



CRAWL AND ATTIC ACCESS SHALL BE SEALED IN ACCORDANCE WITH WSEC 402.2.4 - LOCATE ACCESS BTWN JOISTS/TRUSSES.

HANDRAIL: CONTINUOUS FULL LENGTH FLIGHT OF STAIR.
HANDGRIP PORTION TO BE NOT LESS THAN 1 1/4" OR MORE
THAN 2" IN CROSS SECTION. HANDRAIL TO BE NOT LESS
THAN 1 1/2" FROM WALL.

PROVIDE STAIRWAY ILLUMINATION PER SECTION R303.7 IRC

ENCLOSED USABLE SPACE BELOW STAIRS MUST HAVE 1/2' G.W.B.
ON ENCLOSED SIDE

OPENINGS SUCH AS DOORS AND ATTIC ACCESSSES SHALL BE 1-3/8" SOLID CORE DOORS, OR A 20-MINUTE RATED ASSEMBLY AND SHALL BE SELF CLOSING AND SELF LATCHING.

HYAC AND DUCTING TO BE ENCLOSED IN INSULATED SPACE- NO
DUCTING IN FOUNDATION CRAWLSPACE



HYAC AND WATER HEATER

A HYAC UNIT TO BE MODEL XXX, MIN. HSPF OF 9.5. HEAT PUMP TO BE MODEL XXX.

B ELECTRIC WATER HEATER WITH INTEGRATED HEAT PUMP, TIER III NEAA SPEC, MODEL XXXXXX

Parcel number: 0419095022
Site Address:
409 43rd Ave. SW Puyallup, WA. 98373

Plan: 1864-1864
HC HOMES DUPLEX
Date: 04/11/23
Revision Date: 09/20/23
Drawn by: SM/BP
Phone: (253) 297-8040

[A-1]

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Rueppell
Home Design

PRRNSF20230918

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building

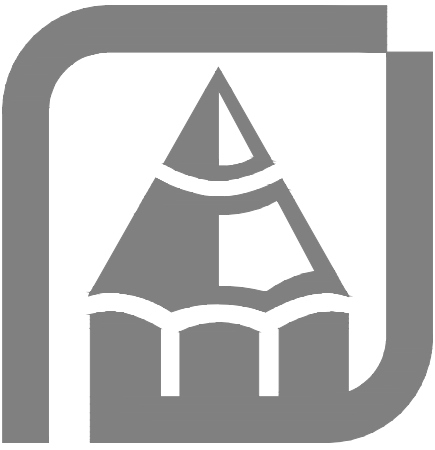
Planning

Engineering

Public Works

Fire

Traffic



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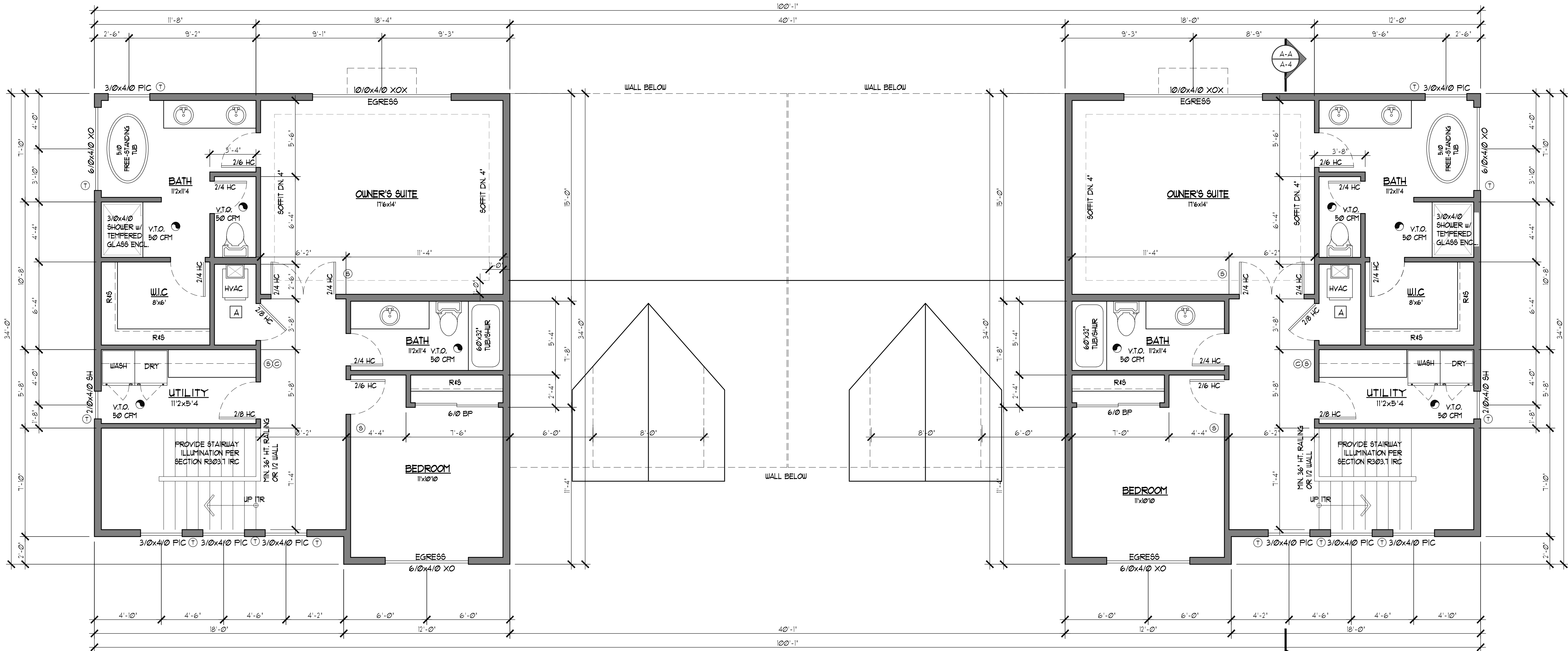
Rueppell
Home Design

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PRRNSF20230918



Unit - A

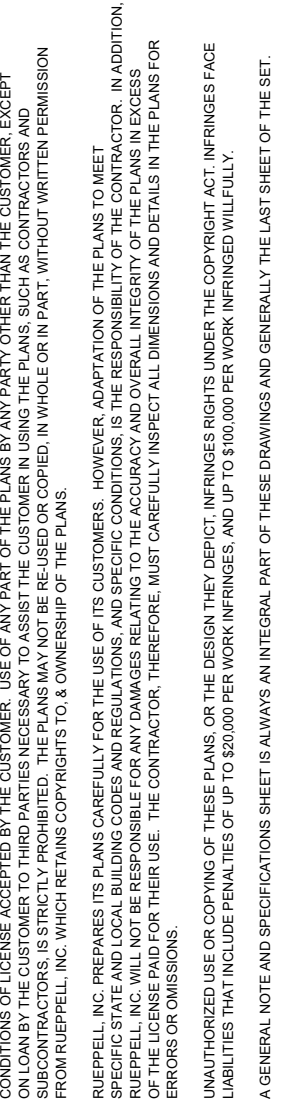
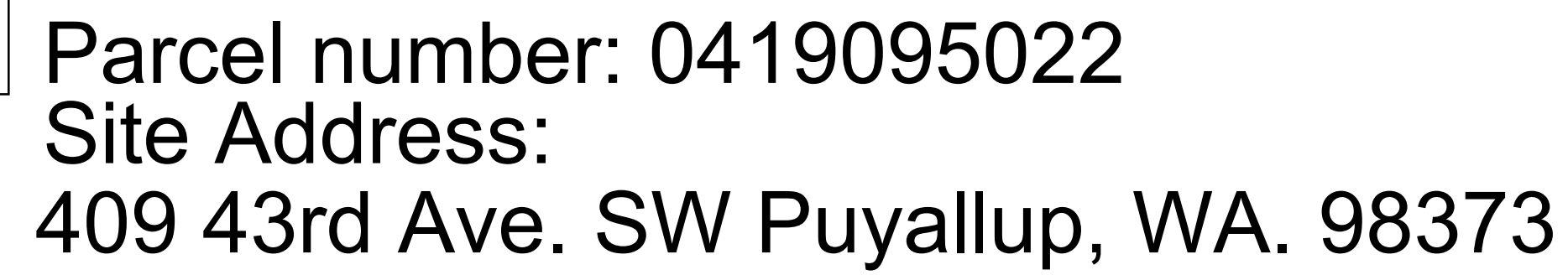
Unit - B

UPPER FLOOR PLAN

- 5 MIN. AIR EXCHANGE CEILING FANS PER PLAN
- 110 VOLT SMOKE DETECTOR HARD WIRED
- INTERCONNECTED WITH BATTERY BACK-UP
- CARBON MONOXIDE DETECTOR
- TEMPERED/SAFETY GLASS
- PROVIDE 1" UNDERCUT ON ALL BEDROOM DOORS

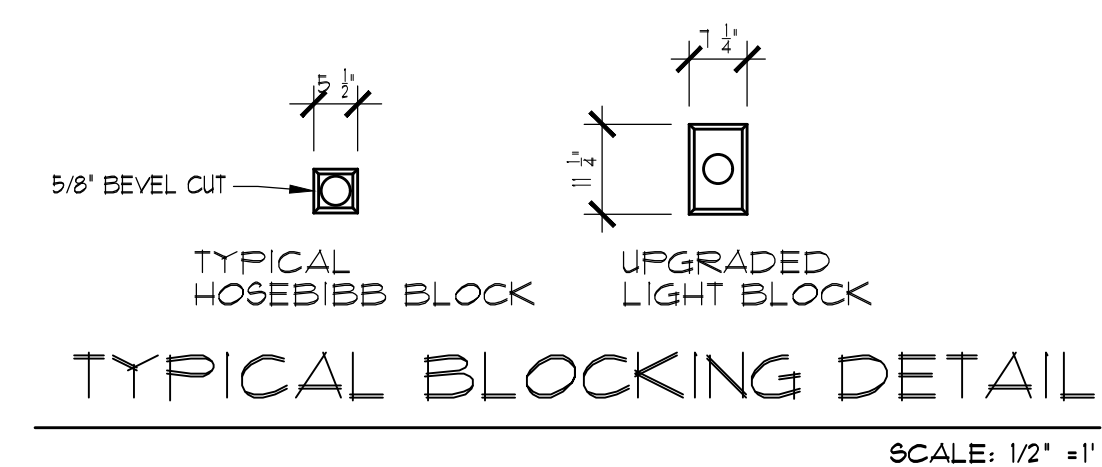
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1/4"=1'-0"

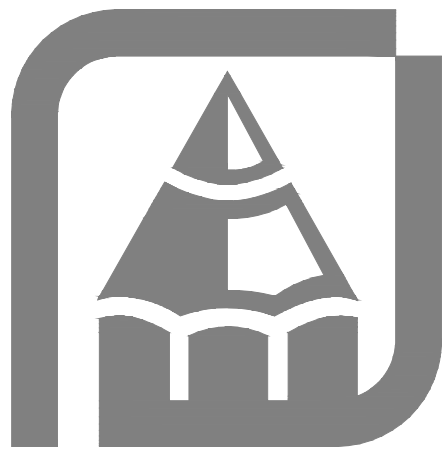


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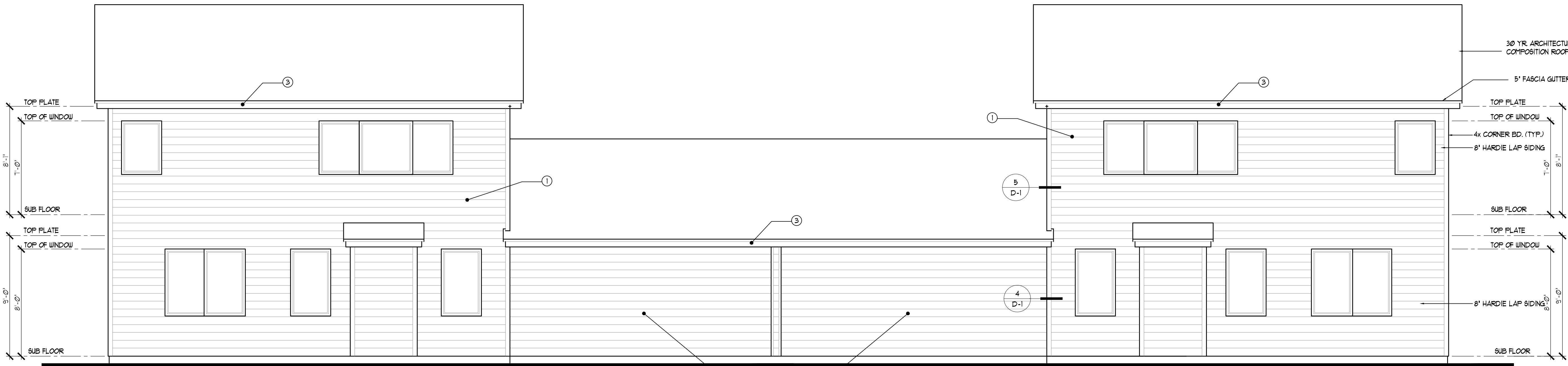


