

CA-01GC-06-20
FM 1-28 Code Alert
September 3, 2020

To: Carlisle SynTec Systems’ Manufacturer’s Representatives and Authorized Applicators

This Code Alert is a monthly online release that addresses issues pertaining to FM and UL, including raising awareness of industry updates and new approvals and elaborating on existing approved assemblies that may require additional clarification. The contents of each release will be altered or customized to address specific field inquiries or to respond to unique market trends. Feedback concerning future topics is strongly encouraged.

FM 1-28 Summary Update

This Code Alert document summarizes changes made to the FM 1-28 Property Loss Prevention Data Sheet, dated February 2020.

One key change relates to roof zone dimensions to align with the ASCE 7-16 Design Standards. In some cases (depending on the roof dimensions, building height, and roof slopes), four zones may exist: interior, inner perimeter, outer perimeter, and corner zones. The Roof Zone table below may be referenced for more detailed information.

Roof Height/Slope	Reference	Corner Zone (3)	Outer Perimeter Zone (2)	Inner Perimeter /Field Zone (1)	Interior Zone (1')
Building slopes less than 1-1/2" (7° or less) OR Buildings less than 90' with height to width ratio of 1.0 or less	Figure I	0.6h x 0.6 x 0.2h "L" shaped	0.6h from roof edge	1.2h from roof edge	Covers the remaining roof area
Building slopes 1-1/2" or greater (greater than 7°)	Figure II	The width (a) of the various perimeter and corner zones equals the lesser of 10% of the building width or 0.4h, but not less than 4% of the width or 3ft.		Covers remaining roof area	N/A
Buildings 90'-high or taller, or buildings higher than 60' with height to width ratio greater than or equal to 1.0	Figure III	The depth of the corner and perimeter zones shall equal 10% of the building width dimension, but not less than 3ft (0.9m). The corner zone shall extend along both perimeters a distance equal to twice the depth forming an "L" pattern.		Covers remaining roof area	N/A

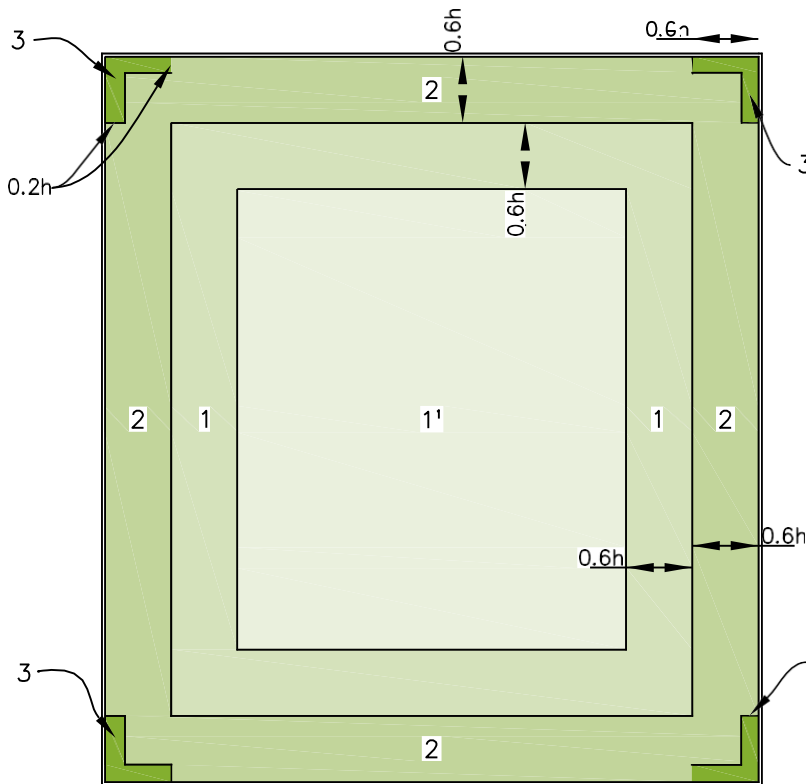
h= building height

Other important items to note include:

1. Revised design wind guidance reflects changes in pressure coefficients (G_C).
2. The basic design wind speed maps for the continental United States and Alaska remain unchanged and are still based on ASCE7-05.
3. Wind pressure tables have been removed. Roof pressures can be determined by using either the RoofNav Ratings Calculator or the pressure calculations in section 3.0 or 1-28. Also, pressure coefficients have been provided as outlined in the tables included with Figure I, Figure II, and Figure III.
4. A separate 100-year MRI wind map has been provided for each of the islands of Hawaii, instead of using one wind speed for all the islands.

