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

# **ELEVATION CERTIFICATE** Important: Follow the instructions on pages 1–9.

| Jopy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (5) build |
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| Copy all pages of this Elevation Ce  | rtificate and all attachm | ents for |                                       |                      | gent/compar      | iy, and (3) building owner.                           |  |
|--|---------------------------|----------|---------------------------------------|----------------------|------------------|---|--|
| SECTION A - PROPERTY INFORMATION   |                           |          |                                       |                      | FOR INSU         | RANCE COMPANY USE                                     |  |
| Township of Neptune  |                           |          |                                       |                      |                  |   |  |
| A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Company NAIC Number: Box No. |                           |          |                                       |                      |                  |   |  |
| 149 S. Riverside Drive   |                           |          |                                       |                      |                  |   |  |
| CityStateZIP CodeNeptuneNew Jersey07753  |                           |          |                                       |                      |                  |   |  |
| A3. Property Description (Lot a Tax map Block 471, Lot 24.01   | nd Block Numbers, Tax     | Parcel   | l Number, Legal De                    | scription, etc.)     |                  |   |  |
| A4. Building Use (e.g., Resider  | ntial, Non-Residential, A | ddition  | , Accessory, etc.)                    | Non-Residential      |                  |   |  |
| A5. Latitude/Longitude: Lat. 4   | 0 - 11 - 31.9 L           | _ong. 74 | 4 - 02 - 21.5                         | Horizontal Datur     | n: 🗌 NAD         | 1927 🔀 NAD 1983                                       |  |
| A6. Attach at least 2 photograp  | hs of the building if the | Certific | ate is being used to                  | o obtain flood insur | ance.            |   |  |
| A7. Building Diagram Number  | 6                         |          |                                       | ;                    |                  |   |  |
| A8. For a building with a crawls   | pace or enclosure(s):     |          |                                       | ę                    |                  |   |  |
| <ul> <li>a) Square footage of crawl</li> </ul>   | space or enclosure(s)     |          | 2,624 sq ft                           |                      |                  |   |  |
| b) Number of permanent fl  | ood openings in the cra   | wlspac   | e or enclosure(s) w                   | ithin 1.0 foot above | adjacent gr      | ade   |  |
| c) Total net area of flood o   | penings in A8.b1,92       | 20 s     | sq in                                 |                      |                  |   |  |
| d) Engineered flood openir   | ngs? 🛛 Yes 🗌 No           | )        |                                       |                      |                  |   |  |
| A9. For a building with an attact  | hed garage:               |          |                                       |                      |                  |   |  |
| a) Square footage of attact  | ned garage                | 1        | sq ft                                 |                      |                  |   |  |
| b) Number of permanent flo   | ood openings in the atta  | ached g  | parage within 1.0 fo                  | ot above adjacent (  | grade            |   |  |
| c) Total net area of flood of  | penings in A9.b           |          | sq in                                 |                      |                  |   |  |
| d) Engineered flood openir   | ngs? 🗌 Yes 🗌 No           | 0        |                                       |                      |                  |   |  |
| SE   | CTION B - FLOOD IN        | ISURA    | NCE RATE MAP                          | (FIRM) INFORMA       | TION             |   |  |
| B1. NFIP Community Name & C<br>Neptune, Township of 340317   | Community Number          |          | B2. County Name<br>Monmouth           |                      |                  | B3. State<br>New Jersey                               |  |
| B4. Map/Panel B5. Suffix<br>Number   | B6. FIRM Index<br>Date    | B7. FI   | IRM Panel<br>ffective/<br>evised Date | B8. Flood Zone(s)    | ) B9. Bas<br>(Zo | se Flood Elevation(s)<br>he AO, use Base<br>of Denth) |  |
| 34025C0333 F   | 09/25/2009                | 01/30    | /2015                                 | AE                   | 11               |   |  |
| B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9:                    |                           |          |                                       |                      |                  |   |  |
| B11. Indicate elevation datum L  | used for BFE in Item B9   | : 🗌 N    | GVD 1929 🔀 NA                         | VD 1988 🗌 Ot         | her/Source:      |   |  |
| B12. Is the building located in a  | Coastal Barrier Resou     | rces Sy  | vstern (CBRS) area                    | or Otherwise Prote   | cted Area (C     | DPA)? 🗌 Yes 🔀 No 📗                                    |  |
| Designation Date:  | C C                       | BRS      |                                       |                      |                  |   |  |
|  |                           |          |                                       |                      |                  |   |  |

| VATION CERTIFICATE  |   |   | OMB No. 1660-0008<br>Expiration Date: November 30, 2018   |  |
|---|---|---|---|--|
| APORTANT: In these spaces, copy the correspondi   | ng information from Sec   | tion A.   | FOR INSURANCE COMPANY USE   |  |
| Building Street Address (including Apt., Unit, Suite, and<br>149 S. Riverside Drive   | /or Bldg. No.) or P.O. Rout   | e and Box No.   | Policy Number:  |  |
| City S<br>Neptune N   | State ZIP C<br>lew Jersey 0775  | Code<br>3   | Company NAIC Number   |  |
| SECTION C - BUILDING  | ELEVATION INFORMAT  | ION (SURVEY R   | EQUIRED)  |  |
| <ul> <li>C1. Building elevations are based on: Construct<br/>*A new Elevation Certificate will be required when</li> <li>C2. Elevations – Zones A1–A30, AE, AH, A (with BFE Complete Items C2.a–h below according to the basenchmark Utilized: Neptune Twp SRH #1 (2013)</li> </ul> | tion Drawings*  Build<br>n construction of the buildin<br>E), VE, V1–V30, V (with BF<br>uilding diagram specified ir<br>) Vertical Datum: 1 | ling Under Constr<br>ig is complete.<br>E), AR, AR/A, AR<br>i Item A7. In Puer<br>NAVD 1988 | uction* IX Finished Construction<br>I/AE, AR/A1–A30, AR/AH, AR/AO.<br>to Rico only, enter meters. |  |
| Indicate elevation datum used for the elevations in   | n items a) through h) below   | 4.  |   |  |
| □ NGVD 1929   | er/Source:<br>ame as that used for the BI   |   | Check the measurement used.   |  |
| <ul> <li>a) Top of bottom floor (including basement, craw</li> </ul>  | Ispace, or enclosure floor)   | 5,5   | X feet I meters   |  |
| b) Top of the next higher floor   |   | <u> </u>  | X feet T meters   |  |
| c) Bottom of the lowest horizontal structural mem   | iber (V Zones only)   |   | X feet I meters   |  |
| d) Attached garage (top of slab)  |   | *********************************   | X feet meters   |  |
| <ul> <li>e) Lowest elevation of machinery or equipment s<br/>(Describe type of equipment and location in Control</li> </ul>   | ervicing the building<br>omments)   | 13 6  | X feet 🔲 meters   |  |
| f) Lowest adjacent (finished) grade next to build   | ng (LAG)  | 4, 6  | X feet I meters   |  |
| g) Highest adjacent (finished) grade next to build  | g) Highest adjacent (finished) grade next to building (HAG)5.9  |   |   |  |
| <ul> <li>h) Lowest adjacent grade at lowest elevation of c<br/>structural support</li> </ul>  | leck or stairs, including   | 4.6   | X feet C meters   |  |
| SECTION D - SURVEYO   | R, ENGINEER, OR ARC   | HITECT CERTIF   | ICATION   |  |
| This certification is to be signed and sealed by a land a<br>l certify that the information on this Certificate represent<br>statement may be punishable by fine or imprisonment  | surveyor, engineer, or arch<br>nts my best efforts to interp<br>under 18 U.S. Code, Secti   | itect authorized b<br>pret the data availation 1001.  | y law to certify elevation information.<br>able. I understand that any false                      |  |
| Were latitude and longitude in Section A provided by a  | licensed land surveyor?   |   | Check here if attachments.  |  |
| Certifier's Name<br>Peter R. Avakian, PE & PLS  | License Number<br>28142   |   |   |  |
| Title<br>President  |   |   |   |  |
| Company Name<br>Leon S. Avakian, Inc.   | Seal<br>Liere   |   |   |  |
| Address<br>788 Wayside Road   |   |   |   |  |
| City<br>Neptune   | State<br>New Jersey   | ZIP Code<br>07753   |   |  |
| Signatede til Ali RS  | Date<br>7-8-16  | Telephone<br>(732) 922-9229   |   |  |
| Copy all pages of this Elevation Certificate and all attaching  | ments for (1) community offi  | cial, (2) insurance   | agent/company, and (3) building owner.  |  |
| Comments (including type of equipment and location, p<br>A5 - Lat, & Lon, determined by Corpscon conversion fr<br>C2.e - Air conditioner compressors are located on a de  | per C2(e), if applicable)<br>om State Plane coordinate<br>tock adjacent to the next hig   | s.<br>her floor.  | ੇ <sup>"</sup><br>ਹਾ  |  |
|   |   |   |   |  |

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| ZVATION CERTIFICATE  |   |   | Expiration Da  | te: November 30,                                    |
|--|---|---|--|---|
| MPORTANT: In these spaces, copy  | the corresponding information   | from Section A.   | FOR INSURA   | NCE COMPANY   |
| Building Street Address (including Apt<br>149 S. Riverside Drive   | ., Unit, Suite, and/or Bldg. No.) or  | P.O. Route and Box No   | . Policy Number  | er:   |
| City   | State   | ZIP Code  | Company NA   | IC Number   |
| Neptune  | New Jersey  | 07753   |  |   |
| SECTION E -  | - BUILDING ELEVATION INFO<br>FOR ZONE AO AND ZON  | DRMATION (SURVEY N<br>IE A (WITHOUT BFE)  | NOT REQUIRED)  |   |
| For Zones AO and A (without BFE), co<br>complete Sections A, B,and C. For Ite<br>enter meters.   | omplete Items E1–E5. If the Certi<br>ms E1–E4, use natural grade, if a  | ficate is intended to supp<br>available. Check the mea  | ort a LOMA or LOM<br>surement used. In I   | IR-F request,<br>Puerto Rico only,                  |
| <ul> <li>E1. Provide elevation information for the highest adjacent grade (HAG)</li> <li>a) Top of bottom floor (including)</li> </ul>                                   | the following and check the appro<br>) and the lowest adjacent grade (I<br>basement,  | ppriate boxes to show wh<br>LAG).   | ether the elevation  | is above or below                                   |
| crawlspace, or enclosure) is   |   | feet [] л   | neters above   | or 🗌 below the                                      |
| <li>b) Top of bottom floor (including<br/>crawlspace, or enclosure) is</li>  | basement,   | [] feet [] n  | neters 🔲 above   | or 🗌 below the                                      |
| E2. For Building Diagrams 6-9 with p   | ermanent flood openings provide   | d in Section A Items 8 an   | d/or 9 (see pages )  | 1–2 of Instruction                                  |
| the next higher floor (elevation C2<br>the diagrams) of the building is  | 2.b in  | [] feet [] n  | neters above   | or below the I                                      |
| E3. Attached garage (top of slab) is   |   | [] feet [] m  | neters above   | or below the l                                      |
| E4. Top of platform of machinery and servicing the building is   | /or equipment   | ∏feet ∏n  | eters above  | or Delow the [                                      |
| E5. Zone AO only: If no flood depth n  | umber is available, is the top of th  | ne bottom floor elevated i  | n accordance with  | the community's                                     |
| floodplain management ordinance  | e? 🗍 Yes 🦳 No 门 Unkni   | own. The local official m   | ust certify this infor   | mation in Sectior                                   |
|  |   |   |  |   |
| SECTION F - F  | PROPERTY OWNER (OR OWNE   | R'S REPRESENTATIVE  |  | ······  |
| SECTION F – F<br>The property owner or owner's authori<br>community-issued BFE) or Zone AO n<br>Property Owner or Owner's Authorized                                     | PROPERTY OWNER (OR OWNE<br>ized representative who complete<br>hust sign here. The statements in<br>d Representative's Name | <b>ER'S REPRESENTATIVE</b><br>as Sections A, B, and E for<br>Sections A, B, and E are                 | CERTIFICATION<br>or Zone A (without a<br>correct to the best                       | FEMA-issued o<br>of my knowledge                    |
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| LVATION CERTIFICAT  |  | Expiration Date: November 30, 2  |  |  |  |  |
|---|--|--|--|--|--|--|
| MPORTANT: In these spaces, co   | py the corresponding information from  | Section A. FOR INSURANCE COMPANY   |  |  |  |  |
| Building Street Address (including /<br>49 S. Riverside Drive   | Apt., Unit, Suite, and/or Bldg. No.) or P.O. I   | Route and Box No. Policy Number:   |  |  |  |  |
| Dity  | State ZIP Code   |  |  |  |  |  |
| leptune   | 07753  |  |  |  |  |  |
|   | SECTION G - COMMUNITY INFORM   | IATION (OPTIONAL)  |  |  |  |  |
| The local official who is authorized<br>Sections A, B, C (or E), and G of th<br>used in Items G8–G10. In Puerto F | by law or ordinance to administer the com<br>is Elevation Certificate. Complete the appl<br>lico only, enter meters. | munity's floodplain management ordinance can complet<br>licable item(s) and sign below. Check the measurement    |  |  |  |  |
| <ol> <li>The information in Sectio<br/>engineer, or architect wh<br/>data in the Comments an</li> </ol>           | n C was taken from other documentation t<br>o is authorized by law to certify elevation ir<br>ea below.)             | hat has been signed and sealed by a licensed surveyor, normation. (Indicate the source and date of the elevation |  |  |  |  |
| 2. A community official com<br>or Zone AO.  | pleted Section E for a building located in Z   | Cone A (without a FEMA-issued or community-issued BF   |  |  |  |  |
| 3. The following information  | (Items G4–G10) is provided for communit  | ty floodplain management purposes.   |  |  |  |  |
| 64. Permit Number   | G5. Date Permit Issued   | G6. Date Certificate of<br>Compliance/Occupancy Issued   |  |  |  |  |
| This pormit has been issued f   |  |  |  |  |  |  |
|   |  | andarmprovement  |  |  |  |  |
| <ol> <li>Elevation of as-built lowest flo<br/>of the building;</li> </ol>   | or (including basement)  | feet [] meters Datum   |  |  |  |  |
| 9. BFE or (in Zone AO) depth of   | flooding at the building site:   | feet [] meters Datum   |  |  |  |  |
| 10. Community's design flood ele  | vation:  | feet [] meters Datum   |  |  |  |  |
| ocal Official's Name  | Title  | <u></u>  |  |  |  |  |
| community Name  | Telep  | hone   |  |  |  |  |
| ignature  | Date   |  |  |  |  |  |
| omments (including type of equin  | nent and location per C2(e) if applicable)   |  |  |  |  |  |
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## **BUILDING PHOTOGRAPHS**

See Instructions for Item A6.

OMB No. 1660-0008 Expiration Date: November 30, 2018

| IMPORTANT: In these spaces, copy t                                 | FOR INSURANCE COMPANY USE |
|--|---------------------------|
| Building Street Address (including Apt.,<br>149 S. Riverside Drive | Policy Number:            |
| City   | Company NAIC Number       |

If using the Elevation Certificate to obtain NFIP flood insurance, affix at least 2 building photographs below according to the instructions for Item A6. Identify all photographs with date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8. If submitting more photographs than will fit on this page, use the Continuation Page.



Photo One Caption Front of Building

**EVATION CERTIFICATE** 



Photo Two Caption Back of Building

| BUIL | DING | PHO1 | <b>FOGR</b> | APHS |
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OMB No. 1660-0008

| ZVATION CERTIFICATE  | Continuation Page  |   | Expiration Date: November 30, 2018  |  |
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| MPORTANT: In these spaces, copy the corr   | NT: In these spaces, copy the corresponding information from Section A.          |   |   |  |
| Building Street Address (including Apt., Unit, S<br>149 S. Riverside Drive   | uite, and/or Bldg. No.) or   | Policy Number:  |   |  |
| City   | State  | ZIP Code  | Company NAIC Number   |  |
| Neptune  | New Jersey   | 07753   |   |  |
| If submitting more photographs than will fit with: date taken; "Front View" and "Rear photographs must show the foundation with re | on the preceding page, a<br>View"; and, if required,<br>epresentative examples o | affix the additional photogr<br>"Right Side View" and '<br>of the flood openings or ven | aphs below. Identify all photographs<br>"Left Side View." When applicable,<br>ts, as indicated in Section A8. |  |
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|  | Photo Two  | )   |   |  |
| Photo Two Caption  |  | 1997 ANNUAL   |   |  |

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Replaces all previous editions.

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ICC-ES Report

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Most Widely Accepted and Trusted

# ESR-2074

Reissued 02/2015 This report is subject to renewal 02/2017.

## DIVISION: 08 00 00—OPENINGS SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS

**REPORT HOLDER:** 

## **SMARTVENT PRODUCTS, INC.**

430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071

## **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



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## **ICC-ES Evaluation Report**

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ESR-2074\*

Reissued February 2015

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A Subsidiary of the International Code Council®

This report is subject to renewal February 2017.

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

REPORT HOLDER:

SMARTVENT PRODUCTS, INC. 430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071 (877) 441-8368 www.smartvent.com info@smartvent.com

## **EVALUATION SUBJECT:**

SMART VENT<sup>®</sup> AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

## **1.0 EVALUATION SCOPE**

Compliance with the following codes:

- 2012, 2009 and 2006 International Building Code<sup>®</sup> (IBC)
- 2012, 2009 and 2006 International Residential Code<sup>®</sup> (IRC)
- 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT<sup>®</sup>Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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 2.6.2.2 of ASCE/SEI 24 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<sup>®</sup> Model #1540-510 and SmartVENT<sup>®</sup> Overhead Door Model #1540-514 both have screen covers with  $^{1}$ /<sub>4</sub>-inch-by- $^{1}$ /<sub>4</sub>-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<sup>®</sup> 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 recognized in this report do not offer natural ventilation.

### 4.0 DESIGN AND INSTALLATION

SmartVENT<sup>®</sup> and FloodVENT<sup>®</sup> 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. The mounting straps allow mounting in masonry and concrete walls up to 12 inches (305 mm) thick. In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the Smart Vent<sup>®</sup> 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<sup>●</sup> Stacking Model #1540-511 and FloodVENT<sup>●</sup> 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

\*Revised July 2015

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grade or floor and finished exterior grade immediately under each opening.

## 5.0 CONDITIONS OF USE

The Smart Vent<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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

Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated October 2013 (editorially revised May 2014).

## 7.0 IDENTIFICATION

The Smart VENT<sup>®</sup> models recognized 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).

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

TABLE 1-MODEL SIZES

For SI: 1 inch = 25.4 mm; 1 square foot =  $m^2$ 

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

OMB No. 1660-0008 Expiration Date: November 30, 2018

## **ELEVATION CERTIFICATE**

Important: Follow the instructions on pages 1-9.

|   | SECT                    | ION A - PROPERTY I        | NFORM     | NATION                                |                                       | FOR INSUR  | ANCE COMPANY US  |
|---|-------------------------|---------------------------|-----------|---------------------------------------|---------------------------------------|--|--|
| A1. Building Owner<br>Gene Hickey                     | 's Name                 |                           |           |                                       |                                       | Policy Num   | ber:   |
| A2. Building Street<br>Box No.<br>201 South Riverside | Address (inc<br>Drive   | luding Apt., Unit, Sulte  | , and/or  | Bidg. No.) or P.O.                    | Route and                             | Company N  | AIC Number:  |
| City  |                         | ndi                       |           | State                                 |                                       | ZIP Code   |  |
| Neptune Towns   | hip                     |                           |           | New Jarsey                            |                                       | 07753  |  |
| A3. Property Descr<br>Lot 6 / Block 6412              | iption (Lot an          | d Block Numbers, Tax      | Parcel    | Number, Legal De                      | scription, etc.)                      | ىلىد بەرى ئۆچىنىڭ مىلىكى يېچىنى مىلىكى بىرى مىلىكى بىرى مىلىكى بىرى مىلىكى بىرى مىلىكى بىرى مىلىكى بىرى مىلىكى | ۸<br>مەربىي بىرىمىي 1954-يىلى بىرىمىيى 1954-يىلى بىرىمىيى 1954-يىلى بىرىمىيى 1954-يىلى بىرىمىيى 1954-يىلى بىرىمىيى |
| A4. Building Use (e                                   | .g., Resident           | ial, Non-Residential, A   | ddition,  | Accessory, etc.)                      | Residential                           |  | -  |
| A5. Latitude/Longit                                   | .ide: Lat. 40           | -11-27N I                 | .ong. 74  | 1-02-21W                              | Horizontel Datum                      | : 🖸 NAD 1  | 927 🔀 NAD 1983   |
| A6. Attach at least                                   | 2 photograph            | is of the building if the | Certifica | ate is being used to                  | obtain flood insura                   | nce.   |  |
| 47. Building Diagra                                   | m Number                | 7 .                       |           |                                       |                                       |  |  |
| A8. For a building v                                  | with a crawlsp          | ace or enclosure(s):      |           |                                       |                                       |  |  |
| a) Square foot  | age of crawls           | pace or enclosure(s)      | 1         | ,016 នជុ ពី                           |                                       |  |  |
| b) Number of p  | ermanent fio            | od openings in the cra    | wispace   | e or enclosure(s) w                   | ithin 1.0 foot above                  | adjacent gra   | ade 6  |
| c) Total net an                                       | a of flood op           | enings in A8.b 1,200      | sq in     |                                       | • • • • • • • • • • • • • • • • • • • | ······································   | ······································   |
| d) Engineered   | flood opening           | 95? 🕅 Yes 🗔 Nr            | 3         | •                                     |                                       |  |  |
|   |                         |                           | -         | *                                     |                                       |  |  |
| A9. For a building v                                  | //m an auach            | eo garage:                |           |                                       | 1                                     |  | 1  |
| a) Square foot  | age of attach           | ed garage                 |           | n pa                                  |                                       |  |  |
| b) Number of (  | ermanent flo            | od openings in the atta   | ached g   | arage within 1.0 fo                   | ot above adjacent (                   | rade   |  |
| <li>c) Total net are</li>                             | a of flood op           | enings in A9.b            |           | sq in                                 |                                       |  |  |
| d) Engineered   | flood openin            | gs? 🗋 Yes 🗌 N             | O         |                                       |                                       |  |  |
| anni (  | SE                      | CTION B - FLOOD IN        | ISURA     | NCE RATE MAP                          | (FIRM) INFORMA                        | TION   |  |
| B1. NFIP Communi<br>Neptune, Township                 | ly Name & C<br>of 34031 | ommunity Number<br>7      |           | B2. County Name<br>Monmouth           |                                       |  | B3. State<br>New Jersey  |
| 4. Map/Panel<br>Number                                | B5. Suffix              | B6. FIRM Index<br>Date    | B7. FI    | RM Panel<br>fective/                  | B8. Flood Zone(s)                     | B9, Bas<br>(Zol  | e Flood Elevation(s)<br>ne AO, use Base  |
| 4025C0333   | F                       | 09/25/2009                | 09/25     | /2009                                 | AE (PBM AE)                           | 9 (PBFI  | E 11)  |
| B10. Indicate the s                                   | ource of the l          | Base Flood Elevation (    | BFE) da   | ata or base flood de                  | apth entered in Iten                  | 1 B9:  |  |
| B11. Indicate eleve                                   | tion datum u            | sed for BFE in Item BS    | ): 🔲 N    |                                       | AVD 1988 🔲 Or                         | hen/Source:  |  |
|   | l located in a          | Coastal Barrier Rescu     | Irces Si  | rstem (CBRS) area                     | or Otherwise Prote                    | cted Area (  |  |
| B12. Is the building                                  |                         |                           |           | · · · · · · · · · · · · · · · · · · · |                                       | · · · · · · · · · · · · · · · · · · ·  | the second s     |
| B12. Is the building                                  | )ata:                   | F7 (                      | ~RP¢      |                                       |                                       |  |  |

| LEVATION CERTIFICATE  | aften einen harten tekentekentekenteken aus die seinen auf die einen mei die die 19 maar van die sein die ster   |  | Expiration Date: November 30, 2018  |
|---|--|--|---|
| APORTANT: In these spaces, copy the c   | orresponding information from S  | ection A.  | FOR INSURANCE COMPANY USE   |
| Building Street Address (including Apt., Unit<br>201 South Riverside Drive  | ;, Suite, and/or Bldg. No.) or P.O. R  | oute and Box No.   | Policy Number:  |
| Sity<br>Veptune Township  | State Zi<br>New Jarsey 0   | IP Code<br>7753  | Company NAIC Number   |
| SECTION C - E   | UILDING ELEVATION INFORM   | ATION (SURVEY R  | EQUIRED)  |
| C1. Building elevations are based on:   | Construction Drawings*   | uliding Under Constru  | uction* 🔀 Finished Construction   |
| *A new Elevation Certificate will be re<br>C2. Elevations – Zones A1–A30, AE, AH,<br>Complete Items C2.a-h below accord<br>Benchmark Litilized: Township of Ner   | quired when construction of the bul<br>A (with BFE), VE, V1–V30, V (with<br>ling to the building diagram specifie<br>stuge Monument Vertical Datu                                | lding is complete.<br>BFE), AR, AR/A, AR<br>d in Item A7. In Puer<br>m: NAVD 1988                    | /AE, AR/A1–A30, AR/AH, AR/AO.<br>to Rico only, enter meters.  |
| Indicate elevation datum used for the   | elevations in items a) through h) be   | alow.  | <sub>ben</sub> -Méjamangkan sany défékéfékéné dan de dés <sup>t</sup> ékékéné dégékékéné dégékékéné dégékékéné désekéné   |
| NGVD 1929 🕅 NAVD 19   | 38 Other/Source:   |  |   |
| Datum used for building elevations mi   | ust be the same as that used for the   | e BFE.   | Charl the mass man tract  |
| a) Top of bottom floor (including base  | ement crawlenace of enclosure fic  | uori 8.0   | foot ☐ meters   |
| h) Ton of the next higher floor   | we will be a second of a propaging find  | 16 73  | The interest  |
| o) Bottom of the lowest horizontal of   | untural member (V Zonec ank)   | N/A  |   |
| <ul> <li>d) Attached carage (top of slab)</li> </ul>  | nome a maninar (a volga omà)   | N/A  | [X] feat [] meters  |
| e) Lowest elevation of machinery or   | equipment servicing the building   | 16, 54   | IX feet meters  |
| (Describe type of equipment and I   | ocation in Comments)   | 7, 78  | 🕅 feet 🗍 meters   |
| a) Highest edjacent (finished) grade  | next to building (HAG)   | 8 39   | Sel feet Timeters   |
| h) Lowest adjacent grade at lowest e  | elevation of deck or stairs, including   | 7. 73  | X feet meters   |
| structural support  | un a constante de la general de la constante de  |  | and a superior of the superior of t |
| This certification is to be signed and seale<br>I certify that the information on this Certific<br>statement may be punishable by fine or in  | d by a land surveyor, engineer, or a<br>rate represents my best efforts to in<br>aprisonment under 18 U.S. Code, S   | architect authorized b<br>herpret the data avail<br>Section 1001.                                    | y law to certify elevation information.<br>able, I understand that any false  |
| Were latitude and longitude in Section A p  | rovided by a licensed land surveyo   | n? 🛛 Yes 🗆 No  | Check here if attachments.  |
| Certifier's Name<br>Zenon T. Grybowski  | License Number<br>23918  |  |   |
| Title<br>Vice President   | νου  | ann <del>i 2011</del> - 1929 Mindhann ann 2931 - 1944 ann ann <b>293 - 939 ann 2849 ann ann an</b> n |   |
| Company Name<br>Landmark Surveying & Engineering  |  | demonstration and an   | Place<br>Seal   |
| Address<br>813 Main Street  |  |  | - neis  |
| City<br>Avon-by-the-Sea   | State<br>New Jersey  | ZIP Code<br>07717  |   |
| Signature Duwn T Guyhusti   | Date<br>04/11/2017   | Telephone<br>(732) 775-8558  | anna an ann an Anna an  |
|   | and it stratements for (1) nerver with   | v official, (2) insurance  | agent/company, and (3) building owne  |
| Copy all pages of this Elevation Certificate a  | and suscementation (1) commonity   |  |   |
| Copy all pages of this Elevation Certificate a<br>Comments (including type of equipment a<br>The lowest elevation of equipment servicit<br>water heater is at elevation 17.09. Engine<br>each for flood area, which totals 1,200 sqt<br>Data, the dwelling is in flood zone "AE", m | nd location, per C2(e), if applicable<br>ng the dwelling is the AC platform a<br>ered flood vents (SMART Vent Moc<br>uare feet for the enclosure floor, Ba<br>inimum BPFE is 11. | )<br>It elevation 16.54. The<br>del #1540-520) design<br>sed on FEMA website                         | e furnace is at elevation 16.73. The ho<br>ted for 200 square feet of floor space<br>a 04/11/2017 NJ Preliminary FIRM   |

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| ELEVATION CERTIFICA  | <b>\TE</b>   |  | OMB No. 1660-0008<br>Expiration Date: November 30, 20                         |
|--|--|--|---|
| MPORTANT: In these spaces,   | copy the corresponding informa   | tion from Section A.   | FOR INSURANCE COMPANY U   |
| Building Street Address (Includir<br>201 South Riverside Drive   | ng Apt., Unit, Suite, and/or Bldg. No  | .) or P.O. Route and Box No                                      | Policy Number:  |
| City<br>Neptune Township   | State<br>New Jersey  | ZIP Code<br>07753  | Company NAIC Number   |
| SECTIO   | DN E - BUILDING ELEVATION I  | NFORMATION (SURVEY)  | NOT REQUIRED)   |
| For Zones AO and A (without BI complete Sections A, B,and C. F   | E), complete Items E1–E5. If the C<br>for Items E1–E4, use natural grade                               | Certificate is intended to supp<br>, if available. Check the mea | oort a LOMA or LOMR-F request,<br>surement used. In Puerto Rico only,         |
| <ul> <li>E1. Provide elevation information</li> <li>the highest adjacent grade</li> <li>Tag of bottom floor (inclusion)</li> </ul> | on for the following and check the a<br>(HAG) and the lowest adjacent gra                              | ppropriate boxes to show wh<br>de (LAG).                         | ether the elevation is above or below   |
| crawispace, of enclosur  | e) is  |  | neters 🔲 above or 📋 below the HA  |
| crawlspace, or enclosur  | e) îs  | [] feet [] r   | neters above or below the LA  |
| E2. For Building Diagrams 6–9<br>the next higher floor (elevat   | with permanent flood openings pro-<br>ion C2.b in  | vided in Section A Items 8 an                                    | nd/or 9 (see pages 1-2 of Instructions),                                      |
| the diagrams) of the buildin   | g is   | feet 🔲 r   | neters 🔲 above or 🗌 below the HA  |
| E3. Attached garage (top of stat   | b) is  |  | neters above or below the HA  |
| E4. Top of platform of machine<br>servicing the building is  | ry and/or equipment  | [] feet [] r   | neters 📋 above or 🗌 below the HA  |
| E5. Zone AO only: If no flood de<br>floodplain management ord  | epth number is available, is the top<br>linance? [] Yes [] No [] U                                     | of the bottom floor elevated nknown. The local official r        | in accordance with the community's nust certify this information in Section G |
| SECTION  | F - PROPERTY OWNER (OR O   | WNER'S REPRESENTATIV   | E) CERTIFICATION  |
| The property owner or owner's a<br>community-issued BFE) or Zone<br>Property Owner or Owner's Auth                                 | authorized representative who comp<br>AO must sign here. The statemen<br>norized Representative's Name | pletes Sections A, B, and E f<br>ts in Sections A, B, and E ar   | or Zone A (without a FEMA-issued or<br>e correct to the best of my knowledge. |
| Address  |  | City   | State ZIP Code  |
| Signature  |  | Date   | Telephone   |
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| ELEVATION CERTIFICATE  |  |   | OMB No. 1660-0008<br>Expiration Date: November 30, 2018                             |
|--|--|---|---|
| IMPORTANT: In these spaces, copy the co  | FOR INSURANCE COMPANY USE  |   |   |
| Building Street Address (including Apt., Unit, 201 South Riverside Drive   | Suite, and/or Bldg. No.) of  | r P.O. Route and Box No                                 | >. Policy Number:   |
| City<br>Neptune Township   | State<br>New Jersey  | ZIP Code<br>07753                                       | Company NAIC Number   |
| SECI   | ION G - COMMUNITY IN   | FORMATION (OPTION                                       | AL)   |
| The local official who is authorized by law or<br>Sections A, B, C (or E), and G of this Elevati<br>used in Items G8–G10. In Puerto Rico only, | ordinance to administer th<br>on Certificate. Complete th<br>enter meters. | ne community's floodplain<br>ne applicable item(s) and  | n management ordinance can complete<br>I sign below. Check the measurement          |
| G1. []] The information in Section C was t<br>engineer, or architect who is autho<br>data in the Comments area below.                          | aken from other document<br>rized by law to certify elev<br>)              | lation that has been sign<br>ation information. (Indica | ed and sealed by a licensed surveyor, `<br>ite the source and date of the elevation |
| G2. A community official completed Se or Zone AO.  | ction E for a building locat   | ed in Zone A (without a                                 | FEMA-issued or community-issued BFE)  |
| G3. The following information (Items G   | 4-G10) is provided for cor   | nmunity floodplain mana                                 | igement purposes.   |
| G4. Permit Number  | G5. Date Permit Issue  | ed (  | <ol> <li>Date Certificate of<br/>Compliance/Occupancy Issued</li> </ol>             |
| G7. This permit has been issued for:   | New Construction   | Substantial Improvemen                                  | nt  |
| G8. Elevation of as-built lowest floor (includ of the building:  | ing basement)  |   | feet 🔲 meters Datum   |
| G9. BFE or (in Zone AO) depth of flooding  | at the building site:  |   | feet [_] meters Datum   |
| G10. Community's design flood elevation:   |  |   | feet imeters Datum  |
| Local Official's Name  | ·  | Title   |   |
| Community Name   | 9  | Telephone   |   |
| Signature  |  | Date  |   |
| Comments (including type of equipment and  | location, per C2(e), if appl   | icable)   | · · · · ·   |
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|  |  |   | Check here if attachments.  |

## **BUILDING PHOTOGRAPHS**

OMB No. 1660-0008 Expiration Date: November 30, 2018

| ELEVATION CERTIFICATE  | See Instructions   | for Item A6.   | Expiration Date: November 30, 2018   |
|--|--|--|--|
| MPORTANT: In these spaces, copy the corr   | esponding information  | from Section A.  | FOR INSURANCE COMPANY USE  |
| Building Street Address (including Apt., Unit, S<br>201 South Riverside Drive  | uite, and/or Bldg. No.) or   | P.O. Route and Box No.   | Policy Number:   |
| City   | State  | ZIP Code   | Company NAIC Number  |
| Neptune Township   | New Jersey   | 07753  |  |
| If using the Elevation Certificate to obtain<br>instructions for Item A6. Identify all photograp<br>"Left Side View." When applicable, photograp<br>vents, as indicated in Section A8. If submitting | NFIP flood insurance,<br>whs with date taken; "From<br>aphs must show the fou<br>g more photographs than | affix at least 2 building p<br>nt View" and "Rear View"; a<br>indation with representative<br>will fit on this page, use the | photographs below according to the<br>and, if required, "Right Side View" and<br>e examples of the flood openings or<br>e Continuation Page. |
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| Photo One Caption  | Front View - Ta  | aken 04/03/2017  | anna an   |
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| la di seconda di second  |  |  |  |
| Photo Two Caption  | Photo T<br>Right Rear View -   | wo<br>Taken 04/03/2017   |  |

FEMA Form 086-0-33 (7/15)

Replaces all previous editions.

