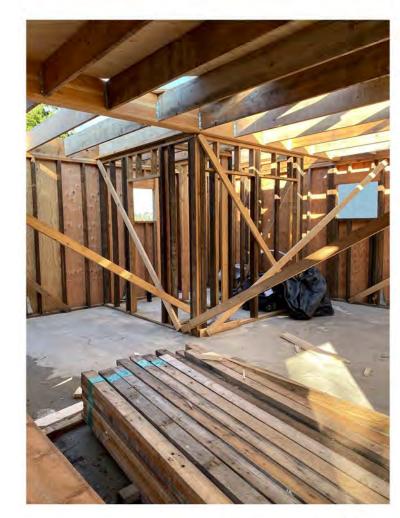
SEATTLECOTTAGE

Money: An estimated budget

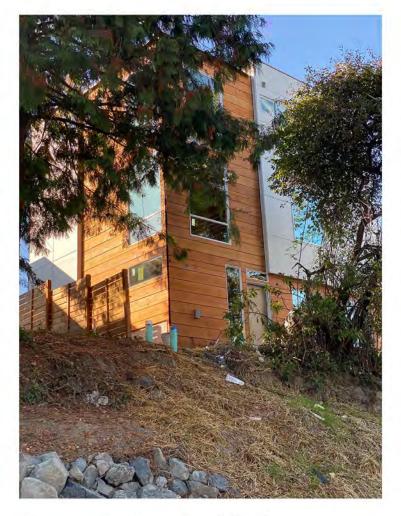
We have built similar DADUs in Seattle for less than \$190/ SF. We are learning, and believe with the methodologies we are experimenting with and the integration of design and construction, we believe we can get this price down to a far more economical level.

For the shell only we are estimating we can build these at around \$120 per square foot; for a complete package, depending on site work and level of finishes, we believe we can do it in the range of \$190 to \$250 (economical to high end).

The DADUs we have built have been in the \$190- \$220 per square foot range, but they were not this design and we haven't applied some of the methodologies we are proposing.



Project using reclaimed framing material (currently in construction)

