



The Studio
Small footprint DADU

PROJECT DESCRIPTION

The “Small Footprint DADU” consists of a large living space that opens out to a patio, and a built-in, floor-to-ceiling storage element that serves double duty as a ladder to access the sleeping loft. Skylights and plentiful glass along the long facade make this small studio feel spacious.

It is possible to reduce the footprint of the DADU for smaller lots, without compromising the functionality of the plan by reducing the length of the living space.

Standard building materials and a simple form keep costs low, but details such as built-in furnishings and a subdued, natural palette provide the feel of a modern, custom home. Large windows and the tall ceiling with operable skylights allows for passive cooling and natural ventilation.

NARRATIVE

“The small footprint” DADU fulfills the design criteria in the following ways:

LOW COST / CONSTRUCTABILITY

- A simple, efficient layout includes no “hallways” and yields a high usable area to total square footage constructed.
- Materials are chosen considering their first-cost as well as their durability, to minimize maintenance and repair costs. Two finish package options are provided for different budgets.
- A flexible plan and simple form and construction methods encourage homeowners to complete the construction themselves.

GREEN BUILDING AND DESIGN

- Wherever possible, proposed building materials promote indoor air quality, environmental sustainability, and incorporate recycled content.
- Symmetric and Flexible plan configuration to allow for favorable solar orientation.
- Skylights and large windows are proposed to maximize daylight and solar heat gain.
- Efficient mechanical systems.
- Optional passive house upgrade with minimal added cost.

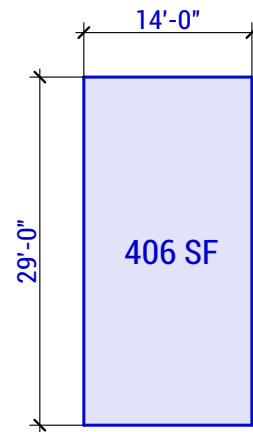
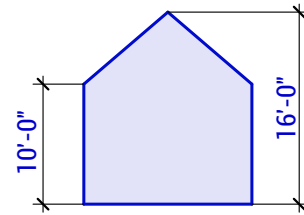
CONTEXT

- The steeply-pitched roof helps minimize view blockage, and at the same time fits into the context of single family houses in most neighborhoods.
- The material palette of the house is inspired by typical alleyway construction and is reinventing the aesthetic of Seattle's alleys and backyards.

CULTURALLY RESPONSIVE DESIGN / PRIVACY

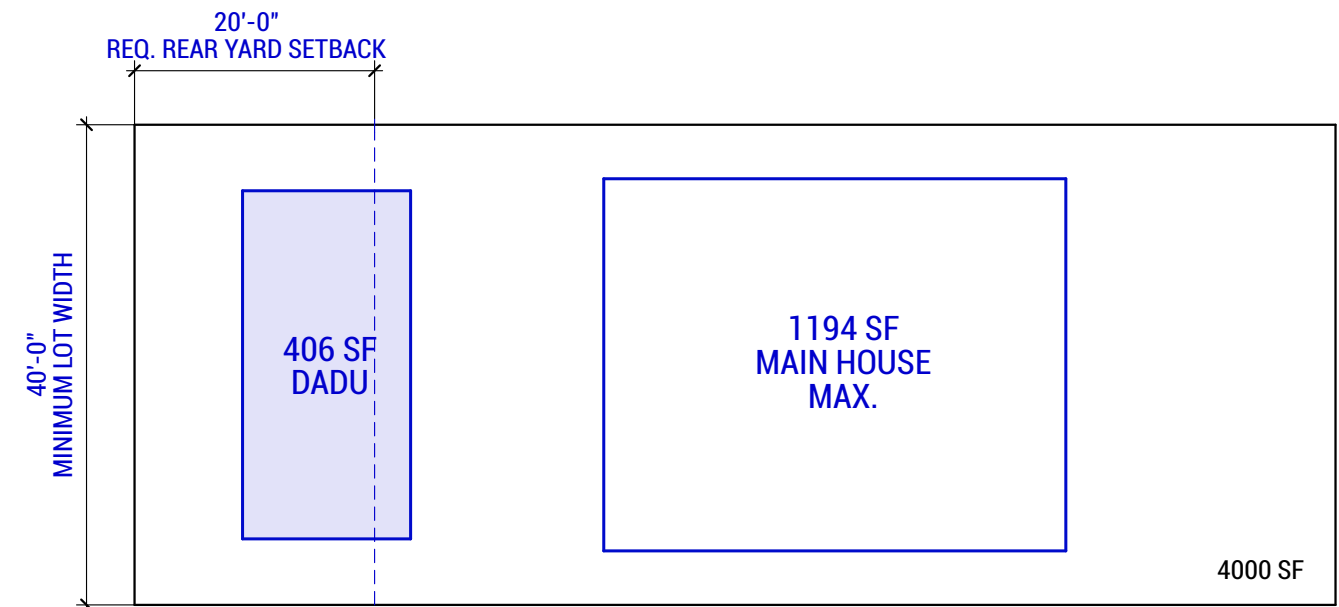
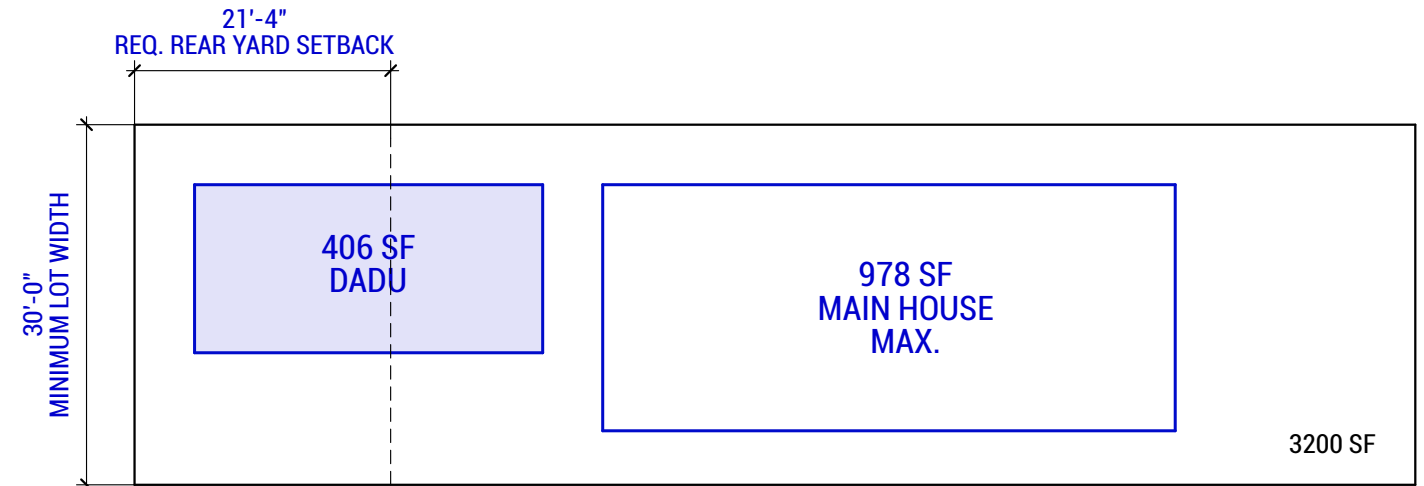
- The open floor plan design allows for many uses of the space. The Studio could be used as a rental unit, a residence for a couple or single occupant or as an office. It is possible to sleep in the living room or in the sleeping loft. The built-in-shelf allows for plenty of storage considering the small size of the dwelling.
- The windows are all placed on the same facade, allowing for privacy and for a certain freedom to place the DADU on the lot in consideration of the main house.

