

APPLICATION FORMS FOR CONDITIONAL AND FINAL LETTERS OF MAP AMENDMENT AND LETTERS OF MAP REVISION BASED ON FILL

eLOMA

A test alternative to using the MF-1 application is eLOMA. eLOMA is a web-based application that provides licensed land surveyors and professional engineers a system to submit simple LOMA requests to FEMA. Many LOMA requests can be submitted to FEMA using eLOMA. You can find additional information about eLOMA, including the types of LOMA requests that qualify for the eLOMA process, at <https://fhwards.fema.gov>.

Online LOMC

For requests that cannot be processed by eLOMA, FEMA has developed the Online LOMC tool to allow applicants to submit their requests electronically. This tool is a convenient way for applicants to upload all information and supporting documentation and check the status of their request online. Users can submit requests through this tool instead of filling the paper form via mail. You can find additional information about FEMA's Online LOMC Tool at <https://fhwards.fema.gov/online/online/Help/UploadInstructions>.

General Background Information

In 1968, the U.S. Congress passed the National Flood Insurance Act, which created the National Flood Insurance Program (NFIP). The NFIP was designed to reduce future flood losses through local floodplain management and to provide protection for property owners against potential losses through an insurance mechanism that allows communities to be most in the protection of those most in need. The creation of structural flood control and disaster relief act.

As part of the agreement for making flood in floodplain management ordinances that meet community official or agency responsible for that would be useful to a requestor. This office, control, or planning in the community as well.

The New Elevation Certificate, LOMAs and LOMR-Fs

2024 IAFSM


March 13, 2024



National Flood Insurance Program

Elevation Certificate

and Instructions

2022 EDITION





1

Basic Terms

- Elevation Certificate (EC)
- Community Rating System (CRS)
- Lowest Adjacent Grade (LAG)
- Highest Adjacent Grade (HAG)
- Base Flood Elevation (BFE)
- First Floor Height
- Letter of Map Change (LOMC)
- Letter of Map Amendment (LOMA)
- Letter of Map Revision Based on Fill (LOMR-F)

2

What we will cover

- LOMAs and LOMR-Fs
- When is an EC required?
- Parts of the New EC
- How do I review an EC for accuracy?



3

Resources – LOMAs and LOMR-Fs

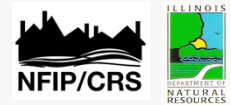
- [How to Request a Letter of Map Amendment \(LOMA\) or Letter of Map Revision Based on Fill \(LOMR-F\) \(fema.gov\)](https://www.fema.gov)
- [MT-1 Application Forms \(Revised June 2012\) \(fema.gov\)](https://www.fema.gov) (8 Pages)
- [MT-1 Instruction October 2021 \(fema.gov\)](https://www.fema.gov)
- [Letter of Map Amendment \(Out as Shown\) \(fema.gov\)](https://www.fema.gov)
- [MT-EZ: Application Form for Single Structure or Residential Lot | FEMA.gov](https://www.fema.gov) (3 pages)
- [MT-EZ Instructions \(Revised October 2021\) \(fema.gov\)](https://www.fema.gov)
- [Illinois National-Flood-Hazard-Layer-Guide-to-Find-a-Loma \(dnr.illinois.gov –floodplain resources\)](https://dnr.illinois.gov)
- [Online LOMC • Help and Instructions \(fema.gov\)](https://www.fema.gov)



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What is a LOMA and a LOMR-F?

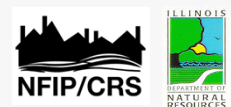
- A LOMA is the process is for challenging the flood hazard designation for buildings/properties on naturally high ground
- The LOMR-F process is for changing the designation for properties elevated by fill



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What application forms are used?

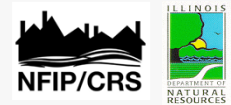
- A LOMA/CLOMA uses either a MT-EZ (3 pages) or what is necessary in the MT-1.
- A LOMR-F/CLOMR-F also uses the MT-1 application. A Community Acknowledgment Form is always required. Part A.
- If a floodway is involved with a LOMA/CLOMA the local community will need to sign Part B of the Community Acknowledgement Form



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What if the floodway is impacted?

- For a LOMA in a **Mapped** Floodway Part B of the Community Acknowledgement Form. The state will be asked through the FEMA reviewer to verify it is naturally high ground
- **A LOMR-F/CLOMR-F cannot show fill in the floodway.**
- For a LOMR-F/CLOMR-F, if there is excavation in the floodway the state or community will need to verify a permit has been issued and that there is no rise in the Base Flood Elev.



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Elevation – Building on Fill



Reasonably Safe from Flooding Requirement for Building on Filled Land

Removed From the Special Flood Hazard Area
in Accordance with the National Flood Insurance Program
NFIP Technical Bulletin 10 / March 2023



- New FEMA Technical Bulletin 10, dated March 2023
- No fill in Floodway unless a Conditional LOMR-F/LOMR-F and state floodway permit are issued
- Verify Reasonably Safe from Flooding (soil compaction, grading plans, sump pump sizing if required, and compensatory storage (if required))
- Keep all Records PERMANENTLY



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Elevation – Building on Fill –LOMR-F Request

DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY
COMMUNITY ACKNOWLEDGMENT FORM

O.M.B. NO. 1660-0015
Expires February 28, 2014

A. REQUESTS INVOLVING THE PLACEMENT OF FILL

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision Based on Fill (LOMR-F) or Conditional LOMR-F request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirement that no fill be placed in the regulatory floodplain. All necessary permits will be obtained. The issuance of the LOMR-F does not constitute a determination that the project will be achieved. The project might harm the public interest under Section 10 of the ESA. The project complies with the requirements of the LOMR-F. The project is to be removed from the floodplain by DHS-FEMA, all necessary permits will be forwarded to DHS-FEMA.

Based on the community's review...project meets...all of the community floodplain management requirements...obtained all state and federal permits...structures to be removed from the (floodplain) are reasonable safe from flooding... and we have all analysis and documentation to make this determination



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Example of Compaction Testing of Fill

FIELD DENSITY TEST RESULTS

Project: _____ Date: 6/13/2006

Client: _____

Grading Contractor: _____

Test Number	Moisture Content (%)	Dry Density (pcf)	Maximum Proctor Dry Density (pcf)	Compaction (%)	Minimum Compaction (%)	Pass/Fail	Maximum Proctor Dry Density (pcf)	Compaction (%)	Minimum Compaction (%)	Pass/Fail
1	11.6	115.7	120.8	95.8	95.0	P	120.8	95.8	95.0	P
2	12.2	115.9	120.8	95.9	95.0	P	120.8	95.9	95.0	P
3	12.9	116.0	120.8	96.0	95.0	P	120.8	96.0	95.0	P
4	10.9	119.4	120.8	98.8	95.0	P	120.8	98.8	95.0	P
5	11.6	116.1	120.8	96.1	95.0	P	120.8	96.1	95.0	P
6	11.9	117.9	120.8	97.6	95.0	P	2'6" BSG	35' SE of NW Corner		
7	11.0	118.2	120.8	97.8	95.0	P	2'6" BSG	25' SW of NE Corner		
8	10.4	119.1	120.8	98.6	95.0	P	2'6" BSG	50' S of N End @ Center Line		

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LOMA Request - Floodway

DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY
COMMUNITY ACKNOWLEDGMENT FORM

O.M.B. NO. 1660-0015
Expires February 28, 2014

B. PROPERTY LOCATED WITHIN THE REGULATORY FLOODWAY

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this request for a LOMA. We understand that this request is being forwarded to DHS-FEMA to determine if this property has been inadvertently included in the regulatory floodway. We acknowledge that no fill on this property has been or will be placed within the designated regulatory floodway. We find that the completed or proposed project meets or is designed to meet all of the community floodplain management requirements.