Form Page 5 of 6

## BUILDING PHOTOGRAPHS Continuation Page

OMB No. 1660-0008 Expiration Date: November 30, 2018

| IMPORTANT: In these spaces, copy the corresponding information from Section A. [FOR INS   | SURANCE COMPANY USE |
|---|---------------------|
| Building Street Address (including Apt., Unit, Suite, and/or Bidg. No.) or P.O. Route and Box No. Policy Nu 201 South Riverside Drive | umber:              |
| CityStateZIP CodeCompanyNeptune TownshipNew Jersey07753   | y NAIC Number       |

If submitting more photographs than will fit on the preceding page, affix the additional photographs below. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8.



Photo One Caption

**ELEVATION CERTIFICATE** 

Left Side View - Taken 04/03/2017



Photo Two Caption

Right Side View - Taken 04/03/2017



ICC-ES Report

ICC-ES | (800) 423-6587 | (562) 699-0543 | www.icc-es.org

Most Widely Accepted and Trusted

# ESR-2074

Reissued 02/2015 This report is subject to renewal 02/2017.

## DIVISION: 08 00 00—OPENINGS SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS

**REPORT HOLDER:** 

## **SMARTVENT PRODUCTS, INC.**

430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071

## **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



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## **ICC-ES Evaluation Report**

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ESR-2074\*

Reissued February 2015

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A Subsidiary of the International Code Council®

This report is subject to renewal February 2017.

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

REPORT HOLDER:

SMARTVENT PRODUCTS, INC. 430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071 (877) 441-8368 www.smartvent.com info@smartvent.com

## **EVALUATION SUBJECT:**

SMART VENT<sup>®</sup> AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

## **1.0 EVALUATION SCOPE**

Compliance with the following codes:

- 2012, 2009 and 2006 International Building Code<sup>®</sup> (IBC)
- 2012, 2009 and 2006 International Residential Code<sup>®</sup> (IRC)
- 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT<sup>®</sup>Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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 2.6.2.2 of ASCE/SEI 24 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<sup>®</sup> Model #1540-510 and SmartVENT<sup>®</sup> Overhead Door Model #1540-514 both have screen covers with  $^{1}$ /<sub>4</sub>-inch-by- $^{1}$ /<sub>4</sub>-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<sup>®</sup> 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 recognized in this report do not offer natural ventilation.

### 4.0 DESIGN AND INSTALLATION

SmartVENT<sup>®</sup> and FloodVENT<sup>®</sup> 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. The mounting straps allow mounting in masonry and concrete walls up to 12 inches (305 mm) thick. In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the Smart Vent<sup>®</sup> 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<sup>●</sup> Stacking Model #1540-511 and FloodVENT<sup>●</sup> 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

\*Revised July 2015

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grade or floor and finished exterior grade immediately under each opening.

## 5.0 CONDITIONS OF USE

The Smart Vent<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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

Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated October 2013 (editorially revised May 2014).

## 7.0 IDENTIFICATION

The Smart VENT<sup>®</sup> models recognized 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).

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

TABLE 1-MODEL SIZES

For SI: 1 inch = 25.4 mm; 1 square foot =  $m^2$ 

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

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OMB No. 1660-0008 Expiration Date: November 30, 2018

## **ELEVATION CERTIFICATE**

Important: Follow the instructions on pages 1-9.

|   | uranos agenecompany, anu (o) bunung own                   |
|---|---|
| SECTION A - PROPERTY INFORMATION  | FOR INSURANCE COMPANY US                                  |
| A1. Building Owner's Name<br>Brice and Karen Cote   | Policy Number:  |
| <ul> <li>A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg, No.) or P.O. Route and<br/>Box No.</li> <li>109 Hillcrest Avenue</li> </ul> | Company NAIC Number:                                      |
| City State  | ZIP Code  |
| Neptune Township New Jersey   | 07753   |
| A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, e<br>Block 5316 Lot 10   | ətc.)   |
| A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)Resident  | tial  |
| A5. Latitude/Longitude: Lat. N 40 11 34.6272 Long. w -74 02 25.0116 Horizont  | al Datum: 🔲 NAD 1927 🔀 NAD 1983                           |
| A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flo  | od insurance.   |
| A7. Building Diagram Number7  |   |
| A8. For a building with a crawlspace or enclosure(s):   |   |
| a) Square footage of crawlspace or enclosure(s) 160 sq ft   |   |
| b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 fo   | ot above adjacent grade 2                                 |
| c) Total net area of flood openings in A8.b 464 sq in   |   |
| d) Engineered flood openings? X Yes I No  |   |
| A9. For a building with an attached garage:   |   |
| a) Square footage of attached garage957 sq ft   |   |
| b) Number of permanent flood openings in the attached garage within 1.0 foot above a  | djacent grade 5   |
| c) Total net area of flood openings in A9 h 1 160 sq in   |   |
|   |   |
| d) Engineered flood openings? [X] Yes [] No   |   |
| SECTION B - ELOOD INSURANCE RATE MAP (FIRM) IN  | FORMATION   |
| B1 NEIP Community Name & Community Number B2, County Name   | B3. State   |
| Township Of Neptune 340317 Monmouth   | New Jersey  |
| 34. Map/Panel B5. Suffix B6. FIRM Index Date B7. FIRM Panel Effective/ B8. Floor  | Zone(s) B9. Base Flood Elevation(s)<br>(Zone AO, use Base |
| 34025C0333 F 09/25/2009 09/25/2009 AE   | 9   |
| B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entere  | d in Item B9:   |
| B11. Indicate elevation datum used for BFE in Item B9: 1 NGVD 1929 X NAVD 1988  | Other/Source:   |
| B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherw  | ise Protected Area (OPA)? 🔲 Yes 🔀 No                      |
| Designation Date:   |   |
|   |   |

|                               | 10 2490<br>1021 - 0                                  | ERTIFICATE   |   |  |  | OMB No. 1<br>Expiration  | 660-0008<br>Date: November 30, 2   |
|-------------------------------|--|--|---|--|--|--|--|
| a                             | <i>4</i> . •   | Address (including Ap  | the corresponding inform<br>t., Unit, Suite, and/or Bldg. N   | ation from Sec<br>lo.) or P.O. Rou   | te and Box No.   | FOR INSU<br>Policy Nur   | RANCE COMPANY  |
|                               | low  | nship  | State<br>New Jersey   | ZIP<br>0775  | Code<br>53   | Company  | NAIC Number  |
|                               | $\sum_{i=1}^{n}$                                     | SECTION  | C - BUILDING ELEVATIO   | N INFORMAT   | ION (SURVEY  | REQUIRED)  |  |
| ́С2.                          | Building<br>*A new<br>Elevatio<br>Comple             | g elevations are based o<br>Elevation Certificate will<br>ons – Zones A1–A30, Af<br>te Items C2.a–h below a  | n: Construction Drawi<br>be required when construct<br>E, AH, A (with BFE), VE, V1-<br>according to the building diag               | ngs*  Build<br>on of the buildli<br>-V30, V (with Bi<br>gram specified i       | ding Under Cons<br>ng is complete.<br>E), AR, AR/A, A<br>n Item A7, in Pue | truction* 🔀<br>R/AE, AR/A1-<br>erto Rico only.   | Finished Constructio   |
|                               | Benchm<br>Indicate                                   | nark Utilized: GPS Obse<br>elevation datum used for  | rvation vitems a) t   | /ertical Datum:<br>hrough h) below   | NAVD 1988<br>v.  |  |  |
|                               | _ [  | ] NGVD 1929 🔀 NAV  | D 1988 Other/Source:  |  |  |  | -  |
|                               | a) Top<br>b) Top                                     | used for building elevation<br>of bottom floor (including<br>of the next higher floor                        | ns must be the same as tha<br>g basement, crawlspace, or (  | t used for the B<br>enclosure floor)   | <u> </u>   | Check t  | he measurement use<br>feet   meters feet  meters                         |
|                               | c) Botto<br>d) Attac                                 | om of the lowest horizon<br>ched garage (top of slab   | tal structural member (V Zon<br>)   | es only)   | N/A<br>6.1   | X  | feet meters<br>feet rieters  |
|                               | e) Lowe<br>(Des                                      | est elevation of machine<br>cribe type of equipment  | ry or equipment servicing the<br>and location in Comments)  | e building   | <u>    12. 1</u>   | X  | feet [] meters   |
|                               | f) Lowe  | est adjacent (finished) g  | rade next to building (LAG)   |  | 5.8  | X  | feet 🔲 meters  |
| -                             | g) High  | est adjacent (finished) g  | rade next to building (HAG)   | 2<br>  | <u> </u>   | X  | feet 🔲 meters  |
|                               | n) Lowe<br>struc                                     | est adjacent grade at lov<br>itural support  | vest elevation of deck or stal  | rs, including  |  | X  | teet L meters  |
|                               |  | SECTION  | I D – SURVEYOR, ENGIN   | EER, OR ARC  | HITECT CERTI   | FICATION   | ×  |
| This<br>I cer<br>state<br>Wer | certifical<br>rtify that t<br>ement ma<br>e latitude | tion is to be signed and<br>the information on this C<br>ay be punishable by fine<br>and longitude in Sectio | sealed by a land surveyor, e<br>ertificate represents my besi<br>or imprisonment under 18 L<br>n A provided by a licensed is        | ngineer, or arch<br>t efforts to intern<br>J.S. Code, Section<br>and surveyor? | itect authorized l<br>pret fhe data avai<br>on 1001.<br>Xyes Doo           | by law to certified in the certification of the cer | y elevation informatio<br>stand that any false<br>ck here if attachments |
| Cert                          | ifler's Na   | me   | Licens  | e Number   |  |  |  |
| Rob                           | ert M. Ra  | agan   | N.J. Li   | c. No. 38977   | 1  |  |  |
| Lanc                          | d Survey   | or -   |   | ě.   |  |  | 4  |
| Com<br>Ragi                   | an Land  | ime<br>Surveying   |   |  |  |  | Place<br>Seal  |
| Addi<br>1913                  | ress<br>3 Cottage                                    | e Place  |   |  | à  |  |  |
| City<br>Wall                  | Townshi  | ip   | State<br>New J  | ersey  | ZIP Code<br>07719  | 3.   | -6-17  |
| Sign                          | ature  | fly?   | Date<br>03/06/  | 2017   | Telephone<br>(732) 280-7000  | f  |  |
| Сору                          | all pages  | s of this Electron Certific  | ate and all attachments for (1  | ) community off  | cial, (2) insurance  | e agent/compa  | ny, and (3) building ow  |
| Com<br>Struc<br>eleva         | ments (ir<br>cture is a<br>ation 12.3<br>d and Air   | Cluding type of equipme<br>2 story frame dwelling to<br>3 and 12.1, respectively.<br>Vent Co. engineered for | ent and location, per C2(e), in<br>pullt on full story foundation v<br>The eir conditioning unit is c<br>pundation vents Model RFSS | f applicable)<br>valls. The gas h<br>putside on a pla<br>t (232 Sq. Ft.) ir    | ot water heater a<br>tform at elevatior<br>in the garage area              | and furnace an<br>15.5. There a<br>a. (See specifi   | e in the enclosure at<br>are five USA Foundati<br>cations attached.)The  |

## **BUILDING PHOTOGRAPHS**

| ERTIFICATE                              | See Instructions            | for Item A6.           | OMB No. 1660-0008<br>Expiration Date: November 30, 2018 |
|---|-----------------------------|------------------------|---|
| these spaces, copy the co               | rresponding information     | from Section A.        | FOR INSURANCE COMPANY USE                               |
| , Address (including Apt., Unit, Avenue | Suite, and/or Bldg. No.) or | P.O. Route and Box No. | Policy Number:  |
|   | State                       | ZIP Code               | Company NAIC Number                                     |
| Township                                | New Jersey                  | 07753                  |   |

sing the Elevation Certificate to obtain NFIP flood insurance, affix at least 2 building photographs below according to the tructions for Item A6. Identify all photographs with date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8. If submitting more photographs than will fit on this page, use the Continuation Page.



FEMA Form 086-0-33 (7/15)

Replaces all previous editions.





## **Certification of Engineered Flood Openings**

In accordance with NFIP, FEMA Technical Bulletin 1-08 and ASCE/SEI 24-14

## **Certification Statement**

y that the flood vents manufactured by USA Foundation Flood Air Vents (Model No's FO-316, FA-316, FOAL, FAAL, RFPC and RFSS) are designed rce with the requirements of the 2011 NFIP "Flood Insurance Manual" to provide automatic equalization of hydrostatic flood loads on exterior walls by ne automatic entry and exit of floodwaters during floods up to and including the base 100-year flood. The flood vents must be installed and sized properly jith by the requirements below. This certification follows the design requirements and specifications that are established in FEMA Technical Bulletin 1-08 CE/SEI 24-14.

#### Design Characteristics

preby certify that I have measured the flood vent models listed below. I have also calculated the maximum total enclosed area that can be served by each individual model based on the net area of the opening using the equation taken from ASCE/SEI 24-14, Section 2.6.2.2 and the following design assumptions listed below.

#### **Design Assumptions:** The rates of rise and fall have been assumed

1.

#### Area of Engineered Openings per ASCE 24, Section 2.6.2.2

 $A_{o} = (0.0333)[1/c]R(A_{o}) \rightarrow Ae = Ao / [(0.0333)[1/c]R]$ 

- to be 5 feet per hour. The maximum difference between the exterior 2. and interior floodwater levels have been assumed to be 1 foot during base flood conditions.
- Where: Total Net Area of Openings Required (in<sup>2</sup>) A. = 0.033 = Coefficient Corresponding to a Factor of Safety of 5.0 (in<sup>2</sup>-hr/ft<sup>3</sup>) Opening Coefficient (Non-Dimensional; see ASCE 24, Table 2-2) c = Worst Case Rate of Rise and Fall (ft/hr) R = Total Enclosed Area (ft<sup>2</sup>) A. =

ð

A factor of safety of 5 has been used in the з design.

|        |                 | Maximum.       | Area Coverage in Sq       | uare Feet per Vent for e                           | ach Model |              |                          |
|--------|-----------------|----------------|---------------------------|--|-----------|--------------|--------------------------|
| Model  | Height<br>(in.) | Width<br>(in.) | A.<br>(in. <sup>2</sup> ) | Constant<br>(in <sup>2</sup> ·hr/ft <sup>3</sup> ) | c         | R<br>(ft/hr) | A,<br>(ff <sup>2</sup> ) |
| FO-316 | 7.00            | 16.50          | 108,50                    | 0.0330   | 0.400     | 5            | 263                      |
| FA-316 | 7.00            | 15.50          | 108.50                    | 0.0330   | 0.400     | 5            | 263                      |
| FOAL-W | 7.00            | 15.50          | 108.50                    | 0.0330   | 0.400     | 5            | 263                      |
| FOAL-B | 7.00            | 15.50          | 108,50                    | 0.0330   | 0.400     | 5            | 263                      |
| FOAL-G | 7,00            | 15.50          | 108.50                    | 0.0330   | 0.400     | , 5          | 263                      |
| FAAL-W | 7.00            | 15.50          | 108,50                    | 0.0330   | 0.400     | <u>,5</u>    | 263                      |
| FAAL-B | 7.00            | 15.50          | 108.50                    | 0.0330   | 0.400     | 5            | 263                      |
| FAAL-G | 7.00            | 15.50          | 108.50                    | 0,0330   | 0.400     | 5            | 263                      |
| RFPC   | 7.00            | 13.75          | 96.25                     | 0.0330   | 0.398     | 5            | 232                      |
| RFSS   | 7.00            | 13.75          | 96.25                     | 0.0330   | 0,398     | 5            | 232                      |

\* Note : (A  $_{o}$ ) is the maximum total enclosed area that can be served for each individual model based on the net area of the opening (A  $_{o}$ )

#### Limitations and Installation Requirements

This certification will be voided in it's entirety if the following installation requirements and limitations are not enforced. USA Foundation Flood Air Vents and Conr Engineering Consultants, Inc. do not recommend or authorize any modifications to the flood vents and will not be held liable for improper installation or modification of the flood vents

FEMA/ NFIP Limitations and Installation Requirements:

- A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. 2
- 3.
- The bottom of all openings shall be no higher than one foot above grade that is immediately under each opening. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters. It is recommended that openings be reasonably distributed around the perimeter of the enclosed area unless there is clear justification for putting all openings 4. on just one or two sides (such as in townhouses or buildings set into sloping sites).
- Where analysis indicates rates of rise and fail greater than 5 feet per hour, the total enclosed area shall be reduced accordingly. 5.

|                   | Design Professional  | Professional Engineering Seal |
|-------------------|--|-------------------------------|
| Name / Title:     | Jason M. Conn, P.E. President, Conn Engineering Consultants, Inc.        |                               |
| Address:          | 107 N. Bridge St., Linden, MI 48451                                      |                               |
| License Type:     | Professional Engineer  |                               |
| State:            | New Jersey   |                               |
| License Number:   | 24GE04573000   |                               |
|                   | Installation Address   |                               |
| Customer and Insi | tailation Address:   |                               |
| 109 Hilcrest Aven | ue   |                               |
| Neptune, NJ 0775  | 53   |                               |
|                   |  |                               |
|                   | Model Installed  | - 30                          |
|                   | Wodel Installed  |                               |
| Model Number;     | RFSS   |                               |
| Maximum total en  | closed area that can be served for EACH individual vent: 232 Square Feet |                               |

## **Certification of Engineered Flood Openings**

In accordance with NFIP, FEMA Technical Bulletin 1-08 and ASCE/SEI 24-14

### **Certification Statement**

eby certify that the flood vents manufactured by USA Found ation Flood Air Vents (Model No's FO-316, FA-316, FO AL, FAAL, RFPC and RFSS) are designed coordance with the requirements of the 2011 NFIP "Flood Insurance Manual" to provide automatic equalization of hy drostatic flood loads on exterior walls by jowing the automatic entry and exit of floodwaters during floods up to and including the base 100-year flood. The flood vents must be installed and sized property. as set forth by the requirements below. This certification follows the design requirements and specifications that are established in FEMA Technical Bulletin 1-08 and ASCE/SEI 24-14.

#### **Design Characteristics**

I hereby certify that I have measured the flood vent models listed below. I have also calculated the maximum total enclosed area that can be served by each individual model based on the net area of the opening using the equation taken from ASCE/SEI 24-14, Section 2.6.2.2 and the following design assumptions listed below.

#### Design Assumptions:

UHRATION FLOOD

#### Area of Engineered Openings per ASCE 24, Section 2.6.2.2

 $A_o = (0.0333)[1/o]R(A_o) \rightarrow Ae = Ao / [(0.0333)[1/o]R]$ 

The rates of rise and fall have been assumed 1, to be 5 feet per hour. The maximum difference between the exterior 2. and interior floodwater levels have been assumed to be 1 foot during base flood

Where: Total Net Area of O penings Required (in<sup>2</sup>) A. = 0.033 = Coefficient Corresponding to a Factor of Safety of 5.0 (in<sup>2</sup>·hr/ft<sup>3</sup>) Opening Coefficient (Non-Dimensional; see ASCE 24, Table 2-2) Worst Case Rate of Rise and Fall (fl/hr) A . = Total Enclosed Area (ft<sup>2</sup>)

conditions. A factor of safety of 5 has been used in the 3. design.

|        | بىنىنىڭ 10 <u>مىمىمەرى</u> بىرىمەرنىڭ <del>10 م</del> ىر | Maximum        | Area Coverage in Sq | uare Feet per Vent for e                           | ach Model |              |                           |
|--------|--|----------------|---------------------|--|-----------|--------------|---------------------------|
| Model  | Height<br>(in.)  | Width<br>(in.) | A₀<br>(in.∛)        | Constant<br>(in <sup>2,</sup> hr/ft <sup>3</sup> ) | C         | R<br>(ft/hr) | A.'<br>(ft <sup>2</sup> ) |
| FO-316 | 7.00   | 15.50          | 108.50              | 0.0330   | 0,400     | . 5          | 263                       |
| FA-316 | 7,00   | 15.50          | 108.50              | 0.0330   | 0.400     | 5            | 263                       |
| FOAL-W | 7.00   | 15,50          | 108.50              | 0.0330   | 0.400     | 5            | 263                       |
| FOAL-B | 7.00   | 15.50          | 108,50              | 0.0330   | 0,400     | 5            | 263                       |
| FOAL-G | 7.00   | 15.50          | 108,50              | 0.0330   | 0,400     | * 5          | 263                       |
| FAAL-W | 7.00   | 15.50          | 108.50              | 0.0330   | 0.400     | 5 🕈          | 263                       |
| FAAL-B | 7.00   | 15,50          | 108.50              | 0.0330   | 0.400     | 5            | 263                       |
| FAAL-G | 7.00   | 15,50          | 108,50              | 0.0330   | 0.400     | 5            | 263                       |
| RFPC   | 7.00   | 13.75          | 96.25               | 0,0330   | 0.398     | 5            | 232                       |
| RFSS   | 7.00   | 13.75          | 96,25               | 0.0330   | 0,398     | 5            | 232                       |

\* Note: (A , ) is the maximum total enclosed area that can be served for each individual model based on the net area of the opening (A ,)

*c* ≈

*R* =

#### Limitations and Installation Requirements

This certification will be volded in it's entirety if the following installation requirements and limitations are not enforced. USA Foundation Flood Air Vents and Conn Engineering Consultants, Inc. do not recommend or authorize any modifications to the flood vents and will not be held liable for improper installation or modification of the flood vents

FEMA/ NFIP Limitations and Installation Requirements:

1.

The Limitations and installation requirements:
A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
The bottom of all openings shall be no higher than one foot above grade that is immediately under each opening.
Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
It is recommended that openings be reasonably distributed around the perimeter of the enclosed area unless there is clear justification for putting all openings on just one or two sides (such as in townhouses or buildings set line stoping sites). 3. 4.

5 Where analysis indicates rates of rise and fall greater than 5 feet per hour, the total enclosed area shall be reduced accordingly.

|                                   | Design Professional  | Professional Enginee ring Seal |
|-----------------------------------|--|--------------------------------|
| Name / Title:                     | Jason M. Conn, P.E. President, Conn Engineering Consultants, Inc.                |                                |
| Address:                          | 107 N. Bridge St., Linden, MI 48451  |                                |
| License Type:                     | Professional Engineer  |                                |
| State:                            | New Jersey   | NOF NEW A                      |
| License Number:                   | 24G E0457 3000   | NO MARCE                       |
|                                   | Installation Address   | I ESTATIVE                     |
| Customer and Insi                 | tallation Address:   | E No. E                        |
| 109 Hilcrest Aven                 | ue   | Ξ 73 :24GE04573000: 8 Ξ        |
| Neptune, NJ 0775                  | 3  |                                |
|                                   |  | CONAL ET ALL                   |
|                                   | Model Installed  | - Commun                       |
| Model Number:<br>Maximum total en | RFSS<br>closed area that can be served for EACH individual vent: 232 Square Feet |                                |

Certification Date: 3/2/2017

ant sidest states the second and U.S. DEPARTMENT OF HOMELAND SECURITY Federal Emergency Management Agency National Flood Insurance Program

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C ;

OMB No. 1660-0008 Expiration Date: November 30, 2018

## **ELEVATION CERTIFICATE**

Important: Follow the Instructions on pages 1-9.

|  | SECTION A – PROPERT  | Y INFORMATION  | F                              | OR INSURANCE COMPA   |             |
|--|--|--|--------------------------------|--|-------------|
| A1, Building Owner's Na  | ame  |  |                                | olicy Number:  |             |
| Ronald and Linda Roma  | i)   |  |                                |  |             |
| A2. Building Street Addr<br>Box No.<br>500 South Riverside Driv  | ess (including Apt., Unit, Su<br>/e  | ite, and/or Bldg. No.) or P.(  | 0, Route and C                 | ompany NAIC Number:  |             |
| City   |  | State  | <u>_</u>                       | IP Code  | ****        |
| Neptune  |  | New Jersey   | Ó                              | 7753   |             |
| A3. Property Description<br>Tax Lot 7 Block 5213, N  | i (Lot and Block Numbers, 7<br>eptune Township, Monmout  | ax Parcel Number, Legal D<br>h County, New Jersey                          | Description, etc.)             | ,  |             |
| A4. Building Use (e.g., f  | Residential, Non-Residential   | Addition, Accessory, etc.)   | Residential                    |  |             |
| A6. Latitude/Longitude:  | Lat. 40-11'-18.5"  | Long. 74-02'-62.7"   | Horizontal Datum:              | NAD 1927 🕅 NAD -   | 983         |
| A6 Attach at least 2 pb  | ptographs of the huilding if the   | ne Certificate is being used   | —<br>I to obtain flood insuran |  |             |
| w, militar Manager Phil  |  | in colorate in collid and  |                                | alar S   |             |
|  |  |  |                                |  |             |
| A8. For a building with a  | crawispace or enclosure(s)   |  |                                |  |             |
| a) Square footage  | of crewispace or enclosure(s   | s) <u>1,920</u> sq ft  |                                |  |             |
| b) Number of perma   | anent flood openings in the  | crawlspace or enclosure(s)   | within 1.0 foot above a        | djacent grade 11   |             |
| c) Total net area of   | flood openings in A8.b 2   | 2,200 sq in  |                                |  |             |
| d) Engineered flood  | openings? 🕅 ves 🗔  | No   |                                | 5  |             |
|  |  | ·  | •                              | ^  |             |
| A9. For a building with a  | n attached garage:   |  |                                |  |             |
| a) Square footage (  | of attached garage 50  | )6sq ft  |                                |  |             |
| b) Number of perma   | anent fibod openings in the r  | attached garage within 1.0   | foot above adjacent gra        | ade 3  |             |
| a). Total pat area of  | food openings in AO h  | 600 en in  | . –                            | ՙՠՠՠՠՠ֎֍֎ՠ֎֎ՠ֎֎ՠ֎֎ՠ֎֎ՠ֎֎ՠ֎֎ՠ֎֎ՠ֎֎ՠ֎֎ՠ֎֎ՠ֎                    |             |
| c) Total net alca of   |  | ooo sgan   |                                |  |             |
| d) Engineered flood  | openings? 🛛 Yes 🗌  | No   |                                |  |             |
|  | SECTION B - FLOOD  | INSURANCE RATE MA  | P (FIRM) INFORMAT              | ION  |             |
| B1. NFIP Community Na  | me & Community Number  | B2. County Nan   | ĥê                             | B3. State  | *********** |
| Neptune Township - 340   | 317  | Monmouth   |                                | New Jersey   | ****        |
|  | *****  | P7 FIDM Danal  | BR Eland Zanale)               | B9. Base Flood Elevation                                     |             |
| 4. Map/Panel B5.<br>Number   | Suffix B6. FIRM Index<br>Date  | Effective/<br>Rovised Date   |                                | (Zone AO, use Base<br>Finad Depth)                           | m(s)        |
| 4. Map/Panel B5.<br>Number 4025C0333 F   | Suffix B6. FIRM Index<br>Date<br>09/25/2009  | Effective/<br>Revised Date<br>09/25/2009                                   | AE                             | (Zone AO, use Base<br>Flood Depth)<br>9                      | m(s)        |
| <ul> <li>4. Map/Panel Number</li> <li>4025C0333</li> <li>B10. Indicate the source □ FIS Profile ∑</li> <li>B11. Indicate elevation of 100 million</li> </ul> | Suffix B6. FIRM Index<br>Date<br>09/25/2009<br>Fof the Base Flood Elevation<br>FIRM Community Date<br>fatum used for BFE in Item | n (BFE) data or base flood<br>ermined C Other/Source:<br>B9: NGVD 1929 X I | AE<br>depth entered in Item I  | (Zone AO, use Base<br>Flood Depth)<br>9<br>39:<br>er/Source: |             |

FEMA Form 086-0-33 (7/15)

| IMPORTANT: In these spaces, copy th  | e corresponding information from 5  | Section A  |   |
|--|---|--|---|
| Building Street Address (including Apt.,   | Unit, Suite, and/or Bldg. No.) or P.O. F  | Route and Box No.  | Policy Number:  |
| 500 South Riverside Drive  |   |  |   |
| City<br>Neptune  | State Z<br>New Jersev 0   | IP Code<br>7753  | Company NAIC Number   |
| SECTION C  |   | ATION (CURVEY D  |   |
| C1. Building clouptions are based and  |   | Allon (SURVET R  |   |
| *A new Elevation Certificate will be   | required when construction of the but   | iuliaing Under Constri<br>Idiaa is complete  | iction [X] Finished Constr  |
| C2. Elevations – Zones A1–A30, AE, A<br>Complete Items C2.a–h below acc<br>Benchmark Utilized: GPS-SMART                         | AH, A (with BFE), VE, V1–V30, V (with<br>cording to the building diagram specific<br>NET Vertical Datu                        | BFE), AR, AR/A, AR<br>d in Item A7. in Pueri<br>m: NAVD 1988   | /AE, AR/A1A30, AR/AH, AR<br>to Rico only, enter meters.   |
| Indicate elevation datum used for  | he elevations in items a) through h) be   | elow.  |   |
| 🗌 NGVD 1929 🔀 NAVD   | 1988 Other/Source:  |  | 1   |
| Datum used for building elevations   | must be the same as that used for the   | e BFE.   | Check the measuremen  |
| a) Top of bottom floor (including b  | asement, crawispace, or enclosure flo   | or) 8,6  |   |
| b) Top of the next higher floor  |   | 13 7   | IX feet □ mete  |
| c) Bottom of the lowest horizontal   | structural member (V Zones only)  | N/A  | ∑ feet ∏rhete   |
| d) Attached garage (top of slab)   | · · · · · · · · · · · · · · · · · · ·   | 10,1   | X feet 	_ mete  |
| <ul> <li>e) Lowest elevation of machinery<br/>(Describe type of equipment ar</li> </ul>  | or equipment servicing the building<br>d location in Comments)  | <u> </u>   | X feet mete   |
| f) Lowest adjacent (finished) grad   | le next to building (LAG)   | <u> </u>   | X feet 🗌 mete   |
| g) Highest adjacent (finished) grad  | de next to building (HAG)   | 9.9  | 🔀 feet 🔲 mete   |
| h) Lowest adjacent grade at lowes  | at elevation of deck or stairs, including   | <u> </u>   | X feet mete   |
| SECTION  | - SURVEYOR ENGINEER OR A  |  | ,<br>(CATION) *   |
| This certification is to be signed and se  | aled by a land surveyor engineer or a   | rchitect authorized by   | law to cortify elevation infor  |
| l certify that the information on this Cert<br>statement may be punishable by fine of  | lificaté represents my best efforts to in<br>imprisonment under 18 U.S. Code, S   | terpret the data availant of the | ble. I understand that any fa   |
| Were latitude and longitude in Section /   | A provided by a licensed land surveyor  | ? ⊠Yes □No   | Check here if attach  |
| Certifier's Name   | License Number  | · · · · · · · · · · · · · · · · · · ·  |   |
| John P. Augustine  | PLS 34838   |  |   |
| Land Surveyor  |   |  |   |
| Company Name   |   |  | - Place   |
| Gravatt Consulting Group, Inc. (Project  | No. 9936)   |  | Seal  |
| Address  |   |  |   |
| 414 Lacey Road   | <u></u>   | 710 0 1  | - the still   |
| Forked River   | New Jersey  | 08731  |   |
| Signature Ahn P. Argute  | Date 08/14/2017   | Telephone<br>(609) 693-6126  |   |
| Copy all pages of this Elevation Gertificat  | e and all attachments for (1) community   | official, (2) insurance  | agent/company, and (3) buildi   |
| Comments (including type of equipment  | t and location, per C2(e), if applicable)   | , - (a+3 <sup>1</sup> a, y), <sup>2</sup> (x+a),a  |   |
| This certificate certified to the owners in<br>& 11, per preliminary map 34029C0333<br>FEMA. Utilities: A/C unit el.=13.7, Furna | line A1 only and is non-transferrable.<br>G, published 1/30/15 by ; this is for inf<br>ace el.≈16.6, W.Heater el.=17.6, E. Me | Property is located in<br>ormational purposes on<br>ter el.=14.5. All flood  | preliminary flood zone AE, e<br>only & subject to verification I<br>vents are Smartvent Model N |
| 1540-520.  |   |  |   |

FEMA Form 086-0-33 (7/16)

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Replaces all previous editions.

