

ICC-ES Evaluation Report

ESR-1733

Reissued February 2024


This report also contains:

- CBC Supplement

Subject to renewal February 2026

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DIVISION: 07 00 00— THERMAL AND MOISTURE PROTECTION Section: 07 42 13— Metal Wall Panels Section: 07 46 00— Siding	REPORT HOLDER: VM ZINC®	EVALUATION SUBJECT: VM ZINC® FLATLOCK AND INTERLOCKING METAL EXTERIOR WALL COVERING PANELS	
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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018 and 2015 [International Building Code® \(IBC\)](#)
- 2021, 2018 and 2015 [International Residential Code \(IRC\)](#)

Properties evaluated:

- Wind resistance
- Physical properties

2.0 USES

The VM ZINC® Flatlock and Interlocking exterior wall covering panels are used as exterior wall covering or veneer in nonfire-resistance-rated Types I, II, III or IV construction with an above grade height of less than 40 feet (12.2 m), and Type V construction. The VM ZINC® Flatlock metal exterior wall covering panels may also be used as interior wall covering or veneer in nonfire-resistance-rated Types I, II, III, IV or V construction.

3.0 DESCRIPTION

3.1 General:

The metal exterior wall covering panels are produced as factory-formed, zinc-alloy panels. The zinc-alloy conforms to ASTM B69-13 (Type 1).

3.2 VM ZINC® Flatlock Panel:

The VM ZINC® Flatlock metal exterior wall covering panel uses overlapped panels so that a nearly flat appearance is achieved. The panels are 0.039 inches (1.0 mm) thick and 16 inches (406 mm) wide. They are available in lengths of 1 foot 6 inches (500 mm) to 13 feet 1 inch (4.0 m) and multiple surface colors. See [Figure 1](#).

3.3 VM ZINC® Interlocking Wall Panel:

The VM ZINC® Interlocking metal exterior wall covering panels are 0.039 inches (1.0 mm) thick with varying coverage widths of 8, 10 and 12 inches (203.2, 254 and 304.8 mm) measured on centers, with width reveals of 1/4, 1/2, 3/4 and 1 inch (6.35, 12.7, 19, and 25.4 mm). See [Figure 2](#).

3.4 Water-Resistive Barrier:

The water-resistive barrier must be compliant with 2021 and 2018 IBC Section 1403.2 (2015 IBC Section 1404.2) or be the subject of an ICC-ES evaluation report recognizing the material as a water-resistive barrier.

3.5 Fasteners:

3.5.1 VM ZINC® Flatlock Panel: Sidelap panel clips and end of panel clips are provided with the VM ZINC® Flatlock metal exterior panel for attaching the panel to the structure.

3.5.1.1 Panel Clips – Sidelap: Sidelap panel clips are $2\frac{3}{8}$ -inch (60 mm) long, $3\frac{5}{8}$ -inch (92 mm) wide, 0.02 inch (0.5 mm) thick galvanized steel (EN10142, DX51D + Z275-N-B-C). See [Figure 3](#).

3.5.1.2 Panel Clips – End of Panels: End of panel clips is 9 inches (229 mm) long, 3.6875 inches (94 mm) wide, 0.02 inch (0.5 mm) thick galvanized steel (EN10142, DX51D + Z275-N-B-C). See [Figure 4](#).

3.5.1.3 Fastener: Fasteners must be galvanized or stainless-steel No. 10 pancake head screws (ASTM C1002-14).

3.5.2 VM ZINC® Interlocking Panel:

3.5.2.1 Panel Clip – Panel clips are provided with the VM ZINC® Interlocking metal exterior panel for attaching the panel to the structure. The clips must be stainless steel (ASTM A240 – Type 316), minimum 0.02 inch (0.5 mm) thick, $2\frac{3}{8}$ -inch wide (60 mm) and 3 inches long (76 mm). See [Figure 5](#).

3.5.2.2 Fasteners: Fasteners must be galvanized or stainless-steel complying with ASTM C1513-13.

4.0 INSTALLATION

4.1 General:

Installation of the products must be in accordance with the manufacturer's published installation guides and this report.

A code complying solid structural sheathing substrate must be provided. The sheathing must be designed for the applicable components and cladding wind loads and fastener loads from the wall panels. Design of the sheathing is outside the scope of this report.