Community Comments:

DO NOT SIGN IF FILL PLACED IN THE FLOODWAY – Look at Google Earth. The state must concur when it's a mapped floodway. Tell the property owner this is standard procedure. FEMA will send the request to IDNR/OWR. No e-LOMA.



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Why did the Elevation Certificate Change?

- To work in conjunction with the new Flood Insurance risk rating system
- Section H added for homeowners to complete and will be used in conjunction with other data sources like LiDAR to rate buildings
- To provide more equity by allowing homeowners **or local floodplain official** to complete the form



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How is an Elevation Certificate Used?

- **AN EC is used only to certify building elevations.** (Page 2 Purpose of The Elevation Certificate)
- Building permit process to document compliance of the building elevations and flood openings (may also need grading plans, fill compaction reports, etc.)
- For a flood insurance policy to accurately set the premium – BUT NOT REQUIRED to get a policy
- Used to support a Letter of Map Amendment request to remove a building



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Resources – Elevation Certificate

- EC Instructions – Toggle between form and instructions - top left corner of EC form
- Community Rating System –EC 2023 Checklist
https://crsresources.org/files/300/2022_ec_checklist.pdf
- CRS Required Fields 2022 EC Form [crs_required_fields-2022_ec_form.pdf](https://crsresources.org/files/300/2022_ec_form.pdf)
(crsresources.org)
- FEMA Technical Bulletin 1 – Requirements for Flood Openings in Foundation Walls and Walls of Enclosures,
https://www.fema.gov/sites/default/files/documents/fema_flood-openings-technical-bulletin_20210607.pdf
- FEMA Floodplain Management Requirements, A Study Guide and Desk Reference for Local Officials, https://www.fema.gov/sites/default/files/documents/fema-480_floodplain-management-study-guide_local-officials.pdf



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When is an EC Required?

- CRS Communities – All new or substantially improved **BUILDINGS** in the regulatory floodplain
- Flood insurance rating to get the most accurate quote (No longer required for a building to get a quote regardless of construction date)
- Elevation of an existing building using NFIP funds – Increased Cost of Compliance (3 needed – existing foundation, new foundation before house lowered and as-built)
- Letter of Map Amendment request for a building only in or near regulatory floodplain boundary – clearly not out as shown



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When is an EC Recommended?

For non- CRS Communities:

- New construction in or near floodplain to confirm compliance with floodplain regulations
- Buildings being elevated for mitigation or compliance with substantial damage/improvement requirements

Using an EC is at the discretion of a community, unless required in your ordinance. It is one of the best tools for documenting most of your building protection standards. It must be reviewed.



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NEW 2023 Elevation Certificate

[Form Instructions](#)

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

OMB Control No. 1660-0008
Expiration Date: 06/30/2026

ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11

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: _____	Policy Number: _____
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: _____	Company NAIC Number: _____
City: _____ State: _____ ZIP Code: _____	
A3. Property Description (e.g., Lot and Block Numbers or Legal Description) and/or Tax Parcel Number: _____	
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.): _____	
A5. Latitude/Longitude: Lat. _____ Long. _____ Horiz. Datum: <input type="checkbox"/> NAD 1927 <input type="checkbox"/> NAD 1983 <input type="checkbox"/> WGS 84	

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New Required Fields/Changes for Existing Fields for 2022 EC

CRS purposes only

** The following list of EC fields shows new or revised requirements for CRS purposes only for the new 2022 EC. All existing CRS requirements still apply to this new form since much of the form is very similar. All ECs signed and dated as of July 7, 2023, must be on the latest EC form. The new EC contains expanded and improved Instructions. Always refer to the EC Instructions first to answer any questions you may have.*

*** Not all CRS-required fields are included below; only the ones with new or revised requirements.*

FIELD	REQUIREMENT
SECTION A	
A5	Latitude and Longitude must now be on the EC and filled out correctly. See the Instructions for A5 on how to fill it out completely and correctly. Cannot be left blank. Datum must be indicated.
A6	At least two (four if possible) photos showing each side of the building are now required with every EC. To the extent possible, the photos must show the entire building and foundation. If flood openings are present, at least one photo is required that shows the foundation and a representative example of the flood openings. Photos must be in color and clearly visible to determine floors, openings, machinery/equipment, and other features of the building that are relevant. Keep this in mind when scanning ECs for CRS submittal.
A8b-f	These fields are newly formatted to better capture the amount and size of openings for crawlspaces/enclosures.
A8b	"Yes" or "No" or "N/A" must be marked. Cannot be left blank.
A8c	Enter the number of non-engineered flood openings present for the building (if one or more exists) and enter the number of engineered flood openings present for the building (if one or more exists). Only count the openings with the bottom within 1' of adjacent grade. "N/A" is desired if none exist.
A8d	If the building has non-engineered openings present, enter the total net open area of all those openings. "N/A" is desired if none exist.

CRS Aid

Required
Fields and
Line by Line
explained
Changes

Helpful for all
communities

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CRS EC Checklist

ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON PAGES 9-19

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: _____	Policy Number: _____
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: _____ Either A2 or A3 must be completed, with City, State and Zip included	Company NAIC Number: _____
City: _____ State: _____ ZIP Code: _____	
A3. Property Description (e.g., Lot and Block Numbers or Legal Description) and/or Tax Parcel Number: _____	
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.): _____ describe as accurately as possible must be formatted correctly (see instructions) _____ one must be chosen	
A5. Latitude/Longitude: Lat. _____ Long. _____ Horizontal Datum: <input type="checkbox"/> NAD 1927 <input type="checkbox"/> NAD 1983 <input type="checkbox"/> WGS 84	
A6. Attach at least two and when possible four clear photographs (one for each side) of the building (see Form pages 7 and 8).	
A7. Building Diagram Number: _____ Must be: 1A,1B,2A,2B,3,4,5,6,7,8,9 2, preferably 4, photos required (photos must be in color and clear)	

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Latitude and Longitude Check Illinois Elevation Finder

<https://maps.dnr.illinois.gov/elev/>

Measurement Result	
Latitude	Longitude
41.294988	-88.836172
41.295345	-88.83556

Use the
Measuring
Tool Icon
and
choose the
Location
Tool

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Section A – Revised Flood Openings Section

