

# FEMA Elevation Certificate

## 2013 MARLS Conference

Larry Schock, CFM – DNRC Missoula Regional Office  
(406) 542-5885  
[lschock@mt.gov](mailto:lschock@mt.gov)



FEMA

# **FEMA Elevation Certificate**

## **Presentation Overview**

National Flood Insurance Program (NFIP)

FEMA Elevation Certificate

FEMA Elevation Certificate Diagrams

# FEMA Elevation Certificate

## Introduction

The NFIP Is A Quid Pro Quo Program

The NFIP Is A Carrot and Stick Program

FEMA agrees to make flood insurance and certain disaster assistance available within a community, in return the community agrees to adopt and enforce floodplain management regulations.

# **National Flood Insurance Program (NFIP)**

With the passage of the National Flood Insurance Act of 1968, Congress established the NFIP in order to identify flood risk zones, and to make affordable flood insurance available to the public.

The NFIP is administered by the Federal Emergency Management Agency (FEMA), coordinated by the State of Montana, regulated and enforced by the Community.

The NFIP along with the Montana MCA's and ARM's provide a framework for a community's floodplain management ordinance.

# National Flood Insurance Program (NFIP)



# National Flood Insurance Program (NFIP)

There are 3 basic parts to the NFIP

Regulations

Insurance

Mapping



# National Flood Insurance Program (NFIP)

BFE - Base Flood Elevation

CLOMR - Conditional Letter of Map Revision

DFIRM - Digital Flood Insurance Rate Map

FEMA - Federal Emergency Management Agency

FIRM - Flood Insurance Rate Map

FIS - Flood Insurance Study

# National Flood Insurance Program (NFIP)

HAG - Highest Adjacent Grade

LAG - Lowest Adjacent Grade

LFE- Lowest Floor Elevation

LOMA - Letter Of Map Amendment

LOMC – Letter of Map Change

LOMR - Letter of Map Revision

# National Flood Insurance Program (NFIP)

Base Flood - The flood having a 1% chance of being equaled or exceeded in any given year = Regulatory Standard.

There is a 26% chance that a home in a SFHA will be flooded during the life of a 30 year mortgage.

Pre-FIRM Structure – Any structure that is located in a Special Flood Hazard Area (SFHA) and the construction or substantial improvement of the building started before December 31, 1974 or before the date of the initial Flood Insurance Rate Map (FIRM).

Post-FIRM Structure – Any structure that is located in a Special Flood Hazard Area (SFHA) and the construction or substantial improvement of the building started after December 31, 1974 or on or after the date of the initial Flood Insurance Rate Map (FIRM).

# National Flood Insurance Program (NFIP)

## Special Flood Hazard Area (SFHA):

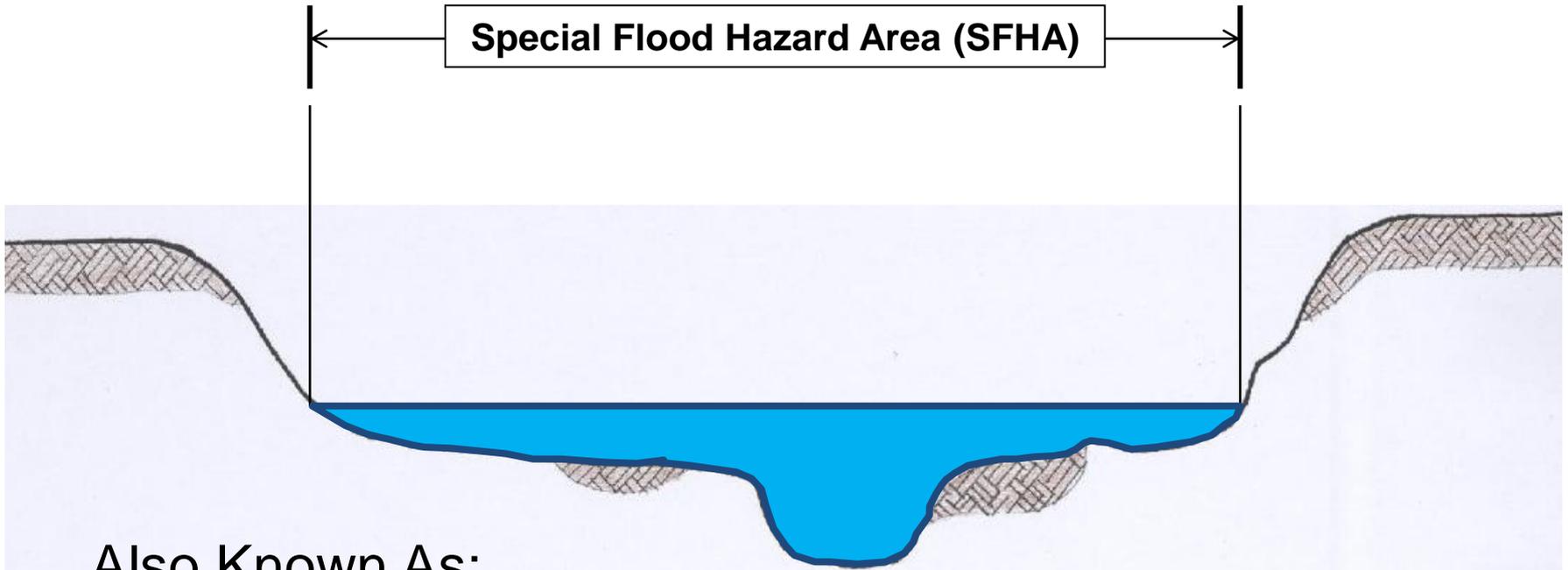
- The area inundated by floodwaters of the Base Flood.
- The area where the NFIP regulations must be enforced and where flood insurance is mandatory.

### Risk Zones

### Description

A	Approx. Methods, no BFEs or flood depths are shown
AE, A1-30	Detailed and Limited Detail methods, with BFEs.
AH	Shallow Flooding (ponding), 1-3 ft depths with BFEs, detailed methods
AO	Shallow Flooding (sheet flow), 1-3' depths, detailed methods, designated by 1', 2', or 3' depth

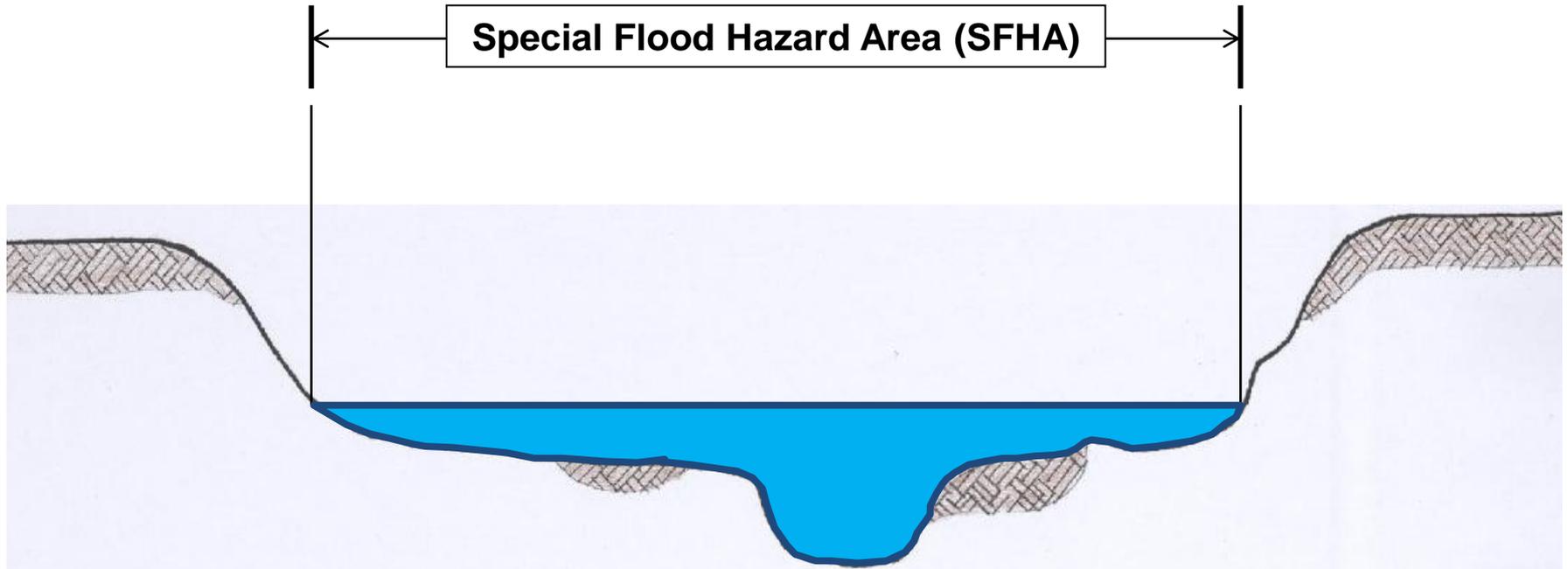
# National Flood Insurance Program (NFIP)



Also Known As:

- FEMA 100 yr. Floodplain
- The Area that has a 1% chance of flooding on any given year.
- The point where the BFE intersects the ground.

