

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 MICHAEL A HUFFMASTER & ROBBIE N SHARP				Policy Number:	
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 102 COVE CREEK LN				Company NAIC Number:	
City HOUSTON		State Texas		ZIP Code 77042-1020	
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) (NORTHERLY 11,9311.5509 SQ FT OF LOT 1, BLOCK 2) LAKESIDE FOREST SECTION 5					
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <u>Residential</u>					
A5. Latitude/Longitude: Lat. <u>29°45'40.41"N</u> Long. <u>95°34'16.75"W</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>7</u>					
A8. For a building with a crawlspace or enclosure(s):					
a) Square footage of crawlspace or enclosure(s) <u>968.00</u> sq ft					
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade <u>4</u>					
c) Total net area of flood openings in A8.b <u>508.0</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>464.10</u> sq ft					
b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade <u>4</u>					
c) Total net area of flood openings in A9.b <u>426.8</u> sq in					
d) Engineered flood openings? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION					
B1. NFIP Community Name & Community Number CITY OF HOUSTON / 480296			B2. County Name HARRIS		B3. State Texas
B4. Map/Panel Number 48201C0640	B5. Suffix M	B6. FIRM Index Date 11/15/19	B7. FIRM Panel Effective/ Revised Date 11/15/2019	B8. Flood Zone(s) AE	B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) 67.0'
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: <input checked="" type="checkbox"/> FIS Profile <input 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 type="checkbox"/> NAVD 1988 <input checked="" type="checkbox"/> Other/Source: <u>NAVD 88 (2001 Adj)</u>					
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, 2022

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City HOUSTON	State Texas	ZIP Code 77042-1020	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: HCFCD RM210160 Vertical Datum: NAVD 88 (2001 Adj)

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

NGVD 1929 NAVD 1988 Other/Source: NAVD 88 (2001 Adj)

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>61.9</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| b) Top of the next higher floor | <u>68.2</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| c) Bottom of the lowest horizontal structural member (V Zones only) | <u>N/A</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| d) Attached garage (top of slab) | <u>61.7</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>66.8</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| f) Lowest adjacent (finished) grade next to building (LAG) | <u>61.6</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| g) Highest adjacent (finished) grade next to building (HAG) | <u>66.6</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>61.2</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 Aaron P. Bohls	License Number 6517		
Title RPLS			
Company Name Allpoints Land Survey TBPELS # 10122600			
Address 1515 Witte Road			
City Houston	State Texas		ZIP Code 77080
Signature 	Date 3/15/2022	Telephone (713) 468-7707	Ext.

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)

C2.e) AC Unit
500 yr flood elevation = 71.0'
BFE and 500 year determined by LOMR 20-06-0264P Effective date: 11/18/2019
Basement Vents: (4) FFV1608 vents that are 127sq in each = 508 sq in total
Garage Vents: (4) FS1412 vents that are 106.7 sq in each = 426.8 sq in total

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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 _____

Signature _____ Date _____ Telephone _____

Comments

Check here if attachments.

BUILDING PHOTOGRAPHS

See Instructions for Item A6.

OMB No. 1660-0008

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City HOUSTON	State Texas	ZIP Code 77042-1020	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.



Date Taken: 3/15/22 Front View

Date Taken: 3/15/22 Right Front View



3/15/22 Left Front View

Date Taken: 3/15/22 Rear View

BUILDING PHOTOGRAPHS

Continuation Page

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City HOUSTON	State Texas	ZIP Code 77042-1020	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.



Date Taken: 3/14/22 Right Rear View

Date Taken: 3/14/22 Right Rear View



Date Taken: 3/14/22 Left Rear View

Date Taken: 3/14/22 Rear View

BUILDING PHOTOGRAPHS

Continuation Page

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City HOUSTON	State TX	ZIP Code 77042-1020	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.



Date Taken: 3/14/22 Flood Vents

Date Taken: 3/14/22 Flood Vents



Date Taken: 3/14/22 Garage

Date Taken: 3/14/22 AC Unit

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

REPORT HOLDER:

FLOOD SOLUTIONS, LLC

EVALUATION SUBJECT:

STATIC FLOOD VENTS

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, 2012 and 2009 *International Building Code*®
- 2018, 2015, 2012 and 2009 *International Residential Code*®

Property evaluated:

Water flow

2.0 USES

Flood Solutions' static flood vents are used to provide for the equalization of hydrostatic flood forces on exterior walls.

3.0 DESCRIPTION

3.1 General:

Flood Solutions' static flood vents are engineered, permanently open flood vents with no moving parts that automatically allow flood waters to enter and exit enclosed areas. The vents are constructed of aluminum and available in four models. See Table 1 for model designations and sizes. See Figure 1 for illustrations of the flood vents.

3.2 Engineered Opening:

The Flood Solutions static flood vents 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, the static flood vents must be installed in accordance with Section 4.0 of this report.

