

U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
National Flood Insurance Program

ELEVATION CERTIFICATE

IMPORTANT: FOLLOW THE INSTRUCTIONS ON PAGES 8-15

OMB Control Number: 1660-0008
Expiration: 11/30/2018

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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 BROWN CHARLES A & VIVIAN C ✓				Policy Number:	
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 410 RIVER FRONT S ✓				Company NAIC Number:	
City CONWAY ✓		State SC ✓		Zip Code 29526 ✓	
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) ✓ TAS # 170-17-01-040 Lot 32 Bucksville					
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)					
A5. Latitude/Longitude: Lat. 33-43-34N Long. 79-2-46W Horizontal Datum: <input type="radio"/> NAD 1927 <input checked="" type="radio"/> 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):			A9. For a building with an attached garage:		
a) Square footage of crawlspace or enclosure(s) 368 ✓ sq ft			a) Square footage of attached garage NA ✓ sq ft		
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 2 ✓			b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade NA ✓		
c) Total net area of flood openings in A8.b 198 ✓ sq in			c) Total net area of flood openings in A9.b NA ✓ sq in		
d) Engineered flood openings? <input checked="" type="radio"/> Yes <input type="radio"/> No			d) Engineered flood openings? <input type="radio"/> Yes <input checked="" type="radio"/> No		
SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION					
B1. NFIP Community Name & Community Number HORRY COUNTY 450104 ✓			B2. County Name HORRY COUNTY ✓		B3. State SC ✓
B4. Map/Panel Number 45051C0660 ✓	B5. Suffix H ✓	B6. FIRM Index Date 9/17/2003 ✓	B7. FIRM Panel Effective/ Revised Date AUGUST 23, 1999 ✓	B8. Flood Zone(s) AE ✓	B9. Base Flood Elevation(s) (Zone AO, use base flood depth) 6 ✓
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: <input checked="" type="radio"/> FIS Profile <input checked="" type="radio"/> FIRM <input type="radio"/> Community Determined <input type="radio"/> Other/Source: _____					
B11. Indicate elevation datum used for BFE in Item B9: <input checked="" type="radio"/> NGVD 1929 <input type="radio"/> NAVD 1988 <input type="radio"/> Other/Source: _____					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? <input type="radio"/> Yes <input checked="" type="radio"/> No Designation Date: <input type="checkbox"/> CBRS <input type="checkbox"/> OPA					
SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)					
C1. Building elevations are based on: <input type="radio"/> Construction Drawings* <input type="radio"/> Building Under Construction* <input checked="" type="radio"/> 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: VRS GPS Vertical Datum: 1988					
Indicate elevation datum used for the elevations in items a) through h) below. <input checked="" type="radio"/> NGVD 1929 <input type="radio"/> NAVD 1988 <input type="radio"/> 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)	6	55	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters		
b) Top of the next higher floor	16	65	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters		
c) Bottom of the lowest horizontal structural member (V Zones only)	NA		<input type="checkbox"/> feet <input type="checkbox"/> meters		
d) Attached garage (top of slab)	NA		<input 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)	11	10	<input type="checkbox"/> feet <input type="checkbox"/> meters		
f) Lowest adjacent (finished) grade next to building (LAG)	4	40	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters		
g) Highest adjacent (finished) grade next to building (HAG)	5	74	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters		
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	4	40	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters		

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. 410 RIVER FRONT S		Policy Number:	
City CONWAY	State SC	Zip Code 29526	Company NAIC Number:
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.			
<input checked="" type="checkbox"/> Check here if attachments.		Were latitude and longitude in Section A provided by a licensed land surveyor? <input type="radio"/> Yes <input checked="" type="radio"/> No	
Certifier's Name Everett Johnson		License Number 30766	
Title Owner	Company Name JW Prof. Land Surveyors, LLC		
Address 3370 Truluck Johnson Rd	City Aynor	State SC	Zip Code 29511
Signature 	Date 12/20/2018	Telephone 843-241-3800	
Copy all pages of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner.			
Comments (including type of equipment and location, per C2(e), if applicable) HVAC UNIT (LEFT SIDE OF HOUSE)			
Signature 		Date 20-Dec-2018	
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 _____ . _____ <input type="checkbox"/> feet <input type="checkbox"/> meters <input type="checkbox"/> above or <input type="checkbox"/> below the HAG.			
b) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ . _____ <input type="checkbox"/> feet <input type="checkbox"/> meters <input type="checkbox"/> above or <input type="checkbox"/> below the LAG.			
E2. For Building Diagrams 6-9 with permanent flood openings provided in Section A Items 8 and/or 9 (see page 8 of Instructions), the next higher floor (elevation C2.b in the diagrams) of the building is _____ . _____ <input type="checkbox"/> feet <input type="checkbox"/> meters <input type="checkbox"/> above or <input type="checkbox"/> below the HAG.			
E3. Attached garage (top of slab) is _____ . _____ <input type="checkbox"/> feet <input type="checkbox"/> meters <input type="checkbox"/> above or <input type="checkbox"/> below the HAG.			
E4. Top of platform of machinery and/or equipment servicing the building is _____ . _____ <input type="checkbox"/> feet <input type="checkbox"/> meters <input type="checkbox"/> above or <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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			
<input type="checkbox"/> Check here if attachments.			