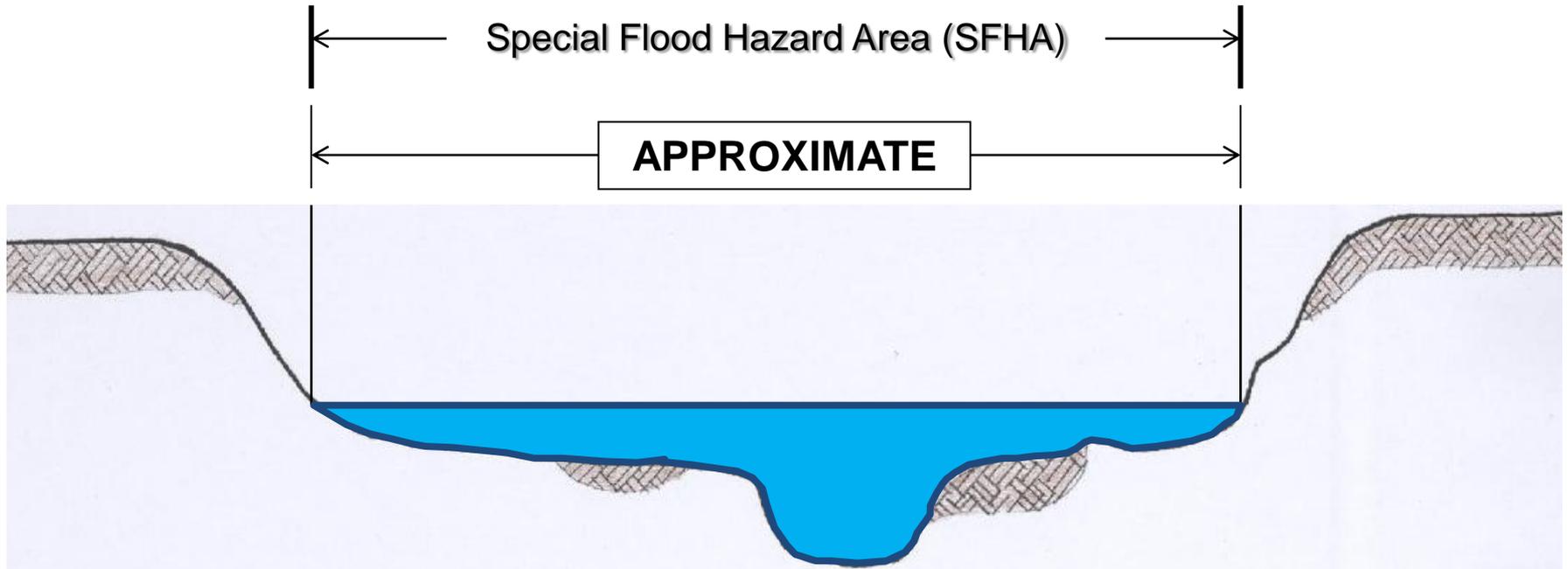
# Types of Floodplain Studies



Three different types of floodplain studies can be used to identify the SFHA:

- Approximate Study
- Limited Detail Study
- Detailed Study

# Types of Floodplain Studies



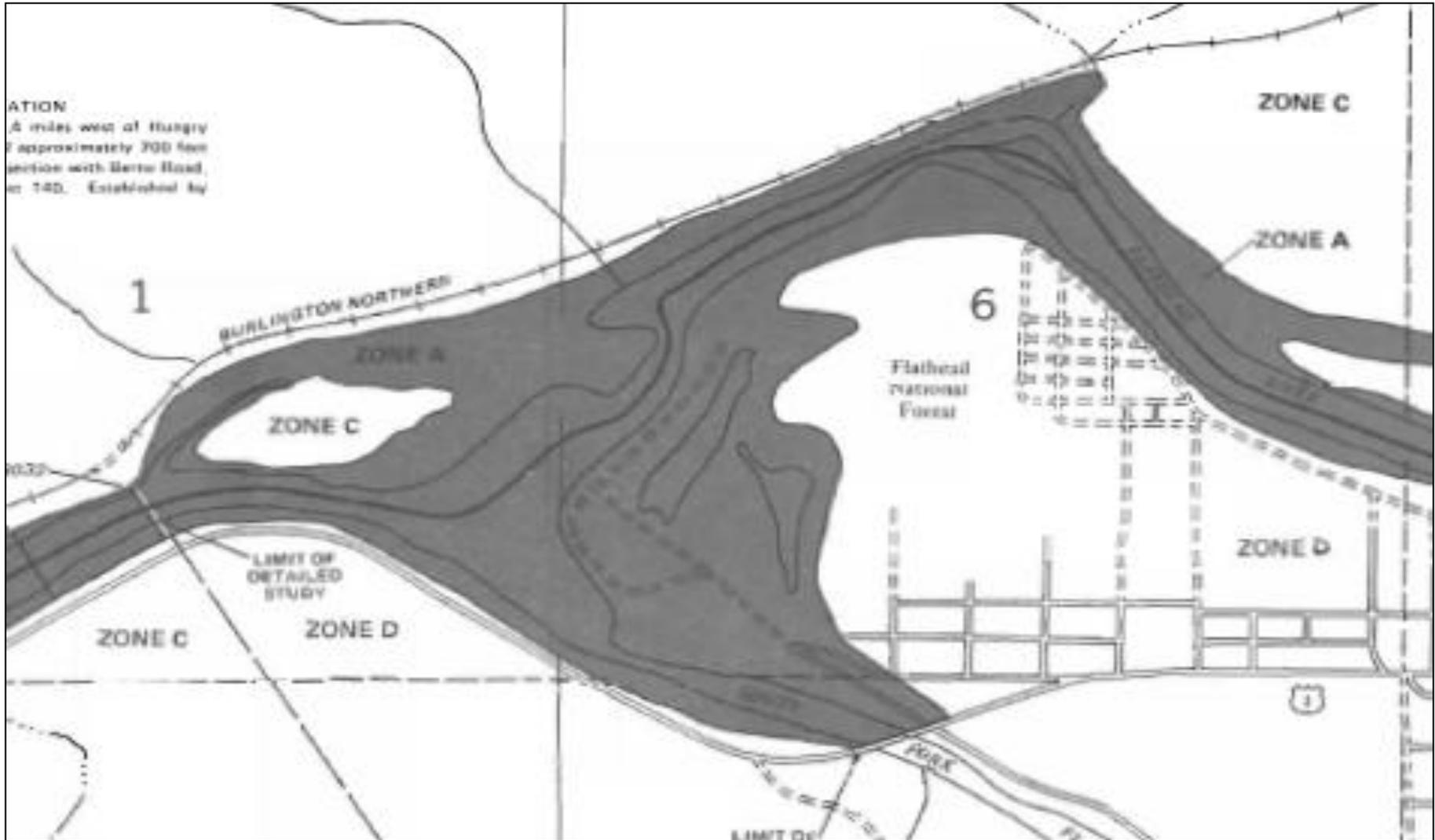
No Base Flood Elevations

No Hydrology

No Hydraulic Modeling

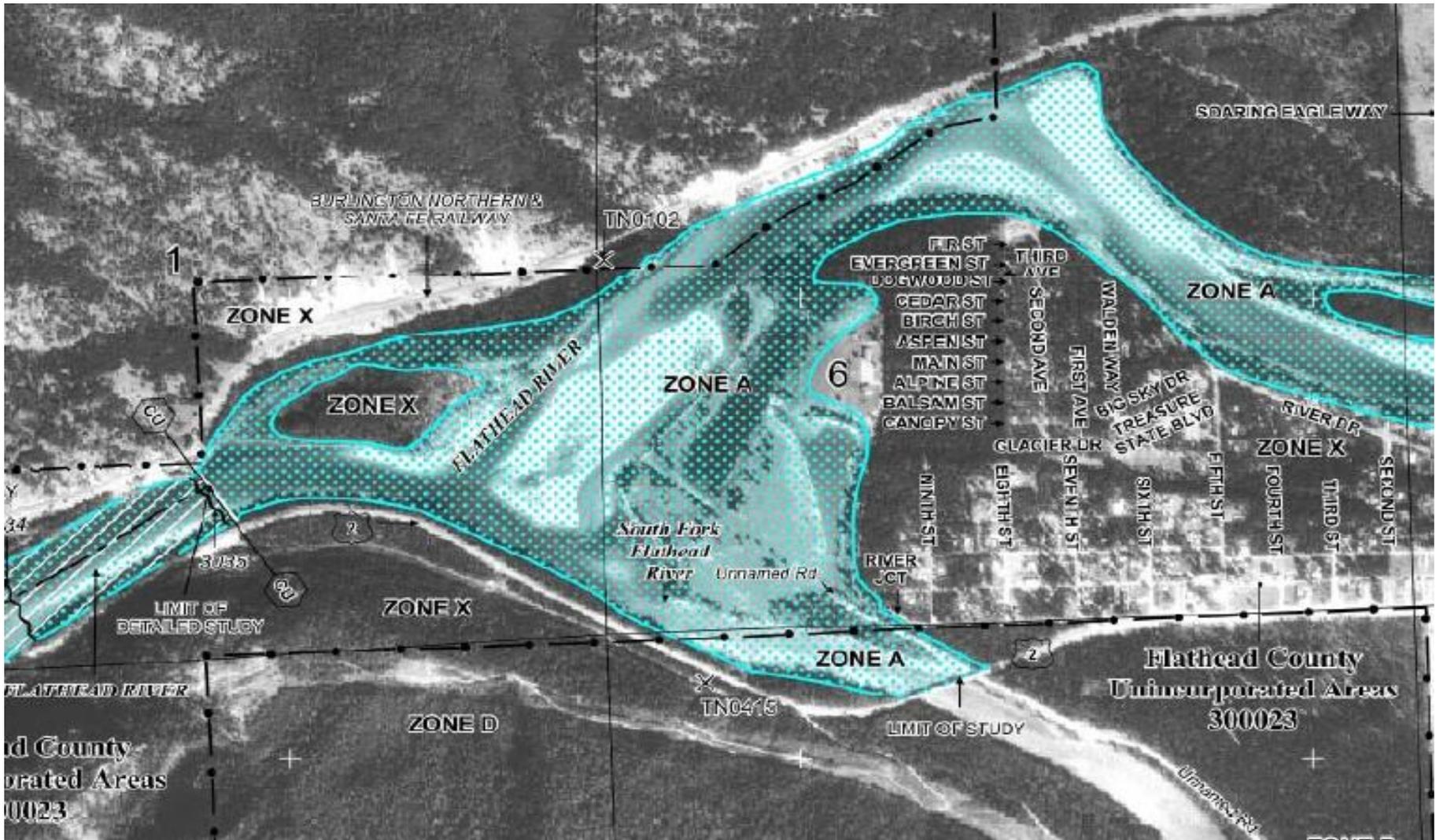
No Flood Profiles

# Types of Floodplain Maps



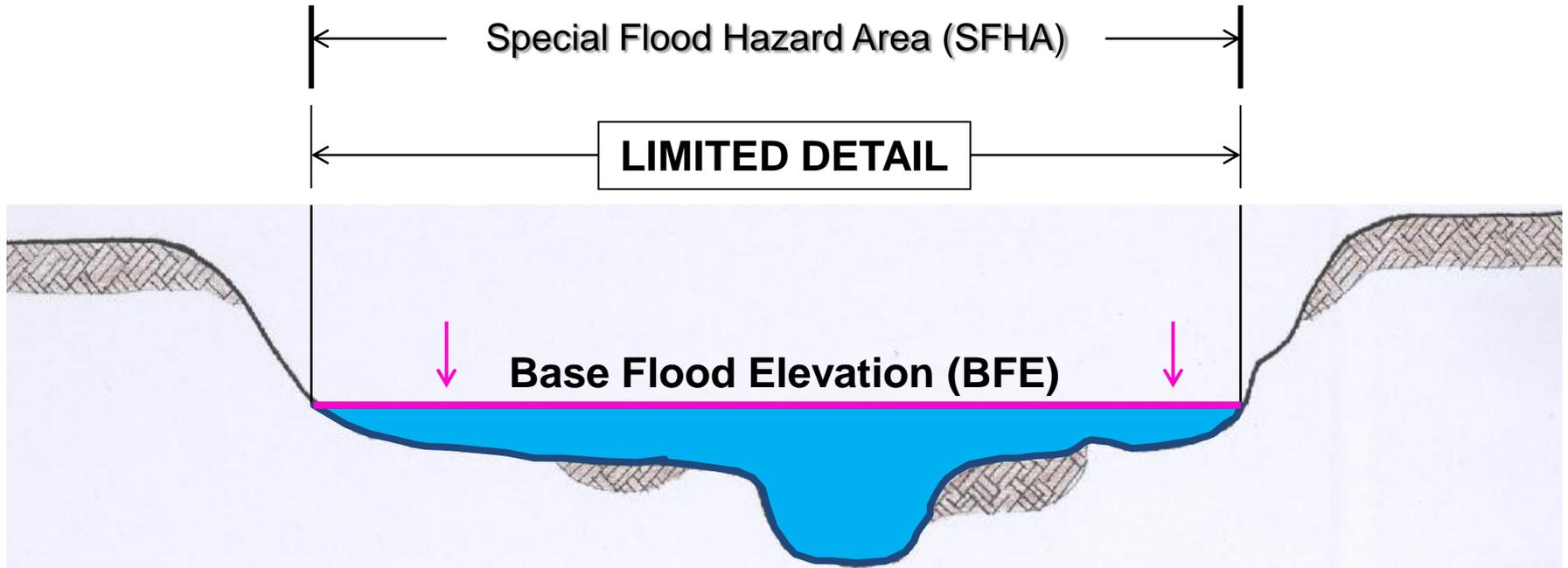
FEMA Flood Insurance Rate Map (FIRM) - **Approximate Study**  
Flathead River – Flathead County

# Types of Floodplain Maps



FEMA Digital Flood Insurance Rate Map (DFIRM) - **Approximate Study**  
Flathead River – Flathead County

# Types of Floodplain Studies

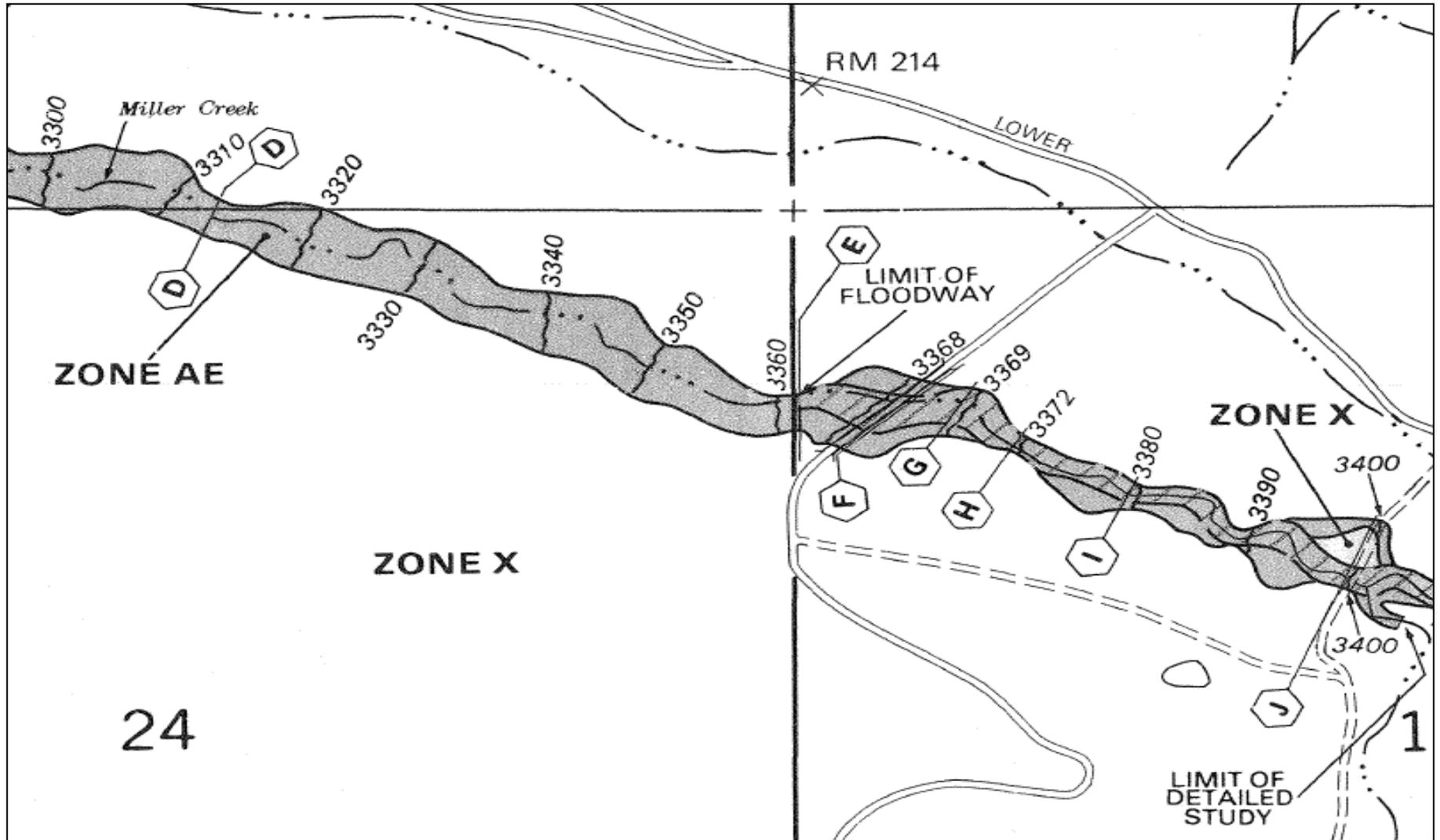


Flood Profiles and BFEs published in FIS.

