



ICE/WATER SHIELD & METAL DRIP EDGE IN CLASS 2 CONSTRUCTION with ASPHALT SHINGLES

State and local building officials have received many questions about ice/water shield and drip edge in Class 2 construction. In response to these questions, this document has been created to provide guidance and to share the code sections that govern this subject in the state of Indiana.

As of December 26, 2019, residential construction in the state of Indiana is regulated by the *2020 Indiana Residential Code* (675 IAC 14-4.4). The *2020 Indiana Residential Code* adopts, and amends, the first printing of the *2018 International Residential Code*. The *2020 Indiana Residential Code* regulates ice/water shield and drip edge as follows. **Note that R903, R904 and R905.1 and their respective subsections apply to all roofing types unless indicated otherwise. Section R905.2 and its subsections apply specifically to asphalt shingle roofs unless indicated otherwise. Other roofing material types are further regulated under their own respective sections.**

R903 WEATHER PROTECTION

R903.1 General. Roof decks shall be covered with approved roof coverings secured to the building or structure in accordance with the provisions of this chapter. **Roof assemblies shall be designed and installed in accordance with this code and the approved manufacturer's installation instructions** such that the roof assembly shall serve to protect the building or structure.

R904 MATERIALS

R904.1 Scope. The requirements set forth in this section shall apply to the application of roof covering materials specified herein. **Roof assemblies shall be applied in accordance with this chapter and the manufacturer's installation instructions.** Installation of roof assemblies shall comply with the applicable provisions of Section R905.

R905 REQUIREMENTS FOR ROOF COVERINGS

R905.1 Roof covering application. Roof coverings shall be applied in accordance with the applicable provisions of this section **and the manufacturer's installation instructions.** Unless otherwise specified in this section, roof coverings shall be installed to resist the component and cladding loads specified in Table R301.2(2), adjusted for height and exposure in accordance with Table R301.2(3).

R905.1.2 Ice barriers. In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier shall be installed for asphalt shingles, metal roof shingles, mineral-surfaced roll roofing, slate and slate-type shingles, wood shingles and wood shakes. The ice barrier shall consist of not fewer than two layers of underlayment cemented together, or a self-adhering polymer-modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point not less than 24 inches (610 mm) inside the exterior wall line of the building. On roofs with slope equal to or greater than eight units vertical in 12 units horizontal (67-percent slope), the ice barrier shall also be applied not less than 36 inches (914 mm) measured along the roof slope from the eave edge of the building.

Exception: Detached accessory structures not containing conditioned floor area.

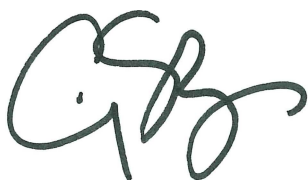
R905.2.8 Flashing. Flashing for asphalt shingles shall comply with this section and *the asphalt shingle manufacturer's installation instructions*.

R905.2.8.5 Drip edge. A drip edge shall be provided at eaves and rake edges of shingle roofs. Adjacent segments of drip edge shall be overlapped not less than 2 inches (51 mm). Drip edges shall extend not less than ¼ inch (6.4 mm) below the roof sheathing and extend up back onto the roof deck not less than 2 inches (51 mm). Drip edges shall be mechanically fastened to the roof deck at not more than 12 inches (305 mm) o.c. with fasteners as specified in Section R905.2.5 Underlayment shall be installed over the drip edge along eaves and under the drip edge along rake edges.

Section R905.1.2 refers to Table R301.2(1) CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA, which is amended by 675 IAC 14-4.4-5. A copy of the amended table follows at the end of this document. Note that the table lists specific Indiana counties in which the use of ice/water shield is required. Note also, however, that the sections cited above (R903.1, R904.1 and R905.1) further require that all roofing materials be installed in accordance with the manufacturer's installation instructions. **Together, these sections and Table R301.2(1) set forth the locations and circumstances in which ice/water shield are required.** In short, there are specific counties in which it is always required (per Table R301.2(1)), and specific counties in which it is required only when the roofing manufacturer's written installation instructions require it (per Sections R903.1, R904.1 and R905.1).