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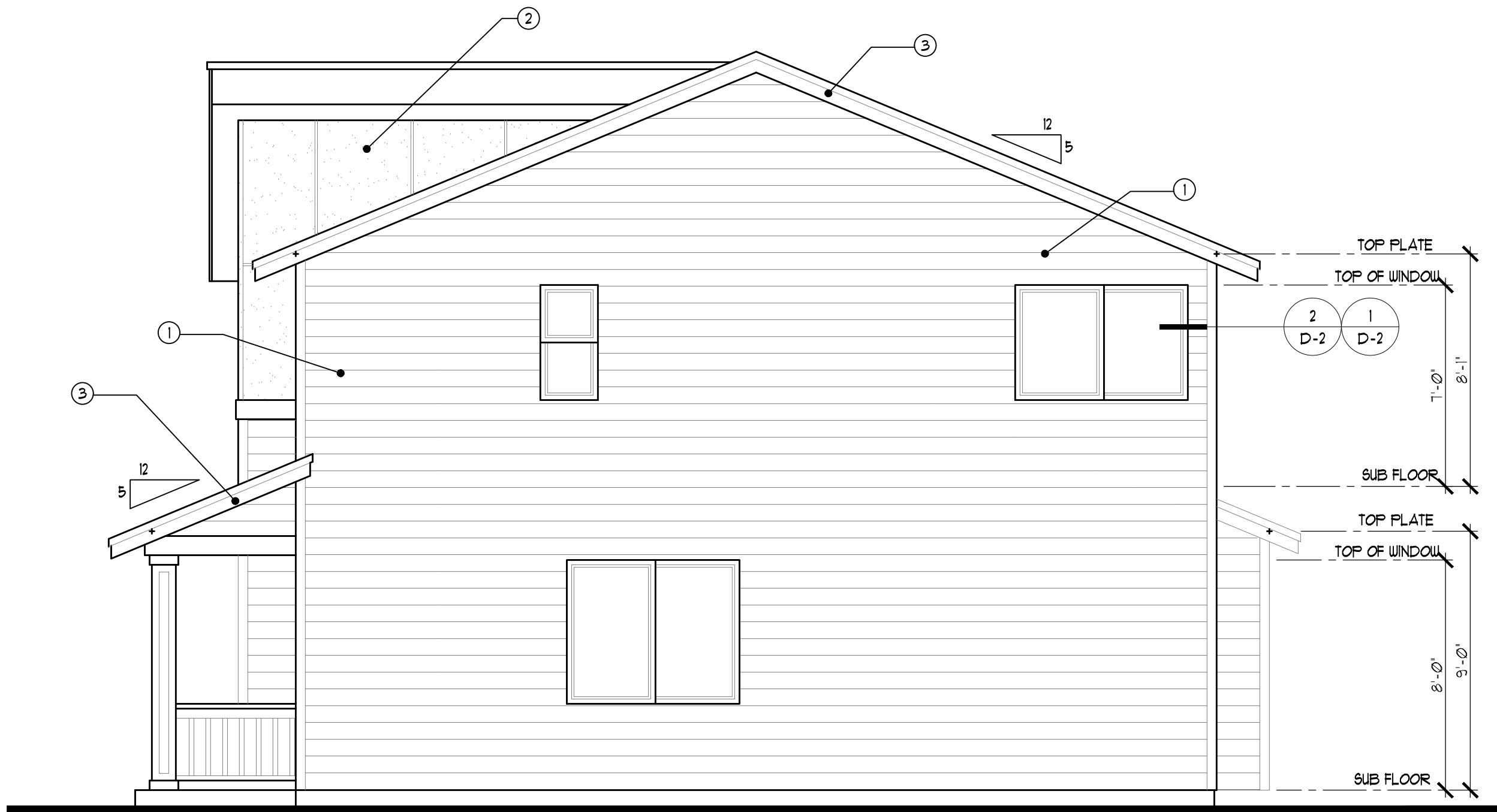
Unit - B

Unit - A
REAR ELEVATION

1/4"=1'-0"

EXTERIOR PAINT COLOR LEGEND:

- ① DORIAN GREY SW 1011
- ② IRON ORE SW 1069
- ③ PURE WHITE SW 1005
- ④ MOUNT ETNA SW 1625
- ⑤ PALM LEAF SW 1135



LEFT ELEVATION

1/4"=1'-0"

ELEVATION NOTES:

- CONTRACTOR SHALL VERIFY ALL NOTES, MATERIALS AND CONDITIONS PRIOR TO CONSTRUCTION.
- CAULK ALL EXTERIOR JOINTS AND PENETRATIONS.
- PROVIDE GALVANIZED OR ANODIZED SHEET METAL FLASHING AND COUNTERFLASHING AT ALL ROOF PENETRATIONS, CHIMNEYS, AND SKYLIGHTS.
- PROVIDE CONTINUOUS GUTTERS AND DOWNSPOUTS AT ALL EAVES, TYP.
- PROVIDE HEADER FLASHING AT ALL DOORS, WINDOWS, AND SHUTTERS PER DETAIL.
- ALL PAPER AND TAPE TO LAP FROM TOP DOWN.
- HOLD ALL SIDING MATERIAL 1 1/2" OFF ROOF.
- HOLD ALL SIDING MATERIAL 6" OFF FINISHED GRADE.
- SOFFIT ALL FLAT AREAS W/ 1 1/2" OVERHANG AT HORIZONTAL EDGES.
- METAL FLASHING AT ALL TRIM AND HORIZONTAL SIDING BREAKS.
- RUN SECOND LAYER OF TAR PAPER VERTICAL AT INTERIOR AND EXTERIOR CORNERS UNLESS TAR PAPER IS CONTINUOUS.
- FOUNDATION VENTS TO BE SPACED PER PLAN.
- ALL FOUNDATION VENTS ON STREET SIDE OF HOUSE (E. FRONT AND/ OR SIDE AND GABLE END AND GARAGE FRESH AIR VENTS TO BE LOUVERED).
- ALL LIGHT BLOCKS ON FACADE TO BE FURRED OUT AN ADDITIONAL 1 1/2".
- GUTTERS TO LAP UNDER DRIP EDGE AT GABLE ENDS, HOLD 1/4" DRIP EDGE CUT 1/4" AWAY FROM FASCIA TO EXCEPT GUTTERS TO LAP UNDERNEATH.
- ALL TRIM WORK TO BE APPLIED PRIOR TO SIDING MATERIALS (SIDING TO BUTT UP TO TRIM WORK).

Plan: 1864-1864

HC HOMES DUPLEX

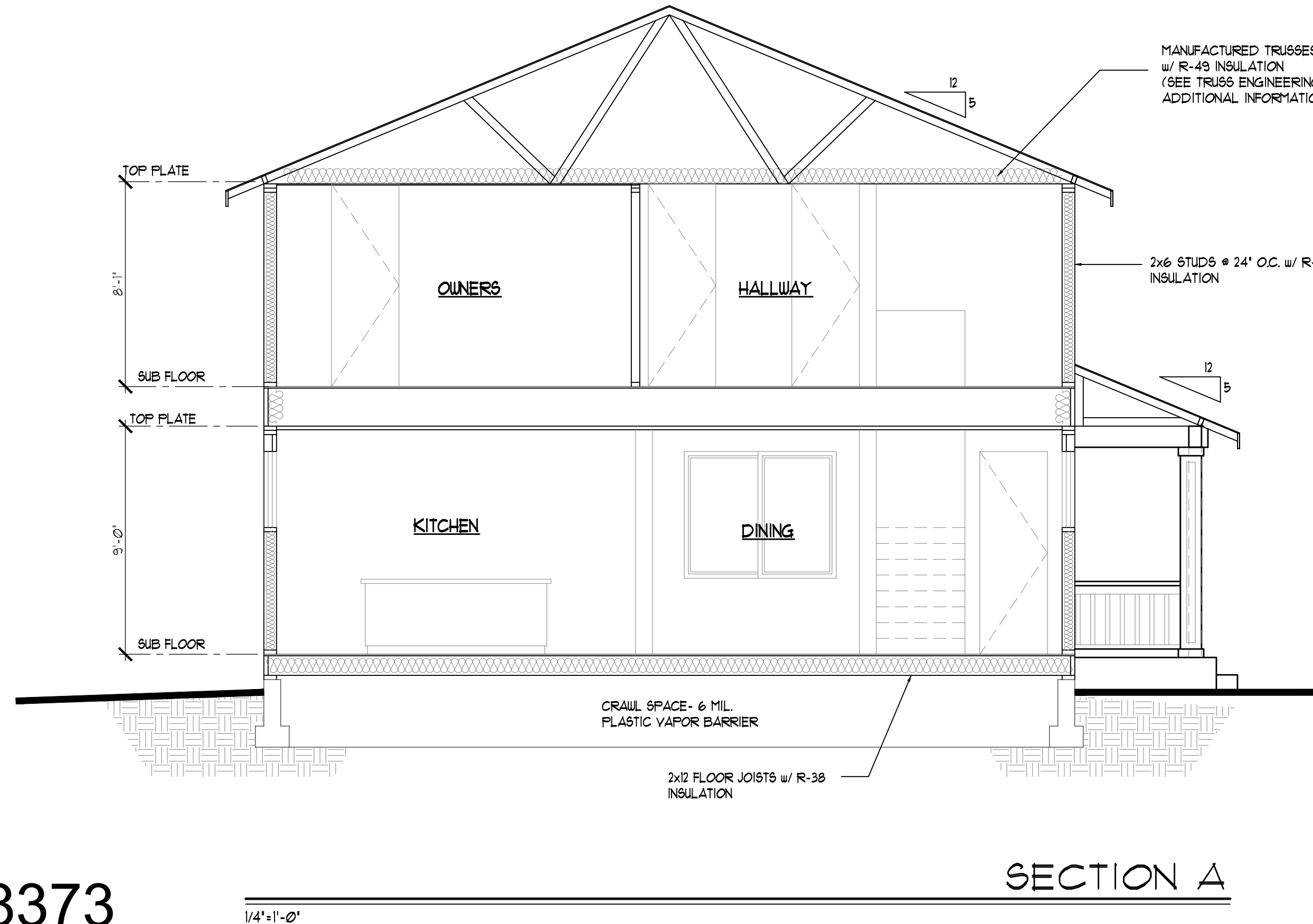
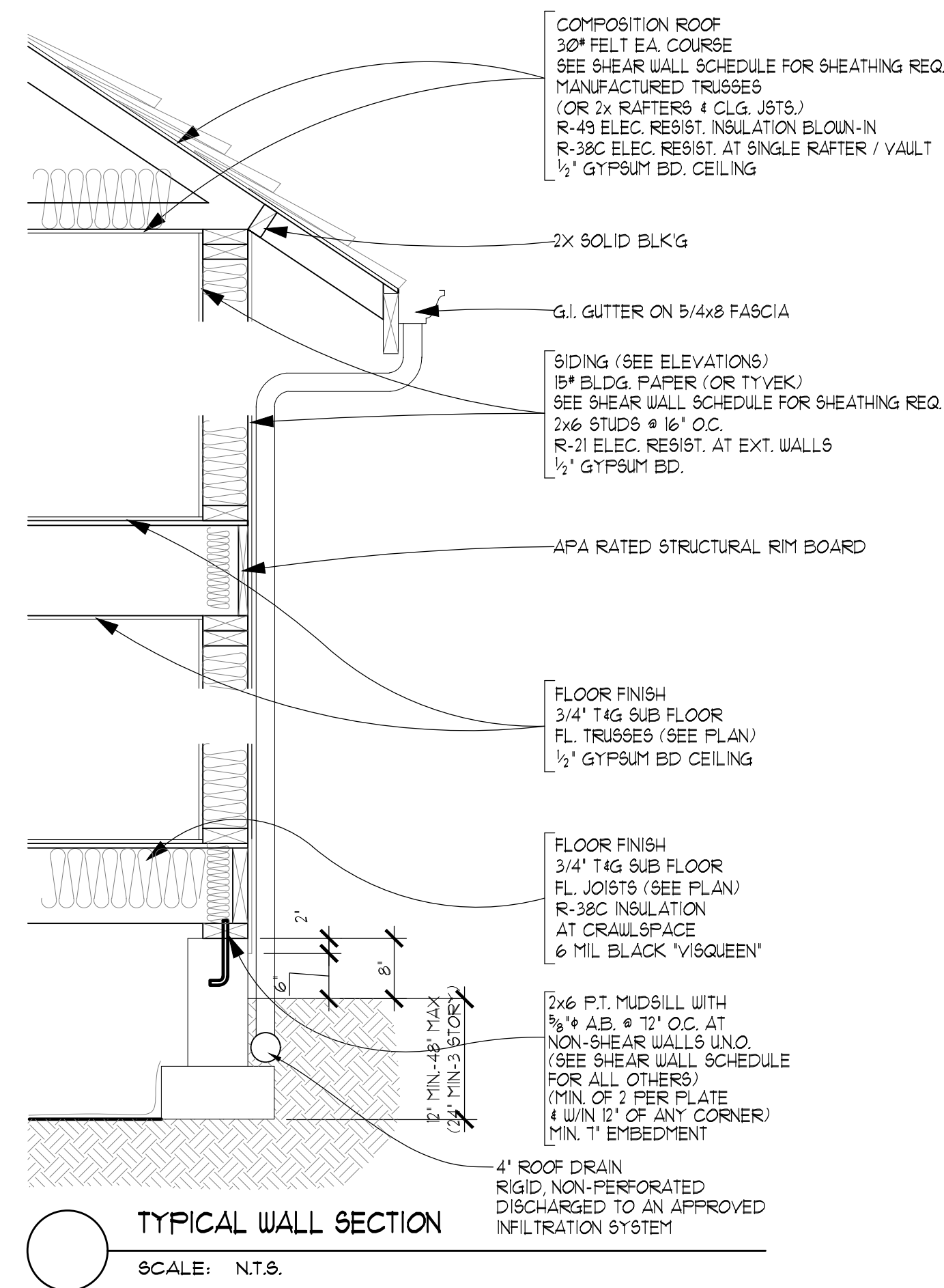
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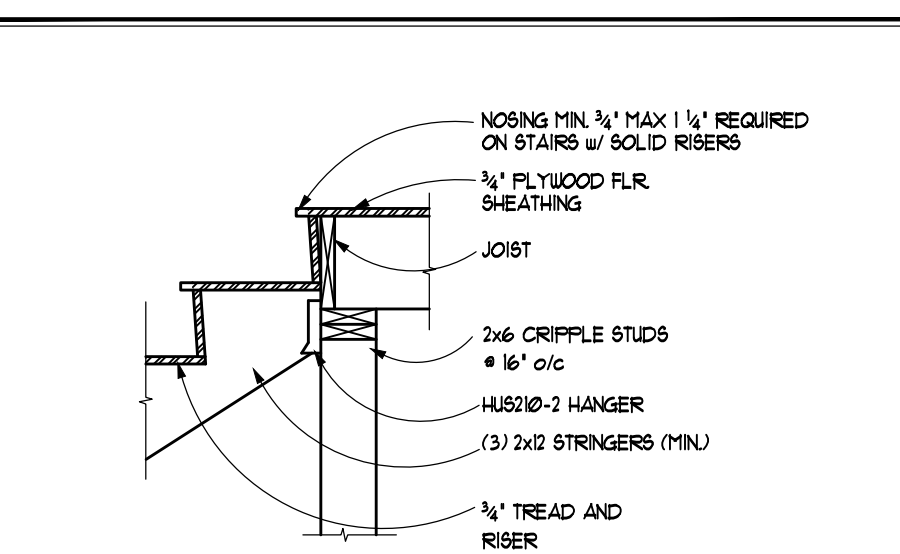
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[A-5]

