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

Permit FP63487

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

ELEVATION CERTIFICATE

Important: Follow the instructions on pages 1–9.

OK MWH 2-23-17

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 JIMMY C. RICHARDSON			Policy Number:
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 310 VISTA DRIVE			Company NAIC Number:
City GARDEN CITY	State South Carolina	ZIP Code 29576	

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)
LOT 9-A BLOCK "C" MYRTLE DUNES (TMS 195-10-15-043)

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) RESIDENTIAL

A5. Latitude/Longitude: Lat. 33°35'20.472"N Long. 78°59'36.789"W 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 6

A8. For a building with a crawlspace or enclosure(s):

a) Square footage of crawlspace or enclosure(s) 378 sq ft

b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 5

c) Total net area of flood openings in A8.b 570 sq in REV. 02/23/2017

d) Engineered flood openings? ☒ Yes ☐ No

A9. For a building with an attached garage:

a) Square footage of attached garage 0 sq ft

b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade 0

c) Total net area of flood openings in A9.b 0 sq in

d) Engineered flood openings? ☐ Yes ☒ No

SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number	B2. County Name	B3. State
HORRY COUNTY 450104	HORRY	South Carolina

B4. Map/Panel Number	B5. Suffix	B6. FIRM Index Date	B7. FIRM Panel Effective/ Revised Date	B8. Flood Zone(s)	B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth)
45051C0753	H	09/17/2003	08/23/1999	AE	13

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 Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☒ No
Designation Date: _____ ☐ CBRS ☐ OPA

ELEVATION CERTIFICATE

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

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. 310 VISTA DRIVE			Policy Number:
City GARDEN CITY	State South Carolina	ZIP Code 29576	Company NAIC Number

SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: ☐ Construction Drawings* ☐ Building Under Construction* ☒ Finished Construction

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

C2. Elevations – Zones A1–A30, AE, AH, 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. In Puerto Rico only, enter meters.

Benchmark Utilized: SCVRS Vertical Datum: NGVD 29

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

☒ NGVD 1929 ☐ NAVD 1988 ☐ Other/Source:

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

		Check the measurement used.	
a) Top of bottom floor (including basement, crawlspace, or enclosure floor)	10.2	☒ feet	☐ meters
b) Top of the next higher floor	21.4	☒ feet	☐ meters
c) Bottom of the lowest horizontal structural member (V Zones only)	N/A	☒ feet	☐ meters
d) Attached garage (top of slab)	N/A	☒ feet	☐ meters
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	19.4	☒ feet	☐ meters
f) Lowest adjacent (finished) grade next to building (LAG)	9.1	☒ feet	☐ meters
g) Highest adjacent (finished) grade next to building (HAG)	9.6	☒ feet	☐ meters
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	N/A	☒ feet	☐ meters

SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

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

Were latitude and longitude in Section A provided by a licensed land surveyor? ☒ Yes ☐ No ☐ Check here if attachments.

Certifier's Name MICHAEL S. CULLER, III	License Number 29114	
Title PRESIDENT		
Company Name CULLER LAND SURVEYING III, INC		
Address 1010 5TH AVE NW EXT.		
City SURFSIDE BEACH	State South Carolina	ZIP Code 29575
Signature	Date 01/26/2017	Telephone (843) 238-2333

Place Seal Here

SOUTH CAROLINA CULLER LAND SURVEYING III INC NO. 4590 CERTIFICATE OF AUTHORIZATION

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

Comments (including type of equipment and location, per C2(e), if applicable)

ITEM C2-A REFERS TO FLOOR LEVEL OF BELOW ENCLOSURE: ITEM C2-E REFERS TO FLOOR LEVEL OF HVAC SYSTEM

ELEVATION CERTIFICATE

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

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. 310 VISTA DRIVE			Policy Number:
City GARDEN CITY	State South Carolina	ZIP Code 29576	Company NAIC Number

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 1–2 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 or Owner's Authorized Representative's Name			
Address	City	State	ZIP Code
Signature	Date	Telephone	

Comments

☐ Check here if attachments.

ELEVATION CERTIFICATE

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

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. 310 VISTA DRIVE			Policy Number:
City GARDEN CITY	State South Carolina	ZIP Code 29576	Company NAIC Number

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–G10. In Puerto Rico only, enter meters.

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–G10) is provided for community floodplain management purposes.

G4. Permit Number	G5. Date Permit Issued	G6. Date Certificate of Compliance/Occupancy Issued

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 Datum _____

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

G10. Community's design flood elevation: _____.____ ☐ feet ☐ meters Datum _____

Local Official's Name	Title
Community Name	Telephone
Signature	Date

Comments (including type of equipment and location, per C2(e), if applicable)

☐ Check here if attachments.

ELEVATION CERTIFICATE

BUILDING PHOTOGRAPHS

See Instructions for Item A6.

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

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. 310 VISTA DRIVE			Policy Number:
City GARDEN CITY	State South Carolina	ZIP Code 29576	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

Photo One Caption FRONT VIEW (01/26/2017)

Photo Two

Photo Two Caption RIGHT SIDE VIEW (01/26/2017)

ELEVATION CERTIFICATE

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 INSURANCE COMPANY USE
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 310 VISTA DRIVE			Policy Number:
City GARDEN CITY	State South Carolina	ZIP Code 29576	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.