- A8.** For a building with a crawlspace or enclosure(s): Enter "N/A" in fields that are not applicable. Blank fields are assumed to be "N/A"
- a) Square footage of crawlspace or enclosure(s): _____ sq. ft.
 - b) Is there at least one permanent flood opening on two different sides of each enclosed area? Yes No N/A one must be chosen
 - c) Enter number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade:
 Non-engineered flood openings: _____ Engineered flood openings: _____
 - d) Total net open area of non-engineered flood openings in A8.c: _____ sq. in. Enter actual opening size
 - e) Total rated area of engineered flood openings in A8.c (attach documentation – see Instructions): Enter total rated area _____ sq. ft.
 - f) Sum of A8.d and A8.e rated area (if applicable – see Instructions): _____ sq. ft. Only required when both non-engineered and engineered openings are present
- A9.** For a building with an attached garage: Enter "N/A" in fields that are not applicable. Blank fields are assumed to be "N/A"
- a) Square footage of attached garage: _____ sq. ft.
 - b) Is there at least one permanent flood opening on two different sides of the attached garage? Yes No N/A one must be chosen
 - c) Enter number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade:
 Non-engineered flood openings: _____ Engineered flood openings: _____
 - d) Total net open area of non-engineered flood openings in A9.c: _____ sq. in. Enter actual opening size
 - e) Total rated area of engineered flood openings in A9.c (attach documentation – see Instructions): Enter total rated area _____ sq. ft.
 - f) Sum of A9.d and A9.e rated area (if applicable – see Instructions): _____ sq. ft. Only required when both non-engineered and engineered openings are present

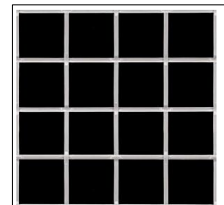
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Section A- Flood Openings – Tech Bulletin 1

- A8.** For a building with a crawlspace or enclosure(s):
- a) Square footage of crawlspace or enclosure(s): _____ sq. ft.
 - b) Is there at least one permanent flood opening on two different sides of each enclosed area? Yes No N/A
 - c) Enter number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade:
 Non-engineered flood openings: _____ Engineered flood openings: _____
 - d) Total net open area of non-engineered flood openings in A8.c: _____ sq. in.
 - e) Total rated area of engineered flood openings in A8.c (attach documentation – see Instructions): _____ sq. ft.
 - f) Sum of A8.d and A8.e rated area (if applicable – see Instructions): _____ sq. ft.
- A9.** For a building with an attached garage:
- a) Square footage of attached garage: _____ sq. ft.
 - b) Is there at least one permanent flood opening on two different sides of the attached garage? Yes No N/A
 - c) Enter number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade:
 Non-engineered flood openings: _____ Engineered flood openings: _____
 - d) Total net open area of non-engineered flood openings in A9.c: _____ sq. in.
 - e) Total rated area of engineered flood openings in A9.c (attach documentation – see Instructions): _____ sq. ft.
 - f) Sum of A9.d and A9.e rated area (if applicable – see Instructions): _____ sq. ft.

Architect may use interior dimensions while EC requires outside dimensions. May mean a shortage in net area of openings. Notify owner of this problem. House in Kane Co is shy 41 sq. inches!

Must subtract any bars, louvers or grates. Provide notes on manufacturer in Comments area.



McNICHOLS® Wire Mesh
 Square, Galvanized, Pre-Galvanized,
 Woven - Lockcrimp Weave, 2.0000" x
 2.0000" Opening (Square), 0.250" Thick
 (2-3/4 Gauge) Wire Diameter, 79% Open
 Area

If yes, ICC ES form from manufacturer must be attached.

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Technical Bulletin 1

[National Flood Insurance Technical Bulletins | FEMA.gov](https://www.fema.gov/national-flood-insurance-technical-bulletins)

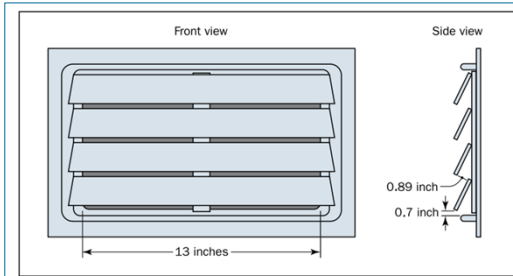


Figure 19: Example of non-engineered opening: Typical standard air vent with fixed, angled blades providing approximately 44 square inches of net open area; measurement of net open area uses slot width of 13 inches times the sum of the spaces between the blades



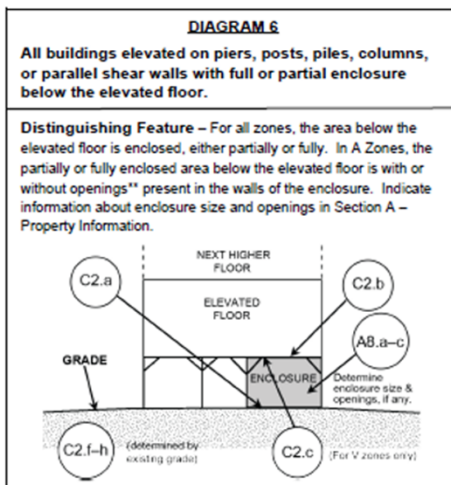
Requirements for Flood Openings in Foundation Walls and Walls of Enclosures

Below Elevated Buildings in Special Flood Hazard Areas In Accordance with the National Flood Insurance Program

NFIP Technical Bulletin 1 / March 2020

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Attached Garage vs Enclosure



Source: Becca Fricke-Croft, Celina Adair, FEMA Region 10

This is an enclosure not an attached garage. The flood openings here would be shown in A8.

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Section B – FIRM and FIS Data

SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1.a. NFIP Community Name: B1.b. NFIP Community Identification Number:

B2. County Name: B3. State: B4. Map/Panel No.: B5. Suffix:

B6. FIRM Index Date: B7. FIRM Panel Effective/Revised Date:

B8. Flood Zone(s): B9. Base Flood Elevation(s) (BFE) (Zone AO, use Base Flood Depth):

B10. Indicate the source of the BFE data or Base Flood Depth entered in Item B9:
 FIS FIRM Community Determined Other: _____

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

B13. Is the building located seaward of the Limit of Moderate Wave Action (LiMWA)? Yes No

FIRM Index Date may not match the map date – Kankakee County has 2 different map dates, Index is 2/15/2019 and all but 2 panels are dated 1/20/2010. Cook County has 3 and soon to be 4 dates. Watch for Suffix changes too

BFE in Zone AE should COME FROM FIS. FIRM used for Zone AH and AO. If Community Source or Other, the Comments section must be used. Example State Hwy or County bridge plan with date and source.

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Section B – Index Date

Use FEMA
Map Service
Center

Date of FIRM
and Index can
differ

Search Results for BLUE ISLAND, CITY OF

Click [subscribe](#) to receive email notifications when products are updated. If you are a person with a disability, are blind, or have low vision, and need assistance, please contact a [map specialist](#).

Effective Products (24)

FIRM Panels (9) DL ALL

Please note: Searches often result in many map files listed under a given section. You can determine the Product ID for the individual map panel needed by looking at the Map Index file. The index map files have "IND" within the Product ID and appear at the start of the list. These index files show an overview of a jurisdiction and how it is subdivided into map panels with the Product ID for each panel shown.

