

National Flood Insurance Program

# Elevation Certificate and Instructions

2023 EDITION

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# FEMA

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 AND INSTRUCTIONS

### PAPERWORK REDUCTION ACT NOTICE

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### PRIVACY ACT STATEMENT

**Authority:** Title 44 CFR § 61.7 and 61.8.

**Principal Purpose(s):** This information is being collected for the primary purpose of documenting compliance with National Flood Insurance Program (NFIP) floodplain management ordinances for new or substantially improved structures in designated Special Flood Hazard Areas. This form may also be used as an optional tool for a Letter of Map Amendment (LOMA), Conditional LOMA (CLOMA), Letter of Map Revision Based on Fill (LOMR-F), or Conditional LOMR-F (CLOMR-F), or for flood insurance rating purposes in any flood zone.

**Routine Use(s):** The information on this form may be disclosed as generally permitted under 5 U.S.C. § 552a(b) of the Privacy Act of 1974, as amended. This includes using this information as necessary and authorized by the routine uses published in DHS/ FEMA-003 – *National Flood Insurance Program Files System of Records Notice* 79 Fed. Reg. 28747 (May 19, 2014) and upon written request, written consent, by agreement, or as required by law.

**Disclosure:** The disclosure of information on this form is voluntary; however, failure to provide the information requested may impact the flood insurance premium through the NFIP. Information will only be released as permitted by law.

### PURPOSE OF THE ELEVATION CERTIFICATE

The Elevation Certificate is an important administrative tool of the NFIP. It can be used to provide elevation information necessary to ensure compliance with community floodplain management ordinances, to inform the proper insurance premium, and to support a request for a LOMA, CLOMA, LOMR-F, or CLOMR-F.

The Elevation Certificate is used to document floodplain management compliance for Post-Flood Insurance Rate Map (FIRM) buildings, which are buildings constructed after publication of the FIRM, located in flood Zones A1–A30, AE, AH, AO, A (with Base Flood Elevation (BFE)), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO, and A99. It may also be used to provide elevation information for Pre-FIRM buildings or buildings in any flood zone.

As part of the agreement for making flood insurance available in a community, the NFIP requires the community to adopt floodplain management regulations that specify minimum requirements for reducing flood losses. One such requirement is for the community to obtain the elevation of the lowest floor (including basement) of all new and substantially improved buildings, and maintain a record of such information. The Elevation Certificate provides a way for a community to document compliance with the community's floodplain management ordinance.

Use of this certificate does not provide a waiver of the flood insurance purchase requirement. Only a LOMA or LOMR-F from the Federal Emergency Management Agency (FEMA) can amend the FIRM and remove the federal mandate for a lending institution to require the purchase of flood insurance. However, the lending institution has the option of requiring flood insurance even if a LOMA/LOMR-F has been issued by FEMA. The Elevation Certificate may be used to support a LOMA, CLOMA, LOMR-F, or CLOMR-F request. Lowest Adjacent Grade (LAG) elevations certified by a land surveyor, engineer, or architect, as authorized by state law, will be required if the certificate is used to support a LOMA, CLOMA, LOMR-F, or CLOMR-F request. A LOMA, CLOMA, LOMR-F, or CLOMR-F request must be submitted with either a completed FEMA MT-EZ or MT-1 application package, whichever is appropriate. If the certificate will only be completed to support a LOMA, CLOMA, LOMR-F, or CLOMR-F request, there is an option to document the certified LAG elevation on the Elevation Form included in the MT-EZ and MT-1 application.

This certificate is used only to certify building elevations. A separate certificate is required for floodproofing. Under the NFIP, non-residential buildings can be floodproofed up to or above the BFE. A floodproofed building is a building that has been designed and constructed to be watertight (substantially impermeable to floodwaters) below the BFE. Floodproofing of residential buildings is not permitted under the NFIP unless FEMA has granted the community an exception for residential floodproofed basements. The community must adopt standards for design and construction of floodproofed basements before FEMA will grant a basement exception. For both floodproofed non-residential buildings and residential floodproofed basements in communities that have been granted an exception by FEMA, a floodproofing certificate is required.

The expiration date on the form herein does not apply to certified and completed Elevation Certificates, as a completed Elevation Certificate does not expire, unless there is a physical change to the building that invalidates information in Section A Items A8 or A9, Section C, Section E, or Section H. In addition, this form is intended for the specific building referenced in Section A and is not invalidated by the transfer of building ownership.