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| -  | LEVATION CERTIFICATE   |   |   | OMB No. 1660-0008<br>Expiration Date: November 30, 2018  |
|----|--|---|---|--|
| ĺ  | IMPORTANT: In these spaces, copy the co  | prresponding information f  | from Section A.   | FOR INSURANCE COMPANY USE  |
| 2  | Building Street Address (including Apt., Unit, 500 South Riverside Drive   | Suite, and/or Bidg. No.) or I   | P.O. Route and Box No.  | Policy Number:   |
|    | City<br>Neptune  | State<br>New Jersey   | ZIP Code<br>07753   | Company NAIC Number  |
| ŀ  | SECTION E - BUIL   | DING ELEVATION INFO   |   | OT REQUIRED)   |
|    | For Zones AO and A (without BFE), complete<br>complete Sections A, B,and C. For Items E1-<br>enter meters.   | e Items E1-E5. If the Certific<br>-E4, use natural grade, if av   | cate is intended to support   | rt a LOMA or LOMR-F request,<br>urement used, In Puerto Rico only,   |
|    | <ul> <li>E1. Provide elevation information for the following the highest adjacent grade (HAG) and the a) Top of bottom floor (including basem</li> </ul>   | owing and check the approp<br>he lowest adjacent grade (L/<br>ient,   | riate boxes to show when<br>AG).  | ther the elevation is above or below   |
|    | crawispace, or enclosure) is<br>b) Top of bottom floor (including basem<br>crawispace, or enclosure) is  | ent,  | feet [] me  | eters above or below the HAG.  |
|    | E2. For Building Diagrams 6-9 with perman  | ent flood openings provided   | in Section A Items 8 and  | /or 9 (see pages 1–2 of Instructions),   |
|    | the diagrams) of the building is   |   | feet [] me  | ters above or below the HAG.   |
|    | <ul> <li>E4. Top of platform of machinery and/or equiproviding the huilding is</li> </ul>  | lípment   |   |  |
|    | 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  |
|    |  |   |   | st centry this monnation in Section 6.   |
| r  | SECTION F DRODE  | EDTY AMAINED AND AMAINED  | S DEDDESENTATIVE  | CERTIEICATION  |
| _  | SECTION F - PROPE  | ERTY OWNER (OR OWNER  | Sections A. B. and E for  | CERTIFICATION<br>Zone A (without a FEMA-issued or  |
| -j | SECTION F – PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig  | ERTY OWNER (OR OWNER<br>presentative who completes<br>gn here. The statements in S                                | <b>X'S REPRESENTATIVE)</b><br>Sections A, B, and E for<br>Sections A, B, and E are  | CERTIFICATION<br>Zone A (without a FEMA-issued or<br>correct to the best of my knowledge.  |
| -  | SECTION F – PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig<br>Property Owner or Owner's Authorized Represent                                  | ERTY OWNER (OR OWNER<br>presentative who completes<br>gn here. The statements in S<br>esentative's Name           | <b>R'S REPRESENTATIVE)</b><br>Sections A, B, and E for<br>Sections A, B, and E are o  | CERTIFICATION<br>Zone A (without a FEMA-issued or<br>correct to the best of my knowledge.  |
|    | SECTION F – PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig<br>Property Owner or Owner's Authorized Repro<br>Address                           | ERTY OWNER (OR OWNER<br>presentative who completes<br>gn here. The statements in S<br>esentative's Name<br>C      | R'S REPRESENTATIVE)<br>Sections A, B, and E for<br>Sections A, B, and E are of  | CERTIFICATION<br>Zone A (without a FEMA-issued or<br>correct to the best of my knowledge.  |
|    | SECTION F – PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig<br>Property Owner or Owner's Authorized Repro<br>Address<br>Signature              | ERTY OWNER (OR OWNER<br>presentative who completes<br>gn here. The statements in S<br>esentative's Name<br>C      | R'S REPRESENTATIVE)<br>Sections A, B, and E for<br>Sections A, B, and E are of<br>Sections A, B, and E are of<br>Sections A, B, and E are of the section | CERTIFICATION         Zone A (without a FEMA-issued or correct to the best of my knowledge.         State         ZIP Code         Telephone |
|    | SECTION F – PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig<br>Property Owner or Owner's Authorized Repro<br>Address<br>Signature<br>Comments  | ERTY OWNER (OR OWNER<br>presentative who completes<br>gn here. The statements in S<br>esentative's Name<br>C      | R'S REPRESENTATIVE)<br>Sections A, B, and E for<br>Sections A, B, and E are of<br>Sections A, B, and E are of<br>Sections A, B, and E are of the section | CERTIFICATION         Zone A (without a FEMA-issued or correct to the best of my knowledge.         State         ZIP Code         Telephone |
|    | SECTION F – PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig<br>Property Owner or Owner's Authorized Repro<br>Address<br>Signature<br>Comments  | ERTY OWNER (OR OWNER<br>presentative who completes<br>gn here. The statements in S<br>esentative's Name<br>C      | R'S REPRESENTATIVE)<br>Sections A, B, and E for<br>Sections A, B, and E are of<br>Sections A, B, and E are of<br>Sections A, B, and E are of the section | CERTIFICATION         Zone A (without a FEMA-issued or correct to the best of my knowledge.         State         ZIP Code         Telephone |
|    | SECTION F – PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig<br>Property Owner or Owner's Authorized Repro<br>Address<br>Signature<br>Comments  | ERTY OWNER (OR OWNER<br>presentative who completes<br>gn here. The statements in S<br>esentative's Name<br>C<br>D | R'S REPRESENTATIVE)<br>Sections A, B, and E for<br>Sections A, B, and E are of<br>Sections A, B, and E are of<br>Sections A, B, and E are of the section | CERTIFICATION         Zone A (without a FEMA-issued or correct to the best of my knowledge.         State         ZIP Code         Telephone |
|    | SECTION F – PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig<br>Property Owner or Owner's Authorized Repro<br>Address<br>Signature<br>Comments  | ERTY OWNER (OR OWNER<br>presentative who completes<br>on here. The statements in S<br>esentative's Name<br>C<br>D | R'S REPRESENTATIVE)<br>Sections A, B, and E for<br>Sections A, B, and E are of<br>Sections A, B, and E are of<br>Sections A, B, and E are of the section | CERTIFICATION         Zone A (without a FEMA-issued or correct to the best of my knowledge.         State       ZIP Code         Telephone   |
|    | SECTION F – PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig<br>Property Owner or Owner's Authorized Repro<br>Address<br>Signature<br>Comments  | ERTY OWNER (OR OWNER<br>presentative who completes<br>gn here. The statements in S<br>esentative's Name<br>C<br>D | R'S REPRESENTATIVE)<br>Sections A, B, and E for<br>Sections A, B, and E are of<br>Sections A, B, and E are of<br>Sections A, B, and E are of the section | CERTIFICATION         Zone A (without a FEMA-issued or correct to the best of my knowledge.         State       ZIP Code         Telephone   |
|    | SECTION F - PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig<br>Property Owner or Owner's Authorized Repro-<br>Address<br>Signature<br>Comments | ERTY OWNER (OR OWNER<br>presentative who completes<br>on here. The statements in S<br>esentative's Name<br>C      | R'S REPRESENTATIVE)<br>Sections A, B, and E for<br>Sections A, B, and E are of<br>Sections A, B, and E are of<br>Sections A, B, and E are of the section | CERTIFICATION         Zone A (without a FEMA-issued or correct to the best of my knowledge.         State       ZIP Code         Telephone   |
|    | SECTION F - PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig<br>Property Owner or Owner's Authorized Repro-<br>Address<br>Signature<br>Comments | ERTY OWNER (OR OWNER<br>presentative who completes<br>on here. The statements in S<br>esentative's Name<br>C<br>D | R'S REPRESENTATIVE)<br>Sections A, B, and E for<br>Sections A, B, and E are of<br>Sections A, B, and E are of<br>Sections A, B, and E are of the section | CERTIFICATION         Zone A (without a FEMA-issued or correct to the best of my knowledge.         State       ZIP Code         Telephone   |
|    | SECTION F - PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig<br>Property Owner or Owner's Authorized Repro-<br>Address<br>Signature<br>Comments | ERTY OWNER (OR OWNER<br>presentative who completes<br>on here. The statements in S<br>esentative's Name<br>C<br>D | R'S REPRESENTATIVE)<br>Sections A, B, and E for<br>Sections A, B, and E are of<br>the sections A, B, and E are of the section of the se   | CERTIFICATION         Zone A (without a FEMA-issued or correct to the best of my knowledge.         State       ZIP Code         Telephone   |
|    | SECTION F - PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig<br>Property Owner or Owner's Authorized Repro-<br>Address<br>Signature<br>Comments | ERTY OWNER (OR OWNER<br>presentative who completes<br>on here. The statements in S<br>esentative's Name<br>C<br>D | R'S REPRESENTATIVE)<br>Sections A, B, and E for<br>Sections A, B, and E are of<br>the sections A, B, and E are of the section of the se   | CERTIFICATION         Zone A (without a FEMA-issued or correct to the best of my knowledge.         State       ZIP Code         Telephone   |
|    | SECTION F - PROPE<br>The property owner or owner's authorized re<br>community-issued BFE) or Zone AO must sig<br>Property Owner or Owner's Authorized Repro-<br>Address<br>Signature<br>Comments | ERTY OWNER (OR OWNER<br>presentative who completes<br>on here. The statements in S<br>esentative's Name<br>C<br>D | R'S REPRESENTATIVE)<br>Sections A, B, and E for<br>Sections A, B, and E are d   | CERTIFICATION         Zone A (without a FEMA-issued or correct to the best of my knowledge.         State       ZIP Code         Telephone   |

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Form Page 3 of 6

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|  |   |   | Expiration Date: November 50, 2  |
|--|---|---|--|
| IMPORTANT: In these spaces, copy the   | corresponding information f   | rom Section A.  | FOR INSURANCE COMPANY  |
| 500 South Riverside Drive  | it, Suite, and/or Bidg. No.) of F   | Y.O. Route and Box No.                                |  |
| City   | State   | ZIP Code  | Company NAIC Number  |
|  |   | UTTOS   | 1  |
| <u> </u>   | CTION G - COMMUNITY INF   | JRWATION (OPTIONA                                     | L)   |
| The local official who is authorized by law<br>Sections A, B, C (or E), and G of this Elev-<br>used in Items G8–G10. In Puerto Rico only | or ordinance to administer the<br>ation Certificate. Complete the<br>y, enter meters. | community's floodplain<br>applicable item(s) and s    | management ordinance can complet<br>sign below. Check the measurement          |
| G1. The information in Section C was<br>engineer, or architect who is auti<br>data in the Comments area belo                             | s taken from other documentat<br>norized by law to certify elevati<br>w.)             | ion that has been signed<br>on information. (Indicate | d and sealed by a licensed surveyor,<br>e the source and date of the elevation |
| G2. A community official completed or Zone AO,   | Section E for a building located  | l in Zone A (without a Fl                             | EMA-issued or community-issued BF  |
| G3. The following information (Items   | G4-G10) is provided for comr  | nunity floodplain manag                               | ement purposes.  |
| G4. Permit Number  | G5. Date Permit Issued  | G   | 5. Date Certificate of<br>Compliance/Occupancy [ssued                          |
| G7、This permit has been issued for:  | New Construction  | ubstantial improvement                                | ·····  |
| G8. Elevation of as-built lowest floor (incl<br>of the building:   | uding basement)   | f   | eet 🔲 meters Datum   |
| G9. BFE or (in Zone AO) depth of floodin   | g at the building site:   |   | eet Datum  |
| G10. Community's design flood elevation:   |   | [] f  | eet 🔲 meters Datum   |
| Local Official's Name  | ·   | îtle  |  |
| Community Name   | 1   | elephone  |  |
| Signature  | E   | Date  |  |
|  | discelles and Orles (Ferrie   |   | •  |
| Comments (including type of equipment ar   | to tocation, per Cz(e), ir applica  | able)   |  |
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ICC-ES Report

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# ESR-2074

Reissued 02/2015 This report is subject to renewal 02/2017.

## DIVISION: 08 00 00—OPENINGS SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS

**REPORT HOLDER:** 

## **SMARTVENT PRODUCTS, INC.**

430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071

## **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



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Reissued February 2015

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A Subsidiary of the International Code Council®

This report is subject to renewal February 2017.

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

REPORT HOLDER:

SMARTVENT PRODUCTS, INC. 430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071 (877) 441-8368 www.smartvent.com info@smartvent.com

## **EVALUATION SUBJECT:**

SMART VENT<sup>®</sup> AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

## **1.0 EVALUATION SCOPE**

Compliance with the following codes:

- 2012, 2009 and 2006 International Building Code<sup>®</sup> (IBC)
- 2012, 2009 and 2006 International Residential Code<sup>®</sup> (IRC)
- 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT<sup>®</sup>Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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 2.6.2.2 of ASCE/SEI 24 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<sup>®</sup> Model #1540-510 and SmartVENT<sup>®</sup> Overhead Door Model #1540-514 both have screen covers with  $^{1}$ /<sub>4</sub>-inch-by- $^{1}$ /<sub>4</sub>-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<sup>®</sup> 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 recognized in this report do not offer natural ventilation.

### 4.0 DESIGN AND INSTALLATION

SmartVENT<sup>®</sup> and FloodVENT<sup>®</sup> 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. The mounting straps allow mounting in masonry and concrete walls up to 12 inches (305 mm) thick. In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the Smart Vent<sup>®</sup> 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<sup>●</sup> Stacking Model #1540-511 and FloodVENT<sup>●</sup> 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

\*Revised July 2015

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grade or floor and finished exterior grade immediately under each opening.

## 5.0 CONDITIONS OF USE

The Smart Vent<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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

Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated October 2013 (editorially revised May 2014).

## 7.0 IDENTIFICATION

The Smart VENT<sup>®</sup> models recognized 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).

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

TABLE 1-MODEL SIZES

For SI: 1 inch = 25.4 mm; 1 square foot =  $m^2$ 

MAY 2 4 2017

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

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OMB No. 1660-0008 Expiration Date: November 30, 2018

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## **ELEVATION CERTIFICATE** Important: Follow the instructions on pages 1-9.

| A1 Brilding Ouno  | 96611   | ON A - PROPERTY   | INFORMATION   |   | FC  | RINSUR   | ANCE COMPANY US   |
|---|---|---|---|---|---|--|---|
| JOHN AND MELAN  | r's Name<br>↓IE MATHEW:   | S   |   |   | Po  | licy Numb  | er:<br>,  |
| A2. Building Street<br>Box No.<br>119 FAIRVIEW PL/  | Address (incl<br>ACE  | Jding Apt., Unit, Suite   | , and/or Bldg. No   | .) or P.O. Route and  | d Co  | mpany N/   | AIC Number:   |
| City<br>NEPTUNE TO  | NNSHIP  |   | State<br>New  | Jersey  | ZII<br>07   | <sup>o</sup> Code<br>753                                 | Романи, айталдайн армана, Майтайдаруу улуу тоосоо   |
| A3. Property Desc<br>LOT 16, BLOCK 5  | ription (Lot and<br>306   | I Block Numbers, Tax  | Parcel Number,  | Legal Description, e  | etc.) '   | 499-97- <sub>7</sub>                                     | <b>M. M. Market</b> (Antonia de Antonia de Contra de La Contra de La Contra de La Contra de La Contra de Co |
| A4, Building Use (  | a.g., Residenti   | al, Non-Residential, A  | ddition, Accesso  | ry, etc.) RESIDE  | NTIAL   |  |   |
| A5. Latitude/Longi  | ude: Lat. 40.   | 193778 DEG.   | Long74.041194   | DEG. Horizont   | tal Datum: [  | NAD 1  | 927 🖾 NAD 1983  |
| A8. Attach at least   | 2 photograph  | s of the building if the  | Certificate is bein   | ig used to obtain flo   | od insurano   | <del>9</del> .   | Ş   |
| A7. Building Diagra   | m Number  | 8   |   |   |   |  |   |
| A8. For a building  | with a crawlsp  | ace or enclosure(s):  |   |   |   |  |   |
| a) Square fool  | age of crawls   | bace or enclosure(s)  | 1,714   | sq ft   |   |  |   |
| b) Number of  | permanent floo  | d openings in the cra   | wispace or enclo  | sure(s) within 1.0 fo   | ot above ad   | jacent gra   | de <u>9</u>   |
|   | ea of flood ope   | mings in A8.b,8   | 00sq.in   | ····-   |   |  |   |
| d) Engineered   | flood opening   | s? 🛛 Yes 🗌 No   | 0   |   | đ   | <b>\$</b> -  |   |
| A9, For a building  | vith an attache   | id garage:  |   |   |   |  |   |
| a) Square fool  | age of attache  | d garage 0  | sq ft   |   |   |  |   |
| b) Number of  | permanent floo  | od openings in the att  | ached garage wit  | nin 1.0 foot above a  | idjacent grad   | ie   | 0   |
| c) Total net an   | ea of flood ope   | inings in A9.b  | 0 sq in   |   |   |  |   |
| d) Engineered   | flood opening   | a? 🗌 Yes 🔀 N  | 0   |   |   |  |   |
|   |   |   | IGHDANCE DA   | TE MAP (FIRM) IN  | FORMATIC  | DN   | timi nyyteessa waxay maayaa ahaa ahaa miiddaa baraf<br>T  |
| -   | SEC   | TION B - FLOOD IN   | ASOUMNOE UM   | and the second se | Contraction of the second second second                         |  | ·   |
| B1. NFIP Commun<br>NEPTUNE TOWNS  | SEC<br>ity Name & Co<br>SHIP  | TION B – FLOOD II<br>mmunity Number<br>340317   | B2. Cou   | nty Name<br>MONMOUTH  | <u> </u>  |  | B3. State<br>New Jersey   |
| B1. NFIP Commun<br>NEPTUNE TOWNS<br>34. Map/Panel<br>Number   | SEC<br>ity Name & Co<br>SHIP<br>B5. Suffix  | CTION B – FLOOD II<br>mmunity Number<br>340317<br>B6. FIRM Index<br>Date  | B7, FIRM Pane<br>Effective/<br>Revised Da   | nty Name<br>MONMOUTH<br>I B8, Floor   | d Zone(s)   | B9. Base<br>(Zon<br>Floo                                 | B3. State<br>New Jersey<br>e Flood Elevation(s)<br>e AO, use Base<br>d Depth)<br>o c EET  |
| B1. NFIP Commun<br>NEPTUNE TOWNS<br>34. Map/Panel<br>Number<br>14025C0333   | SEC<br>Ity Name & Co<br>SHIP<br>B5. Suffix  | CTION B – FLOOD II<br>mmunity Number<br>340317<br>B6. FIRM Index<br>Date<br>09/25/2009  | B7, FIRM Pane<br>Effective/<br>Revised Da<br>09/25/2009   | nty Name<br>MONMOUTH<br>I B8, Floor<br>te Al  | d Zone(s)<br>E  | B9. Base<br>(Zon<br>Floo                                 | B3. State<br>New Jersey<br>e Flood Elevation(s)<br>e AO, use Base<br>d Depth)<br>9 FEET   |
| B1. NFIP Commun<br>NEPTUNE TOWNS<br>34. Map/Panel<br>Number<br>14025C0333<br>B10. Indicate the s<br>□ FIS Profile   | SEC<br>Ity Name & Co<br>BHIP<br>B5. Suffix<br>F<br>F<br>ource of the B<br>a X FIRM                                  | CTION B – FLOOD II<br>ommunity Number<br>340317<br>B6. FIRM Index<br>Date<br>09/25/2009<br>ase Flood Elevation (<br>] Community Determ  | B7, FIRM Pane<br>Effective/<br>Revised Da<br>09/25/2009<br>BFE) data or bas   | nty Name<br>MONMOUTH<br>I B8, Floor<br>te Al<br>e flood depth entere<br>Source:   | d Zone(s)<br>E<br>ed in Item Bl                                 | B9. Bas<br>(Zon<br>Floo                                  | B3. State<br>New Jersey<br>e Flood Elevation(s)<br>e AO, use Base<br>d Depth)<br>9 FEET   |
| B1. NFIP Commun<br>NEPTUNE TOWNS<br>34. Map/Panel<br>Number<br>34025C0333<br>B10. Indicate the s<br>☐ FIS Profile<br>B11. Indicate eleve  | SEC<br>ity Name & Co<br>SHIP<br>B5. Suffix<br>F<br>ource of the B<br>ixi FIRM [<br>ation datum us                   | CTION B – FLOOD II<br>ommunity Number<br>340317<br>B6. FIRM Index<br>Date<br>09/25/2009<br>ase Flood Elevation (<br>] Community Determ<br>ed for BFE in Item B9                           | B7. FIRM Pane<br>Effective/<br>Revised Da<br>09/25/2009<br>BFE) data or bas<br>nined  | nty Name<br>MONMOUTH<br>I B8, Floor<br>te Al<br>e flood depth entere<br>Source:   | d Zone(s)<br>E<br>ed in item Bi                                 | B9. Bas<br>(Zon<br>Floo                                  | B3. State<br>New Jersey<br>e Flood Elevation(s)<br>e A0, use Base<br>d Depth)<br>9 FEET   |
| B1. NFIP Commun<br>NEPTUNE TOWNS<br>34. Map/Panel<br>Number<br>34025C0333<br>B10. Indicate the s<br>E10. Indicate the s<br>FIS Profile<br>B11. Indicate eleve<br>B12. Is the building | SEC<br>ity Name & Co<br>SHIP<br>B5. Suffix<br>F<br>ource of the B<br>X FIRM [<br>ation datum us<br>g located in a b | CTION B – FLOOD II<br>ommunity Number<br>340317<br>B6. FIRM Index<br>Date<br>09/25/2009<br>ase Flood Elevation (<br>] Community Determ<br>led for BFE in Item B9<br>Coastal Barrier Resou | B7. FIRM Pane<br>Effective/<br>Revised De<br>09/25/2009<br>BFE) data or bas<br>nined Other/<br>Comparison Other/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter/<br>Deter | nty Name<br>MONMOUTH<br>I B8, Floor<br>te Ai<br>e flood depth entere<br>Source:<br>2 [X] NAVD 1988<br>RS) area or Otherw  | d Zone(s)<br>E<br>ed in Item Bi                                 | B9. Base<br>(Zon<br>Floo<br>):<br>/Source:<br>ed Area (C | B3. State<br>New Jersey<br>e Flood Elevation(s)<br>e AO, use Base<br>d Depth)<br>9 FEET   |
| B1. NFIP Commun<br>NEPTUNE TOWNS<br>I4. Map/Panel<br>Number<br>4025C0333<br>B10. Indicate the s<br>☐ FIS Profile<br>B11. Indicate eleve<br>B12. Is the building<br>Designation I      | SEC   | CTION B – FLOOD II<br>ommunity Number<br>340317<br>B6. FIRM Index<br>Date<br>09/25/2009<br>ase Flood Elevation (<br>] Community Determ<br>led for BFE in Item B9<br>Coastal Barrier Resou | B7, FIRM Pane<br>Effective/<br>Revised Da<br>09/25/2009<br>BFE) data or bas<br>nined Other/<br>a; NGVD 192<br>urces System (CE<br>CBRS OPA  | nty Name<br>MONMOUTH<br>I B8, Floor<br>te Al<br>e flood depth entere<br>Source:<br>2 [X] NAVD 1988<br>RS) area or Otherw  | d Zone(s)<br>E<br>ed in Item Bl<br>Other<br>vise Protecte<br>E. | B9. Bas<br>(Zon<br>Floo                                  | B3. State<br>New Jersey<br>e Flood Elevation(s)<br>e AO, use Base<br>d Depth)<br>9 FEET   |

| ION CERTIFICATE  |  |  | OMB No. 1660-0008<br>Expiration Date: November 30, 201                       |
|--|--|--|--|
| ANT: In these spaces, copy the co  | prresponding information from Sec  | tion A.  | FOR INSURANCE COMPANY US   |
| ing Street Address (including Apt., Unit,<br>a FAIRVIEW PLACE  | Suite, and/or Bldg. No.) or P.O. Rout  | e and Box No.  | Policy Number:   |
| ity<br>IEPTUNE TOWNSHIP  | State ZIP (<br>New Jersey 0775   | Code<br>i3   | Company NAIC Number  |
| SECTION C - B  | UILDING ELEVATION INFORMAT   | ION (SURVEY RI   | EQUIRED)   |
| <ul> <li>C1. Building elevations are based on: [<br/>*A new Elevation Certificate will be rec</li> <li>C2. Elevations – Zones A1–A30, AE, AH,<br/>Complete Items C2.a–h below accord<br/>Benchmark Utilized: GPS SMARTN</li> </ul> | Construction Drawings* Dulk<br>uired when construction of the buildir<br>A (with BFE), VE, V1–V30, V (with BF<br>ng to the building diagram specified in<br>ET Vertical Datum: | ling Under Construing is complete.<br>FE), AR, AR/A, AR/<br>n item A7. in Puert<br>NAVD'88 | AE, AR/A1-A30, AR/AH, AR/AO.<br>No Rico only, enter meters.                  |
| Indicate elevation datum used for the e  | elevations in items a) through h) below 8 	[ Other/Source:   | v.   | :<br>;<br>;  |
| Datum used for building elevations mu  | ist be the same as that used for the B   | FE.  | Check the measurement used   |
| a) Top of bottom floor (including base   | ment, crawlspace, or enclosure floor)  | <u> </u>   | X feet T meters  |
| b) Top of the next higher floor  |  | <u>    14  10  </u>  | X feet meters  |
| c) Bottom of the lowest horizontal stru  | ictural member (V Zones only)  | <u>N/A</u>   |  |
| d) Attached garage (top of slab)   | · · · · ·  | <u>N/A</u> ,   | X feet I meters  |
| e) Lowest elevation of machinery or e<br>(Describe type of equipment and lo  | quipment servicing the building cation in Comments)  | 12, 93   | X feet 📋 meters  |
| f) Lowest adjacent (finished) grade n  | ext to building (LAG)  | <u> </u>   | X feet [] meters   |
| g) Highest adjacent (finished) grade r   | ext to building (HAG)  | 8, 25  | X feet meters  |
| <ul> <li>h) Lowest adjacent grade at lowest el<br/>structural support</li> </ul>   | evation of deck or stairs, including   | <u> </u>   | X feet T meters  |
| SECTION D-   | SURVEYOR, ENGINEER, OR ARC   | HITECT CERTIF  |  |
| This certification is to be signed and sealed<br>I certify that the information on this Certific<br>statement may be punishable by fine or im  | t by a land surveyor, engineer, or arc<br>ate represents my best efforts to inter<br>prisonment under 18 U.S. Code, Seci   | nitect authorized by<br>pret the data availation 1001.                                     | y law to certify elevation information.<br>able. I understand that any false |
| Were latitude and longitude in Section A pr  | ovided by a licensed land surveyor?  | ⊠Yes □No   | Check here if attachments.   |
| Certifier's Name<br>WILLIAM E. McGRATH   | License Number<br>GS24194  |  |  |
| Title<br>PRESIDENT   |  |  | Place  |
| Company Name<br>McGRATH SURVEYING & WATERFRON<br>Address   | T CONSULTING, LLC  |  | Marseal Mintee   |
| 321 MANTOLOKING ROAD, SUITE 2B   |  |  |  |
| City<br>BRICK  | State<br>New Jersey  | ZIP Code<br>08723  |  |
| Signature  | Date<br>05/10/2017   | Telephone<br>(848) 232-3820  |  |
| Copy all pages of this Elevation Certificate and   | nd all attachments for (1) community of  | ticial, (2) insurance  | agent/company, and (3) building own  |
| Comments (including type of equipment an<br>LOWEST EQUIPMENT SERVICING THE I<br>BOTTOM OF ELEC. METER ELEVATION<br>PROPERTY IN FEMA "PRELIMINARY FLO<br>THERE ARE NINE (9) SMARTVENT MOD   | d location, per C2(e), if applicable)<br>BUILDING IS AN AIR COND. INIT ON<br>12.00.<br>OOD INSURANCE RATE MAP" (1/30<br>EL # 1540-510 INSTALLED IN THE F                       | N AN OUTSIDE PL<br>/2015) ZONE AE,<br>PERIMETER FOU!                                       | ATFORM ELEV. 12.93.<br>BASE FLOOD ELEV. 10 FT.<br>NDATION. ICC CERTIFICATION |

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| /ION CERTIFICATE  |  |   | •  | OMB No. 1660-0<br>Expiration Date:  | 008<br>November 30, 2                      |
|---|--|---|--|---|--|
| ANT: In these spaces, copy th   | e corresponding information  | from Section /  | λ. Π   | FORINSURAN  | CE COMPANY                                 |
| Jing Street Address (including Apt., 1<br>J FAIRVIEW PLACE  | Jnit, Suite, and/or Bldg. No.) or  | r P.O. Route and  | Box No,  | Policy Number:  |  |
| Ćity<br>NEPTUNE TOWNSHIP  | State<br>New Jersey  | ZIP Code<br>07753   |  | Company NAIC  | Number                                     |
| SECTION E - E   | UILDING ELEVATION INFO<br>FOR ZONE AO AND ZON  | DRMATION (SL<br>NE A (WITHOU  | IRVEY NOT I  | REQUIRED)   |  |
| For Zones AO and A (without BFE), com<br>complete Sections A, B,and C. For Items<br>enter meters.   | plete Items E1–E5. If the Certi<br>E1–E4, use natural grade, if a  | ficate is intendeo<br>available. Check                              | I to support a l<br>the measurem   | LOMA or LOMR-<br>tent used. In Pue  | F request,<br>erto Rico only,              |
| <ul> <li>E1. Provide elevation information for the the highest adjacent grade (HAG) at a) Top of bottom floor (including balance)</li> </ul>                                      | following and check the appro<br>nd the lowest adjacent grade (I<br>sement.  | priate boxes to<br>LAG).  | show whether   | the elevation is a  | above or below                             |
| crawlspace, or enclosure) is<br>b) Top of bottom floor (including ba  | sement,  | [] fe   | et 🗌 meters  | above or  | below the H                                |
| crawlspace, or enclosure) is  | nonont flood on original state   |   | et 🗌 meters  | above or  | below the L                                |
| the next higher floor (elevation C2.b<br>the diagrams) of the building is   | in<br>In   | a in Section A Ite  | ems 8 and/or 9   | (see pages 1–2  | of Instructions                            |
| E3. Attached garage (top of slab) is  |  | fe  | et 🔲 meters  | above or  | below the H.                               |
| E4. Top of platform of machinery and/or<br>servicing the building is  | equipment  | Te  | et 🗍 meters  | above or  | below the H                                |
| E5. Zone AO only: If no flood depth num floodplain management ordinance?  | ber is available, is the top of th   | ne bottom floor e<br>own. The local                                 | levated in according to the second se | ordance with the<br>ertify this informa                                     | community's                                |
|   |  |   |  |   |  |
| SECTION F - PR  | OPERTY OWNER (OR OWNE  | R'S REPRESE   | ITATIVE) CEI   | RTIFICATION   |  |
| SECTION F – PR<br>The property owner or owner's authorize<br>community-issued BFE) or Zone AO mus   | OPERTY OWNER (OR OWNE<br>d representative who complete<br>t sign here. The statements in                           | <b>R'S REPRESE</b><br>s Sections A, B,<br>Sections A, B, a          | ATATIVE) CEI<br>and E for Zon<br>nd E are corre  | RTIFICATION<br>e A (without a Fl<br>act to the best of                      | EMA-issued or<br>my knowledge.             |
| SECTION F – PR<br>The property owner or owner's authorized<br>community-issued BFE) or Zone AO mus<br>Property Owner or Owner's Authorized R                                      | OPERTY OWNER (OR OWNE<br>d representative who complete<br>t sign here. The statements in<br>epresentative's Name   | R'S REPRESE<br>In Sections A, B,<br>Sections A, B, a                | ATATIVE) CEI<br>and E for Zon<br>nd E are corre  | RTIFICATION<br>e A (without a Fl<br>act to the best of                      | EMA-issued or<br>my knowledge.             |
| SECTION F – PR<br>The property owner or owner's authorize<br>community-issued BFE) or Zone AO mus<br>Property Owner or Owner's Authorized R<br>Address                            | OPERTY OWNER (OR OWNE<br>d representative who complete<br>at sign here. The statements in<br>epresentative's Name  | R'S REPRESE<br>s Sections A, B,<br>Sections A, B, a<br>City         | ATATIVE) CEI<br>and E for Zon<br>nd E are corre  | RTIFICATION<br>e A (without a Flact to the best of                          | EMA-issued or<br>my knowledge.<br>ZIP Code |
| SECTION F – PR<br>The property owner or owner's authorized<br>community-issued BFE) or Zone AO mus<br>Property Owner or Owner's Authorized R<br>Address<br>Signature              | OPERTY OWNER (OR OWNE<br>d representative who complete<br>the sign here. The statements in<br>epresentative's Name | R'S REPRESE   | ITATIVE) CEI<br>and E for Zon<br>nd E are corre<br>Stat  | RTIFICATION<br>e A (without a F<br>ect to the best of<br>ee                 | EMA-issued or<br>my knowledge.<br>ZIP Code |
| SECTION F – PR<br>The property owner or owner's authorize<br>community-issued BFE) or Zone AO mus<br>Property Owner or Owner's Authorized R<br>Address<br>Signature<br>Comments   | OPERTY OWNER (OR OWNE<br>d representative who complete<br>t sign here. The statements in<br>epresentative's Name   | R'S REPRESE<br>s Sections A, B,<br>Sections A, B, a<br>City<br>Date | ITATIVE) CEI<br>and E for Zon<br>nd E are corre<br>Stat  | RTIFICATION<br>e A (without a Fl<br>ect to the best of<br>ee                | EMA-issued or<br>my knowledge.<br>ZIP Code |
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| ION CERTIFICATE   |  |  | <ul> <li>OMB No. 1660-0008</li> <li>Expiration Date: November 30,</li> </ul>            | , 20       |
|---|--|--|---|------------|
| ANT: In these spaces, copy the co   | rresponding information  | from Section A.                                  | FOR INSURANCE COMPAN  | ΥŲ         |
| ing Street Address (including Apt., Unit,<br># FAIRVIEW PLACE   | Suite, and/or Bldg. No.) or  | P.O. Route and Box                               | No. Policy Number:  |            |
| City<br>NEPTUNE TOWNSHIP  | State<br>New Jersey  | ZIP Code<br>07753                                | Company NAIC Number   |            |
| SECT  | ION G - COMMUNITY IN   | FORMATION (OPTI                                  | ONAL)   |            |
| The local official who is authorized by law or<br>Sections A, B, C (or E), and G of this Elevation<br>used in Items G8G10. In Puerto Rico only, e | ordinance to administer th<br>on Certificate. Complete th<br>enter meters. | e community's floodp<br>e applicable item(s)     | blain management ordinance can compl<br>and sign below. Check the measuremen            | etë<br>nt  |
| G1. The information in Section C was ta<br>engineer, or architect who is author<br>data in the Comments area below.)                              | aken from other documenta<br>ized by law to certify eleva                  | ation that has been s<br>ation information. (Inc | signed and sealed by a licensed surveyor<br>dicate the source and date of the elevation | or,<br>ion |
| G2. A community official completed Second Zone AO.  | ction E for a building locate  | ed in Zone A (withou                             | t a FEMA-issued or community-issued E   | 3FE        |
| G3. []] The following information (Items G  | 4-G10) is provided for con   | nmunity floodplain m                             | anagement purposes.   |            |
| 34. Permit Number   | G5. Date Permit Issue  | d  | G6. Date Certificate of<br>Compliance/Occupancy Issued                                  |            |
| 37. This permit has been issued for:  | New Construction   | Substantial Improver                             | nent  | ( <u> </u> |
| <ol> <li>Elevation of as-built lowest floor (include<br/>of the building;</li> </ol>  | ng basement)   | <u></u>  | i feet i meters Datum   | <u>.</u>   |
| 39, BFE or (in Zone AO) depth of flooding a   | t the building site:   |  | feet meters Datum   |            |
| 310. Community's design flood elevation:  | -<br>  |  | feet meters   | , <u>.</u> |
| .ocal Official's Name   | <u>, ,,,===,,,,,,,,,</u>   | Title  | ······································  |            |
| Community Name  | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,                                     | Telephone  |   |            |
| Signature   |  | Date   |   |            |
| Comments (including type of equipment and   | ocation, per C2(e), if appli   | cable)   |   |            |
|   |  |  |   |            |
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FEMA Form 086-0-33 (7/15)

Replaces all previous editions.