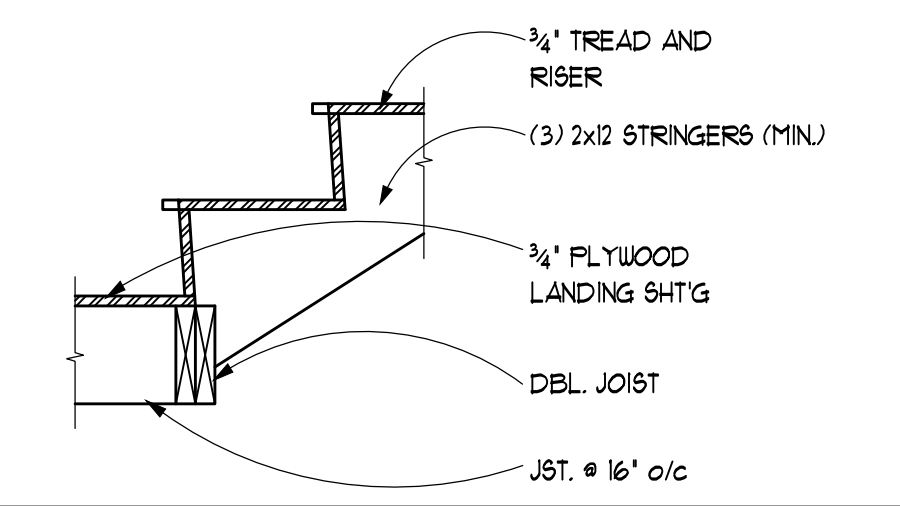
PRRNSF20230918

STAIR AND GUARDRAIL NOTES:
ILLUMINATION NOTES: PER IRC SECTION 305.8, R315.1 ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE LANDING OF THE STAIRWAY. EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP OF THE LANDING OF THE STAIRWAY. LIGHTING CONTROLS SHALL BE ACCESSIBLE AT THE TOP AND BOTTOM OF EACH STAIRWAY WITHOUT TRAVERSING ANY STEPS.

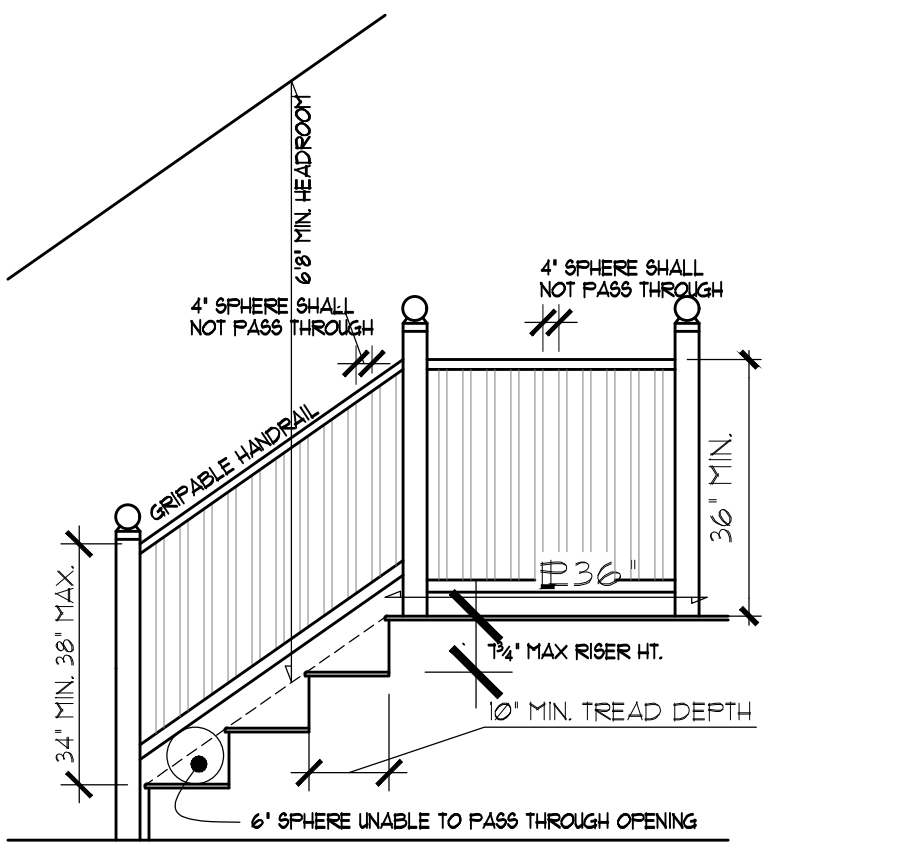
OR MORE RISERS SHALL HAVE AT LEAST ONE HANDRAIL RUNNING CONTINUOUSLY THROUGH THE FULL LENGTH OF STAIR. 34" MIN. HT. 38" MAX. HT. END SHALL RETURN TO WALL OR NEUEL POST OR VERTICAL SURFACE. HANDRAILS SHALL BE STRONG ENOUGH TO RESIST A 200 LB. FT. LOAD IN ANY DIRECTION. HANDRAILS TO BE PRESENT ON AT LEAST ONE SIDE OF STAIR. HANDGRIP PORTION OF HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION OF 1 1/4" MIN. & 2 1/4" MAX. EDGES SHALL HAVE A MIN. RADIUS OF 1/8". ALL REQ. GUARDRAILS TO BE 36" MIN. IN HEIGHT. HANDRAILS WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF 1 1/2" MIN. TO 2 1/4" MAX. HANDRAILS WITH A RECTANGULAR CROSS SECTION SHALL HAVE A MIN. CROSS SECTION DIMENSION OF 1 1/2" MIN. TO 2 1/4" MAX. IF HANDRAIL IS NOT CIRCULAR IT SHALL HAVE A PERIMETER DIMENSION OF AT LEAST 4 INCHES (102 MM) MIN. AND NOT GREATER THAN 6 1/4 INCHES (160 MM) WITH A MAXIMUM CROSS SECTION DIMENSION OF 2 1/4 INCHES (57 MM).