ELEVATION CERTIFICATE, page 3

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Expiration: 11/30/2018

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. 410 RIVER FRONT S		Policy Number:	
City CONWAY	State SC	Zip Code 29526	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. <input type="checkbox"/> 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. <input type="checkbox"/> 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. <input type="checkbox"/> 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: <input type="checkbox"/> New Construction <input type="checkbox"/> Substantial Improvement			
G8. Elevation of as-built lowest floor (including basement) of the building: _____ . _____ <input type="checkbox"/> feet <input type="checkbox"/> meters Datum _____			
G9. BFE or (in Zone AO) depth of flooding at the building site: _____ . _____ <input type="checkbox"/> feet <input type="checkbox"/> meters Datum _____			
G10. Community's design flood elevation: _____ . _____ <input type="checkbox"/> feet <input type="checkbox"/> meters Datum _____			
Local Official's Name		Title	
Community Name		Telephone	
Signature		Date	
Comments (including type of equipment and location, per C2(e), if applicable)			
<input type="checkbox"/> Check here if attachments.			

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. 410 RIVER FRONT S ✓		Policy Number:	
City CONWAY ✓	State SC	Zip Code 29520 ✓	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.



84804

Certificate of Engineered Flood Openings

I do hereby certify that the American Flood Vent, model number FV-1 and FV-2, properly installed and sized in accordance with the Federal Emergency Management Agency's National Flood program regulations (44 CFR 60.3(c)(5)) and National Flood Insurance Program, Technical Bulletin (TB) 1-August 2008 is designed to automatically equalize hydrostatic flood forces on the exterior walls by allowing for entry and exit of floodwater during floods up to and including the base (100 year) flood.

I also hereby certify that I calculated the Non-Engineered, Net free Air and Engineered opening size for each model and size of the Flood Louvers. The Engineered size openings calculations were performed by using the formula in the TB-1- August 2008, Opening in Foundation Walls for Buildings Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program and ASCE/SEI 24-05 Flood Resistance Design and Construction. I measured the size of each louver and the size of all obstructions to determine the Non-Engineered and Net-Free opening size for each model.

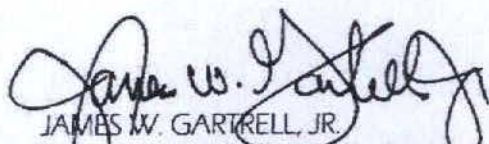
I also hereby certify that I calculated the Non-Engineered, Net free Air and Engineered opening size of each model and size of the Flood Louvers meets IRC - NJ - 2009 - 322.2(2.2) AND Section 2.6.2.2 of ASCE 24.

Each individual opening, and any louver, or other covers, shall be designed to allow automatic entry and exit of floodwaters during design flood or lesser flood conditions: there shall be a minimum of two openings on different sides of each enclosed area: if a has more than one enclosure below the BFE, each area shall have openings, the bottom of each required opening shall be no more than 1 ft above the adjacent ground level: the difference between the exterior and interior floodwater levels shall not exceed 1 ft during base flood conditions: in the absence of reliable flood data on the rates of rise and fall, assume the minimum rate of rise and fall of 5 ft/hr: where data or analysis indicates more rapid rates of rise and fall, the total net area of all required openings shall be increased to account for higher rates of rise and fall.

Each vent Models FV-1 and FV-2 have been engineered to have 95 square inches of net free air and 250 square inches of flood opening with a louver that opens more than 4 inches to allow the flow of debris.

American Floodvent and the engineer of record will not assume liability if the product is not properly installed as set forth by Rules of FEMA document (TB-1 2008) and ASME-24. The flood vents are being installed at the following location:

Address: _____


JAMES W. GARTRELL, JR.
State of Texas Registered Professional Engineer,
License Number 22590, F-4534

