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1. EXTERIOR ELEVATIONS, ROOF PLAN,
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4. NOTES AND SPECIFICATIONS

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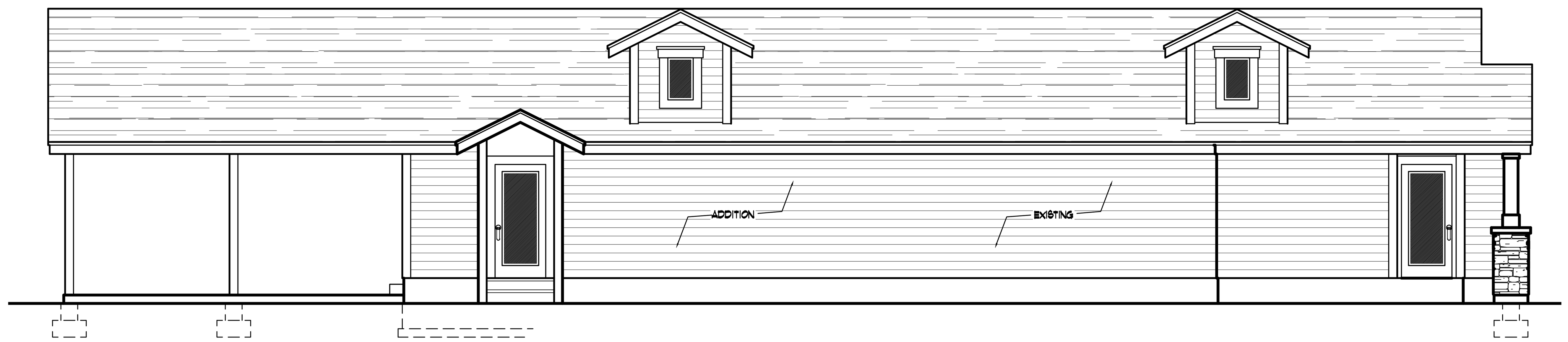
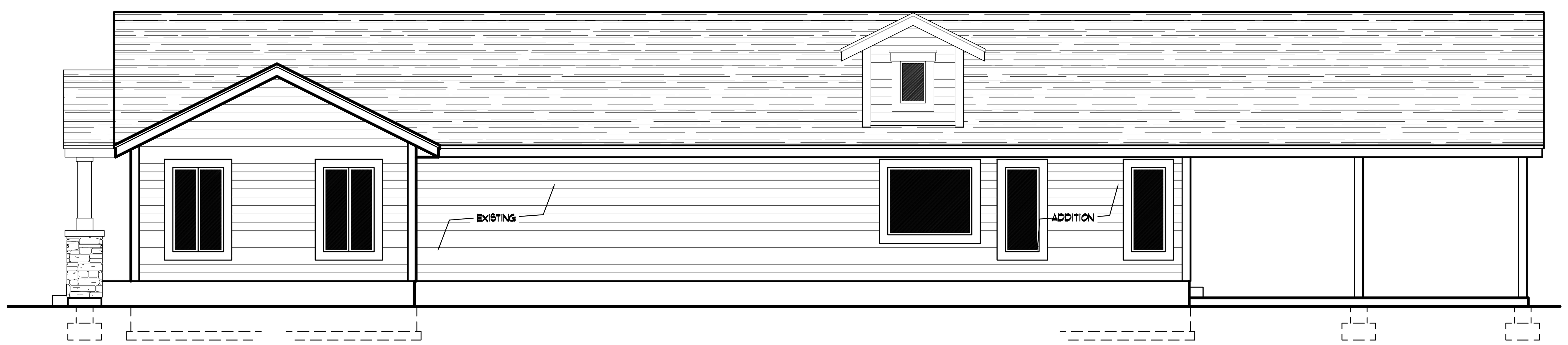


LEFT ELEVATION

SCALE: 3/16"=1'-0"



RIGHT ELEVATION

SCALE: 3/16"=1'-0"

ENERGY CREDITS (UNDER 1500 sq ft total)

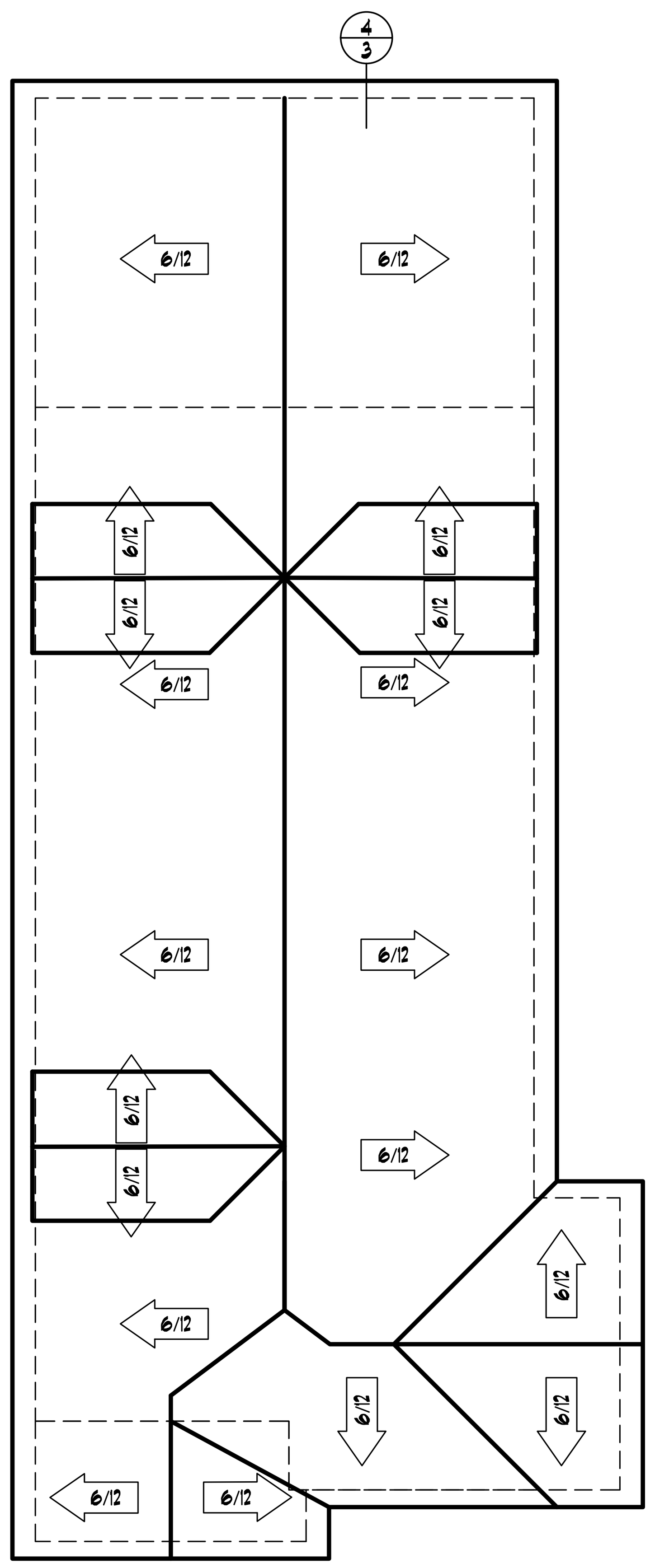
System Type 2 - For an initial heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(2) and supplemental heating provided by electric resistance or a combustion furnace meeting minimum standards listed in Table C403.3.2(5)b

Option 1.2- Prescriptive compliance is based on Table R402.1.3 with the following modifications:
Vertical fenestration U = 0.25
FloorR-38
Slab on grade R-10 perimeter and under entire slab
Below grade slab R-10 perimeter and under entire slab
or
Compliance based on Section R402.1.5: Reduce the Total conductive UA by 15%.