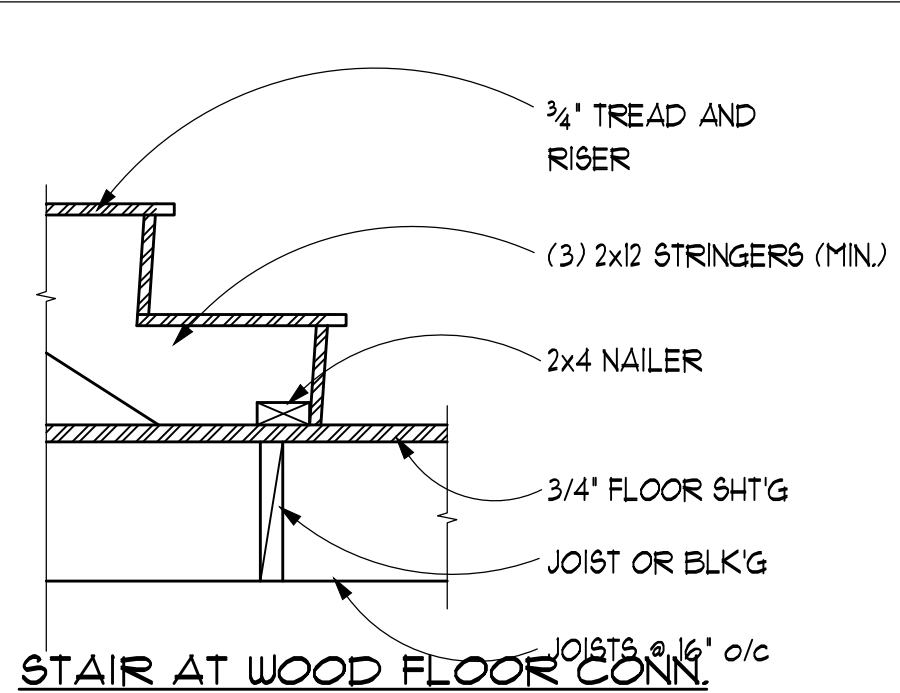
STAIR AT FLOOR CONNECTIONS



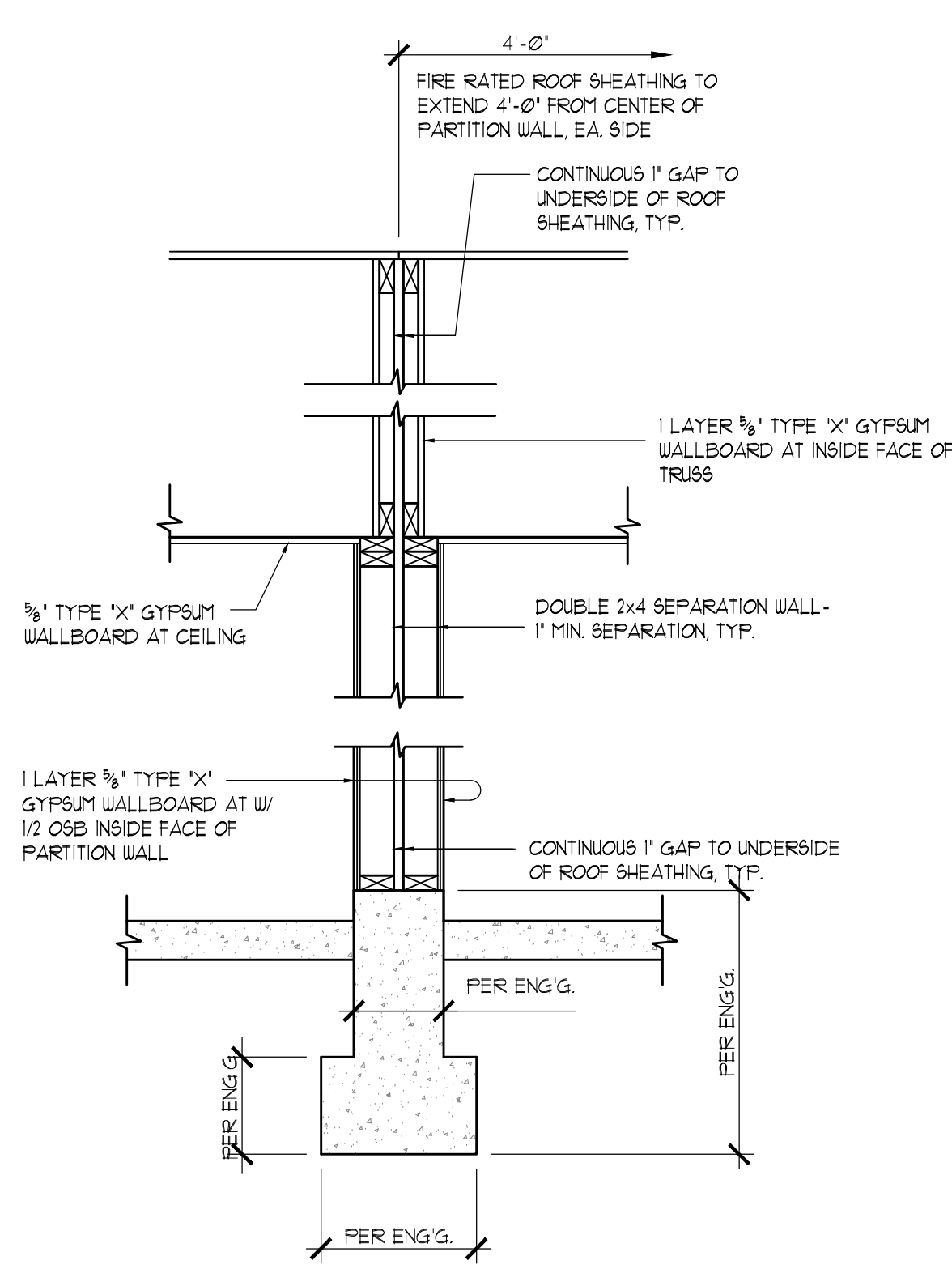
STAIR AT LANDING CONN.



GUARD & STAIR REQUIREMENTS



STAIR AT WOOD FLOOR CONN.



1 HOUR RATED PARTITION WALL ASSEMBLY

SCALE: N.T.S.

GA FILE NO. WP 5512

*NOTE:
~~HORIZONTAL BRACING REQUIRED~~
AT WALL MID-HEIGHT TYPE

GA FILE NO. WP 5512	GENERIC	1 HOUR FIRE	45 TO 49 STC SOUND
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GYPSUM WALLBOARD, WOOD STUDS

ONE LAYER 3/8" TYPE 'X' GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED PARALLEL, OR AT RIGHT ANGLES TO EACH SIDE OF DOUBLE ROW OF 2x4 WOOD STUDS 16" O.C. ON SEPARATE PLATES 1" APART WITH 6d COATED NAILS, 1 3/4" LONG, @20" S. SHANK, 1/4" HEADS, 1" O.C.

JOINTS STAGGERED 16" ON OPPOSITE SIDES.
HORIZONTAL BRACING REQUIRED AT MID-HEIGHT.
(LOAD BEARINGS)

THICKNESS: 9 1/4"
APPROX. WEIGHT: 8 PSF
FIRE TEST: SEE UP 3605
UL R318-4, -6, 6-17-52
UL R2171-39, 1-20-66
UL R3501-52, 3-15-66, UL DESIGN U305
ULC DESIGN U201
UL R4024, 10-31-68
SOUND TEST: NRCC TL-93-261,
IRC-IR-161, 3/38

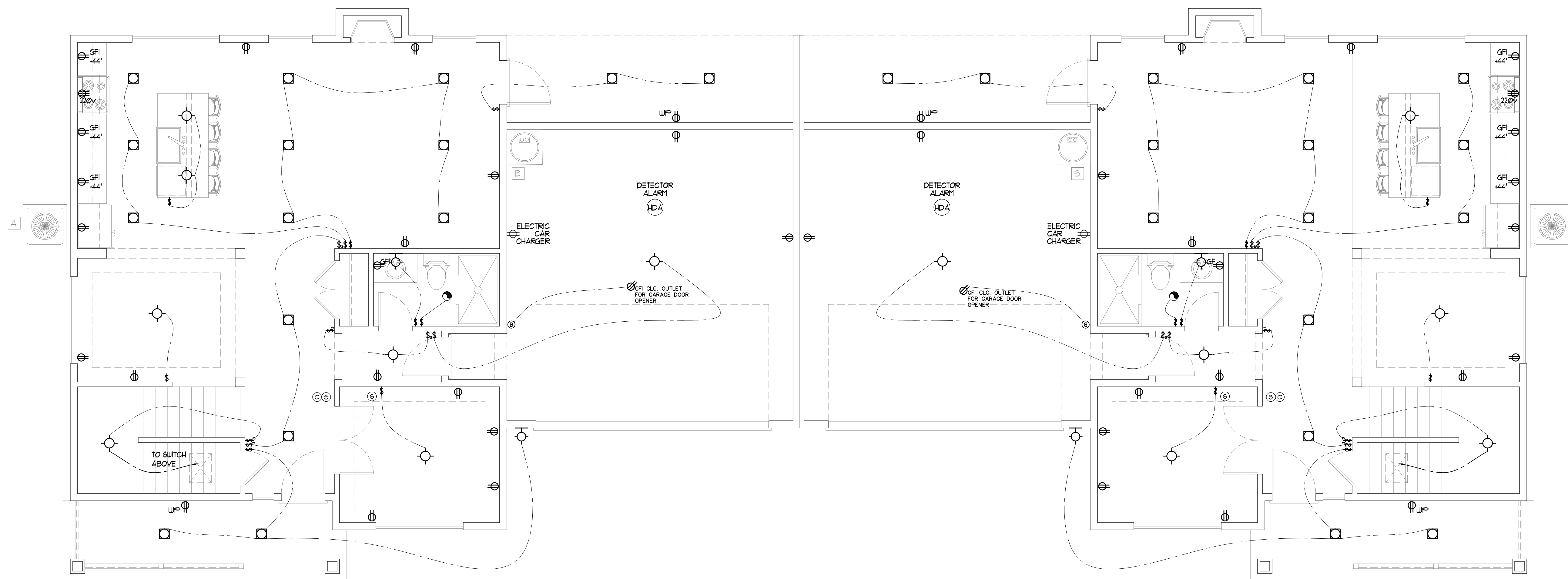
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RECEPTACLES SHALL BE INSTALLED SO THAT NO POINT ALONG THE FLOOR LINE IN ANY UNBROKEN WALL SPACE IS MORE THAN 6 FEET, MEASURED HORIZONTALLY, FROM AN OUTLET IN THAT SPACE. A WALL SPACE SHALL INCLUDE ANY SPACE 2 FEET OR MORE IN WIDTH (INCLUDING SPACE MEASURED AROUND CORNERS) AND UNBROKEN ALONG THE FLOOR LINE BY DOORWAYS, FIREPLACES, AND SIMILAR OPENINGS.

ONE ADDITIONAL #4 BAR, 20-FEET LONG IN FOOTING AT ELECTRICAL
METER LOCATION FOR UFFER GROUND.

PANEL AND CIRCUIT BREAKERS SHALL BE INSPECTED. 2--5 NEC 210-12, (a) AND (b), ARC-FAULT CIRCUIT INTERRUPTER PROTECTION.

Separate electrical permit is required with Washington State Department of Labor & Industries.
<https://lni.wa.gov/licensing-permits/electrical/electrical-permits-fees-and-inspections> or Licensing information: Call 1-800-647-0982



5 MIN. AIR EXCHANGE CEILING FANS PER PLAN
110 VOLT SMOKE DETECTOR HARD WIRED
INTERCONNECTED WITH BATTERY BACK-UP

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RECEPTACLES SHALL BE INSTALLED SO THAT NO POINT ALONG THE FLOOR LINE IN ANY UNBROKEN WALL SPACE IS MORE THAN 6 FEET, MEASURED HORIZONTALLY, FROM AN OUTLET IN THAT SPACE. A WALL SPACE SHALL INCLUDE ANY SPACE 2 FEET OR MORE IN WIDTH (INCLUDING SPACE MEASURED AROUND CORNERS) AND UNBROKEN ALONG THE FLOOR LINE BY DOORWAYS, FIREPLACES, AND SIMILAR OPENINGS.

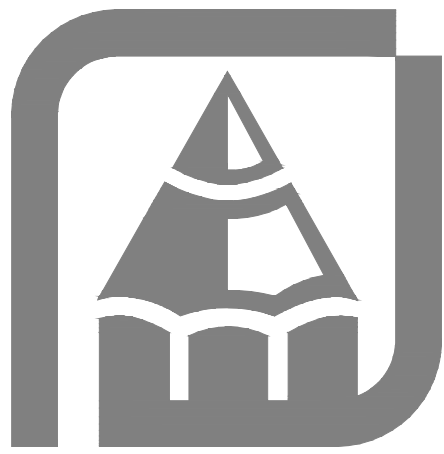
ONE ADDITIONAL #4 BAR, 20-FEET LONG IN FOOTING AT ELECTRICAL
METER LOCATION FOR UFFER GROUND.

PANEL AND CIRCUIT BREAKERS SHALL BE INSPECTED. 2--5 NEC 210-12, (a) AND (b), ARC-FAULT CIRCUIT INTERRUPTER PROTECTION.