Flashing must be installed in accordance with 2021 and 2018 IBC Section 1404.4 (Section 1405.4 of 2015 IBC) or 2021 and 2018 IRC Section R703.4 (2015 IRC Section R703.8), as applicable.

A water-resistive barrier complying with Section 3.4 must be installed between the sheathing and the wall panel.

4.2 VM ZINC® Flatlock Panel

nVM Zinc® Flatlock metal exterior wall panels may be installed horizontally or vertically. The panels must be installed over solid structural sheathing with the panel clips attached directly to the sheathing using the panel sidelap clips and end panel clips with fasteners as noted in Section 3.5.1. Sidelap clips require 2 fasteners per clip and end clips require 5 fasteners per clip. See [Table 1](#) for allowable wind loads.

4.3 VM ZINC® Interlocking Panel

4.3.1 Application for Panels Shorter than 8 Feet– Starting 4 inches (152 mm) from the top of the panel, affix one fastener (ASTM C1513-13) through the female leg of the panel into the supporting framing spaced at a maximum of 18 inches (472 mm) o.c. See [Table 1](#) for fastener type, size, and spacing including reveal fasteners.

4.3.2 Application for Panels Longer than 8 Feet– Five fasteners (ASTM C1513-13) centered on each panel through the female leg of the panel into supporting framing spaced at a maximum of 16 inches (457 mm) o.c. Then work out from the center and apply panel clips at 16 inches (457 mm) o.c. One clip must be placed at 4 inches (102 mm) from each end of the panel. See [Table 1](#) for fastener type, size, and spacing including reveal fasteners.

Install metal exterior wall covering panels perpendicular to girts and subgirts, unless otherwise indicated. See [Table 1](#) for minimum framing thickness and maximum framing spacing for attachment.

4.4 Wind Resistance:

See [Table 1](#) for maximum allowable design wind pressures.

5.0 CONDITIONS OF USE:

The VM ZINC® Flatlock and Interlocking metal exterior wall covering panels described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** Installation must comply with this report, the manufacturer's published installation instructions and the applicable code. In the event of a conflict between the manufacturer's installation instructions and this report, this report governs.
- 5.2** The metal exterior wall covering panels must be installed only by installers who have completed a VM PRO-ZINC Training Course.

- 5.3 Complete construction documents and calculations verifying compliance with this report must be submitted to the code official for each project. The calculations and construction documents must be prepared and sealed by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.
- 5.4 The wall covering panels are manufactured in Allentown, Pennsylvania under a quality control program with inspections by ICC-ES.
- 5.5 Stainless steel clips must be used in marine environments.

6.0 EVIDENCE SUBMITTED

- 6.1 Manufacturer's descriptive literature and installation instructions.
- 6.2 Data in accordance with ASTM E330 and ASTM E1592.
- 6.3 Quality documentation in accordance with [ICC-ES Acceptance Criteria for Quality Documentation \(AC10\)](#).

7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-1733) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.
- 7.2 Each panel is marked with the report holder's name (VM ZINC[®]) and address, the product name and production date code.
- 7.3 The report holder's contact information is the following:

VM ZINC[®]
1513 WALNUT STREET, SUITE 270
CARY, NORTH CAROLINA 27511
(919) 345-6693
www.vmzinc-us.com
www.ZINCsense.com

TABLE 1—ALLOWABLE NEGATIVE PRESSURE ON METAL WALL PANELS

WALL PANEL TYPE	PANEL LENGTH LIMITATIONS	FASTENERS ¹	MAXIMUM FASTENER/CLIP SPACING	ALLOWABLE NEGATIVE PRESSURE (psf)
VM ZINC [®] Flatlock (0.039 inch thick)	Maximum length of 13 feet 1 inch (4.0 m)	2 fasteners per side lap clip 5 fasteners per end clip	12 inches (305 mm); 6 inches (152 mm) from each end of the panel	65
VM ZINC [®] Interlocking	Minimum length of 8 feet (2.4 m)	#12-14 by 1 1/4 inch self-drilling pancake head direct and clip fastener (1 fastener per clip); #8 x 1/2 inch pan head panel reveal fasteners	Clip and direct fasteners @ 16 inches (406 mm); reveal fasteners @ 24 inches (610 mm)	50
VM ZINC [®] Interlocking	Maximum length of 8 feet (2.4 m)	#12-14 by 1 inch self-drilling pancake head direct fasteners; #6 by 3/4 inch pancake head panel reveal fasteners	18 inches (457 mm); reveal fasteners @ 18 inches (457 mm) with one reveal fastener located 12 inches (305 mm) from the ends of the panel	58