Show entries

Showing 1 to 9 of 9 entries

Previous 1 Next

Product ID	Effective Date	LOMC	Size	Download	View
17031CIND1J	09/10/2021		0MB	DL	VIEW
17031CIND2J	09/10/2021		0MB	DL	VIEW
17031CIND3J	09/10/2021		0MB	DL	VIEW
17031CIND4J	09/10/2021		0MB	DL	VIEW
17031C0637J	08/19/2008	LOMC	35MB	DL	VIEW
17031C0639J	08/19/2008	LOMC	34MB	DL	VIEW
17031C0643J	08/19/2008	LOMC	34MB	DL	VIEW
17031C0644J	08/19/2008	LOMC	33MB	DL	VIEW
17031C0645J	08/19/2008	LOMC	18MB	DL	VIEW

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SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1.a. NFIP Community Name: _____ B1.b. NFIP Community Identification Number: _____

B2. County Name: _____ B3. State: _____ B4. Map/Panel No.: **17031C0701** B5. Suffix: **J**

B6. FIRM Index Date: **11/01/2019** B7. FIRM Panel Effective/Revised Date: **08/19/2008**

B8. Flood Zone(s): _____ B9. Base Flood Elevation(s) (BFE) (Zone AO, use Base Flood Depth): _____

B10. Indicate the source of the BFE data or Base Flood Depth entered in Item B9:
 FIS FIRM Community Determined Other: _____

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
 Designation Date: _____ CBRS OPA

B13. Is the building located seaward of the Limit of Moderate Wave Action (LiMW) _____

Showing 1 to 7 of 7 entries

Product ID	Effective Date	LOMC
17031CIND2H	11/01/2019	
17031CIND3H	11/01/2019	
17031CIND1H	11/01/2019	
17031C0701J	08/19/2008	<input type="checkbox"/> LOMC
17031C0702K	11/01/2019	<input type="checkbox"/> LOMC

Get the INDEX PANEL date from the FEMA Map Service Center.

When new map panels are issued for just part of a county the index will not match the dates on all the FIRM panels in the county.

Currently Kankakee County and soon Kane County will be affected.

Watch for different suffixes.

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Establish the BFE

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
East Branch Tributary No. 3 (EBEB)								
EBEB0047	684 ¹	164 ²	239	1.4	670.2	670.2	670.2	0.0
EBEB0048	1,013 ¹	84 ²	97	3.4	674.9	674.9	674.9	0.0
EBEB0049	1,426 ¹	110	273	1.2	686.0	686.0	686.1	0.1
EBEB0050	1,754 ¹	57	126	2.6	686.1	686.1	686.2	0.1
EBEB0051	1,890 ¹	57	62	5.2	686.5	686.5	686.5	0.0
EBEB0052	2,613 ¹	125	264	1.2	699.1	699.1	699.2	0.1
EBEB0053	3,263 ¹	119	198	1.1	713.7	713.7	713.7	0.0

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY DUPAGE COUNTY AND INCORPORATED AREAS	FLOODWAY DATA EAST BRANCH TRIBUTARY NO. 3 (EBEB)
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2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic area of Lake County, Illinois including the incorporated areas listed in Section 1.1.

Table 3, "Stillwater Name Changes," provides a history of flooding source name changes for the September 18, 2013 FIS.

At the time of this Physical Map Revision, there were no name changes affecting the 16 revised FIRM panels.

Table 3 - Stillwater Name Changes (September 18, 2013)

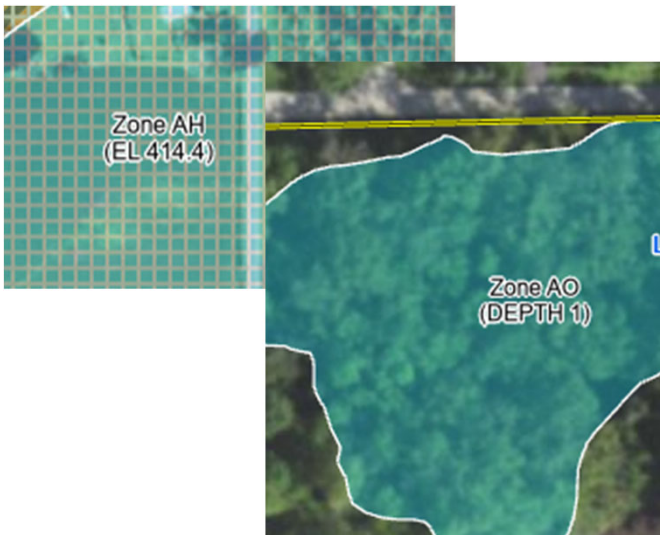
Community	Old Name	New Name
North Barrington, Village of	Unnamed Ponding Area 2	Lake Sheree
Lake County (Unincorporated Areas)	Brandenberg Lake	Brandenburg Lake

Stillwater Table for Lake BFEs in FIS

Table 10 - Summary of Stillwater Elevations

Flooding Source and Location	Elevation (feet NAVD 88)			
	10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
Antioch Lake	756.1	756.2	756.5	756.7
Bluff Lake	739.2	740.6	741.4	742.4
Brandenburg Lake	739.2	740.3	740.8	741.9
Cedar Lake	790.0	790.3	790.5	790.7
Channel Lake	739.6	740.9	741.5	742.8
Cross Lake	812.3	812.5	812.8	813.0

Section B – Base Flood Elevation Information Sources



1. Flood Insurance Study
 - Floodway data table – AE Zone only
 - Flood profile – AE Zone only
 - Stillwater tables
2. FIRM
 - AO Zone depth – max. depth
 - AH Zone elevation
 - AE Zone for waterways use the FIS. Newer maps are more accurate, with BFEs labeled on the X-Sections.

Section C – Surveyed Elevation Data

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, AO, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO, A99. Complete Items C2.a–h below according to the Building Diagram specified in Item A7. In Puerto Rico only, enter meters.

Benchmark Utilized: _____ Vertical Datum: _____

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

NGVD 1929 NAVD 1988 Other: _____

If the EC is your primary plan review tool – know it's limitations. The EC will not address fill compaction, requirement for fill to extend 10 or more feet from foundation before dropping below Flood Protection Elevation, or if the building will be set in the floodway. A site plan or a grading plan may also be needed.

Use Under construction for homes being elevated – required for ICC.

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Section C – Building Elevation - Datum

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, AO, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO, A99. Complete Items C2.a–h below according to the Building Diagram specified in Item A7. In Puerto Rico only, enter meters.