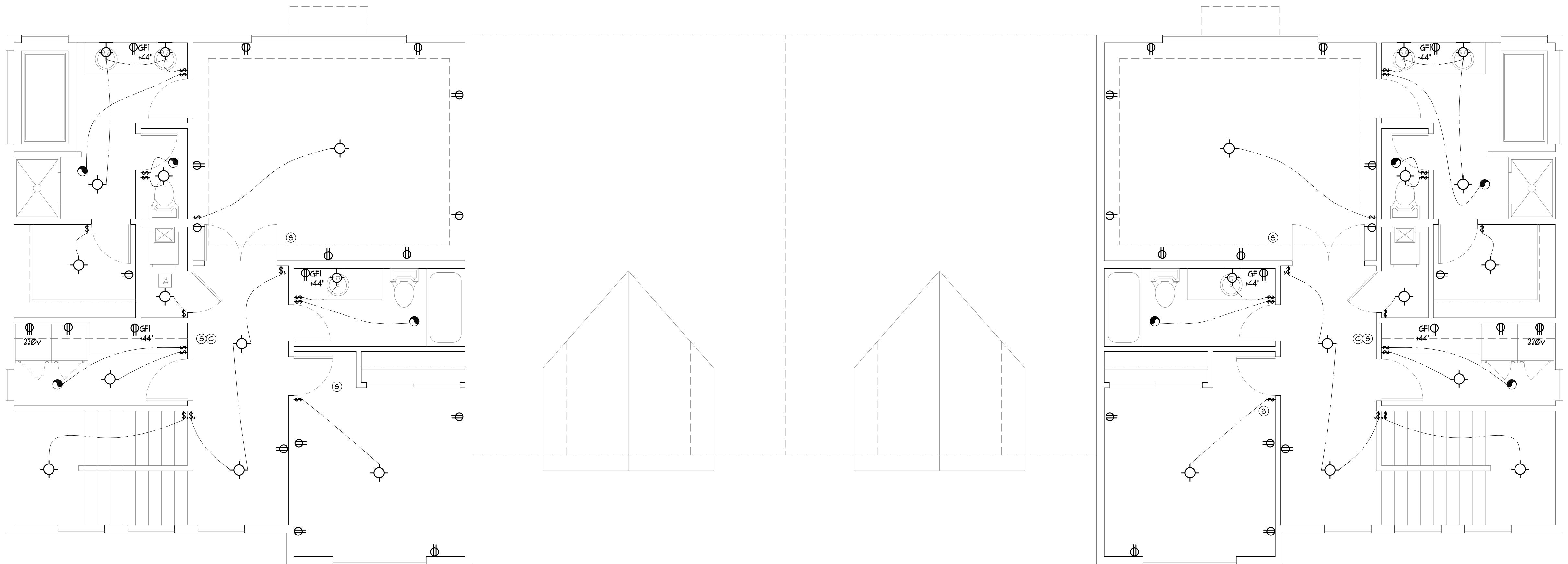
ELECTRICAL LEGEND

\$	SINGLE POLE SWITCH		STANDARD CEILING MOUNT LIGHT OUTLET
\$3	3 POLE SWITCH		PORCELAIN SOCKET FIXTURE
\$4	4 POLE SWITCH		FLUORESCENT CEILING MOUNT LIGHT OUTLET
\$os	SINGLE POLE OCCUPANCY SENSOR		WALL MOUNTED STANDARD LIGHT FIXTURE
\$s	SINGLE POLE SWITCH W/ MOTION SENSOR		WALL MOUNTED FLUORESCENT LIGHT FIXTURE
\$t	TIMER SWITCH		RECESSED CFL CAN LIGHT
\$LV	LOW VOLTAGE SWITCH		RECESSED FLUORESCENT CAN LIGHT
	DUPLEX RECEPTACLE OUTLET		RECESSED DIRECTIONAL CAN LIGHT
	SPLIT WIRE DUPLEX OUTLET		KICK LIGHT
	GROUND FAULT INTERCEPT OUTLET		EXHAUST FAN
	30 AMP 220 VOLT ELECTRIC CAR OUTLET		COMBINATION RECESSED CAN & EXHAUST FAN
	220V OUTLET		THERMOSTAT
	A/C DISCONNECT		JUNCTION BOX
	FLOOR RECEPTACLE		LOW VOLTAGE ADDRESS LIGHT
	PUSH BUTTON		BOX FLUORESCENT, REFER TO PLAN FOR SIZE
	CHIMES		GARAGE DOOR OPENER
	TELEPHONE		CEILING FAN OUTLET (BLOCKED)
	TELEVISION ANTENNA (STRUCTURED WIRING INSTALLED AT TELEVISION LOCATION)		
	SMOKE DETECTOR - PERMANENTLY WIRED AND INTERCONNECTED		
	COMBO CARBON MONOXIDE / SMOKE DETECTOR		

V.T.O. = VENT TO OUTSIDE, W.H.F. = WHOLE HOUSE FAN; V.P. = VAPOR PROOF;
W.P. = WATER PROOF, CH = CHANDELIER, F = PENDANT



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UPPER FLOOR ELECTRICAL PLAN

5 MIN. AIR EXCHANGE CEILING FANS PER PLAN
110 VOLT SMOKE DETECTOR HARD WIRED
INTERCONNECTED WITH BATTERY BACK-UP

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[A-7]

HEAT PUMP

HEAT PUMP

HVAC

HVAC/ FURNACE

RM

FLOOR MOUNTED REGISTER

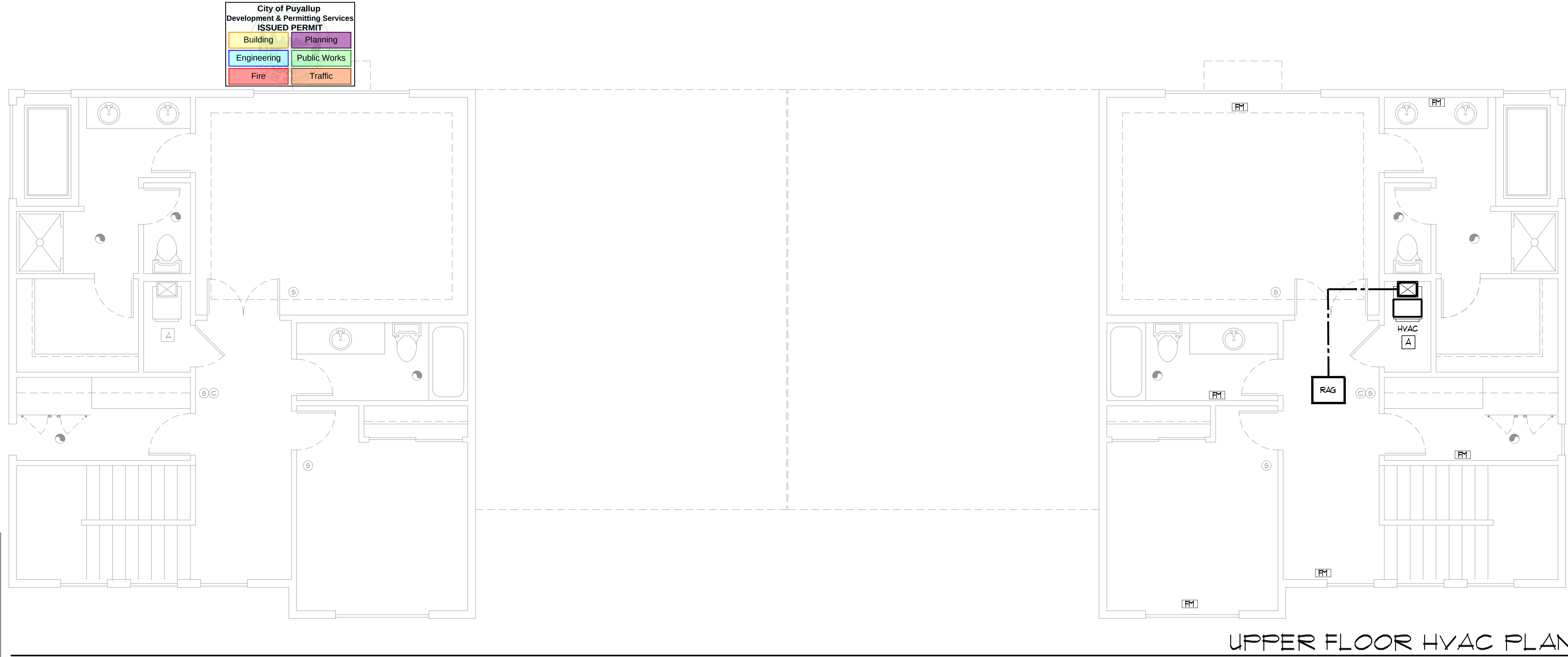
CM

CEILING MOUNTED REGISTER

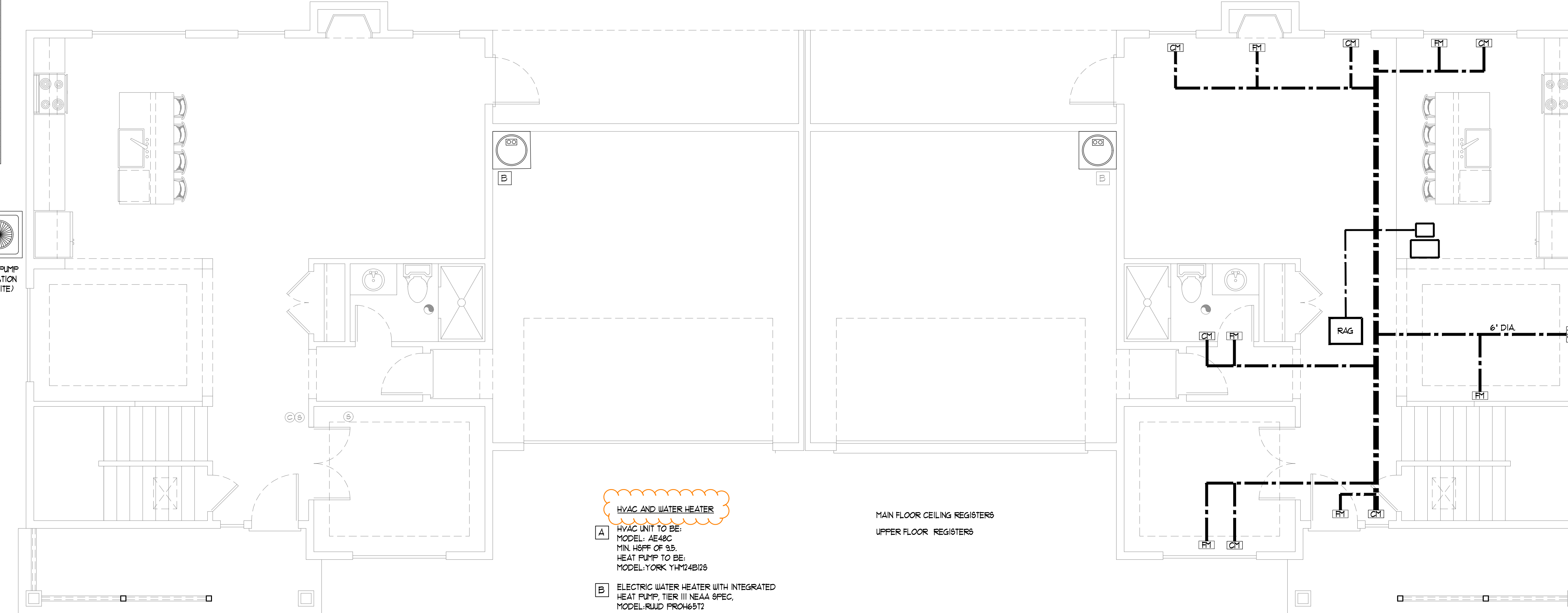
DUCTING RUN

PLENUM/ CONDUCTOR BOX

HEAT PUMP (LOCATION PER SITE)



