

U.S. DEPARTMENT OF HOMELAND SECURITY  
Federal Emergency Management Agency  
National Flood Insurance Program

OMB Control No. 1660-0008  
Expiration Date: 06/30/2026

**ELEVATION CERTIFICATE**

**IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON PAGES 9-19**

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

| SECTION A – PROPERTY INFORMATION                                                                                                                                                                                                                                            |                      | FOR INSURANCE COMPANY USE                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------|
| A1. Building Owner's Name: <u>GREAT SOUTHERN HOMES</u>                                                                                                                                                                                                                      |                      | Policy Number: _____                                                           |
| A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.:<br><u>496 HONEYHILL LOOP</u>                                                                                                                                         |                      | Company NAIC Number: _____                                                     |
| City: <u>CONWAY</u> State: <u>SC</u> ZIP Code: <u>29526</u>                                                                                                                                                                                                                 |                      |                                                                                |
| A3. Property Description (e.g., Lot and Block Numbers or Legal Description) and/or Tax Parcel Number:<br><u>LOT 40 GRISSETT LAKE LANDING, PIN# 340-03-04-0022</u>                                                                                                           |                      |                                                                                |
| A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.): <u>RESIDENTIAL</u>                                                                                                                                                                        |                      |                                                                                |
| A5. Latitude/Longitude: Lat. <u>33°51'28.33"N</u> Long. <u>078°59'42.49" W</u> Horizontal Datum: <input type="checkbox"/> NAD 1927 <input checked="" type="checkbox"/> NAD 1983 <input type="checkbox"/> WGS 84                                                             |                      |                                                                                |
| A6. Attach at least two and when possible four clear photographs (one for each side) of the building (see Form pages 7 and 8).                                                                                                                                              |                      |                                                                                |
| A7. Building Diagram Number: <u>1B</u>                                                                                                                                                                                                                                      |                      |                                                                                |
| A8. For a building with a crawlspace or enclosure(s):                                                                                                                                                                                                                       |                      |                                                                                |
| a) Square footage of crawlspace or enclosure(s): <u>N/A</u> sq. ft.                                                                                                                                                                                                         |                      |                                                                                |
| b) Is there at least one permanent flood opening on two different sides of each enclosed area? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A                                                                             |                      |                                                                                |
| c) Enter number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade:<br>Non-engineered flood openings: <u>N/A</u> Engineered flood openings: <u>N/A</u>                                                                      |                      |                                                                                |
| d) Total net open area of non-engineered flood openings in A8.c: <u>N/A</u> sq. in.                                                                                                                                                                                         |                      |                                                                                |
| e) Total rated area of engineered flood openings in A8.c (attach documentation – see Instructions): <u>N/A</u> sq. ft.                                                                                                                                                      |                      |                                                                                |
| f) Sum of A8.d and A8.e rated area (if applicable – see Instructions): <u>N/A</u> sq. ft.                                                                                                                                                                                   |                      |                                                                                |
| A9. For a building with an attached garage:                                                                                                                                                                                                                                 |                      |                                                                                |
| a) Square footage of attached garage: <u>397</u> sq. ft.                                                                                                                                                                                                                    |                      |                                                                                |
| b) Is there at least one permanent flood opening on two different sides of the attached garage? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A                                                                            |                      |                                                                                |
| c) Enter number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade:<br>Non-engineered flood openings: <u>*1</u> Engineered flood openings: <u>*1</u>                                                                                   |                      |                                                                                |
| d) Total net open area of non-engineered flood openings in A9.c: <u>*20.3</u> sq. in.                                                                                                                                                                                       |                      |                                                                                |
| e) Total rated area of engineered flood openings in A9.c (attach documentation – see Instructions): <u>*200</u> sq. ft.                                                                                                                                                     |                      |                                                                                |
| f) Sum of A9.d and A9.e rated area (if applicable – see Instructions): <u>*220.3</u> sq. ft.                                                                                                                                                                                |                      |                                                                                |
| SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION                                                                                                                                                                                                                     |                      |                                                                                |
| B1.a. NFIP Community Name: <u>HORRY COUNTY</u>                                                                                                                                                                                                                              |                      | B1.b. NFIP Community Identification Number: <u>450104</u>                      |
| B2. County Name: <u>HORRY</u>                                                                                                                                                                                                                                               | B3. State: <u>SC</u> | B4. Map/Panel No.: <u>45051C0555</u> B5. Suffix: <u>K</u>                      |
| B6. FIRM Index Date: <u>12/16/2021</u>                                                                                                                                                                                                                                      |                      | B7. FIRM Panel Effective/Revised Date: <u>12/16/2021</u>                       |
| B8. Flood Zone(s): <u>*X</u>                                                                                                                                                                                                                                                |                      | B9. Base Flood Elevation(s) (BFE) (Zone AO, use Base Flood Depth): <u>*N/A</u> |
| B10. Indicate the source of the BFE data or Base Flood Depth entered in Item B9:<br><input type="checkbox"/> FIS <input type="checkbox"/> FIRM <input type="checkbox"/> Community Determined <input checked="" type="checkbox"/> Other: <u>SEE COMMENTS</u>                 |                      |                                                                                |
| B11. Indicate elevation datum used for BFE in Item B9: <input type="checkbox"/> NGVD 1929 <input checked="" type="checkbox"/> NAVD 1988 <input type="checkbox"/> Other/Source: _____                                                                                        |                      |                                                                                |
| B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Designation Date: _____ <input type="checkbox"/> CBRS <input type="checkbox"/> OPA |                      |                                                                                |
| B13. Is the building located seaward of the limit of moderate wave action (LIMWA)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                                      |                      |                                                                                |

