

APPLICABLE CODES

2009 International Residential Code
2011 National Electrical Code & North Dakota State Wiring Standards
2009 Uniform Plumbing Code
2009 International Mechanical Code



DESIGN LOADS

Ground Snow Load: 30 PSF
Basic Wind Speed: 90 MPH / Exposure B
Seismic Design Category: A
Roof Loads (Live / Dead): 20 PSF / 20 PSF
Floor Live Load: 40 PSF

GLADSTONE - DUPLEX

GLADSTONE NORTH DAKOTA

GENERAL NOTES:

1. All manufacturers' specifications shall be met when their materials are used.
2. Contractor shall compare all dimensions and conditions of drawings at the site. All omissions or conflicts between the various elements of the working drawings or specifications shall be brought to the attention of the designer or engineer before proceeding.
3. It shall be the responsibility of the general contractor to coordinate with all trades on any and all items that are to be integrated into the structural system that are not indicated on these drawings.
4. All details, sections and notes shown on the drawings are intended to be typical and shall apply to similar situations elsewhere unless noted or shown otherwise.
5. Contractor must field verify all existing conditions to match details shown on drawings. Contractor shall be responsible for safety and protection in and around the job site.
6. All Nailing and fastening to conform to Table R602.3(1) Fastener schedule for Structural Members of the 2009 IRC Building Code. See SHEET 25 for schedule.
7. PORCH AND GARAGE ARE BUILT ON SITE BY OTHERS AND ARE SUBJECT TO APPROVAL AND INSPECTION BY LOCAL AHJ.

Drawing Index

1. Cover
2. Foundation
3. Main Floor Plan
4. Floor 2 Floor Plan
5. Front Elevation
6. Right Elevation
7. Left Elevation
8. Rear Elevation
9. Main Floor Framing
10. Upper Floor Framing
11. Roof Framing
12. Nailing & Fastening Schedule.



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DESCRIPTION
Cover Sheet

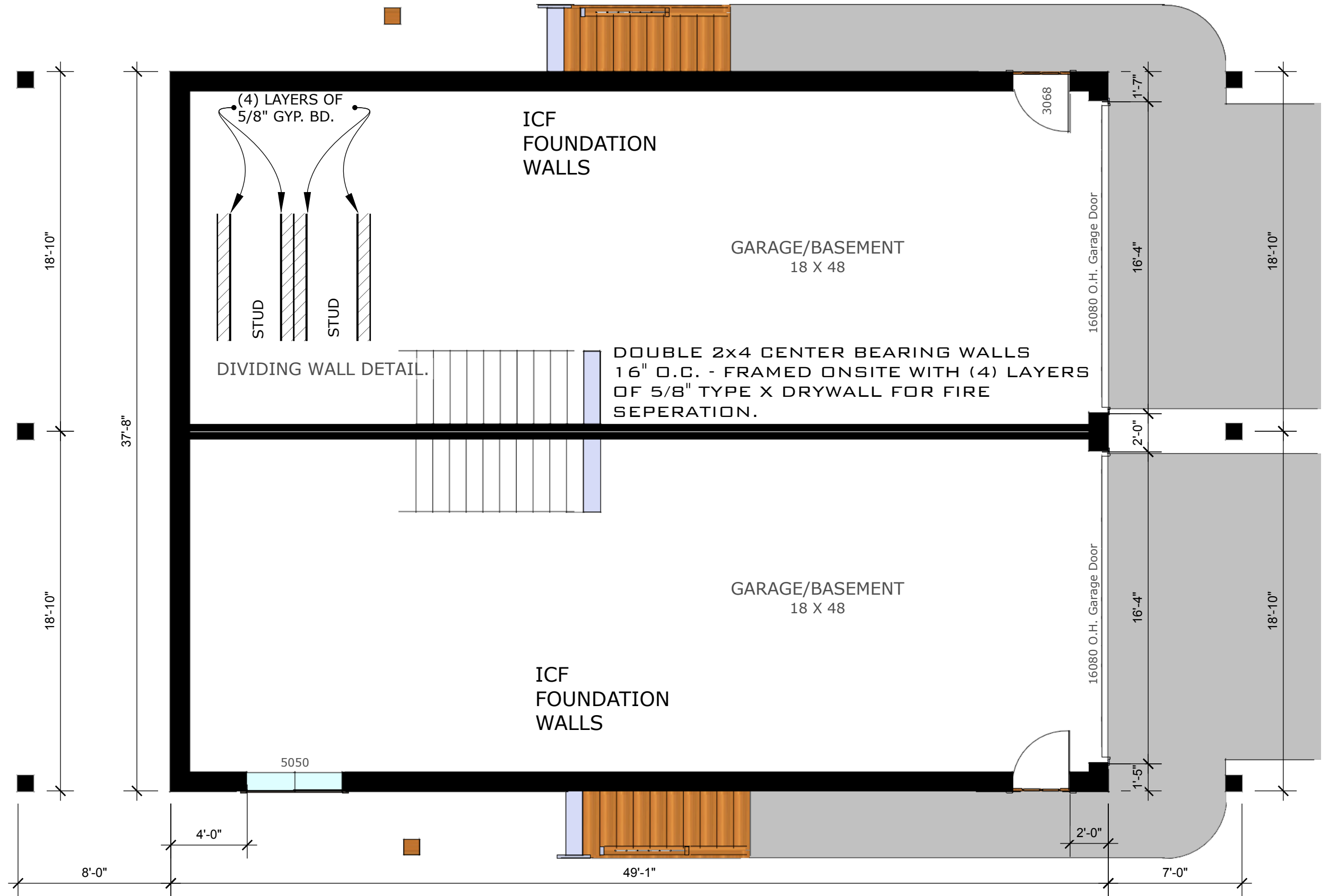
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BASEMENT NOTES:

1. ENTIRE BASEMENT TO BE UNFINISHED.
2. ALL WINDOW WELLS TO BE A MIN. OF 9 SQ FT. ALL WINDOW WELLS DEEPER THAN 44" TO HAVE LADDERS.
3. ALL BASEMENT WINDOWS TO BE A MINIMUM OF 5.7 SQ FT OPENABLE AREA.
4. BASEMENT TO BE INSULATED WITH A MINIMUM R VALUE OF R-13 OR THE FLOOR TO A MINIMUM OF R-19. NO CRAFT PAPER TO BE USED IN UNFINISHED BASEMENT.
5. PORCH AND GARAGE ARE BUILT ON SITE BY OTHERS AND ARE SUBJECT TO APPROVAL AND INSPECTION BY LOCAL AHJ.
6. MINIMUM R-15 INSULATION REQUIRED ON BASEMENT WALLS TO BE INSULATED ON SITE BY LOCAL CONTRACTOR AND SUBJECT TO APPROVAL AND INSPECTION BY LOCAL AHJ.

GARAGE PLAN:

925 SQ FT
SCALE: 3/16" = 1'



FLOOR PLAN NOTES:

1 RED NUMBERS DENOTE EXTERIOR WALLS.

13 GREEN NUMBERS DENOTE INTERIOR WALLS.

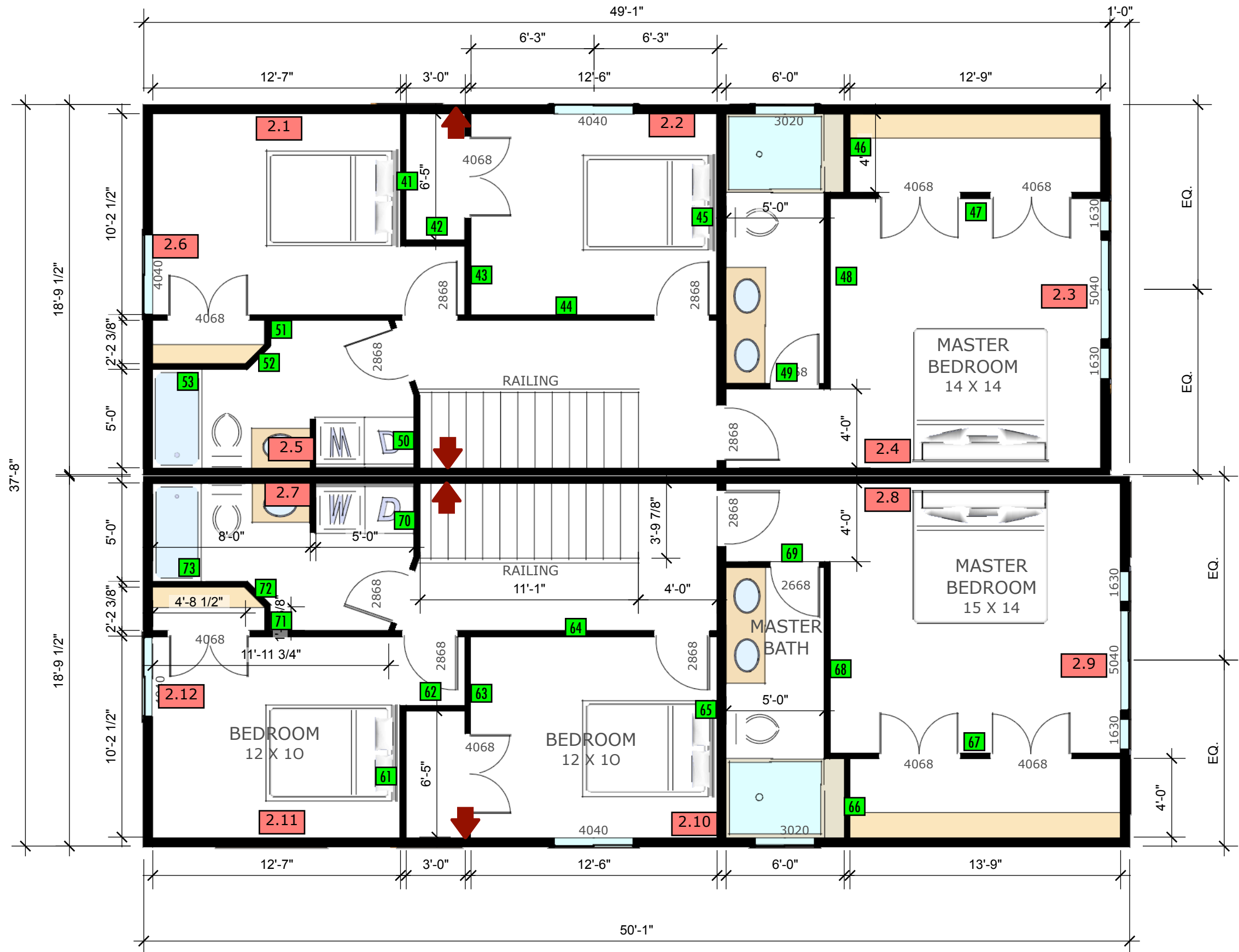
ALL WALL PANEL CONNECTIONS TO SHEETROCK USED AS A BASE FOR TILE SHALL BE WATER RESISTANT TO 70" ABOVE FLOOR.