Has limited Hydrology and Topographic Data

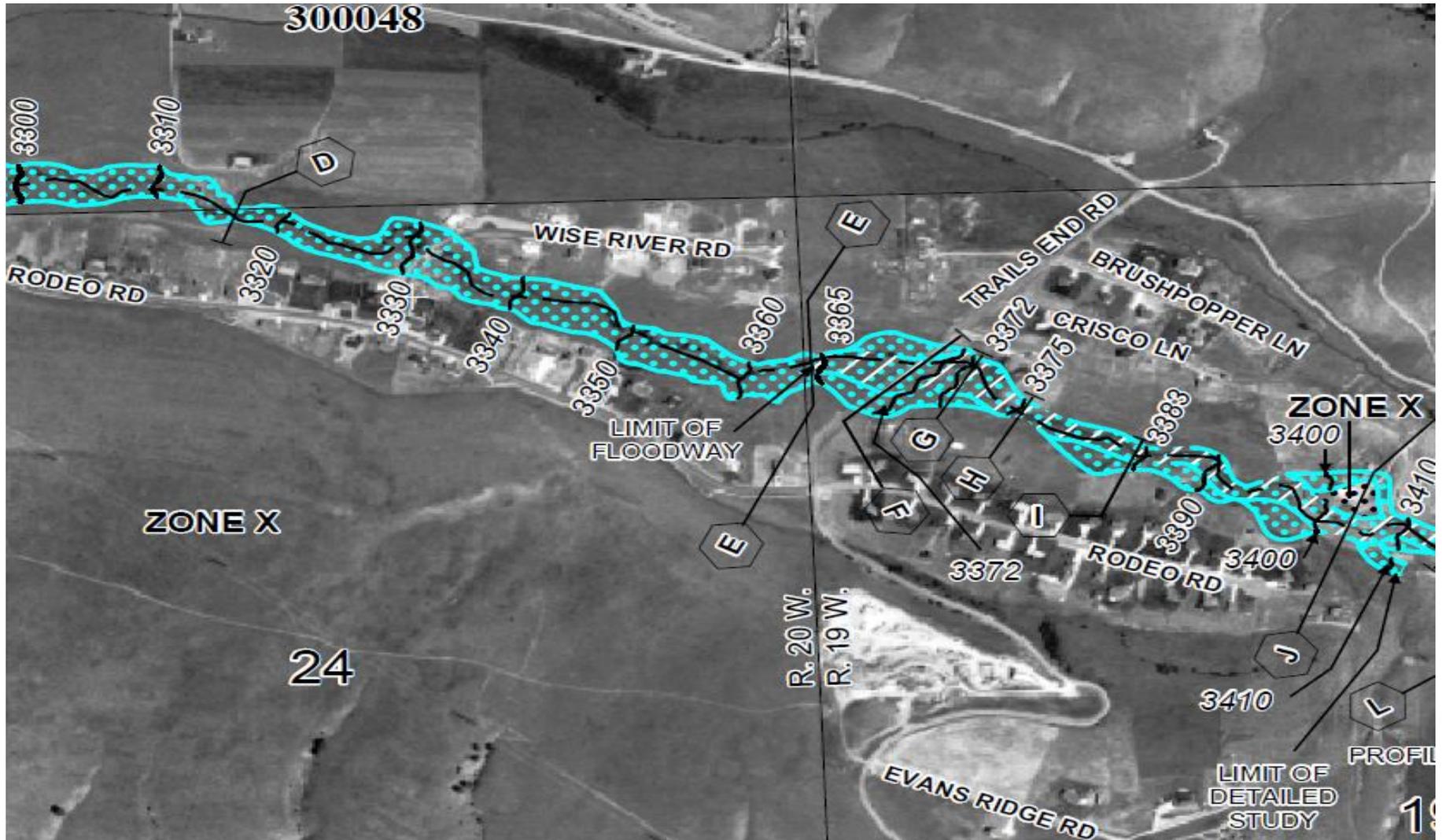
Has Limited Hydraulic Modeling at Bridges and Crossings

# Types of Floodplain Maps



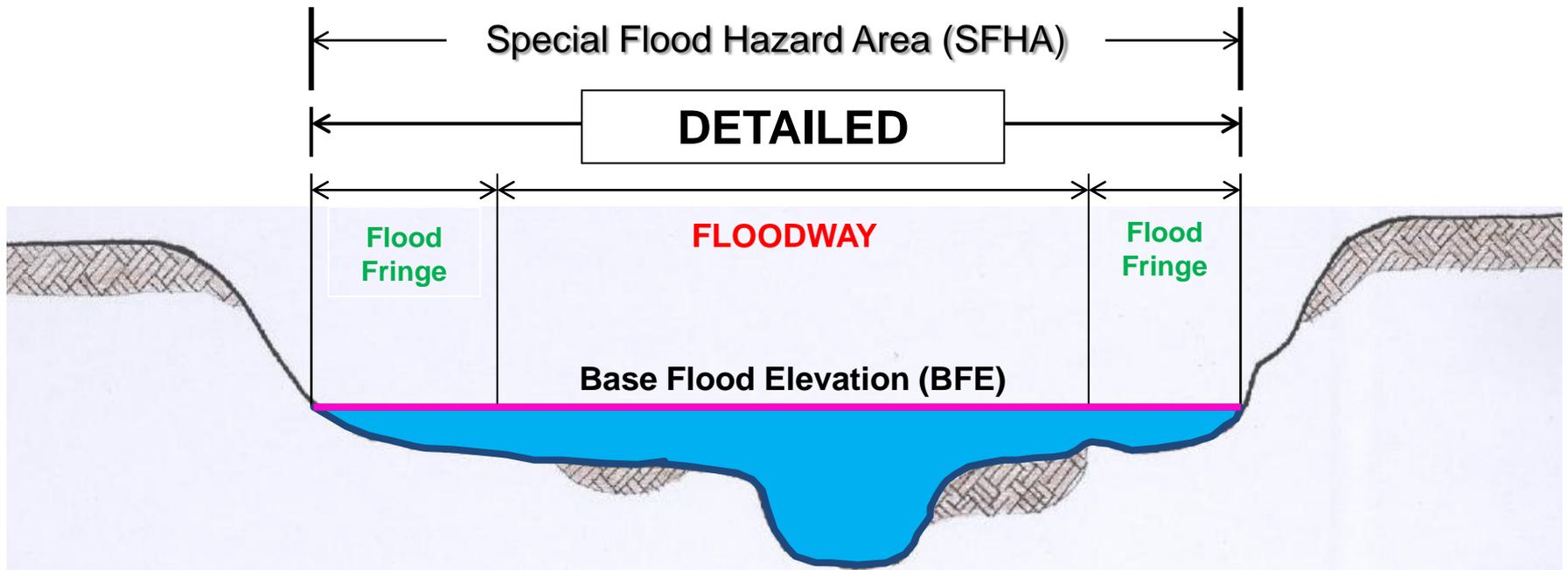
FEMA Digital Flood Insurance Rate Map (FIRM) – **Limited Detail Study**  
Miller Creek - Missoula County

# Types of Floodplain Maps



FEMA Flood Insurance Rate Map (DFIRM) – **Limited Detail Study**  
Miller Creek - Missoula County