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IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON PAGES 9-19

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.:  
496 HONEYHILL LOOP

City: CONWAY State: SC ZIP Code: 29526

## FOR INSURANCE COMPANY USE

Policy Number: \_\_\_\_\_

Company NAIC Number: \_\_\_\_\_

## SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: ☐ Construction Drawings\* ☐ Building Under Construction\* ☒ Finished Construction  
\*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations – Zones A1–A30, AE, AH, AO, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO, A99. Complete Items C2.a–h below according to the Building Diagram specified in Item A7. In Puerto Rico only, enter meters.

Benchmark Utilized: SC VRS OBSERVATION Vertical Datum: NAVD88

Indicate elevation datum used for the elevations in items a) through h) below.

☐ NGVD 1929 ☒ NAVD 1988 ☐ Other: \_\_\_\_\_

Datum used for building elevations must be the same as that used for the BFE. Conversion factor used?

☐ Yes ☒ No

If Yes, describe the source of the conversion factor in the Section D Comments area.

Check the measurement used:

|                                                                                                                                             |       |                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|
| a) Top of bottom floor (including basement, crawlspace, or enclosure floor):                                                                | 20.1  | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| b) Top of the next higher floor (see Instructions):                                                                                         | N/A   | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| c) Bottom of the lowest horizontal structural member (see Instructions):                                                                    | N/A   | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| d) Attached garage (top of slab):                                                                                                           | 18.8  | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| e) Lowest elevation of Machinery and Equipment (M&E) servicing the building (describe type of M&E and location in Section D Comments area): | *19.9 | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| f) Lowest Adjacent Grade (LAG) next to building: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Finished              | 17.2  | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| g) Highest Adjacent Grade (HAG) next to building: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Finished             | 17.6  | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| h) Finished LAG at lowest elevation of attached deck or stairs, including structural support:                                               | N/A   | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |

## SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by state law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

Were latitude and longitude in Section A provided by a licensed land surveyor? ☒ Yes ☐ No

☒ Check here if attachments and describe in the Comments area.

Certifier's Name: WALTER B. SHEETS License Number: L-26959

Title: LAND SURVEYOR

Company Name: RLA ASSOCIATES, PA

Address: 14323 OCEAN HIGHWAY, STE 4139

City: PAWLEYS ISLAND State: SC ZIP Code: 29585

Signature: Walter B. Sheets Date: 09/04/2024

Telephone: 843-879-9091 Ext.: 405 Email: BRAD@RLAPLS.COM



Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments (including source of conversion factor in C2; type of equipment and location per C2.e; and description of any attachments):

\*A9. a-f) ONE SMARTVENT MODEL #1540-520 ENGINEERED FLOOD VENT INSTALLED, CERTIFIED TO COVER 200 SQ.FT., AND ONE NON-ENGINEERED FLOOD VENT CALCULATED AT 20.3 SQ.IN. INSTALLED, PROVIDING A TOTAL NET AREA OF 220.3 SQ.IN. OF FLOOD OPENINGS.

\*B8, B9 & B10. STRUCTURE APPEARS TO BE LOCATED IN FLOOD ZONE X PER FEMA LOMR CASE No. 22-04-2329A DATED 06/08/2022. PER HORRY COUNTY GIS PROPOSED STRUCTURE APPEARS TO LIE IN AN HORRY COUNTY SUPPLEMENTAL FLOOD ZONE WITH A BFE OF 17.0'.

