



Town of Fort Myers Beach

Anita Cereceda
Mayor

Ray Murphy
Vice Mayor

Joanne Shamp
Council Member

Bruce Butcher
Council Member

Rexann Hosafros
Council Member

Memo of EC Review for Correctness and Completion

The attached FEMA Elevation Certificate for the following address has been reviewed by this office.

5920 ESTERO BLVD
(BLD15-0133)

The items noted below are incorrect on the attached form and should read as entered on this page.

SECTION A - PROPERTY INFORMATION

A1. Building Owner's Name			For Insurance Company Use:
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.			Policy Number
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)			Company NAIC Number
City	State	ZIP Code	
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)			
A5. Latitude/Longitude: Lat. Long. 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:			
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)	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		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	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		B2. County Name		B3. State	
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)
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9.					
FIS		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	

Local Official's Name: Chelsea O'Riley	Title: Public Works Manager
Community Name: Town of Fort Myers Beach	Telephone: (239) 765-0202 ext.1700
Signature:	Date: 10/23/2019
Comments:	

ELEVATION CERTIFICATE

Important: Follow the instructions on pages 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 GEM-FL, LLC				Policy Number:	
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 5920 ESTERO BOULEVARD				Company NAIC Number:	
City Fort Myers Beach		State Florida		ZIP Code 33931	
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) Lot 2, Block "G", MCPHIE PARK, Unit 2, Plat Book 8, Page 59, Lee County, Florida Public Records.					
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <u>RESIDENTIAL</u>					
A5. Latitude/Longitude: Lat. <u>26° 25' 34.3"</u> Long. <u>-081° 54' 33.5"</u> Horizontal Datum: <input type="checkbox"/> NAD 1927 <input checked="" type="checkbox"/> 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>6</u>					
A8. For a building with a crawlspace or enclosure(s):					
a) Square footage of crawlspace or enclosure(s) <u>2,150</u> sq ft					
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade <u>11</u>					
c) Total net area of flood openings in A8.b <u>2,255</u> sq in					
d) Engineered flood openings? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
A9. For a building with an attached garage:					
a) Square footage of attached garage <u>N/A</u> sq ft					
b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade <u>N/A</u>					
c) Total net area of flood openings in A9.b <u>N/A</u> sq in					
d) Engineered flood openings? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION					
B1. NFIP Community Name & Community Number 120673 Town of Fort Myers Beach			B2. County Name Lee		B3. State Florida
B4. Map/Panel Number 12071C0566	B5. Suffix F	B6. FIRM Index Date 08/28/2008	B7. FIRM Panel Effective/ Revised Date 08/28/2008	B8. Flood Zone(s) VE	B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) 16.0'
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: <input type="checkbox"/> FIS Profile <input checked="" type="checkbox"/> FIRM <input type="checkbox"/> Community Determined <input type="checkbox"/> Other/Source: _____					
B11. Indicate elevation datum used for BFE in Item B9: <input type="checkbox"/> NGVD 1929 <input checked="" type="checkbox"/> NAVD 1988 <input type="checkbox"/> Other/Source: _____					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Designation Date: _____ <input type="checkbox"/> CBRS <input type="checkbox"/> OPA					

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. 5920 ESTERO BOULEVARD			Policy Number:
City Fort Myers Beach	State Florida	ZIP Code 33931	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: 872 5325 TIDAL 3 Vertical Datum: NAVD '88

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.

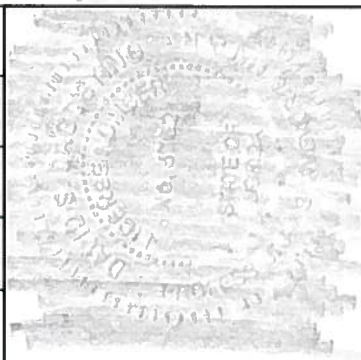

Check the measurement used.

a) Top of bottom floor (including basement, crawlspace, or enclosure floor)	<u>6.1</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
b) Top of the next higher floor	<u>21.0</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
c) Bottom of the lowest horizontal structural member (V Zones only)	<u>19.2</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
d) Attached garage (top of slab)	<u>N/A</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	<u>21.0</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
f) Lowest adjacent (finished) grade next to building (LAG)	<u>5.3</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
g) Highest adjacent (finished) grade next to building (HAG)	<u>5.9</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	<u>N/A</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters

SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by 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 DAVID S. DAGOSTINO, PSM	License Number 5762	
Title Professional Surveyor and Mapper		
Company Name Dagostino & Wood, Inc.		
Address 5415 Jaeger Road, Suite A		
City Naples	State Florida	
Signature 	Date 08/28/2017	Telephone (239) 352-6085

