

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expires March 31, 2012

Important: Read the instructions on pages 1-9.

SECTION A - PROPERTY INFORMATION

A1. Building Owner's Name Brenda M. Knepp		For Insurance Company Use:
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 1308 River Pointe Drive		Policy Number
City Albany State GA ZIP Code 31701		Company NAIC Number
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) Lot 117, River Pointe Plantation, Phase III; Tax Parcel 00135/00002/117		
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <u>Residential</u>		
A5. Latitude/Longitude: Lat. 31°36'51.3" Long. 84°07'07.3"		Horizontal Datum: ☐ NAD 1927 ☒ 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 <u>1-B</u>		
A8. For a building with a crawlspace or enclosure(s):		A9. For a building with an attached garage:
a) Square footage of crawlspace or enclosure(s) <u>192</u> sq ft		a) Square footage of attached garage _____ sq ft
b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade <u>2</u>		b) No. of permanent flood openings in the attached garage within 1.0 foot above adjacent grade _____
c) Total net area of flood openings in A8.b <u>102</u> sq in		c) Total net area of flood openings in A9.b _____ sq in
d) Engineered flood openings? ☒ Yes ☐ No		d) Engineered flood openings? ☐ Yes ☐ No

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number Dougherty County, Georgia 130074		B2. County Name Dougherty "Unincorporated area"		B3. State GA	
B4. Map/Panel Number 13095C0126E	B5. Suffix E	B6. FIRM Index Date 09/25/2009	B7. FIRM Panel Effective/Revised Date 09/25/2009	B8. Flood Zone(s) AE	B9. Base Flood Elevation(s) (Zone AO, use base flood depth) 192.5
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 (Describe) _____					
B11. Indicate elevation datum used for BFE in Item B9: ☐ NGVD 1929 ☒ NAVD 1988 ☐ Other (Describe) _____					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☒ No Designation Date _____ ☐ CBRS ☐ OPA					

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

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

C2. Elevations – Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO. Complete Items C2.a-h below according to the building diagram specified in Item A7. Use the same datum as the BFE.

Benchmark Utilized EGPS Real-Time Network Vertical Datum NAVD 1988

Conversion/Comments _____

Check the measurement used.

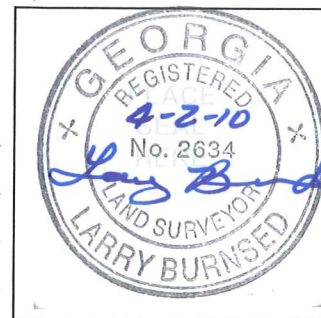
a) Top of bottom floor (including basement, crawlspace, or enclosure floor)	<u>191.68</u>	☒ feet ☐ meters (Puerto Rico only)
b) Top of the next higher floor	<u>202.77</u>	☒ feet ☐ meters (Puerto Rico only)
c) Bottom of the lowest horizontal structural member (V Zones only)	_____	☐ feet ☐ meters (Puerto Rico only)
d) Attached garage (top of slab)	_____	☐ feet ☐ meters (Puerto Rico only)
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	<u>200.8</u>	☒ feet ☐ meters (Puerto Rico only)
f) Lowest adjacent (finished) grade next to building (LAG)	<u>190.7</u>	☒ feet ☐ meters (Puerto Rico only)
g) Highest adjacent (finished) grade next to building (HAG)	<u>191.4</u>	☒ feet ☐ meters (Puerto Rico only)
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	_____	☐ feet ☐ meters (Puerto Rico only)

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

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

☒ Check here if comments are provided on back of form. Were latitude and longitude in Section A provided by a licensed land surveyor? ☒ Yes ☐ No

Certifier's Name Larry Burnsed		License Number 2634	
Title Land Surveyor	Company Name Atlas Surveying Company		
Address 1927A Ledo Road	City Albany	State GA	ZIP Code 31707
Signature <u>Larry Burnsed</u>	Date 4/2/2010	Telephone 229-435-5170	



IMPORTANT: In these spaces, copy the corresponding information from Section A.	For Insurance Company Use:
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 1308 River Pointe Drive	Policy Number
City Albany State GA ZIP Code 31701	Company NAIC Number

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION (CONTINUED)

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

Comments This certificate is only for a 12' x 16' addition located on the East side of the structure as shown on East side view photograph on the next page of this certificate. See attached ICC ES report on engineered flood vents. The lowest machinery in item C2.e is an elevated air conditioning unit.