Figure I

Building slopes less than 1-1/2" (7° or less) OR
Buildings less than 90' with height to width ratio of 1.0 or less

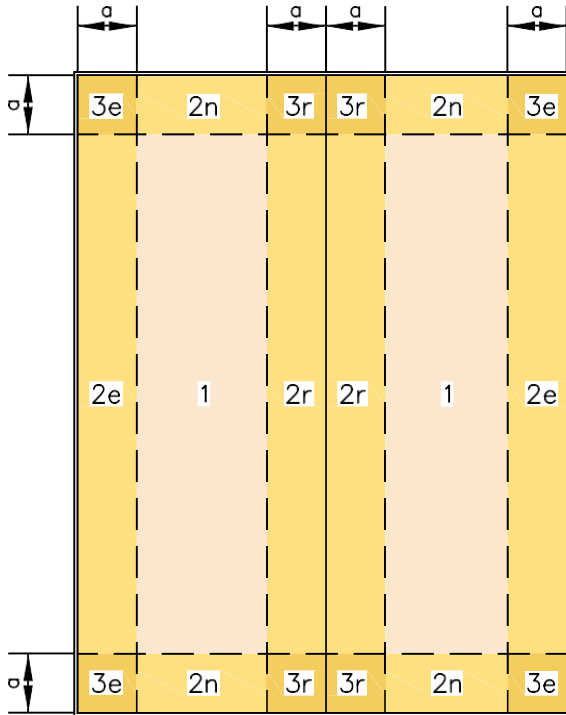


Zone	G_C
Corner Zone (3)	-3.2
Outer Perimeter Zone (2)	-2.3
Inner Perimeter/Field Zone (1)	-1.7
Interior Zone (1')	-0.9

Figure II

Building slopes 1-1/2" or greater (greater than 7°)

a=The width of the various perimeter and corner zones equals the lesser of 10% of the building width or 0.4h, but not less than 4% of the width or 3'.

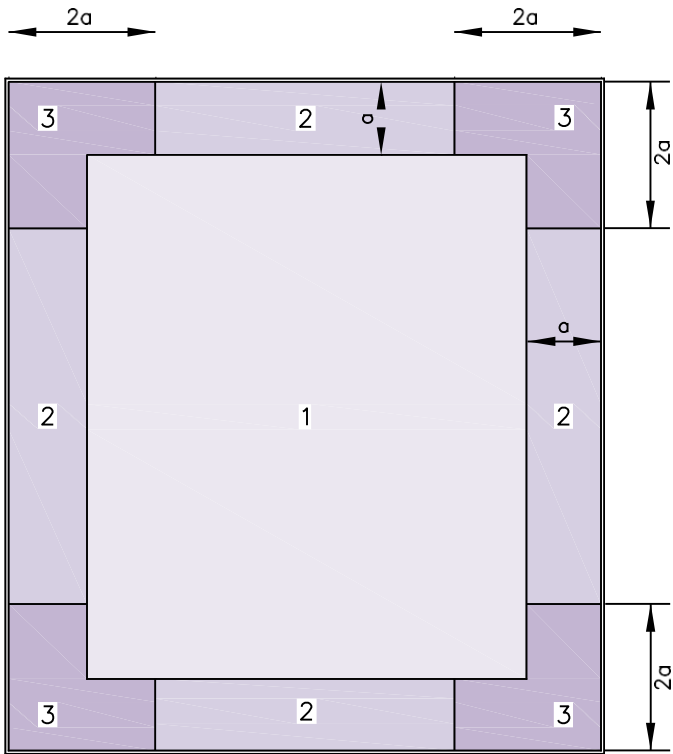


Zone	GC _P
Corner Zone (3r)	-3.6
Outer Perimeter Zone (2n, 2r, 3e)	-3
Inner Perimeter/Field Zone (1, 2e)	-2

This table contains conservative GC_P values for slopes 1-1/2" or greater. For lesser values for steeper slopes, refer to FM 1-28 table 3.2.2d or table 3.2.2c.

Figure III

Buildings 90' high or taller, or buildings higher than 60' with height to width ratio greater than or equal to 1.0



Zone	GC _p
Corner Zone (3)	-3.2
Outer Perimeter Zone (2)	-2.3
Inner Perimeter/Field Zone (1)	-1.7

$a = 10\%$ of the lesser horizontal dimension, but not less than 3ft. (0.9m)

This code alert is intended for informational reference only and shall not be considered a replacement to the actual FM 1-28 publication. All FM-insured projects must be reviewed by the local FM Engineering office before beginning any roofing work.

For additional information, please log on to <https://www.roofnav.com> to access the RoofNav number search, RoofNav Ratings Calculator, and all applicable Property Loss Prevention Data Sheets.