



## RESIDENTIAL ROOF CHECKLIST

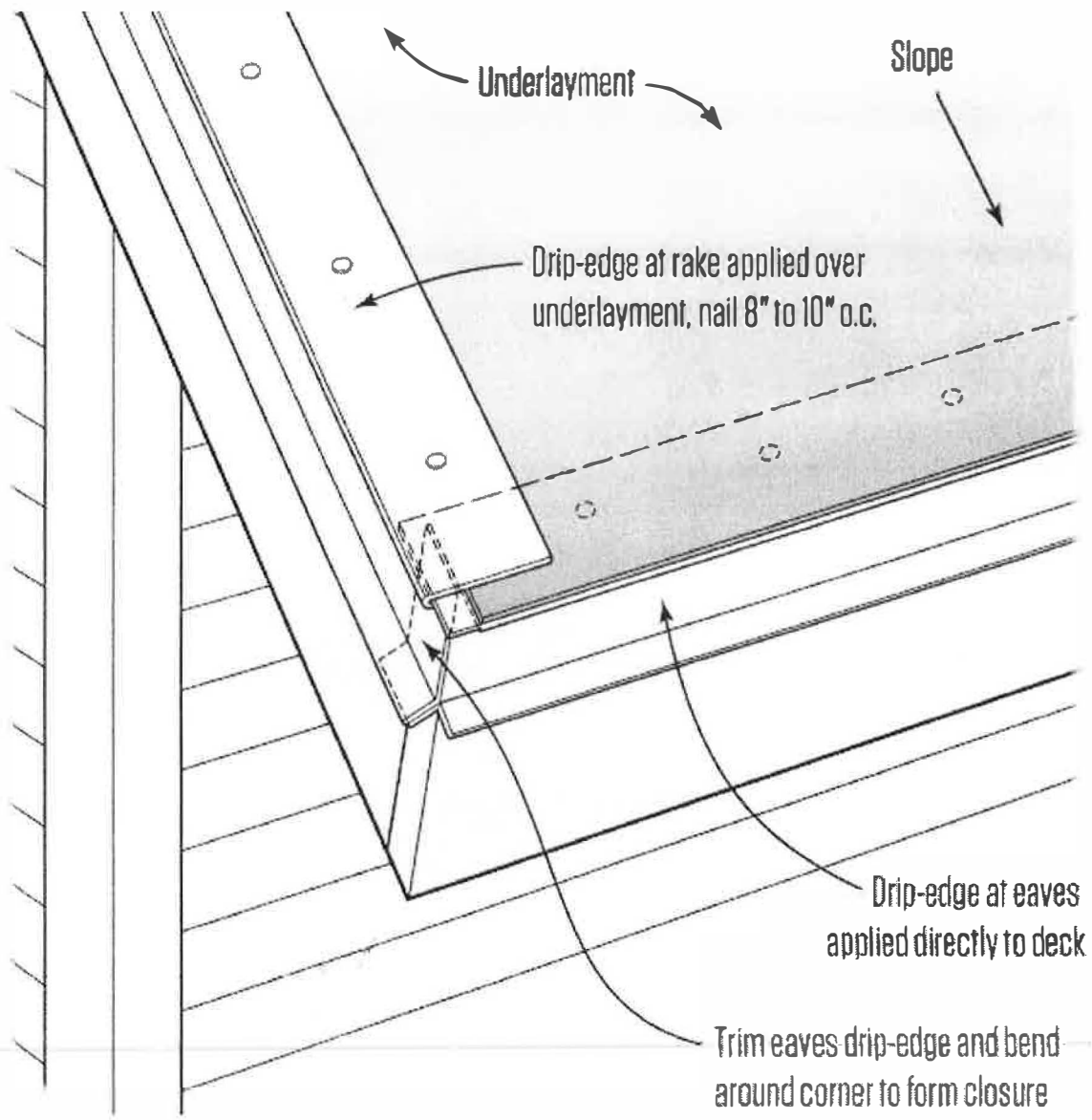
### PERMIT APPLICATION & SUBMITTAL REQUIREMENTS