3.3 Ventilation:

Flood Solutions' static flood vents may be used to supply natural ventilation for under-floor ventilation. See Table 1 for net free area for under-floor ventilation provided by each of Flood Solutions' static flood vents.

4.0 DESIGN AND INSTALLATION

The Flood Solutions static flood vents are designed to be installed into walls or doors of existing or new construction from the exterior side. Installation of the vents must be in accordance with the manufacturer's instructions, the applicable code and this report. In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the vents must be installed as follows:

- With a minimum of two opening on different sides of each enclosed area.
- With a minimum of one vent for the square footage of enclosed area noted in Table 1.
- Below the base flood elevation.
- With the bottom of the vent located a maximum of 12 inches (305 mm) above grade.

5.0 CONDITIONS OF USE

The static flood vents described in this report comply with, or are a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** The static flood vents 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 static flood vents must not be used in the place of "breakaway walls" in coastal high hazard areas, but are permitted for use in conjunction with breakaway walls in other areas.

6.0 EVIDENCE SUBMITTED

- 6.1** Manufacturer's descriptive literature and installation instructions.
- 6.2** Detail drawings.
- 6.3** Engineering calculations in accordance with ASCE/SEI 24.
- 6.4** Quality documentation in accordance with the ICC-ES Acceptance Criteria for Quality Documentation (AC10), dated June 2014.

7.0 IDENTIFICATION

- 7.1** The Flood Solutions static flood vents recognized in this report must be identified by a label bearing the manufacturer's name (Flood Solutions), the model number, and the evaluation report number (ESR-3760).

7.2 The holder's contact information is the following:

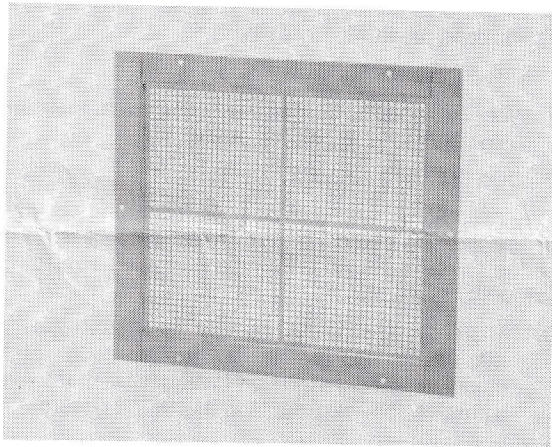
FLOOD SOLUTIONS, LLC
ONE INDUSTRIAL PARK DRIVE
BUILDING 27
PELHAM, NEW HAMPSHIRE 03076
(800) 325-9775
www.floodsolutions.com
info@floodsolutions.com

TABLE 1—FLOOD SOLUTIONS STATIC FLOOD VENTS

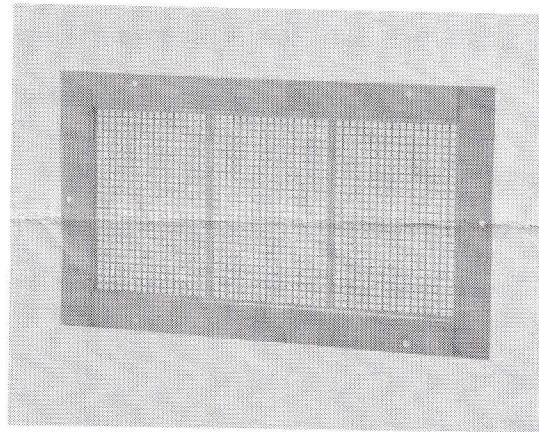
MODEL	VENT SIZE (Width x Height) (in)	ROUGH OPENING SIZE (Width x Height) (in)	ENCLOSED AREA COVERAGE (ft ²)	NET FREE AREA ¹ (in ²)
FS-1608	18 ¹ / ₂ x 10 ¹ / ₂	16 x 8	97	80.7
FS-1616	18 ¹ / ₂ x 18 ¹ / ₂	16 x 16	191	158.2
FS-1412	17 x 14 ¹ / ₂	14 ¹ / ₂ x 12	129	106.7
FS-1608-Hex	18 ¹ / ₂ x 10 ¹ / ₂	16 x 8	110	91.4

For SI: 1 inch = 25.4 mm; 1 ft = 304.8 mm

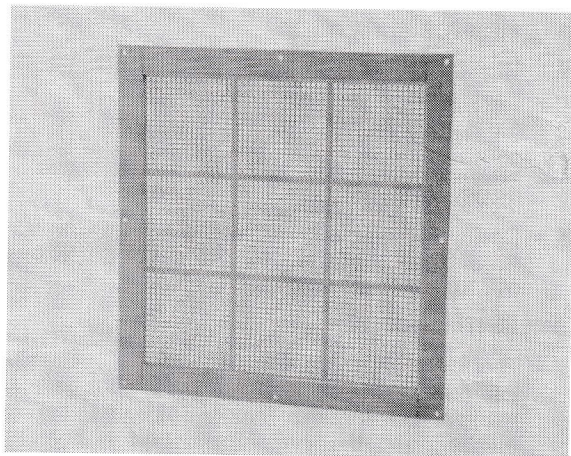
¹Available for use as under-floor ventilation.