Additional guidance can be found in FEMA Publication 467-1, *Floodplain Management Bulletin: Elevation Certificate*.

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 INSTRUCTION PAGES 1-11**

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>CENTER CITY DEVELOPMENT LLC</u>		Policy Number: _____
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: <u>225 GREENVILLE AVE.</u>		Company NAIC Number: _____
City: <u>CAROLINA BEACH</u> State: <u>NC</u> ZIP Code: <u>28428</u>		
A3. Property Description (e.g., Lot and Block Numbers or Legal Description) and/or Tax Parcel Number: PID: <u>R09010-035-013-000; UNIT 2-225 LOT 10 BLK 54</u>		
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.): <u>RESIDENTIAL</u>		
A5. Latitude/Longitude: Lat. <u>34.025365</u> Long. <u>-77.898638</u> Horiz. 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 color photographs (one for each side) of the building (see Form pages 7 and 8).		
A7. Building Diagram Number: <u>6</u>		
A8. For a building with a crawlspace or enclosure(s):		
a) Square footage of crawlspace or enclosure(s): <u>1139</u> sq. ft.		
b) Is there at least one permanent flood opening on two different sides of each enclosed area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
c) Enter number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade: Non-engineered flood openings: <u>N/A</u> Engineered flood openings: <u>7</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>1400</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>N/A</u> sq. ft.		
b) Is there at least one permanent flood opening on two different sides of the attached garage? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
c) Enter number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade: 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 A9.c: <u>N/A</u> sq. in.		
e) Total rated area of engineered flood openings in A9.c (attach documentation – see Instructions): <u>N/A</u> sq. ft.		
f) Sum of A9.d and A9.e rated area (if applicable – see Instructions): <u>N/A</u> sq. ft.		
SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION		
B1.a. NFIP Community Name: <u>TOWN OF CAROLINA BEACH</u>		B1.b. NFIP Community Identification Number: <u>375347</u>
B2. County Name: <u>NEW HANOVER</u>	B3. State: <u>NC</u>	B4. Map/Panel No.: <u>3720313000</u> B5. Suffix: <u>K</u>
B6. FIRM Index Date: <u>01/17/2025</u>		B7. FIRM Panel Effective/Revised Date: <u>08/28/2018</u>
B8. Flood Zone(s): <u>AE</u>		B9. Base Flood Elevation(s) (BFE) (Zone AO, use Base Flood Depth): <u>11.0'</u>
B10. Indicate the source of the BFE data or Base Flood Depth entered in Item B9: <input type="checkbox"/> FIS <input checked="" type="checkbox"/> FIRM <input type="checkbox"/> Community Determined <input type="checkbox"/> Other: _____		
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 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		

# ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: <b>225 GREENVILLE AVE.</b>	<b>FOR INSURANCE COMPANY USE</b>
City: <b>CAROLINA BEACH</b> State: <b>NC</b> ZIP Code: <b>28428</b>	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: **NC RTN** Vertical Datum: **NAVD 1988**

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):  | <u>8.75</u>  | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| b) Top of the next higher floor (see Instructions):   | <u>20.25</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| c) Bottom of the lowest horizontal structural member (see Instructions):  | <u>N/A</u>   | <input type="checkbox"/> feet <input type="checkbox"/> meters            |
| d) Attached garage (top of slab):   | <u>N/A</u>   | <input 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): | <u>13.1</u>  | <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              | <u>8.2</u>   | <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             | <u>8.6</u>   | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| h) Finished LAG at lowest elevation of attached deck or stairs, including structural support:   | <u>8.5</u>   | <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: **L. SCOTT BAGGIE, PLS** License Number: **L-3450**

Title: **PROFESSIONAL LAND SURVEYOR**

Company Name: **DBA L. SCOTT BAGGIE, PLS**

Address: **4909 NORTHEASTER DRIVE**

City: **WILMINGTON** State: **NC** ZIP Code: **28409**

Telephone: \_\_\_\_\_ Ext.: \_\_\_\_\_ Email: **LSBAGGIE@PLDCPA.COM**

Signature: *L. Scott Baggie* **L. SCOTT BAGGIE** Date: **06/03/2025**



Place Seal Here

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):  
**C2.a) DENOTES THE ELEVATION OF SLAB (LOWEST FLOOR); FOYER FINISHED FLOOR ELEVATION IS 9.25'**

**C2.e) DENOTES THE LOWEST ELEVATION OF SERVICING EQUIPMENT (WATER HEATER, HVAC UNIT AND ELECTRICAL BOX / OUTLETS)**

**\*NOTE: SMART VENT MODEL #1540-570 (REPORT ATTACHED)**

# ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.:  
225 GREENVILLE AVE.

City: CAROLINA BEACH State: NC ZIP Code: 28428

## 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: \_\_\_\_\_

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

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

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

**IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11**

Form Page 5 of 8

**IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11**

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

☐ Yes    ☐ No

Comments:



**ELEVATION CERTIFICATE**  
**IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11**  
**BUILDING PHOTOGRAPHS**

See Instructions for Item A6.