ALL SHEETROCK ON THE CEILINGS SHALL BE 5/8" OR SAG RESISTANT.

ALL WALL FRAMING TO BE 2X6, 16" O.C.

ALL BEARING HEADERS (AND HEADERS OVER 5') NOT MARKED ARE TO BE (2) 2X10's. NON BEARING LESS THEN 5' HEADERS TO SINGLE 2X6 AND CRIPPLES.

ALL NAILING AND FASTENING TO CONFORM TO R.602.3(1) - FASTENING SCHEDULE FOR STRUCTURAL MEMBERS. 2009 IRC. SEE SHEET 12 FOR SCHEDULE.



FLOOR 2 PLAN:

925 SQ FT
SCALE: 3/16" = 1'

NOTES:

ATTIC SHALL HAVE VENTILATION PER IRC (NOT LESS THEN 1/300 OF THE AREA, HALF SHALL BE LOCATED IN THE UPPER 3' OF THE ATTIC. VENTS SHALL BE PROTECTED AGAINST RAIN AND SNOW AND BE SCREENED WITH 1/4" MESH.

30 YEAR ASPHALT SHINGLES OVER 15# FELT OVER 7/16" SHEATHING OVER ENGINEERED TRUSSES.

STEP FLASHING PER IRC.

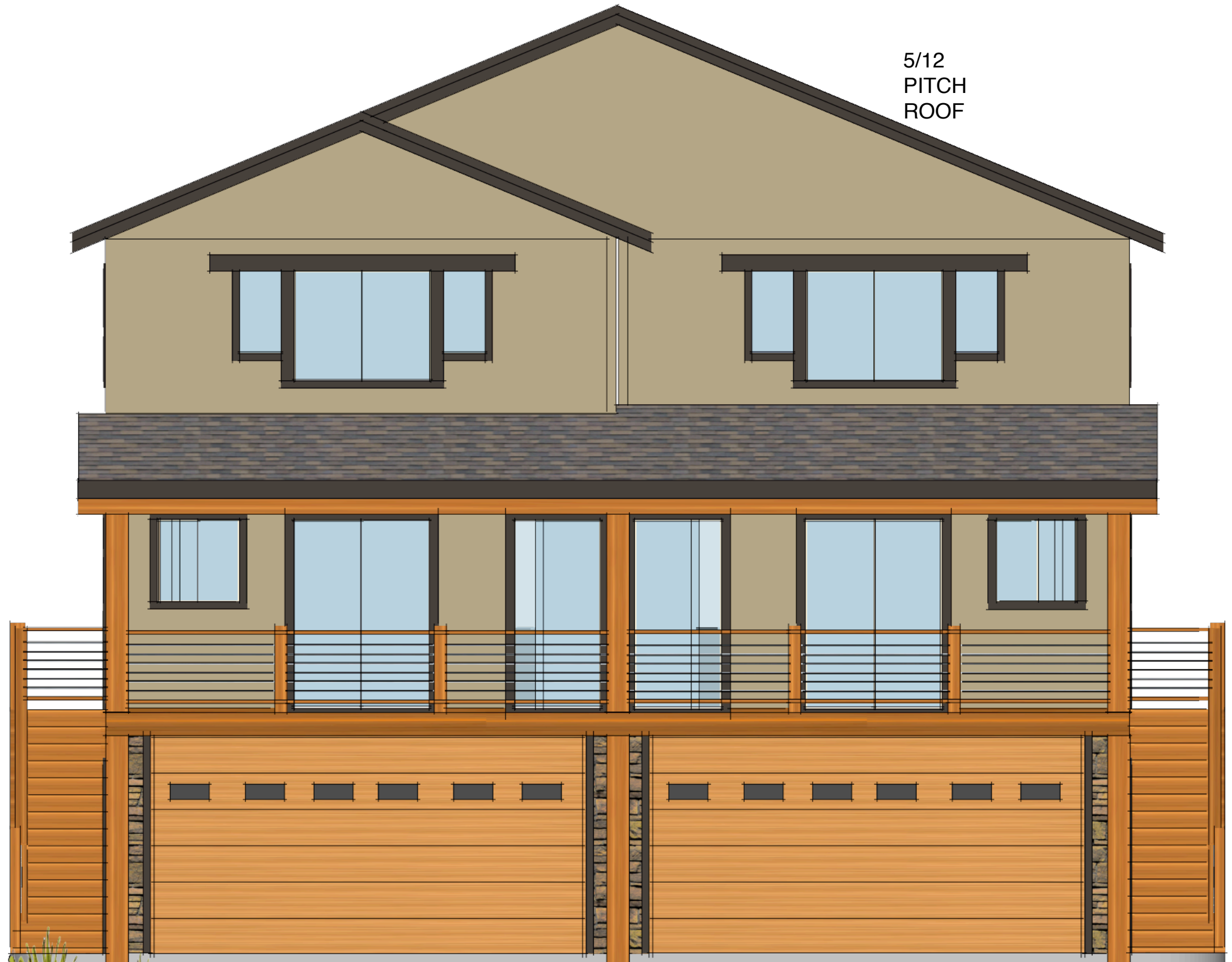
ICE AND WATER SHIELD SHALL BE INSTALLED ON ROOF EDGES AT A MINIMUM OF 24" ON THE INSIDE OF THE WARM SIDE AND ALL VALLEYS, CRICKETS AND DORMERS, ETC.