UPPER FLOOR HVAC PLAN



MAIN FLOOR HVAC PLAN

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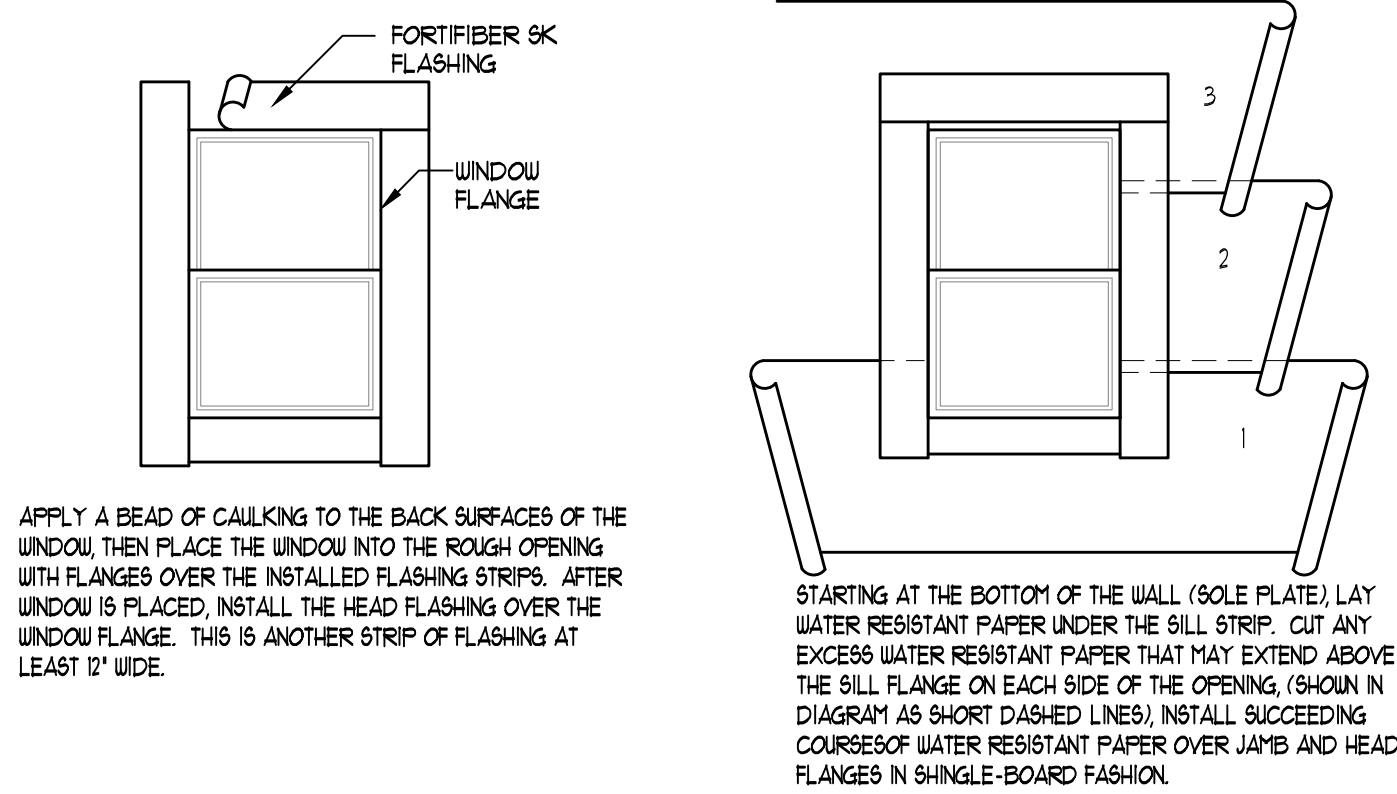
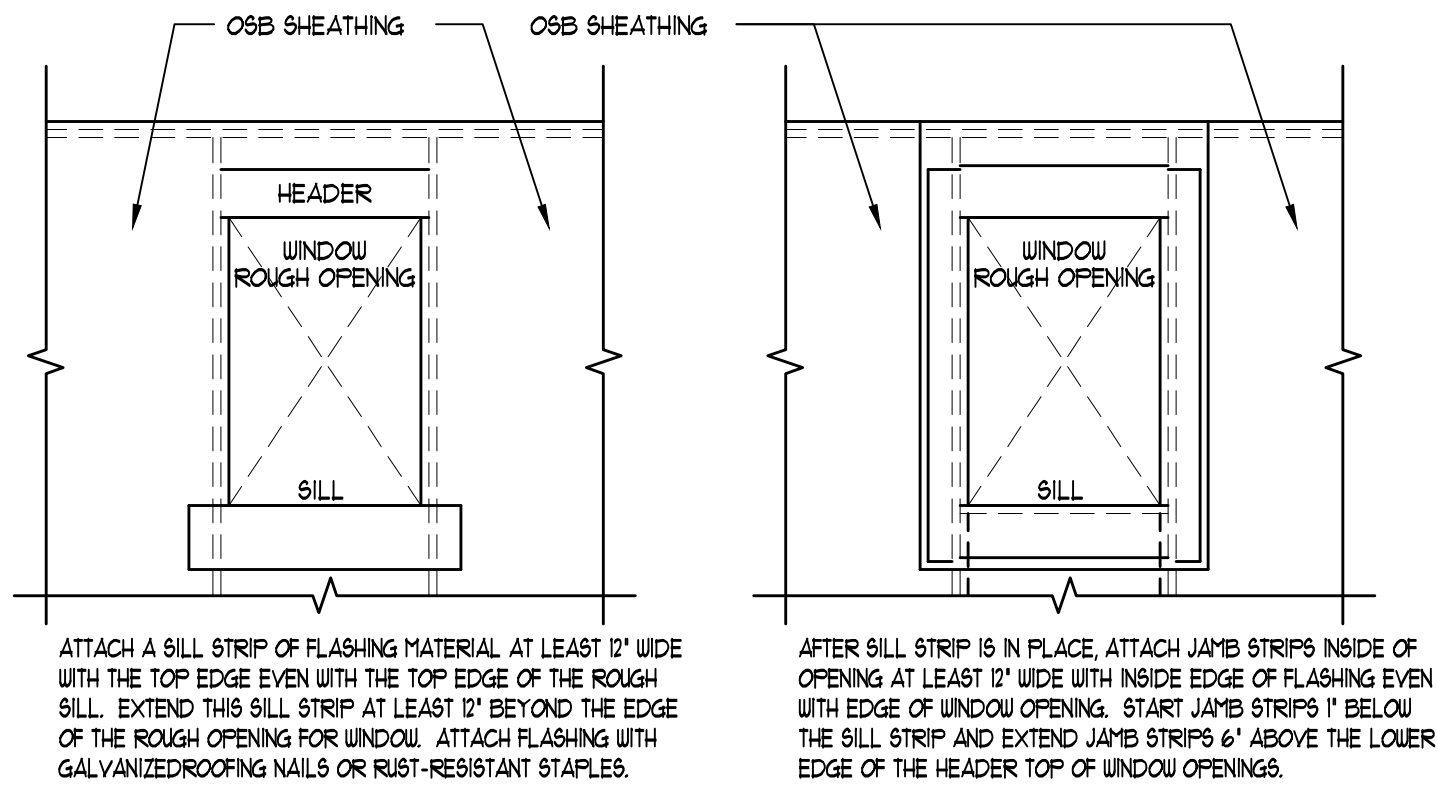
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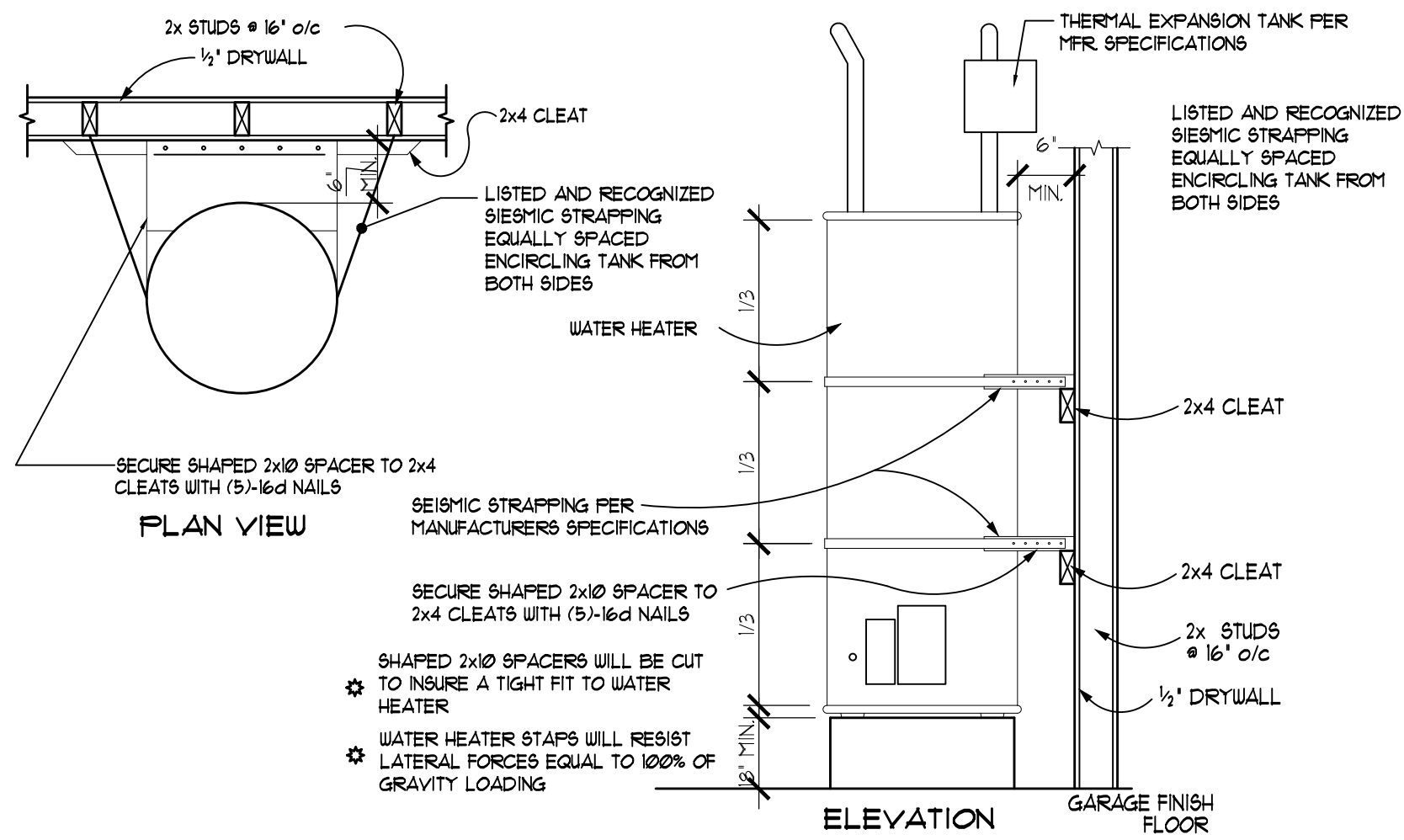
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Home Design

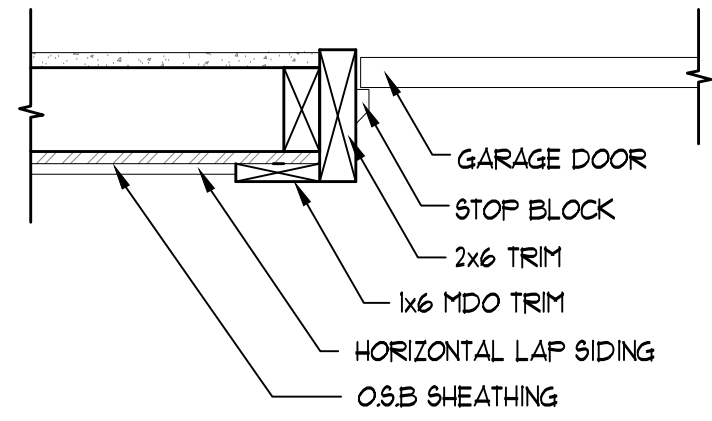
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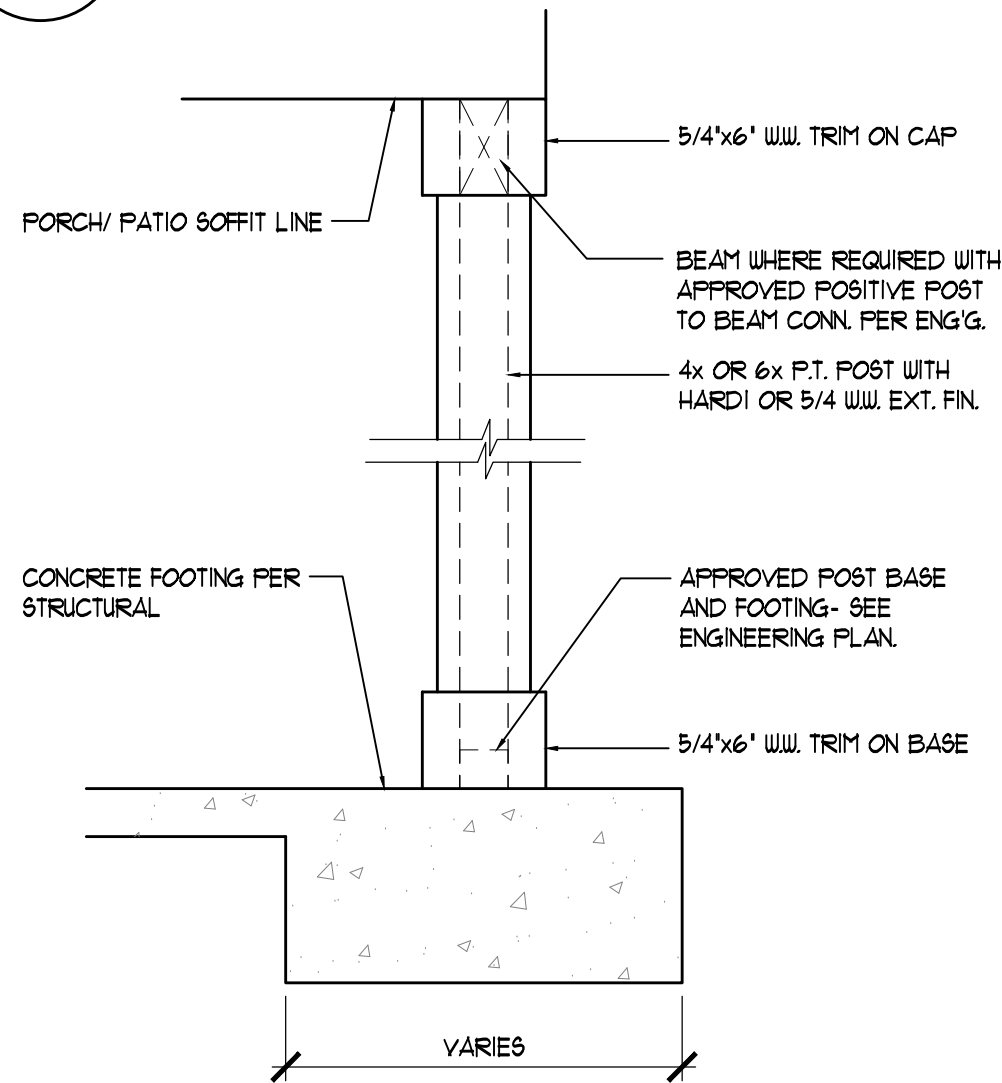
1 WINDOW FLASHING DETAIL N.T.S.