PITCH - 16'-0"
BASE - 10'-0"



3200 SF LOT
≥ 30' WIDE
MAX. LOT COVERAGE = 1480 SF

4000 SF LOT
≥ 40' WIDE
MAX. LOT COVERAGE = 1600 SF



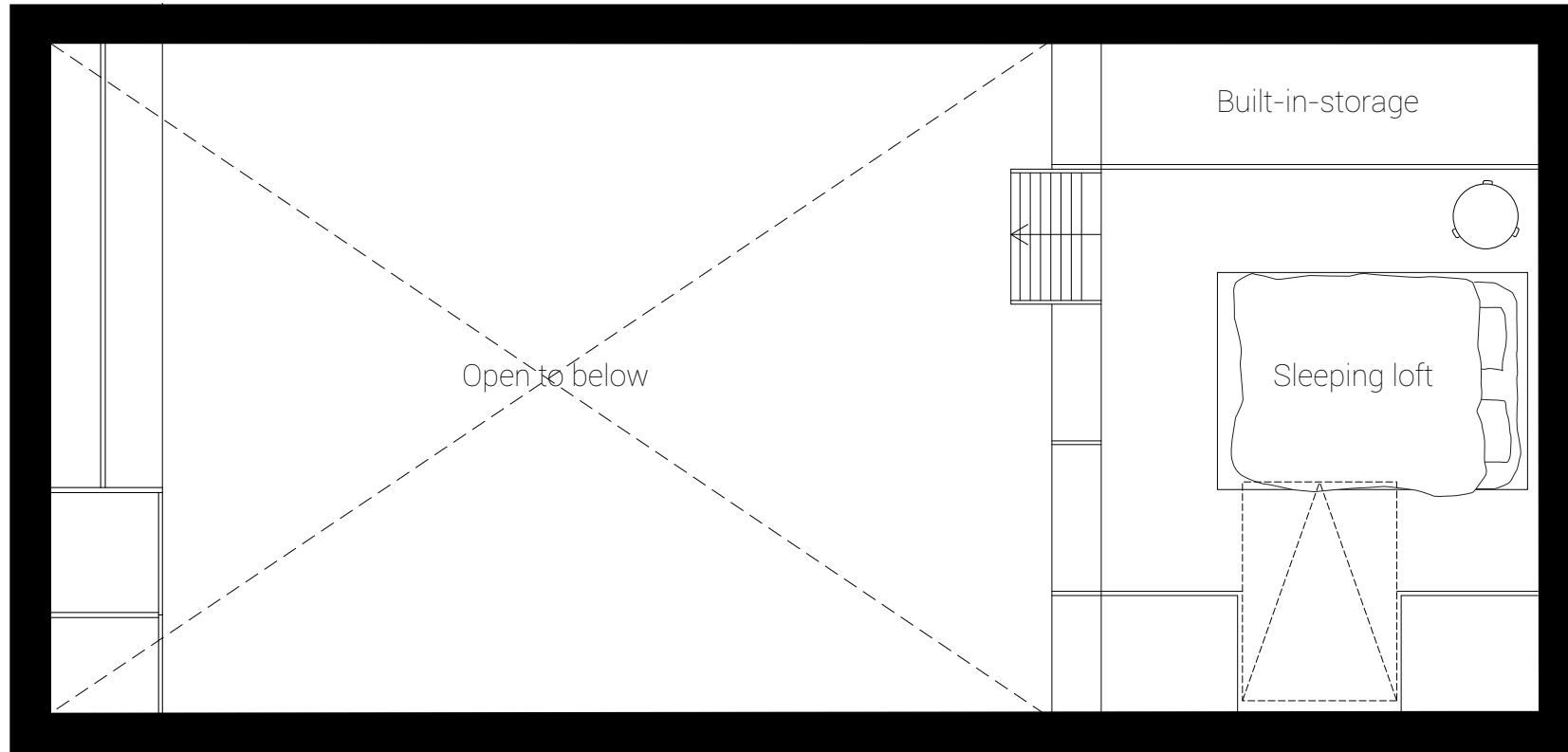
Considering a maximum of 40% rear yard coverage, minimum 5'-0" side yard setback, 20'-0" front yard set back, and 5'-0" principal structure separation.

DADU DIMENSIONS

- Plan Dimensions: 14'-0" x 29'-0"
- Base height: 10'
- Pitch height: 16'
- Coverage area: 406 SF
- Gross Area : 465 SF

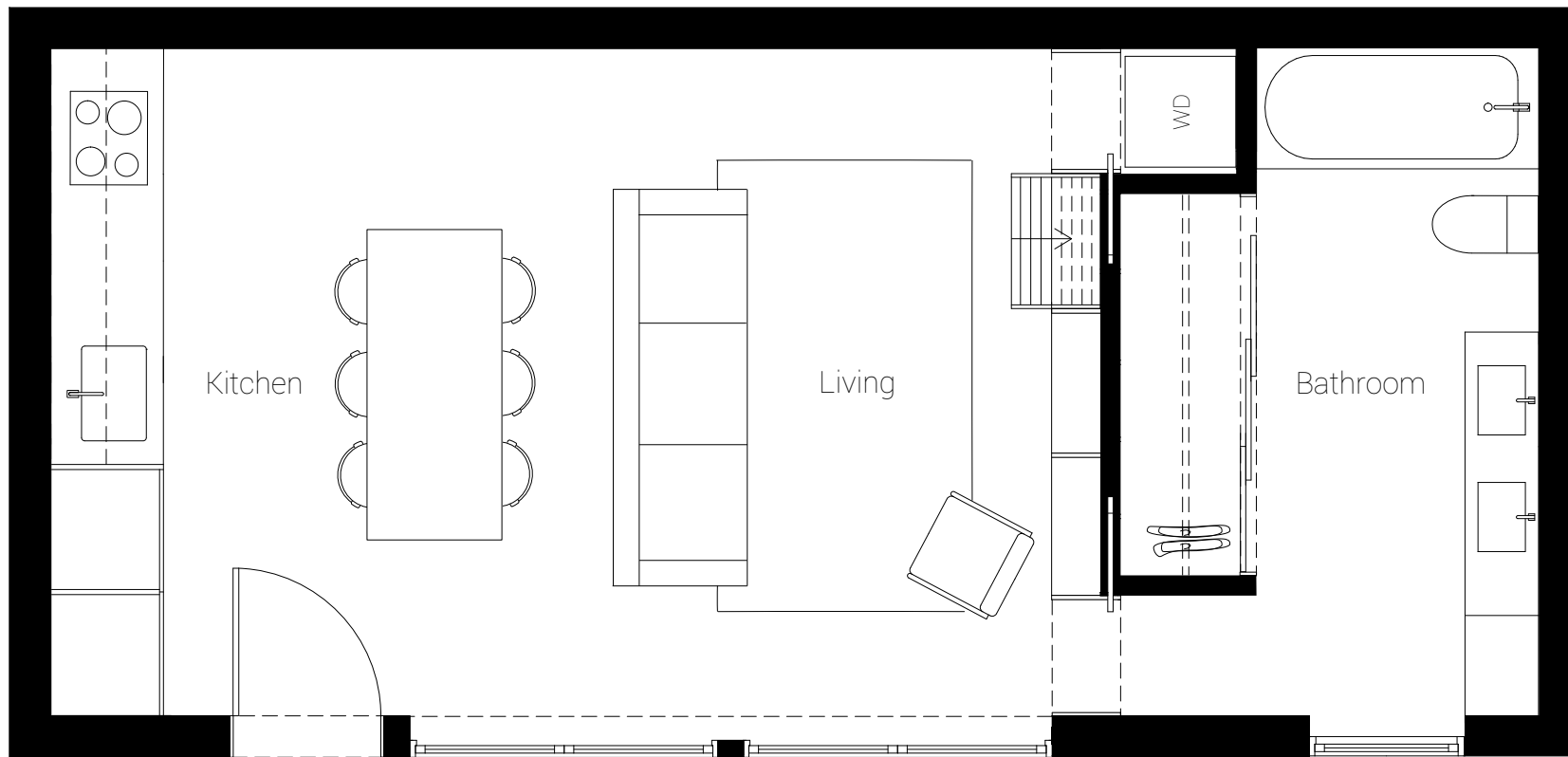
LOT CONFIGURATION

This 1-story cottage with sleeping loft fits on lots as small as 3200 SF. Depending on the orientation of the DADU, it may be built on lots starting at 30'-0" wide.