ALL WEATHER EXPOSED SURFACES SHALL HAVE A WEATHER RESISTIVE BARRIER TO PROTECT THE WALL. SIDING OR STUCCO TO BE INSTALLED PER MFG SPECS.

ALL WINDOWS SHALL CONFORM TO THE FOLLOWING, ENERGY STAR FOR NORTHERN CLIMATE ZONE CRITERIA:

A U-FACTOR OF 3.0 OR LESS (ANY SHGC IS ALLOWED) -OR- A U-FACTOR OF 0.31 AND AN SHGC OF 0.35 OR MORE -OR- A U-FACTOR OF 0.32 AND SHGC OF 0.40 OR MORE.

5/12
PITCH
ROOF



FRONT ELEVATION

SCALE: 1/4" = 1'



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CLIENT
Tim

PROJECT
Duplex

LOCATION
Gladstone

ISSUE
12-30-13

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CJ, JH.



RIGHT SIDE ELEVATION

SCALE: 3/16" = 1'



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3/12
PITCH
ROOF

LEFT SIDE ELEVATION

SCALE: 3/16" = 1'



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ADDITIONAL WINDOW NOTES:

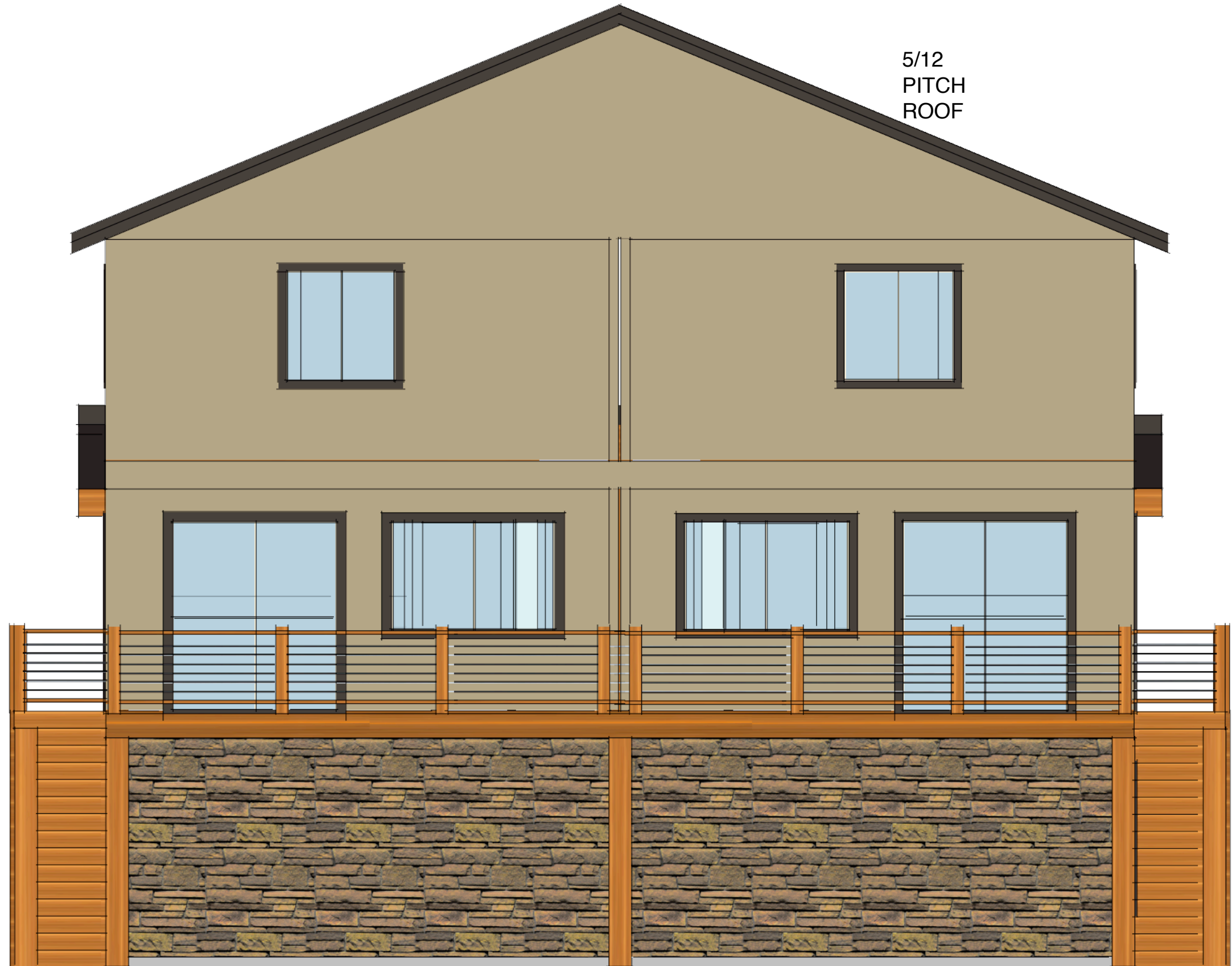
ALL WINDOWS TO HAVE A MAXIMUM SILL HEIGHT OF 44" IN BEDROOMS OR WHERE EGRESS IS REQUIRED.