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 A9. b) There are Eleven (11) engineered Crawl Space Door Systems flood vents; Model 816CS (8" x 16").
Total net area of engineered flood vent openings per data sheet: 11 x 106 sq. in. = 1,166 Square Inches.
Total coverage of flood vents: (11) x 205 = 2,255 Square Feet of coverage.
NOTE: Certification of Engineered Flood Openings for Model 816CS (Florida) is attached.
ITEM C2. b) The entry foyer is at an elevation of 13.7' (NAVD '88).
ITEM C2. e) Lowest machinery is the air conditioning equipment, the pool equipment is at an elevation of 5.7' (NAVD '88)

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. 5920 ESTERO BOULEVARD			Policy Number:
City Fort Myers Beach	State Florida	ZIP Code 33931	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
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Signature	Date	Telephone
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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. 5920 ESTERO BOULEVARD			Policy Number:
City Fort Myers Beach	State Florida	ZIP Code 33931	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
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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 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
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Community Name	Telephone
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Signature	Date
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Comments (including type of equipment and location, per C2(e), if applicable)

Check here if attachments.

BUILDING PHOTOGRAPHS

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

ELEVATION CERTIFICATE

See Instructions for Item A6.

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. 5920 ESTERO BOULEVARD			Policy Number:
City Fort Myers Beach	State Florida	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.



Photo One

Photo One Caption Front view taken on 08/17/2017



Photo Two

Photo Two Caption Rear view taken on 08/17/2017

BUILDING PHOTOGRAPHS

Continuation Page

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

ELEVATION CERTIFICATE

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. 5920 ESTERO BOULEVARD			Policy Number:
City Fort Myers Beach	State Florida	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.



Photo Three

Photo Three Caption Left Front view taken on 08/17/2017



Photo Four

Photo Four Caption Right Front view taken on 08/17/2017

BUILDING PHOTOGRAPHS

Continuation Page

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

ELEVATION CERTIFICATE

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. 5920 ESTERO BOULEVARD			Policy Number:
City Fort Myers Beach	State Florida	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.



Photo Five

Photo Five Caption Flood vent taken on 08/17/2017



Photo Six

Photo Six Caption Flood vent location taken on 08/17/2017



V-Zone Building Design and Performance Certificate

For new Construction and substantial improvements in Coastal High Hazard Areas

(To be completed by a Licensed Professional Engineer or Architect, authorized to certify such information by State)

Section 1: Structure Location and Ownership Information

Structure Owner Gary & Etela Matz

Mailing Address _____

City _____ State _____ Zip Code _____

Structure Location 5920 Estero Blvd. Fort Myers Beach, FL 33931

Latitude — Longitude — County Lee

Other Legal Description —

Section 2: Flood Insurance Rate Map (FIRM) Data

NOTE: This Certificate is NOT a substitute for an Elevation Certificate.

Community Name Fort Myers Beach Community ID Number 120673 FIRM Panel Number 0566

Panel Suffix F FIRM Zone VE-16 Date of FIRM Panel 8/28/2008 Date of Index 8/28/2008

Located within the Coastal Barriers Resource Act (CBRA) Zone or Otherwise Protected Areas: Yes ___/No X/

Section 3: Elevation Information

Record elevations to one tenth of a foot.

Reviewed by: RLS

Check one: New Building X / Substantial Improvement ___/

Date of Construction ___/___/___

Elevation of the bottom of the Lowest Horizontal Structural Member..... 19.3 feet

Base Flood Elevation (BFE)..... 16.0 feet

Elevation of Lowest Adjacent Grade (LAG)..... 5.0 feet

Elevation of Highest Adjacent Grade (HAG)..... 6.8 feet

Foundation type: Pilings X / Columns X /

Foundation Description: Pile Supported structural Footing Below Scour.

Elevation at Bottom of Foundation 1.7 feet

Depth of scour/erosion used for foundation design..... 3.0 feet

Embedment depth of pilings or foundation below LAG..... 15.0 feet

Datum used: NGVD 29 ___/ NAVD 88 X / other _____

25.02

www.fdot.com

Section 4: V Zone Certifying Statement

I certify that I have developed or reviewed the structural design, plans, and specifications for construction and that the proposed design and methods of construction are in accordance with accepted standards of engineering practice for meeting the following provisions:

1. The bottom of the lowest horizontal structural member of the lowest floor (excluding pilings or columns) is elevated to above the BFE; and
2. The pile or column foundation and structure attached thereto are anchored to resist floatation, collapse, lateral movement, or other structural damage from the effects of wind and water loads acting simultaneously on all structure components. Water loading values used are those associated with the base flood. Wind loading values used are those required by the applicable state or local building standards. The scour and erosion at the foundation have been estimated for conditions associated with the base flood, including wave action.

