

**EXCERPTS FROM IRC FASTENING SCHEDULE**

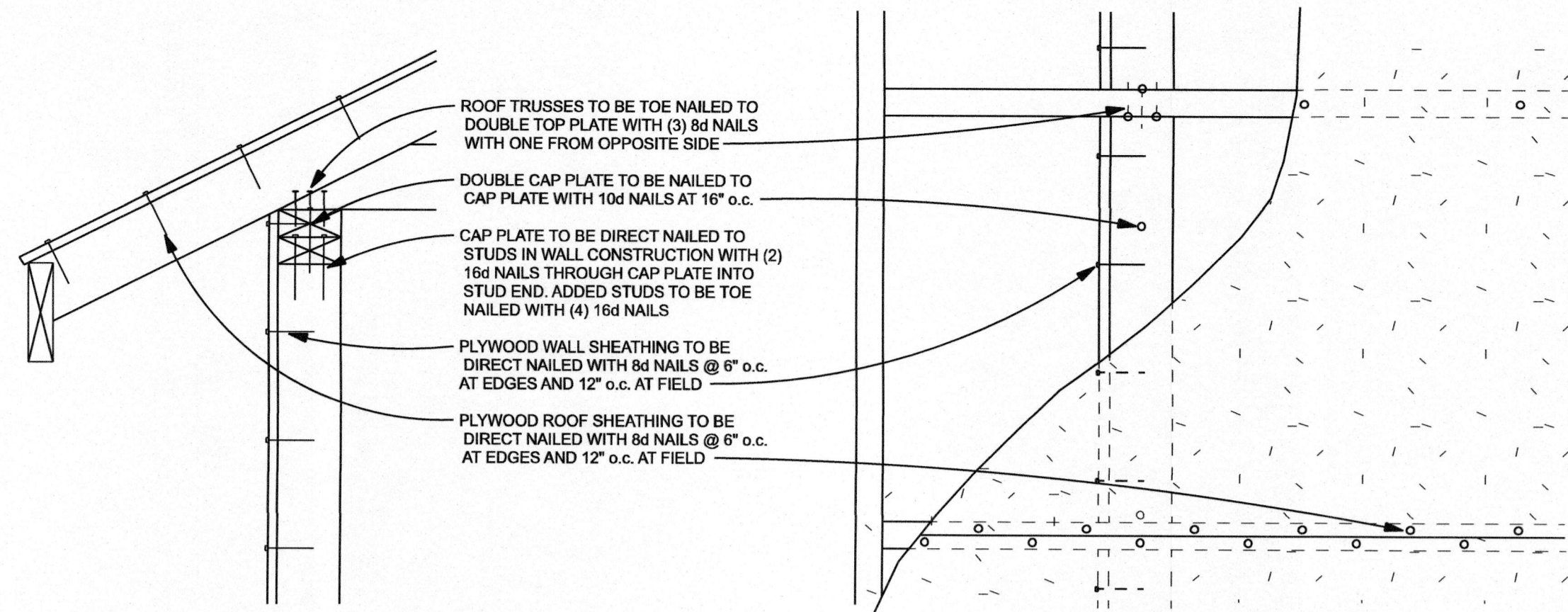
DESCRIPTION OF BUILDING ELEMENTS	NUMBER & TYPE OF FASTENER	SPACING OF FASTENERS
<b>ROOF</b>		
6 Roof truss to plate	3-16d box nails (31/2" x 0.135"); or 3-10d common nails (3" x 0.148"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss
<b>WALL</b>		
8 Stud to stud (not at braced wall panels)	10d box (3" x 0.128"); or 3" x 0.131" nails	16" o.c. face nail
9 Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d box (31/2" x 0.135"); or 3" x 0.131" nails	12" o.c. face nail
10 Built-up header (2.c to 2.c header with 1/2.c/rspacer)	16d box (31/2" x 0.135")	12" o.c. each edge face nail
11 Continuous header to stud	5-8d box (21/2" x 0.113"); or 4-8d common (21/2" x 0.131"); or 4-10d box (3" x 0.128")	Toe nail
12 Top plate to top plate	10d box (3" x 0.128"); or 3" x 0.131" nails	12" o.c. face nail
13 Double top plate splice for SDCs A-D2 with seismic braced wall line spacing < 25.5	8-16d common (31/2" x 0.162"); or 12-16d box (31/2" x 0.135"); or 12-10d box (3" x 0.128"); or 12-3" x 0.131" nails	Face nail on each side of end joint (minimum 24" lap splice length each side of end joint)
14 Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d box (31/2" x 0.135"); or 3" x 0.131" nails	12" o.c. face nail
15 Bottom plate to joist, rim joist, band joist or blocking (at braced wall panel)	3-16d box (31/2" x 0.135"); or 2-16d common (31/2" x 0.162"); or 4-3" x 0.131" nails	3 each 16" o.c. face nail 2 each 16" o.c. face nail 4 each 16" o.c. face nail
16 Top or bottom plate to stud	4-8d box (21/2" x 0.113"); or 3-16d box (31/2" x 0.135"); or 4-8d common (21/2" x 0.131"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails	Toe nail
16 Top or bottom plate to stud	3-16d box (31/2" x 0.135"); or 2-16d common (31/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails	End nail
17 Top plates, laps at corners and intersections	3-10d box (3" x 0.128"); or 2-16d common (31/2" x 0.162"); or 3-3" x 0.131" nails	Face nail