\*C2. e) HVAC UNIT ON LEFT SIDE OF HOUSE. ELEVATION SHOT ON TOP OF HVAC PLATFORM.

\*ESR REPORT FOR ENGINEERED FLOOD VENT ATTACHED.

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496 HONEYHILL LOOP

City: CONWAY

State: SC

ZIP Code: 29526

## FOR INSURANCE COMPANY USE

Policy Number: \_\_\_\_\_

Company NAIC Number: \_\_\_\_\_

## SECTION E – BUILDING MEASUREMENT INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO, ZONE AR/AO, AND ZONE A (WITHOUT BFE)

For Zones AO, AR/AO, and A (without BFE), complete Items E1–E5. For Items E1–E4, use natural grade, if available. If the Certificate is intended to support a Letter of Map Change request, complete Sections A, B, and C. Check the measurement used. In Puerto Rico only, enter meters.

Building measurements are based on: ☐ Construction Drawings\* ☐ Building Under Construction\* ☐ Finished Construction

\*A new Elevation Certificate will be required when construction of the building is complete.

E1. Provide measurements (C.2.a in applicable Building Diagram) for the following and check the appropriate boxes to show whether the measurement is above or below the natural HAG and the LAG.

a) Top of bottom floor (including basement, crawlspace, or enclosure) is: \_\_\_\_\_ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

b) Top of bottom floor (including basement, crawlspace, or enclosure) is: \_\_\_\_\_ ☐ feet ☐ meters ☐ above or ☐ below the LAG.

E2. For Building Diagrams 6–9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 1–2 of Instructions), the next higher floor (C2.b in applicable Building Diagram) of the building is: \_\_\_\_\_ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E3. Attached garage (top of slab) is: \_\_\_\_\_ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E4. Top of platform of machinery and/or equipment servicing the building is: \_\_\_\_\_ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance? ☐ Yes ☐ No ☐ Unknown The local official must certify this information in Section G.

## SECTION F – PROPERTY OWNER (OR OWNER'S AUTHORIZED REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without BFE) or Zone AO must sign here. *The statements in Sections A, B, and E are correct to the best of my knowledge*

☐ Check here if attachments and describe in the Comments area.

Property Owner or Owner's Authorized Representative Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Telephone: \_\_\_\_\_ Ext.: \_\_\_\_\_ Email: \_\_\_\_\_

Comments: \_\_\_\_\_

# ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON PAGES 9-19

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City: CONWAY State: SC ZIP Code: 29526

## FOR INSURANCE COMPANY USE

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Company NAIC Number: \_\_\_\_\_

### SECTION G – COMMUNITY INFORMATION (RECOMMENDED FOR COMMUNITY OFFICIAL COMPLETION)

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Section A, B, C, E, G, or H of this Elevation Certificate. Complete the applicable item(s) and sign below when:

- G1. ☐ The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by state law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)
- G2.a. ☐ A local official completed Section E for a building located in Zone A (without a BFE), Zone AO, or Zone AR/AO, or when item E5 is completed for a building located in Zone AO.
- G2.b. ☐ A local official completed Section H for insurance purposes.
- G3. ☐ In the Comments area of Section G, the local official describes specific corrections to the information in Sections A, B, E and H.
- G4. ☐ The following information (Items G5–G11) is provided for community floodplain management purposes.
- G5. Permit Number: \_\_\_\_\_ G6. Date Permit Issued: \_\_\_\_\_
- G7. Date Certificate of Compliance/Occupancy Issued: \_\_\_\_\_
- G8. This permit has been issued for: ☒ New Construction ☐ Substantial Improvement
- G9.a. Elevation of as-built lowest floor (including basement) of the building: \_\_\_\_\_ ☐ feet ☐ meters Datum: \_\_\_\_\_
- G9.b. Elevation of bottom of as-built lowest horizontal structural member: \_\_\_\_\_ ☐ feet ☐ meters Datum: \_\_\_\_\_
- G10.a. BFE (or depth in Zone AO) of flooding at the building site: \_\_\_\_\_ ☐ feet ☐ meters Datum: \_\_\_\_\_
- G10.b. Community's minimum elevation (or depth in Zone AO) requirement for the lowest floor or lowest horizontal structural member: \_\_\_\_\_ ☐ feet ☐ meters Datum: \_\_\_\_\_
- G11. Variance issued? ☐ Yes ☒ No If yes, attach documentation and describe in the Comments area.