Benchmark Utilized: _____ Vertical Datum: _____

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

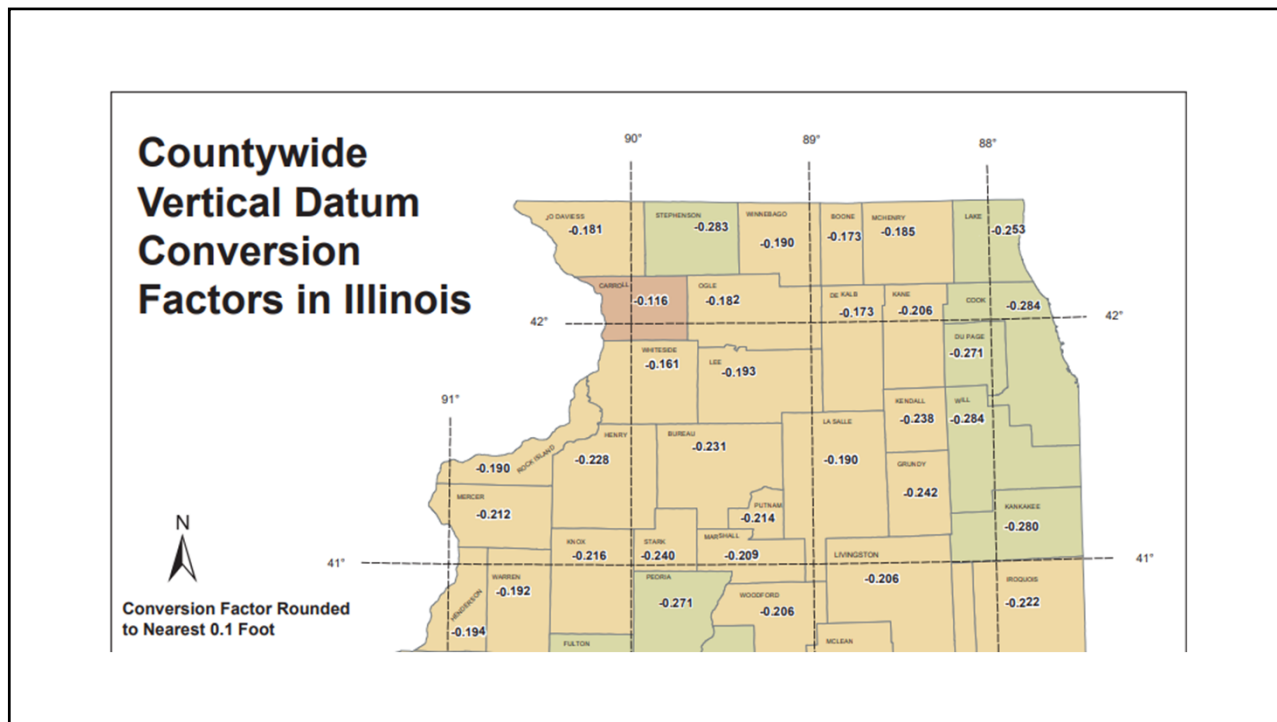
NGVD 1929 NAVD 1988 Other: _____

Datum used for building elevations must be the same as that used for the BFE. Conversion factor used? Yes No

If Yes, describe the source of the conversion factor in the Section D Comments area.

If Yes you must have something in Section D Comments
https://www.isws.illinois.edu/docs/default-source/maps/countywide-vertical-datum-conversion-factors-il-2007-01.pdf?sfvrsn=28e2d41a_2

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Section C – Building Elevation Datum Conversion – FIS

Effective information for this FIS was converted from NGVD 29 to NAVD 88 based on data presented in Figure 1 and Table 9a. Computations show a single average conversion factor of -0.244 feet ($NGVD\ 29 - 0.244 = NAVD\ 88$) for the county. The conversion factor was applied uniformly across the county, and was used to prepare the Floodway Data Tables, Flood Profiles, and FIRM, with the exception of The Sny Reach 1 – Interior ponding area and the Mississippi River.

The countywide conversion factor could not be used for The Sny Reach 1 – Interior ponding area. Instead, the Multiple Conversion Factors (stream-by-stream) method was required. The stream-by-stream conversion factor is applied when a stream is located in two or more counties (multi-county stream), whereby the average conversion factor determined for each county differs from each other. For the stream-by-stream method, the stream is assigned an average conversion factor based on the conversion factors at three points along the stream. These results are shown in Table 9b.

The cross section specific conversion factor (cross section-by-cross section) method was applied to the Mississippi River for Adams County. The cross section specific conversion factor method is applied to all Illinois reaches of the Mississippi River for consistency within the state.

Adams Co example – Computations show a single conversion ... except

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Section C – Building Elevation Datum Conversion – FIS

**Table 9b - Vertical Datum Conversions
Multiple Conversion Factor (stream by stream) Method
The Sny Reach 1 – Interior ponding area**

Point Location	River Mile	NAD83 Latitude (dec_deg.)	NAD83 Longitude (dec_deg.)	NGVD29 to NAVD88 Elevation Change (feet)	Maximum Offset	Average Conversion
The Sny Reach 1 – Interior ponding area						
Downstream	0.50	39.620	91.184	-0.230		
Intermediate	9.00	39.725	91.281	-0.246		
Upstream	17.64	39.812	91.349	-0.266	0.019	-0.247

**Table 9c - Vertical Datum Conversions
Cross Section Specific (cross section-by cross-section) Conversion Factors
Mississippi River**

Cross Section ID	NAD83 Latitude (dec_deg.)	NAD83 Longitude (dec_deg.)	NGVD29 to NAVD88 Elevation Change (feet)
312.7	39.771	91.355	-0.2
313	39.773	91.357	-0.2
313.5	39.777	91.361	-0.2
314	39.781	91.365	-0.3
314.5	39.787	91.371	-0.3
315	39.793	91.378	-0.3
315.5	39.797	91.384	-0.3
316	39.803	91.389	-0.3
316.7	39.807	91.395	-0.3
317	39.810	91.399	-0.3

**Adams Co example – Computations show
a single conversion ... except**

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Section C – Surveyed Elevation Data

Datum used for building elevations must be the same as that used for the BFE. Conversion factor used? Yes No

If Yes, describe the source of the conversion factor in the Section D Comments area.

Check the measurement used:

a) Top of bottom floor (including basement, crawlspace, or enclosure floor): feet meters

b) Top of the next higher floor (see Instructions): feet meters

c) Bottom of the lowest horizontal structural member (see Instructions): feet meters

d) Attached garage (top of slab): feet meters

e) Lowest elevation of Machinery and Equipment (M&E) servicing the building (describe type of M&E and location in Section D Comments area): feet meters **NEW**

f) Lowest Adjacent Grade (LAG) next to building: Natural Finished feet meters

g) Highest Adjacent Grade (HAG) next to building: Natural Finished feet meters

h) Finished LAG at lowest elevation of attached deck or stairs, including structural support: feet meters

The new form does now allow for N/A. If Natural Grade is checked instructions say to attach grading plan/topo.

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Lowest Adjacent Grade

Guidance: FEMA MT1 Technical Guidance

https://www.fema.gov/sites/default/files/documents/mt-1_technical_guidance_dec_2020.pdf

The LAG is defined as the elevation of the lowest point of ground touching a structure; it must include:

- Structural supports for a building, such as piers, posts or columns
- An attached garage
- Supports for an attached deck
- The bottom of a loading dock (see Section 4.10)
- Attached stairs including exterior basement stairs (see Section 4.10)
- The bottom of window wells (see Section 4.10)
- Any accessory or additional building attached by a breezeway, pedestrian bridge, covered entryway, etc. In the picture, the LAG should be inclusive of both buildings due to the breezeway attaching both buildings.