**FOR INSURANCE COMPANY USE**

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

225 GREENVILLE AVE.

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

City: CAROLINA BEACH State: NC ZIP Code: 28428

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

Photo One Caption: FRONT 6/02/2025

Clear Photo One



Photo Two

Photo Two Caption: REAR 5/31/25

Clear Photo Two



**ELEVATION CERTIFICATE**  
**IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11**  
**BUILDING PHOTOGRAPHS**

Continuation Page

**FOR INSURANCE COMPANY USE**

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.:  
225 GREENVILLE AVE.

City: CAROLINA BEACH State: NC ZIP Code: 28428

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

Photo Three Caption: RIGHT SIDE 5/31/25

Clear Photo Three



Photo Four

Photo Four Caption: LEFT SIDE 5/31/25

Clear Photo Four



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# 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

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**



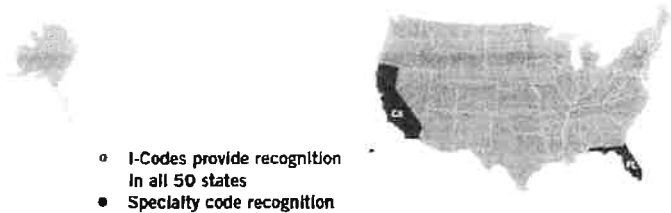
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(WSSPC) Award in Excellence"*



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## ICC-ES Evaluation Report

Reissued February 2023

### ESR-2074

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:

- 2021, 2018, 2015, 2012, 2009 and 2006 *International Building Code*® (IBC)
- 2021, 2018, 2015, 2012, 2009 and 2006 *International Residential Code*® (IRC)
- 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 2021).
- 6.2 Test report on air infiltration in accordance with ASTM E283.

#### 7.0 IDENTIFICATION

- 7.1 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).
- 7.2 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 (sq. ft.)
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>