The local official who provides information in Section G must sign here. *I have completed the information in Section G and certify that it is correct to the best of my knowledge. If applicable, I have also provided specific corrections in the Comments area of this section.*

Local Official's Name: Lauren Harrelson, CFM Title: Flood Hazard Reduction Control Officer

NFIP Community Name: \_\_\_\_\_

Telephone: \_\_\_\_\_ Ext.: \_\_\_\_\_ Email: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

Signature: Lauren Harrelson Date: 09/06/2024

Comments (including type of equipment and location, per C2.e; description of any attachments; and corrections to specific information in Sections A, B, D, E, or H):

Garage slab is not below BFE. Flood openings not required.

# ELEVATION CERTIFICATE

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496 HONEYHILL LOOP

City: CONWAY State: SC ZIP Code: 29526

## FOR INSURANCE COMPANY USE

Policy Number: \_\_\_\_\_

Company NAIC Number: \_\_\_\_\_

## SECTION H – BUILDING'S FIRST FLOOR HEIGHT INFORMATION FOR ALL ZONES (SURVEY NOT REQUIRED) (FOR INSURANCE PURPOSES ONLY)

The property owner, owner's authorized representative, or local floodplain management official may complete Section H for all flood zones to determine the building's first floor height for insurance purposes. Sections A, B, and I must also be completed. Enter heights to the nearest tenth of a foot (nearest tenth of a meter in Puerto Rico). **Reference the Foundation Type Diagrams (at the end of Section H Instructions) and the appropriate Building Diagrams (at the end of Section I Instructions) to complete this section.**

H1. Provide the height of the top of the floor (as indicated in Foundation Type Diagrams) above the Lowest Adjacent Grade (LAG):

a) **For Building Diagrams 1A, 1B, 3, and 5–9.** Top of bottom \_\_\_\_\_ ☐ feet ☐ meters ☐ above the LAG  
floor (include above-grade floors only for buildings with  
subgrade crawlspaces or enclosure floors) is:

b) **For Building Diagrams 2A, 2B, 4, and 6–9.** Top of next \_\_\_\_\_ ☐ feet ☐ meters ☐ above the LAG  
higher floor (i.e., the floor above basement, crawlspace, or  
enclosure floor) is:

H2. Is **all** Machinery and Equipment servicing the building (as listed in Item H2 instructions) elevated to or above the floor indicated by the H2 arrow (shown in the Foundation Type Diagrams at end of Section H instructions) for the appropriate Building Diagram?

☐ Yes ☐ No

## SECTION I – PROPERTY OWNER (OR OWNER'S AUTHORIZED REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and H must sign here. *The statements in Sections A, B, and H are correct to the best of my knowledge.* **Note:** If the local floodplain management official completed Section H, they should indicate in Item G2.b and sign Section G.

☐ Check here if attachments are provided (including required photos) and describe each attachment in the Comments area.

Property Owner or Owner's Authorized Representative Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Telephone: \_\_\_\_\_ Ext.: \_\_\_\_\_ Email: \_\_\_\_\_

Comments: \_\_\_\_\_

**ELEVATION CERTIFICATE**  
**IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON PAGES 9-19**  
**BUILDING PHOTOGRAPHS**  
See Instructions for Item A6.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.:  
496 HONEYHILL LOOP

City: CONWAY State: SC ZIP Code: 29526

**FOR INSURANCE COMPANY USE**

Policy Number: \_\_\_\_\_

Company NAIC Number: \_\_\_\_\_

Instructions: Insert below at least two and when possible four photographs showing each side of the building (for example, may only be able to take front and back pictures of townhouses/rowhouses). Identify all photographs with the date taken and "Front View," "Rear View," "Right Side View," or "Left Side View." Photographs must show the foundation. When flood openings are present, include at least one close-up photograph of representative flood openings or vents, as indicated in Sections A8 and A9.



Photo One Caption: FRONT LEFT VIEW 09/04/2024

Clear Photo One



Photo Two Caption: FRONT RIGHT VIEW 09/04/2024

Clear Photo Two

**ELEVATION CERTIFICATE**  
**IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON PAGES 9-19**  
**BUILDING PHOTOGRAPHS**  
Continuation Page

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.:  
496 HONEYHILL LOOP

City: CONWAY State: SC ZIP Code: 29526

**FOR INSURANCE COMPANY USE**

Policy Number: \_\_\_\_\_

Company NAIC Number: \_\_\_\_\_

Insert the third and fourth photographs below. Identify all photographs with the date taken and "Front View," "Rear View," "Right Side View," or "Left Side View." When flood openings are present, include at least one close-up photograph of representative flood openings or vents, as indicated in Sections A8 and A9.