The 2020 Indiana Residential Code is in full force and effect statewide. Regardless of any established local enforcement policies or practices to the contrary, or whether a local building authority even exists in any particular jurisdiction or location in the state, the 2020 Indiana Residential Code governs all Class 2 residential construction, and its requirements, by law, must be followed. Local units of government are statutorily mandated to require compliance with the code.

It is not the building code official's responsibility, however, nor is it the responsibility of this office, to enforce provisions of any manufacturer's or installer's warranty, other than citing non-compliant conditions where they exist. Determining who shall be responsible for the cost of replacing ice/water shield, drip edge or any other roofing material or component that is required by the code is not a matter governed by the Department or any other state or local building official, but is left for the interested parties to determine.



Craig E. Burgess AIA NCARB CPE CBI LEED AP
Indiana State Building Commissioner
February 25, 2020

ONE AND TWO FAMILY DWELLING CODE

~~SOLID MASONRY to read as follows:~~

~~SOLE PLATE. The bottom horizontal member of a framed wall or partition that receives and transfers loads to the floor assembly, wall, or foundation below.~~

~~(12) Delete the definition of TOWNHOUSE and substitute to read as follows: TOWNHOUSE. Townhouse has the meaning ascribed thereto in IC 22-12-1-5(c).~~

~~(Fire Prevention and Building Safety Commission; 675 IAC 14-4.4-3; filed Nov 26, 2019, 11:43 a.m.; 20191225-IR-675190330FRA)~~

675 IAC 14-4.4-4 Section R301.2.1.4; exposure category

Authority: IC 22-13-2-2; IC 22-13-2-2.5; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 4. Change the fourth sentence in the text of SECTION R301.2.1.4 to read as follows:

For a site where multiple detached one and two family dwellings, townhouses or other structures are to be constructed as part of a subdivision or master-planned community, or are otherwise designated as a developed area by the authority having jurisdiction, the exposure category for an individual structure shall be based on the site conditions that will exist at the time when all adjacent structures on the site have been constructed, provided that their construction in that section of the subdivision or master-planned community is expected to begin within 2 years of the start of construction for the structure for which the exposure category is determined.

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.4-4; filed Nov 26, 2019, 11:43 a.m.; 20191225-IR-675190330FRA)

675 IAC 14-4.4-5 Table R301.2(1); climatic and geographical design criteria

Authority: IC 22-13-2-2; IC 22-13-2-2.5; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 5. Delete TABLE R301.2(1) and the corresponding footnotes and substitute to read as follows:

TABLE R301.2(1)												
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA												
No.	County	Wind Speed _a (MPH)	Seismic Design Category _b	Ground Snow (PSF)	Found-ation _c	Winter Design Temp (°F)	Decay	Termite	Weathering _d	Ice Shield Underlayment Required	Air Freezing Index	Mean Annual Temp (°F)
01	Adams	115	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	≤1500	50.9°
02	Allen	115	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	49.9°
03	Bartholomew	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	53.1°
04	Benton	115	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	49.1°
05	Blackford	115	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	51.4°
06	Boone	115	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	52.3°
07	Brown	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	53.1°
08	Carroll	115	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	≤1500	51.7°
09	Cass	115	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	50.3°
10	Clark	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	54.7°
11	Clay	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	52.1°
12	Clinton	115	A	20	30	2°	Slight to	Moderate	Severe	No	≤1500	50.7°