Guidance for Flood Risk
Analysis and Mapping

MT-1 Technical Guidance

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Lowest Adjacent Grade - Window Wells

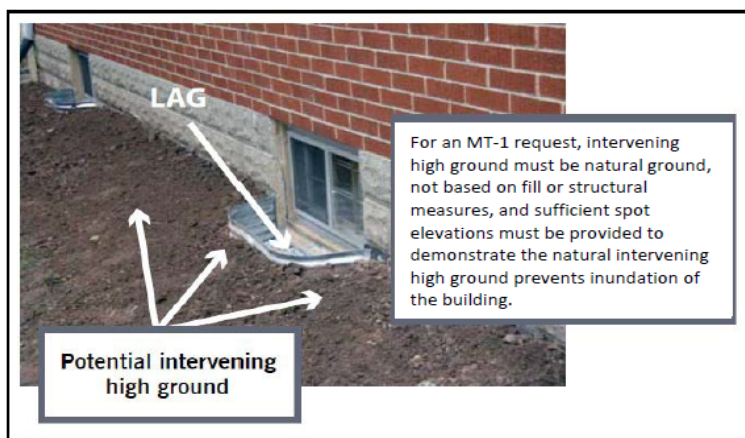


Figure 17: Use of Intervening High Ground – Window Well

New EC asks for grading plan if there is intervening high ground. The pre-construction site grading plan must show the ground was above the BFE and not filled.

38

Lowest Adjacent Grade – Loading Docks

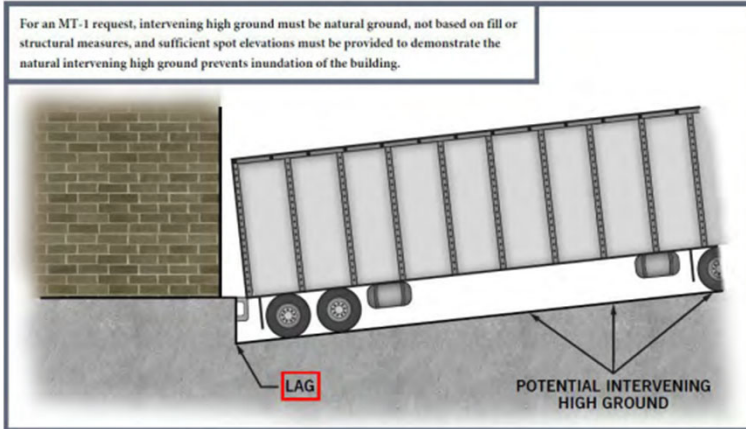


Figure 23: Use of Intervening High Ground – Loading Dock

New EC asks for grading plan if there is intervening high ground. The pre-construction site grading plan must show the ground was above the BFE and not filled.

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Lowest Adjacent Grade

Deck supports can often bring a structure into the floodplain along a creek or lake.

Deck can be freestanding, not bolted into home. If this is the case add notes and make sure photos show supports and bracing.

h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support

feet meters

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DIAGRAM 1A:

All slab-on-grade single- and multiple-floor buildings (other than split-level) and high-rise buildings, either detached or row type (e.g., townhouses); with or without attached garage.

Distinguishing Feature – The bottom floor is at or above ground level (grade) on at least one side.*

DIAGRAM 1B:

All raised-slab-on-grade or slab-on-stem-wall-with-fill single- and multiple-floor buildings (other than split-level), either detached or row type (e.g., townhouses); with or without attached garage.

Distinguishing Feature – The bottom floor is at or above ground level (grade) on at least one side.*

Read Distinguishing Features – Look at the required elevations for Section C but more may be needed.

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DIAGRAM 2A:

All single- and multiple-floor buildings with basement (other than split-level) and high-rise buildings with basement, either detached or row type (e.g., townhouses); with or without attached garage.

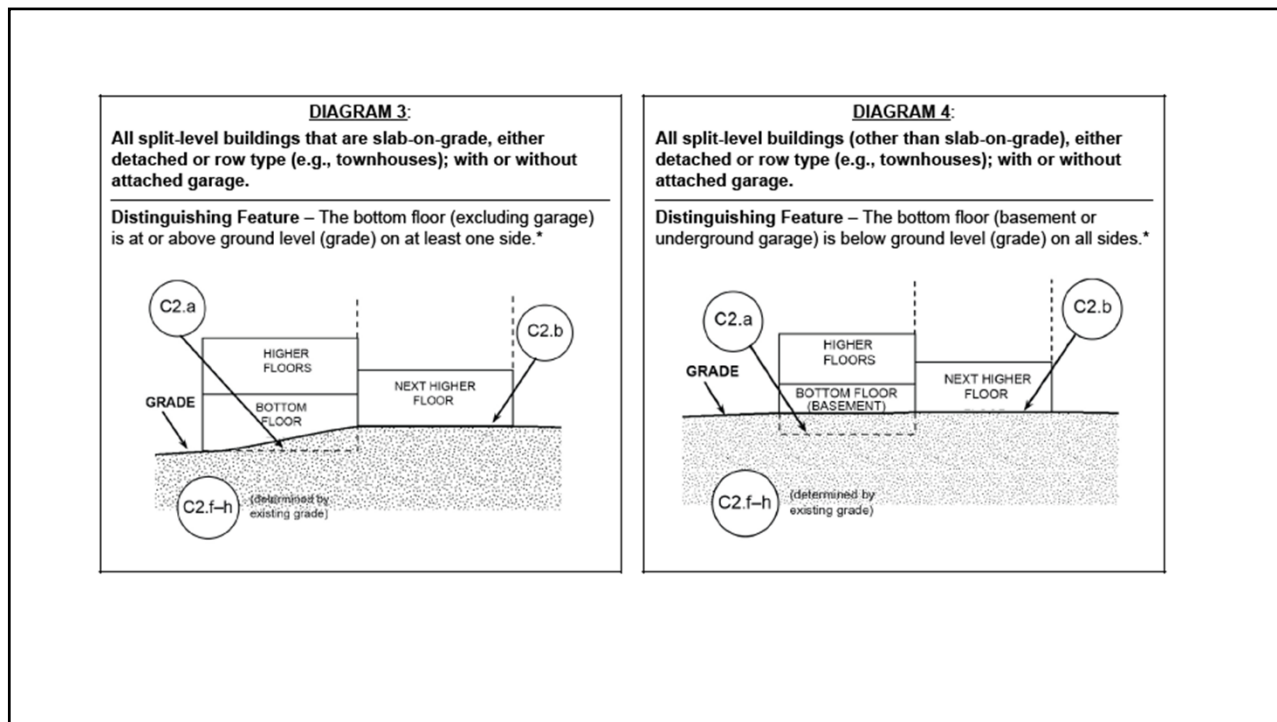
Distinguishing Feature – The bottom floor (basement or underground garage) is below ground level (grade) on all sides.*

DIAGRAM 2B:

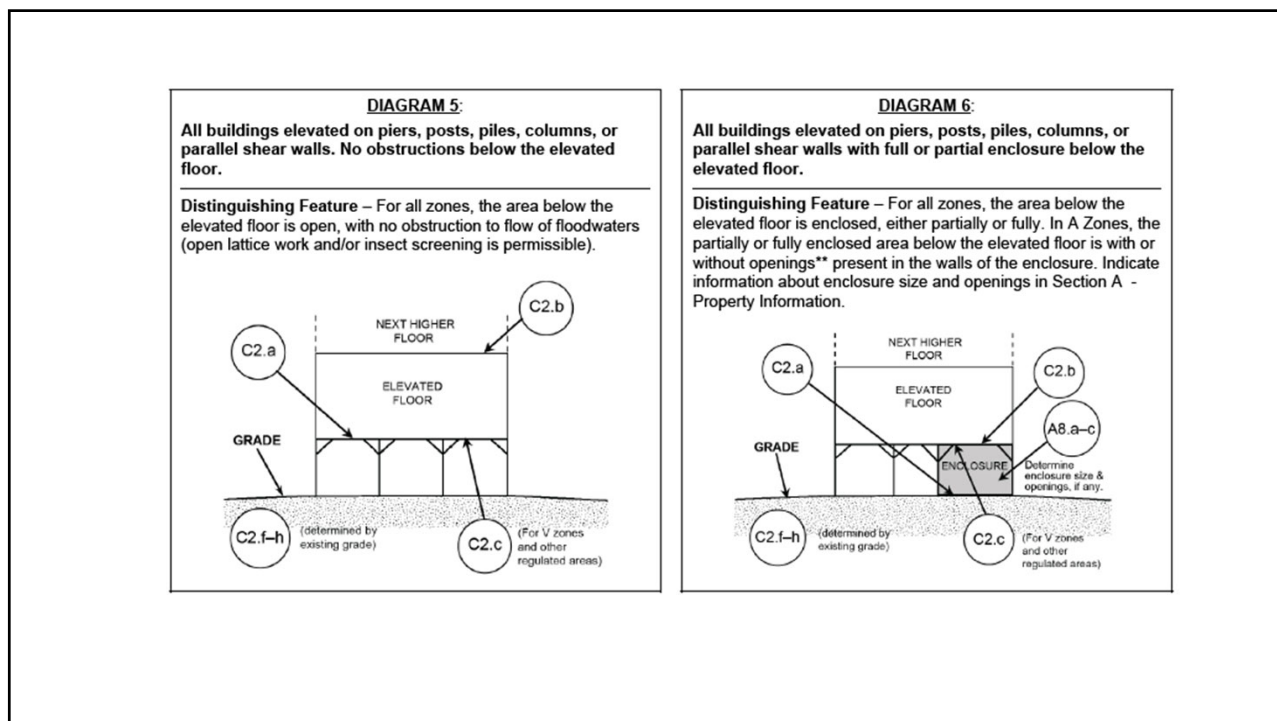
All single- and multiple-floor buildings with basement (other than split-level) and high-rise buildings with basement, either detached or row type (e.g., townhouses); with or without attached garage.

Distinguishing Feature – The bottom floor (basement or underground garage) is below ground level (grade) on all sides; most of the height of the walls is below ground level on all sides; and the door and area of egress are also below ground level on all sides.*

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DIAGRAM 7:

All buildings elevated on full-story foundation walls with a partially or fully enclosed area below the elevated floor. This includes walkout levels, where at least one side is at or above grade. The principal use of this building is located in the elevated floors of the building.

Distinguishing Feature – For all zones, the area below the elevated floor is enclosed, either partially or fully. In A Zones, the partially or fully enclosed area below the elevated floor is with or without openings** present in the walls of the enclosure. Indicate information about enclosure size and openings in Section A - Property Information.

DIAGRAM 8:

All buildings elevated on a crawlspace with the floor of the crawlspace at or above grade on at least one side, with or without an attached garage.

Distinguishing Feature – For all zones, the area below the first floor is enclosed by solid or partial perimeter walls. In all A zones, the crawlspace is with or without openings** present in the walls of the crawlspace. Indicate information about crawlspace size and openings in Section A - Property Information. (If the distance from the crawlspace floor to the top of the next higher floor is more than 5 feet, use Diagram 7.)

9 is for subgrade crawlspaces that are limited in height and subgrade depth. Read Distinguishing Features

DIAGRAM 9:

All buildings (other than split-level) elevated on a sub-grade crawlspace, with or without attached garage.

Distinguishing Feature – The bottom (crawlspace) floor is below ground level (grade) on all sides.* (If the distance from the crawlspace floor to the top of the next higher floor is more than five feet, or the crawlspace floor is more than two feet below the grade [LAG] on all sides, use Diagram 2A or 2B.)

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Section D

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by state 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 and describe in the Comments area.

Certifier's Name: _____ License Number: _____

Title: _____

Company Name: _____

Address: _____

City: _____ State: _____ ZIP Code: _____

Signature: _____ Date: _____

Telephone: _____ Ext.: _____ Email: _____ Place Seal Here

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

Comments (including source of conversion factor in C2; type of equipment and location per C2.e; and description of any attachments):

added

added

Equipment in C2e and location – furnace, water heater, heat pump, A/C, and elevator (see instructions H2). Model for engineered openings, datum, BFE source, and other information needed.

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Section E– Building Measurements for Zone AO or Zone A

SECTION E – BUILDING MEASUREMENT INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO, ZONE AR/AO, AND ZONE A (WITHOUT BFE)

For Zones AO, AR/AO, and A (without BFE), complete Items E1–E5. For Items E1–E4, use natural grade, if available. If the Certificate is intended to support a Letter of Map Change request, complete Sections A, B, and C. Check the measurement used. In Puerto Rico only, enter meters.

Building measurements are based on: Construction Drawings* Building Under Construction* Finished Construction
*A new Elevation Certificate will be required when construction of the building is complete.

E1. Provide measurements (C.2.a in applicable Building Diagram) for the following and check the appropriate boxes to show whether the measurement is above or below the natural HAG and the 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 (C2.b in applicable Building Diagram) 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.

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Sections E – How to measure Example

a) Top of bottom floor (including basement, crawlspace, or enclosure) is:

feet meters above or below the HAG.



Lowest floor measurement below the Highest Adjacent Grade (HAG). Top of foundation is 1 ft above the HAG. Then subtract interior height of foundation (7ft – 5 ¾ in) = HAG +1' - 7.48' = 6.48' Below HAG

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Section F – Information on who has completed A, B and E when EC is not completed by a surveyor

SECTION F – PROPERTY OWNER (OR OWNER'S AUTHORIZED REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without BFE) or Zone AO must sign here. *The statements in Sections A, B, and E are correct to the best of my knowledge*

Check here if attachments and describe in the Comments area.

Property Owner or Owner's Authorized Representative Name:

Address:

City: State: ZIP Code:

Signature: Date:

Telephone: Ext.: Email:

Comments:

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Section G

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Section A, B, C, E, G, or H of this Elevation Certificate. Complete the applicable item(s) and sign below when:

- 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 state law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)
- G2.a. A local official completed Section E for a building located in Zone A (without a BFE), Zone AO, or Zone AR/AO, or when item E5 is completed for a building located in Zone AO.
- G2.b. A local official completed Section H for insurance purposes. added
- G3. In the Comments area of Section G, the local official describes specific corrections to the information in Sections A, B, E and H.
- G4. The following information (Items G5–G11) is provided for community floodplain management purposes.
- G5. Permit Number: G6. Date Permit Issued:
- G7. Date Certificate of Compliance/Occupancy Issued:
- G8. This permit has been issued for: New Construction Substantial Improvement
- G9.a. Elevation of as-built lowest floor (including basement) of the building: feet meters Datum:
- G9.b. Elevation of bottom of as-built lowest horizontal structural member: feet meters Datum:
- G10.a. BFE (or depth in Zone AO) of flooding at the building site: feet meters Datum:
- G10.b. Community's minimum elevation (or depth in Zone AO) requirement for the lowest floor or lowest horizontal structural member: feet meters Datum: added
- G11. Variance issued? Yes No added If yes, attach documentation and describe in the Comments area.