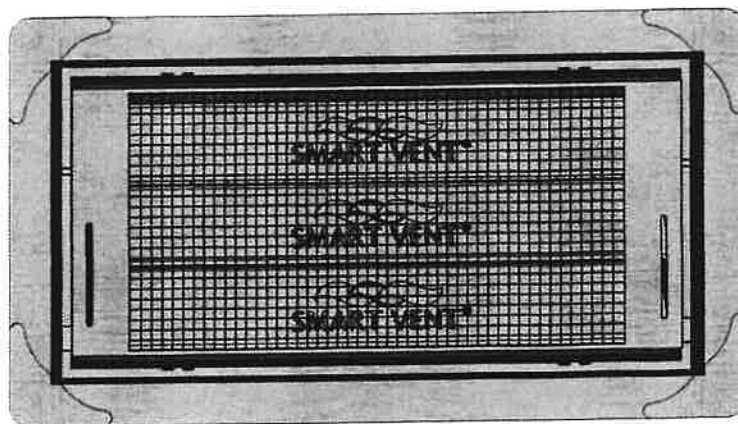


FIGURE 1—SMART VENT: MODEL 1540-510

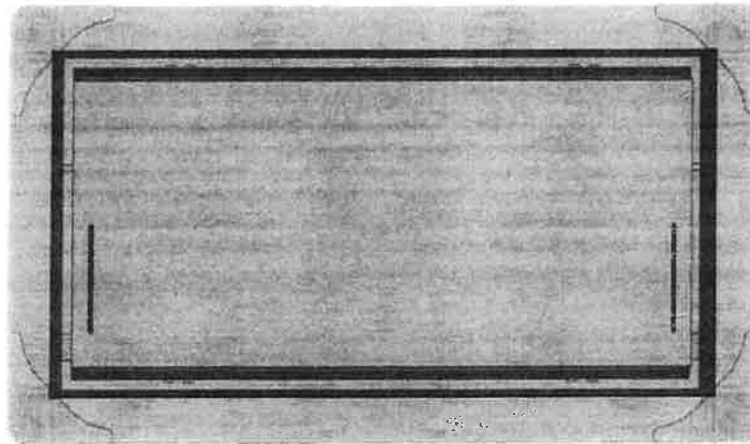


FIGURE 2—SMART VENT MODEL 1540-520

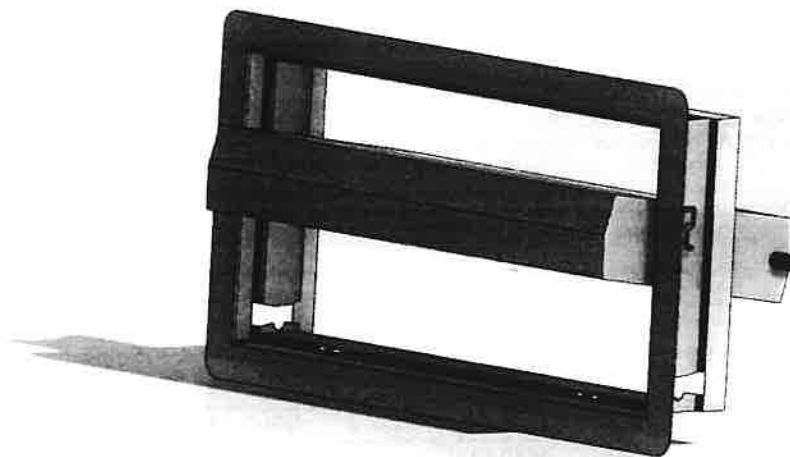


FIGURE 3—SMART VENT: SHOWN WITH FLOOD DOOR PIVOTED OPEN

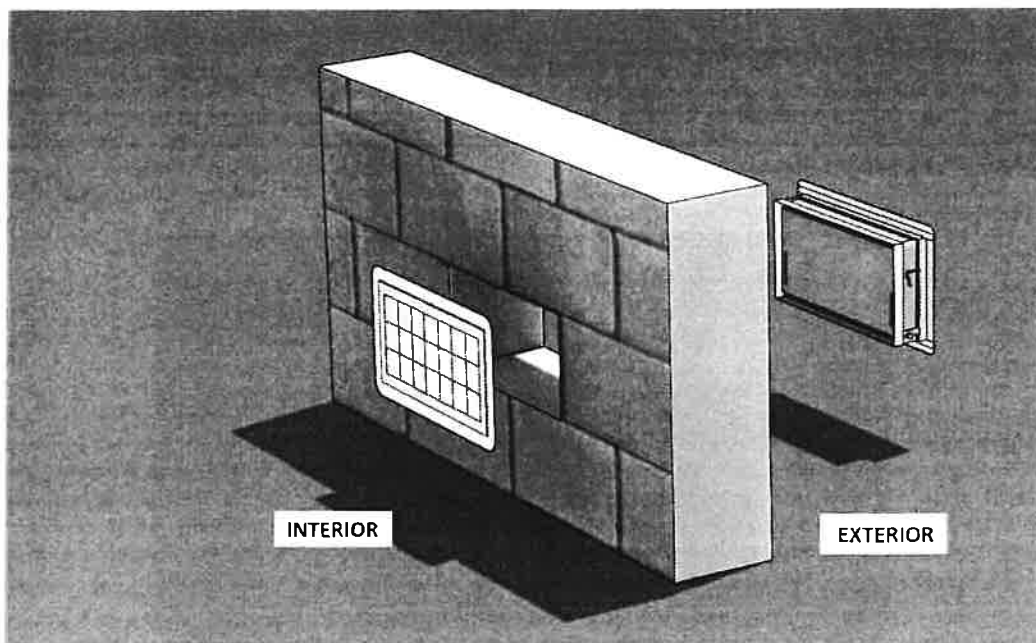


FIGURE 4—FLOOD VENT SEALING KIT

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:

## ■ 2019 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.

## ■ 2019 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 2019 CBC Chapter 12, provided the design and installation are in accordance with the 2018 *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 2019 CRC, provided the design and installation are in accordance with the 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report.

This supplement expires concurrently with the evaluation report, reissued February 2023.

## ICC-ES Evaluation Report

## ESR-2074 FBC Supplement

Reissued February 2023

This report is subject to renewal February 2025.

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

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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:

- 2020 Florida Building Code—Building
- 2020 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 are 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 2018 *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.