<b>FLOOR</b>		
21 Joist to sill, top plate or girder	4-8d box (21/2" x 0.113"); or 3-8d common (21/2" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails	Toe nail
22 Rim joist, band joist or blocking to sill or top plate (roof applications also)	8d common (21/2" x 0.131"); or 10d box (3" x 0.128"); or 3" x 0.131" nails	6" o.c. toe nail
23 1" x 6" subfloor or less to each joist	3-8d box (21/2" x 0.113"); or 2-8d common (21/2" x 0.131"); or 3-10d box (3" x 0.128"); or 2 staples, 1" crown, 16 ga., 13/4" long	Face nail
26 Band or rim joist to joist	3-16d common (31/2" x 0.162"); or 4-10 box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" x 14 ga. staples, 7/16" crown	End nail
27 Built-up girders and beams, 2-inch lumber layers	20d common (4" x 0.192"); or	Nail each layer as follows: 32" o.c. at top and bottom and staggered.
27 Built-up girders and beams, 2-inch lumber layers	10d box (3" x 0.128"); or 3" x 0.131" nails	24" o.c. face nail at top and bottom staggered on opposite sides
27 Built-up girders and beams, 2-inch lumber layers	And: 2-20d common (4" x 0.192"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails	Face nail at ends and at each splice
28 Ledger strip supporting joists or rafters	4-16d box (31/2" x 0.135"); or 3-16d common (31/2" x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails	At each joist or rafter, face nail
<b>Wood structural panels, subfloor, roof and interior wall sheathing to framing [see Table R602.3(3) for wood structural panel exterior wall sheathing to wall framing]</b>		
30 3/8" - 1/2"	6d common (2" x 0.113") nail (subfloor, wall); 8d common (21/2" x 0.131") nail (roof)	6 inch at edge, 12 inch at intermediate supports
31 19/32" - 1"	8d common nail (21/2" x 0.131")	6 inch at edge, 12 inch at intermediate supports
<b>Wood structural panels, combination subfloor underlayment to framing</b>		
37 3/4" and less	6d deformed (2" x 0.120") nail; or 8d common (21/2" x 0.131") nail	6 inch at edge, 12 inch at intermediate supports