For **SI**: 1 inch = 25.4 mm; 1 psf = 47.88 Pa

¹Calculations for the capacity of the fastener attachment to the underlying structural sheathing for the applicable component and cladding wind loads must be provided to the authority having jurisdiction and is outside the scope of this report.

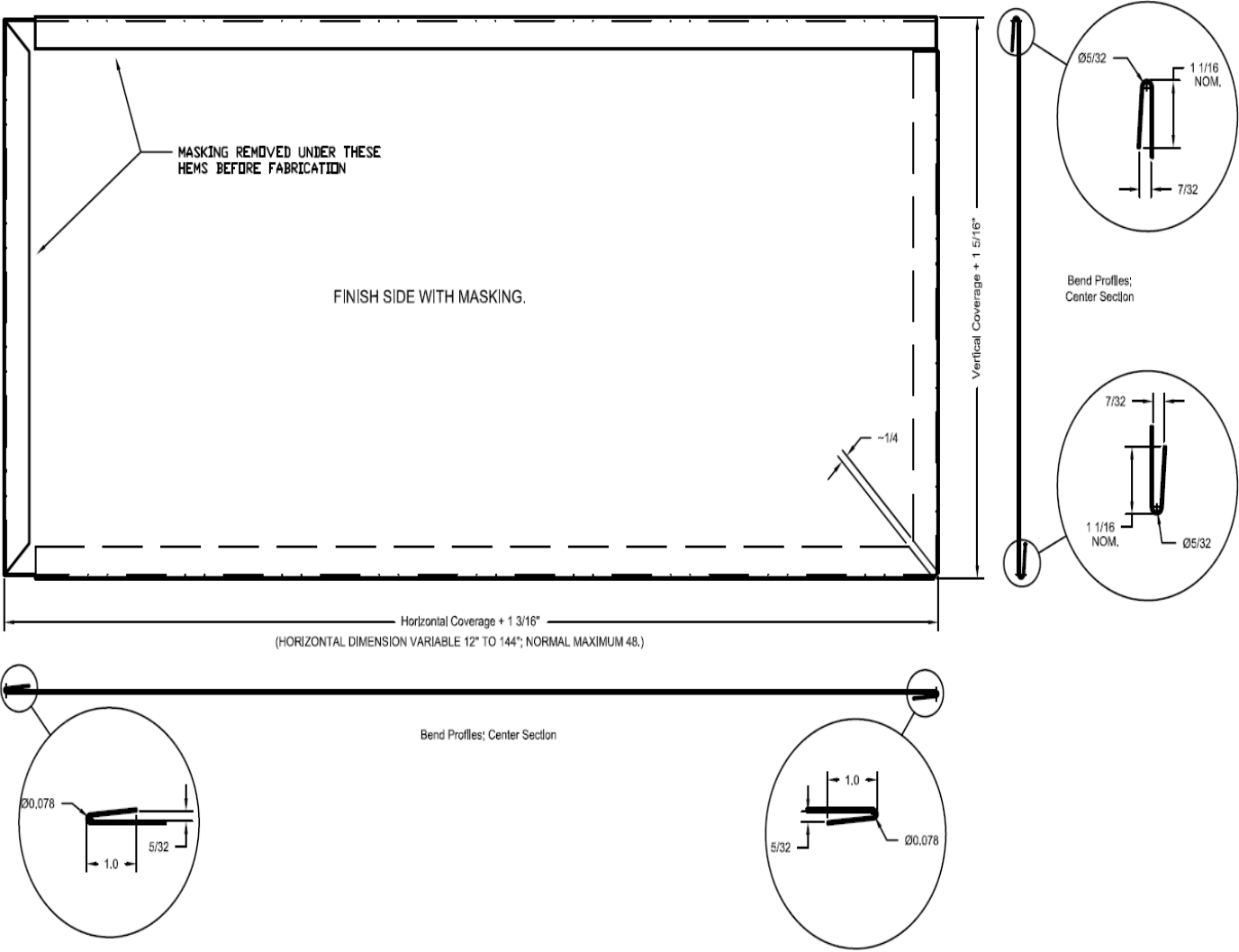


FIGURE 1—VMZ FLAT LOCK WALL PANEL

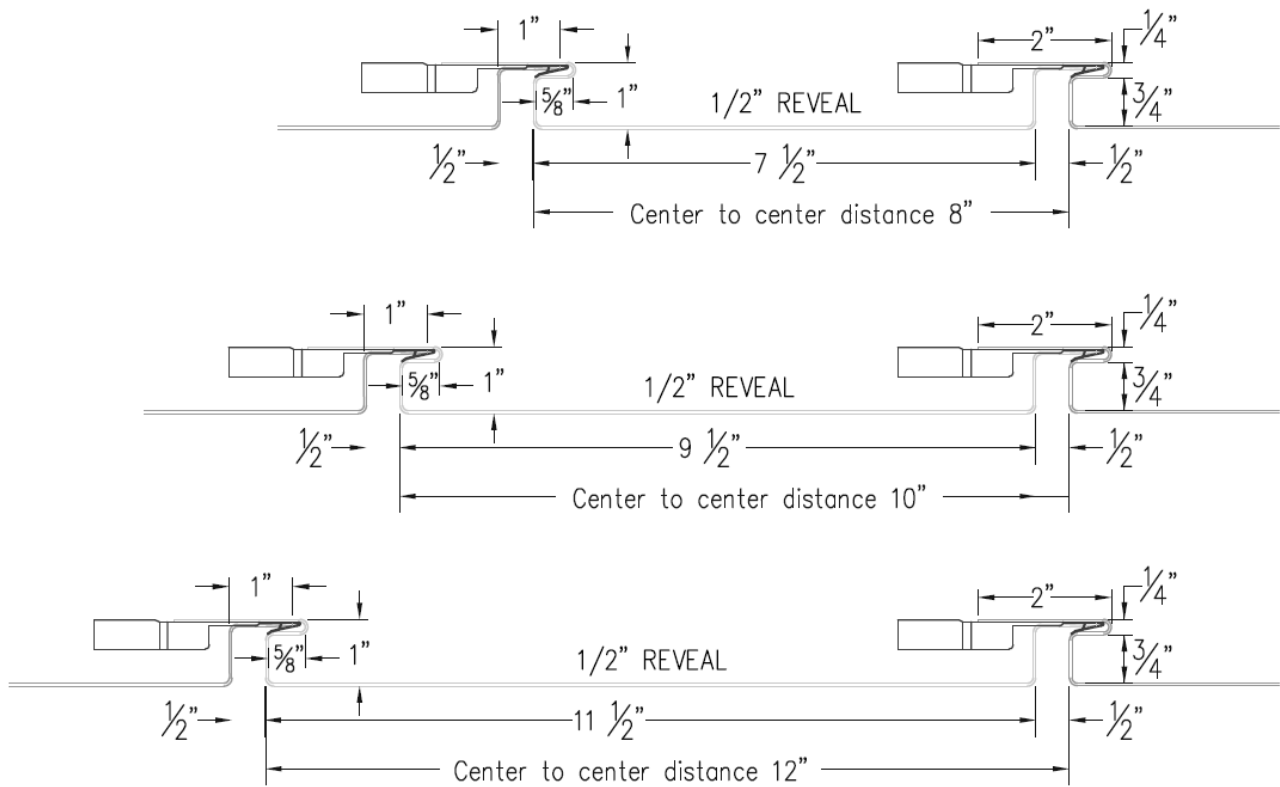


FIGURE 2—VMZ INTERLOCKING WALL PANELS

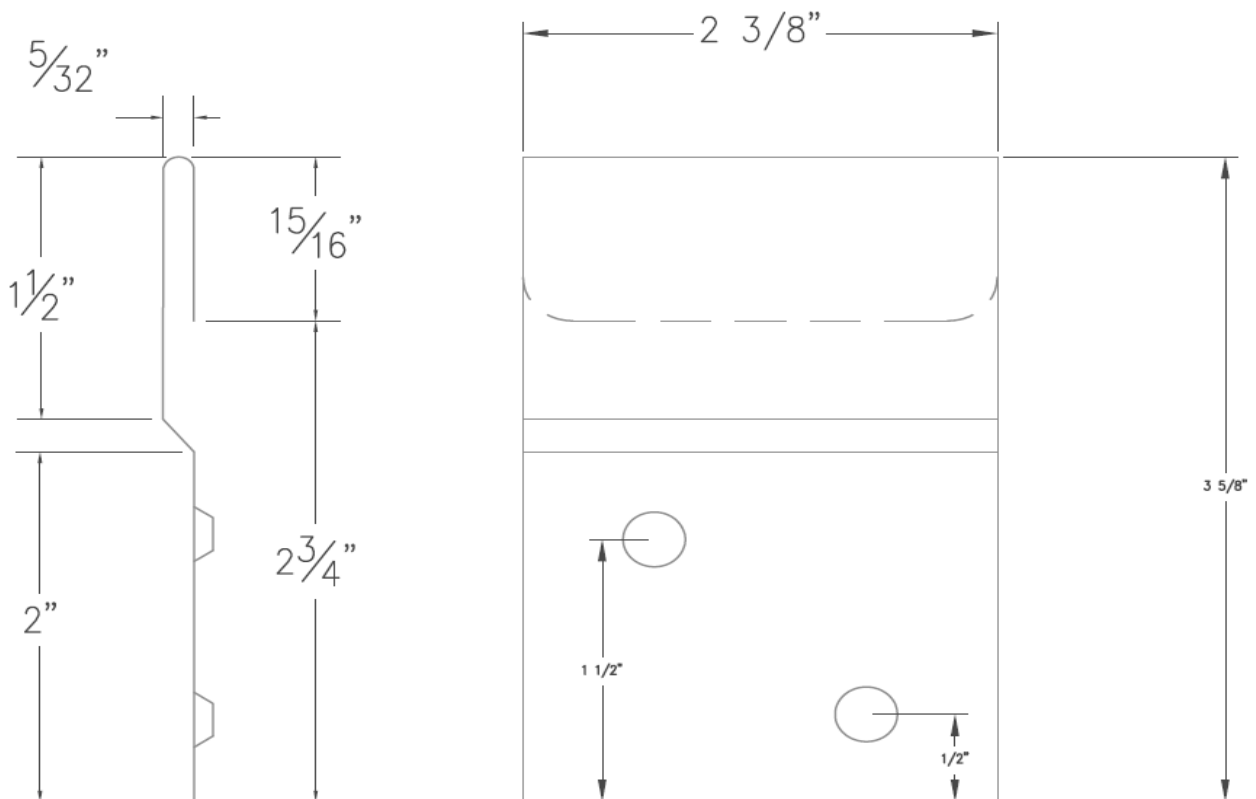


FIGURE 3—FLATLOCK PANEL SIDELAP CLIP

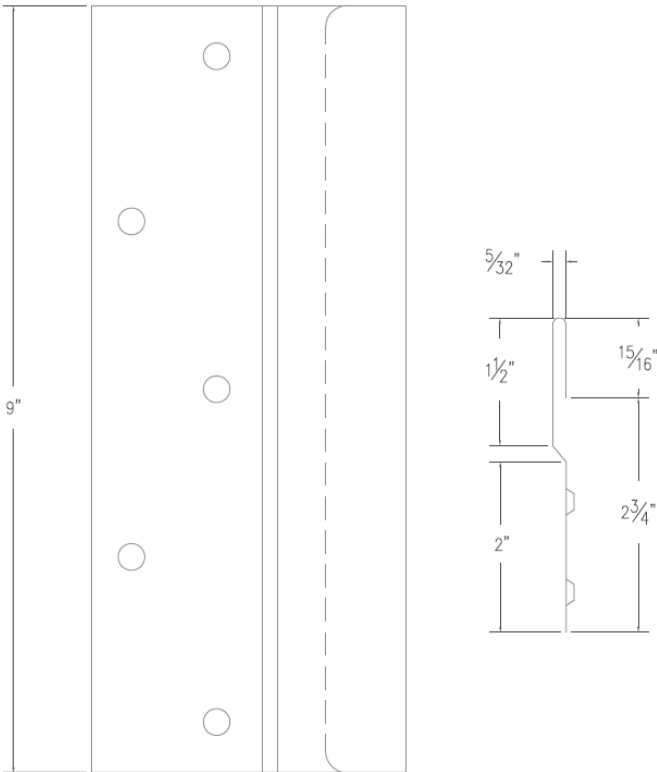


FIGURE 4—FLATLOCK PANEL ENDLAP CLIP

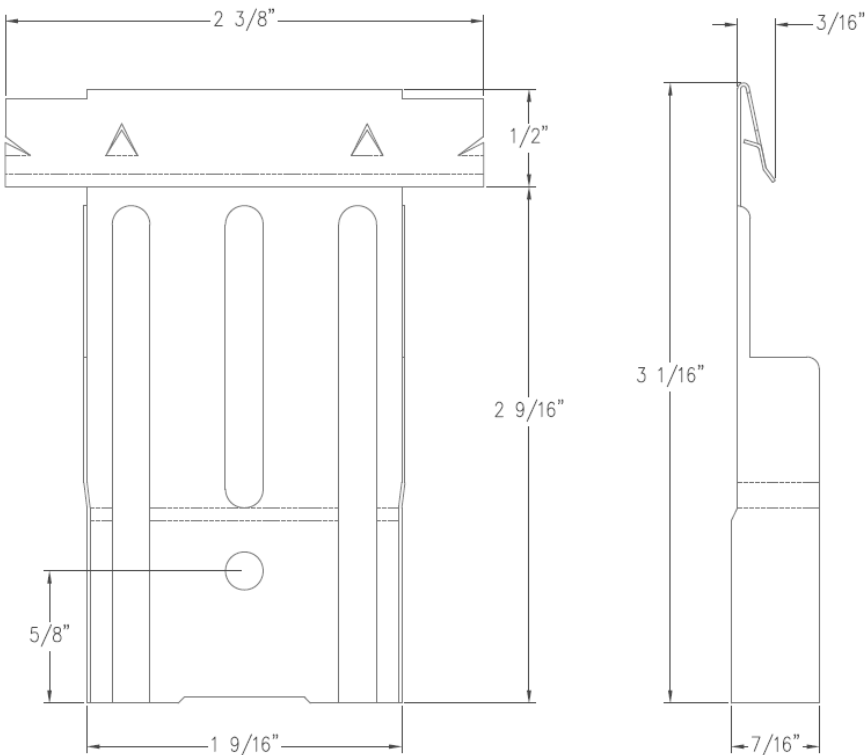


FIGURE 5—INTERLOCKING PANEL CLIP