# Types of Floodplain Studies



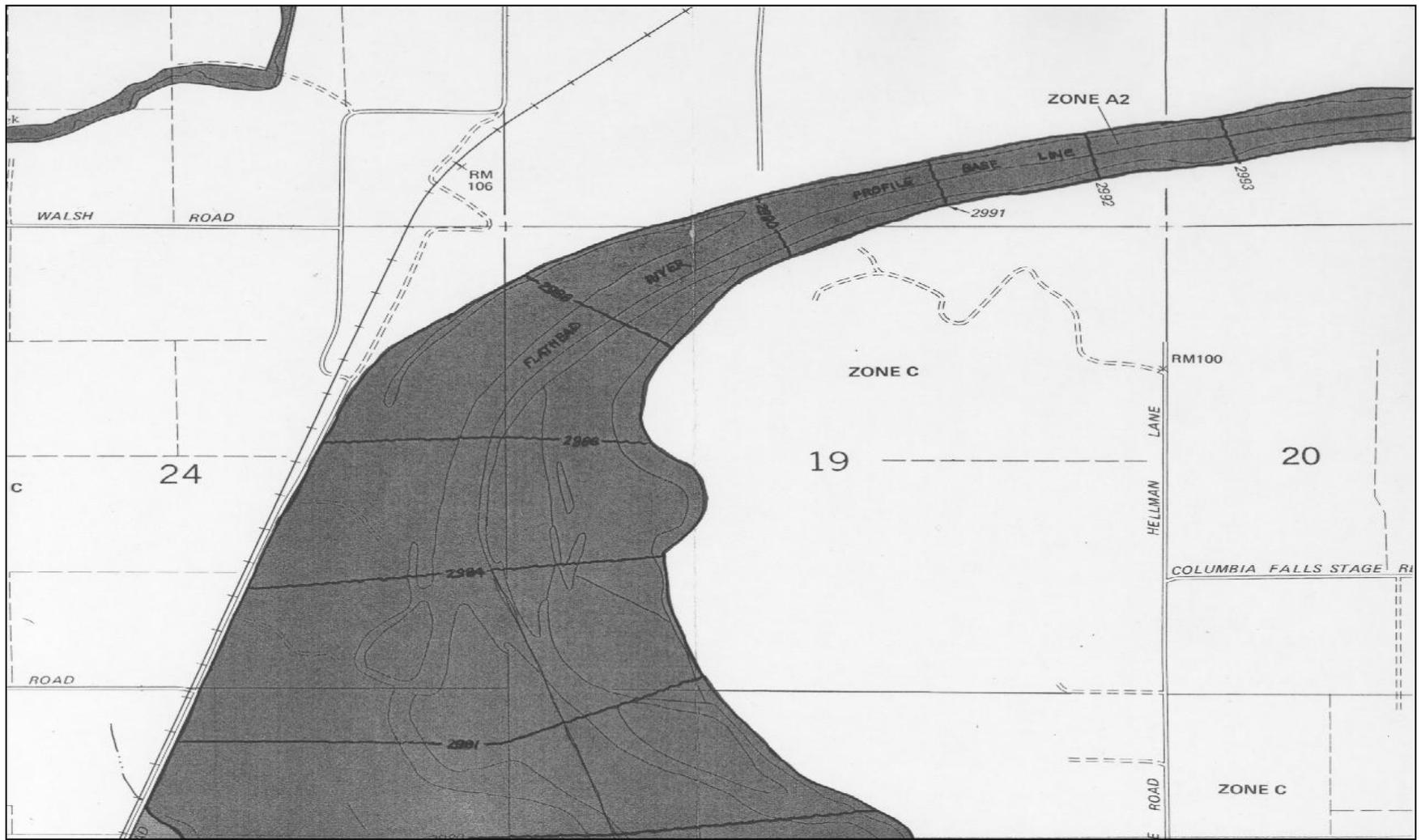
Flood Profiles and BFEs are published in FIS.

Based Upon Detailed Hydrology and Topographic data.

Based Upon Detailed Hydraulic Modeling.

Floodway Data Tables are published in the FIS.

# Types of Floodplain Maps



FEMA Flood Insurance Rate Map (FIRM) - **Detail Study**  
Flathead River – Flathead County

# Types of Floodplain Maps



FEMA Floodway Boundary Map - **Detail Study**  
Flathead River – Flathead County

# Types of Floodplain Maps



FEMA Digital Flood Insurance Rate Map (DFIRM) - **Detailed Study**  
Flathead River – Flathead County

# DFIRM Map Legend

## DFIRM Legend

### LEGEND



#### SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

**ZONE A** No Base Flood Elevations determined.

**ZONE AE** Base Flood Elevations determined.

**ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

**ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

**ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

**ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

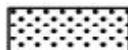
**ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

**ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.



#### FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

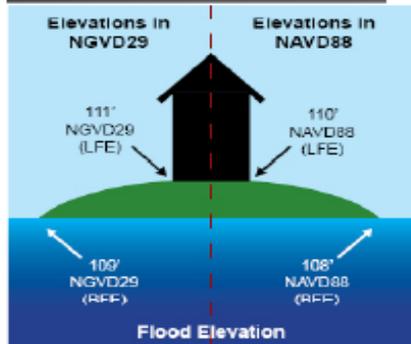
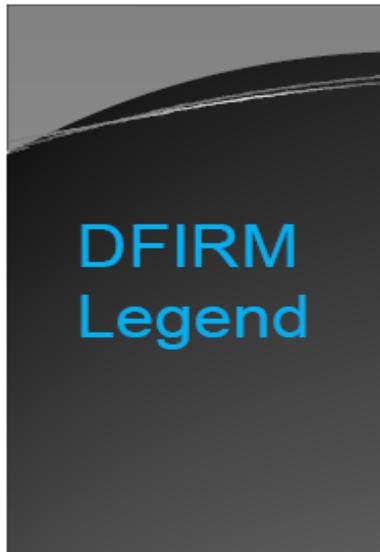


#### OTHER FLOOD AREAS

**ZONE X**

Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

# DFIRM Map Legend



- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CRRS and OPA boundary



Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.



Base Flood Elevation line and value; elevation in feet\*

Base Flood Elevation value where uniform within zone; elevation in feet\*

\*Referenced to the North American Vertical Datum of 1988



Cross section line



Transect line

45° 02' 08", 93° 02' 12"

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere

4989000m N

1000-meter Universal Transverse Mercator grid values, zone 11

4989000 FT

5000-foot grid ticks: Montana State Plane coordinate system, (FIPS Zone 2500), Transverse Mercator

DX5510 ×

Bench mark (see explanation in Notes to Users section of this FIRM panel)

\* M1.5

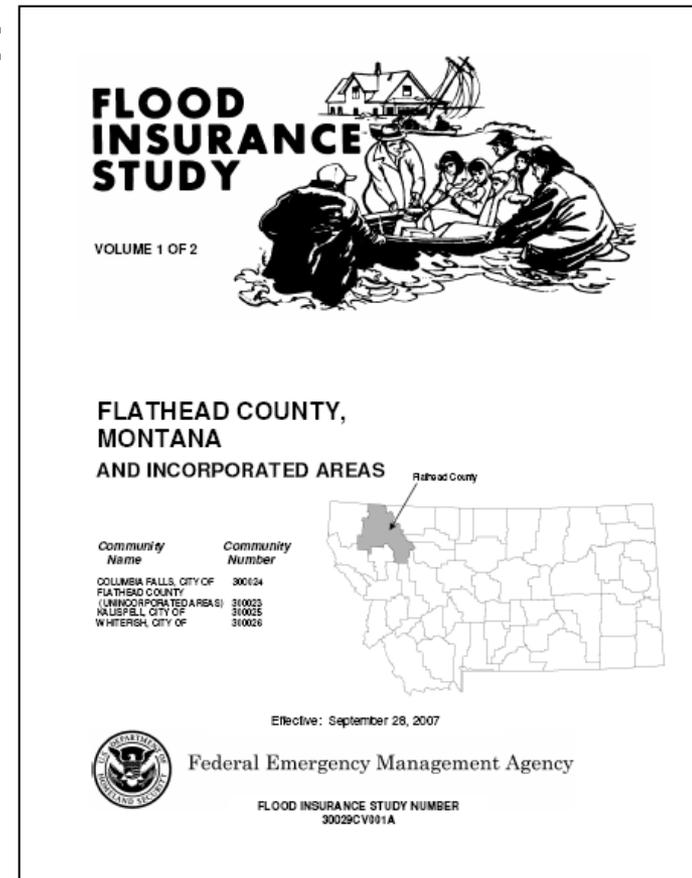
River Mile

DATUM CONVERSION – NOAA's VERTCON [http://www.ngs.noaa.gov/PC\\_PROD/VERTCON/](http://www.ngs.noaa.gov/PC_PROD/VERTCON/)

# Flood Insurance Study (FIS)

The FIS report has three components:

- *The Flood Insurance Study Report*
- *The FIRM or DFIRM's*
- *Prior to 1986, a separate Flood Boundary and Floodway Map (FBFM) was issued as a component of the FIS*