**FASTENING SCHEDULE**

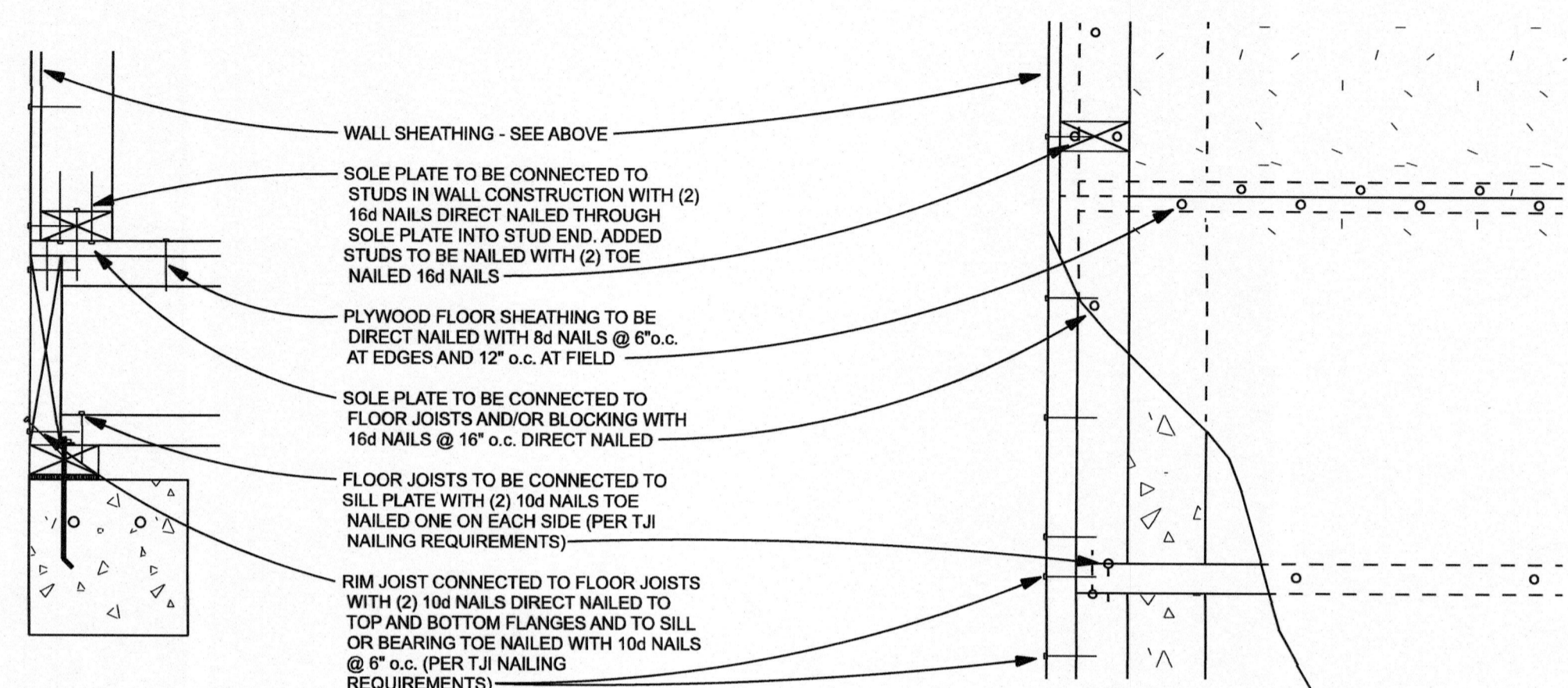
- a. Nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 90 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.
- b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.
- c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.
- d. Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically.
- e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).
- f. Where the ultimate design wind speed is 130 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. Where the ultimate design wind speed is greater than 130 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.
- g. 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.
- h. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at 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.
- i. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.

Silent Floor System Nailing Requirements for TJI/Pro 120TS Joists  
 Per Trus Joist MacMillan publication JM0399/30M - re-order # 2027  
 TJI Joists at bearing: (2) 10d or 12d box nails, 1 1/2" min. from end, one each side.  
 Blocking panels, rim joists or rim board to bearing plate:  
 TJI blocking panels or rim joists: 10d box nails @ 6" o.c.  
 Timberstrand LSL rim board: Toe nail 10d box nails @ 6" o.c., or 16d box nails @ 12" o.c.  
 Shear transfer: Connections equivalent to decking nail schedule  
 Rim board, rim joist or closure to TJI joist: (2) 10d box nails, one each @ top & bottom flange  
 2x4 minimum squash blocks: (2) 10d box nails, one each @ top and bottom flange  
 TJI/Pro 120TS rim joist: (2) 10d box nails, one each @ top and bottom flange