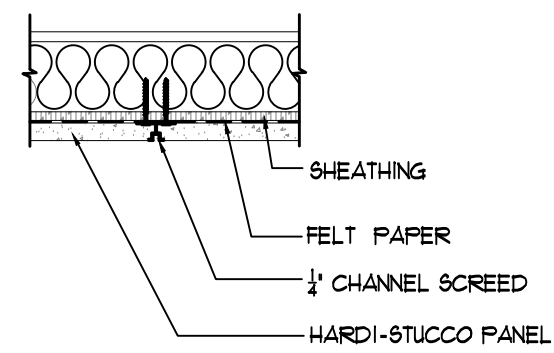
11 WATER HEATER SEISMIC STRAPPING N.T.S.



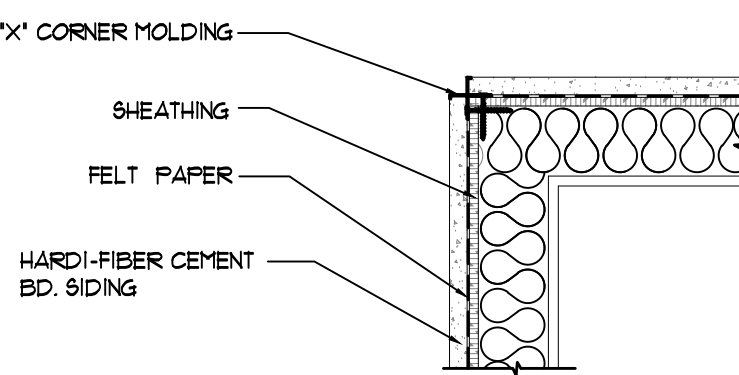
3 GARAGE DOOR TRIM DETAIL N.T.S.



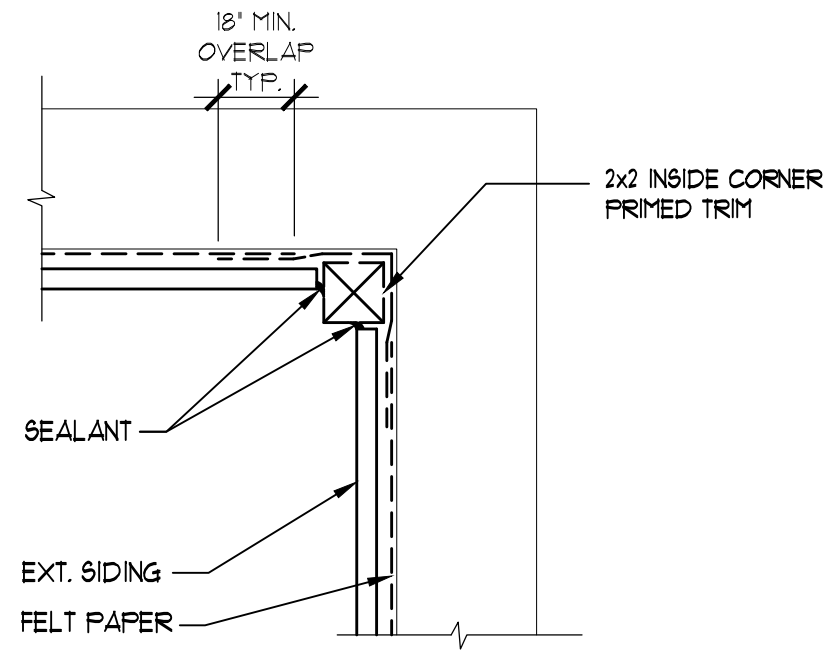
8 WRAP POST DETAIL N.T.S.



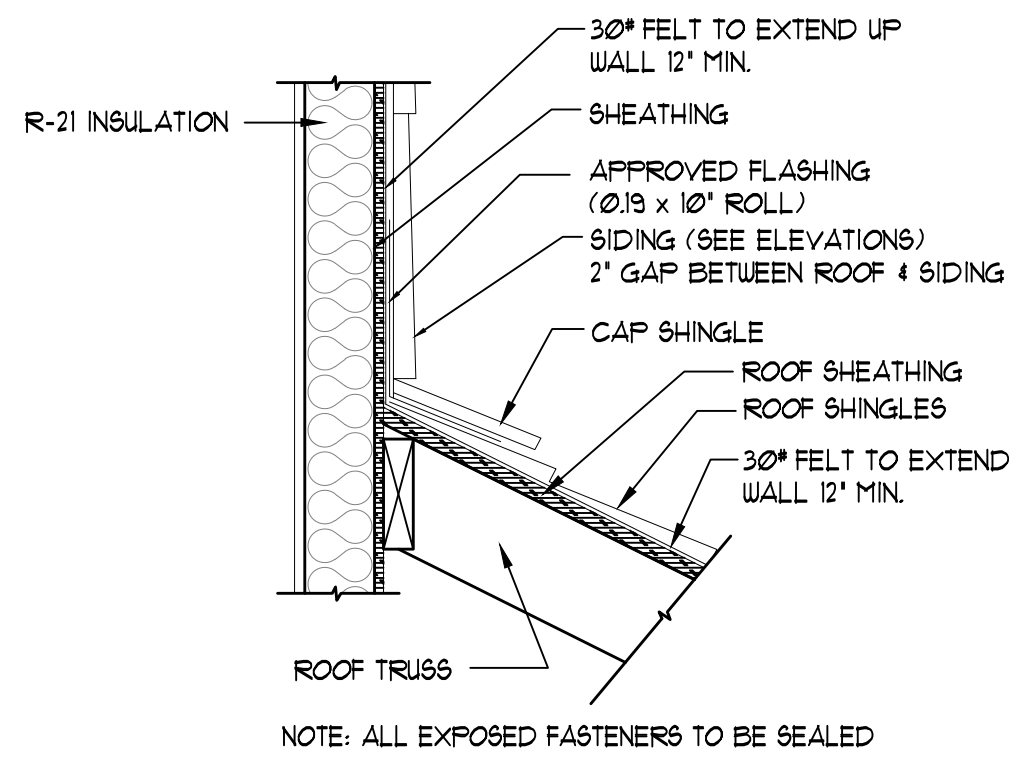
12 1/4 CHANNEL SCREED N.T.S.



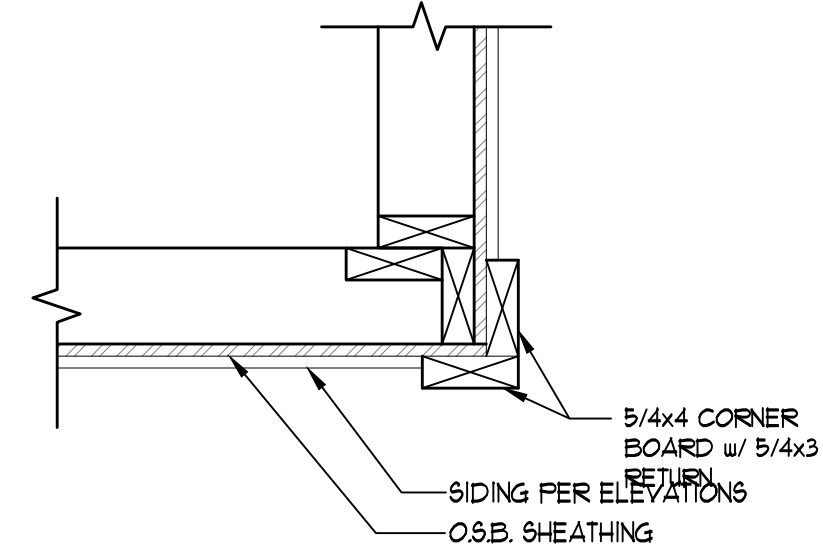
13 "X" CORNER MOLDING DETAIL N.T.S.



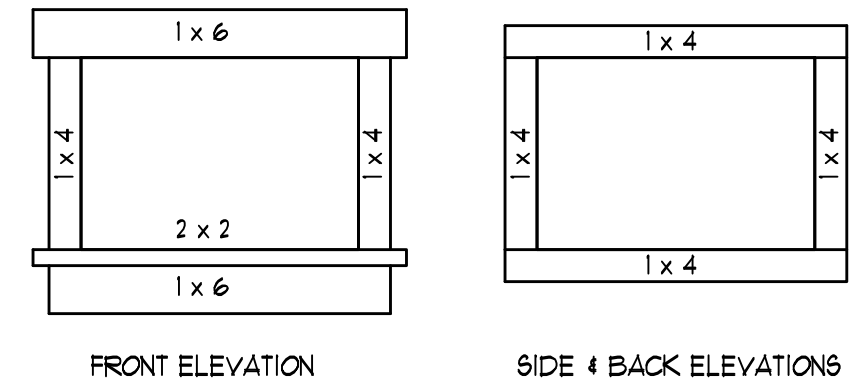
4 INSIDE CORNER TRIM DETAIL N.T.S.



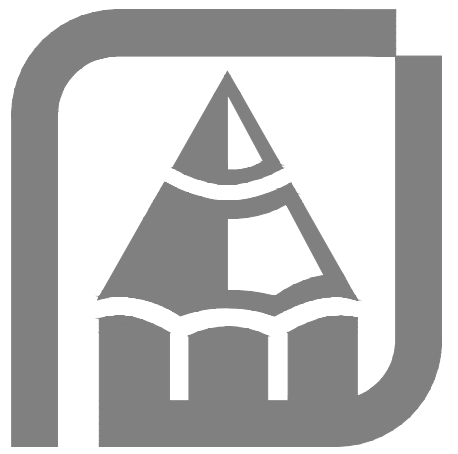
9 ROOF/WALL FLASHING DETAIL N.T.S.



5 CORNER TRIM DETAIL N.T.S.



10 WINDOW TRIM DETAIL N.T.S.



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[D-1]

Units - A&B

Units - A&B

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

Units - A&B

[illegible][illegible]

Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the Washington State Energy Code (WSEC) and ACCA Manual J and S. This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.

Please complete the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you prefer in the drop-down options, please contact the WSU Energy Program at energycode@energy.wsu.edu or (360) 956-2042 for assistance.