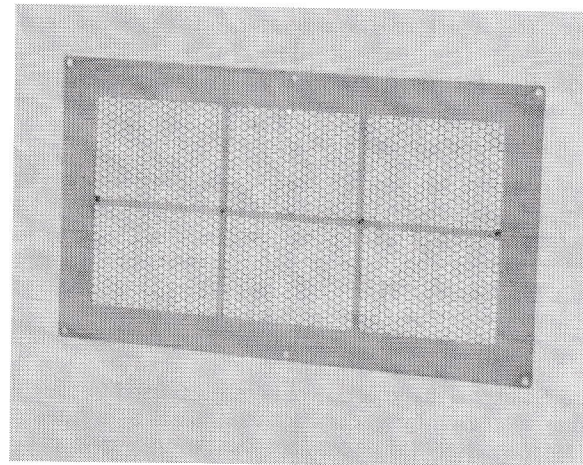
FS-1412



FS-1608



FS-1616



FS-1608-HEX

FIGURE 1—FLOOD SOLUTIONS STATIC FLOOD VENTS

INSTALLATION INSTRUCTIONS

MODELS: FS AND FS-HEX

ICC-ES CERTIFIED - ENGINEERED

FEMA COMPLIANT FLOOD VENTS

What you'll need:

- 1" Concrete/wood/metal screws which is dependent on what type of wall you will be fastening into
- 1" Anchors for concrete wall installation
- Power Drill
- 1/4" Masonry Bit or 1/4" wood drill bit (dependent on what type of wall you will be fastening into)
- Screwdriver
- Hammer
- Level
- Exterior Caulking
- Flashing, if needed, for an opening with a cavity in the wall (optional)

INSTRUCTIONS:

*****NOTE: BE SURE THAT BOTTOM OF OPENING IS LESS THAN 12" ABOVE THE ADJACENT GRADE and the TOP OF THE OPENING IS BELOW THE Base Flood Elevation (BFE)*****

Step 1: PROVIDE A CLEAN, SQUARE AND LEVEL ROUGH OPENING

Step 2: APPLY FLASHING AROUND THE INTERIOR OF THE WALL OPENING IF THERE IS A CAVITY IN THE WALL (optional)

Step 3: LAYOUT THE VENT SO THE OPEN AREAS OF THE VENT HAVE A CLEAR OPENING BEHIND THEM.

Step 4: MAKE SURE VENT IS LEVEL

Step 5: MARK HOLES ON WALL AND THEN REMOVE VENT FROM OPENING

FOR CONCRETE WALLS: Use Concrete Screws and Anchors

FOLLOW STEPS 1-5 ABOVE

Step 6: DRILL HOLES 1-1/4" DEEP INTO CONCRETE/BLOCK WALL.

Step 7: FULLY INSERT ANCHORS INTO WALL, TAPPING ANCHORS INTO PLACE USING A HAMMER MAKING SURE ANCHORS ARE FLUSH TO THE WALL

Step 8: REPLACE VENT INTO OPENING

Step 9: SECURE ALL SCREWS THROUGH HOLES IN VENT INTO ANCHORS SET IN WALL

Step 10: CAULK AROUND PERIMETER OF VENT TO HELP PREVENT WATER FROM SEEPING BEHIND THE FLANGE FRAME

FOR WOOD WALLS: Use Wood Screws

FOLLOW STEPS 1-5 ABOVE

Step 6: DRILL HOLES 1/2" DEEP INTO THE WOOD WALL

Step 7: REPLACE VENT OVER THE OPENING

Step 8: SECURE ALL SCREWS THROUGH HOLES IN VENT INTO THE WOOD WALL

Step 9: CAULK AROUND PERIMETER OF VENT TO HELP PREVENT WATER FROM SEEPING BEHIND THE FRAME

FOR INSTALLATION INTO DOORS:

FOLLOW STEPS 1-5 ABOVE

Step 6: IF THE DOOR IS NOT A SOLID DOOR, USE ALUMINUM FLASHING AROUND THE PERIMETER OF THE HOLE

Step 7: USE WOOD OR METAL SCREWS THROUGH PREDRILLED HOLES IN VENTS INTO FRAMING

Step 8: CAULK AROUND PERIMETER OF VENT TO HELP PREVENT WATER FROM SEEPING BEHIND THE FLANGE FRAME



FLOOD SOLUTIONS, LLC.

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