ALL WINDOWS TO HAVE A MINIMUM SILL HEIGHT OF 24" OR 18" FOR PICTURE WINDOWS OVER 9' OR BE TEMPERED.

ALL WINDOWS IN BATHROOMS THAT ARE LESS THAN 60" FROM THE FLOOR TO BE TEMPERED.

ALL BEDROOM OR EGRESS WINDOWS TO HAVE A MINIMUM OF 5.7 SQ FT OF CLEAR OPERABLE SPACE.

WINDOWS LESS THAN 18" OFF THE GROUND OR WITHIN 24" OF A DOOR MUST BE TEMPERED.



5/12
PITCH
ROOF

REAR ELEVATION

SCALE: 1/4" = 1'



11-7/8" TJI JOISTS AT 16" OC.
WITH 3/4" T&G OSB SHEATHING,
NAILED AND GLUED TO MFG AND
IRC SPECIFICATIONS.

FRAMING NOTES:

1. EXTERIOR WALLS SHEATHED WITH 7/16" OSB WITH 8d NAILING, EDGE 6" O.C., FIELD 12" O.C..

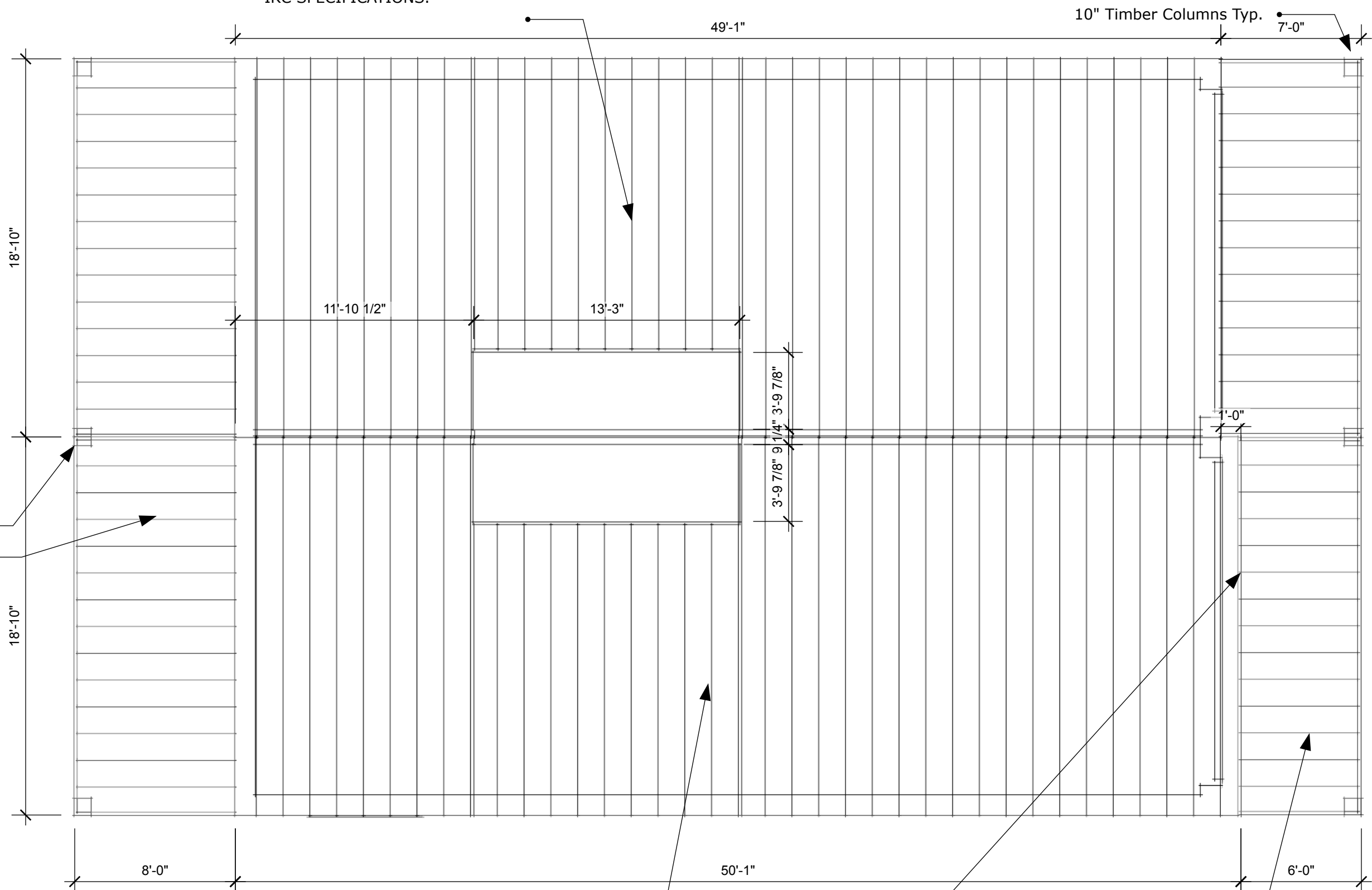
2. WALLS SHEATHED WITH 7/16" OSB WITH 8d NAILING, EDGE 4" O.C., FIELD 12" O.C..