Project Information Plan: 104 HC Home Duplex _____ _____ _____		Contact Information (Planned) Home Design (253) 297-8040 _____ _____ _____	
Heating System Type: ☐ All Other Systems ☒ Heat Pump			
To see detailed instructions for each section, place your cursor on the word "Instructions"			
Design Temperature Instructions Fahrenheit		Design Temperature Difference (ΔT) $\Delta T = \text{Winter (°F) Design} - \text{Outdoor Design Temp}$	
Area of Building Instructions Footsq		Design Temperature Difference (ΔT) 51	
Conditioned Floor Area Instructions Conditioned Floor Area (sq ft)		1,854	
Average Ceiling Height Instructions Average Ceiling Height (ft)		9.0	
Glazing and Doors Instructions U-0.28		10,776 U-Factor X Area = UA 0.280 X 337 = 94.35 U-Factor X Area = UA 0.50 X ____ = ____	
Skylights Instructions U-0.28		0.028 X Area = UA 0.028 X 971 = 25.25 U-Factor X Area = UA No selection	
Insulation Attic Instructions R-49		U-Factor X Area = UA 0.028 X 971 = 25.25 U-Factor X Area = UA No selection	
Single Rafter or Joist Vaulted Ceilings Instructions Select R-Value		U-Factor X Area = UA 0.056 X 1,527 = 85.51 U-Factor X Area = UA No selection	
Above Grade Walls (see Figure 1) Instructions R-21 Intermediate		U-Factor X Area = UA 0.028 X 971 = 24.28 U-Factor X Area = UA No selection	
Floors Instructions R-10		U-Factor X Length = UA No selection	
Below Grade Walls (see Figure 1) Instructions Select R-Value		U-Factor X Length = UA No selection	
Slab Below Grade (see Figure 1) Instructions Select R-Value		U-Factor X Length = UA No selection	
Slab on Grade (see Figure 1) Instructions Select R-Value		U-Factor X Length = UA No selection	
Location of Ducts Instructions Unconditioned Space		Duct Leakage Coefficient 1.10	
Envelope of UA Sum of UA x ΔT 11,699 Btu / Hour Air Leakage Heat Load Volume x 0.6 x ΔT x 0.018 9,240 Btu / Hour Building Design Heat Load Air leakage + envelope heat loss 20,939 Btu / Hour Building and Duct Heat Load Ducts in unconditioned space: sum of building heat loss x 1.10 Ducts in conditioned space: sum of building heat loss x 1 Maximum Heat Equipment Output 28,781 Btu / Hour Building and duct heat loss x 1.10 for forced air furnace Building and duct heat loss x 1.25 for heat pump		229.39 11,699 Btu / Hour 9,240 Btu / Hour 20,939 Btu / Hour 23,033 Btu / Hour 28,781 Btu / Hour	

Figure 1

(10/24)

2018 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family – New & Additions (effective February 1, 2021)

These requirements apply to all IRC building types, including detached one- and two-family dwellings and multiple single-family dwellings (townhouses).

Project Information	Contact Information
IRC Homes Duplex 	Rueppell Homes Design 253-297-8040

Instructions: This single-family project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. Based on the size of the structure, the appropriate number of additional credits are checked as chosen by the permit applicant.

Provide all information from the following tables as building permit drawings: Table R402.1 – Insulation and Fenestration Requirements by Component, Table R406.2 – Fuel Normalization Credits and 406.3 – Energy Credits.

Authorized Representative	Benny Pascual	Digitally signed by Benny Pascual Date: 2022.03.10 07:53:28 -0800	Date	03/18/2021
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All Climate Zones (Table R402.1.1)		
	R-Value *	U-Factor *
Fenestration U-Factor ^b	n/a	0.30
Skylight U-Factor ^b	n/a	0.50
Glazed Fenestration SHGC ^{b,c,d}	n/a	n/a
Ceiling ^e	49 f	0.026
Wood Frame Wall ^{g,h}	21 int	0.056
Floor	30	0.029
Below Grade Wall ^{h,i}	10/15/21 int + TB	0.042
Slab ^h R-Value & Depth	10, 2 ft	n/a

R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the compressed R-value of the insulation from Appendix Table A101.4 shall not be less than the R-value specified in the table.

a The fenestration U-factor column excludes skylights.

b "10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the exterior of the wall, or R-21 cavity insulation with a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the exterior or exterior of the wall. "5TB" means R-5 thermal break between floor slab and basement wall.

d R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.

e For single rafter- or joist-valued ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.

f R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.

g For lo structures developed in compliance with Standard ICC 400, lo walls shall meet the requirements for climate zone 5 ICC 400.

h Int. (intermediate framing) denotes framing and insulation as described in Section A103.2 including standard framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

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Each dwelling unit **in a residential building** shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

1. **Small Dwelling Unit: 3 credits**
 Dwelling units less than 1,500 sf in conditioned floor area with less than 300 sf of fenestration area.
2. **Additions to existing building** that are greater than 500 sf of heated floor area but less than 1,500 sf.
3. **Medium Dwelling Units: 6 credits**
 All dwelling units that are not included in #1 or #3
3. **Large Dwelling Unit: 7 credits**
 Dwelling units exceeding 5,000 sf of conditioned floor area
4. **Additions less than 500 square feet: 1.5 credits**
All other additions shall meet 1-3 above

Before selecting your credits on this Summary table, review the details in Table 406.3 (Single Family), on page 4.

Summary of Table R406.2			
Heating Options	Fuel Normalization Descriptions	Credits - select ONE heating option	User Notes
1	Combustion heating minimum NAECA ³	0.0	☐
2	Heat pump ⁴	1.0	☒
3	Electric resistance heat only - furnace or zonal	-1.0	☐
4	DHP with zonal electric resistance per option 3.4	0.5	☐
5	All other heating systems	-1.0	☐
Energy Options	Energy Credit Option Descriptions	Credits - select ONE energy option from each category ⁵	
1.1	Efficient Building Envelope	0.5	☐
1.2	Efficient Building Envelope	1.0	☐
1.3	Efficient Building Envelope	0.5	☒
1.4	Efficient Building Envelope	1.0	☐
1.5	Efficient Building Envelope	2.0	☐
1.6	Efficient Building Envelope	3.0	☐
1.7	Efficient Building Envelope	0.5	☐
2.1	Air Leakage Control and Efficient Ventilation	0.5	☒
2.2	Air Leakage Control and Efficient Ventilation	1.0	☐
2.3	Air Leakage Control and Efficient Ventilation	1.5	☐
2.4	Air Leakage Control and Efficient Ventilation	2.0	☐
3.1	High Efficiency HVAC	1.0	☐
3.2	High Efficiency HVAC	1.0	☒
3.3	High Efficiency HVAC	1.5	☐
3.4	High Efficiency HVAC	1.5	☐
3.5	High Efficiency HVAC	1.5	☐
3.6 ⁶	High Efficiency HVAC	2.0	☐
4.1	High Efficiency HVAC Distribution System	0.5	☐
4.2	High Efficiency HVAC Distribution System	1.0	☒

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Summary of Table R406.2 (cont.)				
Energy Options	Energy Credit Option Descriptions (cont.)	Credits to select ONE energy option from each category ¹		
5.1 ²	Efficient Water Heating	0.5	☐	
5.2	Efficient Water Heating	0.5	☐	
5.3	Efficient Water Heating	1.0	☐	
5.4	Efficient Water Heating	1.5	☐	
5.5	Efficient Water Heating	2.0	☒	
5.6	Efficient Water Heating	2.5	☐	
6.1 ³	Renewable Electric Energy (3 credits max)	1.0	☐	
7.1	Appliance Package	0.5	☐	
Total Credits		6.0	CLEAR FORM	

a. An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.

b. Equipment listed in Table C403.3.2(4) or C403.3.2(5)

c. Equipment listed in Table C403.3.2(1) or C403.3.2(2)

d. **You cannot select more than one option from any category EXCEPT in category 5. Option 5.1 may be combined with options 5.2 through 5.6. See Table 406.3.**

e. 1.0 credit for each 1,200 kWh of electrical generation provided annually, up to 3 credits max.
 See the complete Table R406.2 for all requirements and option descriptions.

MECHANICAL

HEATING EQUIPMENT. ALL WARM-AIR FURNACES SHALL BE LISTED AND LABELED BY AN APPROVED AGENCY AND INSTALLED TO LISTED SPECIFICATIONS. NO WARM-AIR FURNACES SHALL BE INSTALLED IN A ROOM USED OR DESIGNED TO BE USED AS A BEDROOM, BATHROOM, CLOSET OR IN ANY ENCLOSED SPACE WITH ACCESS ONLY THROUGH SUCH ROOM OR SPACE, EXCEPT DIRECT VENT FURNACE, ENCLOSED FURNACES AND ELECTRIC HEATING FURNACES. LIQUID PETROLEUM GAS-BURNING APPLIANCES SHALL NOT BE INSTALLED IN A PIT, BASEMENT OR SIMILAR LOCATION WHERE HEAVIER THAN AIR GAS MIGHT ACCUMULATE. GAS-BURNING APPLIANCES SHALL NOT BE INSTALLED IN AN ABOVE GRADE OR UNDER FLOOR SPACE OR BASEMENT UNLESS SUCH LOCATION IS PROVIDED WITH AN APPROVED MEANS FOR REMOVAL OF UNBURNED GAS. HEATING AND COOLING EQUIPMENT LOCATED IN A GARAGE WHICH GENERATES A GLOW, SPARK OR FLAME CAPABLE OF IGNITING FLAMMABLE VAPORS SHALL BE INSTALLED WITH THE PILOTS AND BURNERS FOR HEATING ELEMENTS AND SWITCHES AT LEAST 18' ABOVE THE FLOOR LEVEL.

TEMPERATURE CONTROL THE PRIMARY SPACE CONDITIONING SYSTEM WITHIN EACH DWELLING UNIT SHALL BE PROVIDED WITH AT LEAST ONE PROGRAMMABLE THERMOSTAT FOR THE REGULATION OF TEMPERATURE (WSEC.403.1)

VENTILATION EVERY FACTORY BUILT CHIMNEY, TYPE L VENT, TYPE B GAS VENT OR TYPE BW GAS VENT SHALL BE INSTALLED IN ACCORDANCE WITH THE TERMS OF ITS LISTING, MFR'S INSTALLATION INSTRUCTIONS AND APPLICABLE CODE REQUIREMENTS. A TYPE L VENTING SYSTEM SHALL TERMINATE NOT LESS THAN 2 FEET ABOVE THE HIGHEST POINT WHERE THE VENT PASSES THROUGH THE ROOF OF THE BUILDING AND AT LEAST 2' HIGHER THAN ANY PORTION OF THE BUILDING WITHIN 10' OF THE VENT.

UTILITY ROOM NOTES/MAKE UP AIR:

THE EXHAUST DUCT IS CONCEALED WITHIN THE BUILDING CONSTRUCTION. THE EQUIVALENT LENGTH OF THE EXHAUST DUCT SHALL BE IDENTIFIED ON A PERMANENT LABEL OR TAG. THE LABEL OR TAG SHALL BE LOCATED WITHIN 6 FEET OF THE EXHAUST DUCT CONNECTION.

• 120 SQ. INCH TRANSFER GRILL PER IRC G2439.4 (6146)

MAKE UP AIR WHERE A CLOSET IS DESIGNED FOR THE INSTALLATION OF A CLOTHES DRYER, AN OPENING HAVING AN AREA OF NOT LESS THAN 100 SQ. INCHES FOR MAKE UP AIR SHALL BE PROVIDED IN THE CLOSET ENCLOSURE, OR MAKE UP AIR SHALL BE PROVIDED BY OTHER MEANS.

CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS				
FLOOR AREA (SQ. FT.)	NUMBER OF BEDROOMS			
	1	2	4	>5
	AIRFLOW IN CFM			
< 500	3.0	3.0	3.5	4.5
500 - 1000	3.0	3.5	4.0	5.0
1001 - 1500	3.0	4.0	4.5	5.5
1501 - 2000	3.5	4.5	5.0	6.0
2001 - 2500	4.0	5.0	5.5	6.5
2501 - 3000	4.5	5.5	6.0	7.0
3001 - 3500	5.0	6.0	6.5	7.5
3501 - 4000	5.5	6.5	7.0	8.0
4001 - 4500	6.0	7.0	7.5	8.5
> 4500	7.5	8.5	9.0	9.5

INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS						
RUN-TIME % IN EACH 4-HOUR SEGMENT	25%	33%	50%	66%	75%	100%
FACTOR	4	3	2	15	13	10

MINIMUM REQUIRED EXHAUST RATES	
AREA TO BE VENTED	EXHAUST RATES
KITCHENS	100 CFM INTERMITTENT OR 25 CFM CONTINUOUSLY
BATHROOM / LAUNDRY / SIMILAR AREAS	50 CFM INTERMITTENT OR 20 CFM CONTINUOUSLY

[illegible]

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Home Design

Plan: 1864-1864

HCM HOMES DUPLEX

Date: 04/11/23

Revision Date: 09/20/23

Drawn by: SM/BP

Phone: (253) 297-8040

[E-1]