- Complete a building permit application online by visiting our [Online Permitting Portal](#)
- Roofing contractor shall provide a copy of the state roofing license.
- Provide a copy of the contract/proposal.
- Roofing requirements
  - New roof sheathing shall comply with required thickness and allowable spans based upon existing roof rafter spacing per the 2024 IRC Table R503.2.1.1(1) – see page 3
  - Ice and water shield is required to begin at the eaves edge and extend at least twenty-four inches (24”) inside the exterior wall line.
  - Underlayment shall be a minimum of 15 pound felt for roof slopes 4:12 or greater and shall be installed to completely cover the entire roof sheathing system. Double underlayment is required on roof slopes 2:12 to 4:12
  - Base and cap flashing, valley lining, and sidewall flashing are required
  - Drip edge shall be installed at eaves and gables of shingled roofs. Underlayment shall be installed over the drip edge along eaves and under the drip edge on gables
  - Roof ventilation will be verified at the time of inspection. The minimum net free ventilation area shall be 1/300 square feet of the vented space if at least 40% and not more than 50% of the required ventilating area is provided by vents located in the upper portion of the attic space. Ventilation can be accomplished by mushroom style vents or ridge vents in combination with soffit/eave vents. Installation of additional roof vents may be required on existing roofs with inadequate ventilation.
  - Existing plumbing vents and bathroom exhaust vents will be required to extend through the roof deck
  - A maximum of two (2) layers of shingles are permitted. If two (2) layers exist, they must be removed down to the sheathing prior to the new installation
- Must comply with the following codes:
  - 2024 International Residential Code

### **INSPECTIONS:**

Inspections are scheduled by calling (847) 357-4220 between the hours of 8:00 a.m. and 5:00 p.m. Monday through Friday. Please have the **permit number** and **site address** ready. In addition, please allow a minimum of 24 hours when scheduling an inspection.

- Sheathing (if applicable)
- Drip Edge
- Ice and water shield
- Final



Ice and water shield to be installed per IRC 905.1.2  
Drip-Edge Installation

**TABLE R503.2.1.1(1)—ALLOWABLE SPANS AND LOADS FOR WOOD STRUCTURAL PANELS FOR ROOF AND SUBFLOOR SHEATHING AND COMBINATION SUBFLOOR UNDERLAYMENT<sup>a, b, c</sup>**

SPAN RATING	MINIMUM NOMINAL PANEL THICKNESS (inch)	ALLOWABLE LIVE LOAD (psf) <sup>h, i</sup>		MAXIMUM SPAN (inches)		LOAD (pounds per square foot, at maximum span)		MAXIMUM SPAN (inches)
		Span @ 16" o.c.	Span @ 24" o.c.	With edge support <sup>d</sup>	Without edge support	Total load	Live load	
<b>Sheathing<sup>e</sup></b>		<b>Roof<sup>f</sup></b>						<b>Subfloor<sup>j</sup></b>
16/0	$\frac{3}{8}$	30	—	16	16	40	30	0
20/0	$\frac{3}{8}$	50	—	20	20	40	30	0
24/0	$\frac{3}{8}$	100	30	24	20 <sup>g</sup>	40	30	0
24/16	$\frac{7}{16}$	100	40	24	24	50	40	16
32/16	$\frac{15}{32}, \frac{1}{2}$	180	70	32	28	40	30	16 <sup>h</sup>
40/20	$\frac{19}{32}, \frac{5}{8}$	305	130	40	32	40	30	20 <sup>h, i</sup>
48/24	$\frac{23}{32}, \frac{3}{4}$	—	175	48	36	45	35	24
60/32	$\frac{7}{8}$	—	305	60	48	45	35	32
<b>Underlayment, C-C plugged, single floor<sup>e</sup></b>		<b>Roof<sup>f</sup></b>						<b>Combination subfloor underlayment<sup>k</sup></b>
16 o.c.	$\frac{19}{32}, \frac{5}{8}$	100	40	24	24	50	40	16 <sup>i</sup>
20 o.c.	$\frac{19}{32}, \frac{5}{8}$	150	60	32	32	40	30	20 <sup>i, j</sup>
24 o.c.	$\frac{23}{32}, \frac{3}{4}$	240	100	48	36	35	25	24
32 o.c.	$\frac{7}{8}$	—	185	48	40	50	40	32
48 o.c.	$1\frac{3}{32}, 1\frac{1}{8}$	—	290	60	48	50	40	48