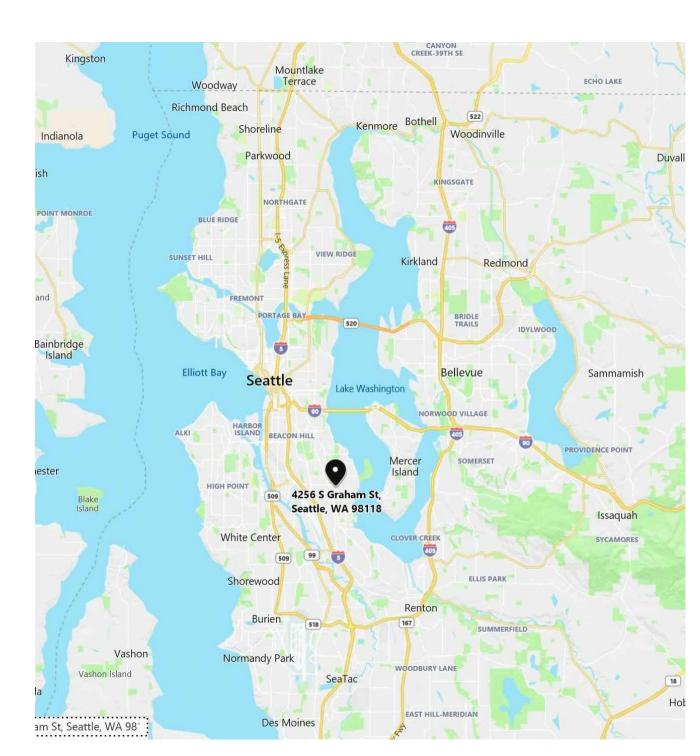


An example of exterior siding in new construction

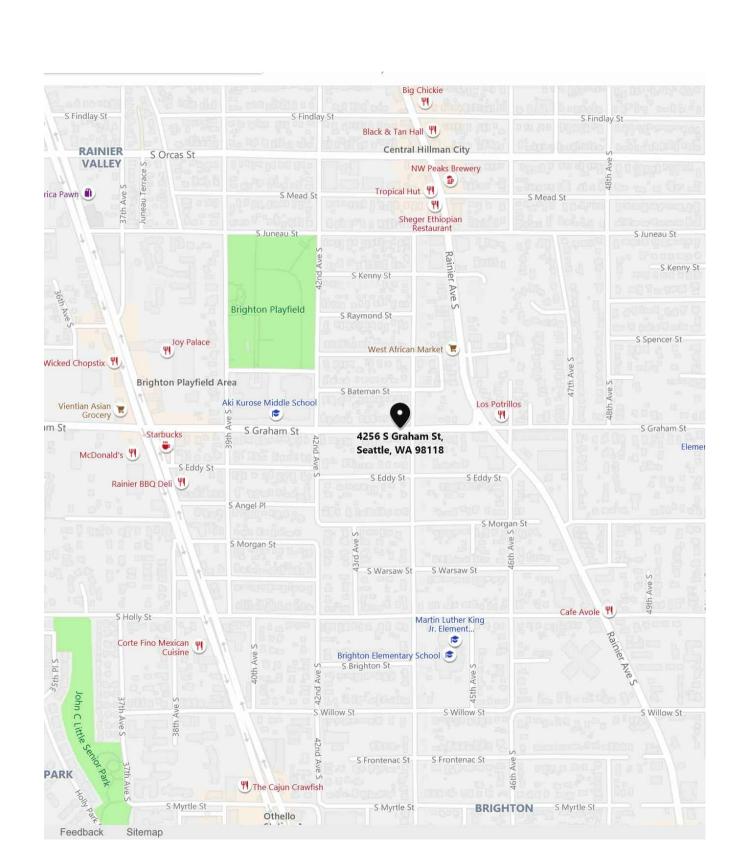
Permit Plan Set

The permit set on the following pages is the standard plan we recently had permitted. We will begin construction next month.