Photo Three Caption: REAR RIGHT VIEW 09/04/2024

Clear Photo Three



Photo Four Caption: REAR LEFT VIEW 09/04/2024

Clear Photo Four



FLOOD VENT IN SIDE OF GARAGE



FLOOD VENT IN SIDE OF GARAGE MODEL NUMBER



NON-ENGINEERED FLOOD VENT IN GARAGE DOOR



*Most Widely Accepted and Trusted*

# ICC-ES Evaluation Report

ICC-ES | (800) 423-6587 | (562) 699-0543 | [www.icc-es.org](http://www.icc-es.org)

## ESR-2074

Reissued 02/2023

Revised 06/2024

This report is subject to renewal 02/2025.

**DIVISION: 08 00 00—OPENINGS**

**SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS**

**REPORT HOLDER:**

**SMART VENT PRODUCTS, INC.**

**EVALUATION SUBJECT:**

**SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520;  
#1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514  
FLOOD VENT SEALING KIT #1540-526**



*"2014 Recipient of Prestigious Western States Seismic Policy Council  
(WSSPC) Award in Excellence"*



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# ICC-ES Evaluation Report

## ESR-2074

Reissued February 2023

Revised June 2024

*This report is subject to renewal February 2025.*

**DIVISION: 08 00 00—OPENINGS**  
**Section: 08 95 43—Vents/Foundation Flood Vents**

### REPORT HOLDER:

**SMART VENT PRODUCTS, INC.**

### EVALUATION SUBJECT:

**SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS:**  
**MODELS #1540-520; #1540-521; #1540-510; #1540-511;**  
**#1540-570; #1540-574; #1540-524; #1540-514**  
**FLOOD VENT SEALING KIT #1540-526**

## 1.0 EVALUATION SCOPE

### Compliance with the following codes:

- 2024, 2021, 2018, 2015, 2012, 2009 and 2006 *International Building Code®* (IBC)
- 2024, 2021, 2018, 2015, 2012, 2009 and 2006 *International Residential Code®* (IRC)
- 2024, 2021 and 2018 *International Energy Conservation Code®* (IECC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)<sup>†</sup>

<sup>†</sup>The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

### Properties evaluated:

- Physical operation
- Water flow

## 2.0 USES

The Smart Vent® units are engineered mechanically operated flood vents (FVs) employed to equalize hydrostatic pressure on walls of enclosures subject to rising or falling flood waters. Certain models also allow natural ventilation.

## 3.0 DESCRIPTION

### 3.1 General:

When subjected to rising water, the Smart Vent® FVs internal floats are activated, then pivot open to allow flow in either direction to equalize water level and hydrostatic pressure from one side of the foundation to the other. The FV pivoting door is normally held in the closed position by a buoyant release device. When subjected to rising water, the buoyant release device causes the unit to unlatch, allowing the door to rotate out of the way and allow flow. The water

level stabilizes, equalizing the lateral forces. Each unit is fabricated from stainless steel. Smart Vent® Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT® Stacking Model #1540-511 and FloodVENT® Stacking Model #1540-521 units each contain two vertically arranged openings per unit.

### 3.2 Engineered Opening:

The FVs comply with the design principle noted in Section 2.7.2.2 and Section 2.7.3 of ASCE/SEI 24-14 [Section 2.6.2.2 of ASCE/SEI 24-05 (2012, 2009, 2006 IBC and IRC)] for a maximum rate of rise and fall of 5.0 feet per hour (0.423 mm/s). In order to comply with the engineered opening requirement of ASCE/SEI 24, Smart Vent FVs must be installed in accordance with Section 4.0.

### 3.3 Ventilation:

The SmartVENT® Model #1540-510 and SmartVENT® Overhead Door Model #1540-514 both have screen covers with 1/4-inch-by-1/4-inch (6.35 by 6.35 mm) openings, yielding 51 square inches (32 903 mm<sup>2</sup>) of net free area to supply natural ventilation. The SmartVENT® Stacking Model #1540-511 consists of two Model #1540-510 units in one assembly, and provides 102 square inches (65 806 mm<sup>2</sup>) of net free area to supply natural ventilation. Other FVs described in this report do not offer natural ventilation.

### 3.4 Flood Vent Sealing Kit:

The Flood Vent Sealing Kit Model #1540-526 is used with SmartVENT® Model #1540-520. It is a Homasote 440 Sound Barrier® (ESR-1374) insert with 21 – 2-inch-by-2-inch (51 mm x 51 mm) squares cut in it. See Figure 4.