Option 2.1- Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 2.0 air changes per hour maximum at 50 Pascals, or for R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to 0.25 cfm/ft2 maximum at 50 Pascals
and
All whole house ventilation requirements as determined by Section M1505.3 of the International Residential Code or Section 403.8 of the International Mechanical Code shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.65.

Option 3.3- Air-source, centrally ducted heat pump with minimum HSPF 2 of 8.1 (HSPF of 9.5).
In areas where the winter design temperature as specified in Appendix RC is 23°F or below, a cold climate heat pump found on the NEEP cc ASHP qualified product list shall be used.

Option 5.6- Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification

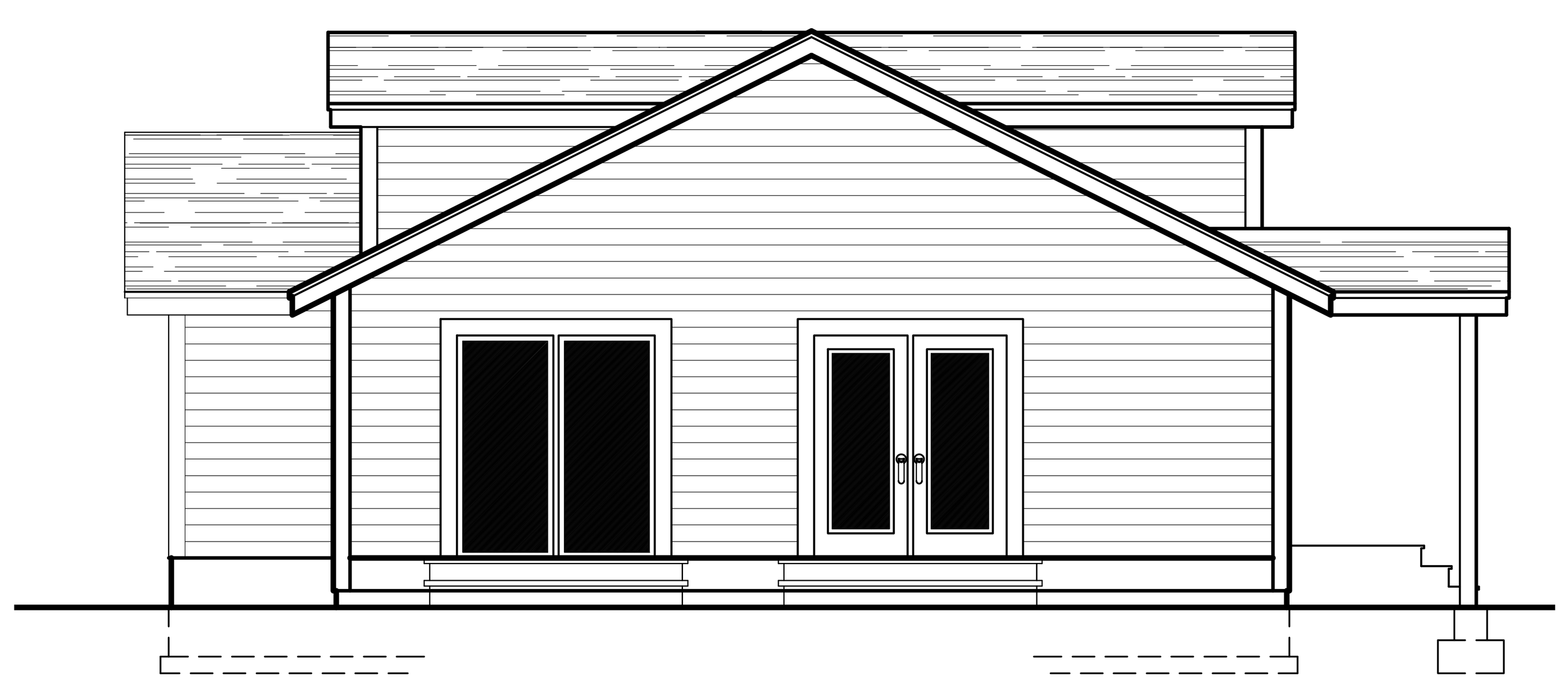


NOTES:

ROOF SLOPE - 6 TO 12, TYP.
ROOF OVERHANG - 16" AT EVES, 12" AT GABLES, TYP.
ROOF VENTILATION - AREA / 150 SQ FT
ICE BARRIER REQUIRED AND SHALL EXTEND FROM THE LOWEST POINT OF ROOM TO NOT LESS THAN 24" INSIDE OF INTERIOR WALL LINE

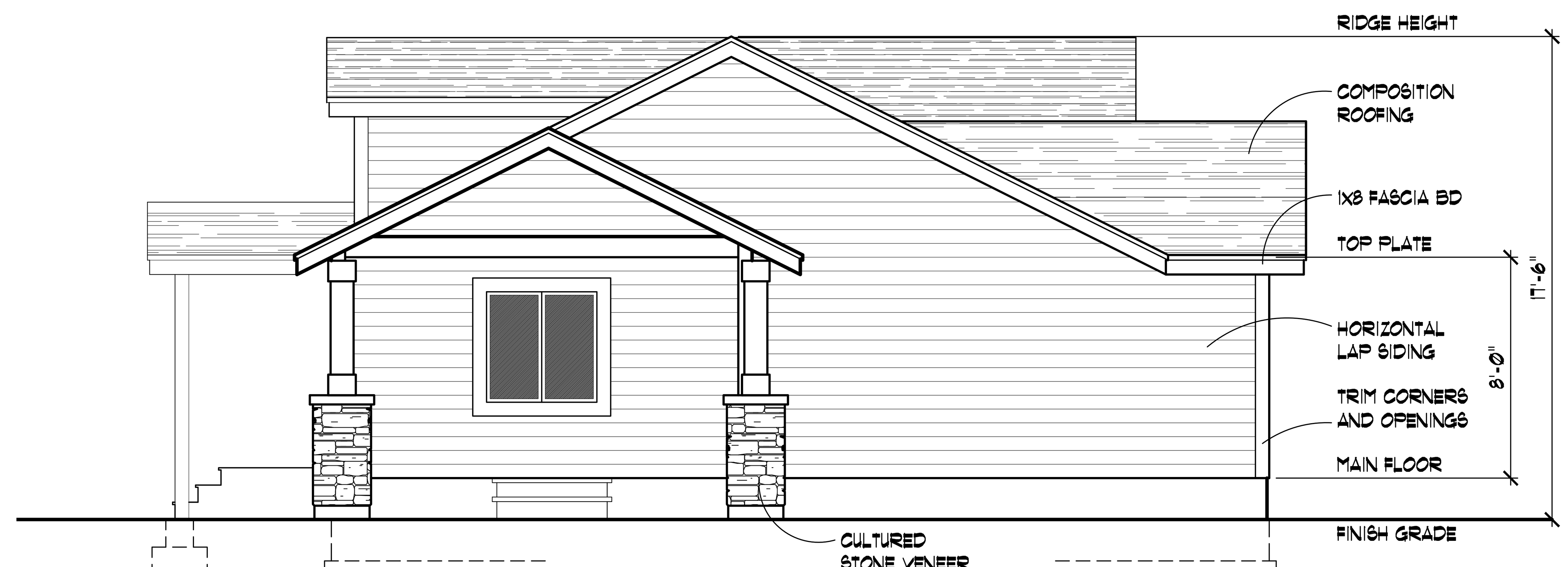
ROOF PLAN

SCALE: 1/8"=1'-0"