3. ALL EXTERIOR WALL OPENING HEADERS ARE (2) - 2 X 10'S , UNLESS NOTED OTHERWISE.

4. ALL INTERIOR LOAD BEARING HEADERS ARE (2) - 2 X 10'S , UNLESS NOTED OTHERWISE.

10" Timber Columns Typ.

ELEVATED DECK FRAMING
2 X 10 JOISTS AT 16" O.C.



FLOOR FRAMING PLAN-MAIN

SCALE: 3/16" = 1'

11-7/8" TJI JOISTS AT 16" OC.
WITH 3/4" T&G OSB SHEATHING,
NAILED AND GLUED TO MFG AND
IRC SPECIFICATIONS.

FLOOR FRAMING
CANTILEVERS 1'-0"

ELEVATED DECK FRAMING
2 X 10 JOISTS AT 16" O.C.



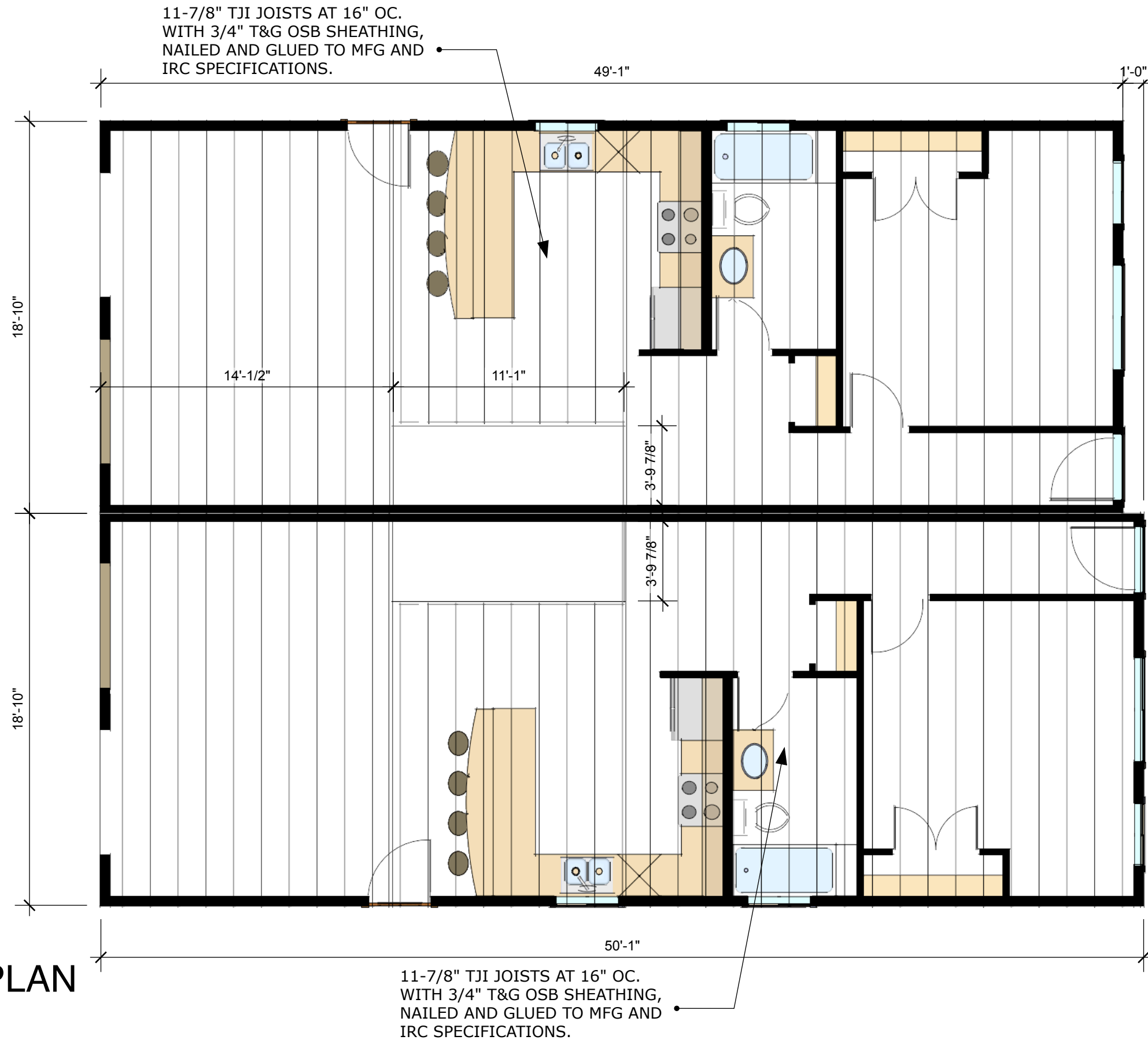
FRAMING NOTES:

1. EXTERIOR WALLS SHEATHED WITH 7/16" OSB WITH 8d NAILING, EDGE 6" O.C., FIELD 12" O.C..

2. WALLS SHEATHED WITH 7/16" OSB WITH 8d NAILING, EDGE 4" O.C., FIELD 12" O.C..

3. ALL EXTERIOR WALL OPENING HEADERS ARE (2) - 2 X 10'S , UNLESS NOTED OTHERWISE.

4. ALL INTERIOR LOAD BEARING HEADERS ARE (2) - 2 X 10'S , UNLESS NOTED OTHERWISE.

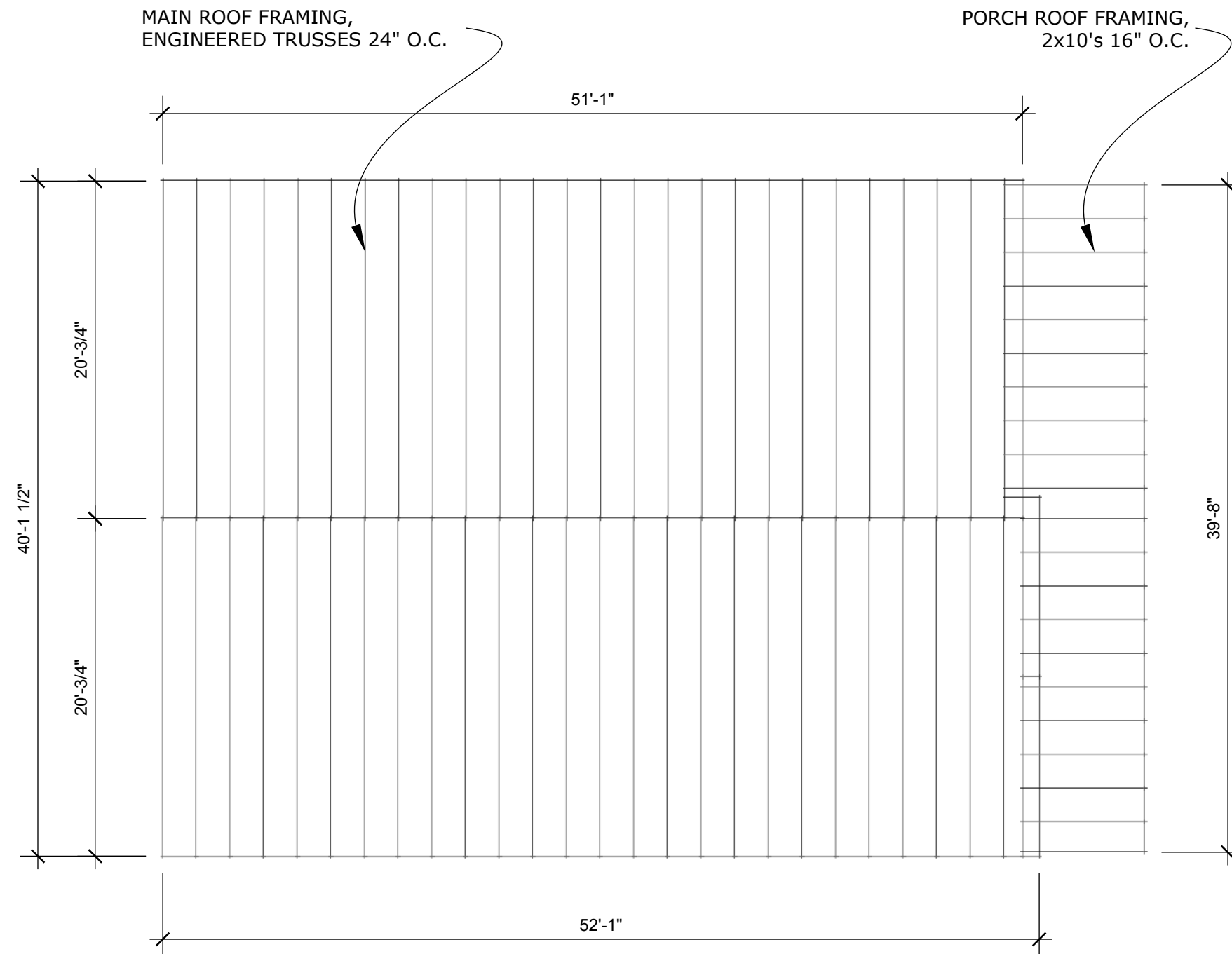


FLOOR 2 FRAMING PLAN

SCALE: 3/16" = 1'

ROOF NOTES:

1. ALL TRUSSES ARE TO HAVE ENGINEERING PROVIDED FOR THIS BUILDING BY THE MFG. DESIGNED FOR 45 PSF LIVE / 15 DEAD LOADS. ALL TRUSSES MUST BE INSTALLED PER IRC AND MFG SPECS.
2. 7/16" OSB SHEATHING ON ROOF.
3. PLYWOOD CLIPS TO BE USED.
4. ALL TRUSSES TO BE ENGINEERED FOR 30 PSF SNOW LOAD AND 15 PSF DEAD LOAD.