Signature  Date 4/2/2010 ☒ Check here if attachments

SECTION E - BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE)

For Zones AO and A (without BFE), complete Items E1-E5. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C. For Items E1-E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.

- E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).
- a) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.
- b) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the LAG.
- E2. For Building Diagrams 6-9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 8-9 of Instructions), the next higher floor (elevation C2.b in the diagrams) of the building is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.
- E3. Attached garage (top of slab) is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.
- E4. Top of platform of machinery and/or equipment servicing the building is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.
- E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance? ☐ Yes ☐ No ☐ Unknown. The local official must certify this information in Section G.

SECTION F - PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION

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

Property Owner's or Owner's Authorized Representative's Name

Address	City	State	ZIP Code
Signature	Date	Telephone	
Comments			

☐ Check here if attachments

SECTION G - COMMUNITY INFORMATION (OPTIONAL)

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8 and G9.

- G1. ☐ The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)
- G2. ☐ A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.
- G3. ☐ The following information (Items G4-G9) is provided for community floodplain management purposes.

G4. Permit Number	G5. Date Permit Issued	G6. Date Certificate Of Compliance/Occupancy Issued
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G7. This permit has been issued for: ☐ New Construction ☐ Substantial Improvement

G8. Elevation of as-built lowest floor (including basement) of the building: _____ ☐ feet ☐ meters (PR) Datum _____

G9. BFE or (in Zone AO) depth of flooding at the building site: _____ ☐ feet ☐ meters (PR) Datum _____

G10. Community's design flood elevation _____ ☐ feet ☐ meters (PR) Datum _____

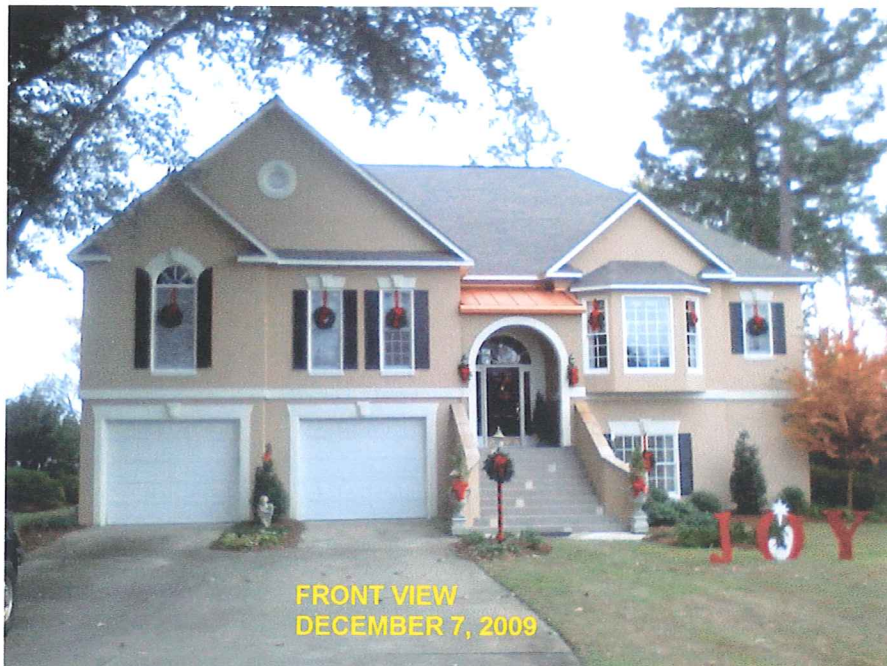
Local Official's Name	Title
Community Name	Telephone
Signature	Date
Comments	

☐ Check here if attachments

Building Photographs

See Instructions for Item A6.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 1308 River Pointe Drive	For Insurance Company Use: Policy Number
City Albany State GA ZIP Code 31701	Company NAIC Number
If using the Elevation Certificate to obtain NFIP flood insurance, affix at least two 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." If submitting more photographs than will fit on this page, use the Continuation Page on the reverse.	