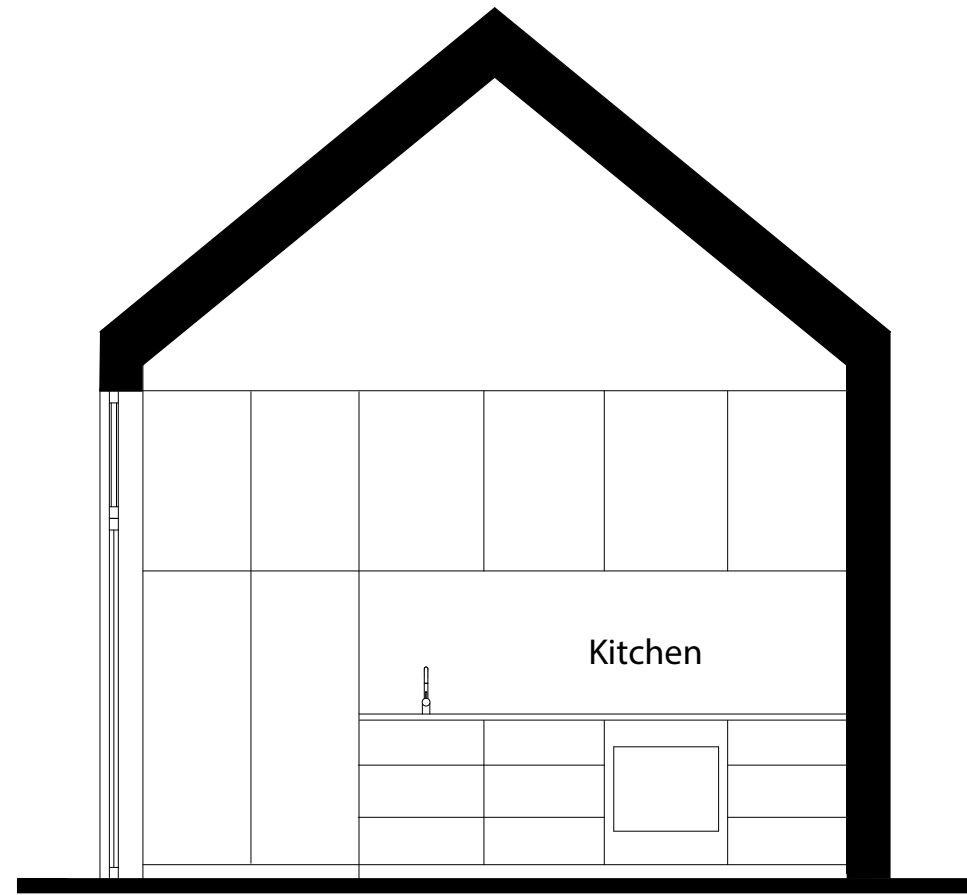
SLEEPING LOFT

SLEEPING LOFT - 69 SF; STORAGE - 30 SF

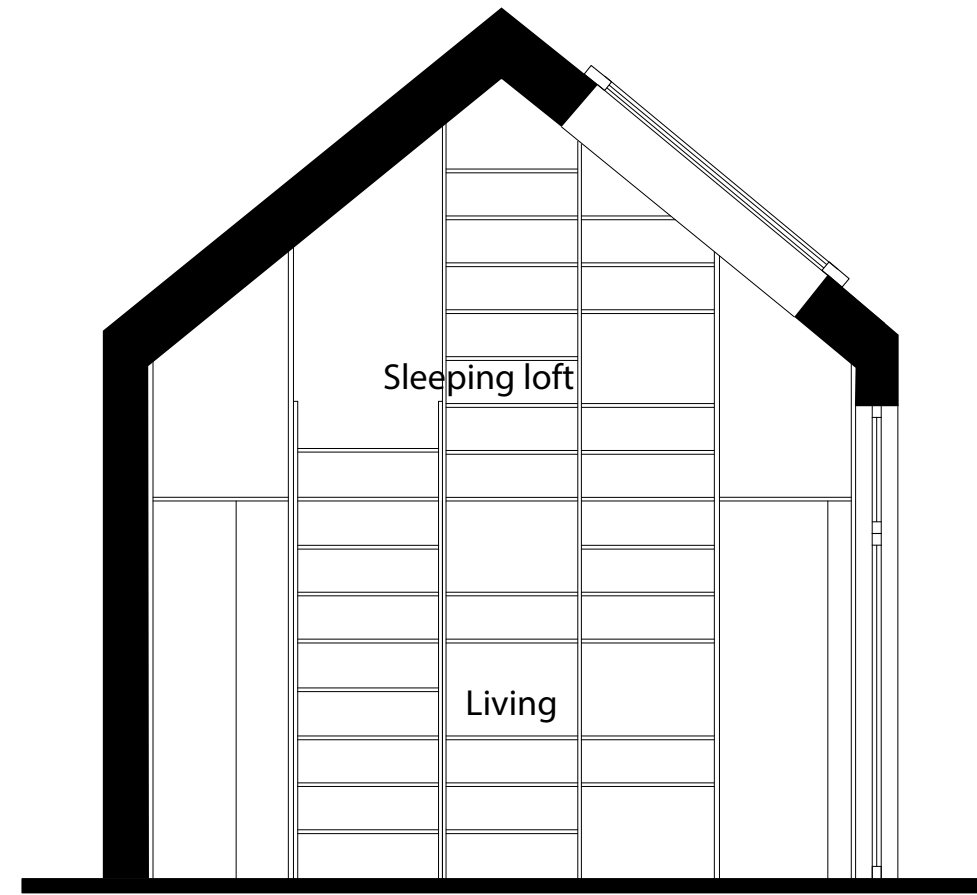


LEVEL 1

LIVING - 265 SF; BATHROOM - 36 SF



SECTION THROUGH KITCHEN



SECTION THROUGH LIVING SHOWING BUILT-IN-SHELF



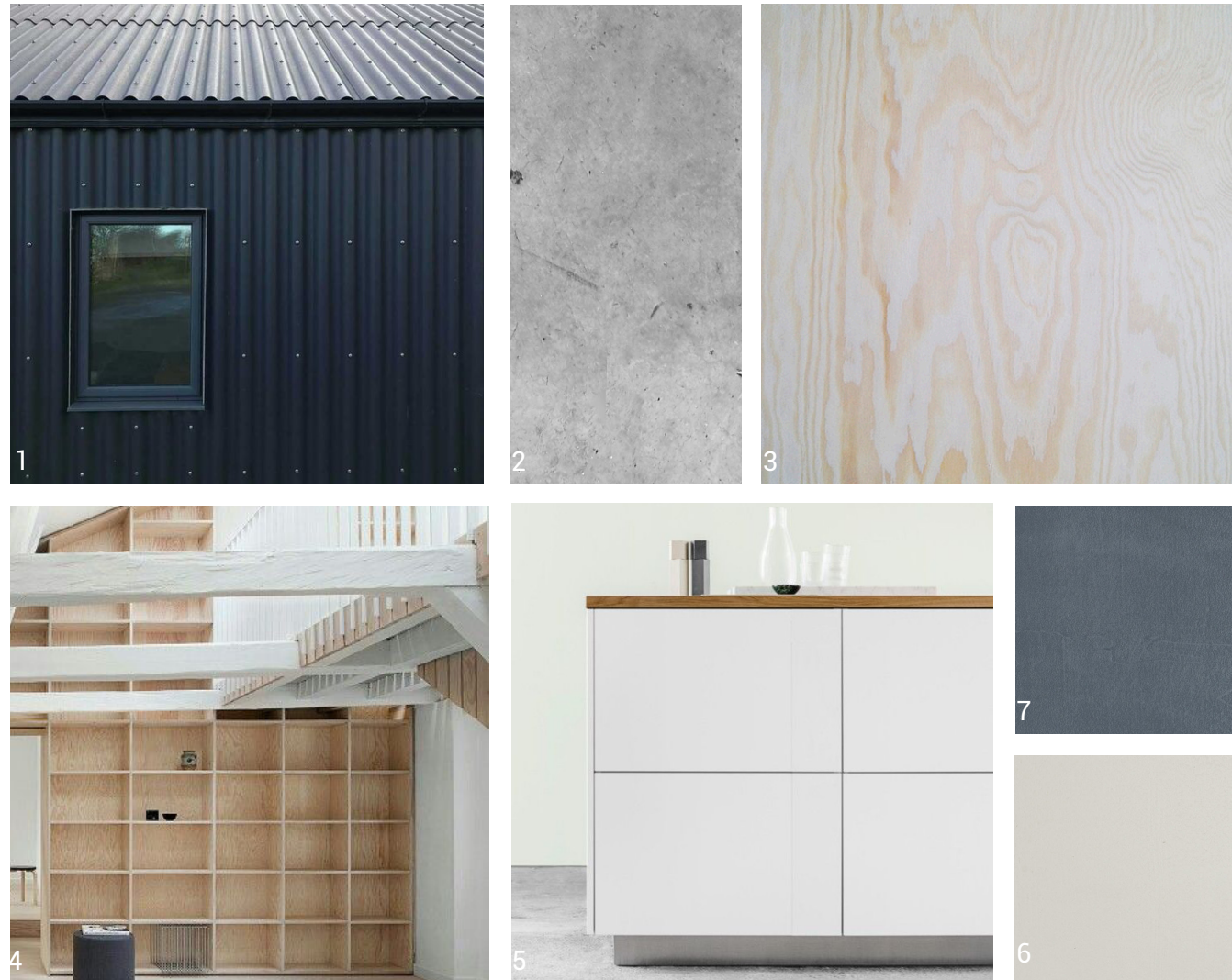
INTERIOR VIEW

The built in bookcase functions both as storage and as a ladder and guardrail for the sleeping loft.



EXTERIOR VIEW

MATERIALS PALETTE #1 LOWER GRADE



MATERIALS: 1. Corrugated Metal Roofing and siding. 2. Concrete, matte. 3. Plywood floor. 4. Built-in-shelf in plywood. 5. Painted kitchen fronts and wood countertop. 6. Microcement, in Ivory 7. Microcement in Royal Velvet.

EXTERIOR FINISHES

ROOFING: Corrugated metal, black.

EXTERIOR SIDING: Corrugated metal, black.

BASE METAL FLASHING: Prefin aluminum.

WINDOWS: Vinyl, black

WINDOW FLASHING: Prefin aluminum.

SKYLIGHTS: Vinyl, black.

SKYLIGHT FLASHING: Metal to match roof.

EXTERIOR DOORS: Vinyl, black, stainless steel threshold. Hardwood front door.

INTERIOR FINISHES

FLOOR - FIRST FLOOR: Cast in place concrete, smooth trowel and penetrating sealer, matte finish.

FLOOR - FIRST FLOOR BATHROOM: Cast in place concrete, smooth trowel and penetrating sealer, matte finish.

FLOOR - SLEEPING LOFT: Plywood