Section 5: Breakaway Walls Certifying Statement

I certify that I have developed or reviewed the structural design, plans, and specifications for construction and that the proposed design and methods of construction are in accordance with accepted standards of engineering practice for meeting the following provisions:

1. Breakaway walls will collapse from a water load less than that which would occur during the base flood.
2. 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 (structural and non-structural).
3. The space below the lowest floor is designed to be used solely for parking of vehicles, building access, and/or storage.
4. The wind loading values used shall be those required by applicable State or local standards.

Section 6: Certification

Check one: Sections 4 and 5 / Section 4 only / Section 5 only

Reviewed by: RLS

Name (please print) James Harris
 Title Professional Engineer License number 67346
 Phone Number 239-287-8575 EMAIL HarrisEG@hotmail.com
 Company Harris Engineering Group LLC
 Address 8148 Las Palmas Way
 City Naples State FL Zip Code 34109



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]
<input type="checkbox"/>	816CS	8 x 16	106	205
<input type="checkbox"/>	1220CS	12 x 20	237	500
<input type="checkbox"/>	1232CS	12 x 32	306	645
<input type="checkbox"/>	1616CS	16 x 16	184	395
<input type="checkbox"/>	1624CS	16 x 24	312	670
<input type="checkbox"/>	1632CS	16 x 32	408	835
<input type="checkbox"/>	2032CS	20 x 32	630	1240
<input type="checkbox"/>	2424CS	24 x 24	570	1230
<input type="checkbox"/>	2436CS	24 x 36	852	1765

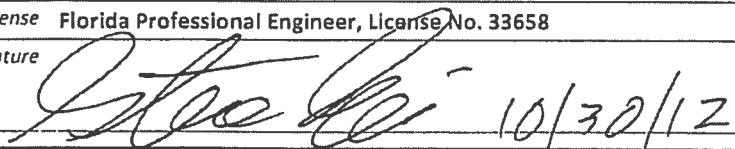
Table 1 Maximum total enclosed area (A_e) that can be served by each individual model based on the given net area of engineered openings (A_o)

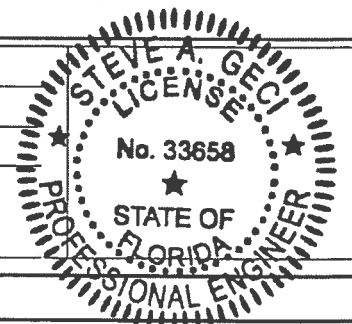
Installation Requirements and Limitations

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

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



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

ELEVATION CERTIFICATE

Important: Follow the instructions on pages 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 GEM-FL, LLC				Policy Number:	
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 5920 ESTERO BOULEVARD				Company NAIC Number:	
City Fort Myers Beach		State Florida		ZIP Code 33931	
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) Lot 2, Block "G", MCPHIE PARK, Unit 2, Plat Book 8, Page 59, Lee County, Florida Public Records.					
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <u>RESIDENTIAL</u>					
A5. Latitude/Longitude: Lat. <u>26° 25' 34.3"</u> Long. <u>-081° 54' 33.5"</u> Horizontal Datum: <input type="checkbox"/> NAD 1927 <input checked="" type="checkbox"/> 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>6</u>					
A8. For a building with a crawlspace or enclosure(s):					
a) Square footage of crawlspace or enclosure(s) <u>2,150</u> sq ft					
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade <u>11</u>					
c) Total net area of flood openings in A8.b <u>2,255</u> sq in					
d) Engineered flood openings? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
A9. For a building with an attached garage:					
a) Square footage of attached garage <u>N/A</u> sq ft					
b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade <u>N/A</u>					
c) Total net area of flood openings in A9.b <u>N/A</u> sq in					
d) Engineered flood openings? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION					
B1. NFIP Community Name & Community Number 120673 Town of Fort Myers Beach			B2. County Name Lee		B3. State Florida
B4. Map/Panel Number 12071C0566	B5. Suffix F	B6. FIRM Index Date 08/28/2008	B7. FIRM Panel Effective/ Revised Date 08/28/2008	B8. Flood Zone(s) VE	B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) 16.0'
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: <input type="checkbox"/> FIS Profile <input checked="" type="checkbox"/> FIRM <input type="checkbox"/> Community Determined <input type="checkbox"/> Other/Source: _____					
B11. Indicate elevation datum used for BFE in Item B9: <input type="checkbox"/> NGVD 1929 <input checked="" type="checkbox"/> NAVD 1988 <input type="checkbox"/> Other/Source: _____					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Designation Date: _____ <input type="checkbox"/> CBRS <input type="checkbox"/> OPA					

ELEVATION CERTIFICATE

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

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Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 5920 ESTERO BOULEVARD			Policy Number:
City Fort Myers Beach	State Florida	ZIP Code 33931	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: 872 5325 TIDAL 3 Vertical Datum: NAVD '88

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.