REAR ELEVATION

SCALE: 3/16"=1'-0"



FRONT ELEVATION

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

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EXTERIOR ELEVATIONS
ROOF PLAN
RICK & LORI JORAN

DRAWN BY: TJ
DATE: 8/26/2024
SCALE: AS NOTED
JOB NO: 667-ADD
SHEET 1
OF 4 SHEETS

WALL BRACING NOTES

Continuous Sheathing Method - 2018 IRC Section 602.10.4.2
Length requirements for Continuously Sheathed Wood Structural Panel (CS-WSP)

Adjacent clear opening height to braced panel	Min. Length of Braced Wall Panel				
	8'	9'	10'	11'	12'
64"	24"	27"	30"	33"	36"
68"	26"	27"	30"	33"	36"
72"	27"	27"	30"	33"	36"
76"	30"	29"	30"	33"	36"
80"	32"	30"	30"	33"	36"
84"	35"	32"	32"	33"	36"
88"	38"	35"	33"	33"	36"
92"	43"	37"	35"	35"	36"
96"	48"	41"	38"	36"	36"

For openings greater than 96" refer to Table R602.10.5

1. Exterior braced wall panel shall begin within 10 feet from each end of a braced wall line. The distance between adjacent edges of braced wall panels along a braced wall line shall be no greater than 20 feet.

Braced wall lines shall be continuously sheathed with 7/16" APA RATED SHEATHING 24/16, exposure 1, as a continuously sheathed wall.

Panel edge nailing is 8d Common (2.5" × 0.131") @ 6" o.c. Panel interior or field nailing is 8d Common (2.5" × 0.131") @ 12" o.c. Edge blocking is required at braced wall panels only.

2. Stagger top plate splices by 2'-0" min. and nail splice with 16d @ 3".

3. Anchor bolts should be installed within 12" of the end of a wall or the end of a plate at a splice. Anchor bolt min. embedment is 7".

4. Install floor and roof sheathing with face grain perpendicular to supports with long edges continuous over 2 or more supports and short edges staggered.

Roof sheathing shall be 7/16" APA RATED SHEATHING 24/16, exposure 1. Nail with 8d @ 6" at panel edges and 8d @ 12" at field.

Floor sheathing shall be 3/4" T&G APA STURD-I-FLOOR 24 O.C. or equal. Glue and nail with 8d ring or screw shank @ 6" at panel edges and 8d @ 12" at field.

5. Interior braced walls to be gypsum board with minimum 1/2" thickness placed on studs spaced a maximum of 24" o.c. and fastened at 7" o.c. with gypsum board nails, 0.086" in diameter, 1-5/8" long, 9/32" head.

6. For alternate braced walls refer to details provided on plans.

HEADERS

1. All exterior headers are (2)- 2x10, unless otherwise noted on the plan.

2. For specific header sizes refer to Tables R602.7(1), R602.7(2), and R602.7(3)

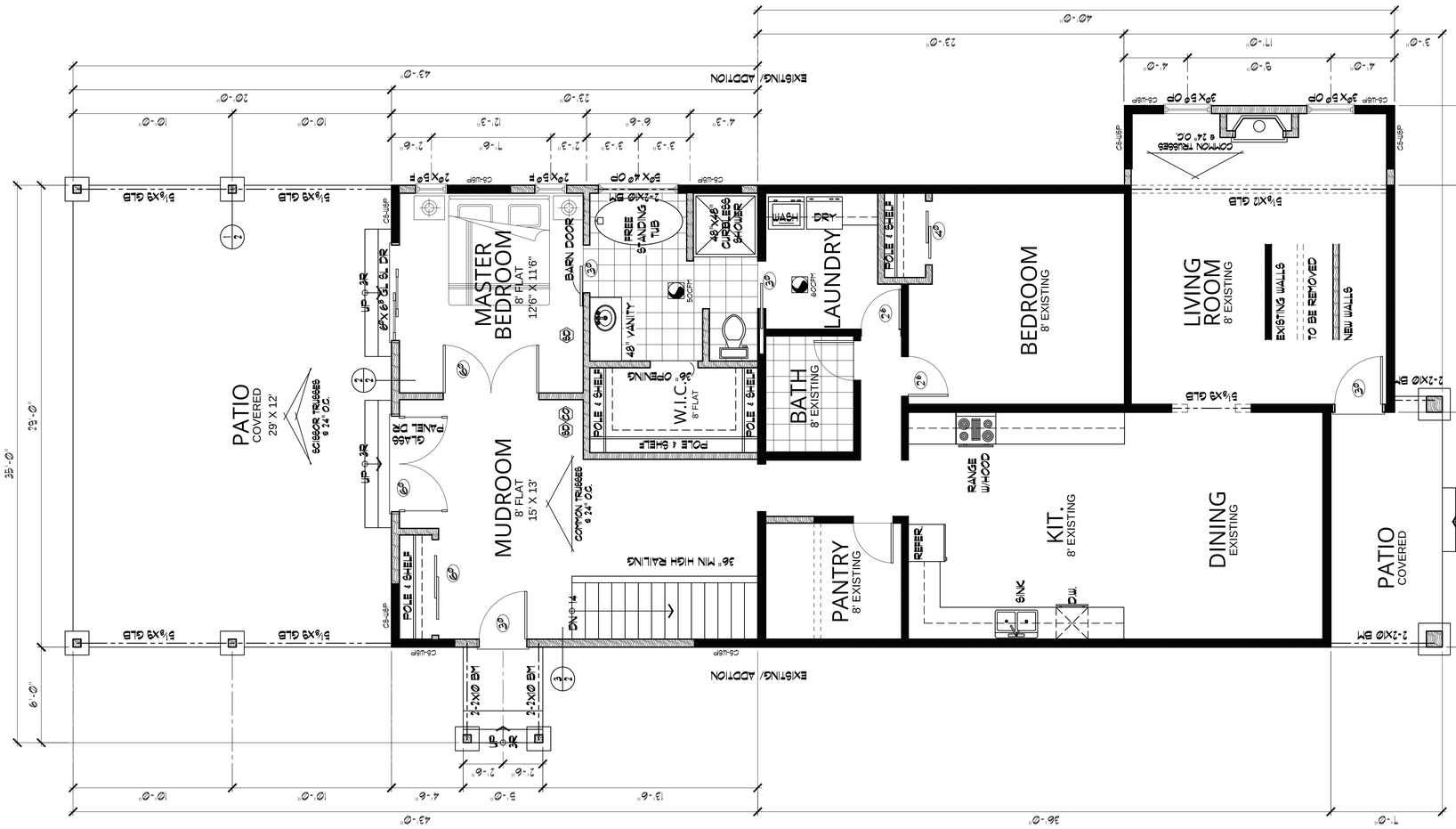
4. For all interior header sizes & locations, refer to plan.