LADDER: Plywood and Pine

BUILT-IN-SHELF: Plywood

WALL FINISH: Painted Gypsum Board Wall Board, level 5 finish.

CEILING FINISH: Painted Gypsum Board Wall Board, level 5 finish.

BASEBOARD & DOOR TRIM: Painted Poplar to match wall color, semi-gloss finish.

WINDOW & DOOR RETURN: Painted GWB. Hardwood Sill.

INTERIOR DOOR: Sliding flush panel, painted to match wall color.

KITCHEN: IKEA Metod Cabinets with painted fronts and wood countertop

MATERIALS PALETTE #2 HIGHER GRADE (rendered option)

EXTERIOR FINISHES

ROOFING: Standing Seam metal, black

EXTERIOR SIDING: Standing Seam metal, black

DECKING: Cast in place concrete

WINDOWS: All wood.

WINDOW FLASHING: Painted Metal to match exterior Siding.

SKYLIGHTS: Aluminum-clad wood to match roof.

SKYLIGHT FLASHING: Metal to match roof.

EXTERIOR DOORS: All wood stainless steel threshold. Hardwood front door.

INTERIOR FINISHES

FLOOR - FIRST FLOOR: 1"x 4" Pine hardwood Floor, with soap finish.

FLOOR - FIRST FLOOR BATHROOM: Microcement light grey

FLOOR - SLEEPING LOFT: 1"x 4" Pine hardwood Floor, with soap finish.

LADDER: Plywood and Pine

BUILT-IN-SHELF: Plywood

WALL FINISH: Painted Gypsum Board Wall Board, level 5 finish.

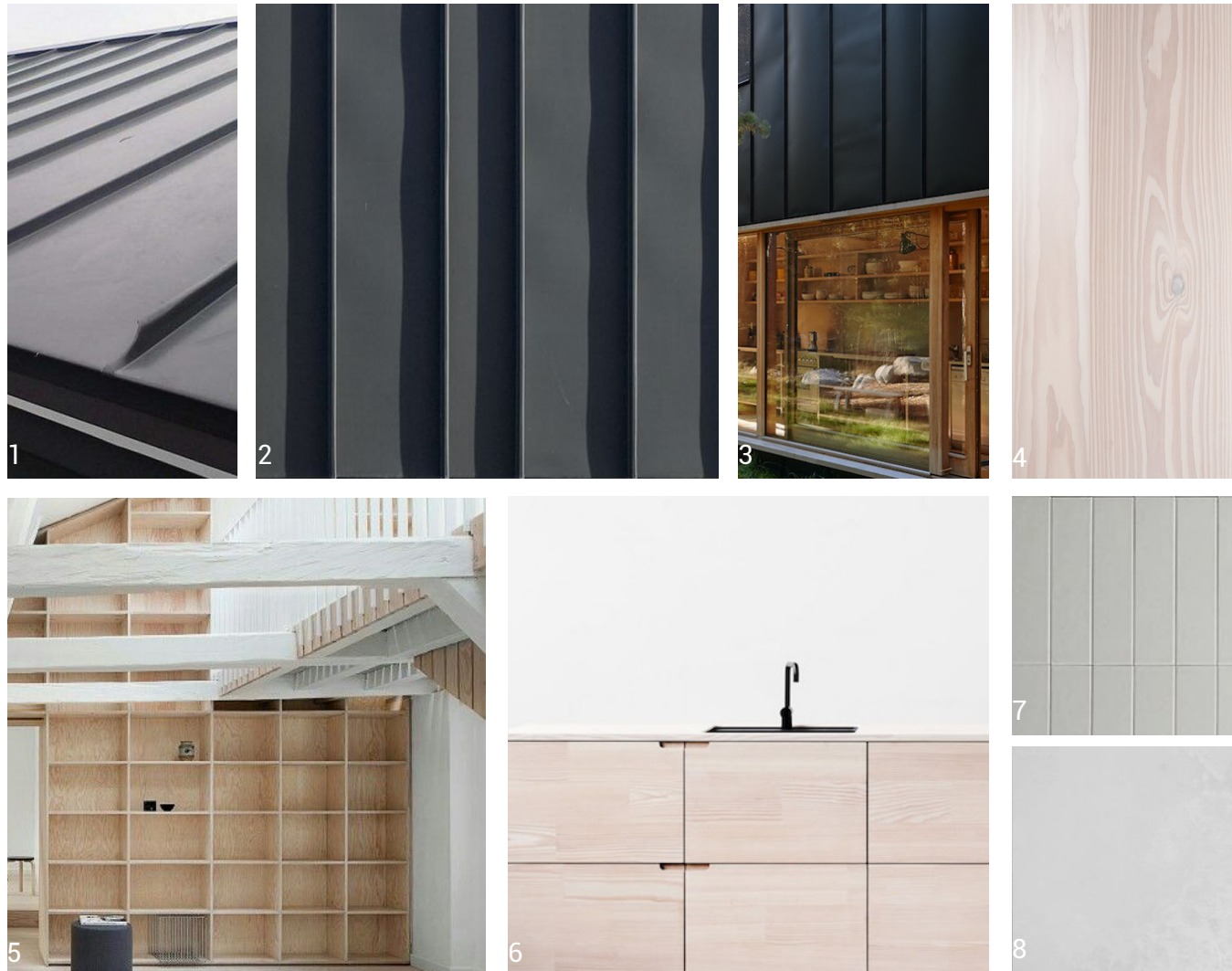
CEILING FINISH: Painted Gypsum Board Wall Board, level 5 finish.