## 4.0 DESIGN AND INSTALLATION

### 4.1 SmartVENT® and FloodVENT®:

SmartVENT® and FloodVENT® are designed to be installed into walls or overhead doors of existing or new construction from the exterior side. Installation of the vents must be in accordance with the manufacturer's instructions, the applicable code and this report. Installation clips allow mounting in masonry and concrete walls of any thickness. In order to comply with the engineered opening design principle noted in Section 2.7.2.2 and 2.7.3 of ASCE/SEI 24-14 [Section 2.6.2.2 of ASCE/SEI 24-05 (2012, 2009, 2006 IBC and IRC)], the Smart Vent® FVs must be installed as follows:

- With a minimum of two openings on different sides of each enclosed area.
- With a minimum of one FV for every 200 square feet (18.6 m<sup>2</sup>) of enclosed area, except that the SmartVENT® Stacking Model #1540-511 and FloodVENT® Stacking Model #1540-521 must be installed with a minimum of one FV for every 400 square feet (37.2 m<sup>2</sup>) of enclosed area.
- Below the base flood elevation.
- With the bottom of the FV located a maximum of 12 inches (305.4 mm) above the higher of the final grade or floor and finished exterior grade immediately under each opening.

#### 4.2 Flood Vent Sealing Kit

The Flood Vent Sealing Kit Model 1540-526 is used in conjunction with FloodVENT® Model #1540-520. When installed and tested in accordance with ASTM E283, the FV and Flood Vent Sealing Kit assembly have an air leakage rate of less than 0.2 cubic feet per minute per lineal foot (18.56 l/min per lineal meter) at a pressure differential of 1 pound per square foot (50 Pa) based on 12.58 lineal feet (3.8 lineal meters) contained by the Flood Vent Sealing Kit.

#### 5.0 CONDITIONS OF USE

The Smart Vent® FVs 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 The Smart Vent® FVs must be installed in accordance with this report, the applicable code and the manufacturer's installation instructions. In the event of a conflict, the instructions in this report govern.

- 5.2 The Smart Vent® FVs must not be used in the place of "breakaway walls" in coastal high hazard areas, but are permitted for use in conjunction with breakaway walls in other areas.

#### 6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated August 2015 (editorially revised February 2024).
- 6.2 Test report on air infiltration in accordance with ASTM E283.

#### 7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-2074) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.
- 7.2 The Smart VENT® models and the Flood Vent Sealing Kit described in this report must be identified by a label bearing the manufacturer's name (Smartvent Products, Inc.), the model number, and the evaluation report number (ESR-2074).
- 7.3 The report holder's contact information is the following:

**SMART VENT PRODUCTS, INC.**  
**19 MANTUA ROAD**  
**MOUNT ROYAL, NEW JERSEY 08061**  
**(877) 441-8368**  
[www.smartvent.com](http://www.smartvent.com)  
[info@smartvent.com](mailto:info@smartvent.com)

TABLE 1—MODEL SIZES

| MODEL NAME                         | MODEL NUMBER | MODEL SIZE (in.)                                                   | COVERAGE <sup>1</sup> (ft <sup>2</sup> ) |
|------------------------------------|--------------|--------------------------------------------------------------------|------------------------------------------|
| FloodVENT®                         | 1540-520     | 15 <sup>3</sup> / <sub>4</sub> " X 7 <sup>3</sup> / <sub>4</sub> " | 200                                      |
| SmartVENT®                         | 1540-510     | 15 <sup>3</sup> / <sub>4</sub> " X 7 <sup>3</sup> / <sub>4</sub> " | 200                                      |
| FloodVENT® Overhead Door           | 1540-524     | 15 <sup>3</sup> / <sub>4</sub> " X 7 <sup>3</sup> / <sub>4</sub> " | 200                                      |
| SmartVENT® Overhead Door           | 1540-514     | 15 <sup>3</sup> / <sub>4</sub> " X 7 <sup>3</sup> / <sub>4</sub> " | 200                                      |
| Wood Wall FloodVENT®               | 1540-570     | 14" X 8 <sup>3</sup> / <sub>4</sub> "                              | 200                                      |
| Wood Wall FloodVENT® Overhead Door | 1540-574     | 14" X 8 <sup>3</sup> / <sub>4</sub> "                              | 200                                      |
| SmartVENT® Stacker                 | 1540-511     | 16" X 16"                                                          | 400                                      |
| FloodVent® Stacker                 | 1540-521     | 16" X 16"                                                          | 400                                      |

For SI: 1 inch = 25.4 mm; 1 square foot = m<sup>2</sup>

<sup>1</sup>The coverage area in square feet for each model is equivalent to the performance of the same number of square inches of non-engineered openings.

