U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY 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

FOR INSURANCE COMPANY USE

A1. Building Owner's Name Bruce A. + Sandra A. Sorensen — Policy Number:

A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.
222 Flamingo St. — Company NAIC Number:

City Fort Myers Beach State FL ZIP Code 33931

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)
LOT 26, BLOCK C, FLAMINGO PARK, PB 9/PG 66 STRAP: 34-46-24-W4-0010C.0260

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

A5. Latitude/Longitude: Lat. 26.4256749 Long. -81.90397289999998 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) 1579 sq ft
- b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 8
- c) Total net area of flood openings in A8.b 1640 sq in
- d) Engineered flood openings? ☒ Yes ☐ No

A9. For a building with an attached garage:
- a) Square footage of attached garage N/A sq ft
- b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade N/A
- c) Total net area of flood openings in A9.b N/A 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
Town of Fort Myers Beach & 120673	Lee	FL

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)
12071C0567	F	8/28/2008	8/28/2008	AE	10'

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

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: PK/NAIL & TAB Vertical Datum: 3.20'

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)	3.13	☒ feet	☐ meters
b) Top of the next higher floor	12.85	☒ feet	☐ meters
c) Bottom of the lowest horizontal structural member (V Zones only)	N/A	☐ feet	☐ meters
d) Attached garage (top of slab)	3.13	☒ feet	☐ meters
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	13.0	☒ feet	☐ meters
f) Lowest adjacent (finished) grade next to building (LAG)	2.60	☒ feet	☐ meters
g) Highest adjacent (finished) grade next to building (HAG)	2.90	☒ 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.*

☐ Check here if comments are provided on back of form.
☐ Check here if attachments.

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

Certifier's Name R.L. Schumann License Number RLS 2239

Title Reg. Land Surveyor Company Name LIS Surveying, LLC (Job#20462)

Address 21430 Palm Beach Blvd City Alva State FL ZIP Code 33920

Signature R. L. Schumann Date 6/9/2014 Telephone (239) 693-9244

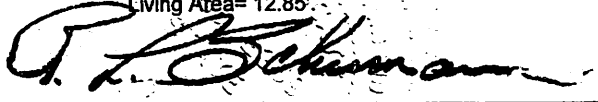
6/9/14

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. 222 Flamingo St.	Policy Number:
City Fort Myers Beach State FL ZIP Code 33931	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 C(2) Benchmark Utilized: Pk/Nail and Tab in wood power pole.
Living Area= 12.85'



6/9/14

Signature R.L. Schumann Date 6/9/2014

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–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

☐ Check here if attachments.

Building Photographs

See Instructions for Item A6.

IMPORTANT: In these spaces, copy the corresponding information from Section A.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 222 Flamingo St.	FOR INSURANCE COMPANY USE Policy Number:
City Fort Myers Beach State FL ZIP Code 33931	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.

FRONT VIEW 6/9/2014

REAR VIEW 6/9/2014

EQUIPMENT VIEW 6/9/2014

Building Photographs

Continuation Page

IMPORTANT: In these spaces, copy the corresponding information from Section A.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 222 Flamingo St.	FOR INSURANCE COMPANY USE Policy Number:
City FortMyers Beach State FL ZIP Code 33931	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.

Certification of Engineered Flood Openings

In accordance with NFIP, FEMA TB 1-08, and ASCE/SEI 24-05

I hereby certify that the **Crawl Space Door Systems flood vents 816CS, 1220CS, 1232CS, 1616CS, 1624CS, 1632CS, 2032CS, 2424CS, and 2436CS are designed** in accordance with the requirements of the NFIP "Flood Insurance Manual" (2011) **to provide automatic equalization of hydrostatic flood forces by allowing for the entry and exit of floodwaters,** when properly installed and sized as set forth below. This certification follows the design requirements and specifications established in FEMA Technical Bulletin 1-08, "Openings in Foundation Walls and Walls of Enclosures Below Elevated Buildings in Special Flood Hazard Areas", and the ASCE Standard for "Flood Resistant Design and Construction" (ASCE/SEI 24-05). The actual vent opening measurements were determined and certified by Mr. Christopher Mark Loney, Virginia PE No. 029000. Calculations are based on the spreadsheet formulas, and "Review of certification of Engineered Flood Openings, dated January 16, 2012" prepared by Dr. Georg Reichard, Associate Professor of Building Construction, Virginia Tech.

Design Characteristics

Section 2.6.2.2 of ASCE 24 provides an equation to determine the required net area of engineered openings (A_o) for a given enclosed area (A_e). This equation is based on the hydraulic formula for the flow rate across sharp edged orifices. I have utilized this equation to calculate 1) the respected flow rate through the individual openings between louvers; 2) the flow rate through the main frame opening in case the louver is blown out during a flood event; and 3) the flow rate of water flowing through louver blades following hydraulic short tube theory. The ultimate maximum total enclosed area (A_e) that can be serviced by a single vent has then been determined by utilizing the lowest flow rate of the three assessed scenarios for each vent and is listed in Table 1.