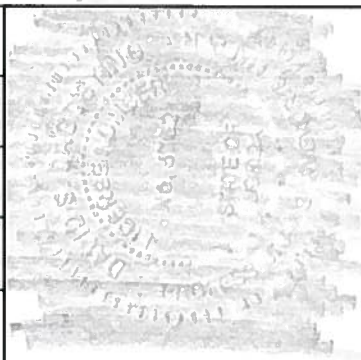

Check the measurement used.

a) Top of bottom floor (including basement, crawlspace, or enclosure floor)	<u>6.1</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
b) Top of the next higher floor	<u>21.0</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
c) Bottom of the lowest horizontal structural member (V Zones only)	<u>19.2</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
d) Attached garage (top of slab)	<u>N/A</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	<u>21.0</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
f) Lowest adjacent (finished) grade next to building (LAG)	<u>5.3</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
g) Highest adjacent (finished) grade next to building (HAG)	<u>5.9</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	<u>N/A</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters

SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by 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 DAVID S. DAGOSTINO, PSM	License Number 5762	
Title Professional Surveyor and Mapper		
Company Name Dagostino & Wood, Inc.		
Address 5415 Jaeger Road, Suite A		
City Naples	State Florida	
Signature 	Date 08/28/2017	Telephone (239) 352-6085

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 A9. b) There are Eleven (11) engineered Crawl Space Door Systems flood vents; Model 816CS (8" x 16").
Total net area of engineered flood vent openings per data sheet: 11 x 106 sq. in. = 1,166 Square Inches.
Total coverage of flood vents: (11) x 205 = 2,255 Square Feet of coverage.
NOTE: Certification of Engineered Flood Openings for Model 816CS (Florida) is attached.
ITEM C2. b) The entry foyer is at an elevation of 13.7' (NAVD '88).
ITEM C2. e) Lowest machinery is the air conditioning equipment, the pool equipment is at an elevation of 5.7' (NAVD '88)

ELEVATION CERTIFICATE

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**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
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Signature	Date	Telephone
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Comments

Check here if attachments.

ELEVATION CERTIFICATE

OMB No. 1660-0008
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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
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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 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
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Community Name	Telephone
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Signature	Date
-----------	------

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

Check here if attachments.

BUILDING PHOTOGRAPHS

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

ELEVATION CERTIFICATE

See Instructions for Item A6.

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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 taken on 08/17/2017



Photo Two

Photo Two Caption Rear view taken on 08/17/2017

BUILDING PHOTOGRAPHS

Continuation Page

OMB No. 1660-0008
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ELEVATION CERTIFICATE

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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 Three

Photo Three Caption Left Front view taken on 08/17/2017



Photo Four

Photo Four Caption Right Front view taken on 08/17/2017

BUILDING PHOTOGRAPHS

Continuation Page

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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 Five

Photo Five Caption Flood vent taken on 08/17/2017



Photo Six

Photo Six Caption Flood vent location taken on 08/17/2017

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]
<input type="checkbox"/>	816CS	8 x 16	106	205
<input type="checkbox"/>	1220CS	12 x 20	237	500
<input type="checkbox"/>	1232CS	12 x 32	306	645
<input type="checkbox"/>	1616CS	16 x 16	184	395
<input type="checkbox"/>	1624CS	16 x 24	312	670
<input type="checkbox"/>	1632CS	16 x 32	408	835
<input type="checkbox"/>	2032CS	20 x 32	630	1240
<input type="checkbox"/>	2424CS	24 x 24	570	1230
<input type="checkbox"/>	2436CS	24 x 36	852	1765

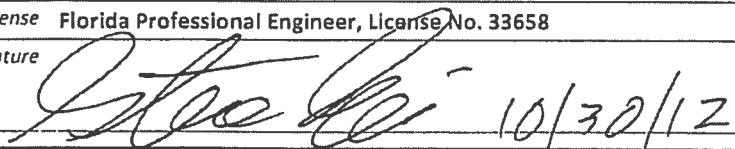
Table 1 Maximum total enclosed area (A_e) that can be served by each individual model based on the given net area of engineered openings (A_o)

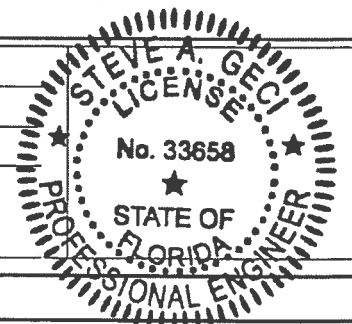
Installation Requirements and Limitations

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

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



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