ROOF FRAMING PLAN

SCALE: 1/8" = 1'



TABLE R602.3(1)
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER ^{a, b, c}	SPACING OF FASTENERS
Roof			
1	Blocking between joists or rafters to top plate, toe nail	3-8d (2 1/2" x 0.113")	—
2	Ceiling joists to plate, toe nail	3-8d (2 1/2" x 0.113")	—
3	Ceiling joists not attached to parallel rafter, laps over partitions, face nail	3-10d	—
4	Collar tie rafter, face nail or 1 1/4" x 20 gage ridge strap	3-10d (3" x 0.128")	—
5	Rafter to plate, toe nail	2-16d (3 1/2" x 0.135")	—
6	Roof rafters to ridge, valley or hip rafters: toe nail face nail	4-16d (3 1/2" x 0.135") 3-16d (3 1/2" x 0.135")	— —
Wall			
7	Built-up corner studs	10d (3" x 0.128")	24" o.c.
8	Built-up header, two pieces with 1/2" spacer	16d (3 1/2" x 0.135")	16" o.c. along each edge
9	Continued header, two pieces	16d (3 1/2" x 0.135")	16" o.c. along each edge
10	Continuous header to stud, toe nail	4-8d (2 1/2" x 0.113")	—
11	Double studs, face nail	10d (3" x 0.128")	24" o.c.
12	Double top plates, face nail	10d (3" x 0.128")	24" o.c.
13	Double top plates, minimum 48-inch offset of end joints, face nail in lapped area	8-16d (3 1/2" x 0.135")	—
14	Sole plate to joist or blocking, face nail	16d (3 1/2" x 0.135")	16" o.c.
15	Sole plate to joist or blocking at braced wall panels	3-16d (3 1/2" x 0.135")	16" o.c.
16	Stud to sole plate, toe nail	3-8d (2 1/2" x 0.113") or 2-16d (3 1/2" x 0.135")	— —
17	Top or sole plate to stud, end nail	2-16d (3 1/2" x 0.135")	—
18	Top plates, laps at corners and intersections, face nail	2-10d (3" x 0.128")	—
19	1" brace to each stud and plate, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 3/4"	— —
20	1" x 6" sheathing to each bearing, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 3/4"	— —
21	1" x 8" sheathing to each bearing, face nail	2-8d (2 1/2" x 0.113") 3 staples 1 3/4"	— —
22	Wider than 1" x 8" sheathing to each bearing, face nail	3-8d (2 1/2" x 0.113") 4 staples 1 3/4"	— —
Floor			
23	Joist to sill or girder, toe nail	3-8d (2 1/2" x 0.113")	—
24	1" x 6" subfloor or less to each joist, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 3/4"	— —
25	2" subfloor to joist or girder, blind and face nail	2-16d (3 1/2" x 0.135")	—
26	Rim joist to top plate, toe nail (roof applications also)	8d (2 1/2" x 0.113")	6" o.c.
27	2" planks (plank & beam – floor & roof)	2-16d (3 1/2" x 0.135")	at each bearing
28	Built-up girders and beams, 2-inch lumber layers	10d (3" x 0.128")	Nail each layer as follows: 32" o.c. at top and bottom and staggered. Two nails at ends and at each splice.
29	Ledger strip supporting joists or rafters	3-16d (3 1/2" x 0.135")	At each joist or rafter

(continued)

TABLE R602.3(1)—continued
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER ^{a, b, c}	SPACING OF FASTENERS	
			Edges (inches)	Intermediate supports ^{d, e} (inches)
Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing				
30	3/8" - 1/2"	6d common (2" x 0.113") nail (subfloor wall) 8d common (2 1/2" x 0.131") nail (roof)	6	12 ^f
31	3/16" - 1/2"	6d common (2" x 0.113") nail (subfloor, wall) 8d common (2 1/2" x 0.131") nail (roof) ^g	6	12 ^f
32	1 1/2" - 1"	8d common nail (2 1/2" x 0.131")	6	12 ^f
33	1 1/8" - 1 1/4"	10d common (3" x 0.148") nail or 8d (2 1/2" x 0.131") deformed nail	6	12
Other wall sheathing^h				
34	1/2" structural cellulose fiberboard sheathing	1/2" galvanized roofing nail, 7/16" crown or 1" crown staple 16 ga., 1 1/4" long	3	6
35	2 1/32" structural cellulose fiberboard sheathing	1 1/4" galvanized roofing nail, 7/16" crown or 1" crown staple 16 ga., 1 1/2" long	3	6
36	1/2" gypsum sheathing ^d	1 1/2" galvanized roofing nail; staple galvanized, 1 1/2" long; 1 1/4" screws, Type W or S	7	7
37	3/8" gypsum sheathing ^d	1 1/4" galvanized roofing nail; staple galvanized, 1 1/4" long; 1 1/8" screws, Type W or S	7	7
Wood structural panels, combination subfloor underlayment to framing				
38	3/8" and less	6d deformed (2" x 0.120") nail or 8d common (2 1/2" x 0.131") nail	6	12
39	7/8" - 1"	8d common (2 1/2" x 0.131") nail or 8d deformed (2 1/2" x 0.120") nail	6	12
40	1 1/8" - 1 1/4"	10d common (3" x 0.148") nail or 8d deformed (2 1/2" x 0.120") nail	6	12

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s, 1 ksi = 6.895 MPa.

- All nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.
- Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.
- Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.
- Four-foot-by-8-foot or 4-foot-by-9-foot panels shall be applied vertically.
- Spacing of fasteners not included in this table shall be based on Table R602.3(2).
- For regions having basic wind speed of 110 mph or greater, 8d deformed (2 1/2" x 0.120) nails shall be used for attaching plywood and wood structural panel roof sheathing to framing within minimum 48-inch distance from gable end walls, if mean roof height is more than 25 feet, up to 35 feet maximum.
- For regions having basic wind speed of 100 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. When basic wind speed is greater than 100 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to gable end wall framing.
- Gypsum sheathing shall conform to ASTM C 1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C 208.
- Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at all floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.