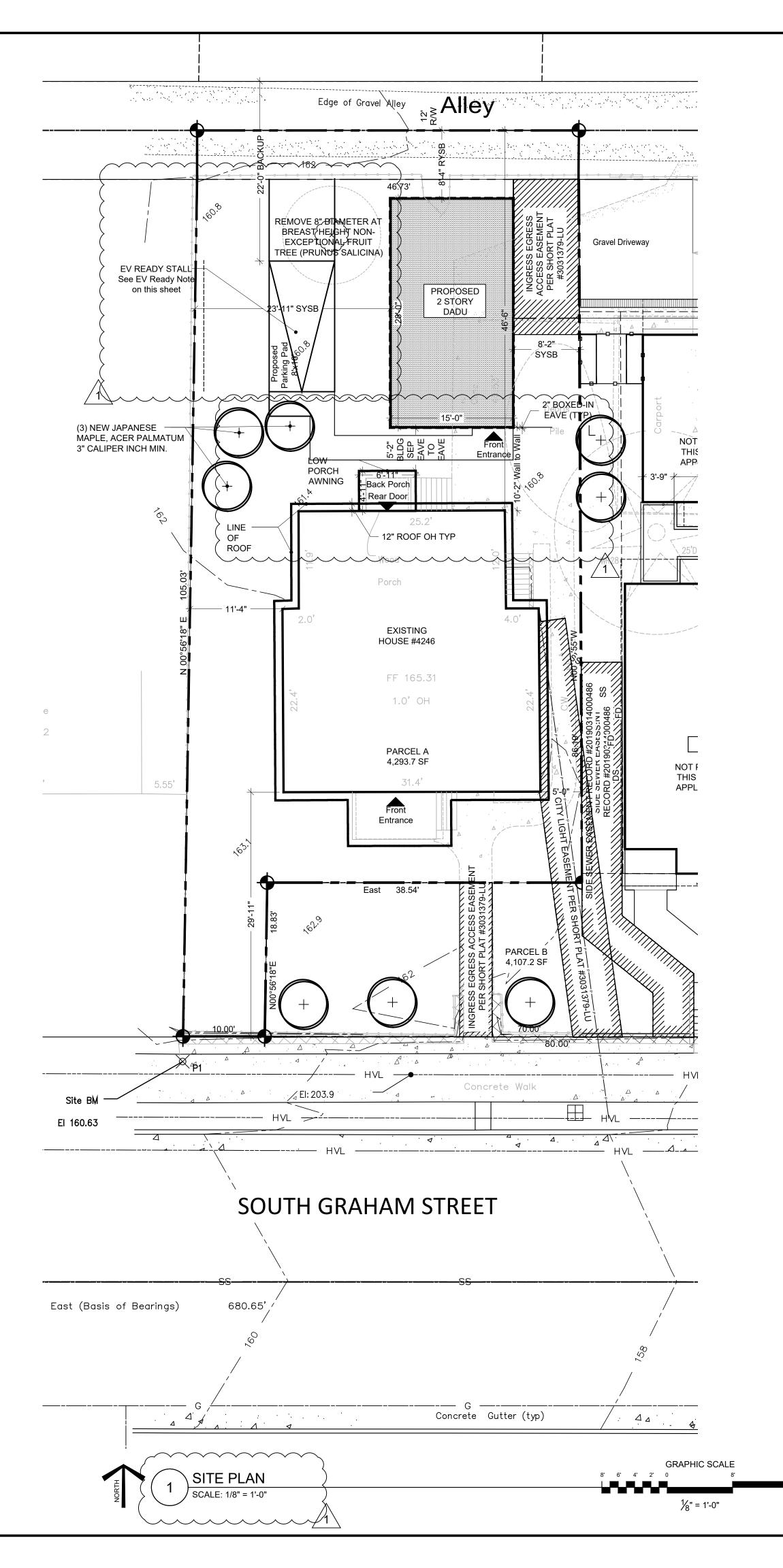
Permit # 6758415-CN











PROJECT DESCRIPTION

Construct 2 story detached accessory dwelling unit.

ADDRESS | 4246 S Graham St, Seattle, WA 98118

SDCI CONSTRUCTION PERMIT NUMBER: 6758415-CN

ASSESSOR'S PARCEL NUMBER | 811310-0690

LEGAL DESCRIPTION

SUNNYSIDE 5-ACRE TRS PCL A SEATTLE SP #3031379-LU REC #20190821900011 SD SP DAF W 80 FT OF E 195 FT OF S 105 FT OF LOT 20 OF SD ADD PLAT LOT 20

PROJECT INFORMATION APPLICABLE CODES

EXISTING PRINCIPAL DWELLING UNIT City of Seattle Municipal Code 2015 Seattle Residential Code BEDROOMS: 2017 Seattle Electrical Code BATHROOMS: 2015 Seattle Energy Code **GROSS FLOOR AREA:**

Second Floor (heated) 900 sf TOTAL (heated): 1880 AGLA sf **Subject to Errors and Omissions**

2015 Seattle Mechanical Code

PROPOSED DETACHED ACCESSORY DWELLING UNIT

BATHROOMS: 1.5 GROSS FLOOR AREA: First Floor 395 sf Second Floor

First Floor (heated)

BEDROOMS:

395 sf 790 sf TOTAL:

ENERGY COMPLIANCE

THIS PROJECT SHALL INCORPORATE THE FOLLOWING OPTIONS FROM WSEC TABLE 406.2 FOR A TOTAL OF 2.0 CREDITS.

1a - Efficient Building Envelope 1a (0.5 credits)

Provide: Vertical Fenestration = U value of 0.28 / Floor R-38 / Slab on grade R-10 perimeter

& under entire slab. *no below grade slab in project 5c - Efficient water heating, water heater w/ min EF of 0.91 required (1.5 credits)

Provide: Noritz EcoTough NRC1111, EF = 0.92, efficiency = 95%

PROJECT TEAM

OWNER/CONTRACTOR:

SSS Sound Structural Solutions Engineers Greenstream Investments, Llc

Contact: Ronald Skinner Contact: Jim Barger inbox@ssseng.com jim.kbseattle@gmail.com 425.778.1023 206.747.6919

DESIGN: SURVEYOR: Sledge Seattle, Llc Emerald Land Surveyors

Contact: Brent Eble Contact: John Benavente mousechamp@gmail.com

206.734.5076

STRUCTURAL:

SHEET LIST

ARCHITECTURAL

SURVEY

A1.0 - SITE PLAN A1.1 - LAND USE COMPLIANCE

A2.0 - FLOOR PLANS, DOOR SCHEDULE, & ROOF VENTING CALCS

A3.0 - SOUTH & EAST ELEVATIONS

A3.1 - NORTH & WEST ELEVATIONS & WINDOW SCHEDULE

A4.0 - BUILDING SECTIONS & DETAILS A5.0 - GENERAL NOTES

STRUCTURAL:

S2

S3

Hernandez Capital LLC

Graham 4246 S Graham §

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DEPARTMENT OF CONSTRUCTION AND INSPI