# DIVISION: 08 00 00-OPENINGS SECTION: 08 95 43-VENTS/FOUNDATION FLOOD VENTS

**REPORT HOLDER:** 

# **SMARTVENT PRODUCTS, INC.**

430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071

**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



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**ICC-ES Evaluation Report** 

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ESR-2074

Reissued February 2017 This report is subject to renewal February 2019.

www.icc-es.org | (800) 423-6587 | (562) 699-0543

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

**REPORT HOLDER:** 

SMARTVENT PRODUCTS, INC. 430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071 (877) 441-8368 www.smartvent.com info@smartvent.com

#### **EVALUATION SUBJECT:**

SMART VENT<sup>®</sup> AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

#### **1.0 EVALUATION SCOPE**

Compliance with the following codes:

- 2015, 2012, 2009 and 2006 International Building Code<sup>®</sup> (IBC)
- 2015, 2012, 2009 and 2006 International Residential Code<sup>®</sup> (IRC)
- 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

 $\langle \cdot \rangle_1$ 

The Smart Vent<sup>®</sup> 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<sup>®</sup> 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.

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The water level stabilizes, equalizing the lateral forces. Each unit is fabricated from stainless steel. Smart Vent<sup>®</sup> Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT<sup>®</sup> Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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) BC 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<sup>®</sup> Model #1540-510 and SmartVENT<sup>®</sup> Overhead Door Model #1540-514 both have screen covers with  $\frac{1}{4}$ -inch-by- $\frac{1}{4}$ -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<sup>®</sup> 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 recognized in this report do not offer natural ventilation.

#### 4.0 DESIGN AND INSTALLATION

SmartVENT<sup>®</sup> and FloodVENT<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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.

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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.

#### 5.0 CONDITIONS OF USE

The Smart Vent<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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

Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated August 2015.

#### 7.0 IDENTIFICATION

The Smart VENT<sup>®</sup> models recognized 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).

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

#### TABLE 1-MODEL SIZES

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

*†* 1 j

Page 2 of 3

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

OMB No. 1660-0008 Expiration Date: November 30, 2018

•

# ELEVATION CERTIFICATE Important: Follow the instructions on pages 1–9.

| A1. Building Owner's Name<br>Keinneth & Sharon Henn       Policy Number:         A2. Building Street Address (including Apt., Unit, Suite, and/or Bidg. No.) or P.O. Route and<br>Box No.       Company NAIC Ni         115 Fairview PI       State       ZIP Code         City       State       07753-5718         A3. Property Description (Lot and Block Numbers, Tax Percel Number, Legal Description, etc.)       Total and Block 475       07753-5718         A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)       Residential       Actach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.         A7. Building Diagram Number       7         A8. For a building with a crawlspace or enclosure(s):       a) Square footage of crawispace or enclosure(s)       409 sq ft         b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade       .         c) Total net area of flood openings in A8.b       600 sq in         d) Engineered flood openings in the attached garage within 1.0 foot above adjacent grade       .         c) Total net area of flood openings in the attached garage within 1.0 foot above adjacent grade       .         d) Engineered flood openings in A9.b       600 sq in         d) Engineered flood openings in A9.b       600 sq in         d) Engineered flood openings in A9.b       600 sq in         d) Engine | Number:                         |
|--|---------------------------------|
| A2. Building Street Address (including Apt., Unit, Suite, and/or Bidg. No.) or P.O. Route and BOX No.       Company NAIC Ni         115 Fairview Pl       State       ZIP Code         City       New Jersey       07753-5718         A3. Property Description (Lot and Block Numbers, Tax Parcet Number, Legal Description, etc.)       Lot 50 & 51 Block 475       JGC         A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)       Residential         A5. Latitude/Longitude:       Lat. 40.193748°       Long74.040950°       Horizontal Datum: □ NAD 1927         A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.       A7. Building Diagram Number  | Number:                         |
| City       State       ZIP Code         Neptune Township       New Jersey       07753-5718         A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)       Lot 50 & 51 Block 475       3306       15         A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)       Residential       Residential         A5. Latitude/Longitude:       Lat. 40.193748°       Long74.040950°       Horizontal Datum: I NAD 1927         A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.       A7. Building Diagram Number   | ⊠ NAD 1983<br>≹                 |
| Neptune Township       New Jersey       07753-5718         A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)       Lot 50 & 51 Block 475       306       15         A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)       Residential       Residential         A5. Latitude/Longitude:       Lat. 40.193748°       Long74.040950°       Horizontal Datum:        NAD 1927         A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.       A7. Building Dlagram Number   | ⊠ NAD 1983                      |
| A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)         Lot 50 & 51 Block 475       J306         A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)       Residential         A5. Latitude/Longitude:       Lat. 40.193748°       Long74.040950°       Horizontal Datum: □ NAD 1927         A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.       A7. Building Diagram Number   | ⊠ NAD 1983                      |
| A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)       Residential         A5. Latitude/Longitude:       Lat. 40.193748°       Long74.040950°       Horizontal Datum: □ NAD 1927         A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.       NAT       Building Diagram Number   | ⊠ NAD 1983                      |
| A5. Latitude/Longitude:       Lat. 40.193748°       Long74.040950°       Horizontal Datum: □ NAD 1927         A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.       A7. Building Diagram Number  | ⊠ NAD 198:                      |
| <ul> <li>A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.</li> <li>A7. Building Diagram Number</li></ul>  | Ş                               |
| <ul> <li>A7. Building Diagram Number</li></ul>   | •                               |
| <ul> <li>A8. For a building with a crawlspace or enclosure(s): <ul> <li>a) Square footage of crawlspace or enclosure(s)</li></ul></li></ul>  |                                 |
| <ul> <li>a) Square footage of orawispace or enclosure(s) 409 sq ft</li> <li>b) Number of permanent flood openings in the crawispace or enclosure(s) within 1.0 foot above adjacent grade</li></ul>   |                                 |
| <ul> <li>b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade</li></ul>  | _                               |
| c) Total net area of flood openings in A8.b       600       sq in         d) Engineered flood openings?       X Yes       No         A9. For a building with an attached garage:   | 3                               |
| <ul> <li>d) Engineered ficod openings? ∑ Yes □ No</li> <li>A9. For a building with an attached garage: <ul> <li>a) Square footage of attached garage <u>369</u> sq ft</li> <li>b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade</li> <li>c) Total net area of flood openings in A9.b <u>600</u> sq in</li> <li>d) Engineered flood openings? ∑ Yes □ No</li> </ul> </li> </ul>  |                                 |
| A9. For a building with an attached garage: <ul> <li>a) Square footage of attached garage <u>369</u> sq ft</li> <li>b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade</li> <li>c) Total net area of flood openings in A9.b <u>600</u> sq in</li> <li>d) Engineered flood openings? X Yes No</li> </ul>   |                                 |
| <ul> <li>a) Square footage of attached garage <u>369</u> sq ft</li> <li>b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade</li> <li>c) Total net area of flood openings in A9.b <u>600</u> sq in</li> <li>d) Engineered flood openings? X Yes No</li> </ul>   |                                 |
| <ul> <li>b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade</li> <li>c) Total net area of flood openings in A9.b 600 sq in</li> <li>d) Engineered flood openings? X Yes No</li> </ul>   |                                 |
| <ul> <li>c) Total net area of flood openings in A9.b 600 sq in</li> <li>d) Engineered flood openings? [X] Yes [] No</li> </ul>   | 3                               |
| <ul> <li>c) Total net area of flood openings in A9.0 000 sq in</li> <li>d) Engineered flood openings? X Yes No</li> </ul>  |                                 |
|  |                                 |
|  |                                 |
| SECTION B - FLOOD INSUKANCE KATE MAP (FIRM) INFORMATION  |                                 |
| B1. NFIP Community Name & Community Number B2. County Name B3.   | State                           |
| Township of Neptune 340317 Monmouth New  | w Jersey                        |
| B4. Map/Panel B5. Suffix B6. FIRM Index Date B7. FIRM Panel B8. Flood Zone(s) B9. Base Flor<br>Number Date Effective/<br>Revised Date Flood Date   | ood Elevation(s<br>.O, use Base |
| 34025C/0333 F 09/25/2009 09/25/2009 AE 9.0   | eputy                           |
| B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9:  |                                 |
| B11. Indicate elevation datum used for BFE in item B9: NGVD 1929 X NAVD 1988 Other/Source:   | )? [] Yes []                    |
| B11. Indicate elevation datum used for BFE in Item B9: NGVD 1929 NAVD 1988 Other/Source:<br>B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)?  | )? [] Yes 🗵                     |

| In these spaces, copy the  |   |   | Expiration Date: November 30, 201   |
|--|---|---|---|
| and the stand of the second  | corresponding Information from  | Section A.  | FOR INSURANCE COMPANY US  |
| reet Address (including Apt., Un<br>view Pl  | it, Suite, and/or Bldg. No.) or P.O. I  | Route and Box No.   | Policy Number:  |
| dune Townshin  | State Z   | ZIP Code<br>07753-5718  | Company NAIC Number   |
| SECTION C -  |   | ATION (SURVEY PE  |   |
|  |   |   |   |
| C1. Building elevations are based on:<br>*A new Elevation Certificate will be re   | Construction Drawings     Construction of the building  | aliding Under Constru<br>Alding is complete.  | ction" [X] Finished Construction  |
| C2. Elevations – Zones A1–A30, AE, AH<br>Complete Items C2.a–h below accor<br>Benchmark I tillized: KV6267   | A (with BFE), VE, V1–V30, V (wit<br>ding to the building diagram specifi<br>Vertical Date   | h BFE), AR, AR/A, AR/.<br>ed in Item A7. In Puerte  | AE, AR/A1–A30, AR/AH, AR/AO.<br>Rico only, enter meters.  |
| Indicate elevation datum used for the  | venual Dau  |   |   |
| □ NGVD 1929 🖾 NAVD 19  | 88 Other/Source:  |   | 1   |
| Datum used for building elevations m   | nust be the same as that used for th  | ie BFE.   | Check the measurement used  |
| a) Top of bottom floor (including bas  | ement, crawlspace, or enclosure fi  | oor) <u>6</u> . <u>80</u>   | X feet I meters   |
| b) Top of the next higher floor  | ŗ   | <u> </u>  | X feet meters   |
| c) Bottom of the lowest horizontal st  | ructural member (V Zones only)  | <u>N/A</u>  | X feet T metera   |
| d) Attached garage (top of slab)   | · · · · · · · · · · · · · · · · · · ·   | <u> </u>  | X feet meters   |
| <ul> <li>e) Lowest elevation of machinery or<br/>(Describe type of equipment and</li> </ul>  | equipment servicing the building location in Comments)  | <u> </u>  | X feet meters   |
| f) Lowest adjacent (finished) grade  | next to building (LAG)  | <u> </u>  | 🔜 🔀 feet 📋 meters   |
| g) Highest adjacent (finished) grade   | next to building (HAG)  | <u> </u>  | X feet [ meters   |
| h) Lowest adjacent grade at lowest   | elevation of deck or stairs, including  | g <u>5.80</u>   | X feet meters   |
| SECTION D.   | - SURVEYOR, ENGINEER, OR  | ARCHITECT CERTIF  |   |
| This certification is to be signed and seal<br>I certify that the information on this Certifi<br>statement may be punishable by fine or i  | ed by a land surveyor, engineer, or<br>cate represents my best efforts to i<br>mprisonment under 18 U.S. Code,  | architect authorized by interpret the data availa Section 1001.   | law to certify elevation informatior<br>ble. I understand that any false  |
| Were latitude and longitude in Section A   | provided by a licensed land survey  | or? ⊠Yes ∐No  | Check here if attachments.  |
| Certifier's Name<br>Walter Scharfenberg  | License Number<br>GS14159   |   |   |
| Title  |   |   | 4 Palter  |
| President  |   |   | and the second second   |
| President<br>Company Name  |   |   | Place   |
| President<br>Company Name<br>George W. Henn, Inc.  |   |   | Place<br>Seal   |
| President<br>Company Name<br>George W. Henn, Inc.<br>Address<br>435 Mantoloking Road   |   |   | Place<br>Seal<br>Here<br>Schanlenbha  |
| President<br>Company Name<br>George W. Henn, Inc.<br>Address<br>435 Mantoloking Road<br>City<br>Brick  | State<br>New Jersey   | ZIP Code<br>08723   | Place<br>Seal<br>Here<br>Scharfenbhg  |
| President<br>Company Name<br>George W. Henn, Inc.<br>Address<br>435 Mantoloking Road<br>City<br>Brick<br>Signature   | State<br>New Jersey<br>Date   | ZIP Code<br>08723<br>Telephone  | Place<br>Seal<br>Here<br>Scharfenbhg  |
| President<br>Company Name<br>George W. Henn, Inc.<br>Address<br>435 Mantoloking Road<br>City<br>Brick<br>Signature<br>Watter Schammer<br>Copy all pages of this Elevation Certificate  | State<br>New Jersey<br>Date<br>11/17/2016<br>and all attachments for (1) communi  | ZIP Code<br>08723<br>Telephone<br>(732) 477-6500<br>tv official, (2) insurance  | Place<br>Seal<br>Here<br>Scharfenblig<br>agent/company, and (3) building ow   |
| President<br>Company Name<br>George W. Henn, Inc.<br>Address<br>435 Mantoloking Road<br>City<br>Brick<br>Signature<br>Watter - Chanter<br>Copy all pages of this Elevation Certificate<br>Comments (including type of equipment a<br>Lowest machinery servicing building is the<br>building diagram number is 7, the Sq ft of<br>garage is 369', there are 3 Smartvent bra<br>flood vents model number 1540-520 that   | State<br>New Jersey<br>Date<br>11/17/2018<br>and all attachments for (1) communi<br>and location, per C2(e), if applicable<br>he air conditioning unit located out<br>the enclosure is 409' the total net<br>in flood vents model number 1540<br>covers 600 Sq ft, with a total cover   | ZIP Code<br>08723<br>Telephone<br>(732) 477-6500<br>ty official, (2) insurance<br>e)<br>iside of the house on a<br>area of the building is 7<br>i-510 that covers 600 S<br>age of 1200 Sq ft.   | Place<br>Seal<br>Here<br>Scharfenbfrg<br>agent/company, and (3) building ow<br>platform, @ elevation 12.26' the<br>'78', total net area of the attached<br>ig ft, there are 3 Smartvent brand   |
| President<br>Company Name<br>George W. Henn, Inc.<br>Address<br>435 Mantoloking Road<br>City<br>Brick<br>Signature<br><u>Watter</u> <u>Potantian</u><br>Copy all pages of this Elevation Certificate<br>Comments (including type of equipment a<br>Lowest machinery servicing building is the<br>building diagram number is 7, the Sq ft of<br>garage is 369', there are 3 Smartvent bra<br>flood vents model number 1540-520 that<br>FEMA FIRM MAP NUMBER 34029C0333<br>THIS DATE) INDICATES ZONE AE, WIT | State<br>New Jersey<br>Date<br>11/17/2016<br>and all Attachments for (1) communi<br>and location, per C2(e), if applicable<br>he air conditioning unit located out<br>the enclosure is 409' the total net<br>ind flood vents model number 1540<br>covers 600 Sq ft, with a total cover<br>3G DATED JANUARY 30, 2015 (N<br>TH A BASE FLOOD ELEVATION C | ZIP Code<br>08723<br>Telephone<br>(732) 477-6500<br>ty official, (2) insurance<br>e)<br>iside of the house on a<br>area of the building is 7<br>i-510 that covers 600 S<br>age of 1200 Sq ft.<br>OT OFFICIALY ADOP<br>DF 10 FEET ABOVE N. | Place<br>Seal<br>Here<br>Scharfenbug<br>agent/company, and (3) building ow<br>platform, @ elevation 12.26' the<br>'78', total net area of the attached<br>of ft, there are 3 Smartvent brand<br>TED AS AN EFFECTIVE FIRM ON<br>AVD'88 |

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| CERTIFICATE  |   | E  | Expiration Date: November 30, 2018  |
|--|---|--|---|
| in these spaces, copy ti   | e corresponding information from Sec  | tion A.  | FOR INSURANCE COMPANY USE   |
| eet Address (including Apt.,   | Unit, Suite, and/or Bldg, No.) or P.O. Rou  | te and Box No.   | Policy Number:  |
| btune Township   | State ZIP<br>New Jersey 077   | Code<br>53-5718  | Company NAIC Number   |
| SECTION E -  | BUILDING ELEVATION INFORMATIO<br>FOR ZONE AO AND ZONE A (WIT  | N (SURVEY NOT I<br>HOUT BFE)   | REQUIRED)   |
| For Zones AO and A (without BFE), cor<br>complete Sections A, B,and C. For Item  | nplete Items E1–E5. If the Certificate is in<br>s E1–E4, use natural grade, if available. (   | tended to support a l<br>Check the measurem                                    | LOMA or LOMR-F request,   |
| E1. Provide elevation information for the<br>the highest adjacent grade (HAG) a  | e following and check the appropriate box<br>and the lowest adjacent grade (LAG).   | kes to show whether  | the elevation is above or below   |
| a) Top of boltom hoor (including ba<br>crawlspace, or enclosure) is  |   | 🗍 feet 🗌 meters  | above or 🔲 below the HAG  |
| <li>b) Top of bottom floor (including ba<br/>crawlspace, or enclosure) is</li>   | asement,  | 🗍 feet 🗌 meters  | above or below the LAG  |
| E2. For Building Diagrams 6-9 with per<br>the next higher floor (elevation C2.)  | manent flood openings provided in Sections in Sections in Sections in Sections in Sections in Section 2018 and the section of | on A Items 8 and/or 9  | 9 (see pages 1-2 of Instructions),  |
| the diagrams) of the building is   | ······  | feet meters  | above or below the HAG  |
| E3. Attached garage (top of slab) is   |   | eet meters   | above or 🗌 below the HAG  |
| <ol> <li>Top of platform of machinery and/o<br/>servicing the building is</li> </ol>   | r equipment   | 🗍 feet 🔲 meters  | above or 🗌 below the HAG  |
| E5. Zone AO only: If no flood depth nu   | mber is available, is the top of the bottom   | floor elevated in acc<br>e local official must c                               | ordance with the community's<br>ertify this information in Section G  |
| floodplain management ordinance?   |   |  | only and anomaton around of the   |
| fioodplain management ordinance  |   | RESENTATIVE) CE  | RTIFICATION   |
| floodplain management ordinance<br>SECTION F – PI<br>The property owner or owner's authoriz-<br>community-issued BFE) or Zone AO mu<br>Property Owner or Owner's Authorized  | ROPERTY OWNER (OR OWNER'S REP<br>ad representative who completes Section<br>ist sign here. The statements in Sections<br>Representative's Name  | RESENTATIVE) CE<br>s <del>A, B, and E for Zor</del><br>A, B, and E are corr    | RTIFICATION<br>ne A (without a FEMA-issued or<br>ect to the best of my knowledge.   |
| fioodplain management ordinance<br>SECTION F – PI<br>The property owner or owner's authoriz<br>community-issued BFE) or Zone AO mu<br>Property Owner or Owner's Authorized<br>Address                              | ROPERTY OWNER (OR OWNER'S REP<br>ed representative who completes Section<br>ist sign here. The statements in Sections<br>Representative's Name<br>City  | RESENTATIVE) CE<br>s A, B, and E for Zon<br>A, B, and E are corr<br>Sta        | RTIFICATION<br>no A (without a FEMA-issued or<br>ect to the best of my knowledge.<br>Ite ZIP Code                             |
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FEMA Form 086-0-33 (7/15)

Replaces all previous editions.

Form Page 3 of 6

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|  | 4 CERTIFICATE  |  | OMB No. 1660-0008<br>Expiration Date: November 30. 2018   |
|--|--|--|---|
|  | in these spaces, copy in these spaces, copy in these spaces, copy in the second | the corresponding information from Sect<br>, Unit, Suite, and/or Bidg. No.) or P.O. Rout   | ion A. FOR INSURANCE COMPANY USE<br>and Box No. Policy Number:  |
| / AU   | une Township   | State ZIP C<br>New Jersey 0775   | ode Company NAIC Number<br>3-5718   |
| and the second |  | SECTION G - COMMUNITY INFORMATIC   | DN (OPTIONAL)   |
| The<br>Secti<br>used<br>G1.  | local official who is authorized by<br>tions A, B, C (or E), and G of this I<br>d in Items G8–G10. In Puerto Rico  | law or ordinance to administer the communi<br>Elevation Certificate. Complete the applicabl<br>only, enter meters.<br>was taken from other documentation that h<br>authorized by law to certify elevation inform | ty's floodplain management ordinance can complete<br>e item(s) and sign below. Check the measurement<br>as been signed and sealed by a licensed surveyor,<br>nation. (Indicate the source and date of the elevation |
| G2.  | data in the Comments area I A community official comple or Zone AO. The following information (It  | below.)<br>ted Section E for a building located in Zone<br>ems G4–G10) is provided for community flo   | A (without a FEMA-issued or community-issued BFE)   |
| G3.  |  |  |   |
| G4,  | Permit Number  | G5. Date Permit Issued   | G6. Date Certificate of<br>Compliance/Occupancy Issued  |
| G7.<br>G8.   | This permit has been issued for:<br>Elevation of as-built lowest floor   | New Construction 🔄 Substantia (including basement)   | Improvement   |
| 69   | of the building:<br>BFF or (in Zone AO) depth of flo   | oding at the building site;  | feet meters Datum   |
| 1<br>G10.  | . Community's design flood elevat  | ion:   | feet [] meters  |
| Loca   | I Official's Name  | Title  |   |
| Com  | munity Name  | Telephon   | ę   |
| Signa  | ature  | Date   |   |
| Com  | ments (including type of equipments  | nt and location, per C2(e), if applicable)   |   |
|  |  |  |   |
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|  |  |  | Eorm Page 4   |

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### **BUILDING PHOTOGRAPHS**

OMB No. 1660-0008 Expiration Date: November 30, 2018

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| IN CERTIFICATE                        | See Instructions            | for Item A6.           | Expiration Date: November 30, 2018 |
|---------------------------------------|-----------------------------|------------------------|------------------------------------|
| NT: In these spaces, copy the co      | rresponding information     | from Section A.        | FOR INSURANCE COMPANY USE          |
| Street Address (including Apt., Unit, | Suite, and/or Bldg. No.) or | P.O. Route and Box No. | Policy Number:                     |
| Arairview Pl                          |                             | ·                      |                                    |
|                                       | State                       | ZIP Code               | Company NAIC Number                |
| /Neptune Township                     | New Jersey                  | 07753-5718             |                                    |

If using the Elevation Certificate to obtain NFIP flood insurance, affix at least 2 building photographs below according to the instructions for Item A6. Identify all photographs with date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8. If submitting more photographs than will fit on this page, use the Continuation Page.



Photo One Caption Front view of 115 Fairview PI 11/17/2016



Photo Two

# **BUILDING PHOTOGRAPHS** OMB No. 1660-0008 Expiration Date: November 30, 2018 N CERTIFICATE **Continuation Page** AT: In these spaces, copy the corresponding information from Section A. FOR INSURANCE COMPANY USE Street Address (including Apt., Unit, Suite, and/or Bidg. No.) or P.O. Route and Box No. Policy Number: airview Pl State **ZIP** Code **Company NAIC Number** 07753-5718 Neptune Township New Jersey If submitting more photographs than will fit on the preceding page, affix the additional photographs below. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8. Photo One Photo One Caption Left side View of 115 Fairview PI 11/17/2016 Photo Two Photo Two Caption Right side view of 115 Fairview PI 11/17/2016

# Flood Vent Photo's

- T

115 Fairview Place, Neptune Twp.







ICC-ES Report

ICC-ES | (800) 423-6587 | (562) 699-0543 | www.icc-es.org

Most Widely Accepted and Trusted

# ESR-2074

Reissued 02/2015 This report is subject to renewal 02/2017.

# DIVISION: 08 00 00—OPENINGS SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS

**REPORT HOLDER:** 

# **SMARTVENT PRODUCTS, INC.**

430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071

### **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



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### **ICC-ES Evaluation Report**

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ESR-2074\*

Reissued February 2015

www.icc-es.org | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

This report is subject to renewal February 2017.

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

REPORT HOLDER:

SMARTVENT PRODUCTS, INC. 430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071 (877) 441-8368 www.smartvent.com info@smartvent.com

#### **EVALUATION SUBJECT:**

SMART VENT<sup>®</sup> AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

#### **1.0 EVALUATION SCOPE**

Compliance with the following codes:

- 2012, 2009 and 2006 International Building Code<sup>®</sup> (IBC)
- 2012, 2009 and 2006 International Residential Code<sup>®</sup> (IRC)
- 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT<sup>®</sup>Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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 2.6.2.2 of ASCE/SEI 24 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<sup>®</sup> Model #1540-510 and SmartVENT<sup>®</sup> Overhead Door Model #1540-514 both have screen covers with  $^{1}$ /<sub>4</sub>-inch-by- $^{1}$ /<sub>4</sub>-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<sup>®</sup> 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 recognized in this report do not offer natural ventilation.

#### 4.0 DESIGN AND INSTALLATION

SmartVENT<sup>®</sup> and FloodVENT<sup>®</sup> 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. The mounting straps allow mounting in masonry and concrete walls up to 12 inches (305 mm) thick. In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the Smart Vent<sup>®</sup> 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<sup>●</sup> Stacking Model #1540-511 and FloodVENT<sup>●</sup> 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

\*Revised July 2015

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grade or floor and finished exterior grade immediately under each opening.

#### 5.0 CONDITIONS OF USE

The Smart Vent<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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

Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated October 2013 (editorially revised May 2014).

#### 7.0 IDENTIFICATION

The Smart VENT<sup>®</sup> models recognized 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).