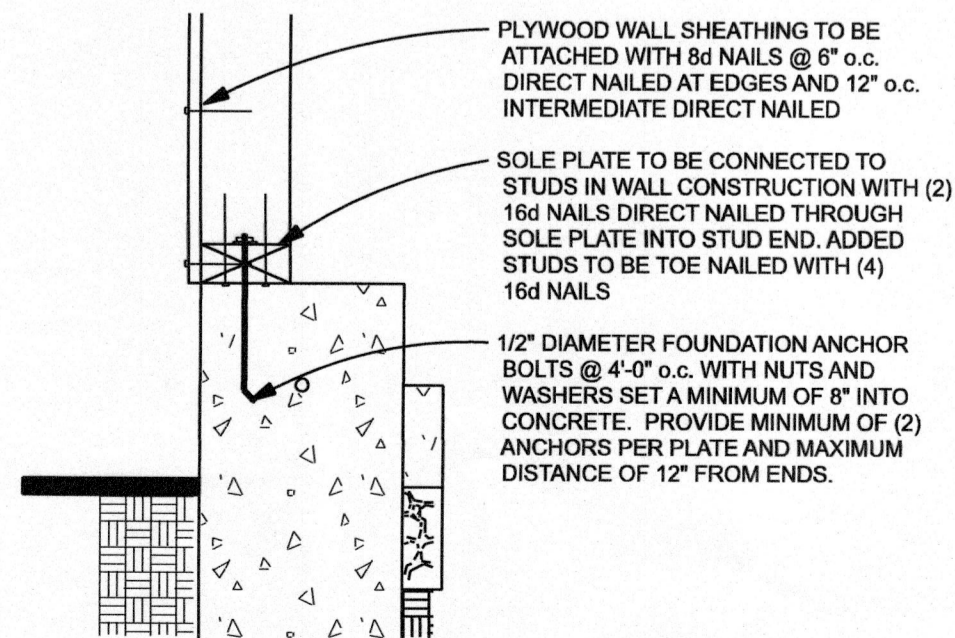
Silent Floor System Nailing Requirements for TJI/Pro 150, 250, 350 & 550 Joists  
 Per Trus Joist MacMillan publication NV0798/30M - re-order # 2025  
 TJI Joists at bearing: (2) 10d or 12d box nails, 1 1/2" min. from end, one each side  
 Blocking panels, rim joists or rim board to bearing plate:  
 TJI blocking panels or rim joists: 10d box nails @ 6" o.c.  
 Timberstrand LSL or MicroLam LVL rim board: Toe nail 10d box nails @ 6" o.c., or 16d box nails @ 12" o.c.  
 Shear transfer: Connections equivalent to decking nail schedule  
 Rim board, rim joist or closure to TJI joist:  
 1 3/4" width or less: (2) 10d box nails, one each @ top and bottom flange  
 TJI/Pro 350 rim joist: (2) 16d box nails, one each @ top and bottom flange  
 TJI/Pro 550 rim joist: Toe nail joist to rim joist with (1) 10d box nail on each side of top flange  
 2x4 minimum squash blocks: (2) 10d box nails, one each @ top and bottom flange