APPROVED

1/24/2020

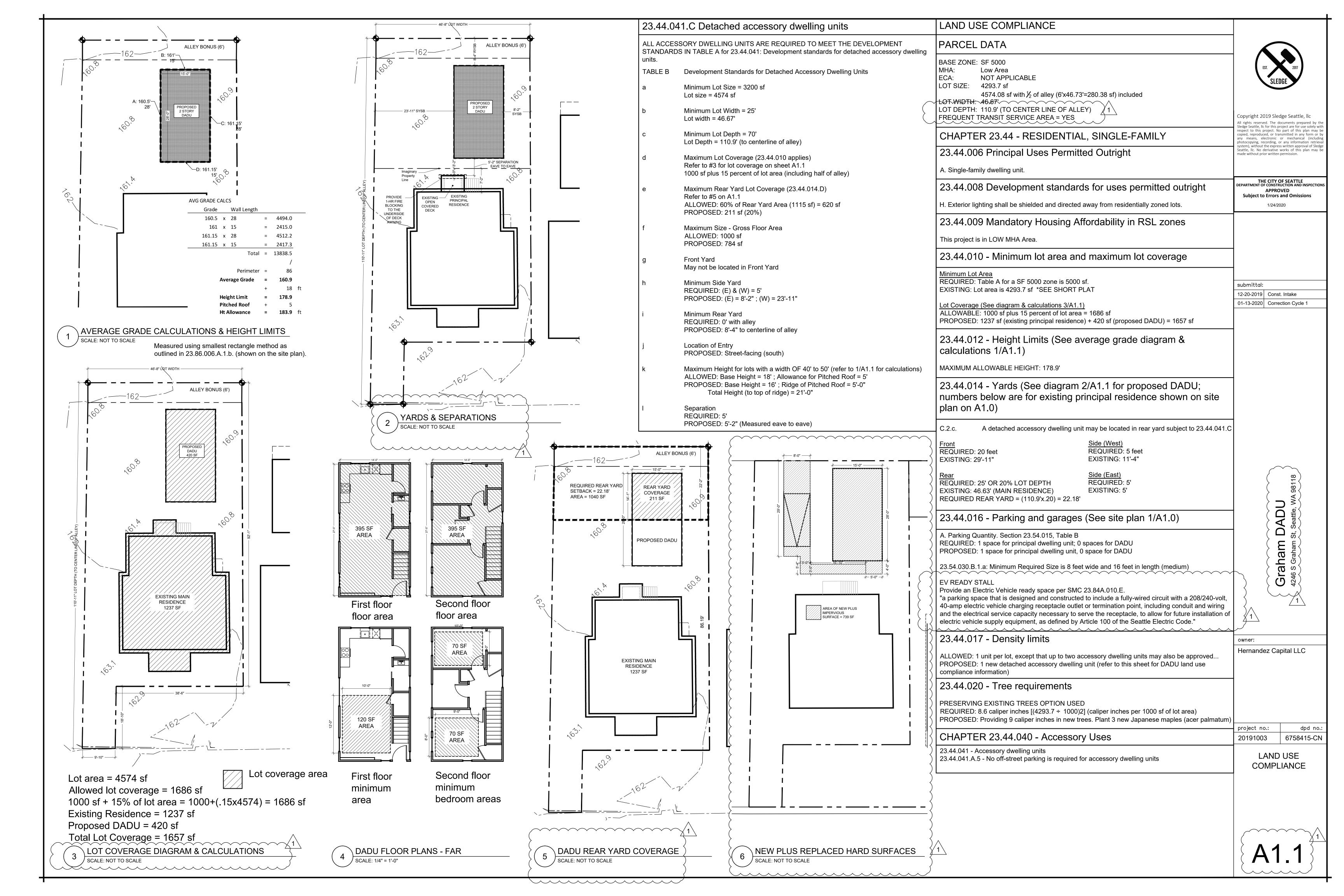
submittal:

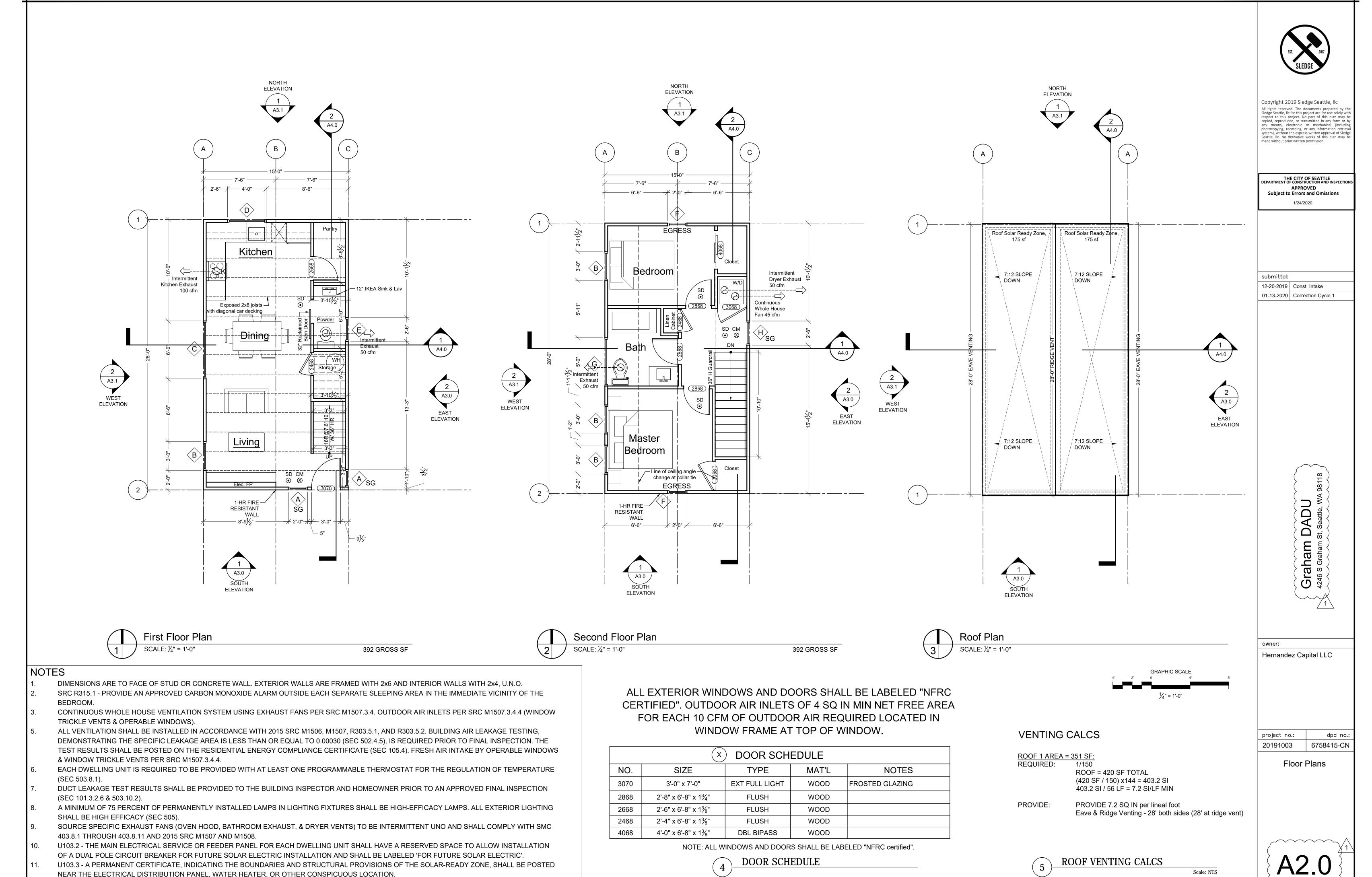
12-20-2019 Const. Intake

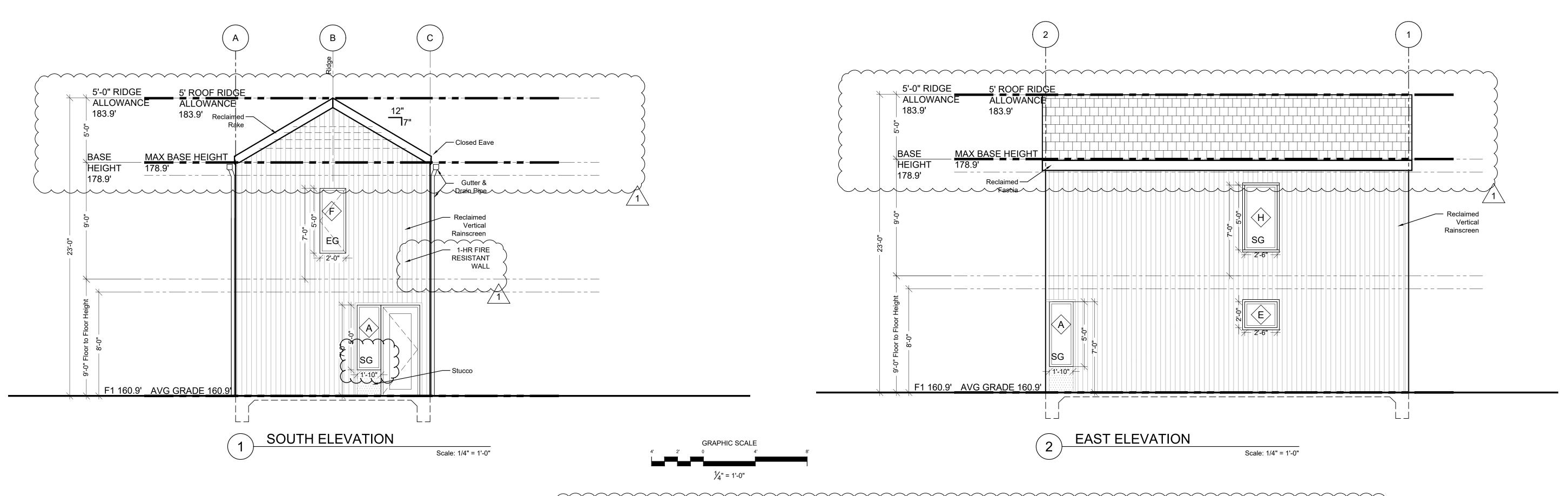
01-13-2020 Correction Cycle 1

dpd no 6758415-CN 20191003

> SITE PLAN & **PROJECT** DESCRIPTION

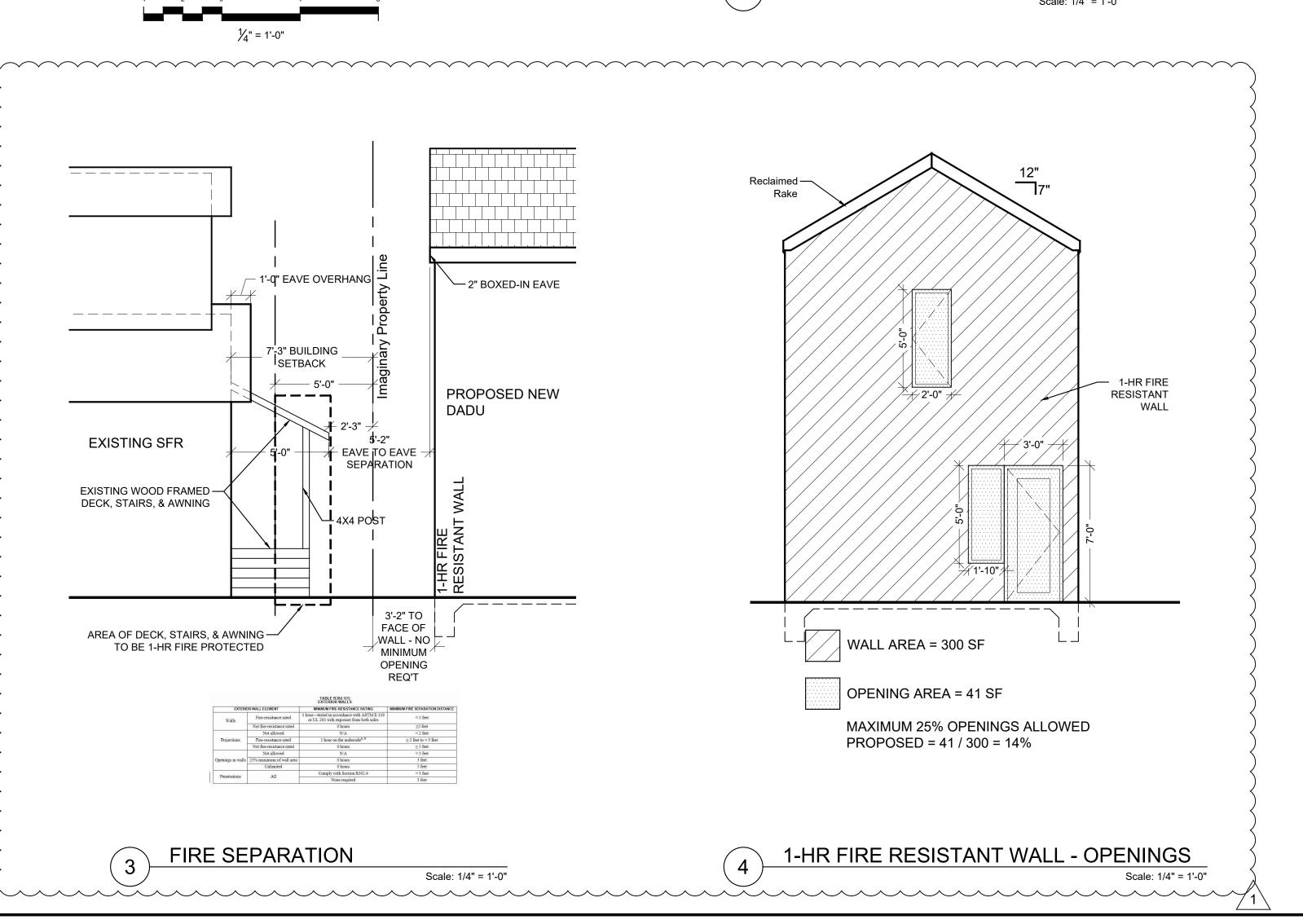






NOTES

- 1. DIMENSIONS ARE TO FACE OF STUD OR CONCRETE WALL. EXTERIOR WALLS ARE FRAMED WITH 2x6 AND INTERIOR WALLS WITH 2x4, U.N.O.
- 2. SRC R315.1 PROVIDE AN APPROVED CARBON MONOXIDE ALARM OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM.
- 3. BUILDING AIR LEAKAGE TESTING, DEMONSTRATING THE SPECIFIC LEAKAGE AREA IS LESS THAN OR EQUAL TO 0.00030 (SEC 502.4.5), IS REQUIRED PRIOR TO FINAL INSPECTION. THE TEST RESULTS SHALL BE POSTED ON THE RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE (SEC 105.4).