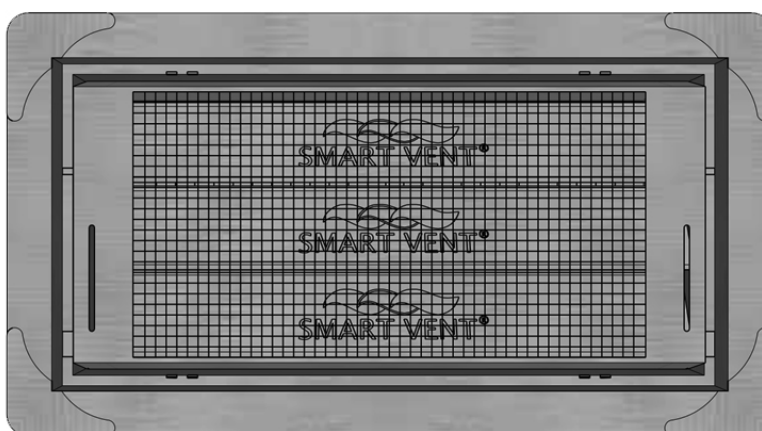


FIGURE 1—SMART VENT: MODEL 1540-510

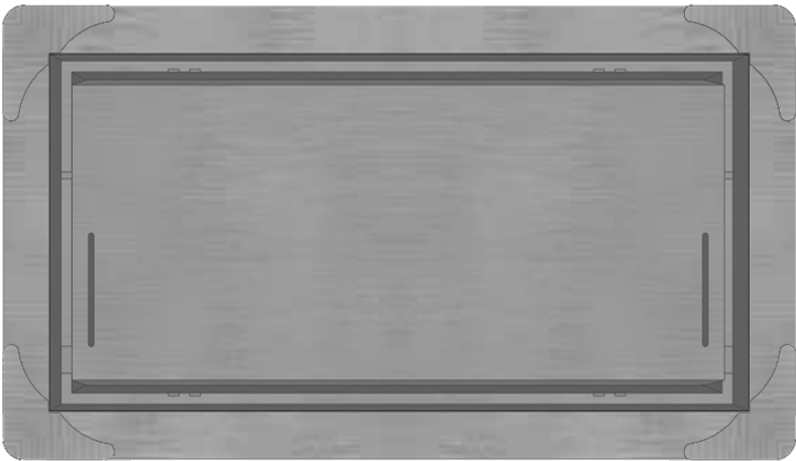


FIGURE 2—SMART VENT MODEL 1540-520

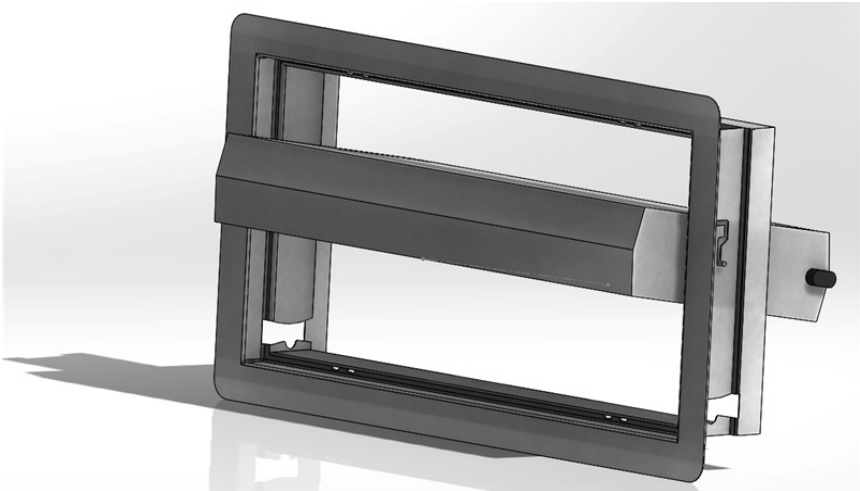


FIGURE 3—SMART VENT: SHOWN WITH FLOOD DOOR PIVOTED OPEN

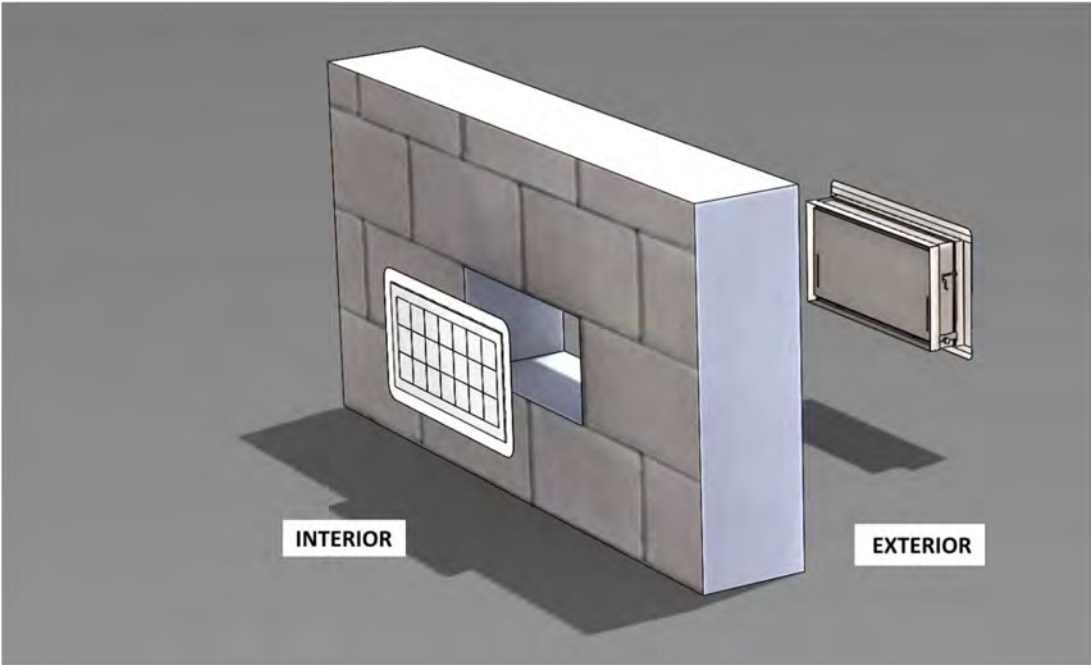


FIGURE 4—FLOOD VENT SEALING KIT

# ICC-ES Evaluation Report

# ESR-2074 CBC and CRC Supplement

Reissued February 2023

Revised June 2024

*This report is subject to renewal February 2025.*

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A Subsidiary of the International Code Council®

**DIVISION: 08 00 00—OPENINGS**

**Section: 08 95 43—Vents/Foundation Flood Vents**

## REPORT HOLDER:

**SMART VENT PRODUCTS, INC.**

## EVALUATION SUBJECT:

**SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514  
FLOOD VENT SEALING KIT #1540-526**

## 1.0 REPORT PURPOSE AND SCOPE

### Purpose:

The purpose of this evaluation report supplement is to indicate that Smart Vent® Automatic Foundation Flood Vents, described in ICC-ES evaluation report ESR-2074, have also been evaluated for compliance with codes noted below.

### Applicable code editions:

#### ■ 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 Smart Vent® Automatic Foundation Flood Vents, described in Sections 2.0 through 7.0 of the evaluation report ESR-2074, comply with CBC Chapter 12, 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 Chapters 12 and 16, as applicable.

#### 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 Smart Vent® Automatic Foundation Flood Vents, described in Sections 2.0 through 7.0 of the evaluation report ESR-2074, comply with the CRC, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report.

This supplement expires concurrently with the evaluation report, reissued February 2023 and revised June 2024.