HEAT DETECTOR

R314.2.3 New Attached Garages

A heat detector or heat alarm rated for the ambient outdoor temperatures and humidity shall be installed in new garages that are attached to or located under new and existing dwellings. Heat detectors and heat alarms shall be installed in a central location and in accordance with the manufacturer's instructions.

Exception: Heat detectors and heat alarms shall not be required in dwellings without commercial power.



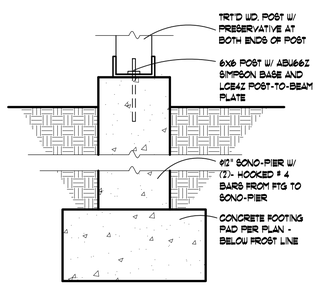
NOTE:

ALL ANGLES ARE 45° UNLESS OTHERWISE NOTED

ALL WINDOWS @ HEADER HEIGHT OF 6'-8" A.F.F. UNLESS THERE IS TRANSOM(S)

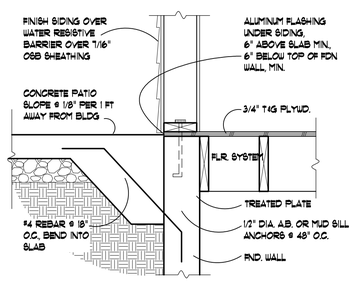
MAIN FLOOR PLAN

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



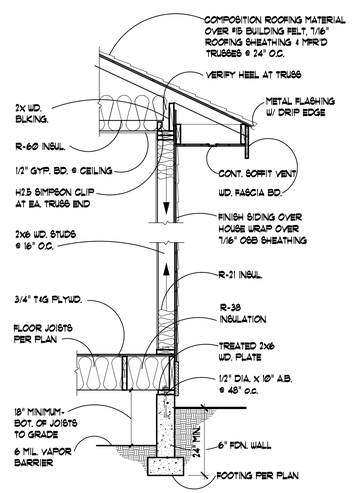
1 PIER DETAIL

SCALE: 1"=1'-0"



2 PATIO/ HOUSE DETAIL

SCALE: 1"=1'-0"



3 WALL SECTION

SCALE: 1/2"=1'-0"

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CONTENTS
MAIN FLOOR PLAN
TYPICAL DETAILS

RICK & LORI JORAN

DRAWN BY: TJ
DATE: 8/26/2024
SCALE: AS NOTED
JOB NO.: 661-ADD
SHEET 2
OF 4 SHEETS

Fire protection of floors.

R302.13 Fire protection of floors. Floor assemblies, that are not required elsewhere in this code to be fire-resistance rated, shall be provided with a ½-inch (12.7 mm) gypsum wallboard membrane, 5/8-inch (16 mm) wood structural panel membrane, or equivalent on the underside of the floor framing member. Penetrations or openings for ducts, vents, electrical outlets, lighting, devices, luminaires, wires, speakers, drainage, piping, and similar openings or penetrations shall be permitted.

Exceptions:
1. Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with Section P2904, NFPA13D, or other approved equivalent sprinkler system.

2. Floor assemblies located directly over a crawl space not intended for storage or fuel-fired appliances.

3. Portions of floor assemblies can be unprotected when complying with the following:

3.1. The aggregate area of the unprotected portions shall not exceed 80 square feet per story

3.2. Fire blocking in accordance with Section R302.11.1 shall be installed along the perimeter of the unprotected portion to separate the unprotected portion from the remainder of the floor assembly.

4. Wood floor assemblies using dimension lumber or structural composite lumber equal to or greater than 2-inch by 10-inch (50.8 mm by 254 mm) nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance.

HEADERS

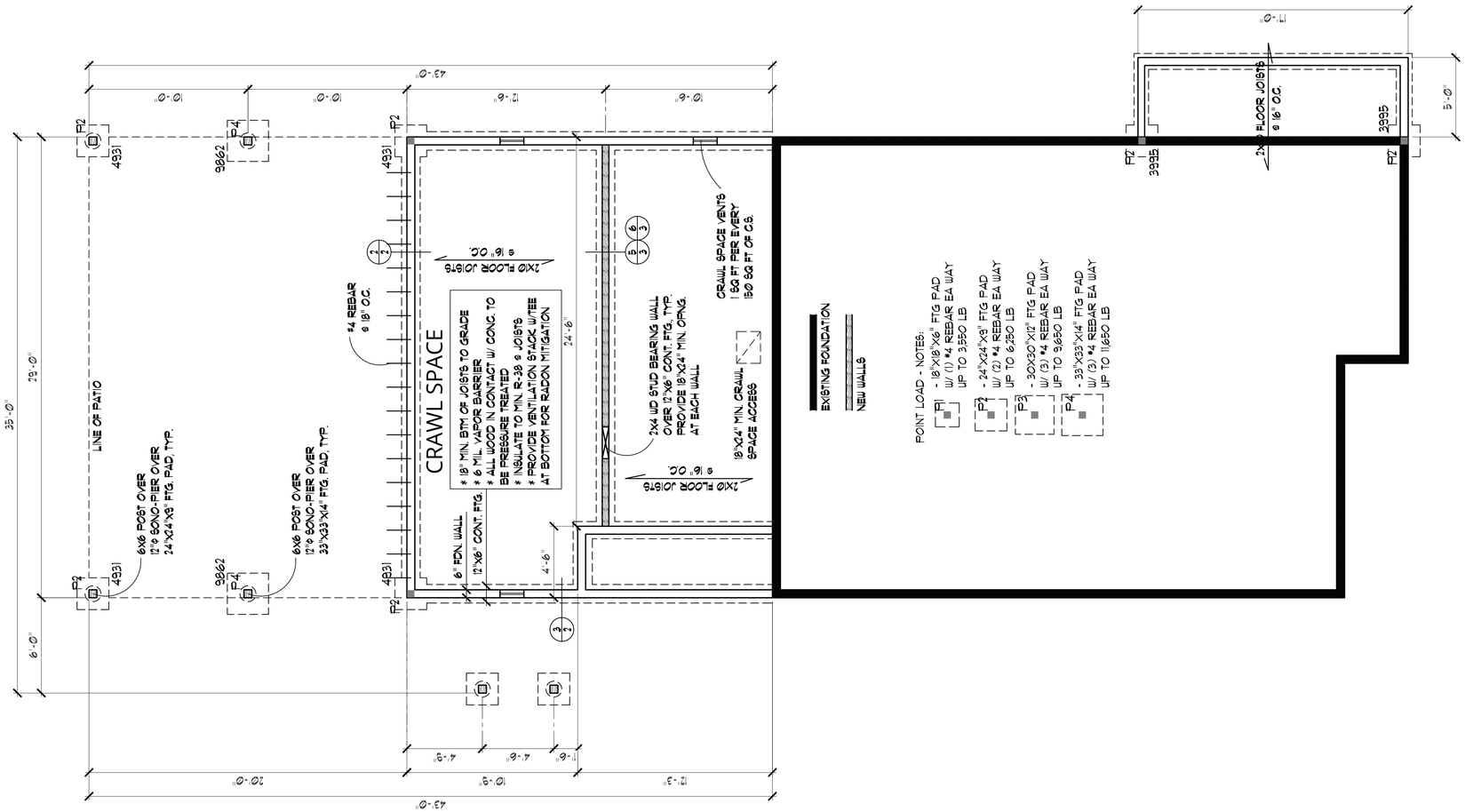
1. All headers supporting roof and ceiling to be (2)- 2x10 minimum for max. span of 6'1" with 2 jack studs, unless otherwise noted on plan.