BASEBOARD & DOOR TRIM: Painted wood to match wall color, semi-gloss finish.

WINDOW & DOOR RETURN: Painted GWB. Hardwood Sill.

INTERIOR DOOR: Sliding flush panel, painted to match wall color.

KITCHEN: IKEA Metod Cabinets with plywood fronts and light grey paperstone countertop.



MATERIALS: 1. Corrugated Metal Roofing. 2. Corrugated Metal 3. All wood window 4. Heart Pine floor, soap treated. 5. Built-in-shelf in plywood. 6. Plywood kitchen fronts. 7. Vertical ceramic tiles 8. Light grey microcement.

PROPOSED MECHANICAL SYSTEMS

WATER HEATER

30 gallon electric water heater. Rheem 3800 Watts. 240 Volts. Wall mounted. 19" diameter. 48" height.

Efficiency 0.92 Uniform Energy Factor (UEF)

RENEWABLE ELECTRIC ENERGY

Solar array. Possibility of generating up to 5940 kWh/year, considering the full use of one of the roof faces.

For the purpose of a cost estimate, we are considering a 2kW system.

These results will vary based on location and orientation of the roof.

HEATING AND COOLING

Mini split heat pump. 18000 btu. HSPF 10.

Mitsubishi MZ-HM18NA 18,000 BTU 18 SEER Ductless Mini Split Heat.

Table 406.2 Energy credits: 3B - Air source heat pump with min. HSPF of 9.0 - 1.0 point. (2015 WREC)

PROPOSED GREEN BUILDING FEATURES

SUSTAINABLE BUILDING MATERIALS

High density cellulose cavity insulation.

Paperstone (recycled paper and non petroleum resin) or wood countertops.

Wood or Linoleum flooring.

Low flow fixtures.

Induction cooktop.

EnergyStar appliances.

OPTIONAL GREEN BUILDING FEATURES FOR HIGHER ENERGY PERFORMANCE

ADDED FEATURES

Targeting 0.6 ACH Airtight envelope.

INTUS/ZOLA high performance windows and doors.

Mineral wool exterior insulation (min. R29 walls).

Zero VOC paint

ALTERNATIVE WATER HEATER

40 gallon heat pump water heater. Reference brand: Hubbell. 28" diameter. 49" height.

EF 2.33 at ambient air temperature of 77 F.

Table 406.2 Energy credits: 5C - Efficient Water Heater - 1.5 points. (2015 Residential Energy Code).

ADDED HRV (HEAT RECOVERY VENTILATOR)

20 to 90 CFM Zehnder ComfoAir 160

The CA160 is equipped with two class G4 filters (MERV 7/8). An optional class F7 pollen filter (MERV 13) is available for fresh air intake.

Height: 34". Width: 26.4". Depth: 10.6"

REMOVED HEATING AND COOLING

Given the volume of this Passive House and HRV system, the heating loads will be very small and a mini split heat pump is not required for thermal comfort.

PROJECT FEE: Please inquire with us directly about services we can provide, including: custom design, permit drawings, site-specific permitting assistance, construction documents and standardized materials package and interior design.