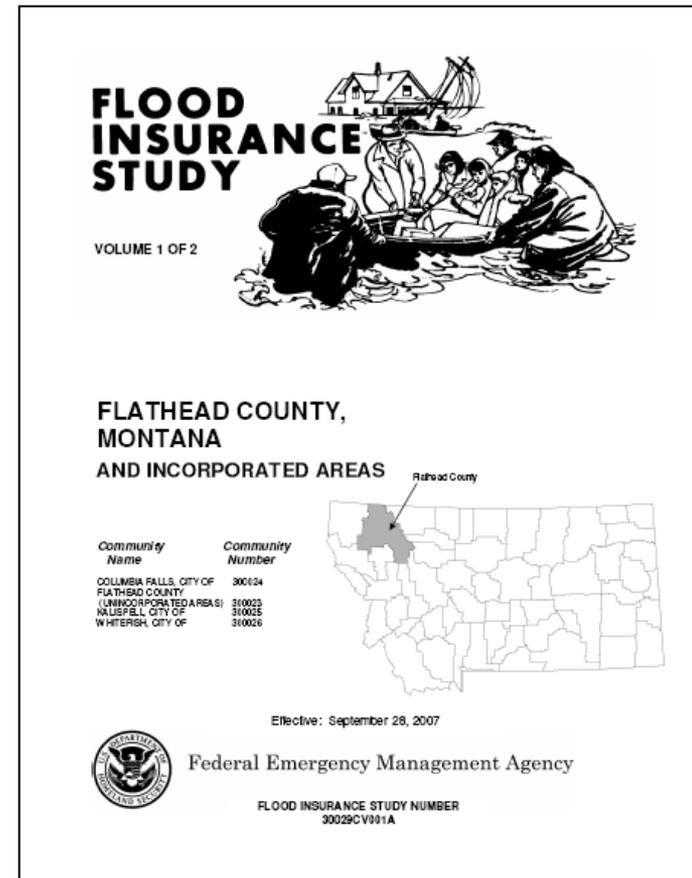


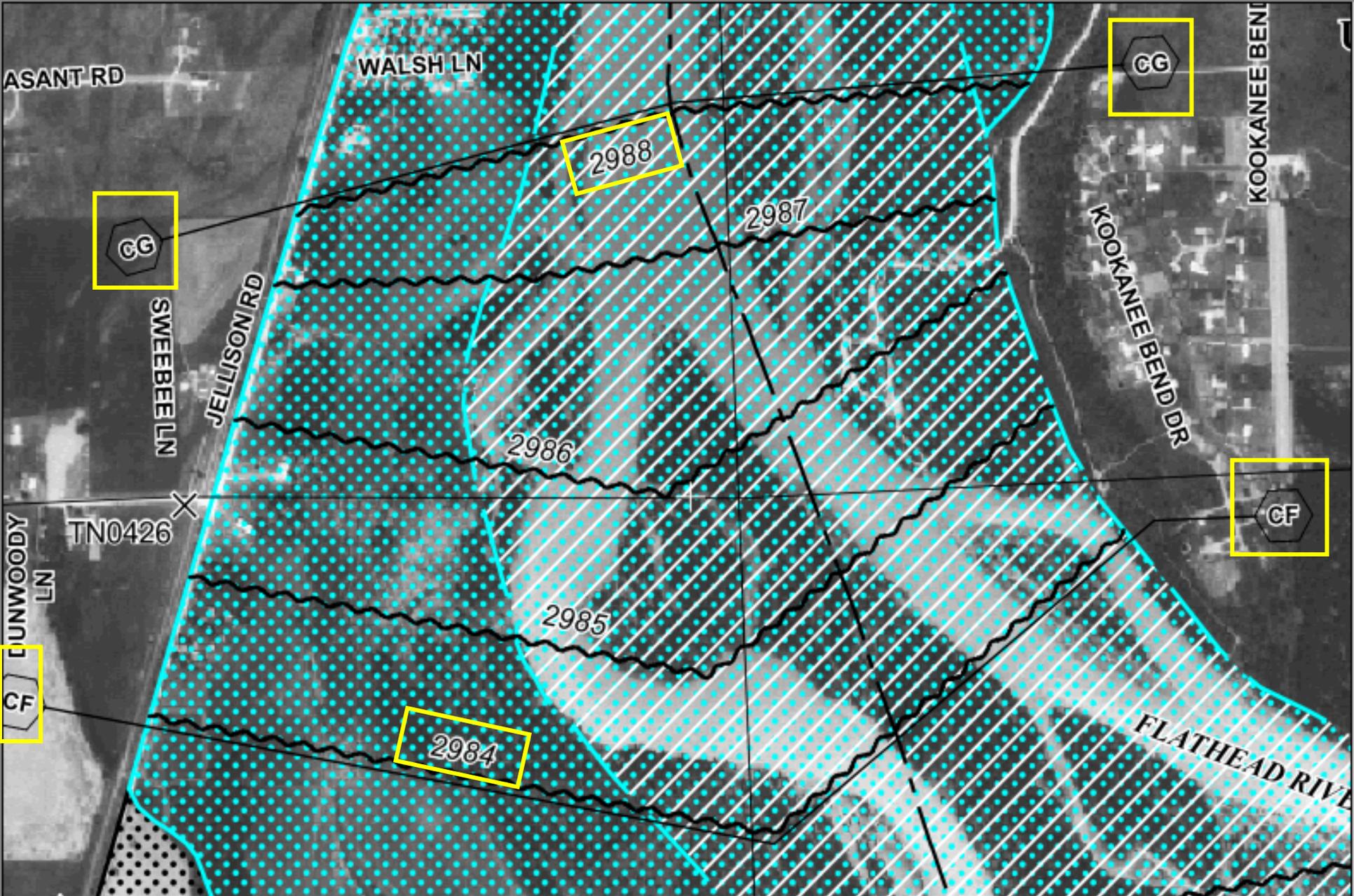
# Flood Insurance Study (FIS)

The FIS serves as the basis for rating flood insurance, regulating floodplain development, and carrying out floodplain management measures.

Contains tables summarizing various flood hazard data, including BFE's.

Contains computed flood profiles.





**Example – DFIRM**

FLOODING SOURCE		FLOODWAY			1-PERCENT ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
FLATHEAD RIVER (cont.)					2,933.7	2,933.7	2,934.0	0.3
					2,935.5	2,935.5	2,935.8	0.3
					2,937.2	2,937.2	2,937.6	0.4
					2,940.7	2,940.7	2,940.7	0.0
					2,945.1	2,945.1	2,945.1	0.0
					2,947.3	2,947.3	2,947.3	0.0
BU	158,650	2,002	7,356	11.4	2,949.5	2,949.5	2,949.5	0.0
BV	160,350	1,252	10,087	8.3	2,953.2	2,953.2	2,953.2	0.0
BW	162,150	971	7,894	10.6	2,956.3	2,956.3	2,956.3	0.0
BX	163,700	1,750	14,184	5.9	2,957.9	2,957.9	2,957.9	0.0
BY	165,550	1,850	7,621	11.0	2,960.2	2,960.2	2,960.2	0.0
BZ	167,300	1,608	12,297	6.8	2,962.7	2,962.7	2,962.7	0.0
CA	170,100	2,013	12,744	6.5	2,966.7	2,966.7	2,966.7	0.0
CB	172,400	1,280	12,883	6.5	2,969.8	2,969.8	2,970.3	0.5
CC	174,500	1,377	12,545	6.6	2,972.7	2,972.7	2,973.2	0.5
CD	178,000	2,506	20,757	4.0	2,977.6	2,977.6	2,978.1	0.5
CE	180,700	2,416	17,097	4.9	2,980.9	2,980.9	2,981.4	0.5
CF	183,600	2,775	19,317	4.4	2,984.0	2,984.0	2,984.3	0.3
CG	186,700	2,125	15,714	5.4	2,988.0	2,988.0	2,988.5	0.5
CH	191,400	730	9,788	8.6	2,993.7	2,993.7	2,994.2	0.5
CI	197,900	469	8,694	9.7	2,997.8	2,997.8	2,998.3	0.5
CJ	200,070	1,181	12,310	7.7	3,004.1	3,004.1	3,004.3	0.2

This is the Regulatory BFE that must be used!

<sup>1</sup>Feet above confluence with Flathead Lake

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLATHEAD COUNTY, MT  
AND INCORPORATED AREAS

FLOODWAY DATA

FLATHEAD RIVER

Example – Floodway Data Table

FLOODING SOURCE		FLOODWAY			1-PERCENT ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
Cross Section Stations correspond to Stations on FIRM/DFIRM	145,150	3,251	18,754	4.5	2,933.7	2,933.7	2,934.0	0.3
	147,050	2,925	15,369	5.4	2,935.5	2,935.5	2,935.8	0.3
	148,550	3,657	20,632	4.0	2,937.2	2,937.2	2,937.6	0.4
	151,050	3,931	9,143	9.1	2,940.7	2,940.7	2,940.7	0.0
	153,950	3,194	12,346	6.8	2,945.1	2,945.1	2,945.1	0.0
	156,550	2,604	18,187	4.6	2,947.3	2,947.3	2,947.3	0.0
	158,650	2,002	7,356	11.4	2,949.5	2,949.5	2,949.5	0.0
	160,350	1,252	10,087	8.3	2,953.2	2,953.2	2,953.2	0.0
	BW 162,150	971	7,894	10.6	2,956.3	2,956.3	2,956.3	0.0
	BX 163,700	1,750	14,184	5.9		.9	2,957.9	0.0
	BY 165,550	1,850	7,621	11.0		.2	2,960.2	0.0
	BZ 167,300	1,608	12,297	6.8		.7	2,962.7	0.0
			2,013	12,744	6.5		.7	2,966.7
		1,280	12,883	6.5		.8	2,970.3	0.5
		1,377	12,545	6.6		.7	2,973.2	0.5
		2,506	20,757	4.0		.6	2,978.1	0.5
		2,416	17,097	4.9		.9	2,981.4	0.5
		2,775	19,317	4.4		.0	2,984.3	0.3
		2,125	15,714	5.4		.0	2,988.5	0.5
		730	9,788	8.6		.7	2,994.2	0.5
CI	197,900	469	8,694	9.7		.8	2,998.3	0.5
CJ	200,070	1,181	12,310	7.7	3,004.1	3,004.1	3,004.3	0.2

<sup>1</sup>Feet above confluence with Flathead Lake

Floodway Data - Important data needed for determining floodway boundaries.