2. Headers supporting roof, ceiling & center bearing floor to be (3)- 2x10 minimum for max. span of 6'7" with 2 jack studs, unless otherwise noted on plan.

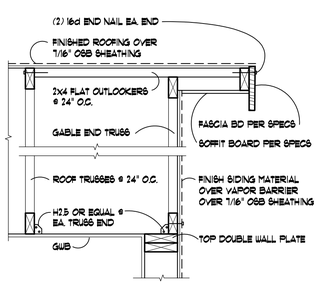
3. All headers supporting roof, ceiling, and two center bearing floors shall be (3)- 2x10 minimum for max. span of 5'7" with 2 jack studs, unless otherwise noted on plan.

4. To reduce sizes for particular openings, refer to plan or to 2018 IRC table R602.7c(1).

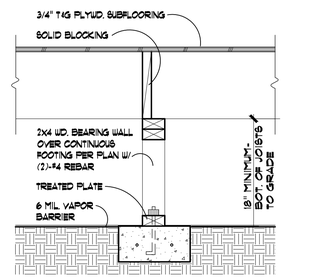
5. For all interior header sizes & locations, refer to plan.



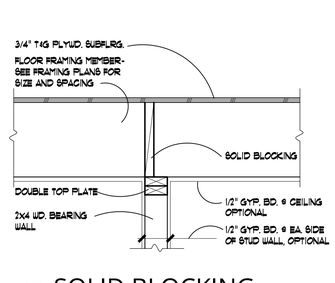
FOUNDATION PLAN
SCALE: 1/4"=1'-0"



4 OUTLOOKER
SCALE: 1"=1'-0"



5 BEARING @ CRAWL
SCALE: 1"=1'-0"



6 SOLID BLOCKING
SCALE: 1"=1'-0"

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FOUNDATION PLAN
TYPICAL DETAILS

RICK & LORI JORAN

DRAWN BY: TJ
DATE: 8/26/2024
SCALE: AS NOTED
JOB NO: 661-ADD
SHEET 3
OF 4 SHEETS

NOTES AND SPECIFICATIONS

GENERAL NOTES

1. All construction to be in accordance with 2021 IRC, local, and state building code requirements.

2. The builder shall verify all dimensions and conditions on drawings and shall be responsible for all adjustments and corrections made to the drawings in the field.

3. Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job and this office must be notified of any variations from the dimensions and conditions on these drawings.

DESIGN REQUIREMENTS

Ground snow load:	40 lbs/sq.ft.
Wind speed, exposure:	115 mph, B
Seismic design category:	ISO 33 C
Weathering:	Severe
Frost line depth:	24"
Termites:	Slight to Moderate
Decay:	None to slight
Winter design temp:	10° F
Summer design temp:	96° F
Ice shield underlay:	Yes
Flood hazards:	FEMA map
Air freeze index:	1232
Mean annual temp:	47.2° F

LOADING SPECIFICATIONS

Design Loads, Design Category C:
Floor: DL 10# s.f. + LL 40# s.f. = 50# s.f.
Roof: DL 15# s.f. + LL 40# s.f. = 55# s.f.
Stairs: LL 100# s.f.
Decks: LL 60# s.f.
NOTE: Refer to 2021 I.R.C. for allowable unit stresses & consult local building code agency for allowable local loading conditions.

HEADERS

Allowance varies based on building width. Refer to Tables R602.7(1), R602.7(2), and R602.7(3)

For the purpose of general building practice:

1. All exterior headers are 2- 2x10, unless otherwise noted on the plan.

2. For all interior header sizes & locations, refer to plan.

FRAMING

1. Use 3/4" tongue and groove plywood subfloor nailed or screwed and glued, or as specified on drawings. See Table R503.2.1.1(1&2).

2. All joists or beams framing into beams, headers, or girders shall be supported with "U" type Simpson (or equal) beam hangers. All post/beam connections to be made with approved connectors where it is required.

3. Provide solid blocking between joists and rafters at bearing walls. Provide joist blocking at all intermediate supports (2021 IRC R502.7)

4. All plywood to be standard grades with exterior glue. Plywood nailing to be 8d common at 6" O.C. at edges and 12" O.C. at intermediate bearings. Install 7/16" roof sheathing APA rated sheathing for up to 40psf L.L., 15/32" APA rated sheathing for up to 65psf L.L., 3/4" floor sheathing with the face grain perpendicular to supports.

5. All exterior doors or doors to unheated spaces to be solid core and weatherstripped.

6. Doors between the garage and residence shall be 1-3/8" thick solid wood, solid or honeycomb core steel, or 20 minute fire-rated, and equipped with self closing device. (Sect. R302.5.1)

7. Minimum ceiling height in habitable rooms & kitchens to be 7'-0". Halls, bathrooms, stairwells, and toilet compartments can be reduced to 6'-8". Sloped ceiling min. 5'-0" where 50% is above 7'-0" (R305.1)

8. All joists under parallel bearing partitions and headers are to be doubled. (IRC R502.4)

9. Install Simpson H-2.5 tiedowns (or equal) at each rafter tail.

10. Foundation cripple studs over 4' shall not be less in size than the studding for an additional story. Foundation studs of bearing walls and partitions shall be thoroughly and effectively braced. Cripple walls supporting brace wall panels in Seismic categories D0, D1, & D2 shall also be built and braced per R602.9

11. Fire blocking required vertically at ceilings and floor level and horizontally at 10 ft intervals.

At openings such as vents, pipes, chimney, between stair stingers at top and bottom, and in concealed spaces with glass fiber or mineral wool insulation, 2" lumber or equivalent approved materials per IRC R302.11.

12. Provide 22"x30" access hatch to building attic areas. A minimum of 30" head clearance is required. (IRC R807.1)

13. Unless otherwise specified, use douglas-fir larch no. 2 or better.

14. Deck ledger connection to band joist.
For decks supporting a 60# live load plus 10# dead load (WAC R301.5), the connection between a deck ledger of pressure-preservative-treated Southern Pine, incised pressure-preservative-treated Hem-Fir and a 2 inch nominal rim ssolid-sawn pruce-pine-fir band joist bearing on a sill plate or wall plate shall be constructed with 1/2" lag screws @ 8" o.c. or per R507.9.1.3(1), bolts w/ washers in accordance w/ Table R507.2.3. Lag screws, bolts and washers shall be hot-dipped galvanized or stainless steel. The lateral load connection required by Section R507.1 for decks above 30" at any point shall be permitted to be in accordance with R507.9.2. Where the lateral load connection is provided in accordance with Figure R507.9.2(1), hold-down tension devices shall be installed in not less than two locations per deck within 24" of each end, and each device shall have an allowable stress design capacity of not less than 1500 pounds (6672 N).