AHOUSE STUDIO

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KEY

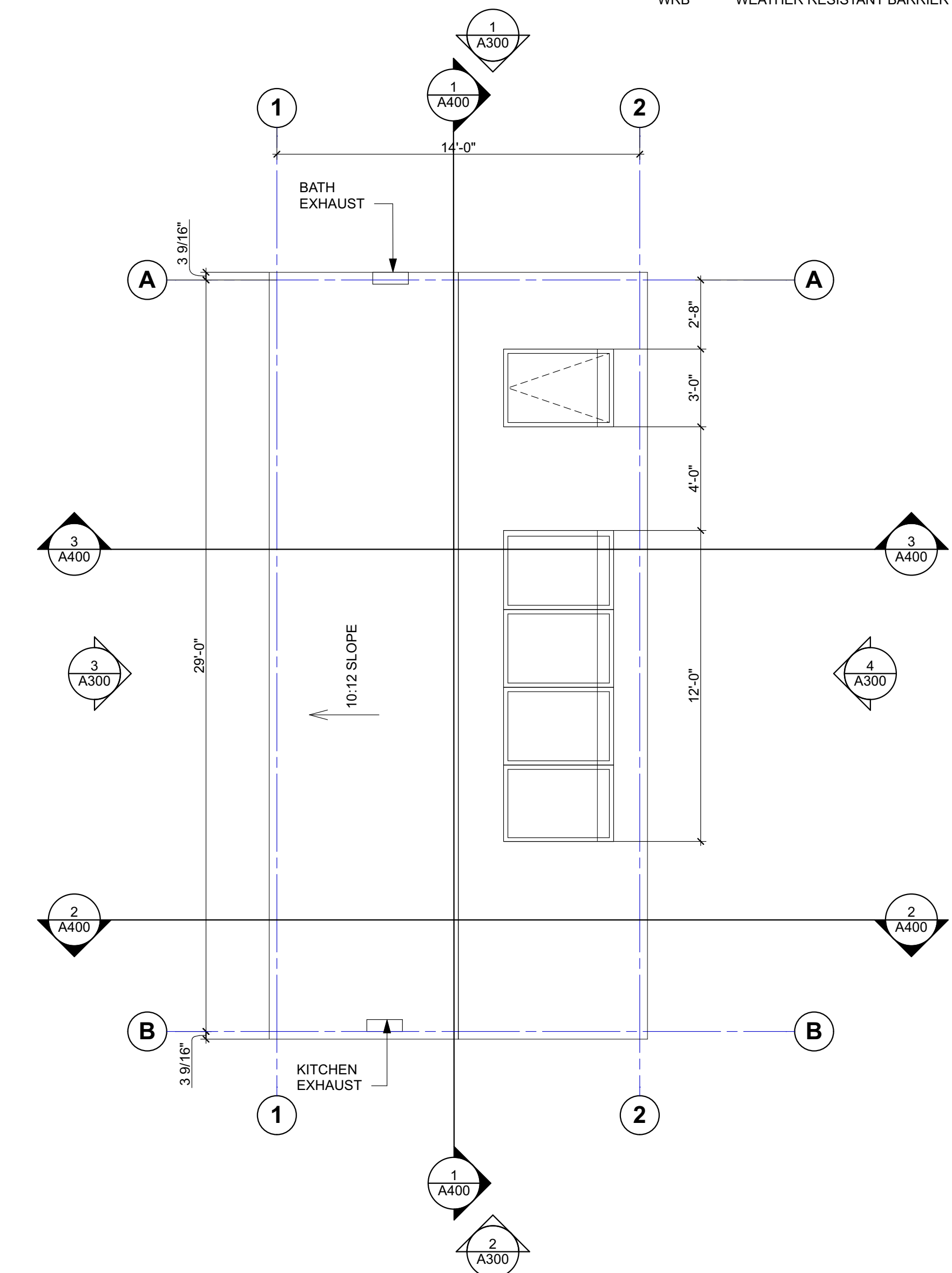
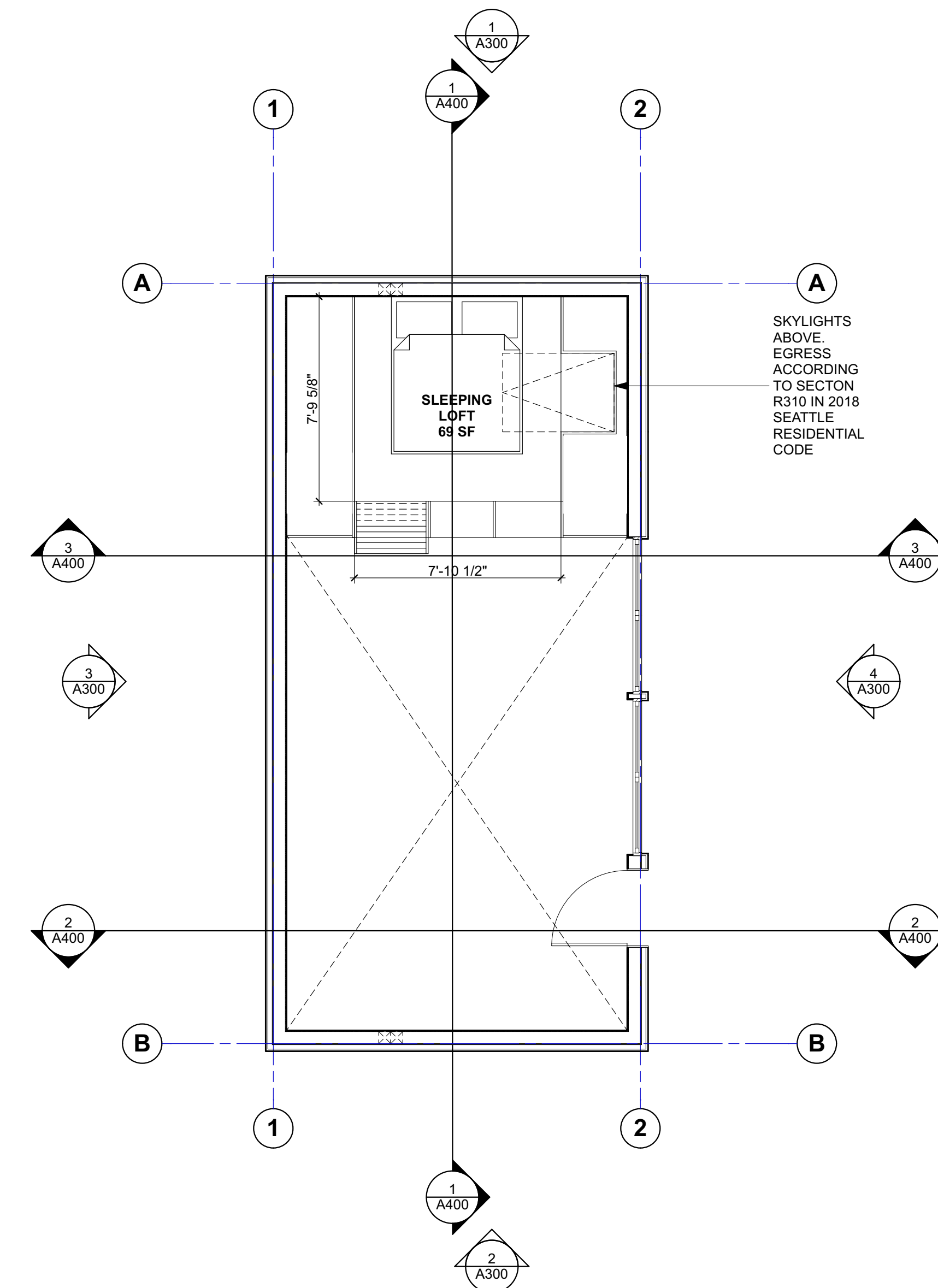
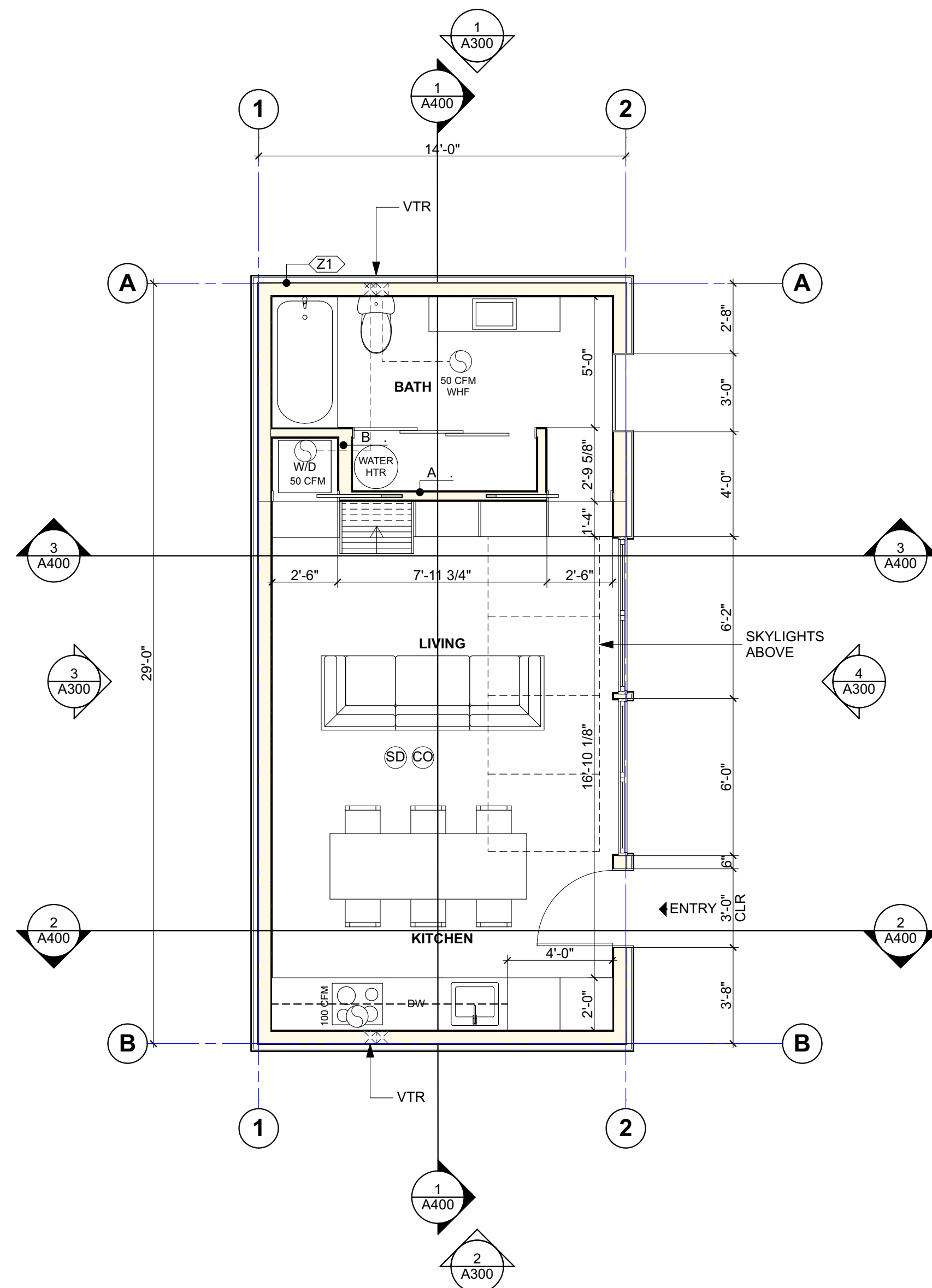
- DRAWING INDICATOR**
DRAWING NUMBER
SHEET NUMBER
- WALL TYPE INDICATOR**
SEE SCHEDULE
FOR EXPLANATION
- EXHAUST FAN**
- SMOKE DETECTOR**
- CARBON MONOXIDE DETECTOR**