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Section G – Community Authorization - continued

The local official who provides information in Section G must sign here. *I have completed the information in Section G and certify that it is correct to the best of my knowledge. If applicable, I have also provided specific corrections in the Comments area of this section.*

Local Official's Name: Title:
 NFIP Community Name:
 Telephone: Ext.: Email:
 Address:
 City: State: ZIP Code:
 Signature: Date:

Comments (including type of equipment and location, per C2.e; description of any attachments; and corrections to specific information in Sections A, B, D, E, or H):

CRS communities must complete Section G when EC is used for new construction or a substantial improvement

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Section H For Insurance Policy Only – Not LOMAs

SECTION H – BUILDING'S FIRST FLOOR HEIGHT INFORMATION FOR ALL ZONES (SURVEY NOT REQUIRED) (FOR INSURANCE PURPOSES ONLY)

The property owner, owner's authorized representative, or local floodplain management official may complete Section H for all flood zones to determine the building's first floor height for insurance purposes. Sections A, B, and I must also be completed. Enter heights to the nearest tenth of a foot (nearest tenth of a meter in Puerto Rico). **Reference the Foundation Type Diagrams (at the end of Section H Instructions) and the appropriate Building Diagrams (at the end of Section I Instructions) to complete this section.**

H1. Provide the height of the top of the floor (as indicated in Foundation Type Diagrams) above the Lowest Adjacent Grade (LAG):

a) For Building Diagrams 1A, 1B, 3, and 5–9. Top of bottom feet meters above the LAG floor (include above-grade floors only for buildings with subgrade crawlspaces or enclosure floors) is:

b) For Building Diagrams 2A, 2B, 4, and 6–9. Top of next higher floor (i.e., the floor above basement, crawlspace, or enclosure floor) is: feet meters above the LAG

H2. Is all Machinery and Equipment servicing the building (as listed in Item H2 instructions) elevated to or above the floor indicated by the H2 arrow (shown in the Foundation Type Diagrams at end of Section H instructions) for the appropriate Building Diagram?

Yes No

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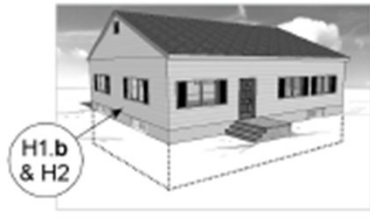
Sections H – How to measure

H1. Provide the height of the top of the floor (as indicated in Foundation Type Diagrams) above the Lowest Adjacent Grade (LAG):

a) For Building Diagrams 1A, 1B, 3, and 5-9. Top of bottom floor (include above-grade floors only for buildings with subgrade crawlspaces or enclosure floors) is: feet meters above the LAG

b) For Building Diagrams 2A, 2B, 4, and 6-9. Top of next higher floor (i.e., the floor above basement, crawlspace, or enclosure floor) is: feet meters above the LAG

Basement (Non-Elevated)



Corresponds to EC Diagrams 2A, 2B and 4

House with a basement is Building Diagram 2A
Top of Next Higher Above the LAG is 1 foot



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FIRST FLOOR HEIGHT DETERMINATION

The First Floor Height (FFH), or the height of the building's first lowest floor above the adjacent grade, is another rating variable critical to understanding flood risk. FEMA will determine a FFH value using application information and various datasets. Elevation Certificates (EC) are no longer required but can be an optional tool for establishing FFH. A policyholder may submit an EC to provide another FFH value. FEMA's system will review the two values and apply the FFH value that is most beneficial to the policyholder. If using an EC to provide a FFH value, the following fields must be entered:

- EC date
- Building Diagram Number
- Information from section C or E of the EC as shown to the right

*To determine the LFE when using Section C of the EC or First Floor Height when using Section E of the EC, see FIM Section 3. II. C. 4. c. Table 15 or 16.

All ECs and land surveys must be signed, accompanied by photographs and submitted to the NFIP insurers. See FIM Section 3. II. C. 4. d.

Using Optional Elevation Certificate (EC) Information from Section C to Complete the Application Form







1. Enter the Lowest Adjacent Grade (LAG) (section C2f. of the EC)
2. Enter the Lowest Floor Elevation (LFE)*
3. Enter the First Floor Height (the First Floor Height is the difference between the LAG and LFE)

Using Optional Elevation Certificate (EC) Information from Section E to Complete the Application Form

1. Enter the First Floor Height*

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Foundation Type Diagrams (for use in Section H):

<p>Slab on Grade (Non-Elevated)</p>  <p>Corresponds to EC Diagrams 1A, 1B and 3</p> <p>Note: If the building has more than one floor, the Machinery and Equipment should be on the second floor or higher.</p>	<p>Elevated without Enclosure on Posts, Piles, or Piers</p>  <p>Corresponds to EC Diagram 5</p>
<p>Basement (Non-Elevated)</p>  <p>Corresponds to EC Diagrams 2A, 2B and 4</p>	<p>Elevated with Enclosure on Posts, Piles, or Piers</p>  <p>Corresponds to EC Diagram 6</p>
<p>Crawlspace (Elevated, including Non-Elevated Sub-Grade Crawlspace)</p>  <p>Corresponds to EC Diagrams 8 and 9</p>	<p>Elevated with Enclosure Not on Posts, Piles, or Piers (Solid Foundation Walls)</p>  <p>Corresponds to EC Diagram 7</p>

Homeowners may need help figuring how to do this section

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SECTION I – PROPERTY OWNER (OR OWNER’S AUTHORIZED REPRESENTATIVE) CERTIFICATION

The property owner or owner’s authorized representative who completes Sections A, B, and H must sign here. *The statements in Sections A, B, and H are correct to the best of my knowledge.* **Note:** If the local floodplain management official completed Section H, they should indicate in Item G2.b and sign Section G.

Check here if attachments are provided (including required photos) and describe each attachment in the Comments area.

Property Owner or Owner’s Authorized Representative Name:

Address:

City: State: ZIP Code:

Signature: Date:

Telephone: Ext.: Email:

Comments:

New section required if Section H is used and completed by someone other than the local official

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ELEVATION CERTIFICATE
IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON PAGES 9-19
BUILDING PHOTOGRAPHS
 See Instructions for Item A6.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.:	FOR INSURANCE COMPANY USE
City: _____ State: _____ ZIP Code: _____	Policy Number: _____
	Company NAIC Number: _____
Instructions: Insert below at least two and when possible four photographs showing each side of the building (for example, may only be able to take front and back pictures of townhouses/rowhouses). Identify all photographs with the date taken and "Front View," "Rear View," "Right Side View," or "Left Side View." Photographs must show the foundation. When flood openings are present, include at least one close-up photograph of representative flood openings or vents, as indicated in Sections A8 and A9.	
Photo One	
Photo One Caption: _____	Clear Photo One

Photos need to be labeled as Front, Rear, Right and Left View

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Summary

- READ ALL OF THE MT-1 and EC INSTRUCTIONS
- Elevation Certificates are only for buildings
- Use the CRS tools
- ALL ECs must be checked for accuracy
- Grading plans and site plans may be needed, not just an EC to issue a permit



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Questions?

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