15. Wood siding, sheathing and wall framing on the exterior of a building having a clearance of less than 6 inches from the ground or less than 2 inches measured vertically from concrete steps, patios, or similar horizontal surfaces exposed to weather must be protected against decay. (IRC R317.1)

16. Minimum 1 layer of No. 15 felt complying with ASTM D226, Type 1 or other approved weather-resistant material shall be applied over studs or sheathing of all exterior walls as required by R703.2. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer not less than 2". Where joints occur, felt shall be lapped not less than 6".

FOUNDATION & CONCRETE

Minimum concrete compressive strength to be 2500 PSI, 3500 PCI for porch, steps, carport and garage slabs. (Table R402.2). All foundation walls to comply with IRC section R404.1.1-2.

1. All footings to bear on firm undisturbed soil. All footings to extend below frost line (24" in Spokane County (SMC 17F.040.105), verify requirement with local building department). Foundations supporting wood to extend at least 6" above adjacent grade.

2. Section R401.2 of the 2021 IRC requires that foundation construction shall be capable of accommodating all loads according to Section R301 and of transmitting the resulting loads to the supporting soil. Fill soils that support footings and foundations shall be designed, installed and tested in accordance with accepted engineering practice. All footings shall comply with Section R403.

3. The grade away from foundation walls shall fall a minimum of 6 inches within the first 10 feet. Exception: Where lot lines, walls, slopes or other physical barriers prohibit 6 inches of fall within 10 feet, drains or swales shall be provided to ensure drainage away from the structure. Section R401.3 of the 2021 IRC requires that surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection so as not to create a hazard. Lots shall be graded so as to drain surface water away from foundation walls.

4. Section R401.4 of the 2021 IRC requires that in areas likely to have expansive, compressible, shifting or other unknown soil characteristics, the building official shall determine whether to require a soil test to determine the soil's characteristics at a particular location. This test shall be made by an approved agency using an approved method.

5. Foundation plates or sills to be bolted to foundation with 1/2"x10" anchor bolts embedded 7" into concrete @ 6'-0" o.c. and max. 12" from ends, with 3"x3"x1/4" steel plate washers at each bolt, typical. Fasteners for pressure-treated wood shall be of hot dipped galvanized steel. (IRC R404.3)

6. Fill underground supported slab with 4" well compacted sand or gravel. Provide keyed control joints in slabs on grade @ 25' on center and 1/2" tooled joints @ 5' on center in exterior slabs on walks. Install 10 mil. poly barrier between slab and base subgrade. (IRC R506)

7. Provide 6 mil. poly barrier over crawl grade. (R408.1)

8. Maintain 18" top of grade to bottom of joists. (12" min. below girders) at crawl grade.

9. Wood in direct contact with concrete or masonry to be pressure treated.

10. Vent crawl areas with net area of not less than 1 sq. ft. for each 300 sq. ft. of under floor area (IRC R408.2). Locate openings close to corners to provide cross ventilation and cover with corrosion resistant wire mesh.

11. Beam pockets to have 1/2" clear air space around beam sides and ends. Girders supported on concrete or masonry to have not less than 3" bearings.

12. Provide crawl access of at least 18"x24" located in easily accessible area.

13. Apply water-proofing below ground foundation or masonry walls before backfilling per IRC R406.2

14. Columns (including in the crawlspace) shall be anchored at the base to prevent lateral displacement. Wood columns shall not be less than 4"x4" nominal (IRC 407.3).

15. Garage floor surfaces shall be sloped to a drain or toward the main vehicle entry (Sect. R309.1).

FOUNDATION STEEL

1. Rebar for basement walls dependent on soil type and tables R404.1.2(1)-(9) verify with on site conditions.
General requirements with 45lb psf per foot of depth soil:
Four foot or shorter wall:
Footing: 2- #4 continuous, minimum 14" extension into stem wall and 6" hook.
Wall: 2- #4 at maximum 6" from top, bottom continuous.
#4 at 24" O.C. horizontal
#4 at 48" O.C. vertical
Over four foot wall:
Footing: 2- #4 continuous, minimum 14" extension into stem wall and 6" hook.
Wall: 2- #4 at maximum 6" from top, bottom continuous.
#4 at 18" O.C. vertical & horizontal
Nine foot wall:
Footing: 2- #4 continuous, minimum 14" extension into stem wall and 6" hook.
Wall: 2- #4 at top,
#4 at 11" O.C. vertical & horizontal

2. Footings require minimum 2- #4 rebar and shall be continuous throughout. Retaining walls not laterally supported at the top and retain more than 4'0" of backfill will require engineering.

3. The center of vertical reinforcement shall be located at the centerline of the wall, and shall not vary by more than 10 percent of the wall thickness.

4. All rebar shall be Grade 60.

DRYWALL

1. The 2021 IRC section 302.6 states that the garage shall be separated from the residence and its attic area by not less than 1/2" GWB applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8" Type "X" GWB or equivalent. Where the separation is a floor-ceiling assembly, the structure supporting the separation shall also be protected by not less than 1/2" GWB or equivalent. Enclosed accessible space under stairs shall be protected on the enclosed side with 1/2" GWB (IRC R302.7).

2. Single-ply application. All edges and ends of gypsum wallboard shall occur on the framing members, except those edges and ends which are perpendicular to the framing members (IRC R702.3.5). All edges and ends of gypsum wallboard shall be in moderate contact except in concealed spaces where fire-resistant construction or diaphragm action is not required.

3. Fasteners shall be spaced not less than 7" o.c. and 3/8" from edges and ends of gypsum wallboard (IRC R702.3.6). Fasteners at the top and bottom plates of vertical assemblies, or the edges and ends of horizontal assemblies perpendicular to supports, and at the wall line, may be omitted except on shear-resisting elements or fire-resistant assemblies. Fasteners shall be applied in such a manner as not to fracture the face paper with the fastener head.

4. Walls and ceiling of bath areas to have waterproof board of approved type.

FLOOR COVERINGS

1. All bath and utility room floors to be sheet vinyl, tile or approved non absorbent material with a coved base of like material extending up the wall an minimum of 3".

2. Kitchen floors may be installed as above.

VENTILATION

1. Ventilation of crawl space(s) per Section R408.2 is at one square foot of ventilation openings per each 300 sq ft of under floor area. Unvented crawl space shall have acontinous mechanical exhaust at a rate of 1 CFM per 50 sq ft of crawl space, and comply w/ Appendix AF for radon mitigation.

2. All penetrations (plate junctions, around windows & doors, any openings through envelope) shall be air sealed.

3. Vapor diffusion retarder can be polyethylene, low perm paint, or face stapling with a perm rating of 1 or less, and shall be located between conditioned and unconditioned spaces.