ABBREVIATIONS

- CL CENTERLINE
- D DRYER
- DE DRYER EXHAUST
- DET/DTL DETAIL
- DIM DIMENSION
- DS DOWNSPOUT (EXTERIOR)
- DW DISHWASHER
- EQ EQUAL
- EXH EXHAUST
- FD FLOOR DRAIN
- GL GRID LINE
- GWB GYPSUM WALL BOARD
- GYP GYPSUM
- HHW HOT WATER HEATER
- INSUL INSULATION
- MIN MINIMUM
- RD ROOF DRAIN
- RO ROUGH OPENING
- SD SMOKE DETECTOR
- SF SQUARE FEET
- SL SLOPE
- STRUCT STRUCTURAL
- TYP TYPICAL
- VENT VENTILATION
- WHF WHOLE HOUSE FAN
- VTR VENT THROUGH ROOF
- W WASHER
- WP WATERPROOF(ING) MEMBRANE
- WRB WEATHER RESISTANT BARRIER

PLAN NOTES:

1. ALL SPOT ELEVATIONS ARE SHOWN RELATIVE PROJECT DATUM.
PROJECT DATUM = XXX'
SEE TOPOGRAPHIC SURVEY FOR ADDITIONAL GRADING INFORMATION.
2. ALL NUMBERED GRIDLINES ARE PERPENDICULAR TO ALL LETTERED GRIDLINES.
GRIDLINES ONLY SHOW WHERE RELEVANT AT LEVEL.
4. ALIGN WALLS THAT APPEAR TO ALIGN.
5. VERIFY ALL EXISTING SPOT ELEVATIONS AND DIMENSIONS ON SITE.



1 PLAN: LEVEL 1
SCALE: 1/4" = 1'-0"

2 LOFT PLAN
SCALE: 1/4" = 1'-0"

3 PLAN: ROOF
SCALE: 1/4" = 1'-0"

DADU
The Studio

OWNERS:
X

DPD PROJECT # XXXXXXXX

PARCEL #XXXXXXXXXX

PROJECT DESCRIPTION

CONSTRUCT NEW 1-STORY
DETACHED ACCESSORY DWELLING
UNIT IN REAR YARD OF EXISTING
SINGLE FAMILY RESIDENCE

ADDRESS
XX
SEATTLE

DESIGN
AHOUSE

NOTES

REVISION	ID	CHANGE NAME	DATE

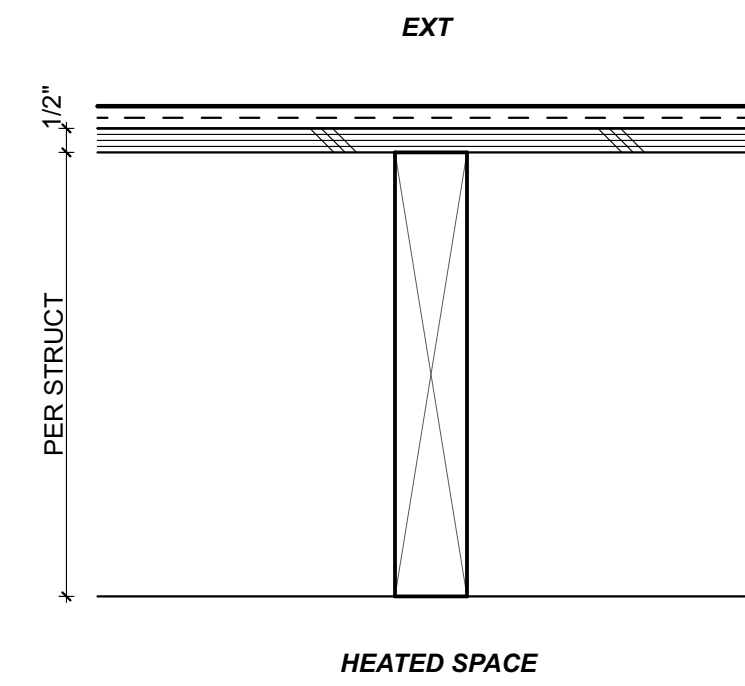
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DATE 02/17/2020
DRAWN BY CD

SHEET TITLE
PLANS

SHEET

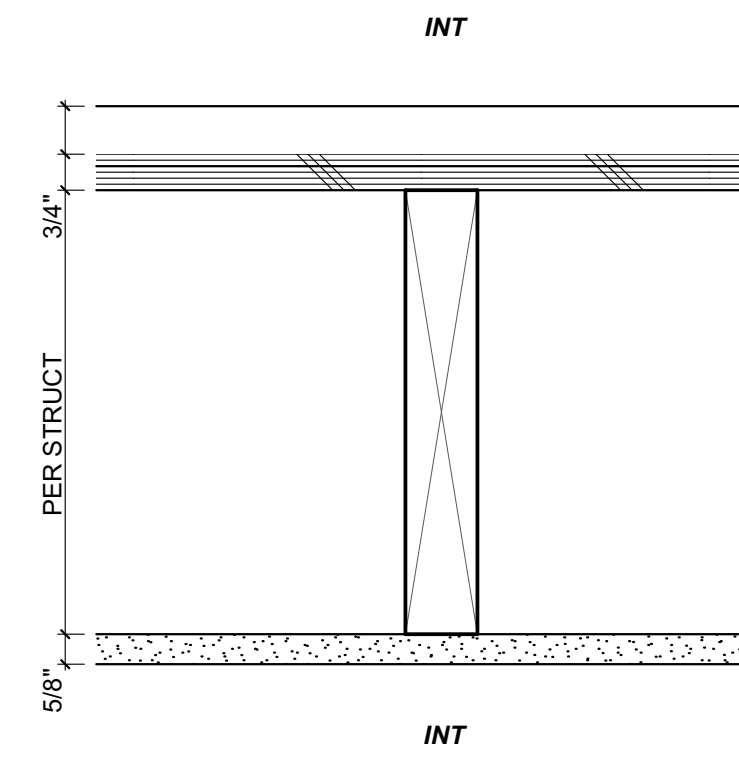
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SCALE AS INDICATED



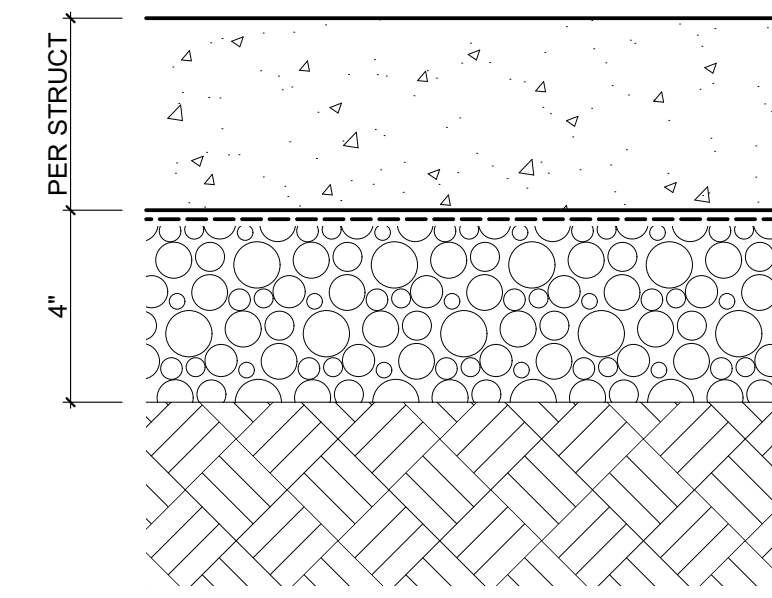
3 ROOF ASSEMBLY - R-49 MIN

- SHEET METAL ROOFING
- WATERPROOFING MEMBRANE
- 1/2" PLYWD SHTG (PER STRUCT)
- HIGH DENSITY BLOW IN CELLULOSE
- MAINTAIN 1" AIR SPACE ABOVE FOR VENTILATION
- 2X WOOD JOISTS (PER STRUCT)
- SLOPE PER PLAN