- 4. EACH DWELLING UNIT IS REQUIRED TO BE PROVIDED WITH AT LEAST ONE PROGRAMMABLE THERMOSTAT FOR THE REGULATION OF TEMPERATURE (SEC 503.8.1).
- 5. ALL VENTILATION SHALL BE INSTALLED IN ACCORDANCE WITH 2015 SRC M1506, M1507, R303.5.1, AND R303.5.2. BUILDING AIR LEAKAGE TESTING, DEMONSTRATING THE SPECIFIC LEAKAGE AREA IS LESS THAN OR EQUAL TO 0.00030 (SEC 502.4.5), IS REQUIRED PRIOR TO FINAL INSPECTION. THE TEST RESULTS SHALL BE POSTED ON THE RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE (SEC 105.4). FRESH AIR INTAKE BY OPERABLE WINDOWS & WINDOW TRICKLE VENTS PER SRC M1507.3.4.4.
- 6. DUCT LEAKAGE TEST RESULTS SHALL BE PROVIDED TO THE BUILDING INSPECTOR AND HOMEOWNER PRIOR TO AN APPROVED FINAL INSPECTION (SEC 101.3.2.6 & 503.10.2).
- 7. A MINIMUM OF 75 PERCENT OF PERMANENTLY INSTALLED LAMPS IN LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS. ALL EXTERIOR LIGHTING SHALL BE HIGH EFFICACY LUMINARIES (SEC 505).
- 8. ALL EGRESS WINDOWS TO CONFORM TO 2015 SRC R312.2 & R312.3. MINIMUM OPEN AREA PER R310.2.1 OF 5.7 SQ FT; MINIMUM HORIZONTAL DIMENSION OF 20" & MINIMUM VERTICAL DIMENSION OF 24".
- 9. ALL WINDOW SILLS OF OPERABLE WINDOWS ARE 24" OR HIGHER (BUT LESS THAN 72") ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
- 10. WINDOW AND DOOR HEADERS TO HAVE A MINIMUM R-10 INSULATION.