4. Additions with less than 500 square feet of conditioned floor area are exempt from the requirements for Whole-House Ventilation Systems

5. Whole-house mechanical ventilation systems shall be designed in accordance with Sections M1505.4.1 through M1505.4.4. As per energy credit 2.1, whole house ventilation shall use HRV (M1505.4). The whole-house ventilation system shall consist of one or more supply or exhaust fans, ERV with integrated fans, or a combination of such, and associated ducts and controls. Local exhaust or supply fans are permitted to serve as part of such a system provided they comply with M1505.4.2 controls. The whole-house mechanical ventilation system shall provide outdoor air at a continuous rate of not less than that determined in accordance with Table M1505.4.3(1), and shall provide ducted outdoor ventilation or 30 CFM whole-house transfer fan to each habitable space within the unit. Outdoor air ducts connected to the return side of an air handler complying with M1505.4.1.5 shall be considered as providing supply ventilation. The whole-house mechanical ventilation system shall be provided with controls that enable manual override.

6. Local exhaust fans:
Bathrooms shall have a minimum 50 CFM fan and kitchens a minimum 160 CFM fan for electric ranges or 250 CFM for combustion. Both shall be vented to exterior with smooth duct and equipped with back-draft damper. Kitchen fan shall have a separate termination point.

7. Dryer ducts shall be 4" in diameter, constructed of metal not less than 0.0157" thick, shall have smooth interior surfaces. Where dryer duct is concealed within building construction the equivalent length shall be identified by permanent label or tag located within 6 feet of the duct connection. (M1502.4.1)

GLAZING

1. Glazing shall comprise no less than 8% of the floor area in each habitable room (IRC 303.1).

2. All glazing within 18" of floor or within 24" of door to be tempered glass or protected by means of a solid barrier railing 36" from floor.

3. Sliding glass doors to be tempered glass.

4. Glazing in locations subject to human impact such as glass doors; glazing immediately adjacent to such doors; glazing adjacent to any surface normally used as walking surface; sliding glass door units, including fixed glass panels which are part of such units; shower doors; tub enclosures; and storm doors shall be of safety glazing materials. Safety glazing materials are those so constructed, treated or combined with other materials as to minimize the likelihood of cutting and piercing injuries resulting from human contact with this glazing material and include such materials as laminated glass, tempered glass, wired glass and safety plastic (Section R 308).

STAIRS

1. A minimum headroom clearance for stairways of not less than 6'-8" shall be provided (IRC R311.7.2).

2. The maximum riser height shall be 7-3/4 " and the minimum tread depth shall be 10". The largest tread run and the greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch. The profile of treads and risers shall conform to section R311.7.5.

3. Stairways shall have a minimum clear width of 36" above the permitted handrail height. Stairways shall have a minimum clear width of 31.5" at and below the handrail where only one handrail is provided, or 27" where handrails are provided on both sides (IRC R311.7.1).

4. Interior stairways shall be provided with an artificial light source to illuminate the landings and treads. the light source shall be capable of illuminating treads and landings to levels of not less than 1 foot-candle (11 lux) as measured at the center of treads and landings. there shall be a wall switch at each floor level to control the light source where the stairway has six or more risers. (IRC R303.7)
Exception: a switch is not required where remote. central or automatic control of lighting is provided.

Exterior stairways shall be provided with an artificial light source located at the top landing of the stairway. Exterior stairways providing access to a *basement* from the outdoor *grade* level shall be provided with an artificial light source located at the bottom landing of the stairway. (IRC R303.8)

5. There shall be a floor or landing at the top and bottom of each stairway (except at the top of an interior stairway provided no door swings over the stairs). A flight of stairs shall not have a vertical rise greater than 12'-7" between floor levels or landings. The width of each landing shall not be less than the stairway served. (IRC R311.7.6)

6. Winders shall comply with section R311.7.5.2.1. Winders in residences may be used if the required width of run is provided at a point not more than 12" from the side of the stairway where the treads are narrower, but in no case shall any width of run be less than 6 inches at any point.

7. Nosing of not less than 3/4" but not more than 1-1/4" shall be provided on stairways with solid risers. Beveling of nosing shall not exceed 1/2". (IRC R311.7.5.3) Open risers are permitted, provided that the opening between treads does not permit the passage of a 4" diameter sphere. (IRC R311.7.5.1)

GUARD/HAND RAILS

1. All unenclosed floor and roof openings, open and glazed sides of landings, stairwells, and ramps, balconies or porches which are more than 30 inches above grade, or 36" horizontally , or the floor below, and roofs used for other than service of building shall be protected by a guardrail. (IRC Sect. 312)

2. Guardrails shall not be less than 36" in height. Railings are allowed to be half the clear floor to ceiling opening height in lofts below 7' ceiling height (R312.1.2)

3. Stairways shall have at least one handrail, and handrails shall be installed on open sides of stairways. Handrails shall be continuous for the full length of the flight, terminating into itself, a wall, or post. Open handrails shall have intermediate rails or an ornamental pattern such that a sphere 4 3/8 inches in diameter cannot pass through. (Sec. R312.1.3).

3. Handrails projecting from a wall shall have a space of not less than 1-1/2" between the wall and the handrail. Handrail cross-sections shall comply with IRC Sect. R311.7.8. Handrails with a circular cross-section shall have an outside diameter of at least 1-1/4" and not greater than 2". Handrails should be installed 34"-38" measured vertically from the sloped plane adjoining the tread nosing.

INSULATION

1. Floor insulation - R-38
Wall insulation - R-21+R5 Continuous
Flat ceilings - R-60 or R-49 w/ energy heel
Single rafter ceilings - R-38 uncompressed

2. Slab on grade foundation insulation shall be R-10 to a point 48" vertical or horizontal at exterior wall.

3. Cut batt. insulation 1/2" to 3/4" wider/ longer than actual dimension to insure snug fit without voids.

4. Kraft-faced or foam plastic insulation cannot be left exposed.

EMERGENCY EXITS

1. Basements with habitable space and every sleeping room shall have at least one operable window or exterior door conforming to Section R310.1 for emergency escape or rescue. The egress units shall be operable from the inside to provide a full clear opening without the use of separate tools. If a basement is to be used as habitable space, it must meet the min. requirements for light, ventilation, and egress. Min. 8% of the floor area must be in glazing.

2. Minimum opening area for all emergency escape and rescue openings shall be 5.7 sq. ft. (Exception: grade floor openings shall have a minimum net clear opening of 5.0 sq.ft.) The minimum height dimension shall be 24 inches. The minimum width dimension shall be 20 inches. Where windows are provided as a means of egress or rescue the bottom of the clear opening shall not be more than 44 inches above the floor. (Sec R310.2)

3. At least one exterior exit door that does not pass through the garage must be provided. The door must be side-hinged, and not less than 2'8" wide & 6'-8" high (Section R311.2). There shall be a floor landing required on both sides of exit doors with min. size of 3 ft. measured in direction of travel by 3 ft. or width of door if greater, and not lower than 1-1/2" below threshold, or 7-3/4" below threshold on the exterior side, provided the door does not swing over the landing. (Sect. R311.3).

4. Doors other than the required egress door shall be provided with landings or floors not more than 7-3/4" below the threshold. A landing is not required on the exterior side, provided the door has not more than 2 risers and does not swing over the landing. (R311.3.2)

FIRE WARNING SYSTEM

1. Smoke alarms shall be installed in each sleeping room, outside each separate sleeping area in the immediate vicinity of the bedrooms, on each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level. In the hall and room where the room ceiling height exceeds that of a hall servicing bedrooms by 24".
In the immediate vicinity of an open loft.
Smoke alarms shall be installed not less than 3 feet (914 mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by IRC Section R314.3.