## ICC-ES Evaluation Report

## ESR-2074 FBC Supplement

Reissued February 2023

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**DIVISION: 08 00 00—OPENINGS**

**Section: 08 95 43—Vents/Foundation Flood Vents**

### REPORT HOLDER:

**SMART VENT PRODUCTS, INC.**

### EVALUATION SUBJECT:

**SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514  
FLOOD VENT SEALING KIT #1540-526**

### 1.0 REPORT PURPOSE AND SCOPE

#### Purpose:

The purpose of this evaluation report supplement is to indicate that Smart Vent® Automatic Foundation Flood Vents, described in ICC-ES evaluation report ESR-2074, have also been evaluated for compliance with the codes noted below.

#### Applicable code editions:

- 2023 *Florida Building Code—Building*
- 2023 *Florida Building Code—Residential*

### 2.0 CONCLUSIONS

The Smart Vent® Automatic Foundation Flood Vents, described in Sections 2.0 through 7.0 of the evaluation report ESR-2074, comply with the *Florida Building Code—Building* and the *Florida Building Code—Residential*, provided the design requirements must be determined in accordance with the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-2074 for 2021 *International Building Code*® meet the requirements of the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable.

Use of the Smart Vent® Automatic Foundation Flood Vents has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and the *Florida Building Code—Residential*.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report, reissued February 2023 and revised June 2024.