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

TABLE 1-MODEL SIZES

For SI: 1 inch = 25.4 mm; 1 square foot =  $m^2$ 

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

5306/4

OMB No. 1660-0008 Expiration Date: November 30, 2018

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| ELEVATION CE | RTIFICATE |
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|--------------|-----------|

Important: Follow the instructions on pages 1-9.

|  | 0001101   | NA-PRUPEKIY   | INFORMATION  | •••  | FOR INSUR  | ANCE COMPANY U   |
|--|---|---|--|--|--|--|
| A1. Building Owner<br>TERRACE  | 's Name<br>CONCANNON  | AND JOANN CON   | VCANNON  |  | Policy Numb  | er:  |
| A2. Building Street<br>Box No.<br>NO. 11   | Address (includ   | ing Apt., Unit, Suite<br>NAY  | e, and/or Bldg. No.) or P.O.   | Route and  | Company N  | AIC Number:  |
| City<br>NEPTUN   | E   |   | State<br>New Jersey  |  | ZIP Code<br>07753  | K A TROŻE ŚC INSTANIA W SARO O POWOWACE DO UMU SA ODANIA SKO   |
| A3. Property Descr<br>LOT 14 IN BL   | iption (Lot and E<br>OCK 475 ON T/  | Block Numbers, Tax<br>X MAP OF NEPTI  | x Parcel Number, Legal De<br>UNE TOWNSHIP  | scription, etc.)<br>TAX MAP PAGE NO  | D. 43.02   | ••••••••••••••••••••••••••••••••••••••   |
| A4. Building Use (e  | .g., Residential,   | Non-Residential, /  | Addition, Accessory, etc.)   | RESIDENTIAL  |  |  |
| A5. Latitude/Longit  | ude: Lat. 40* 1   | 1' 38.50" N   | Long. 74* 02' 26.55" W   | Horizontal Datun   | n: 🔲 NAD 1   | 927 🖾 NAD 1983   |
| A6. Attach at least  | 2 photographs o   | of the building if the  | Certificate is being used to   | o obtain flood insura  | ance. ,  |  |
| <ol> <li>A7. Building Diagra</li> </ol>  | m Number  | 7 WALKOL  | IT LEVEL ENCLOSUR  | <sup>E</sup> with garag  | E  |  |
| 48. For a building v   | with a crawlspac  | e or enclosure(s):  |  |  |  |  |
| a) Square foot   | age of crawlspa   | ce or enclosure(s)  | 672 sq ft  |  |  |  |
| b) Number of p   | ermanent flood  | openings in the cra   | awlspace or enclosure(s) w   | ithin 1.0 foot above   | adjacent gra   | de <u>3</u>  |
| c) Total net are   | a of flood open   | ings in A8.b750   | 6 sq in T. C.F.  |  |  | USA VENTS  |
| d) Engineered  | flood openings?   | Yes □N  | 0  | x  | N°   |  |
|  |   |   |  |  |  |  |
| A9. For a building v   | ith an attached   | garage:   |  | •  |  |  |
| A9. For a building v<br>a) Square foot   | /ith an attached  | garage:<br>garage <u>288</u>  | sq ft  |  |  | 1  |
| A9. For a building v<br>a) Square foot<br>b) Number of p   | vith an attached<br>age of attached<br>emnanent flood   | garage:<br>garage 288<br>openings in the att  | sq ft<br>tached garage within 1.0 fo   | ot above adjacent (  | rade   | 2  |
| <ul> <li>A9. For a building v</li> <li>a) Square foot</li> <li>b) Number of p</li> <li>c) Total net are</li> </ul>   | vith an attached<br>age of attached<br>permanent flood<br>a of flood openi  | garage:<br>garage 288<br>openings in the att<br>ings in A9.b 45   | sq ft<br>tached garage within 1.0 fo<br>2 sq in  | ot above adjacent (  | gradei t   | 2<br>ISA VENT  |
| <ul> <li>A9. For a building v</li> <li>a) Square foot</li> <li>b) Number of p</li> <li>c) Total net are</li> <li>d) Engineered</li> </ul>  | vith an attached<br>age of attached<br>permanent flood<br>a of flood openi<br>flood openings7   | garage:<br>garage 288<br>openings in the att<br>ings in A9.b 45<br>Y [X] Yes [] N   | sq ft<br>tached garage within 1.0 fo<br>$\frac{12}{10}$ sq in $\mathcal{T}_{-C} = \mathcal{F}_{-C}$  | ot above adjacent (  | grade<br>լէ  | 2<br>ISA VENT<br>SMART VENT  |
| <ul> <li>A9. For a building v</li> <li>a) Square foot</li> <li>b) Number of p</li> <li>c) Total net are</li> <li>d) Engineered</li> </ul>  | vith an attached<br>age of attached<br>permanent flood<br>a of flood openi<br>flood openings?<br>SECT   | garage 288<br>openings in the att<br>ings in A9.b 45<br>V X Yes N<br>ION B - FLOOD I  | sq ft<br>tached garage within 1.0 fo<br>2 sq in T-CF<br>to<br>NSURANCE RATE MAP  | ot above adjacent (<br>(FIRM) INFORMA  | grade<br>I t<br>I<br>ITION   | 2<br>ISA VENT<br>SMART VENT  |
| <ul> <li>A9. For a building v</li> <li>a) Square foot</li> <li>b) Number of p</li> <li>c) Total net are</li> <li>d) Engineered</li> <li>B1. NFIP Community</li> <li>NFIP Community</li> </ul>  | vith an attached<br>age of attached<br>bermanent flood<br>a of flood openi<br>flood openings7<br>SECT<br>ty Name & Com<br>HIP   | garage 288<br>openings in the att<br>ings in A9.b 45<br>V X Yes N<br>ION B - FLOOD II<br>munity Number<br>340317  | sq ft<br>tached garage within 1.0 fo<br>2 sq in<br>7-CF<br>to<br>NSURANCE RATE MAP<br>B2. County Name<br>MONMOUTH CO   | ot above adjacent (<br>(FIRM) INFORMA<br>UNTY  | grade1 t<br>1<br>I   | 2<br>ISA VENT<br>SMART VENT<br>B3. State<br>New Jersey   |
| <ul> <li>A9. For a building v</li> <li>a) Square foot</li> <li>b) Number of p</li> <li>c) Total net are</li> <li>d) Engineered</li> <li>B1. NFIP Community</li> <li>S1. NF</li></ul> | vith an attached<br>age of attached<br>bermanent flood<br>a of flood openi<br>flood openings7<br>SECT<br>ty Name & Com<br>HIP<br>B5. Suffix B   | garage 288<br>openings in the att<br>ings in A9.b 45<br>V X Yes N<br>ION B - FLOOD II<br>munity Number<br>340317<br>8. FIRM Index<br>Date   | sq ft<br>tached garage within 1.0 fo<br>2 sq in<br>7-C.F.<br>to<br>NSURANCE RATE MAP<br>B2. County Name<br>MONMOUTH CO<br>B7. FIRM Panel<br>Effective/<br>Revised Date   | ot above adjacent (<br>(FIRM) INFORMA<br>UNTY<br>B8. Flood Zone(s  | grade<br>I L<br>I<br>NTION<br>) B9. Bas<br>(Zor<br>Floo                                | 2<br>ISA VENT<br>SMART VENT<br>B3. State<br>New Jersey<br>e Flood Elevation(s)<br>ie AO, use Base<br>d Depth)                      |
| <ul> <li>A9. For a building v</li> <li>a) Square foot</li> <li>b) Number of p</li> <li>c) Total net are</li> <li>d) Engineered</li> </ul> 31. NFIP Communiver 32. NFIP Communiver 33. NFIP Communiver 34. Map/Panel Number 4025C 0333F   | vith an attached<br>age of attached<br>permanent flood<br>a of flood openi<br>flood openings7<br>SECT<br>ty Name & Com<br>HIP<br>B5. Suffix B<br>F 0  | garage 288<br>openings in the att<br>ings in A9.b 45<br>V X Yes N<br>ION B - FLOOD II<br>munity Number<br>340317<br>6. FIRM Index<br>Date<br>9/25/2009  | sq ft<br>tached garage within 1.0 fo<br>2 sq in<br>7-CF<br>to<br>NSURANCE RATE MAP<br>B2. County Name<br>MONMOUTH CO<br>B7. FIRM Panel<br>Effective/<br>Revised Date<br>09/25/2009   | ot above adjacent (<br>(FIRM) INFORMA<br>UNTY<br>B8. Flood Zone(s<br>AE  | grade<br>I U<br>I<br>VTION<br>) B9. Bas<br>(Zor<br>Floo<br>EL.9'                       | 2<br>ISA VENT<br>SMART VENT<br>B3. State<br>New Jersey<br>e Flood Elevation(s)<br>e AO, use Base<br>d Depth)                       |
| <ul> <li>A9. For a building v</li> <li>a) Square foot</li> <li>b) Number of p</li> <li>c) Total net are</li> <li>d) Engineered</li> </ul> 31. NFIP Communi 32. NFIP Communi 33. NFIP Communi 33. NFIP Communi 34. NEP Communi 35. NFIP Communi 36. NEP Communicipation 36. NEP Com   | vith an attached<br>age of attached<br>bermanent flood<br>ea of flood openi<br>flood openings7<br>SECT<br>ty Name & Com<br>HIP<br>B5. Suffix B<br>F 0<br>ource of the Bas   | garage       288         openings in the att         ings in A9.b       45         IQN B - FLOOD II         munity Number         340317         8. FIRM Index         9/25/2009         9         PE Flood Elevation         Community Determinity   | sq ft<br>tached garage within 1.0 fo<br>2 sq in T.C.F.<br>to<br>NSURANCE RATE MAP<br>B2. County Name<br>MONMOUTH CO<br>B7. FIRM Panel<br>Effective/<br>Revised Date<br>09/25/2009<br>(BFE) data or base flood do<br>mined [] Other/Source:   | ot above adjacent (<br>(FIRM) INFORMA<br>UNTY<br>B8. Flood Zone(s<br>AE<br>apth entered in item  | TION<br>B9. Bas<br>(Zor<br>Floo<br>EL.9'   | 2<br>ISA VENT<br>SMART VENT<br>B3. State<br>New Jersey<br>e Flood Elevation(s)<br>le AO, use Base<br>d Depth)                      |
| <ul> <li>A9. For a building v</li> <li>a) Square foot</li> <li>b) Number of p</li> <li>c) Total net are</li> <li>d) Engineered</li> <li>31. NFIP Communi</li> <li>NEPTUNE TOWNS</li> <li>4. Map/Panel</li> <li>Number</li> <li>4025C 0333F</li> <li>310. Indicate the s</li> <li>S11. Indicate eleve</li> <li>311. Indicate eleve</li> </ul>   | vith an attached<br>age of attached<br>permanent flood<br>a of flood openi<br>flood openings7<br>SECT<br>ty Name & Com<br>HIP<br>B5, Suffix B<br>F 0<br>Durce of the Bas<br>Surce of the Bas                              | garage 288<br>openings in the att<br>ings in A9.b 45<br>(X) Yes () N<br>ION B - FLOOD II<br>munity Number<br>340317<br>(6) FIRM Index<br>9/25/2009<br>(6) Flood Elevation<br>Community Determ<br>I for BFE in Item Bit  | sq ft<br>tached garage within 1.0 fo<br>2 sq in<br>7-C-F<br>to<br>NSURANCE RATE MAP<br>B2. County Name<br>MONMOUTH CO<br>B7. FIRM Panel<br>Effective/<br>Revised Date<br>09/25/2009<br>(BFE) data or base flood do<br>nined C Other/Source:  | ot above adjacent (<br>(FIRM) INFORMA<br>UNTY<br>B8. Flood Zone(s<br>AE<br>apth entered in item<br>VD 1988 [] Ot                         | grade<br>I U<br>I<br>VTION<br>B9. Bas<br>(Zor<br>Floo<br>EL.9'<br>n B9:<br>her/Source: | 2<br>ISA VENT<br>SMART VENT<br>B3. State<br>New Jersey<br>e Flood Elevation(s)<br>e AO, use Base<br>d Depth)                       |
| <ul> <li>A9. For a building v</li> <li>a) Square foot</li> <li>b) Number of p</li> <li>c) Total net are</li> <li>d) Engineered</li> </ul> 31. NFIP Communi 31. NFIP Communicate elevel 31. Is the building  | vith an attached<br>age of attached<br>bermanent flood<br>a of flood openi<br>flood openings<br>SECT<br>by Name & Com<br>HIP<br>B5, Suffix B<br>F 0<br>burce of the Bas<br>Surce of the Bas<br>Surce of the Bas           | garage       288         openings in the att         ings in A9.b       45         ings in A9.b       1000000000000000000000000000000000000 | sq ft<br>tached garage within 1.0 fo<br>2 sq in T.C.F.<br>to<br>NSURANCE RATE MAP<br>B2. County Name<br>MONMOUTH CO<br>B7. FIRM Panel<br>Effective/<br>Revised Date<br>09/25/2009<br>(BFE) data or base flood do<br>mined Other/Source:  | ot above adjacent (<br>(FIRM) INFORMA<br>UNTY<br>B8. Flood Zone(s<br>AE<br>apth entered in item<br>VD 1988 [] Ot<br>or Otherwise Prote   | TION<br>B9. Bas<br>(Zor<br>Floo<br>EL.9'<br>n B9:<br>her/Source:<br>acted Area (C      | 2<br>ISA VENT<br>SMART VENT<br>B3. State<br>New Jersey<br>e Flood Elevation(s)<br>te AO, use Base<br>d Depth)                      |
| <ul> <li>A9. For a building v</li> <li>a) Square foot</li> <li>b) Number of p</li> <li>c) Total net are</li> <li>d) Engineerad</li> <li>31. NFIP Communi</li> <li>31. NFIP Communi</li> <li>31. NFIP Communi</li> <li>31. NFIP Communi</li> <li>4. Map/Panel</li> <li>Number</li> <li>4025C 0333F</li> <li>310. Indicate the s</li> <li>311. Indicate eleve</li> <li>312. Is the building Designation D</li> </ul>   | vith an attached<br>age of attached<br>bermanent flood<br>a of flood openi<br>flood openings<br>SECT<br>SECT<br>by Name & Com<br>HIP<br>B5. Suffix B<br>F 0<br>burce of the Bas<br>SUFFIRM C<br>tion datum used<br>boate: | garage 288<br>openings in the att<br>ings in A9.b 45<br>(X) Yes () N<br>ION B - FLOOD II<br>munity Number<br>340317<br>(0) FIRM Index<br>9/25/2009<br>(0) Flood Elevation<br>Community Determ<br>I for BFE in Item Bit<br>pastal Barrier Resort   | sq ft<br>tached garage within 1.0 fo<br>2 sq in T-CF<br>to<br>NSURANCE RATE MAP<br>B2. County Name<br>MONMOUTH CO<br>B7. FIRM Panel<br>Effective/<br>Revised Date<br>09/25/2009<br>(BFE) data or base flood do<br>nined Other/Source:<br>9; NGVD 1929 X N/<br>urces System (CBRS) area<br>CBRS OPA | ot above adjacent (<br>(FIRM) INFORMA<br>UNTY<br>B8. Flood Zone(s<br>AE<br>apth entered in item<br>VD 1988 [] Of<br>i or Otherwise Prote | TION<br>B9. Bas<br>(Zor<br>Floo<br>EL.9'<br>n B9:<br>her/Source:<br>acted Area (C      | 2<br>ISA VENT<br>SMART VENT<br>B3. State<br>New Jersey<br>e Flood Elevation(s)<br>te AO, use Base<br>d Depth)<br>PA)? [] Yes [X] I |

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|       |   |   | 5  |   |
|-------|---|---|--|---|
|       | Street Address (including Apt., Unit, Suite<br>NO. 110 BEVERLY WAY  | e, and/or Bidg. No.) or P.O. I  | Route and Box No.  | POR INSURANCE COMPANY L<br>Policy Number:                                   |
| P.F   | City<br>NEPTUNE   | State 2<br>New Jersey 0   | IP Code<br>7753  | Company NAIC Number   |
| f     | SECTION C - BUILD   | ING ELEVATION INFORM  | ATION (SURVEY R  | EQUIRED)  |
|       | C1. Building elevations are based on: Co.<br>*A new Elevation Certificate will be required  | nstruction Drawings*  | Building Under Constr<br>ilding is complete.                           | uction* IX Finished Construction  |
|       | C2. Elevations – Zones A1–A30, AE, AH, A (with<br>Complete Items C2.a–h below according to<br>Benchmark Utilized: KV6260 DISK   | h BFE), VE, V1–V30, V (with<br>the building diagram specifi<br>Vertical Date  | n BFE), AR, AR/A, AF<br>ed in Item A7. In Puer<br>rm: <u>NAVD 1988</u> | VAE, AR/A1~A30, AR/AH, AR/AO.<br>to Rico only, enter meters.<br>EL. 5.59'   |
|       | Indicate elevation datum used for the elevat  | ions in items a) through h) b<br>I Other/Source;  | elow.  | · •   |
|       | Detum used for building elevations must be  | the same as that used for th  | e BFE.   | Check the measurement use   |
|       | a) Top of bottom floor (including basement,   | crawlspace, or enclosure fi   | oor) <u>5.9</u>  | X feet T meters   |
|       | b) Top of the next higher floor   | FINISHED FLOOF  | 13,6   | X feet I meters   |
|       | c) Bottom of the lowest horizontal structura  | i member (V Zones only)   | <u>N/A</u>   | feet meters   |
|       | d) Attached garage (top of slab) GAR  | AGE FLOOR   | <u> </u>   | X feet T meters   |
|       | <ul> <li>e) Lowest elevation of machinery or equipn<br/>(Describe type of equipment and location)</li> </ul>  | nent servicing the building<br>n in Comments)   | 12 4'<br>AC UNIT 7   | C.F. X feet meters  |
|       | f) Lowest adjacent (finished) grade next to   | building (LAG)  | <u> </u>   | X feet I meters   |
| Į     | g) Highest adjacent (finished) grade next to  | building (HAG)  | 5.8  | * 🔀 feet 📋 meters   |
|       | h) Lowest adjacent grade at lowest elevatic<br>structural support   | on of deck or stairs, including   | <u> </u>   | X feet T meters   |
| 3     | SECTION D SURV  | EYOR, ENGINEER, OR  | RCHITECT CERTII  | ICATION   |
|       | This certification is to be signed and sealed by a<br>I certify that the information on this Certificate rep  | land surveyor, engineer, or<br>presents my best efforts to l  | architect authorized b<br>nterpret the data avail                      | y law to certify elevation informatic<br>lable. I understand that any false |
|       | Were latitude and longitude in Section A provide  | d by a licensed land survey   | nr? ⊠Yes □No   | Check here if attachments   |
|       | Certifier's Name<br>THOMAS CRAIG FINNEGAN P.L.S.  | License Number<br>N.J. G.S. 38601   |  |   |
|       | Title<br>PROFESSIONAL LAND SURVEYOR   |   |  |   |
|       | Company Name<br>THOMAS FINNEGAN LAND SURVEYING  |   |  | Place<br>Seal   |
|       | Address<br>245 EAST END AVENUE  |   |  | ( let e   |
|       | City<br>BELFORD   | State<br>New Jersey   | ZIP Code<br>07718  |   |
|       | Signature   | Date 02/03/20   | 17 Telephone   |   |
|       | (T.C.F.) Allow Contraction Certificate and all  | attachments for (1) communit  | OI7 (732) 707-0318<br>y official, (2) insurance                        | agent/company, and (3) building ov  |
| · · · | Comments (including type of equipment and loca<br>THE DWELLING BUILDING HAS IT'S FINISHEE<br>THE FURNACE AND WATER HEATER ARE AT<br>THE AC UNIT IS ELEVATED AT ELEVATION<br>THE WALKOUT LEVEL ENCLOSURE FLOOR I<br>THE ATTACHED GARAGE FLOOR IS AT ELEV<br>THE ENGINEERED FLOOD VENTS ARE USA | Ationsper C2(e), if applicable<br>D FLOOR AT ELEVATION 1<br>ELEVATION 13.7'<br>I2.4'<br>S AT ELEVATION 5.9'<br>ATION 5.9'<br>VENTS, MODEL, FOSS (4) | )<br>3.6'<br>TC:F5<br>ika FO-3IG) EACH                                 | WITH 252 sq.ft. COVERAGE  |

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|--|--|---|--|
| A  | :  | OMB No. 16<br>Expiration D  | 160-0008<br>Jate: November 30, 2018  |
| spaces, copy the corresp   | onding information from Section A.   | FOR INSU  | RANCE COMPANY USE  |
| Address (including Apt., Unit, Sulte, NO. 110 BEVERLY WAY  | , and/or Bldg. No.) or P.O. Route and Bo   | ox No. Policy Num   | ber.   |
| NEPTUNE  | State ZIP Code<br>New Jersey 07753   | Company M   | IAIC Number  |
| SECTION E - BUILDING<br>FOR Z  | ELEVATION INFORMATION (SUR)  | /EY NOT REQUIRED<br>SFE)  | ))   |
| or Zones AO and A (without BFE), complete Item<br>omplete Sections A, B,and C. For Items E1~E4, under meters   | s E1-E5. If the Certificate is intended to<br>ise natural grade, if available. Check the   | support a LOMA or Lo<br>measurement used. I   | DMR-F request,<br>n Puerto Rico only,  |
| <ol> <li>Provide elevation information for the following<br/>the highest adjacent grade (HAG) and the low</li> </ol>   | and check the appropriate boxes to sho<br>est adjacent grade (LAG).  | w whether the elevation   | n is above or below  |
| a) Top of bottom floor (including basement,<br>crawlspace, or enclosure) is  | feet   | meters abov   | e or 🔲 below the HAG   |
| <li>b) Top of bottom floor (including basement,<br/>crawispace, or enclosure) is</li>  | feet   | meters abov   | e or 🔲 below the LAG.  |
| <ol> <li>For Building Diagrams 6–9 with permanent flo<br/>the next higher floor (elevation C2.b in<br/>the diagrams) of the suidless is</li> </ol>   | od openings provided in Section A Items  | s 8 and/or 9 (see page  | s 1-2 of Instructions),  |
| the diagrams) of the building is<br>A Attached garage (top of slab) is   |  | meters abov   | e or ∐below the HAG<br>e or ∏below the HAG   |
| . Top of platform of machinery and/or equipment  | nt 🗔 feet  | Timeters Dahou  | e or Delow the HAG   |
|  | illable, is the top of the bottom floor elev   | ated in accordance wit  | h the community's  |
| 5. Zone AO only: If no flood depth number is ava   | the state of a state of the sector state of a state  |   | ±  |
| 5. Zone AO only: If no flood depth number is ava<br>floodplain management ordinance?   | No Unknown. The local offi   | cial must certify this in   | formation in Section G.  |
| 5. Zone AO only: If no flood depth number is ava<br>floodplain management ordinance? Yes<br>SECTION F - PROPERTY of ourse's authorized represent   | No Unknown. The local offi   | cial must certify this in<br>ATIVE) CERTIFICATION   | formation in Section G.  |
| 5. Zone AO only: If no flood depth number is ava<br>floodplain management ordinance? Yes<br>SECTION F – PROPERTY of<br>the property owner or owner's authorized represent<br>mmunity-issued BFE) or Zone AO must sign her  | No Unknown. The local offi<br>OWNER (OR OWNER'S REPRESENT/<br>Intative who completes Sections A, B, and<br>e. The statements in Sections A, B, and                                 | cial must certify this in<br>ATIVE) CERTIFICATION<br>Id E for Zone A (without<br>E are correct to the bo  | formation in Section G.<br>DN<br>ut a FEMA-issued or<br>ast of my knowledge.             |
| 5. Zone AO only: If no flood depth number is ava<br>floodplain management ordinance? Yes<br>SECTION F – PROPERTY of<br>the property owner or owner's authorized represent<br>mmunity-issued BFE) or Zone AO must sign her<br>roperty Owner or Owner's Authorized Representation  | No Unknown. The local offi<br>OWNER (OR OWNER'S REPRESENT/<br>Intative who completes Sections A, B, and<br>e. The statements in Sections A, B, and<br>ative's Name                 | icial must certify this in<br>ATIVE) CERTIFICATION<br>Id E for Zone A (without<br>I E are correct to the biogeneric to the biogen | formation in Section G.<br>DN<br>It a FEMA-issued or<br>ast of my knowledge.             |
| 5. Zone AO only: If no flood depth number is ava<br>floodplain management ordinance? Yes<br>SECTION F – PROPERTY of<br>the property owner or owner's authorized represent<br>mmunity-issued BFE) or Zone AO must sign her<br>roperty Owner or Owner's Authorized Represente<br>ddress  | No Unknown. The local offi<br>OWNER (OR OWNER'S REPRESENT/<br>Intative who completes Sections A, B, and<br>e. The statements in Sections A, B, and<br>ative's Name<br>City         | cial must certify this in<br>ATIVE) CERTIFICATION<br>IN E for Zone A (without<br>E are correct to the biogeneric to the biogeneri | formation in Section G.<br>DN<br>ut a FEMA-issued or<br>ast of my knowledge.<br>ZIP Code |
| 5. Zone AO only: If no flood depth number is ava<br>floodplain management ordinance? Yes<br>SECTION F – PROPERTY of<br>the property owner or owner's authorized represent<br>immunity-issued BFE) or Zone AO must sign her<br>operty Owner or Owner's Authorized Representa<br>idress  | No Unknown. The local offi<br>OWNER (OR OWNER'S REPRESENT/<br>Intative who completes Sections A, B, and<br>e. The statements in Sections A, B, and<br>ative's Name<br>City<br>Date | cial must certify this in<br>ATIVE) CERTIFICATION<br>IN E are correct to the biogram<br>State<br>Telephone  | formation in Section G.<br>DN<br>ut a FEMA-issued or<br>ast of my knowledge.<br>ZIP Code |
| 5. Zone AO only: If no flood depth number is ava<br>floodplain management ordinance? Yes<br>SECTION F – PROPERTY of<br>reproperty owner or owner's authorized represent<br>mmunity-issued BFE) or Zone AO must sign her<br>operty Owner or Owner's Authorized Representa<br>Idress<br>gnature  | No Unknown. The local offi<br>OWNER (OR OWNER'S REPRESENT/<br>Intative who completes Sections A, B, and<br>e. The statements in Sections A, B, and<br>ative's Name<br>City<br>Date | icial must certify this in<br>ATIVE) CERTIFICATION<br>I E are correct to the biogram<br>State<br>Telephone  | formation in Section G.<br>DN<br>ut a FEMA-issued or<br>ast of my knowledge.<br>ZIP Code |
| 5. Zone AO only: If no flood depth number is ava<br>floodplain management ordinance? Yes<br>SECTION F – PROPERTY of<br>re property owner or owner's authorized represent<br>mmunity-issued BFE) or Zone AO must sign her<br>operty Owner or Owner's Authorized Represent<br>Idress<br>gnature  | No Unknown. The local offi<br>OWNER (OR OWNER'S REPRESENT)<br>Intative who completes Sections A, B, and<br>e. The statements in Sections A, B, and<br>ative's Name<br>City<br>Date | icial must certify this in<br>ATIVE) CERTIFICATION<br>Id E for Zone A (without<br>E are correct to the biogeneric<br>State<br>Telephone   | formation in Section G.<br>DN<br>ut a FEMA-issued or<br>ast of my knowledge.<br>ZIP Code |
| Score AO only: If no flood depth number is ava<br>floodplain management ordinance? Yes<br>SECTION F – PROPERTY of<br>e property owner or owner's authorized represent<br>mmunity-issued BFE) or Zone AO must sign her<br>operty Owner or Owner's Authorized Represent<br>Idress<br>gnature<br>omments                                      | No Unknown. The local offi<br>OWNER (OR OWNER'S REPRESENT)<br>Intative who completes Sections A, B, and<br>e. The statements in Sections A, B, and<br>ative's Name<br>City<br>Date | cial must certify this in<br>ATIVE) CERTIFICATION<br>Id E for Zone A (without<br>E are correct to the bio<br>State<br>Telephone   | formation in Section G.<br>DN<br>ut a FEMA-issued or<br>ast of my knowledge.<br>ZIP Code |
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| TAT  | ſE  |  | OMB No. 1<br>Expiration I                         | 660-0008<br>Date: November 30, 20               |
|--|---|--|---|---|
| spaces, ci   | opy the corresponding information   | n from Section A.                                    | FOR INSU  | RANCE COMPANY U                                 |
| Address (including<br>NO. 110 BEVERLY  | Apt., Unit, Suite, and/or Bidg. No.) c<br>WAY   | or P.O. Route and Box                                | No. Policy Nun                                    | nber:   |
| NEPTUNE  | State<br>New Jersey   | ZIP Code<br>07753                                    | Company   | NAIC Number                                     |
|  | SECTION G - COMMUNITY I   | NFORMATION (OPTIC                                    | DNAL)   |   |
| The local official who is authorized<br>Sections A, B, C (or E), and G of t<br>used in Items G8–G10. In Puerto   | d by law or ordinance to administer t<br>this Elevation Certificate. Complete t<br>Rico only, enter meters.                             | he community's floodpl<br>the applicable item(s) a   | lain management or<br>Ind sign below. Che         | dinance can complete<br>ck the measurement      |
| G1. The information in Secti<br>engineer, or architect wi<br>data in the Comments a  | on C was taken from other documen<br>ho is authorized by law to certify elev<br>rea below.)   | ntation that has been si<br>vation information. (Ind | gned and sealed by<br>Icate the source and        | a licensed surveyor,<br>d date of the elevation |
| G2. A community official cor<br>or Zone AO.  | npleted Section E for a building loca   | ited in Zone A (without                              | a FEMA-issued or o                                | community-issued BFE                            |
| G3.  The following informatio  | n (Items G4–G10) is provided for co   | ommunity floodplain ma                               | nagement purpose                                  | S.  |
| G4. Permit Number  | G5. Date Permit Issu  | led  | G6. Date Certific<br>Compliance/                  | ate of<br>Occupancy Issued                      |
| <ul> <li>G7. This permit has been issued</li> <li>G8. Elevation of as-built lowest flore building:</li> </ul>  | for: New Construction   | Substantial Improvem                                 | ent   | Datum   |
| <ul> <li>G7. This permit has been issued</li> <li>G8. Elevation of as-built lowest flort the building:</li> <li>G9. BFE or (in Zone AO) depth of</li> <li>T0. Community's design flood el</li> <li>Local Official's Name</li> </ul>  | for: [] New Construction []<br>loor (including basement)<br>of flooding at the building site:   | Substantial Improvem                                 | ient<br>feet meters<br>feet meters<br>feet meters | Datum<br>Datum<br>Datum                         |
| <ul> <li>G7. This permit has been issued</li> <li>G8. Elevation of as-built lowest flor of the building:</li> <li>G9. BFE or (in Zone AO) depth of the building.</li> <li>G9. Community's design flood elevational design flo</li></ul> | for: INew Construction  | Substantial Improvem                                 | ient  | Datum<br>Datum<br>Datum                         |
| <ul> <li>G7. This permit has been issued</li> <li>G8. Elevation of as-built lowest flof the building:</li> <li>G9. BFE or (in Zone AO) depth of</li> <li>G10. Community's design flood el</li> <li>Local Official's Name</li> <li>Community Name</li> <li>Signature</li> </ul>   | for:  New Construction  ioor (including basement)  of flooding at the building site:  | Substantial Improvem                                 | ient  | Datum<br>Datum<br>Datum                         |
| <ul> <li>G7. This permit has been issued</li> <li>G8. Elevation of as-built lowest flor of the building:</li> <li>G9. BFE or (in Zone AO) depth of</li> <li>T10. Community's design flood el</li> <li>Local Official's Name</li> <li>Community Name</li> <li>Signature</li> <li>Comments (including type of equility)</li> </ul>   | for:  New Construction  ioor (including basement)  of flooding at the building site:  levation:  poment and location, per C2(e), if app | Substantial Improvem                                 | ent   | Datum<br>Datum<br>Datum                         |
| <ul> <li>G7. This permit has been issued</li> <li>G8. Elevation of as-built lowest flor of the building:</li> <li>G9. BFE or (in Zone AO) depth of</li> <li>G9. Community's design flood el</li> <li>Local Official's Name</li> <li>Community Name</li> <li>Signature</li> <li>Comments (including type of equil)</li> </ul>   | for: New Construction   | Substantial Improvem                                 | ent   | Datum<br>Datum<br>Datum                         |
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FEMA Form 086-0-33 (7/15)

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## **ICC-ES Evaluation Report**

EVALUATION

Most Widely Accepted and Trusted

#### ESR-3907

www.icc-es.org | (800) 423-6587 | (562) 699-0543

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

REPORT HOLDER:

USA FLOOD AIR VENTS, LTD. 63 PUTNAM STREET SUITE 202 SARATOGA SPRINGS, NEW YORK 12866 (631) 269-1872 www.usafloodairvents.com info@usafloodairvents.com

#### EVALUATION SUBJECT:

USA FLOOD AIR VENTS: MODELS FOSS; FASS; FOAL; FAAL; ROAL

#### 1.0 EVALUATION SCOPE

Compliance with the following codes:

2015 and 2012 International Building Code<sup>®</sup> (IBC)

■ 2015 and 2012 International Residential Code<sup>®</sup> (IRC)

#### Property evaluated:

- Physical operation
- Water flow
- Ventilation
- 2.0 USES

The USA Flood Air Vents are used to provide for the equalization of hydrostatic flood forces on exterior walls. Certain models also allow natural ventilation.

#### 3.0 DESCRIPTION

#### 3.1 General:

USA Flood Air Vents are engineered mechanically operated flood vents that automatically allow flood waters to enter and exit enclosed areas. The vents are constructed of stainless steel or aluminum. On contact with rising flood water, the grill will disengage from its secured position, allowing flood water and debris to flow through in either direction. See Table 1 for vent sizes and Figure 1 for an illustration of the vents.

3.1.1 FOSS: The FOSS is constructed of stainless steel and has a solid flap to prevent the free flow of air into the under-floor space. A Subsidiary of the International Code Council® -

**3.1.2 FASS:** The FASS is constructed of stainless steel and has a flap with  $\frac{1}{4}$  inch (6 mm) diameter holes to allow for the ventilation of under-floor spaces.

**3.1.3 FOAL:** The FOAL is constructed of aluminum and has a solid flap to prevent the free flow of air into the under-floor space.

**3.1.4 FAAL:** The FAAL is constructed of aluminum and has a flap with  $\frac{1}{4}$  inch (6 mm) diameter holes to allow for the ventilation of under-floor spaces.

**3.1.5 ROAL:** The ROAL is constructed of aluminum and has a solid flap to prevent the free flow of air into the under-floor space, it is intended for retrofit applications.

#### 3.2 Engineered Opening:

The USA Flood Air Vents flood vents comply with the design principle noted in Section 2.7.2.2 of ASCE/SEI 24-14 (Section 2.6.2.2 of ASCE/SEI 24-05) for a rate of rise and fall of 5 feet per hour (0.423 mm/s). In order to comply with the engineered opening requirement of ASCE/SEI 24, USA Flood Air Vents flood vents must be installed in accordance with Section 4.0.

#### 3.3 Ventilation:

USA Flood Air Vents models FASS and FAAL have <sup>1</sup>/<sub>4</sub> inch (6 mm) diameter holes in the flap to supply natural ventilation for under-floor ventilation. See Table 1 for the net free area provided for under-floor ventilation.

#### 4.0 DESIGN AND INSTALLATION

USA Flood Air Vents flood vents are designed to be installed into walls or doors of existing or new construction. Installation of the flood vents must be in accordance with the manufacturer's instructions, the applicable code and this report. USA Flood Air Vents flood vents can be installed in wood, masonry and concrete walls. In order to comply with the engineered opening design principle noted In Section 2.7.2.2 of ASCE/SEI 24-14 (Section 2.6.2.2 of ASCE/SEI 24-05), the USA Flood Air Vents flood vents must be installed as follows:

- With a minimum of two openings on different sides of each enclosed area.
- With a minimum of one flood vent per the amount of enclosed area coverage noted in Table 1.
- Below the base flood elevation.
- With the bottom of the flood vent located a maximum of 12 inches (305 mm) above grade.

ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.



Page 1 of 2

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U.S. DEPORTMENT OF HOMELAND SECURITY FEDERAL EMERGENSY MANAGEMENT AGENCY National Flood Insurance Program

# **ELEVATION CERTIFICATE**

Important: Read the instructions on pages 1-9.