Building Photographs

Continuation Page

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 1308 River Pointe Drive	For Insurance Company Use:
City Albany State GA ZIP Code 31701	Policy 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."	



ICC Evaluation Service, Inc.
www.icc-es.org

Business/Regional Office ■ 5360 Workman Mill Road, Whittier, California 90601 ■ (562) 699-0543
Regional Office ■ 900 Montclair Road, Suite A, Birmingham, Alabama 35213 ■ (205) 599-9800
Regional Office ■ 4051 West Flossmoor Road, Country Club Hills, Illinois 60478 ■ (708) 799-2305

DIVISION: 10—SPECIALTIES
Section: 10230—Vents

REPORT HOLDER:

SMART VENT®, INC.
450 ANDBRO DRIVE, SUITE 2B
PITMAN, NEW JERSEY 08071
877-441-8368
www.smartvent.com
eval@smartvent.com

EVALUATION SUBJECT:

SMART VENT® 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:

- 2006 International Building Code® (IBC)
- 2006 International Residential Code® (IRC)

Properties evaluated:

- Physical operation
- Water flow

2.0 USES

The Smart Vent® 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. 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® AFFVs disengage, 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 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, and each opening provides 76 square inches (49 032 mm²) of net free area for flood mitigation in the open position. The SmartVENT™ Stacking Model #1540-511 and FloodVENT™ Stacking Model #1540-521 units each contain two vertically arranged openings per unit, providing 152 square inches (98 064 mm²) of net free area for flood mitigation in the open position.

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™ Model #1540-520, SmartVENT™ Model #1540-510, FloodVENT™ Overhead Door Model #1540-524, and SmartVENT™ Overhead Door Model #1540-514 units measure 15³/₄ inches wide by 7³/₄ 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 8³/₄ inches high (355.6 by 222.25 mm). The SmartVENT™ Stacking Model #1540-511 and FloodVENT™ Stacking Model #1540-521 units measure 16 inches wide by 16 inches high (406.4 by 406.4 mm).

3.4 Ventilation:

The SmartVENT® Model #1540-510 and SmartVENT® Overhead Door Model #1540-514 both have screen covers with 1/4-inch-by-1/4-inch (6.35 by 6.35 mm) openings, yielding 51 square inches (32 903 mm²) of net free area to supply natural ventilation. The SmartVENT™ Stacking Model #1540-511 consists of two Model #1540-510 units in one assembly, and provides 102 square inches (65 806 mm²) of net free area to supply natural ventilation. Other AFFVs recognized in this report do not offer natural ventilation.

4.0 INSTALLATION

SmartVENT® and FloodVENT™ are designed to be installed into walls or overhead doors of existing or new construction from the exterior side. Installation of the vents must be in accordance with the manufacturer's instructions, the applicable code and this report. The mounting straps allow mounting in wood, 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® 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 m²) 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 m²) 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:

- 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.