ONE AND TWO FAMILY DWELLING CODE

							Moderate	to Heavy				
13	Crawford	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	54.7°
14	Daviess	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	56.1°
15	Dearborn	115	A	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	50.5°
16	Decatur	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	52.4°
17	DeKalb	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	≤1500	50.0°
18	Delaware	115	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	50.8°
19	Dubois	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	53.9°
20	Elkhart	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	≤1500	50.5°
21	Fayette	115	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	51.5°
22	Floyd	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	54.7°
23	Fountain	115	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	2000	51.2°
24	Franklin	115	A	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	51.8°
25	Fulton	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	49.3°
26	Gibson	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	55.2°
27	Grant	115	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	50.3°
28	Greene	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	52.9°
29	Hamilton	115	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	51.5°
30	Hancock	115	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	51.6°
31	Harrison	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	54.7°
32	Hendricks	115	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	52.3°
33	Henry	115	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	49.9°
34	Howard	115	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	2000	49.6°
35	Huntington	115	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	≤1500	50.4°
36	Jackson	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	52.5°
37	Jasper	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	49.6°
38	Jay	115	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	49.7°
39	Jefferson	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	54.7°
40	Jennings	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	54.3°
41	Johnson	115	B	20	30	2°	Slight to	Moderate	Severe	No	≤1500	52.0°

ONE AND TWO FAMILY DWELLING CODE

							Moderate	to Heavy				
42	Knox	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	53.4°
43	Kosciusko	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	49.0°
44	LaGrange	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	≤1500	47.9°
45	Lake	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	49.0°
46	LaPorte	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	49.7°
47	Lawrence	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	52.6°
48	Madison	115	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	50.8°
49	Marion	115	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	51.8°
50	Marshall	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	50.0°
51	Martin	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	54.2°
52	Miami	115	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	49.4°
53	Monroe	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	53.1°
54	Montgomery	115	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	50.1°
55	Morgan	115	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	51.5°
56	Newton	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	50.2°
57	Noble	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	≤1500	49.0°
58	Ohio	115	A	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	53.0°
59	Orange	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	53.0°
60	Owen	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	50.1°
61	Parke	115	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	53.9°
62	Perry	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	55.8°
63	Pike	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	54.8°
64	Porter	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	49.6°
65	Posey	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	55.4°
66	Pulaski	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	49.7°
67	Putnam	115	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	52.6°
68	Randolph	115	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	49.9°
69	Ripley	115	A	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	54.5°
70	Rush	115	A	20	30	2°	Slight to	Moderate	Severe	No	≤1500	51.2°

ONE AND TWO FAMILY DWELLING CODE

							Moderate	to Heavy				
71	St. Joseph	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	≤1500	49.1°
72	Scott	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	53.9°
73	Shelby	115	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	52.6°
74	Spencer	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	56.2°
75	Starke	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	49.7°
76	Steuben	115	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	47.3°
77	Sullivan	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	52.7°
78	Switzerland	115	A	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	55.7°
79	Tippecanoe	115	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	2000	50.9°
80	Tipton	115	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	2000	49.2°
81	Union	115	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	51.5°
82	Vanderburgh	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	57.0°
83	Vermillion	115	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	50.8°
84	Vigo	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	53.1°
85	Wabash	115	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	49.0°
86	Warren	115	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	2000	51.0°
87	Warrick	115	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	56.2°
88	Washington	115	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	54.5°
89	Wayne	115	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe	No	≤1500	49.9°
90	Wells	115	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	≤1500	49.9°
91	White	115	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	2000	50.3°
92	Whitley	115	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe	Yes	≤1500	48.8°

a. Wind exposure shall be determined on a site-specific basis in accordance with SECTION R301.2.1.4.

b. Seismic design category shall be assigned according to this TABLE or SECTION R301.2.2.1.1.

c. Foundation is the minimum depth, in inches, from the finish grade to the bottom of the footing.

d. The grade of masonry units shall be determined from ASTM C34, C55, C62, C73, C90, C129, C145, C216, or C652.

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.4-5; filed Nov 26, 2019, 11:43 a.m.: 20191225-IR-675190330FRA)

~~**675 IAC 14-4.4-6 Section R301.2.2.1; determination of seismic design category**~~

Authority: IC 22-13-2-2; IC 22-13-2-2.5; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 6. Change the text of SECTION R301.2.2.1 to read as follows:

~~Buildings shall be assigned a seismic design category in accordance with TABLE R301.2(1).~~