TABLE 6

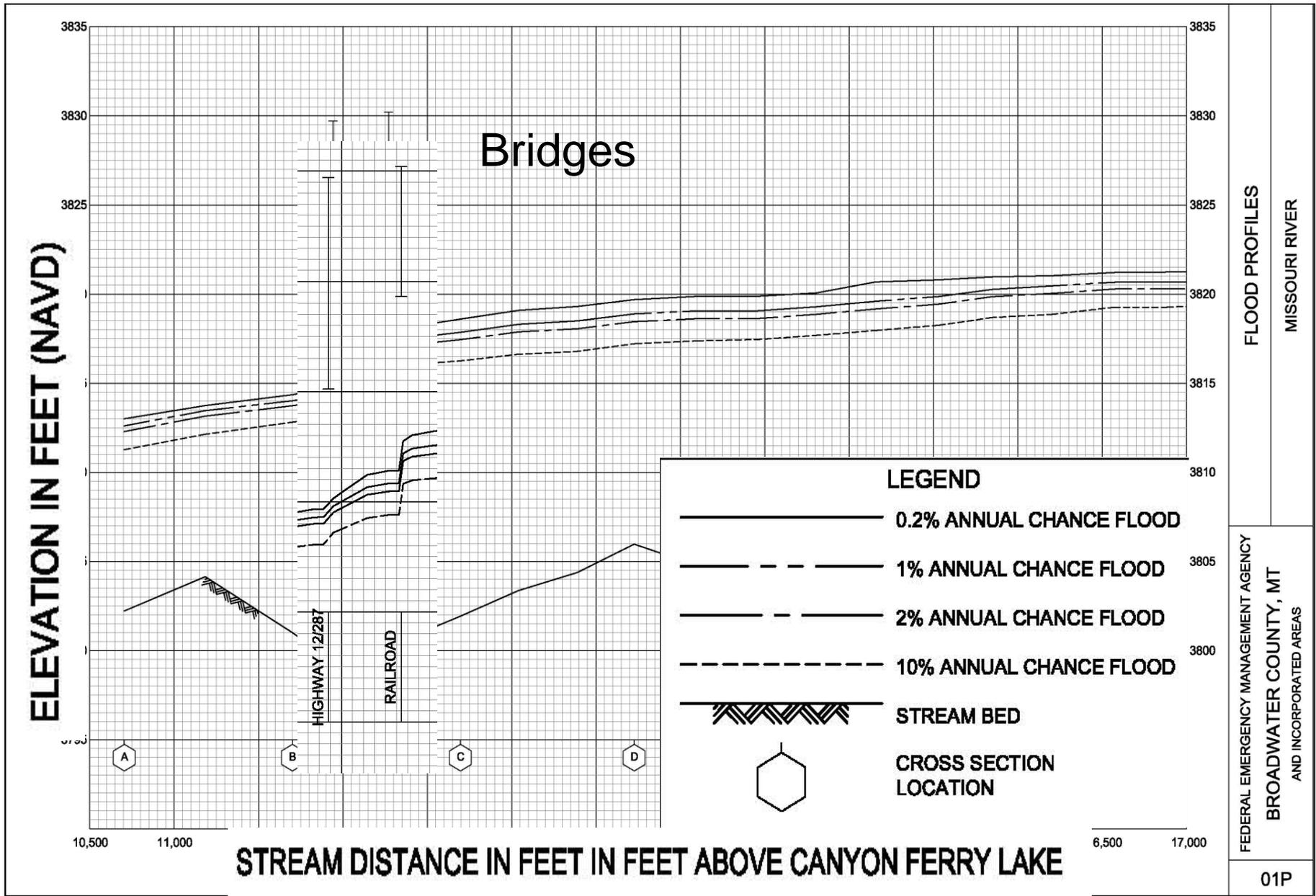
FEDERAL EMERGENCY MANAGEMENT AGENCY

FLATHEAD COUNTY, MT AND INCORPORATED AREAS

FLOODWAY DATA

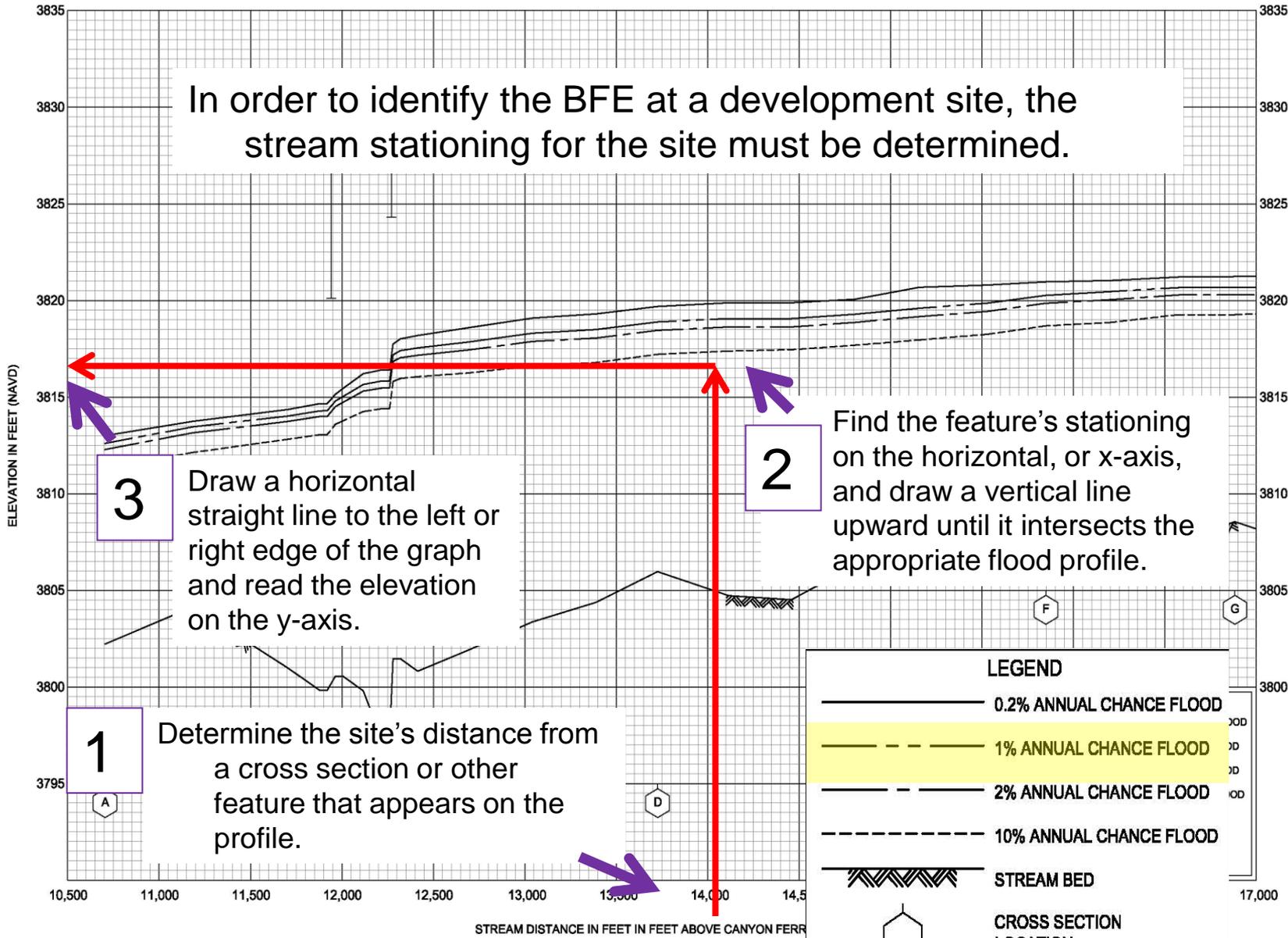
FLATHEAD RIVER

# Example – Floodway Data Table



**Example – Flood Profile**

In order to identify the BFE at a development site, the stream stationing for the site must be determined.



FLOOD PROFILES  
MISSOURI RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY  
BROADWATER COUNTY, MT  
AND INCORPORATED AREAS

01P

# Example – Flood Profile

# General Flood Insurance Rating Concepts

Build outside the floodplain and flood insurance is very cheap (until you experience a flood loss)

Build in the floodplain and elevate the “living” or “finished floor” several feet above the BFE and insurance will be relatively cheap – the higher you go the cheaper it gets.

Structures in floodplain with a finished or enclosed floor below BFE - premiums will be very expensive.

If flood openings are missing or not sufficient and/or machinery/utilities are below BFE insurance will cost more.

# Private Lender Determinations

Around 80% of all determinations are performed automatically using proprietary methods.

When USPS address cannot be found these automated determination methods may default to tax map parcel or even zip code.

A standard appeal process does not exist. Determination companies work for the lender and will only accept review requests from the lender.

# What Is The Elevation Certificate Used For?

The Elevation Certificate is an important administrative tool of the National Flood Insurance Program (NFIP).

Used by communities to verify and document building compliance with the community's floodplain management regulations.

Utilized to determine the proper flood insurance rate.

Used to support map amendments and revisions.

# Who Certifies Building Elevations?

In order to be rated properly for flood insurance, a State-licensed professional is required to certify the elevation information on the Elevation Certificate.

Surveyor

Engineer

Architect

# Who Needs An Elevation Certificate?

Anyone who will apply for insurance on a building that is located in or near a Special Flood Hazard Area (SFHA).

Anyone who is proposing to construct a new structure within a SFHA, or substantially improve an existing building within a SFHA.

Anyone who will apply for a LOMA, LOMR-F, CLOMA, or CLOMR-F.