OMB No. 1660-0008 Expiration Date: July 31, 2015

| SECTION A - PROPERTY INFORMATION  | EORINSURANCE COMPANY USE   |
|---|--|
| A1. Building Owner's Name DIANE & DOUG BROPHY   | RolicyNumber   |
| 2. Building Street Address (including Apt., Unit, Sulte, and/or Bidg. No.) or P.O. Route and Box No.<br>114 FAIRVIEW PLACE  | Company NAIC Number  |
| City NEPTUNE TOWNSHIP State NJ ZIP Code 07753   |  |
| A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)<br>LOTS 6-10 BLK 474   |  |
| <ul> <li>A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <u>RESIDENTIAL</u></li> <li>A5. Latitude/Longitude: Lat. <u>40.1934</u> Long. <u>74.0409</u> Horizontal Datum: □ NAD 1927 ⊠ NAD 1983</li> <li>A6. Attach at least 2 photographs of the building If the Certificate is being used to obtain flood insurance.</li> <li>A7. Building Diagram Number <u>7</u></li> <li>A8. For a building with a crawlspace or enclosure(s): A9. For a building with an atta a) Square footage of crawlspace or enclosure(s) <u>1200</u> sq ft a) Square footage of att b) Number of permanent flood openings In the crawlspace</li> <li>b) Number of permanent flood openings In the crawlspace</li> <li>c) Total net area of flood openings? ⊠ Yes □ No</li> <li>d) Engineered flood open</li> </ul>  | ached garage:<br>ached garage <u>375</u> sq ft<br>t flood openIngs in the attached garage<br>adjacent grade <u>2</u><br>d openings in A9.b <u>400</u> sq in<br>nings? <u>X</u> Yes <u>No</u> |
| SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATIO  | )N   |
| B1.     NFIP Community Name and Community Number     B2. County Name       TO     Township of Neptune, 340317     MONMOUTH  | B3. State<br>NJ  |
| B4. Map/Panel Number<br>0333B5. Suffix<br>FB6. FIRM Index Date<br>9-25-2009B7. FIRM Panel<br>Effective/Revised Date<br>9-25-2009B8. Flood<br>Zone(s)<br>AE  | B9. Base Flood Elevation(s) (Zone<br>AO, use base flood depth)<br>9  |
| B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9.         □ FIS Profile       ☑ FIRM       □ Community Determined       □ Other/Source:         B11. Indicate elevation datum used for BFE in Item B9:       □ NGVD 1929       ☑ NAVD 1988       □ Other/Source:         B12. Is the building located in a Geastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)?       □ CBRS       □ OPA   | Yes 🛛 No   |
| SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REGU   |  |
| <ul> <li>C1. Building elevations are based on: Construction Drawings* Building Under Construction*         *A new Elevation Certificate will be required when construction of the building is complete.         C2. Elevations – Zones A1–A30, AE, AH, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AF below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.         Benchmark Utilized: <u>GPS OBSERVATION</u>         Vertical Datum: <u>NAVD '88</u>         Indicate elevation datum used for the elevations in Items a) through h) below. INGVD 1929 INAVD 1988 Indicate elevations must be the same as that used for the BFE.         Check         Check</li></ul> | X Finished Construction  |
| a) Top of bottom floor (including basement, crawlspace, or enclosure floor) 7.0   | ⊠ feat □ meters  |
| b) Top of the next higher floor <u>15.8</u>   | i feet ☐ meters  |
| c) Bottom of the lowest horizontal structural member (V Zones only)   | ☐ feet ☐ meters  |
| d) Attached garage (top of slab)       Z.0         e) Lowest elevation of machinery or equipment servicing the bullding       14.5         (Describe type of equipment and location in Comments)       14.5   | i feet ☐ meters<br>I feet ☐ meters   |
| f) Lowest adjacent (finished) grade next to building (LAG)       6.6         g) Highest adjacent (finished) grade next to building (HAG)       Z.Z  | ⊠ feet     □ meters       ⊠ feet     □ meters       ⊠ feet     □ meters  |
|   |  |
| SECTION D - SURVETOR, ENGINEER, OR ARCHITECT CERTIFICATI  |  |
| information. I certify that the information on this Certificate represents my best efforts to interpret the data available.<br>I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.<br>☐ Check here if comments are provided on back of form. Were latitude and longitude in Section A provided by<br>☐ Check here if attachments. Icensed land surveyor? ☐ Yes ☐ No   | a PLACE<br>SEAL  |
| Sertifier's Name KENNETH P. FRANK License Number 36727  | HERE   |
| Title OWNER/PRESIDENT         Company Name         KF2T PROFESSIONAL LAND SURVEYORS   |  |
| Address P.O. BOX 521 City COLTS NECK State NJ ZIP Code 07722  | ·····  |
| Signature // Date 2-19-16 Telephone 908-692-7853  |  |

|   | aces, copy the corresponding i   | nformation from Section   | A. I   | EOR INSURANCE COM  | PANYLIGE  |
|---|--|---|--|--|---|
| inclu   | iding Apt., Unit, Sulte, and/or Bldg. No.  | ) or P.O. Route and Box No.   | •  | Policy Number  |   |
| WNSHIP  |  | State NJ ZIP Code   | 07753  | Company NAIC Number  |   |
| s   | ECTION D - SURVEYOR, ENGIN   | EER, OR ARCHITECT CE  | RTIFICATION (C   |  |   |
| sides of this Eleva   | tion Certificate for (1) community officir   | I. (2) insurance agent/compan   | v. and (3) building r  | w/ner  |   |
| Aents LOWEST ELEV   | ATION OF VISIBLE MACHINERY SEF<br>-520. ABFE : A 1% EL 10 & 0.2% EL  | VICING THE DWELLING IS T<br>12.   | HE AC UNIT ON A  | WOODEN PLATFORM.   | SMART   |
| ignature Komon  | -P.L.C   | Date 2-19-16  |  |  | •<br>   |
| SECTION E - BUILDI  | NG ELEVATION INFORMATION   | SURVEY NOT REQUIRED   | ) FOR ZONE AC  | AND ZONE A (WITH   | OUT BFE)  |
| <ol> <li>nd C. For Items E1-E4, use</li> <li>Provide elevation inforr<br/>grade (HAG) and the lo<br/>a) Top of bottom floor (</li> <li>b) Top of bottom floor (</li> <li>b) Top of bottom floor (</li> <li>c) For Building Diagrams<br/>(elevation C2.b in the d</li> <li>Attached garage (top or</li> <li>Top of platform of mach</li> <li>Zone AO only: If no floor</li> </ol>  | i natural grade, if available. Check the in-<br>nation for the following and check the is<br>west adjacent grade (LAG).<br>Including basement, crawispace, or en-<br>including basement, crawispace, or en-<br>6-9 with permanent flood openings pro-<br>iagrams) of the building is<br>f slab) is feet [<br>hinery and/or equipment servicing the b<br>od depth number is available, is the top | neasurement used. In Puerto<br>ppropriate boxes to show whe<br>losure) is   | Rico only, enter me<br>ther the elevation is<br>feet                                   | ters.<br>above or below the high<br>above or below the<br>above or below the<br>9 of Instructions), the new<br>he HAG.<br>bove or below the HAG<br>bove or below the HAG | est adjacent<br>HAG.<br>LAG.<br>Kt higher floo<br>G.<br>managemer |
| ordinance? 🗌 Yes [  | ] No [] Unknown. The local official  | must certify this information in  | Section G.   |  |   |
| SI  | ECTION F - PROPERTY OWNER  | (OR OWNER'S REPRESE   | NTATIVE) CERT  | IFICATION  | <u></u>   |
| operty Owner's or Owner's<br>dress  | Authorized Representative's Name   | City  | State  | * ZIP Code   |   |
| gnature   | να ματαγματικά του το πολογία το το πορολογία το Μαζαγματικο ποιο το Ναταγματικο το Ναταγματικο το Ναταγματικο<br>Το πολογία το πολογία το πολογία το πολογία το πολογία το Μαζαγματικο πολογία το πολογία το πολογία το πολογία τ   | Date  | Telepi   | ione   |   |
| ornments  | SECTION G - COM  | MUNITY INFORMATION (  | OPTIONAL)  | Check her  | e if attachme   |
|   | plete the applicable item(s) and sign be   | iommunity's nooopiain manag-<br>low. Check the measurement unitation that has been signed an  | ement ordinance ca<br>sed in Items G8-G1<br>d sealed by a licen:                       | n complete Sections A, B,<br>O. In Puerto Rico only, enl<br>sed surveyor, engineer, of<br>Comments area below.)  | c (or E), and<br>ter meters.<br>r architect wi                    |
| The information in Section Certificate. Con     The information in Section 2 authorized by law t     A community official C     The following information   | ection C was taken from other documer<br>o certify elevation information. (Indicat<br>completed Section E for a building loca<br>tion (Items C4-G10) is provided for co  | e the source and date of the el<br>led in Zone A (without a FEMA<br>mmunity floodplain manageme   | evation data in the<br>-issued or commun<br>nt purposes.                               | Ity-Issued BFE) or Zone A  | 40,   |
| Iocal official who is authonization Certificate. Com     The information in Se     is authorized by law t     A community official o     The following informa     Permit Number  | ection C was taken from other documer<br>o certify elevation information. (Indicat<br>completed Section E for a building loca<br>tlon (Items G4–G10) is provided for co  | e the source and date of the el<br>ted in Zone A (without a FEMA<br>mmunity floodplain manageme<br>G6. Date   | evation data in the<br>-issued or commun<br>int purposes.<br>e Certificate Of Con      | Ity-Issued BFE) or Zone A  | 40.<br>   |
| The information in Section Certificate. Com     The information in Section Certificate. Com     The information in Section Certificate. Com     A community official of     A community official of     The following information     The following information     This permit has been issue     Elevation of as-built lowes     BFE or (In Zone AO) depth     Community's design flood   | ection C was taken from other documer<br>o certify elevation information. (Indical<br>completed Section E for a building loca<br>ition (Items G4–G10) is provided for co<br>G5. Date Permit Issued<br>ed for: New Construction<br>t floor (including basement) of the build<br>o of flooding at the building site:<br>elevation:   | e the source and date of the el<br>ted in Zone A (without a FEMA<br>mmunity floodplain manageme<br>G6. Date<br>Substantial Improvement<br>ling: fee<br>fee  | evation data in the<br>-issued or commun<br>ent purposes.<br>e Certificate Of Com<br>t | Ity-Issued BFE) or Zone A<br>npliance/Occupancy Issue<br>Datum<br>Datum<br>Datum   | AO.   |
| The information in Section Certificate. Com The information in Section Certificate. Com The information in Section Certificate. Com The information in Section Certificate of Section                     | ection C was taken from other documer<br>o certify elevation information. (Indicat<br>completed Section E for a building loca<br>ition (Items G4–G10) is provided for co<br>G5. Date Permit Issued<br>ed for: New Construction<br>t floor (including basement) of the build<br>of flooding at the building site:<br>elevation:   | e the source and date of the el<br>ted in Zone A (without a FEMA<br>mmunity floodplain manageme<br>G6. Date<br>Substantial Improvement<br>ling: fee<br>fee<br>fee<br>fee  | evation data in the<br>-issued or commun<br>ent purposes.<br>e Certificate Of Con<br>t | Ity-Issued BFE) or Zone A<br>npliance/Occupancy Issue<br>Datum<br>Datum<br>Datum   | AO.   |
| The information in Section Certificate. Com A community official of a community official of a community official of a community official of the permit has been issued. This permit has been issued. This permit has been issued. Elevation of as-built lowes. BFE or (In Zone AO) deption. Community's design flood. Cal Official's Name. Section Cal Official's Name.   | ection C was taken from other documer<br>o certify elevation information. (Indicat<br>completed Section E for a building loca<br>itlon (Items G4–G10) is provided for co<br>G5. Date Permit Issued<br>ed for: New Construction<br>t floor (including basement) of the build<br>o of flooding at the building site:<br>elevation:   | e the source and date of the el<br>ted in Zone A (without a FEMA<br>mmunity floodplain manageme<br>G6. Date<br>Substantial Improvement<br>ling: fee<br>fee<br>fee<br>fee<br>fee<br>fee<br>fee   | evation data in the<br>-issued or commun<br>int purposes.<br>e Certificate Of Con<br>t | Ity-Issued BFE) or Zone A<br>npliance/Occupancy issue<br>Datum<br>Datum<br>Datum   | AO.<br>ad   |
| Inicial official | ection C was taken from other documer<br>o certify elevation information. (Indicat<br>completed Section E for a building loca<br>itlon (Items G4–G10) is provided for co<br>G5. Date Permit Issued<br>ed for: New Construction<br>t floor (including basement) of the build<br>a of flooding at the building site:<br>elevation:   | e the source and date of the el<br>ted in Zone A (without a FEMA<br>mmunity floodplain manageme<br>G6. Date<br>Substantial Improvement<br>ling: fee<br>fee<br>fee<br>fee<br>fee<br>fee<br>fee<br>fee<br>fee<br>fee<br>fee<br>fee<br>fee | evation data in the<br>-issued or commun<br>int purposes.<br>e Certificate Of Con<br>t | Ity-Issued BFE) or Zone A<br>npliance/Occupancy Issue<br>Datum<br>Datum<br>Datum   | AO.   |
| <ul> <li>Inceal official who is authorized in Certificate. Com</li> <li>The information in Section is authorized by law t</li> <li>A community official of</li> <li>The following information information in Section 1.</li> <li>Permit Number</li> <li>This permit has been issue</li> <li>Elevation of as-built lowes</li> <li>BFE or (In Zone AO) depthered in Section 1.</li> <li>Community's design flood</li> <li>cal Official's Name</li> <li>mmunity Name</li> <li>gnature</li> <li>mments</li> </ul>   | ection C was taken from other documer<br>o certify elevation information. (Indical<br>completed Section E for a building loca<br>ition (Items G4–G10) is provided for co<br>G5. Date Permit Issued<br>ed for: New Construction<br>t floor (including basement) of the build<br>a of flooding at the building site:<br>elevation:   | e the source and date of the el<br>ted in Zone A (without a FEMA<br>mmunity floodplain manageme<br>G6. Date<br>Substantial Improvement<br>ling: fee<br>fee<br>fee<br>fee<br>fee<br>fee<br>fee<br>fee                                    | evation data in the<br>-issued or commun<br>int purposes.<br>e Certificate Of Con<br>t | Ity-Issued BFE) or Zone A<br>npliance/Occupancy issue<br>Datum<br>Datum<br>Datum   | AO.   |

FEMA Form 086-0-33 (7/12)

Replaces all previous editions.

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FICATE, page 3

# Building Photographs See Instructions for Item A6.

| : In these spaces, copy the corresponding                              | FOR INSURANCE COMPANY USE      |                      |
|--|--------------------------------|----------------------|
| deet Address (including Apt., Unit, Suite, and/or Bldg.<br>AVIEW PLACE | No.) or P.O. Route and Box No. | Policy Number        |
| NEPTUNE TOWNSHIP   | State NJ ZIP Code 07753        | Company NAIC Number: |

If using the Elevation Certificate to obtain NFIP flood insurance, affix at least 2 building photographs below according to the instructions for Item A8. Identify all photographs with date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8. If submitting more photographs than will fit on this page, use the Continuation Page.



FEMA Form 086-0-33 (7/12)

Replaces all previous editions.

//FICATE, page 4

# Building Photographs Continuation Page

| In these spaces, copy the correspo                | FOR INSURANCE COMPANY USE            |                      |
|---|--------------------------------------|----------------------|
| veet Address (including Apt., Unit, Suite, and/or | Bldg, No.) or P.O. Route and Box No. | Policy Number:       |
| NEPTUNE TOWNSHIP                                  | State NJ ZIP Code 07753              | Company NAIC Number: |

If submitting more photographs than will fit on the preceding page, affix the additional photographs below. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8.



FEMA Form 086-0-33 (7/12)



### **CC-ES Evaluation Report**

Most Widely Accepted and Trusted

ESR-2074

Reissued February 2015 Revised May 2016 This report is subject to renewal February 2017.

A Subsidiary of the International Code Council®

www.icc-es.org | (800) 423-6587 | (562) 699-0543

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

REPORT HOLDER:

SMARTVENT PRODUCTS, INC. 430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071 (877) 441-8368 www.smartvent.com info@smartvent.com

#### 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

#### 1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2015, 2012, 2009 and 2006 International Building Code<sup>®</sup> (IBC)
- 2015, 2012, 2009 and 2006 International Residential Code<sup>®</sup> (IRC)
- 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

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The Smart Vent<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT<sup>®</sup> Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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<sup>®</sup> Model #1540-510 and SmartVENT<sup>®</sup> Overhead Door Model #1540-514 both have screen covers with <sup>1</sup>/<sub>4</sub>-inch-by-<sup>1</sup>/<sub>4</sub>-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<sup>®</sup> 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 recognized in this report do not offer natural ventilation.

#### 4.0 DESIGN AND INSTALLATION

SmartVENT<sup>®</sup> and FloodVENT<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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.

ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.



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FIGURE 1-SMART VENT: MODEL 1540-510



FIGURE 2-SMART VENT MODEL 1540-520



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

Page 3 of 3

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

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OMB No. 1660-0008 Expiration Date: November 30, 2018

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# **ELEVATION CERTIFICATE**

Important: Follow the instructions on pages 1-9.

| Copy all pages of this Elevation Certificate and all attachments for | (1) | <ol> <li>community official</li> </ol> | . (2 | ) insurance agent/company | and (3) building owner. |
|--|-----|--|------|---------------------------|-------------------------|
|--|-----|--|------|---------------------------|-------------------------|

| SECTIO  | ON A - PROPERTY I  | NFORMATION  |                       | FOR INSUR       | ANCE COMPANY USE  |
|---|--|---|-----------------------|-----------------|---|
| A1. Building Owner's Name                                       |  |   |                       |                 | )er:  |
| Charles & Jayne Johnson   |  |   |                       |                 | 3   |
| A2. Building Street Address (Inclu<br>Box No.<br>29 Albany Road | ding Apt., Unit, Suite,  | and/or Bldg. No.) or P.O.                           | Route and             | Company N       | AIC Number:   |
| City  | аннаринин алтан ал дэгүйн хэрэгтээ ал ал ал ад од нэрэгтээ алтан алтан | State   |                       | ZIP Code        |   |
| Neptune Township  |  | New Jersey  |                       | 07753           |   |
| A3. Property Description (Lot and<br>Lot 23 / Block 5602        | Block Numbers, Tax   | Parcel Number, Legal De                             | scription, etc.)      | ł               |   |
| A4. Building Use (e.g., Residentia                              | I, Non-Residential, A  | ddition, Accessory, etc.)                           | Residential           |                 |   |
| A5. Latitude/Longitude: Lat. 40-1                               | 11-28 N L  | ong. 74-01-36 W                                     | Horizontal Datum      | : 🔄 NAD 1       | 927 🕅 NAD 1983  |
| A6. Attach at least 2 photographs                               | of the building if the (   | Certificate is being used to                        | o obtain flood insura | ance.           |   |
| A7. Building Diagram Number                                     | 8  |   |                       |                 | y   |
| A8. For a building with a crawlspa                              | ice or enclosure(s);   |   |                       |                 |   |
| a) Square footage of crawlsp                                    | ace or enclosure(s)  | 1,142 sq ft   |                       |                 |   |
| b) Number of permanent floo                                     | d openings in the craw   | wispace or enclosure(s) w                           | ithin 1.0 foot above  | adjacent gra    | ide 6   |
| c) Total net area of flood ope                                  | nings in A8.b (see   | comments)   |                       |                 | ₩ <mark>₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩</mark>  |
| d) Engineered flood openings                                    | 57 🕅 VAE 🗍 NO  |   |                       | \$              |   |
|   |  |   |                       | •               |   |
| A9. For a building with an attache                              | d garage:  |   |                       |                 |   |
| <ul> <li>a) Square footage of attache</li> </ul>                | d garage 0   | sợ ft   |                       |                 |   |
| b) Number of permanent floo                                     | d openings in the atta   | ched garage within 1.0 fo                           | ot above adjacent o   | )rade           | <b>)</b>  |
| c) Total net area of flood ope                                  | nings in A9.b(   | ) sq In   |                       |                 | 4   |
| d) Engineered flood opening                                     | s? 🗌 Yes 🕱 No  | <b>}</b> .  |                       |                 |   |
| SEC   | TION B - FLOOD IN  | SURANCE RATE MAP                                    | (FIRM) INFORMA        | TION            |   |
| B1. NFIP Community Name & Con                                   | nmunity Number   | B2. County Name                                     |                       |                 | B3. Stete   |
| Neptune, Township of 340317                                     |  | Monmouth  |                       |                 | i New Jersey  |
| B4. Map/Panel B5. Suffix<br>Number                              | B6. FIRM Index<br>Date   | B7. FIRM Panel<br>Effective/<br>Revised Date        | B8. Flood Zone(s      | B9, Bas<br>(Zoi | e Flood Elevation(s)<br>te AO, use Base   |
| 34025C0334 F  | 09/25/2009   | 09/25/2009  | AE (PBM AE)           | 9 (PBFI         | Ξ 10)   |
| B10. Indicate the source of the Ba                              | ase Flood Elevation (E<br>] Community Determi                          | BFE) data or base flood di<br>ined [] Other/Source: | epth entered in Iterr | ı B9:           | ی اور می در این این اور این اور این   |
| B11. Indicate elevation datum use                               | ed for BFE in Item 89:   | 🗌 NGVD 1929 🛛 NA                                    | VD 1988 🔲 Ot          | her/Source:     | ور در ۲۰۰۵ میلید.<br>مرابع میرون می |
| B12. Is the building located in a C                             | loastal Barrier Resour   | ces System (CBRS) area                              | or Otherwise Prote    | cted Area (C    | PA)? TYes IXI No  |
| Designation Date:   |  |   |                       | L.              | Cond Cond   |
|   | *  |   |                       |                 |   |
| FEMA Form 086-0-33 (7/15)                                       | Rej  | places all previous edition                         | \$.                   |                 | Form Page 1 of 6  |

| , these space   | es, copy the correspondi   | ng information from Se  | ction A.   | FOR INSURAL   | NCE COMPANY U                              |
|---|--|---|--|---|--|
| any Road  | uding Apt., Unit, Suite, and   | or Bidg. No.) or P.O. Ro  | ute and Box No.  | Policy Number   | •  |
| Jiy<br>Neptune Township   | S  | itate ZIP<br>Iew Jersey 077   | Code<br>753  | Company NAI   | C Number                                   |
| S   |  | LEVATION INFORMA  | TION (SURVEY   | REQUIRED)   |  |
| C1. Building elevations are<br>*A new Elevation Certi   | based on:  Construction Constru | tion Drawings* [] Bui   | ilding Under Cons<br>ling is complete.                       | truction* 🛛 Fin   | ished Construction                         |
| C2. Elevations – Zones A1<br>Complete Items C2.a–<br>Benchmark Utilized: M  | –A30, AE, AH, A (with BFE<br>h below according to the bi<br>lon, DM6975  | <ol> <li>VE, V1–V30, V (with E<br/>uilding diagram specified<br/>Vertical Datum</li> </ol>                    | BFE), AR, AR/A, A<br>in Item A7, In Pue                      | NR/AE, AR/A1–A30<br>erto Rico only, ent                   | ), AR/AH, AR/AO.<br>er meters.             |
| Indicate elevation datu   | m used for the elevations in   | n items a) through h) bek   | ow.  |   | -  |
| NGVD 1929   | X NAVD 1988 Othe   | r/Source:   | PCC  |   | ····                                       |
| Darum used for buildin  | y erevations must be the sa  | Tille as fildt usen for file -  | orc.   | Check the I   | neasurement used                           |
| <ul> <li>a) Top of bottom floor</li> </ul>  | (including basement, craw  | Ispacë, or enclosure floo   | r) <u>6. 74</u>  | X fee   | t 🔲 meters                                 |
| <li>b) Top of the next hig</li>   | ner floor  |   | <u> </u>   | X fee   | t 🔲 meters                                 |
| <ul><li>c) Bottom of the lowes</li></ul>  | t horizontal structural mem  | iber (V Zones only)   | <u> </u>   | X fee   | t 🔲 meters                                 |
| d) Attached garage (tr  | op of slab)  |   | <u> </u>   | X fee   | t 🗌 meters                                 |
| e) Lowest elevation of<br>(Describe type of e   | <sup>i</sup> machinery or equipment s<br>quipment and location in C  | ervicing the building<br>omments)   | 19.97  | X fee   | t 🔲 meters                                 |
| f) Lowest adjacent (fi  | nished) grade next to build  | ng (LAG)  | <u> </u>   | [X] fee   | t 📋 meters                                 |
| g) Highest adjacent (f  | inished) grade next to build   | ing (HAG)   | <u> </u>   | X fee   | t 🔲 meters                                 |
| <ul> <li>h) Lowest adjacent gr<br/>structural support</li> </ul>  | ade at lowest elevation of c   | leck or stairs, including   | <u> </u>   | • 🔀 fee   | t 📋 meters                                 |
| ······································  | SECTION D - SURVEYO  | R, ENGINEER, OR AR  | CHITECT CERT   | IFICATION   |  |
| This certification is to be signation<br>I certify that the information<br>statement may be punishal              | ned and sealed by a land<br>on this Certificate represe<br>ble by fine or imprisonment   | surveyor, engineer, or an<br>nts my best efforts to inte<br>under 18 U.S. Code, Se                            | chitect authorized<br>arpret the data ave<br>ction 1001.     | by law to certify el<br>allable. I understan              | evation information                        |
| Were latitude and longitude   | in Section A provided by a   | a licensed land surveyor?   | > ⊠Yes □No   | Check h   | ere if attachments.                        |
| Certifier's Name<br>Zenon T. Grybowski  | инии — тердица — тердина — тердина — тердина — тердинати   | License Number<br>23918   | ····   |   |  |
| Title<br>Vice President   | £40 <del>0011.0001.0001.0001.0000.0000.0000</del>  |   |  |   |  |
| Company Name<br>Landmark Surveying & Eng  | ineering   | ••••••••••••••••••••••••••••••••••••••  |  |   | Plaçe<br>Seal                              |
| Address<br>813 Main Street  |  | , , , , , , , , , , , , , , , , , , ,   |  |   | Here                                       |
| City<br>Avon-by-the-Sea   | and an   | State<br>New Jersey   | ZIP Code .<br>07717  |   |  |
| Signature Jum T G   | inflowsli  | Date<br>06/13/2016  | Telephone<br>(732) 775-8558                                  | В   | <b></b>                                    |
| Copy all pages of this Elevat   | ion Certificate and all attach   | ments for (1) community of  | official, (2) insurance                                      | ce agent/company,   | and (3) building own                       |
| Comments (including type of<br>The lowest elevation of mac<br>vents (SMART Vent Model/<br>FEMA website 06/13/2016 | if equipment and location, j<br>chinery are the Furnace and<br>t 1540-520) designed to co<br>NJ Preliminary FIRM Data,   | per C2(e), if applicable)<br>d Hot Water Heater at elever 200 square feet of er<br>the dwelling is in flood z | evation 19.97. Th<br>iclosed area which<br>one "AE", minimur | nere are no AC Un<br>h totals 1,200 squa<br>m PBFE is 10. | its. Engineered floc<br>are feet. Based on |
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| FICATE   |  |  |  | OMB No. 1660-0<br>Expiration Date:  | 008<br>November 30, 20  |
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| ese spaces, copy the   | e corresponding Information  | from Section A.  |  | FOR INSURAN   | CE COMPANY U  |
| Address (including Apt., U   | Jnit, Suite, and/or Bldg. No.) or  | r P.O. Route and B   | ox No.   | Policy Number:  |   |
|  | State  | ZIP Code   |  | Company NAIC  | Number  |
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|  | FOR ZONE AO AND ZON  | NE A (WITHOUT E  | BFE)   |   |   |
| For Zones AO and A (without BFE), com<br>complete Sections A, B,and C. For Items<br>enter meters.  | plete Items E1–E5. If the Certi<br>E1–E4, use natural grade, if a  | ficate is intended to<br>available. Check the  | e support a<br>e measuren  | LOMA or LOMR<br>nent used. In Pu  | -F request,<br>erto Rico only,  |
| <ul> <li>E1. Provide elevation information for the the highest adjacent grade (HAG) at a) Top of bottom floor (including based)</li> </ul>   | e following and check the appro<br>nd the lowest adjacent grade (<br>sement,   | priate boxes to shi<br>LAG).   | ow whether   | the elevation is  | above or below  |
| b) Top of bottom floor (including ba   | sement,  |  |  | apove or  |   |
| crawispace, or enclosure) is   |  |  |  | a Liabove or  |   |
| E2. For Building Diagrams 6–9 with perr<br>the next higher floor (elevation C2.b   | nanent flood openings provide<br>In  | a in Section A Item  | is 8 and/or⊺   | ⊎ (see pages 1–<br>s □ above or   | ∠ or instructions),   |
| E3. Attached garage (top of slab) is   | •  | iset   | meter  | s above or  | below the HA  |
| E4. Top of platform of machinery and/or servicing the building is  | equipment  | [] feet  | meters   | s 🔲 above or  | below the HA  |
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FEMA Form 086-0-33 (7/15)

Replaces all previous editions.

Form Page 5 of 6



OMB No. 1660-0008 2018

| <b><i>I</i>IFICATE</b>   | Continuation Page                                 |  | Expiration Date: November 30, 2018  |
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| inese spaces, copy the co  | rresponding information                           | from Section A.  | FOR INSURANCE COMPANY USE   |
| et Address (including Apt., Unit,<br>y Road  | Suite, and/or Bldg. No.) or                       | P.O. Route and Box No.                                 | Policy Number:  |
| Neptune Township   | State<br>New Jersey                               | ZIP Code<br>07753                                      | Company NAIC Number   |
| If submitting more photographs than will fit<br>with: date taken; "Front View" and "Rea<br>photographs must show the foundation with | on the preceding page,<br>View"; and, if required | affix the additional photog<br>, "Right Side View" and | raphs below. Identify all photographs<br>"Left Side View." When applicable, |



Photo One Caption

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Rear View - Taken 06/13/2016



FEMA Form 086-0-33 (7/15)

Replaces all previous editions.

SMART Vent Model# 1540-520 - Taken 06/13/2016

Form Page 6 of 6


ICC-ES Report

ICC-ES | (800) 423-6587 | (562) 699-0543 | www.icc-es.org

Most Widely Accepted and Trusted

# ESR-2074

Reissued 02/2015 This report is subject to renewal 02/2017.

### DIVISION: 08 00 00—OPENINGS SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS

**REPORT HOLDER:** 

## **SMARTVENT PRODUCTS, INC.**

430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071

### **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



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### **ICC-ES Evaluation Report**

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ESR-2074\*

Reissued February 2015

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A Subsidiary of the International Code Council®

This report is subject to renewal February 2017.

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

REPORT HOLDER:

SMARTVENT PRODUCTS, INC. 430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071 (877) 441-8368 www.smartvent.com info@smartvent.com

### **EVALUATION SUBJECT:**

SMART VENT<sup>®</sup> AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

### **1.0 EVALUATION SCOPE**

Compliance with the following codes:

- 2012, 2009 and 2006 International Building Code<sup>®</sup> (IBC)
- 2012, 2009 and 2006 International Residential Code<sup>®</sup> (IRC)
- 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT<sup>®</sup>Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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 2.6.2.2 of ASCE/SEI 24 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<sup>®</sup> Model #1540-510 and SmartVENT<sup>®</sup> Overhead Door Model #1540-514 both have screen covers with  $^{1}$ /<sub>4</sub>-inch-by- $^{1}$ /<sub>4</sub>-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<sup>®</sup> 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 recognized in this report do not offer natural ventilation.

### 4.0 DESIGN AND INSTALLATION

SmartVENT<sup>®</sup> and FloodVENT<sup>®</sup> 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. The mounting straps allow mounting in masonry and concrete walls up to 12 inches (305 mm) thick. In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the Smart Vent<sup>®</sup> 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<sup>●</sup> Stacking Model #1540-511 and FloodVENT<sup>●</sup> 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

\*Revised July 2015

ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.



grade or floor and finished exterior grade immediately under each opening.

### 5.0 CONDITIONS OF USE

The Smart Vent<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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

Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated October 2013 (editorially revised May 2014).

### 7.0 IDENTIFICATION

The Smart VENT<sup>®</sup> models recognized 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).