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

- The allowable total loads were determined using a dead load of 10 psf. If the dead load exceeds 10 psf, then the live load shall be reduced accordingly.
- Panels continuous over two or more spans with long dimension (strength axis) perpendicular to supports. Spans shall be limited to values shown because of possible effect of concentrated loads.
- Applies to panels 24 inches or wider.
- Lumber blocking, panel edge clips (one midway between each support, except two equally spaced between supports where span is 48 inches), tongue-and-groove panel edges, or other approved type of edge support.
- Includes Structural I panels in these grades.
- Uniform load deflection limitation:  $\frac{1}{180}$  of span under live load plus dead load,  $\frac{1}{240}$  of span under live load only.
- Maximum span 24 inches for  $\frac{15}{32}$ - and  $\frac{1}{2}$ -inch panels.
- Maximum span 24 inches where  $\frac{3}{4}$ -inch wood finish flooring is installed at right angles to joists.
- Maximum span 24 inches where 1.5 inches of lightweight concrete or approved cellular concrete is placed over the subfloor.
- Unsupported edges shall have tongue-and-groove joints or shall be supported with blocking unless minimum nominal  $\frac{1}{4}$ -inch-thick wood panel-type underlayment, fiber-cement underlayment with end and edge joints offset not less than 2 inches or  $1\frac{1}{2}$  inches of lightweight concrete or approved cellular concrete is placed over the subfloor, or  $\frac{3}{4}$ -inch wood finish flooring is installed at right angles to the supports. Fiber-cement underlayment shall comply with ASTM C1288 or ISO 8336 Category C. Allowable uniform live load at maximum span, based on deflection of  $\frac{1}{360}$  of span, is 100 psf.
- Unsupported edges shall have tongue-and-groove joints or shall be supported by blocking unless nominal  $\frac{1}{4}$ -inch-thick wood panel-type underlayment, fiber-cement underlayment with end and edge joints offset not less than 2 inches or  $\frac{3}{4}$ -inch wood finish flooring is installed at right angles to the supports. Fiber-cement underlayment shall comply with ASTM C1288 or ISO 8336 Category C. Allowable uniform live load at maximum span, based on deflection of  $\frac{1}{360}$  of span, is 100 psf, except panels with a span rating of 48 on center are limited to 65 psf total uniform load at maximum span.
- Allowable live load values at spans of 16 inches on center and 24 inches on center taken from referenced standard APA E30, *APA Engineered Wood Construction Guide*. Refer to referenced standard for allowable spans not listed in the table.

**TABLE R503.2.1.1(2)—ALLOWABLE SPANS FOR SANDED PLYWOOD COMBINATION SUBFLOOR UNDERLAYMENT<sup>a</sup>**

IDENTIFICATION	SPACING OF JOISTS (inches)		
	16	20	24
Species group <sup>b</sup>	—	—	—
1	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$
2, 3	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$
4	$\frac{3}{4}$	$\frac{7}{8}$	1

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

- Plywood continuous over two or more spans and face grain perpendicular to supports. Unsupported edges shall be tongue-and-groove or blocked except where nominal  $\frac{1}{4}$ -inch-thick wood panel-type underlayment, fiber-cement underlayment or  $\frac{3}{4}$ -inch wood finish floor is used. Fiber-cement underlayment shall comply with ASTM C1288 or ISO 8336 Category C. Allowable uniform live load at maximum span based on deflection of  $\frac{1}{360}$  of span is 100 psf.
- Applicable to all grades of sanded exterior-type plywood.