These values are based on the following assumptions:

- In absence of reliable data, the rates of rise and fall have been assumed with 5 feet/hour;
- The (maximum) difference between the exterior and interior floodwater levels has been assumed with 1 foot during base flood conditions;
- A factor of safety of 5 has been assumed, which is consistent with design practices related to protection of life and property;
- The net area of openings (A_o) as provided by the manufacturer.

*)	Model	H x W [in]	A_o [in^2]	A_e [ft^2]
☐	816CS	8 x 16	106	**205**
☐	1220CS	12 x 20	237	**500**
☐	1232CS	12 x 32	306	**645**
☐	1616CS	16 x 16	184	**395**
☐	1624CS	16 x 24	312	**670**
☐	1632CS	16 x 32	408	**835**
☐	2032CS	20 x 32	630	**1240**
☐	2424CS	24 x 24	570	**1230**
☐	2436CS	24 x 36	852	**1765**

Table 1 Maximum total enclosed area (A_e) that can be served by each individual model based on the given net area of engineered openings (A_o)

Installation Requirements and Limitations

This certification will be voided if the following installation requirements and limitations are not enforced:

- There shall be a minimum of two openings on different sides of each enclosed area;
- The bottom of each required opening shall be no more than 1ft above the adjacent ground level;
- No temporary (e.g. during cold weather) or permanent solid cover may be placed into or over the flood vent that would block the automatic entry or exit of floodwaters at any time;
- Where analysis indicates rates of rise and fall greater than 5 ft/hr, the total enclosed area as given in Table 1 shall be reduced accordingly to account for the higher rates of rise and fall.

Certifying Design Professional

Name, Title	Steve A. Geci, President, Geci & Associates Engineers, Inc.
Address	2950 N 12th Avenue, Pensacola, FL 32503
License	Florida Professional Engineer, License No. 33658
Signature	10/30/12

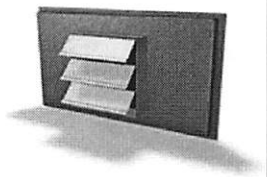
STEVE A. GECI LICENSE No. 33658 STATE OF FLORIDA PROFESSIONAL ENGINEER

Identification of the Building and Installed Flood Vents (By Others)

The flood vent models marked in Table 1*) are being installed at the following building:

Building Address

Crawl Space Door Systems® INCORPORATED



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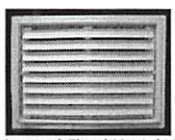
What's New?



Engineered Flood Vent (16" x 24") White
$119.00

Information

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Privacy Notice
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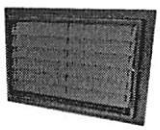
Printable Catalog
Site Map

Engineered Flood Vent (8" x 16") $79.00

[816CS]



Click to Enlarge

- ENGINEERED CERTIFIED FLOOD VENT
- It's Smart to use Flood Vents
- FEMA Flood Louver - Patent No. US D583,042
- Protect home from flood waters
- Compliant with FEMA's flood zone requirements
- Certification of Engineered Flood Openings (FEMA's TB 1/ August 2008)
- Increases flood protection with fewer flood vents
- The most economical flood vent in the market today
- Save money on flood insurance by using flood vents
- Louver and vermin screen for summer ventilation
- No cover allowed to block the automatic entry and exit of floodwaters
- Durable PVC/ABS plastic (no rust or rot)
- Treated with UV retardant
- Quick and easy installation
- Installation instructions and hardware included
- The flood vent is excellent for remodeling or new construction
- Flush mount install over the foundation opening
- Opening within frame is 8x16 with 1.5" frame for mounting = Total Dimensions 11x19

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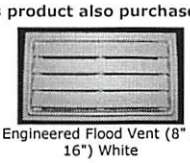
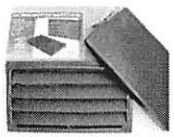
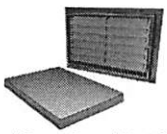
Crawl Space Door / Vent (20" x 32")



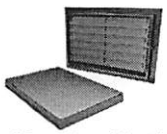
Engineered Flood Vent (8" x 16") White



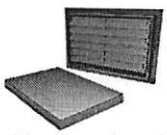
8"x16" Foundation Air Vent



Crawl Space Door / Vent (24" x 24")



Crawl Space Door / Vent (12" x 32")



Crawl Space Door / Vent (16" x 24")

Categories

- Doors / Air Vents
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04. Engineered Flood Vent (16" x 24")
05. Engineered Flood Vent (16" x 32")
06. Engineered Flood Vent (24" x 24")
07. Engineered Flood Vent (8" x 16") White
08. Engineered Flood Vent (12" x 32")
09. Engineered Flood Vent (20" x 32")
10. Engineered Flood Vent (24" x 36")

Tuesday 10 December, 2013

1272654 requests since Monday 04 May, 2009

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