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

#### TABLE 1-MODEL SIZES

For SI: 1 lnch = 25.4 mm;  $1 \text{ square foot} = \text{m}^2$ 

| valiyna  | AL EMERGENCY MANA<br>A Floga Insurance Prog.  | GEMENT AGENC  | important: F   | Read th   | e instructions  | on page  | es 1-9.   | OMB N<br>Expirat                        | lo. 1660-0008<br>ion Date: July 31, 2015   |
|--|---|---|--|---|---|--|---|---|--|
|  |   |   | SEC  | TION A  | - PROPERTY I  | FORMA  | TION  | FOR IN                                  | SURANCE COMPANY USE  |
| 1. B   | Building Owner's Nam  | e Robert Hagler   |  |   |   |  |   | Policy N                                | umber:   |
| A2. B<br>337 S                                 | Building Street Addres  | s (including Apt.,  | Unit, Suite, and/or  | Bidg, N   | o.) or P.O. Route an  | id Box No.   |   | Compar                                  | y NAIC Number:   |
| C  | City Neptune  | a - The analysis of the second se              | AN   |   | State NJ ZIF  | Code 07  | 753   |   | ىرىنى بى <sub>رىكى</sub> يەرىپىيە يىلىرىكى بىلىرىكى بىلىرىكى بىلىرىكى بىلىكى بىلىكى بىلىكى بىلىكى بىلىكى بىلىكى بىلىكى بىل |
| A3. P<br>Lot 17                                | Property Description (L<br>7 Block 420 Q18  | ot and Block Nu   | mbers, Tax Parcel  | Number  | Legal Description,  | etc.)  | Į.  | louse                                   | Elevated   |
| A4. B<br>A5. L<br>A6. A<br>A7. B<br>A8. F<br>a | Building Use (e.g., Rei<br>atitude/Longitude: La<br>Attach at least 2 photo<br>Building Diagram Num<br>For a building with a cr<br>a) Square footage of | sidential, Non-Re<br>L. <u>N 40° 11' 17. (;</u><br>graphs of the bu<br>ber <u>2</u><br>awlspace or enc<br>crawlspace or enc | sidential, Addition,<br><u>2"</u> Long, <u>W 74° 02</u><br>Iding if the Certific<br>losure(s):<br>closure(s) | Accesso<br>2' 19.62"<br>ate is bei<br><u>1040</u> | ory, etc.) <u>Residenti</u><br>Ing used te obtain fl<br>Ag<br>sq ft | al<br>oodinsura<br>. Forabu<br>a) Squa                       | Horizontal Datur<br>nce.<br>Ilding with an atta<br>are foolage of att | n: 🔲 NA<br>ached gar                    | D 1927 🖾 NAD 1983<br>age:<br>age <u>N/A</u> sq ft  |
| c<br>C   | <ul> <li>Number of perman<br/>or enclosure(s) with</li> <li>Total net area of fic</li> </ul>  | ent flood opening<br>hin 1.0 foot above<br>ood openings in /  | is in the crawispac<br>adjacent grade<br>\8.b  | ਿਵ<br><u>ਓ</u><br><u>1200</u>                     | sq in   | <ul> <li>b) Num</li> <li>within</li> <li>c) Total</li> </ul> | ber of permanen<br>n 1.0 foet above<br>I net area of flood            | t flood ope<br>adjacent o<br>d openings | enings in the attached garage<br>grade<br>s in A9.b sq in  |
| d  | <ol> <li>Engineered flood o</li> </ol>  | penings?  | ⊠Yes ∐No   |   |   | d) Engi  | ineered flood ope   | enings?                                 | U Yes U No   |
|  |   | SEC   | TON B - FLOOL  | TINSUF  | RANCE RATE M  | AP (FIRM   | ) INFORMATIC  | NC.                                     |  |
| 81. NI<br>Towns                                | FIP Community Name<br>ship of Neptune /3403   | & Cornmunity N<br>17  | lumber   | B2. Co<br>Monm                                    | ounty Name<br>outh County   |  | enter i enter a di managene   | B3, Stat<br>NJ                          | 9  |
| B4. N  | Map/Panel Number<br>34025C0333  | B5. Suffix<br>F   | B6. FIRM Index<br>9/29/200 <u>6</u>  | Date  | B7. FIRM Par<br>Effective/Revised<br>9/29/2006                      | nel<br>I Date  | B8. Flood<br>Zone(s)<br>AE  | B9. E                                   | Base Flood Elevalion(s) (Zone<br>AO, use base flood depth)<br>9.0'   |
| 310. Ir  | ndicate the source of   | the Base Flood E  | levation (BFE) dat   | a or base   | e flood depth entere  | ed in Item E   | 39  |   |  |
|  | FIS Profile   |   |  | etermined   | d ∐ Other/  | Source:  |   |   | Ω.   |
| 312. Is  | s the building located  | in a Coastal Bar  | ier Resources Sys  | tem (CBI  | RS) area of Otherw  | ise Protect  | ed Area (OPA)?  |   |  |
| D  | Designation Date:   |   |  | D   | CBRS 🗆 C  | PA   |   |   |  |
|  |   | SECTIO  | N C - BUILDING   | ELEV  | ATION INFORM  | TION (SI   | JRVEY REQUI   | RED)                                    |  |
| C1. Bu   | ulding elevations are t   | based on:   | Construction E   | )rawings'   | 🗍 Buildi  | ng Under (   | Construction*   | 🖾 Fi                                    | nished Construction  |
| C2 Ele<br>bel                                  | evaluations - Zenes A1-<br>evaluations - Zenes A1-<br>elow according to the f   | A30, AE, AH, A<br>oullding diagram  | (with BFE), VE, V1<br>specified in Item A  | -V30, V<br>7. In Pue                              | (with BFE). AR, AR<br>(to Rico only, enter<br>inal Datum: NAVD      | A, AR/AE,<br>meters.   | AR/A1-A30, AR   | AH. AR/A                                | O. Complete Items C2.a-h   |
| Inc  | dicate elevation datun  | n used for the ele  | vations in liems a)  | through   | h) below.   | ) 1929 🖾   | NAVD 1988   | Other/Sou                               | rce:   |
| Da   | atum used for building  | elevations must   | be the same as th  | at used f   | or the SFE  |  | Chec  | k the mea                               | surement used  |
| a)   | Top of bottom floor (in   | ncluding baseme   | nt, crawlspace, or   | enclosur  | e floor)  | 6.9  |   | 🖾 feet                                  | meters   |
| b)   | Top of the next highe   | r floor   |  |   |   | 13.2   |   | 🛛 feet                                  | meters   |
| C)   | Bottom of the lowest  | norizontal structu  | ral member (V Zor  | nes only)   |   | N/A  | ·   | 🛛 feet                                  | melers   |
| d) (   | Attached garage (Lop  | of slab)<br>lachipery or activ  | oment servicion th   | e huildin   |   | N/A<br>12.0  | ·*  | ⊠ teet                                  |  |
| 0,1  | (Describe type of equ   | ipment and locat  | ion in Comments)   | o Dananiy   | 5   | 151.5  |   | R'N 1001                                | Lindfold   |
| f)   | Lowest adjacent (finis  | hed) grads next   | to building (LAG)  |   |   | <u>6.9</u>   |   | 🛛 feet                                  | meters   |
| <u>g)</u> 1                                    | Highest adjacent (fini<br>Lowest adjacent urad  | shed) grade next<br>e at lowest eleva   | to building (HAG)  | irs includ  | ling structural supp  | <u>7.2</u>   |   | 🛛 feet                                  |  |
|  |   | PECTIC  |  |   |   | CUITEOT  | CEDTICICAT  |   |  |
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| inform<br>I unde<br>C                          | nation. I certify that the<br>erstand that any false :<br>Check here If commen  | information on t<br>statement may b<br>is are provided o  | his Certificate repr<br>e punishable by fir<br>n back of form.   | esents m<br>le or impl<br>Wese i                  | y best efforts to int<br>isonment under 18<br>latitude and iongitue | erpret lhe c<br>U.S. Code<br>de in Sectio                    | data available.<br>Section 1001.                                      | a                                       |  |
| Cortiti  | ar's Name Robert Via  | and,<br>Ba PI S   |  | neense  | Licopro   | lumber 42  | 276   | 1                                       |  |
| Title t  | Land Surveyor   |   | Company Name   | Vallee 5  | Surveying, LLC  | 1011108: 40  |   | Folas                                   | HUL  |
|  |   |   |  |   |   |  |   |   |  |
| Addres   | ss 100 Ashuret I m-   | Suite 305   | City Mt Holly  |   | State N1  | ZIP Co   | ode 08060   |   |  |

FEMA Form 086-0-33 (7/12)

laces all previous editions.

ALC: NAME OF

|  | opy the corresponding information from  | Section A.   | FOR   | NSURANCE COMPANY USE   | 1               |
|--|---|--|---|--|-----------------|
| zauding Apt  | , Unit, Suite, and/or Bldg, No.) or P.O. Route and  | Box No.  | Policy  | Nuniber:   |                 |
| Brive  | State NJ  | ZIP Code 07753   | Comp  | any NAIC Number:   |                 |
| SECTION  | 0-SURVEYOR ENGINEER OR ARCHI  | TECT CERTIFICATIO  | DN (CONTI   | VUED)  | j               |
| py both sides of this Elevation Certi  | ficate for (1) community official, (2) insurance and  | ent/company, and (3) bu  | ilding owner.   | an an a sum of the construct formation the structure of the | •               |
| mmens Hot water heater and was<br>hartVent Model 1540-520***   | her/dryer are located on the finished floor, elev.≃   | 13.2. ***Preliminary Wo  | rk Map BFE≈   | AE11. Release date 6/17/13   |                 |
| mature   | Date  | 10/25/13   |   |  |                 |
| SECTION E - BUILDING ELE   | VATION INFORMATION (SURVEY NOT R  | EQUIRED) FOR ZON   | E AO AND  | ZONE A (WITHOUT BEE)   | f<br>1          |
| <ul> <li>d C. For items E1-E4, use natural (<br/>Provide elevation information for grade (HAG) and the lowest adjient of the property of bottom floor (including b) Top of platform of machinery and Zone AO only: If no flood depth ordinance? Yes No []</li> </ul>   | Irade, if available. Check the measurement used<br>the following and check the appropriate boxes to<br>icent grade (LAG).<br>basement, crawlspace, or enclosure) is<br>basement, crawlspace, or enclosure) is<br>field of the building is<br>number is available, is the top of the bottom floo<br>lunknown. The local efficial must certify this inf | . In Puerto Rico only, en<br>o show whether the elev<br>feet mo<br>Items 8 an@/or 9 (see pa<br>eters above or t<br>e or below the HAG<br>feet meters<br>r elevated in accordance<br>formation in Section G | ter meters,<br>ation is above<br>eters above<br>ages 8-9 of in<br>below the HA<br>b<br>s above of<br>with the con | e or below the highest adjacent<br>ve or _ below the HAG.<br>ve or _ below the LAG.<br>Instructions), the next higher floor<br>G.<br>rr _ below the HAG.   |                 |
| SECTION  | F - PROPERTY OWNER (OR OWNER'S  | REPRESENTATIVE)  | CERTIFIC  | ATION  | -               |
| operty Owner's or Owner's Authorized   | id Representative's Name  |  | State   | ZIP Code   | •               |
| nature   | Date  |  | lelephone   |  | _               |
| mments   |   |  |   |  | 1.2             |
|  | Carallel and an and a second  |  |   | Check here if attachments  |                 |
|  | SECTION G - COMMUNITY INFOR   | MATION (OPTIONAL   | .)  |  |                 |
|  | for ordinance to administer the community's floods<br>applicable item(s) and sign below. Check the mer  | plain management ordina<br>asurement used in Items   | ince can com<br>G8-G10. In F  | plete Sections A, B, C (or E), and G<br>Puerto Rico only, enter meters   |                 |
| local official who is authorized by law<br>s Elevation Certificate. Complete the   |   |  | a licenard au   | rveyor, engineer, or architect who   |                 |
| <ul> <li>ocal official who is authorized by law s Elevation Certificate. Complete the</li> <li>The information in Section C visauthorized by law to certify</li> <li>A community official complete</li> <li>The following information (Iter</li> </ul>   | vas taken from other documentation that has bee<br>elevation information. (Indicate the source and d<br>d Section E for a building located in Zone A (with<br>is G4–G10) is provided for community floodplain   | en signed and sealed by<br>late of the elevation data<br>lout a FEMA-issued or c<br>management purposes  | in the Commonity-Iss  | ients area below.)<br>ued BFE) or Zone AO.   |                 |
| <ul> <li>ocal official who is authorized by law<br/>s Elevation Certificate. Complete the<br/>The information in Section C v<br/>is authorized by law to certify</li> <li>A community official complete</li> <li>The following information (Iter</li> <li>Permit Number</li> </ul>   | vas taken from other documentation that has bee<br>elevation information. (Indicate the source and d<br>d Section E for a building located in Zone A (with<br>ns G4–G10) is provided for community floodplain<br>G5. Date Permit Issued   | en signed and sealed by<br>late of the elevation data<br>lout a FEMA-issued or c<br>management purposes<br>G6. Date Certificate  | onmunity-lss<br>Of Compiliant   | tents area below.)<br>ued BFE) or Zone AD.<br>ce/Occupancy Issued  |                 |
| <ul> <li>ocal official who is authorized by law s Elevation Certificate. Complete the is authorized by law to certify A community official complete</li> <li>The following information (Iter The following information (Iter Permit Number</li> <li>This permit has been issued for: Elevation of as-built lowest floor (in BFE or (in Zone AO) depth of flood Community's design flood elevation</li> </ul>   | vas taken from other documentation that has bee<br>elevation information. (Indicate the source and d<br>d Section E for a building located in Zone A (with<br>ns G4–G10) is provided for community floodplain<br>G5. Date Permit Issued<br>New Construction Substantial Im<br>cluding basement) of the building:  | en signed and sealed by<br>late of the elevation data<br>hout a FEMA-Issued or c<br>management purposes<br>G6. Date Certificate<br>provement<br>feet fmete<br>feet meter                                   | ors Datu<br>rs Datu   | tents area below.)<br>ued BFE) or Zone AO.<br>ce/Occupancy Issued<br>m<br>m  | Immunit         |
| <ul> <li>ocal official who is authorized by law s Elevation Certificate. Complete the is authorized by law to certify A community official complete</li> <li>The following information (Iter Permit Number</li> <li>This permit has been issued for: Elevation of as-built lowest floor (in BFE or (in Zone AO) depth of floor Community's design flood elevatio</li> <li>cal Official's Name</li> </ul>   | vas taken from other documentation that has bee<br>elevation information. (Indicate the source and d<br>d Section E for a building located in Zone A (with<br>ns G4-G10) is provided for community floodplain<br>G5. Date Permit Issued<br>New Construction Substantial im<br>cluding basement) of the building:  | en signed and sealed by<br>late of the elevation data<br>rout a FEMA-issued or c<br>in management purposes<br>G6. Date Certificate<br>provement<br>feet freet meter<br>feet meter<br>le                    | or in the Community-lss<br>Of Compilant<br>rs Datu<br>rs Datu   | tents area below.)<br>ued BFE) or Zone AO.<br>ce/Occupancy Issued  | (constraint)    |
| <ul> <li>local official who is authorized by law s Elevation Certificate. Complete the is authorized by law to certify A community official complete</li> <li>The information in Section C is authorized by law to certify A community official complete</li> <li>The following information (Iter</li> <li>Permit Number</li> <li>This permit has been issued for:</li> <li>Elevation of as-built lowest floor (in BFE or (in Zone AO) depth of floor</li> <li>Community's design flood elevatio</li> <li>cal Official's Name</li> <li>mmunity Name</li> </ul>       | vas taken from other documentation that has bee<br>elevation information. (Indicate the source and d<br>d Section E for a building located in Zone A (with<br>ns G4–G10) is provided for community floodplain<br>G5. Date Permit Issued<br>New Construction Substantial Im-<br>cluding basement) of the building:<br>ing at the building site:<br>n:<br>Titu<br>Televiological Substantial Im-  | en signed and sealed by<br>bate of the elevation data<br>hout a FEMA-issued or c<br>i management purposes<br>G6. Date Certificate<br>iprovement<br>feet feet meter<br>feet meter<br>le                     | rs Datu<br>rs Datu  | tents area below.)<br>ued BFE) or Zone AO.<br>ce/Occupancy Issued<br>mm  | (manual states) |
| <ul> <li>ocal official who is authorized by laws Elevation Certificate. Complete the is authorized by law to certify A community official complete</li> <li>The information in Section C vis authorized by law to certify A community official complete</li> <li>The following information (Iter</li> <li>Permit Number</li> <li>This permit has been issued for:</li> <li>Elevation of as-built lowest floor (in BFE or (in Zone AO) depth of flood community's design flood elevatio</li> <li>cal Official's Name</li> <li>mmunity Name</li> <li>nature</li> </ul> | vas taken from other documentation that has bee<br>elevation information. (Indicate the source and d<br>d Section E for a building located in Zone A (with<br>ns G4-G10) is provided for community floodplain<br>G5. Date Permit Issued<br>New Construction Substantial Im<br>cluding basement) of the building:<br>ing at the building site:<br>n:<br>Titi<br>Tel<br>Da  | en signed and sealed by<br>bate of the elevation data<br>tout a FEMA-Issued or c<br>in management purposes<br>G6. Date Certificate<br>provement<br>feet meter<br>feet meter<br>le<br>le<br>lephone<br>te   | or in the Community-Iss<br>Of Compilant<br>rs Datu<br>rs Datu<br>rs Datu  | tents area below.)<br>ued BFE) or Zone AD.<br>ce/Occupency Issued<br>imm   | Internet        |

# Building Photographs See Instructions for Item A6.

| ATANT: In these spaces, copy the corresponding inf   | ormation from   | n Section A.   | FOR INSURANCE COMPANY USE |
|--|-----------------|----------------|---------------------------|
| Building Street Address (including Apt., Unit, Suite, and/or Bldg, No.) (<br>337 South Riverside Drive | or P.O. Route a | td Box No.     | Policy Number:            |
| City Neptune   | State NJ        | ZIP Code 07753 | Gompany NAIC Number:      |

If using the Elevation Certificate to obtain NFIP flood insurance, affix at least 2 building photographs below according to the instructions for Item A3. Identify all photographs with date taken: "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8. If submitting more photographs than will fit on this page, use the Continuation Page.





🔍 z, page 3

Rear View (10/15/13)



Flood Opening (10/15/13)



ons.

MA Form 086-0-33 (7/12)

Replaces all previous editions.



### **ICC-ES Evaluation Report**

Most Widely Accepted and Trusted

### ESR-2074\*

www.icc-es.org | (800) 423-6587 | (562) 699-0543

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

**REPORT HOLDER:** 

SMARTVENT PRODUCTS, INC. 430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071 (877) 441-8368 www.smartvent.com Info@smartvent.com

#### EVALUATION SUBJECT:

SMART VENT<sup>®</sup> AUTOMATIC FOUNDATION FLOOD VENTS: FLOODVENT™ MODEL #1540-520; FLOODVENT™ STACKING MODEL #1540-521; SMARTVENT™ MODEL #1540-510; SMARTVENT™ STACKING MODEL #1540-511; WOOD WALL FLOOD MODEL #1540-570; WOOD WALL FLOOD OVERHEAD DOOR MODEL #1540-574; FLOODVENT™ OVERHEAD DOOR MODEL #1540-524; SMARTVENT™ OVERHEAD DOOR MODEL #1540-514

### 1.0 EVALUATION SCOPE

- Compliance with the following codes:
- 🛛 🕿 2009 and 2006 International Building Code<sup>®</sup> (IBC)
- 2009 and 2006 International Residential Code<sup>®</sup> (IRC)

**Properties evaluated:** 

- Physical operation
- Water flow
- 2.0 USES

The Smart Vent<sup>●</sup> units are automatic foundation flood vents (AFFVs) employed to equalize hydrostatic pressure on nonfire-resistance-rated foundation walls, rolling-type overhead doors and building walls subject to rising or falling flood waters. The Smart Vent<sup>●</sup> units are intended for use where flood hazard areas have been established in accordance with IBC Section 1612.3 or IRC Section R3222.1. Certain models also allow natural ventilation in accordance with Section 1203 of the IBC or Section 408.1 of the IRC.

### 3.0 DESCRIPTION

#### 3.1 General:

When subjected to pressure from rising water, the Smart Vent<sup>®</sup> AFFVs disengage, then pivot open to allow flow in either direction to equalize water level and hydrostatic Reissued December 1, 2012

This report is subject to renewal February 1, 2015.

A Subsidiary of the International Code Council®

pressure from one side of the foundation to the other. The AFFV 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 plate to rotate out of the way and allow flow. The water level stabilizes, equalizing the lateral forces. Each unit is fabricated from stainless steel. The SmartVENT<sup>TM</sup> Stacking Model #1540-521 units each contain two vertically arranged openings per unit.

### 3.2 Engineered Opening:

The AFFVs comply with the design principle noted in Section 2.6.2.2 of ASCE/SEI 24 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 AFFVs must be installed in accordance with Section 4.0.

#### 3.3 Model Sizes:

The FloodVENT<sup>TM</sup> Model #1540-520, SmartVENT<sup>TM</sup> Model #1540-510, FloodVENT<sup>TM</sup> Overhead Door Model #1540-524, and SmartVENT<sup>TM</sup>, Overhead Door Model #1540-514 units measure  $15^{3}$ /<sub>4</sub> linches wide by  $7^{3}$ /<sub>4</sub> inches high (400 by 196.9 mm). The Wood Wall Flood Model #1540-570 and Wood Wall Flood Overhead Door Model #1540-574 units measure 14 inches wide by  $8^{3}$ /<sub>4</sub> inches high (355.6 by 222.25 mm). The SmartVENT<sup>TM</sup> Stacking Model #1540-511 and FloodVENT<sup>TM</sup> Stacking Model #1540-521 units measure 16 inches wide by 16 inches high (406,4 by 406.4 mm).

#### 3.4 Ventilation:

The SmartVENT<sup>®</sup> Model #1540-510 and SmartVENT<sup>®</sup> Overhead Door Model #1540-514 both have screen covers with <sup>1</sup>/<sub>4</sub>-inch-by-<sup>1</sup>/<sub>4</sub>-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<sup>™</sup> 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 AFFVs recognized in this report do not offer natural ventilation.

#### 4.0 INSTALLATION

SmartVENT<sup>®</sup> and FloodVENT<sup>™</sup> 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. The mounting straps allow mounting in wood, masonry and

\*Revised July 2013

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concrete walls up to 12 inches (305 mm) thick. In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the Smart Vent® AFFVs must be installed as follows:

- With a minimum of two openings on different sides of . each enclosed area.
- With a minimum of one AFFV 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 AFFV for every 400 square feet (37.2 m<sup>2</sup>) of enclosed area.
- Below the base flood elevation.
- # With the bottom of the AFFV located a maximum of 12 inches (305,4 mm) above grade.

#### **5.0 CONDITIONS OF USE**

The Smart Vent® AFFVs 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:

- Page 2 of 2
- 5.1 The Smart Vent® AFFVs 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® AFFVs 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

Data in accordance with the ICC-ES Acceptance Criteria for Automatic Foundation Flood Vents (AC364), dated October 2007.

### 7.0 IDENTIFICATION

The Smart VENT<sup>®</sup> models recognized 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).



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

OMB No. 1660-0008 Expiration Date: November 30, 2018

## **ELEVATION CERTIFICATE**

Important: Follow the instructions on pages 1-9.

| 110   | CTION A - PROPERTY  | INFORMATION   | ·   | FOR INSU  | RANCE COMPANY LISP   |
|---|---|---|---|---|--|
| At. Building Owner's Name<br>SHARK RIVER BEACH & YA   | CHT CLUB  |   |   | Policy Num  | ber:   |
| A2, Building Street Address (<br>Box No,<br>360 SOUTH RIVERSIDE DR.   | including Apt., Unit, Suite   | ≊, алd/or Bldg. No.) or P.  | 0. Route and  | Company N   | IAIC Number:   |
| City  |   | State   |   | ZIP Code  | <u></u>  |
| NEPTUNE   |   | New Jersey  |   | 07753   | and a state of the |
| A3. Property Description (Lot<br>LOT 14 IN BLOCK 402  | and Block Numbers, Ta   | x Parcel Number, Legal I  | Description, etc.)  |   |  |
| A4. Building Use (e.g., Reside  | entiai, Non-Residential, /  | Addition, Accessory, etc.   | NON- RESIDENT   | 'IAL  | مریک میکند.<br>مریک میکند (مریک میکند)<br>مریک مریک میکند (مریک میکند)<br>مریک مریک میکند (مریک میکند)<br>مریک میکند (مریک میکند)  |
| A5. Latitude/Longitude: Lat.  | 40*11'10.7"   | Long, -74*02'23.6"  | Horizontal Datum  |   | 1927 🔀 NAD 1983  |
| A6. Attach at least 2 photogra  | aphe of the building if the   | Certificate is being used   | l to obtain flood insura  | ince.   |  |
| A7. Building Diagram Number   | r <u>6</u>  |   |   |   |  |
| A8. For a building with a craw  | (ispace or enclosure(s);  |   |   |   |  |
| a) Square footage of oran   | wispace or enclosure(s)   | 759 sq f  |   |   |  |
| b) Number of permanent  | flood openings in the cri   | awispace or enclosure(s)  | within 1.0 foot above   | adjacent gr   | ade <u>3</u>   |
| c) Total net area of flood  | openings In A8.b80  | 0 sq in   |   |   |  |
| d) Engineered flood oper  | nings? X Yes N  | 0   |   |   |  |
| A9. For a building with an atta   | ched garage:  |   |   |   |  |
| , a) .Square footage of atta  | ched garage   | sq ft   |   |   |  |
| b) Number of permanent  | flood openings in the att   | ached garage within 1.0   | foot above adjacent g   | rade  |  |
| c) Total net area of flood  | openings in A9.b  | saín  |   | and the second second   | ۰  |
| d) Engineered flood oper  | nings? Yes N  | 0   |   |   |  |
|   | SECTION B - FLOOD I   | NSURANCE RATE MA  | P (FIRM) INFORMA  | TIÓN  |  |
| B1, NFIP Community Name & NEPTUNE TOWNSHIP 340  | Community Number<br>317   | B2. County Nar<br>MONMOUTH  | ne  |   | B3. State  |
|   |   | 1   |   |   | New Jersey   |
| 34. Map/Panel B5. Suffix<br>Number  | B6. FIRM Index  | B7. F/RM Panel<br>Effective/  | B8. Flood Zone(s)   | B9. Bas   | se Flood Elevation(s)<br>ne AO, use Base   |
| 34. Map/Panel<br>Number<br>14025C0341 F   | < B6. FIRM Index<br>Date<br>09/25/2009  | B7. FIRM Panel<br>Effective/<br>Revised Date<br>09/25/2009  | B8. Flood Zone(s)   | B9. Bas<br>(Zo<br>Floo<br>9                                       | the Flood Elevation(s)<br>ne AO, use Base<br>od Depth)   |
| 34. Map/Panel<br>Number     B5. Suffx       34025C0341     F       B10. Indicate the source of the<br>□ FIS Profile ⊠ FIRM  | <ul> <li>B6. FIRM Index<br/>Date</li> <li>09/25/2009</li> <li>■ Base Flood Elevation (<br/>□ Community Determinity</li> </ul>   | B7. FIRM Panel<br>Effective/<br>Revised Date<br>09/25/2009<br>BFE) data or base flood<br>hined  | B8. Flood Zone(s)<br>AE<br>depth entered in Item  | B9. Bas<br>(Zo<br>Fior<br>9<br>B9:                                | New Jersey<br>se Flood Elevation(s)<br>ne AO, use Base<br>od Depth)  |
| 34. Map/Panel<br>Number     B5. Suffx       34025C0341     F       B10. Indicate the source of the<br>□ FIS Profile ⊠ FIRM       B11. Indicate elevation datum  | B6. FIRM Index<br>Date 09/25/2009 Base Flood Elevation (     Community Determ used for BFE in Item B6   | B7. FiRM Panel<br>Effective/<br>Revised Date<br>09/25/2009<br>BFE) data or base flood<br>hined Other/Source:  | B8. Flood Zone(s)<br>AE<br>depth entered in Nem   | B9. Ba:<br>(Zo<br>Floo<br>9<br>B9:<br>ner/Source:                 | New Jersey<br>Re Flood Elevation(s)<br>ne AO, use Base<br>od Depth)  |
| <ul> <li>34. Map/Panel<br/>Number</li> <li>34. Map/Panel<br/>Number</li> <li>35. Suffx</li> <li>36. Suffx</li> <li></li></ul> | <ul> <li>B6. FIRM Index<br/>Date</li> <li>09/25/2009</li> <li>Base Flood Elevation (<br/>Community Determination)</li> <li>used for BFE in Item B6</li> <li>a Coastal Barrier Resource</li> </ul> | B7. FIRM Panel<br>Effective/<br>Revised Date<br>09/25/2009<br>BFE) data or base flood<br>hined Other/Source:<br>R I NGVD 1929 X I                                       | B8. Flood Zone(s)<br>AE<br>depth entered in Nem<br>VAVD 1988 [] Other<br>a or Otherwise Prote   | B9. Ba:<br>(Zo<br>Flor<br>9<br>B9:<br>cted Area (C                | New Jersey<br>se Flood Elevation(s)<br>ne AO, use Base<br>od Depth)  |
| <ul> <li>34. Map/Panel<br/>Number</li> <li>34025C0341</li> <li>B10. Indicate the source of the<br/>☐ FIS Profile ∑ FIRM</li> <li>B11. Indicate elevation datum</li> <li>B12. Is the building located in<br/>Designation Date:</li> </ul>  | B6. FIRM Index<br>Date 09/25/2009 e Base Flood Elevation ( Community Determined for BFE in Item B6 a Coastal Barrier Resource   | B7. FIRM Panel<br>Effective/<br>Revised Date<br>09/25/2009<br>BFE) data or base flood<br>hined Other/Source:<br>R I NGVD 1929 II<br>Irces System (CBRS) are<br>CBRS OPA | B8. Flood Zone(s)<br>AE<br>depth entered in Item<br>VAVD 1988  Otherwise Prote                  | B9. Bas<br>(Zo<br>Fio<br>9<br>B9:<br>Der/Source:<br>cted Area (C  | New Jersey<br>se Flood Elevation(s)<br>ne AO, use Base<br>od Depth)<br>Depth)  |
| 34. Map/Panel<br>Number     B5. Suffx       34025C0341     F       B10. Indicate the source of the<br>□ FIS Profile ∑ FIRM       B11. Indicate elevation datum       B12. Is the building located in<br>Designation Date:   | B6. FIRM Index<br>Date 09/25/2009  Base Flood Elevation (     Community Detem used for BFE in Item B6 a Coastal Barrier Resou   | B7. FIRM Panel<br>Effective/<br>Revised Date<br>09/25/2009<br>BFE) data or base flood<br>hined 		Other/Source:<br>0:  | B8. Flood Zone(s)<br>AE<br>depth entered in Item<br>NAVD 1988 [] Other<br>ta or Otherwise Prote | B9. Ba:<br>(Zo<br>Flor<br>9<br>B9:<br>ner/Source:<br>cted Area (C | New Jersey<br>se Flood Elevation(s)<br>ne AO, use Base<br>od Depth)<br>DPA)? [] Yes [X] No   |

| LEVATION CERTIFICATE   |   |   | CMB No. 1660-0008<br>Expiration Date: November 30, 20  |
|--|---|---|--|
| IPORTANT: In these spaces, copy th   | ne corresponding information f  | rom Section A.  | FOR INSURANCE COMPANY U  |
| uilding Street Address (including Apt.,<br>60 SOUTH RIVERSIDE DR.  | Unit, Suite, and/or Bldg. No.) or F   | P.O. Route and Box No.  | Policy Number:   |
| ity<br>EPTUNE  | State<br>New Jersey   | ZIP Code<br>07753   | Company NAIC Number  |
| SECTION C  | - BUILDING ELEVATION INF  | ORMATION (SURVEY I  | REQUIRED)  |
| <ol> <li>Building elevations are based on:<br/>*A new Elevation Certificate will b</li> <li>Elevations – Zones A1–A30, AE,<br/>Complete Items C2.a–h below ac</li> <li>Benchmark Utilized: <u>GPS</u></li> </ol> | Construction Drawings*<br>e required when construction of th<br>AH, A (with BFE), VE, V1–V30, V<br>cording to the building diagram sp<br>                     | Building Under Const<br>ne building is complete.<br>( with BFE), AR, AR/A, Af<br>becified in item A7. In Pue<br>I Datum: <u>NAVD 1988</u> | ruction* [X] Finished Construction<br>R/AE, AR/A1–A30, AR/AH, AR/AO.<br>rto Rico only, enter meters. |
| Indicate elevation datum used for  | the elevations in items a) through  | h) below.   |  |
| 📋 NGVD 1929 🔀 NAVD   | 1988 🔲 Other/Source:  |   |  |
| Datum used for building elevation  | s must be the same as that used   | for the BFE.  | Check the measurement used   |
| b) Top of the next tarbox from the   |   | 18 1  |  |
| o) i op of the next higher floor   |   | <u> </u>  | Ixi reet meters  |
| c) Bottom of the lowest horizonta  | I structural member (V Zones only   | y) <u>15,8</u>  | X feet C meters  |
| d) Attached garage (top of slab)   |   | <u>N/A</u> ,  | X feet 🔲 meters  |
| <ul> <li>e) Lowest elevation of machinery<br/>(Describe type of equipment a)</li> </ul>  | r or equipment servicing the buildi<br>nd location in Comments)   | ing <u>15</u> , <u>7</u>  | 🔀 feet 🔲 meters  |
| <li>f) Lowest adjacent (finished) gra</li>   | de next to building (LAG)   | <u> </u>  | X feet 🔲 meters  |
| g) Highest adjacent (finished) gra   | ade next to building (HAG)  | <u> </u>  | X feet [] metors   |
| <ul> <li>h) Lowest adjacent grade at lowe<br/>structural support</li> </ul>  | st elevation of deck or stairs, incl  | uding6, <u>1</u>  | X feet meters  |
| SECTION  | D – SURVEYOR, ENGINEER, O   | OR ARCHITECT CERTI  | FICATION   |
| This certification is to be signed and se<br>I certify that the information on this Ce<br>statement may be punishable by fine o  | ealed by a land surveyor, enginee<br>nificate represents my best efforts<br>or imprisonment under 18 U.S. Co  | r, or architect authorized t<br>s to interpret the data avai<br>de, Section 1001.   | by law to certify elevation information<br>lable. I understand that any false                        |
| Were latitude and longitude in Section   | A provided by a licensed land su  | rveyor? 🖾Yes 🗌 No   | Check here if attachments.   |
| Certifier's Name<br>STANLEY HANS JR  | License Num<br>29182  | ber   |  |
| Title<br>PROFESSIONAL LAND SURVEYOR  |   |   |  |
| Company Name<br>RC BURDICK, PE, PP   |   |   | Place<br>Seal  |
| Address<br>1023 OCEAN ROAD   |   |   | Here   |
| Dity<br>POINT PLEASANT   | State<br>New Jersey   | ZIP Code<br>08742   |  |
| Signature  | aush 11/04/2016   | Telephone<br>(732) 892-5050   | <ul> <li>Engineering Version der versionen werden eine eine eine eine eine eine eine e</li></ul>     |
| Copy all pages of this Elevation Certifica   | te and all attachments for (1) comm   | nunity official, (2) insurance  | agent/company, and (3) building owr  |
| Comments (including type of equipment<br>OWER LEVEL FLOOR=6.1' FF=18.1'<br>ENCLOSURE HAS 3 (1540-570) SMA<br>THEY ARE UNDER THE STAIR WELL<br>BEST AVAILABLE DATA PER FEMA I                                     | nt and location, per C2(e), if applic<br>ELECTRIC JUNCTION BOX=15<br>RT VENTS 200X3=600 SQ. IN'S<br>AND ELEVATOR(145 SF) . REN<br>PRELIMINARY FIRM PANEL # 34 | cable)<br>.7'<br>MAINDER OF ROOM HAS<br>4025C0341G UPDATED T  | S BREAKAWAY WALLS<br>THROUGH 01/30/2015 BFE=VE 12  |
| MA Form 086-0-33 (7/15)  | Replaces all previou  | us editions.  | Form Page 2  |