2 TYP. INTERIOR WD FRAMED FLOOR

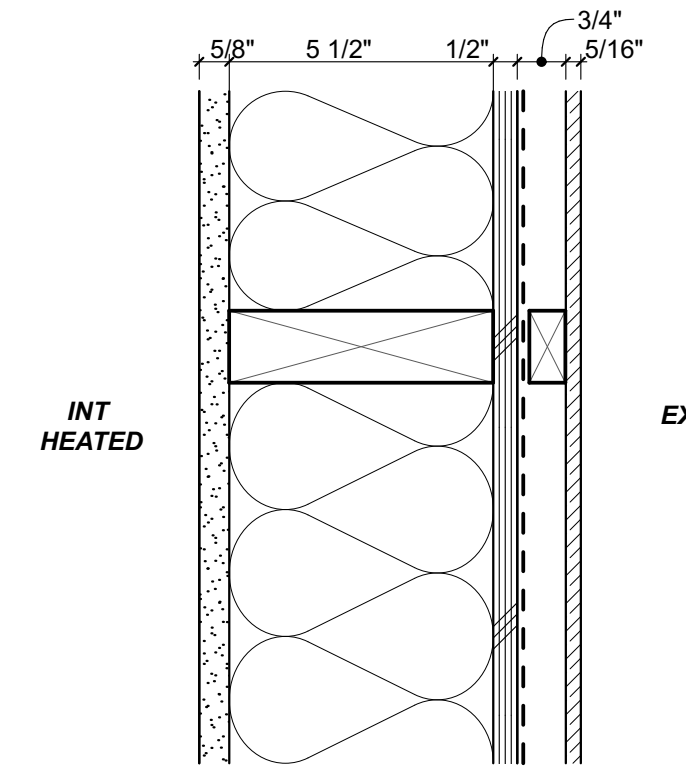
- FINISH
- PER SCHEDULE
- 3/4" PLYWD
- 2X WOOD JOISTS (PER STRUCT)
- 5/8" GWB



1 TYP. SLAB ON GRADE

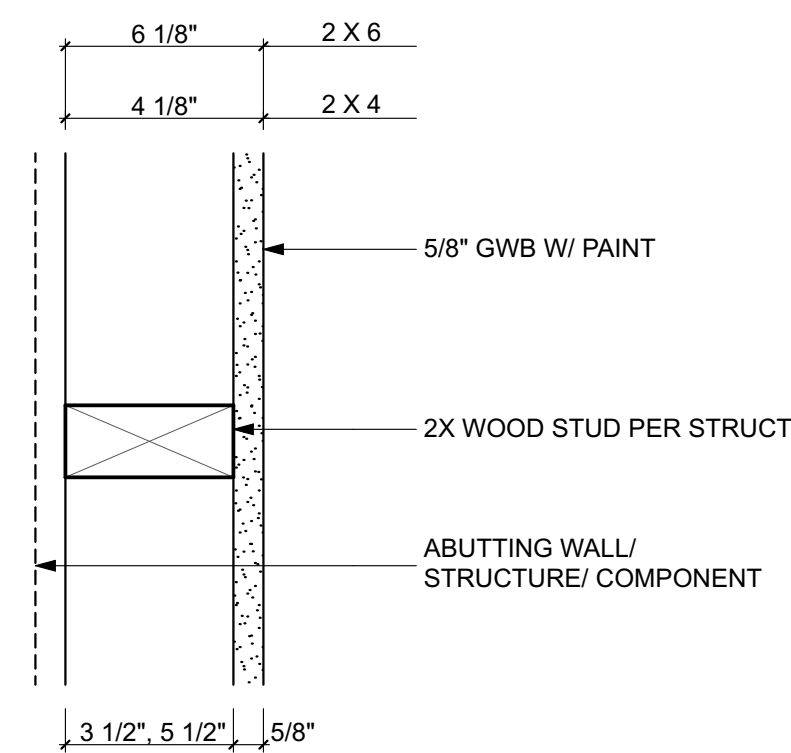
- CONCRETE SLAB
- PER STRUCT
- VAPOR BARRIER
- 4" MIN GRAVEL STRUCTURAL FILL

PROVIDE R-10 RIGID INSUL 24" WIDE @ PERIMETER OF SLAB BELOW HEATED SPACE, AND EXTENDED DOWN TO TOP OF FOOTING, TYP

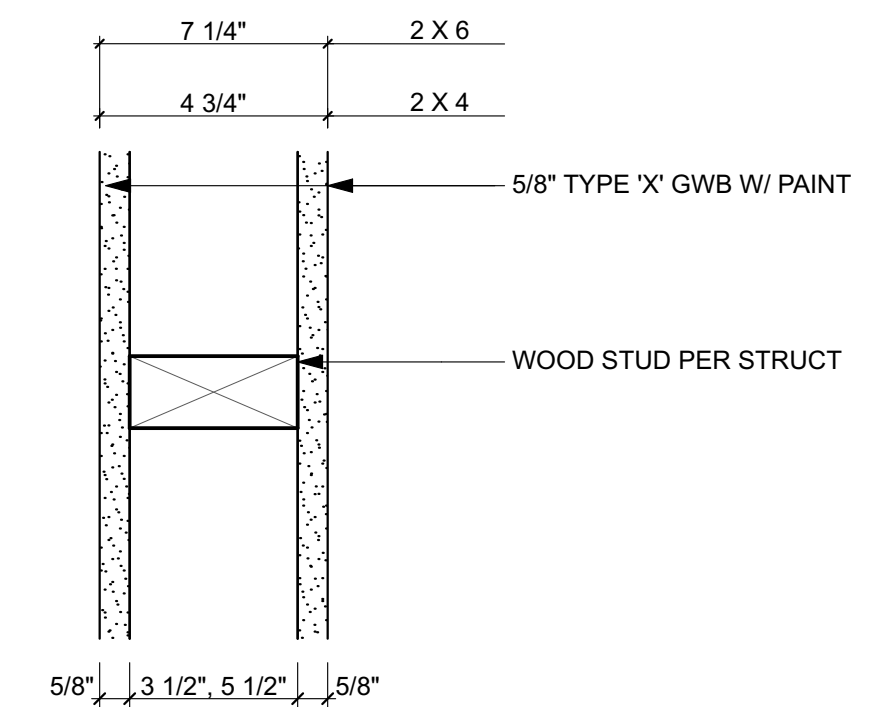


Z1 WOOD STUD WALL W/ WD RAINSCREEN CLADDING - R-21 MIN

- 5/16" CORRUGATED METAL
- 3/4" WD FURRING, SLOPED TOP, TREATED W/ SBX AFTER RIPPING TO SIZE
- WRB - (AIR BARRIER)
- 1/2" PLYWD
- 2X6 WD STUDS @ 16" OC
- BATT INSUL - R-21 MIN - OR - BLOWN-IN HIGH DENSITY CELLULOSE INSUL - R-21 MIN
- 5/8" GWB W/ VAPOR RETARDER PAINT



E WOOD STUD FURRING WALL - 2 x 6 STUD
D WOOD STUD FURRING WALL - 2 x 4 STUD



B TYP. INTERIOR WOOD STUD WALL - 2 x 6 STUD
A TYP. INTERIOR WOOD STUD WALL - 2 x 4 STUD

GENERAL NOTES

1. GYP BD IS 5/8" U.N.O.
2. CEMENTITIOUS BACKER IS 5/8"
3. STUD SIZES ARE PER PARTITION TYPE
4. WHERE ENDS OF PARTITION ABUT OTHER CONSTRUCTION PROVIDE RELIEF JOINT
5. SHEAR WALLS PER STRUCTURAL SCHEDULE
6. ALL EXPOSED GYP BOARD TO BE LEVEL 4 FINISH U.N.O.

DADU
The Studio

OWNERS:
 X

DPD PROJECT # XXXXXXXX

PARCEL #XXXXXXXXXX

PROJECT DESCRIPTION
 CONSTRUCT NEW 1-STORY DETACHED ACCESSORY DWELLING UNIT IN REAR YARD OF EXISTING SINGLE FAMILY RESIDENCE

ADDRESS
 XX
 SEATTLE

DESIGN
 AHOUSE

NOTES

REVISION	ID	CHANGE NAME	DATE

ISSUE DESIGN DEVELOPMENT
 DATE 02/17/2020
 DRAWN BY CD

SHEET TITLE
ASSEMBLIES

SHEET

A800

SCALE AS INDICATED