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Graham DADU

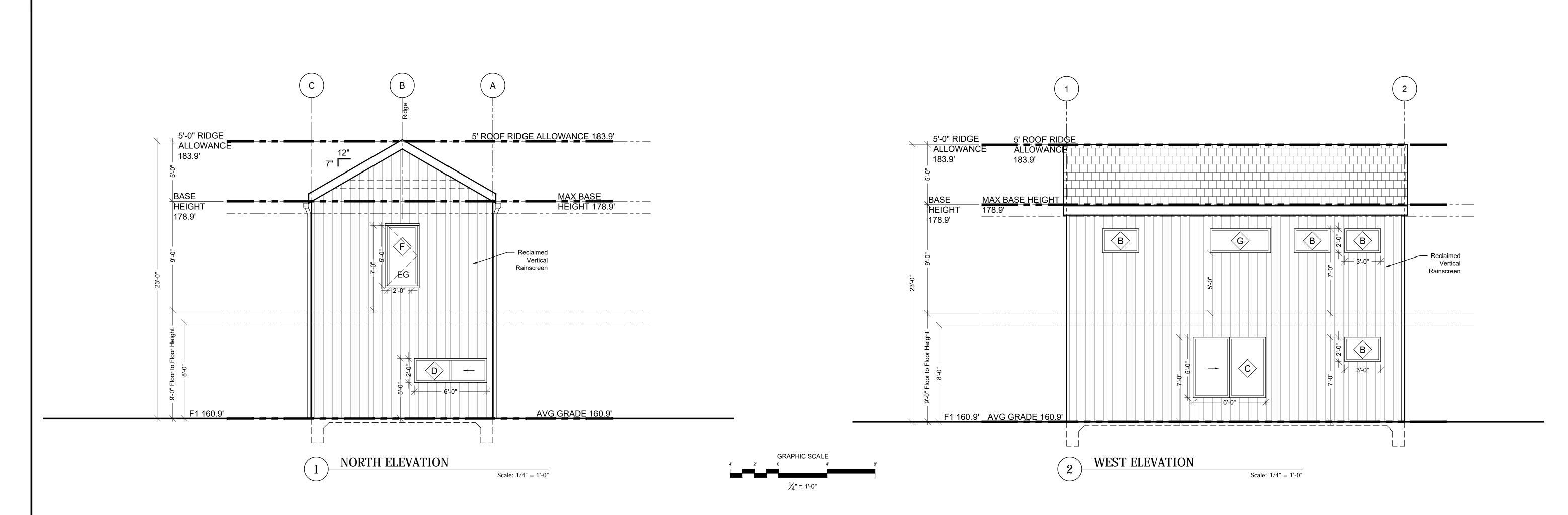
4246 S Graham St, Seattle, WA 98118

Hernandez Capital LLC

project no.: dpd no.: 20191003 6758415-CN

ELEVATIONS

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NOTES

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- BUILDING AIR LEAKAGE TESTING, DEMONSTRATING THE SPECIFIC LEAKAGE AREA IS 2. LESS THAN OR EQUAL TO 0.00030 (SEC 502.4.5), IS REQUIRED PRIOR TO FINAL INSPECTION. THE TEST RESULTS SHALL BE POSTED ON THE RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE (SEC 105.4).
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- INTAKE BY OPERABLE WINDOWS & WINDOW TRICKLE VENTS PER SRC M1507.3.4.4. DUCT LEAKAGE TEST RESULTS SHALL BE PROVIDED TO THE BUILDING INSPECTOR AND HOMEOWNER PRIOR TO AN APPROVED FINAL INSPECTION (SEC 101.3.2.6 & 503.10.2).
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- ALL WINDOW SILLS OF OPERABLE WINDOWS ARE 24" OR HIGHER (BUT LESS THAN 72") ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
- WINDOW AND DOOR HEADERS TO HAVE A MINIMUM R-10 INSULATION.

INSULATION NOTES

- PRESCRIPTIVE COMPLIANCE APPROACH USED BASED ON 2015 SEATTLE ENERGY CODE TABLE R402.1.1 WITH MODIFICATIONS FROM TABLE 406.2 OPTION 1a (EFFICIENT BUILDING ENVELOPE 1a).
- VERTICAL FENESTRATION U-VALUE = 0.28
- INSULATION INSTALLATION PER SEC R402.1.1 & R402.2.2.
- WINDOW AND DOOR HEADERS SHALL BE INSULATED WITH A MINIMUM OF R-10 INSULATION PER SREC TABLE
- ROOF R-VALUE = 49
- WOOD FRAME WALL R-VALUE = 21
- SLAB R-VALUE = 10 PERIMETER AND UNDER ENTIRE

ALL EXTERIOR WINDOWS AND DOORS SHALL BE LABELED "NFRC CERTIFIED". OUTDOOR AIR INLETS OF 4 SQ IN MIN NET FREE AREA FOR EACH 10 CFM OF OUTDOOR AIR REQUIRED LOCATED IN WINDOW FRAME AT TOP OF WINDOW.

NO.	SIZE	TYPE	NOTES				
Α	22x60	FIXED	SG				
В	36x60	FIXED					
С	72x60	HORIZ. SLIDER					
D	72x24	FIXED	SG				
Е	30x24	FIXED					
F	24x60	CASEMENT	EGRESS				
G	60x24	FIXED	DOES NOT HAVE TO BE SG				
Н	30x60	FIXED	SG				

NOTE: ALL WINDOWS AND DOORS SHALL BE LABELED "NFRC certified".

WINDOW SCHEDULE



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ELEVATIONS & SCHEDULES