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| ELEVATION CERTIFICATE   |   |   | OMB No. 1660<br>Expiration Date             | -0008<br>2: November 30, 2018                                 |
|---|---|---|---|---|
| MPORTANT: in these spaces, copy the c   | orresponding information  | from Section A.                                       | FOR INSURA                                  | NCE COMPANY USE   |
| Building Street Address (including Apt., Uni<br>360 SOUTH RIVERSIDE DR.   | t, Suite, and/or Bldg. No.) or                                  | P.O. Route and Box No                                 | Policy Numbe                                | α τη δαπαλογή της ματά το |
| City<br>NEPTUNE   | State<br>New Jersey   | ZIP Code<br>07753                                     | Company NAI                                 | C Number  |
| SECTION E - BU  | ILDING ELEVATION INFO<br>FOR ZONE AO AND ZON                    | RMATION (SURVEY I<br>E A (WITHOUT BFE)                | NOT REQUIRED)                               |   |
| For Zones AO and A (without BFE), comple<br>complete Sections A, B,and C, For Items E<br>enter meters   | te Items E1–E5. If the Certifi<br>1–E4, use natural grade, if a | icate is intended to supp<br>vallable. Check the mea  | ort a LOMA or LOM<br>surement used. In P    | R-F request,<br>uerto Rico only,                              |
| <ol> <li>Provide elevation information for the fo<br/>the highest adjacent grade (HAG) and</li> <li>Ton of bottom floor (including base)</li> </ol> | llowing and check the appro<br>the lowest adjacent grade (L     | priate boxes to show wh<br>AG).                       | ether the elevation i                       | s above or below  |
| crawispace, or enclosure) is<br>b) Top of bottom floor (including baser   | nent,   | [] feet [] n  | neters 🔲 above o                            | r 🔲 below the HAG   |
| crawlspace, or enclosure) is  | · ·   | feet [] n   | neters 🔲 above o                            | r 🔲 below the LAG.  |
| <ol> <li>For Building Diagrams 6–9 with permai<br/>the next higher floor (elevation C2.b in<br/>the elevation c2.b in</li> </ol>                    | nent flood openings provided                                    | I in Section A Items 8 an                             | d/or 9 (see pages 1                         | -2 of Instructions),  |
| the diagrams) of the building is<br>E3. Attached garage (top of slab) is  | ······  | [] feet [] n  | neters 📋 above o<br>neters 🗍 above o        | r ∐below the HAG.<br>r ⊡below the HAG.                        |
| 54. Top of platform of machinery and/or eq  | juipment  |   | atara 🗖 atara a                             |   |
| E5. Zone AO only: If no flood depth number  | r is available, is the top of th                                | e bottom floor elevated i                             | n accordance with t                         | r in below the HAG.   |
| floodplain management ordinance?  | Yes No Unkno  | wn. The local official m                              | nust certify this inform                    | nation in Section G.  |
| The property owner or owner's authorized r<br>community-issued BFE) or Zone AO must s   | epresentative who complete:<br>ign here. The statements in      | s Sections A, B, and E fo<br>Sections A, B, and E are | or Zone A (without a<br>correct to the best | FEMA-issued or of my knowledge.                               |
| Property Owner or Owner's Authorized Rep  | resentative's Name  |   |   |   |
| Address   | (   | City  | State                                       | ZIP Code  |
| Signature   | 1   | Date  | Telephone                                   |   |
| Jomments  |   |   |   |   |
|   |   |   |   |   |
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|   |   |   |   |   |
|   |   |   | 🔀 Check                                     | here if attachments.  |

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| ELEVATION CERTIFICATE   |  |  | OMB No. 1660-0008<br>Expiration Date: November 30, 2018   |
|---|--|--|---|
| MPORTANT: In these spaces, copy the cor   | responding information   | from Section A.  | FOR INSURANCE COMPANY US  |
| Building Street Address (Including Apt., Unit, 3<br>360 SOUTH RIVERSIDE DR.   | Sulte, and/or Bidg. No.) or  | P.O. Route and Box N                                   | o. Policy Number:   |
|   | State<br>New Jersey  | ZIP Code<br>07753                                      | Company NAIC Number   |
| SECT  | ION G - COMMUNITY IN   | FORMATION (OPTION                                      | IAL)  |
| The local official who is authorized by law or o<br>Sections A, B, C (or E), and G of this Elevatio<br>used in Items G8–G10. In Puerto Rico only, e | ordinance to administer th<br>on Certificate. Complete th<br>onter meters. | e community's floodplai<br>le applicable item(s) and   | In management ordinance can complete<br>d sign below. Check the measurement                                     |
| G1. The information in Section C was ta<br>engineer, or architect who is author<br>data in the Comments area below.)                                | ken from other document<br>ized by law to certify eleve                    | ation that has been sign<br>ation information. (Indice | ned and sealed by a licensed surveyor,<br>ate the source and date of the elevation                              |
| G2. A community official completed Sec<br>or Zone AO.   | ction E for a building locate  | ed in Zone A (without a                                | FEMA-issued or community-issued BFE)  |
| G3. The following information (Items G4   | I-G10) is provided for con   | nmunity floodplain man                                 | agement purposes.   |
| G4, Permit Number   | G5. Date Permit Issue  | d  | G6. Date Certificate of<br>Compliance/Occupancy Issued  |
| G7. This permit has been issued for:  | New Construction   | Substantial Improveme                                  | nt  |
| <ol> <li>Elevation of as-built lowest floor (including) of the building:</li> </ol>   | ng basement)   |  | feet [] meters Datum  |
| 39. BFE or (in Zone AO) depth of flooding a   | t the building site:   |  | ] feat [] meters Datum  |
| 310. Community's design flood elevation:  |  | ,  | ] feet [_] meters Datum   |
| Local Official's Name   |  | Title  | ۵۰۰ اور با در اور اور اور اور اور اور اور اور اور او  |
| Community Name  | <u> </u>   | Telephone  | ۵۹۵۹ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۹ - ۲۰۰۰ - ۲۰۰۳ - ۲۰۰۳ - ۲۰۰۳ - ۲۰۰۳ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - |
| Signature   |  | Date   |   |
| Comments (including type of equipment and i   | ocation, per C2(e), if appli   | cable)   |   |
|   |  |  | •<br>•  |
|   |  |  |   |
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|   |  |  | 🕅 Check here if attachments.  |

### **BUILDING PHOTOGRAPHS**

See Instructions for Item A6.

OMB No. 1660-0008 Expiration Date: November 30, 2018



5219 FEMA Form 086-0-33 (7/15)

Form Page 5 of 6

Replaces all previous editions.

### **BUILDING PHOTOGRAPHS**

OMB No. 1660-0008 Expiration Date: November 30, 2018



Replaces all previous editions.

### V-ZONE CONSTRUCTION CERTIFICATE

Building Permit No. \_\_\_\_\_ Owner: \_\_ SRBYC

| Street | t Address; <u>360 S R</u> : | iverside Drive                          |             |                |
|--------|-----------------------------|---|-------------|----------------|
| City:  | <u>Neptune</u>              | State: <u>NJ</u>                        | Zip:        | <u>07753</u>   |
|        |                             | Section I - Elevation Informati         | ion         |                |
| 1,     | Bottom of the Lowest Ho     | rizontal Structural Member              |             | <u>15.8 ft</u> |
| 2.     | Base Flood Elevation        |   |             | 1 ft.          |
| 3.     | Flood Protection Elevation  | 23                                      |             | <u>15</u> ft.  |
| 4,     | Elevation of Highest Adj    | acent Grade                             |             | 6.1 ft.        |
| 5,     | Elevation of Lowest Adja    | cent Grade                              |             | <u>53</u> ft.  |
| б.     | Elevation of Bottom of P    | lings or Foundation                     |             | ft.            |
| ****   | *************************   | *************************************** | *********** | ******         |

### Section II - V-Zone Certification Statement

I certify that based upon development and/or review of structural design, specifications, and plans for construction including consideration of the hydrostatic, hydrodynamic and impact loading involved, that the design and methods of construction are in accordance with accepted standards of practice for meeting the following provisions:

The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to or above the Flood Protection Elevation (F.P.E.).

The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components.

### Section III - Breakaway Wall Certification Statement

I certify that based upon development and/or review of structural design, specifications, and plans for construction that the design and methods of construction of the breakaway walls are in accordance with accepted standards of practice for meeting the following provisions:

Breakaway collapse shall result from a safe design loading 20 pounds per square foot. Said walls are capable of resisting a safe design loading of 10 pounds per square foot.

The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components.

The space below the lowest floor is useable solely for parking of vehicles, building access and storage.

### Section IV - Certification

| <u>Check one:</u> | Section II Section   | n III          | Sections II and III X |
|-------------------|----------------------|----------------|-----------------------|
| Certifier's Name: | Jonathan T. Mille    | r, P.E.        |                       |
| Title: Profe      | ssional Engineer     | License Number | : <u>24GE05151600</u> |
| Company Name:     | R.C. Burdick, P.E    | ., P.C.        |                       |
| Street Address:   | 1023 Ocean Road      |                |                       |
| City:             | Point PleasantState: | N.J.           | _Zip:08742            |
| Signature:        | J-7. Mille           | Telephone;     | 732-892-5050          |



ICC-ES Report

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# ESR-2074

Reissued 02/2015 This report is subject to renewal 02/2017.

### DIVISION: 08 00 00—OPENINGS SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS

**REPORT HOLDER:** 

## **SMARTVENT PRODUCTS, INC.**

430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071

### **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



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ESR-2074\*

Reissued February 2015

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A Subsidiary of the International Code Council®

This report is subject to renewal February 2017.

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

REPORT HOLDER:

SMARTVENT PRODUCTS, INC. 430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071 (877) 441-8368 www.smartvent.com info@smartvent.com

### **EVALUATION SUBJECT:**

SMART VENT<sup>®</sup> AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

### **1.0 EVALUATION SCOPE**

Compliance with the following codes:

- 2012, 2009 and 2006 International Building Code<sup>®</sup> (IBC)
- 2012, 2009 and 2006 International Residential Code<sup>®</sup> (IRC)
- 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT<sup>®</sup>Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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 2.6.2.2 of ASCE/SEI 24 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<sup>®</sup> Model #1540-510 and SmartVENT<sup>®</sup> Overhead Door Model #1540-514 both have screen covers with  $^{1}$ /<sub>4</sub>-inch-by- $^{1}$ /<sub>4</sub>-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<sup>®</sup> 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 recognized in this report do not offer natural ventilation.

### 4.0 DESIGN AND INSTALLATION

SmartVENT<sup>®</sup> and FloodVENT<sup>®</sup> 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. The mounting straps allow mounting in masonry and concrete walls up to 12 inches (305 mm) thick. In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the Smart Vent<sup>®</sup> 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<sup>●</sup> Stacking Model #1540-511 and FloodVENT<sup>●</sup> 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

\*Revised July 2015

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grade or floor and finished exterior grade immediately under each opening.

### 5.0 CONDITIONS OF USE

The Smart Vent<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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

Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated October 2013 (editorially revised May 2014).

### 7.0 IDENTIFICATION

The Smart VENT<sup>®</sup> models recognized 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).

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

TABLE 1-MODEL SIZES

For SI: 1 inch = 25.4 mm; 1 square foot =  $m^2$ 

U.S. DEPARTMENT OF HOMELAND SECURITY Federal Emergency Management Agency

OMB No. 1660-0008 Expiration Date: November 30, 2018

### National Flood Insurance Program

| - | LE   | ٧    | Ά    |     | O   | N   | С    | EF     | <b>K</b> 1 |    | -   | C,  | Α   |    |  |
|---|------|------|------|-----|-----|-----|------|--------|------------|----|-----|-----|-----|----|--|
|   | Impo | orta | ant: | Fol | low | the | inst | ructio | ons        | on | pag | ges | 1-9 | ). |  |

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 Policy Number: EMIDIO AND MARIA DIFIORE A2. Building Street Address (including Apt., Unit, Sulte, and/or Bldg. No.) or P.O. Route and Company NAIC Number: Box No. **401 SOUTH RIVERSIDE DRIVE** /idlations City State ZIP Cod New Jersey NEPTUNE 07753 A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) TOWNSHIP OF NEPTUNE: LOT 23, BLOCK 414 -5409-8 A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) RESIDENTIAL A5. Latitude/Longitude: Lat. 40°11'07.9"N Long. 074°02'32.8"W Horizontal Datum: NAD 1927 X NAD 1983 A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance. A7. Building Diagram Number 8 A8. For a building with a crawispace or enclosure(s): a) Square footage of crawlspace or enclosure(s) 1,756 sq ft b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 10 c) Total net area of flood openings in A8.b 1,800 sq in d) Engineered flood openings? X Yes INo A9. For a building with an attached garage: a) Square footage of attached garage 341 sợ ft b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade 2 c) Total net area of flood openings in A9.b 400 sq in d) Engineered flood openings? X Yes No SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION B1. NFIP Community Name & Community Number B2, County Name B3. State TOWNSHIP OF NEPTUNE 340317 MONMOUTH New Jersev B9. Base Flood Elevation(s) B5. Suffix B6. FIRM Index **B7. FIRM Panel** B8. Flood Zone(s) B4. Map/Panel (Zone AO, use Base Flood Depth) Number Date Effective/ Revised Date 9 34025C0341 F 09/29/2006 09/29/2006 AE B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: FIS Profile X FIRM Community Determined Other/Source: B11. Indicate elevation datum used for BFE in Item B9: 🗍 NGVD 1929 🛛 NAVD 1988 📋 Other/Source: B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? 🗌 Yes 🔀 No. Designation Date: CBRS OPA FEMA Form 086-0-33 (7/15) Replaces all previous editions. Form Page 1 of 6

| ELEVATION CERTIFICATE  |  |   | OMB No. 1660-00<br>Expiration Date: Noverne                                  |              |   |
|--|--|---|--|--------------|---|
| MPORTANT: in these spaces, copy the  | corresponding information fro  | om Section A.   | FOR INSURANCE COMPANY US   |              |   |
| Building Street Address (including Apt., Ur<br>401 SOUTH RIVERSIDE DRIVE   | hit, Suite, and/or Bldg. No.) or P.  | O. Route and Box No.  | Policy Number:   |              |   |
| City   | State  | ZIP Code  | Company NAIC Number  |              |   |
| NEPTUNE  | New Jersey   | 07753   |  |              |   |
| SECTION C-   | BUILDING ELEVATION INFO  | DRMATION (SURVEY R  | EQUIRED)   | 7            |   |
| C1. Building elevations are based on:<br>*A new Elevation Certificate will be r  | Construction Drawings*   | Building Under Constru-   | uction* 🛛 Finished Construction  |              |   |
| C2. Elevations – Zones A1–A30, AE, AF<br>Complete Items C2.a–h below accord  | I, A (with BFE), VE, V1–V30, V<br>rding to the building diagram spe                                  | (with BFE), AR, AR/A, AR<br>acified in Item A7. In Puer                           | /AE, AR/A1-A30, AR/AH, AR/AO.<br>to Rico only, enter meters.                 |              |   |
| Benchmark Utilized: GPS RTK OBS  | ERVATION Vertical  | Datum: <u>1988</u>  |  | 1            |   |
| Indicate elevation datum used for the  | e elevations in items a) through<br>988 [] Other/Source:   | h) below.   |  |              | , and the second second   |
| Datum used for building elevations n   | nust be the same as that used fo   | or the BFE.   | Check the measurement used.  |              |   |
| a) Top of bottom floor (including bas  | sement, crawlspace, or enclosur  | re floor)7, 9   | X feet T meters  | {            | 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - |
| b) Top of the next higher floor  |  | 14,0  | X feet meters  |              |   |
| c) Bottom of the lowest horizontal si  | ructural member (V Zones only)   | N/A.  | ∑ feet □ meters  |              |   |
| d) Attached garage (top of slab)   | ,  | 7,82  |  |              |   |
| e) Lowest elevation of machinery or<br>(Describe type of equipment and   | equipment servicing the buildin location in Comments)  | g <u>12, 3</u>  | X feet meters  |              | )R  |
| f) Lowest adjacent (finished) grade  | next to building (LAG)   | <u> </u>  | X feet meters  |              |   |
| g) Highest adjacent (finished) grade   | next to building (HAG)   | <u> </u>  | X feet meters  |              |   |
| h) Lowest adjacent grade at lowest   | elevation of deck or stairs, inclu   | ding7. <u>6</u>   | X feet meters  |              |   |
| structural support   |  |   |  |              |   |
| SECTION D  | - SURVEYOR, ENGINEER, O  | R ARCHITECT CERTIF  | ICATION  |              |   |
| This certification is to be signed and seal<br>I certify that the information on this Certifi<br>statement may be punishable by fine or it | ed by a land surveyor, engineer,<br>cate represents my best efforts<br>mprisonment under 18 U.S. Coo | , or architect authorized by<br>to interpret the data availa<br>le, Section 1001. | y law to certify elevation information.<br>able, I understand that any false |              |   |
| Were latitude and longitude in Section A   | provided by a licensed land surv   | /eyor? 🛛 Yes 🗋 No   | Check here if attachments.   |              | Pavemen   |
| Certifier's Name<br><i>N</i> illiam H. Doolittle   | License Numb<br>24GS3624000  | )<br>)  | A C  | ลี           |   |
| Fitie<br>Professional Land Surveyor  |  |   |  |              |   |
| Company Name<br>indstrom, Diessner & Carr, P.C.  | · · · · · · · · · · · · · · · · · · ·  |   | Place  |              |   |
| vddress<br>36 Drum Point Road, Suite 6   |  |   | July of  |              |   |
| ity<br>rick  | State<br>New Jersey  | ZIP Code<br>08723   | Pr vi  |              |   |
| Ignature Willeto, Jerol  | Date<br>07/19/2016   | Telephone<br>(732) 477-8900   |  |              |   |
| opy all pages of this Elevation Certificate  | and all attachments for (1) comm   | unity official, (2) insurance   | agent/company, and (3) building owner  | -            |   |
| omments (including type of equipment a<br>EMA PRELIMINARY FLOOD INSURAN<br>C PLATFORM AT ELEVATION 12.3 FE<br>C FLEVATION 16.2 FEET.       | nd location, per C2(e), if applica<br>CE RATE MAP (PFIRM)(REVIS<br>ET; FURNACE AND HOT WAT           | able)<br>ED RELEASED 1/30/201<br>ER HEATER AT ELEVAT                              | 5) FLOOD HAZARD ZONE AE-11.<br>TION 16.6 FEET; ELECTRIC PANEL                |              | GPS RTK   |
| IN (10) SMART VENTS WITHIN THE C<br>AWLSPACE 'A' (892 Sq.Ft.); FIVE (5)<br>IE GARAGE AREA (341 Sq.Ft.) AT ELI                              | RAWLSPACE AREA AT ELEV<br>SMART VENTS WITHIN CRAW<br>EVATION 8.4 FEET. SMART VE                      | ATION 8.4 FEET; FIVE (5<br>VLSPACE 'B' (864 Sq.Ft);<br>ENT MODEL #1540-520.       | 5) SMART VENTS WITHIN<br>TWO (2) SMART VENTS WITHIN                          | £ (E)<br>2,7 | & ZONE<br>17 25,<br>(EL 10) 8   |
| A Ferm 086-0-33 (7/15)   | Replaces all previous  | s editions.   | Form Page 2 of   | لہ<br>6      | 2014.   |

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| in these snaces, convitte correspond   | ing information from Section  | <br>Σπ.Δ  |   | NOC COMPANY UN                                 |
|--|---|---|---|--|
| Jing Street Address (Including Apt., Unit, Suite, and  | Policy Number   | r:  |   |  |
| 401 SOUTH RIVERSIDE DRIVE  |   |   |   | *•   |
| City   | State ZIP Co  | de  | Company NA  | C Number                                       |
|  | New Jersey 07753  |   |   |  |
| SECTION E - BUILDING EL  | EVATION INFORMATION   | (SURVEY NO  | T REQUIRED)   |  |
| For Zones AO and A (without BFE), complete Items E1<br>complete Sections A, B,and C. For Items E1–E4, use n<br>enter meters.   | -E5. If the Certificate is inter<br>atural grade, if available. Che   | ided to support<br>eck the measur                             | a LOMA or LON<br>ement used. In F   | IR-F request,<br>Puerto Rico only,             |
| E1. Provide elevation information for the following and<br>the highest adjacent grade (HAG) and the lowest a   | check the appropriate boxes<br>adjacent grade (LAG).  | to show wheth   | er the elevation  | is above or below                              |
| a) Top of bottom floor (including basement,<br>crawlspace, or enclosure) is  |   | ] feet 🔲 met  | ers 🗌 above o   | or 🔲 below the HAG                             |
| <li>b) Top of bottom floor (including basement,<br/>crawlspace, or enclosure) is</li>  |   | <br>∃feat ∏met  | ers El shove d  |  |
| <ol> <li>For Building Diagrams 6–9 with permanent flood o</li> </ol>   | penings provided in Section .   | A Items 8 and/c   | or 9 (see pages 1   | -2 of Instructions),                           |
| the next higher floor (elevation C2.b in the diagrams) of the building is  | · [   | ] feet [] met   | ers 🗍 above o   | r Tbelow the HAG                               |
| E3. Attached garage (top of slab) is   |   | ∃feet ∏met  | ers Dahove d  | r Delow the HAG                                |
| E4. Top of platform of machinery and/or equipment  |   | []   .60  |   |  |
| servicing the building is  |   | feet 📋 met  | ers 🗌 above o   | or below the HAG                               |
| 55. Zone AO only: If no flood depth number is available floodplain management ordinance? Yes   | e, is the top of the bottom flo<br>No 🔲 Unknown. The lo   | or elevated in a<br>cal official mus                          | ccordance with t<br>t certify this infor                                      | he community's mation in Section G.            |
|  |   |   |   |  |
| SECTION F – PROPERTY OWN<br>The property owner or owner's authorized representativ<br>community-issued BFE) or Zone AO must sign here. Th  | NER (OR OWNER'S REPRE<br>re who completes Sections A<br>ne statements in Sections A,                            | SENTATIVE) C<br>, B, and E for Z<br>B, and E are co           | CONTRACTION   | FEMA-issued or of my knowledge.                |
| SECTION F – PROPERTY OWN<br>The property owner or owner's authorized representative<br>community-issued BFE) or Zone AO must sign here. The<br>Property Owner or Owner's Authorized Representative<br>Address                            | NER (OR OWNER'S REPRE<br>ve who completes Sections A<br>he statements in Sections A,<br>s Name<br>City          | SENTATIVE) C<br>, B, and E for Z<br>B, and E are co           | CERTIFICATION<br>Cone A (without a<br>prrect to the best                      | FEMA-issued or<br>of my knowledge.<br>ZIP Code |
| SECTION F – PROPERTY OWN<br>The property owner or owner's authorized representative<br>community-issued BFE) or Zone AO must sign here. The<br>Property Owner or Owner's Authorized Representative'                                      | NER (OR OWNER'S REPRE<br>ve who completes Sections A<br>ne statements in Sections A,<br>s Name<br>City          | SENTATIVE) C<br>, B, and E for Z<br>B, and E are co           | CERTIFICATION<br>Cone A (without a<br>prrect to the best                      | FEMA-issued or<br>of my knowledge.<br>ZIP Code |
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| SECTION F – PROPERTY OWN<br>The property owner or owner's authorized representative<br>community-issued BFE) or Zone AO must sign here. The<br>Property Owner or Owner's Authorized Representative<br>Address<br>Signature               | NER (OR OWNER'S REPRE<br>re who completes Sections A<br>ne statements in Sections A,<br>s Name<br>City<br>Date  | SENTATIVE) C<br>, B, and E for Z<br>B, and E are cc<br>S      | CERTIFICATION<br>Cone A (without a<br>Drifect to the best                     | FEMA-issued or<br>of my knowledge.<br>ZIP Code |
| SECTION F – PROPERTY OWN<br>The property owner or owner's authorized representative<br>community-issued BFE) or Zone AO must sign here. The<br>Property Owner or Owner's Authorized Representative'<br>address<br>Signature              | NER (OR OWNER'S REPRE<br>ve who completes Sections A<br>ne statements in Sections A,<br>s Name<br>City<br>Date  | SENTATIVE) C<br>, B, and E for Z<br>B, and E are co<br>S      | CERTIFICATION<br>Cone A (without a<br>prrect to the best<br>State             | FEMA-issued or<br>of my knowledge.<br>ZIP Code |
| SECTION F – PROPERTY OWN<br>The property owner or owner's authorized representative<br>community-issued BFE) or Zone AO must sign here. The<br>Property Owner or Owner's Authorized Representative<br>Address<br>Signature               | NER (OR OWNER'S REPRE<br>re who completes Sections A<br>ne statements in Sections A,<br>s Name<br>City<br>Date  | SENTATIVE) C<br>, B, and E for Z<br>B, and E are co<br>S      | CERTIFICATION<br>Cone A (without a<br>prrect to the best                      | FEMA-issued or<br>of my knowledge.<br>ZIP Code |
| SECTION F – PROPERTY OWN<br>The property owner or owner's authorized representative<br>community-issued BFE) or Zone AO must sign here. The<br>Property Owner or Owner's Authorized Representative'<br>address<br>Signature              | NER (OR OWNER'S REPRE<br>ve who completes Sections A<br>ne statements in Sections A,<br>s Name<br>City<br>Date  | SENTATIVE) (<br>, B, and E for Z<br>B, and E are co<br>S      | Certification<br>Cone A (without a<br>prrect to the best<br>State             | FEMA-issued or<br>of my knowledge.<br>ZIP Code |
| SECTION F – PROPERTY OWN<br>The property owner or owner's authorized representative<br>community-issued BFE) or Zone AO must sign here. The<br>Property Owner or Owner's Authorized Representative<br>Address<br>Signature<br>Comments   | NER (OR OWNER'S REPRE<br>re who completes Sections A<br>ne statements in Sections A,<br>s Name<br>City<br>Date  | SENTATIVE) (<br>B, and E for Z<br>B, and E are co<br>S        | CERTIFICATION<br>Cone A (without a<br>prrect to the best                      | FEMA-issued or<br>of my knowledge.<br>ZIP Code |
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|   |  | etion A   |
|---|--|---|
| Building Street Address (including  | ute and Box No. Policy Number:   |   |
| 401 SOUTH RIVERSIDE DRIVE   | · · · · ·  |   |
| City<br>NEPTUNE   | State ZIP<br>New Jersev 07   | Code Company NAIC Number<br>753   |
| · - · · · · · · · · · · · · · · · · · ·   | SECTION G - COMMUNITY INFORMAT   | FION (OPTIONAL)   |
| The local official who is authorize<br>Sections A, B, C (or E), and G of<br>used in Items G8–G10, In Puerto<br>G1.  The information in Sect | d by law or ordinance to administer the commu<br>this Elevation Certificate. Complete the applica<br>Rico only, enter meters.<br>Ion C was taken from other documentation that | inity's floodplain management ordinance can complete<br>ible item(s) and sign below. Check the measurement<br>thas been signed and sealed by a licensed surveyor. |
| engineer, or architect w<br>data in the Comments a  | ho is authorized by law to certify elevation info<br>area below.)  | rmation. (Indicate the source and date of the elevation   |
| 32. L. A community official co<br>or Zone AO.   | mpleted Section E for a building located in Zon  | e A (without a FEIVIA-ISSUED or community-ISSUED BFE)   |
| 33. 🗍 The following information   | on (Items G4–G10) is provided for community f  | loodplain management purposes.  |
| 54, Permit Number   | G5. Date Permit Issued   | G6. Date Certificate of<br>Compliance/Occupancy Issued  |
| 37. This permit has been issued   | for: New Construction Substant   | iai Improvement   |
| G8. Elevation of as-built lowest t<br>of the building:  | feet [] meters Datum   |   |
| 39. BFE or (in Zone AO) depth (   | of flooding at the building site:,   | feet meters   |
| 310. Community's design flood e   | evation:   | feet meters Datum   |
| ocal Official's Name  | Title  |   |
| Community Name  | Telepho  | ne  |
| Bignature   | Date   | en andre de la constantina en antre en  |
|   |  |   |
| Comments (including type of equi  | pment and location, per C2(e), if applicable)  |   |
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|   |  | Check here if attachments.  |
| -MA Form 086-0-33 (7/15)  | Replaces all previous edition  | ons. Form Page 4 of 6   |



|  | IFICATE Continuation Page  |  |   | OMB No. 1660-0008<br>Expiration Date: November 30, 2018  |  |
|--|--|--|---|--|--|
|  | , in these spaces, copy the c  | these spaces, copy the corresponding information from Section A.                         |   | FOR INSURANCE COMPANY USE  |  |
| Jung Stre                                | eet Address (including Apt., Unit  | t, Suite, and/or Bldg. No.) or P.O. Route and Box No.                                    |   | Policy Number:   |  |
| City<br>NEPTUNE                          |  | State<br>New Jersey  | ZIP Code<br>07753   | Company NAIC Number  |  |
| If submittin<br>with: date<br>photograph | g more photographs than will<br>taken; "Front View" and "Re<br>is must show the foundation wit | fit on the preceding page,<br>ar View"; and, if required,<br>h representative examples o | affix the additional photogr<br>"Right Side View" and<br>of the flood openings or ven | aphs below. Identify all photographs<br>"Left Side View." When applicable,<br>its, as indicated in Section A8. |  |
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| Photo One C                              | Caption REAR OF 401 SOUTH  | RIVERSIDE DRIVE  |   |  |  |
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| Dhoto Two (                              | aption RIGHT SIDE OF 401 S   | OUTH RIVERSIDE DRIVE   | 0   | •<br>************************************  |  |
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See reverse side for continuation.



ICC-ES Report

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# ESR-2074

Reissued 02/2015 This report is subject to renewal 02/2017.

### DIVISION: 08 00 00—OPENINGS SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS

**REPORT HOLDER:** 

## **SMARTVENT PRODUCTS, INC.**

430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071

### **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



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ESR-2074\*

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This report is subject to renewal February 2017.

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

REPORT HOLDER:

SMARTVENT PRODUCTS, INC. 430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071 (877) 441-8368 www.smartvent.com info@smartvent.com

### **EVALUATION SUBJECT:**

SMART VENT<sup>®</sup> AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

### **1.0 EVALUATION SCOPE**

Compliance with the following codes:

- 2012, 2009 and 2006 International Building Code<sup>®</sup> (IBC)
- 2012, 2009 and 2006 International Residential Code<sup>®</sup> (IRC)
- 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT<sup>®</sup>Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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 2.6.2.2 of ASCE/SEI 24 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<sup>®</sup> Model #1540-510 and SmartVENT<sup>®</sup> Overhead Door Model #1540-514 both have screen covers with  $^{1}$ /<sub>4</sub>-inch-by- $^{1}$ /<sub>4</sub>-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<sup>®</sup> 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 recognized in this report do not offer natural ventilation.

### 4.0 DESIGN AND INSTALLATION

SmartVENT<sup>®</sup> and FloodVENT<sup>®</sup> 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. The mounting straps allow mounting in masonry and concrete walls up to 12 inches (305 mm) thick. In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the Smart Vent<sup>®</sup> 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<sup>●</sup> Stacking Model #1540-511 and FloodVENT<sup>●</sup> 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

\*Revised July 2015

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grade or floor and finished exterior grade immediately under each opening.

### 5.0 CONDITIONS OF USE

The Smart Vent<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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

Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated October 2013 (editorially revised May 2014).

### 7.0 IDENTIFICATION

The Smart VENT<sup>®</sup> models recognized 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).

#### COVERAGE (sq. ft.) MODEL NAME MODEL NUMBER MODEL SIZE (in.) 153/4" X 73/4" FloodVENT® 1540-520 200 SmartVENT<sup>®</sup> 15<sup>3</sup>/4" X 7<sup>3</sup>/4" 1540-510 200 FloodVENT<sup>®</sup> Overhead Door 15<sup>3</sup>/4" X 7<sup>3</sup>/4" 1540-524 200 SmartVENT<sup>®</sup> Overhead Door 15<sup>3</sup>/4" X 7<sup>3</sup>/4" 1540-514 200 Wood Wall FloodVENT® 14" X 8<sup>3</sup>/4" 200 1540-570 Wood Wall FloodVENT® Overhead Door 14" X 8<sup>3</sup>/4" 200 1540-574 SmartVENT® Stacker 16" X 16" 1540-511 400 FloodVent® Stacker 1540-521 16" X 16" 400

### TABLE 1-MODEL SIZES

For SI:  $4 \text{ lnch} = 25.4 \text{ mm}; 1 \text{ square foot} = \text{m}^2$