2. Carbon monoxide alarms in dwelling units shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms on each level of the dwelling and in accordance with the manufacturer's recommendations. Where a fuel burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom. (IRC R315.3)

3. A heat detector or heat alarm rated for the ambient outdoor temperatures and humidity shall be installed in new garages that are attached to or located under new and existing dwellings.

ROOFING/CEILING CONSTRUCTION

1. Asphalt shingles shall be installed according to manufacturer's specifications over approved 5/8" plywood or OSB sheathed roofs. Underlayment to be 1 layer of felt applied in shingle fashion and lapped 2" or a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment. Shingles shall not be installed on roof pitches less than 2:12. Shingles can be installed on pitches between 2:12 and 4:12 require double underlayment per R905.1.1.

2. An ice barrier consisting of 2 layers of underlayment cemented together and extend from the eave's edge to a point at least 24" inside the exterior wall line of the building, or 36" for roofs sloped 8:12 or greater. (R905.1.2)

3. Wood shingles and shakes for roofs shall bear the label of an approved inspection bureau or agency. Shakes shall be laid with not less than 18 inch wide of type 30 felt shingled between each course and not exposed to weather. (R905.8)

5. Enclosed attics and enclosed rafter spaces shall be ventilated in accordance with Section R806. Venting ratios: 1 to 150 for eave or rooftop only ventilators, 1 to 300 for combination of eave and rooftop ventilators.

6. Crickets and saddles shall be provided on the ridge side of any chimney greater than 30" wide.

FLASHING/WALL COVER

1. Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing as described in Section R703.4. The exterior wall envelope shall be designed and constructed in such a manner as to prevent the accumulation of water within the wall assembly by providing a water-resistive barrier behind the exterior veneer, as required by Section R703.2.

2. Flashing shall be used at all of the following locations: (R703.4)
1) At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings.
2) Under and at ends of masonry, wood or metal copings & sills.
3) Continuously above all projecting wood trim.
4) Where exterior porches, decks or stairs attach to a wall or floor assembly of wood frame construction.
5) At wall and roof intersections
6) At built-in gutters
7) At all exterior windows and doors, complying with R703.4.1

3. Weather exposed surfaces shall be provided with a weather-resistive barrier (building felt or approved material) in accordance with Sect. R703.2 and Table R703.1.

4. Exterior stone or masonry veneer shall be supported in accordance with Sections R602.10 and Table R703.8(1).

5. Roof valley flashing not less than no. 26 galvanized sheet gauge corrosion resistant metal extending 24-36" from center line each way over class 1 underlayment according to R905.2.8.2. For asphalt or relevant sizing per Section R905 for desired roofing.

WALL BRACING NOTES

Continuous Sheathing Method - 2021 IRC R602.10.4.2
Length requirements for Continuously Sheathed Wood Structural Panel (CS-WSP)

Adjacent clear opening height to braced panel	Min. Length of Braced Wall Panel				
	8'	9'	10'	11'	12'
64"	24"	27"	30"	33"	36"
68"	26"	27"	30"	33"	36"
72"	27"	27"	30"	33"	36"
76"	30"	29"	30"	33"	36"
80"	32"	30"	30"	33"	36"
84"	35"	32"	32"	33"	36"
88"	38"	35"	33"	33"	36"
92"	43"	37"	35"	35"	36"
96"	48"	41"	38"	36"	36"

For openings greater than 96" refer to Table R602.10.5

1. Exterior braced wall panel shall begin within 10 feet from each end of a braced wall line. The distance between adjacent edges of braced wall panels along a braced wall line shall be no greater than 20 feet.

Braced wall lines shall be continuously sheathed with 7/16" APA RATED SHEATHING 24/16, exposure 1, as a continuously sheathed wall.

Panel edge nailing is 8d Common (2.5" × 0.131") @ 6" o.c. Panel interior or field nailing is 8d Common (2.5" × 0.131") @ 12" o.c. Edge blocking is required at braced wall panels only.

2. Stagger top plate splices by 2'-0" min. and nail splice with 16d @ 3".

3. Anchor bolts should be installed within 12" of the end of a wall or the end of a plate at a splice. Anchor bolt min. embedment is 7".

4. Install floor and roof sheathing with face grain perpendicular to supports with long edges continuous over 2 or more supports and short edges staggered.

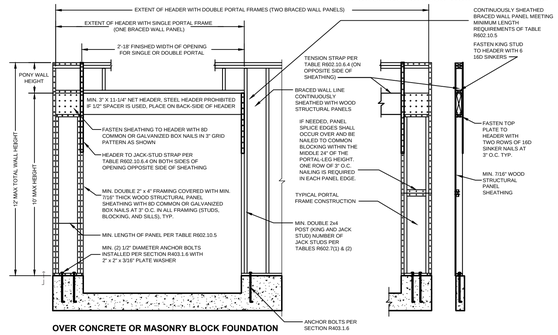
Roof sheathing shall be 7/16" APA RATED SHEATHING 24/16, exposure 1 for up to 40psf live load. 15/32" APA RATED SHEATHING for up to 65psf live load. Nail with 8d @ 6" at panel edges and 8d @ 12" at field.

Floor sheathing shall be 3/4" T&G APA STURD-I-FLOOR 24 O.C. or equal. Glue and nail with 8d ring or screw shank @ 6" at panel edges and 8d @ 12" at field.

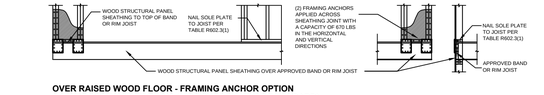
5. Interior braced walls to be gypsum board with minimum 1/2" thickness placed on studs spaced a maximum of 24" o.c. and fastened at 7" o.c. with gypsum board nails, 0.086" in diameter, 1-5/8" long, 9/32" head.

6. Install CS-WSP hold-downs per Figure R602.10.7

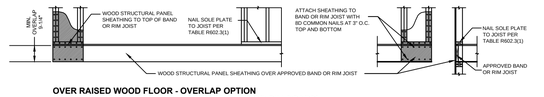
7. For alternate braced walls refer to R602.10.4-6



OVER CONCRETE OR MASONRY BLOCK FOUNDATION



OVER RAISED WOOD FLOOR - FRAMING ANCHOR OPTION
(WHERE PORTAL SHEATHING LAPS OVER BAND OR RIM BOARD)



OVER RAISED WOOD FLOOR - OVERLAP OPTION
(WHERE PORTAL SHEATHING LAPS OVER BAND OR RIM BOARD)

FRONT ELEVATION SECTION

FIGURE R602.10.6.4 (IRC 2021)
METHOD CS-PF - CONTINUOUSLY SHEATHED PORTAL FRAME PANEL CONSTRUCTION

EVERY EFFORT HAS BEEN MADE TO INSURE THE ACCURACY OF THESE DRAWINGS, HOWEVER: THE CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

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CONTENTS
NOTES AND SPECIFICATIONS
PORTAL FRAME DETAILS

DRAWN BY: TJ
DATE: 04/02/24
SCALE: N/A
JOB NO.
SHEET SP
OF SHEETS