Photo One

Photo One Caption VENT VIEW (02/23/2017)

Photo Two

Photo Two Caption LEFT SIDE VIEW (01/26/2017)

ICC EVALUATION SERVICE

Most Widely Accepted and Trusted

ICC-ES Evaluation Report

ESR-3560

Reissued September 2015

This report is subject to renewal September 2017.

www.icc-es.org | (800) 423-6587 | (562) 699-0543 *A Subsidiary of the International Code Council®*

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

REPORT HOLDER:

FLOOD FLAPS®, LLC
2707 WATERPOINTE CIRCLE
MT. PLEASANT, SOUTH CAROLINA 29466
(843) 849-8031
www.floodflaps.com
info@floodflaps.com

EVALUATION SUBJECT:

FLOOD FLAPS® FLOOD VENTS: MODELS FFWF12; FFNF12; FFWF08; FFNF08; FFWF05; FFNF05

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2012 and 2009 *International Building Code®* (IBC)
- 2012 and 2009 *International Residential Code®* (IRC)

Properties evaluated:

- Physical operation
- Water flow
- Weathering

2.0 USES

Flood Flaps® are used to provide for the equalization of hydrostatic flood forces on exterior walls.

3.0 DESCRIPTION

3.1 General:

Flood Flaps® flood vents are engineered mechanically operated flood vents (FVs) that automatically allow flood waters to enter and exit enclosed areas. The FVs are constructed of ABS plastic which serves as the FV's housing, and a front grill that contains an anodized metal screen imbedded in polypropylene plastic. 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.

The sealed series models contain two rubber flaps that close the FV to the passage of air when using with conditioned areas or sealed crawl spaces. In the same manner as the grill, the two rubber flaps are pushed open by water pressure, allowing water and debris to flow through the FV in either direction. See Figure 1 for an illustration of the Flood Flaps® FV.

3.2 Engineered Opening:

The Flood Flaps® FVs comply with the design principle noted in Section 2.6.2.2 of ASCE/SEI 24 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, Flood Flaps® FVs must be installed in accordance with Section 4.0.

3.3 Model Sizes:

The Flood Flaps® FV model designations and sizes are as follows:

MODEL	WIDTH (in)	HIGHT (in)	DEPTH (in)
FFWF12 FFNF12	$15^5/_8$	$7^3/_4$	12
FFWF08 FFNF08	$15^5/_8$	$7^3/_4$	8
FFWF05 FFNF05	$15^5/_8$	$7^3/_4$	5

For **SI:** 1 inch = 25.4 mm.

The FFWF series include two rubber flaps for the prevention of air flow. The FFNF series omit the rubber flaps.

3.4 Ventilation:

Flood Flaps® FV models FFNF12, FFNF08, FFNF05, and FFNF02 have metal screens with $^1/_4$ inch by $^1/_4$ inch (6 mm by 6 mm) openings and provide 37 square inches of net free opening to supply natural ventilation for under-floor ventilation. Flood Flaps® FV models FFWF12, FFWF08, and FFWF05 have not been evaluated for use as openings for under-floor ventilation.

4.0 DESIGN AND INSTALLATION

Flood Flaps® FVs are designed to be installed into walls of existing or new construction. Installation of the FVs must be in accordance with the manufacturer's instructions, the applicable code and this report. Flood Flaps® FVs can be installed in wood, masonry and concrete walls up to a thickness of 12 inches (305 mm). In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the Flood Flaps® FVs must be installed as follows:

- With a minimum of two openings on different sides of each 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.

Copyright © 2015

- With a minimum of one FV for every 220 square feet (20 m^2) of enclosed area.
- Below the base flood elevation.
- With the bottom of the FV located a maximum of 12 inches (305 mm) above grade.

5.0 CONDITIONS OF USE

The Flood Flaps® flood vents 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 Flood Flaps® 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 Flood Flaps® FVs must not be used in 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.

7.0 IDENTIFICATION

The Flood Flaps models recognized in this report are identified by a label bearing the manufacturer's name, the model number, and the evaluation report number (ESR-3560).

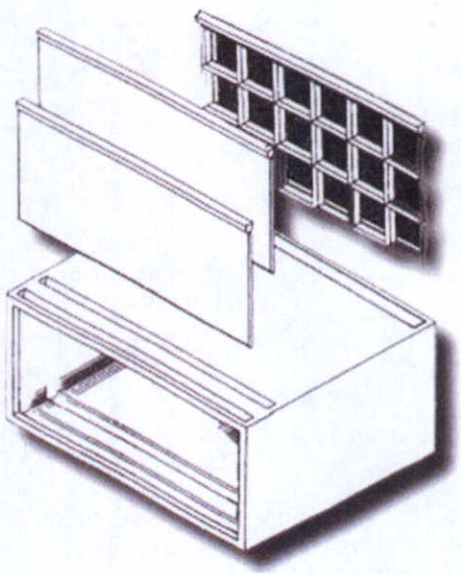

FIGURE 1—FLOOD FLAPS® FLOOD VENT