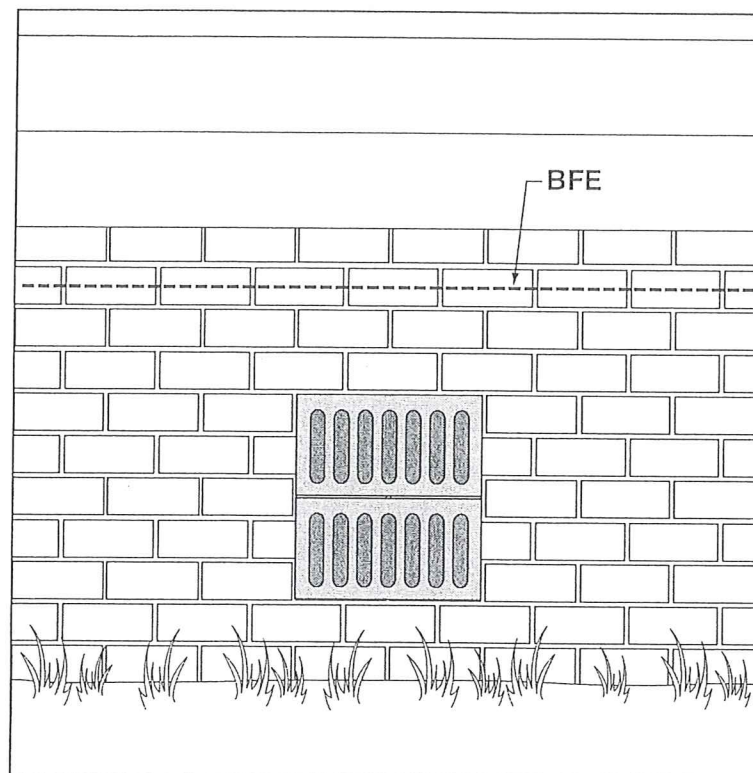
6.0 EVIDENCE SUBMITTED

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

7.0 IDENTIFICATION

The Smart VENT®, models recognized in this report must be identified by a label bearing the manufacturer's name (Smart Vent, Inc.), the model number, and the evaluation report number (ESR-2074).

Figure 13. Stacked vents inserted in large openings must be below the BFE



Depth of water 1 foot or less

Some FIRMs show mapped SFHAs where the depth of water will be 1-foot deep or shallower. Although the difference in water depth between the outside and inside of the enclosure under a building in these areas will not exceed 1 foot during the base flood, the NFIP regulations require openings.

There are at least two solutions to this situation. The first is to elevate the floor of the enclosure the necessary height so that it is at or above the BFE and there is no need for openings. The second solution is to install openings, taking care to ensure that all of the necessary open area is below the BFE (otherwise the openings will not function as intended). This can be accomplished by positioning the bottom of the openings at or very close to grade, rather than the maximum of 1 foot above grade. In addition to complying with the regulations, the walls will not experience excessive differential hydrostatic pressure when floodwaters rise higher than the BFE.

Non-Engineered Openings and Engineered Openings

The NFIP regulations identify alternatives to provide sufficient size and number of openings to allow for the automatic entry and exit of floodwaters. This section describes how this level of performance can be satisfied by use of:

- Non-engineered openings (or covers and devices) that meet the prescriptive requirement to provide 1 square inch of net open area for each square foot of enclosed area (as

described below, a variety of options and devices can serve as non-engineered openings).

- Engineered openings (or covers and devices) that are specifically designed and certified by a registered design professional as meeting the required performance and design requirements outlined below (and, if applicable, the community's building code).
- Engineered openings (or covers and devices) for which an Evaluation Report has been issued by the International Code Council (ICC) Evaluation Service, Inc. (ICC-ES), a subsidiary of the International Code Council, Inc. (<http://www.iccsafe.org>).

The International Residential Code® includes both the prescriptive (non-engineered) alternative and the engineered openings alternative.

The International Building Code® also includes both alternatives by reference to ASCE 24.

The following requirements for installation apply regardless of whether engineered openings or non-engineered openings are used to satisfy the NFIP requirements (also see page 13, Requirements and Guidance for Installation of Openings):

- Each enclosed area must have a minimum of two openings; if there are multiple enclosed areas, each area must have openings in its exterior walls,
- The bottom of each opening must be no more than 1 foot above the higher of the interior or exterior grade immediately under the opening, and
- Any screens, grates, grilles, fixed louvers, or other covers or devices must not block or impede the automatic flow of floodwaters into and out of the enclosed area.

Unacceptable Measures

It is important to note that FEMA has determined that certain measures are not acceptable as flood openings, including:

- Standard foundation air ventilation devices that can be closed manually, because they do not allow for the automatic entry and exit of floodwaters unless they are permanently disabled in the open position.
- Standard foundation air ventilation devices that have detachable solid covers that are intended to be manually installed over the opening in cold weather, because they do not allow for the automatic entry and exit of floodwaters when the cover is in place.
- Standard foundation air ventilation devices that are designed to open and close based on temperature (unless they also are designed to allow for the automatic entry and exit of floodwaters).
- Windows below the BFE, because the automatic entry and exit of floodwaters cannot be satisfied by the expectation that windows will break under rising floodwaters.
- Garage doors without openings installed in them, because human intervention is required to open the doors when flooding is expected. Gaps between the garage door and the door jamb or walls do not count towards the net open area requirement.
- Standard exterior doors without openings installed in them.