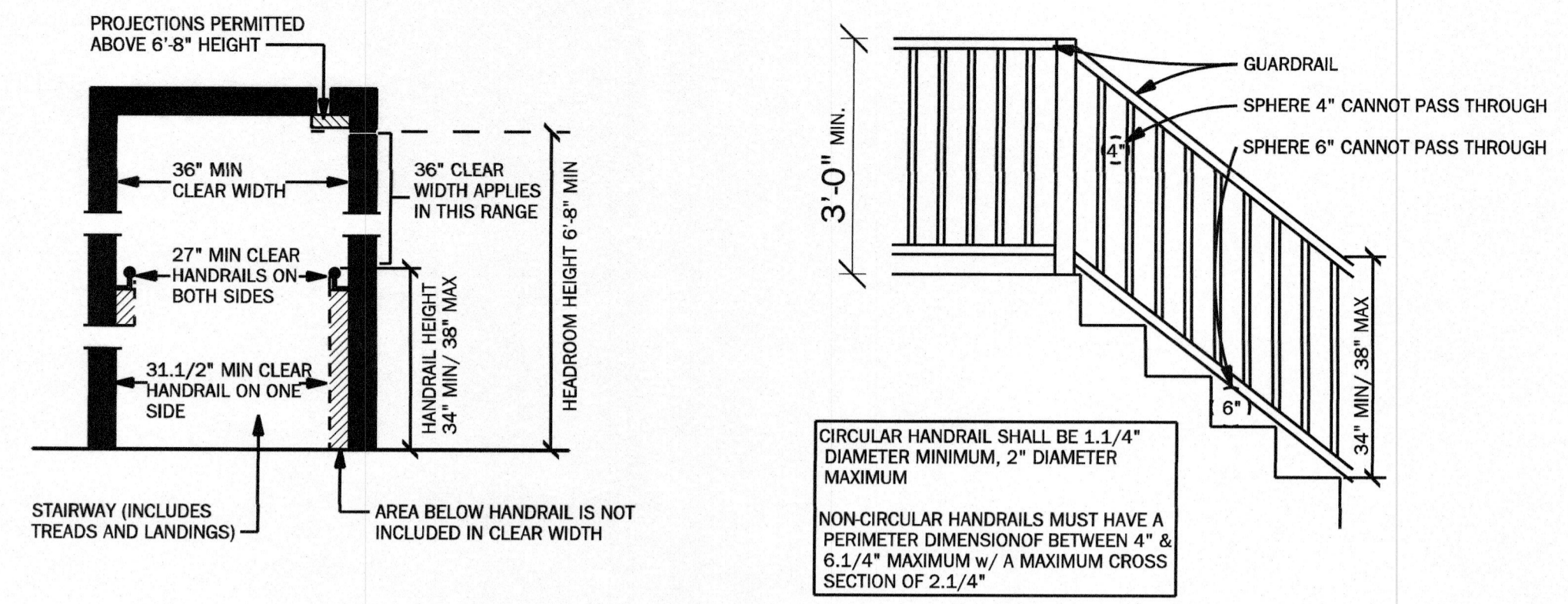
**NAILING @ ROOF AND TOP PLATES**



**NAILING @ JOISTS OVER CONCRETE**

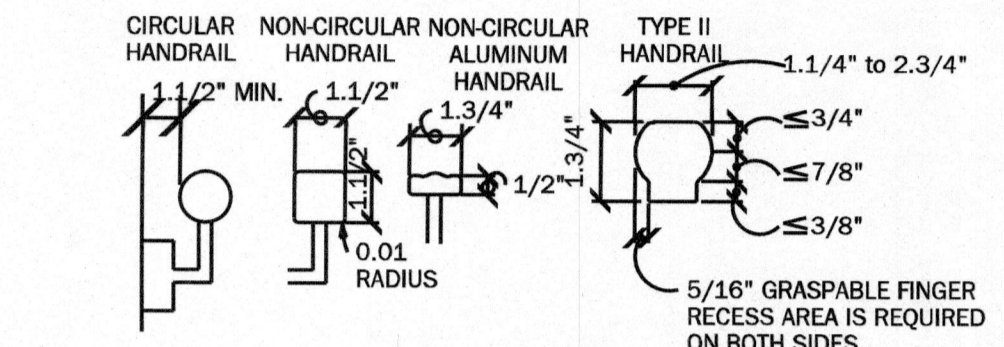


**NAILING @ FRAMING OVER FROST WALL**

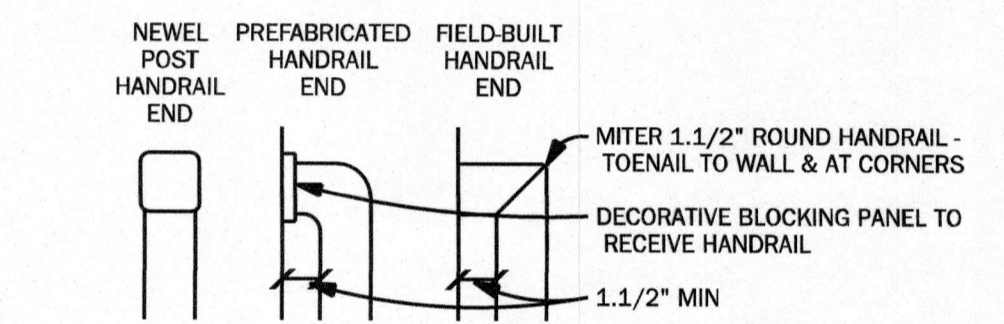


**STAIRWAY CROSS SECTIONAL CLEARANCES**

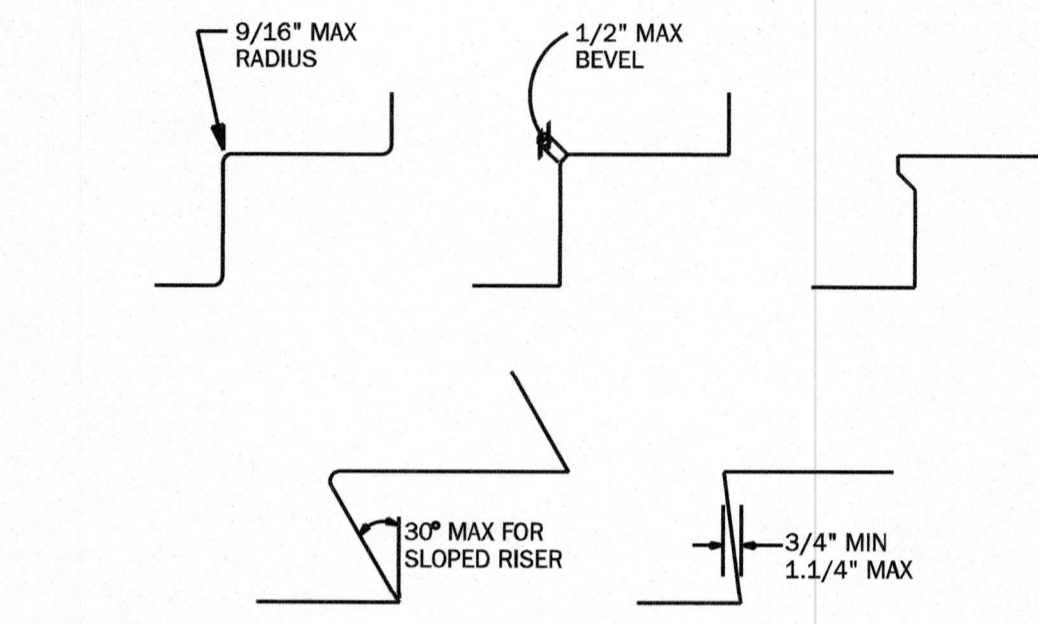
**GUARDRAIL REQUIREMENTS**



**HANDRAIL CROSS SECTIONS**



**HANDRAIL TERMINATION - PLAN VIEWS**



**TREAD PROFILES**

**MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS (IRC TABLE R602.7.5)**

HEADER SPAN	16 INCHES	24 INCHES
	MAXIMUM STUD SPACING	MAXIMUM STUD SPACING
3 FEET OR LESS	1	1
4 FEET	2	1
8 FEET	3	2
12 FEET	5	3
16 FEET	6	4

**Proposed residence, 1600-32 model**  
**Permit #**  
**Lot #5, 504 NW Main Street**  
**Lee's Summit, Jackson County, Missouri 64063**  
**for Walker Custom Homes LLC**

**STUDIO ARCHAEO S**

433 BLUFF STREET, ALTON, IL 62002 314-280-3855  
 MISSOURI STATE CERTIFICATE OF AUTHORITY #2011021199

revised	by	date	issued for	date
	Tim		building permit application	5/22/2020

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Timothy J. Busse - Architect  
 MO#007234

Actual construction and dimensions may vary in field.

Exterior elevations shown as artist's concepts only.  
**DO NOT SCALE DRAWINGS.**

sheet **5** of **5**

6/5/2020