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 42 13—Metal Wall Panels

Section: 07 46 00—Siding

REPORT HOLDER:

VM ZINC®

EVALUATION SUBJECT:

ZINC® FLATLOCK AND INTERLOCKING METAL EXTERIOR WALL COVERING PANELS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Zinc® Flatlock and Interlocking Metal Exterior Wall Covering Panels, described in ICC-ES evaluation report ESR-1733, have also been evaluated for compliance with the codes noted below.

Applicable code edition(s):

- 2022 California Building Code (CBC)

For evaluation of applicable Chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2022 California Residential Code (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Zinc® Flatlock and Interlocking Metal Exterior Wall Covering Panels, described in Sections 2.0 through 7.0 of the evaluation report ESR-1733, comply with CBC Chapter 14, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapter 14, as applicable.

Zinc® Flatlock and Interlocking Metal Exterior Wall Covering Panels have not been evaluated under Chapter 7A for use in the exterior design and construction of new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or any Wildland–Urban Interface Fire Area.

2.1.1 OSHPD: The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA: The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

2.2 CRC:

The Zinc® Flatlock and Interlocking Metal Exterior Wall Covering Panels, described in Sections 2.0 through 7.0 of the evaluation report ESR-1733, comply with CRC Chapter 3, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of CRC Chapter 3, as applicable.

The Zinc® Flatlock and Interlocking Metal Exterior Wall Covering Panels have not been evaluated under CRC Section R337 for use in the exterior design and construction of new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or any Wildland–Urban Interface Fire Area.

The products recognized in this supplement have not been evaluated for compliance with the *International Wildland–Urban Interface Code*®.

This supplement expires concurrently with the evaluation report, reissued February 2024.