# The FEMA Elevation Certificate

If the EC is incorrect, conflicting, or incomplete? The property owner gets the more conservative insurance rating (i.e. more expensive).

If the insurance company cannot accept the EC because of errors or inconsistency? The lender may “force place” insurance. Force place does not require an EC - however it is very expensive.

If the rating is wrong because of incomplete or incorrect EC data, the policy holder is ultimately held liable.

# The FEMA Elevation Certificate

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

## ELEVATION CERTIFICATE

IMPORTANT: Follow the instructions on pages 1-9.

OMB No. 1660-0008  
Expiration Date: July 31, 2015

SECTION A - PROPERTY INFORMATION		FOR INSURANCE COMPANY USE
A1. Building Owner's Name		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 (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)		
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)		
A5. Latitude/Longitude: Lat. _____ Long. _____	Horizontal Datum: <input type="checkbox"/> NAD 1927 <input 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 _____		
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) Number 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? <input type="checkbox"/> Yes <input type="checkbox"/> No		d) Engineered flood openings? <input type="checkbox"/> Yes <input type="checkbox"/> 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: <input 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 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 type="checkbox"/> No Designation Date: ____/____/____ <input type="checkbox"/> CBRS <input type="checkbox"/> OPA			

## SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on:  Construction Drawings\*  Building Under Construction\*  Finished Construction  
\*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations - Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO. Complete Items C2.a-h below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.  
Benchmark Utilized: \_\_\_\_\_ Vertical Datum: \_\_\_\_\_  
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) \_\_\_\_\_  feet  meters

b) Top of the next higher floor \_\_\_\_\_  feet  meters

c) Bottom of the lowest horizontal structural member (V Zones only) \_\_\_\_\_  feet  meters

d) Attached garage (top of slab) \_\_\_\_\_  feet  meters

e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments) \_\_\_\_\_  feet  meters

f) Lowest adjacent (finished) grade next to building (LAG) \_\_\_\_\_  feet  meters

g) Highest adjacent (finished) grade next to building (HAG) \_\_\_\_\_  feet  meters

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

## SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

Check here if comments are provided on back of form. Were latitude and longitude in Section A provided by a licensed land surveyor?  Yes  No

Check here if attachments.

Certifier's Name		License Number	
Title	Company Name		
Address	City	State	ZIP Code
Signature	Date	Telephone	

PLACE  
SEAL  
HERE

FEMA Form 086-0-33 (7/12)

See reverse side for continuation.

Replaces all previous editions.

## ELEVATION CERTIFICATE, page 2

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

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.	FOR INSURANCE COMPANY USE
City	Policy Number:
State	Company NAIC Number:
ZIP Code	

## SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION (CONTINUED)

Copy both sides of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner.  
Comments

Signature \_\_\_\_\_ Date \_\_\_\_\_

## 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 LOMRF request, complete Sections A, B, and C. For Items E1-E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.

E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).

a) Top of bottom floor (including basement, crawlspace, or enclosure) is \_\_\_\_\_  feet  meters  above or  below the HAG.

b) Top of bottom floor (including basement, crawlspace, or enclosure) is \_\_\_\_\_  feet  meters  above or  below the LAG.

E2. For Building Diagrams 6-9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 8-9 of Instructions),

the next higher floor (elevation C2.b in the diagrams) of the building is \_\_\_\_\_  feet  meters  above or  below the HAG.

E3. Attached garage (top of slab) is \_\_\_\_\_  feet  meters  above or  below the HAG.

E4. Top of platform of machinery and/or equipment servicing the building is \_\_\_\_\_  feet  meters  above or  below the HAG.

E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance?  Yes  No  Unknown. The local official must certify this information in Section G.

## SECTION F - PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION

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

Property Owner or Owner's Authorized Representative's Name \_\_\_\_\_

Address	City	State	ZIP Code
Signature	Date	Telephone	
Comments			

Check here if attachments.

## SECTION G - COMMUNITY INFORMATION (OPTIONAL)

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8-G10. In Puerto Rico only, enter meters.

G1.  The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)

G2.  A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.

G3.  The following information (Items G4-G9) is provided for community floodplain management purposes.

G4. Permit Number	G5. Date Permit Issued	G6. Date Certificate Of Compliance/Occupancy Issued
-------------------	------------------------	---

G7. This permit has been issued for:  New Construction  Substantial Improvement

G8. Elevation of as-built lowest floor (including basement) of the building: \_\_\_\_\_  feet  meters Datum \_\_\_\_\_

G9. BFE (or in Zone AO) depth of flooding at the building site: \_\_\_\_\_  feet  meters Datum \_\_\_\_\_

G10. Community's design flood elevation: \_\_\_\_\_  feet  meters Datum \_\_\_\_\_

Local Official's Name	Title
Community Name	Telephone
Signature	Date
Comments	

Check here if attachments.

FEMA Form 086-0-33 (7/12)

Replaces all previous editions.

# Elevation Certificate overview

Section A - General Property and Owner Information; some technical information about enclosures and lat/long coordinates with vertical datum

## Section B

FIRM panel information

## Section C

Documents elevations for any A zones *with* a BFE

## Section D

Surveyor, Engineer, or Architect Certification, and Comments

# Elevation Certificate overview

## Section E

Documents elevations for AO-Zones and A-Zones ***without***  
BFE

## Section F

Property Owner/Owner's representative Certification

## Section G

Community information (optional)

# Elevation Certificate

## Section A

Use the most recent form.

[www.fema.gov](http://www.fema.gov)

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

### ELEVATION CERTIFICATE

**IMPORTANT:** Follow the instructions on pages 1-9.

OMB No. 1660-0008  
Expiration Date: July 31, 2015

#### SECTION A - PROPERTY INFORMATION

FOR INSURANCE COMPANY USE

A1. Building Owner's Name

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 (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)

**This is especially important if the property does not have an address.**

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):

a) Square footage of crawlspace or enclosure(s) \_\_\_\_\_ sq ft

b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade \_\_\_\_\_

c) Total net area of flood openings in A8.b \_\_\_\_\_ sq in

d) Engineered flood openings?  Yes  No

A9. For a building with an attached garage:

a) Square footage of attached garage \_\_\_\_\_ sq ft

b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade \_\_\_\_\_

c) Total net area of flood openings in A9.b \_\_\_\_\_ sq in

d) Engineered flood openings?  Yes  No

# Elevation Certificate

## Section A

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

### ELEVATION CERTIFICATE

**IMPORTANT:** Follow the instructions on pages 1-9.

OMB No. 1660-0008  
Expiration Date: July 31, 2015

SECTION A - PROPERTY INFORMATION		FOR INSURANCE COMPANY USE
A1. Building Owner's Name		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

**Detached garages are considered accessory structures.**

- 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.

**Lat/Long must be accurate to 66 feet. Google Earth can be used. The horizontal datum must be identified and documented.**

b) No. of permanent flood openings in the crawlspace or enclosure (c) within 4.0 feet above adjacent grade

b) Number of permanent flood openings in the attached garage within 4.0 feet above adjacent grade

**Photographs are required for insurance if it is a post FIRM structure.**

d) Engineered flood openings?  Yes  No

d) Engineered flood openings?  Yes  No

# Elevation Certificate

## Section A

ELEVATION CERTIFICATE, page 3			BUILDING PHOTOGRAPHS 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.			Policy Number:	
City	State	ZIP Code	Company NAIC Number:	
<p>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.</p>				
<p>Front view of building to be insured</p>		<p>Rear view of building to be insured</p>		
<p>Date the photograph was taken</p>		<p>Date the photograph was taken</p>		

FEMA Form 086-0-33 (7/12) Replaces all previous editions.

A6: Additional forms for attaching photographs are provided with the EC.

- 3"x3" color photographs
- Digital format is acceptable
- photographs must show front and rear of building
- If the building is split- or multi-level, at least 2 additional photographs are needed

# Elevation Certificate

## Section A

<p>Right side view of the building to be insured</p> <p>Date the photograph was taken</p>	<p>Left side view of the building to be insured</p> <p>Date the photograph was taken</p>
<p>Right Side View – Date of Photograph:</p>	<p>Left Side View – Date of Photograph:</p>

A6: Additional forms for attaching photographs are provided with the EC

- Include the date the photograph was taken
- Must be taken within 90 days from the date of certification
- Photographs should capture key elements such as flood openings
- Helpful to show the lowest level of the building that is above grade

# Elevation Certificate

## Section A

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

### ELEVATION CERTIFICATE

**IMPORTANT:** Follow the instructions on pages 1–9.

OMB No. 1660-0008 Expiration Date: July 31, 2015
---

SECTION A – PROPERTY INFORMATION	FOR INSURANCE COMPANY USE
A1. Building Owner's Name	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 (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)

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 \_\_\_\_\_

**A 7: Building Diagram Number is required for insurance rating**

b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade \_\_\_\_\_

c) Total net area of flood openings in A8.b \_\_\_\_\_ sq in

d) Engineered flood openings?  Yes  No

b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade \_\_\_\_\_

c) Total net area of flood openings in A9.b \_\_\_\_\_ sq in

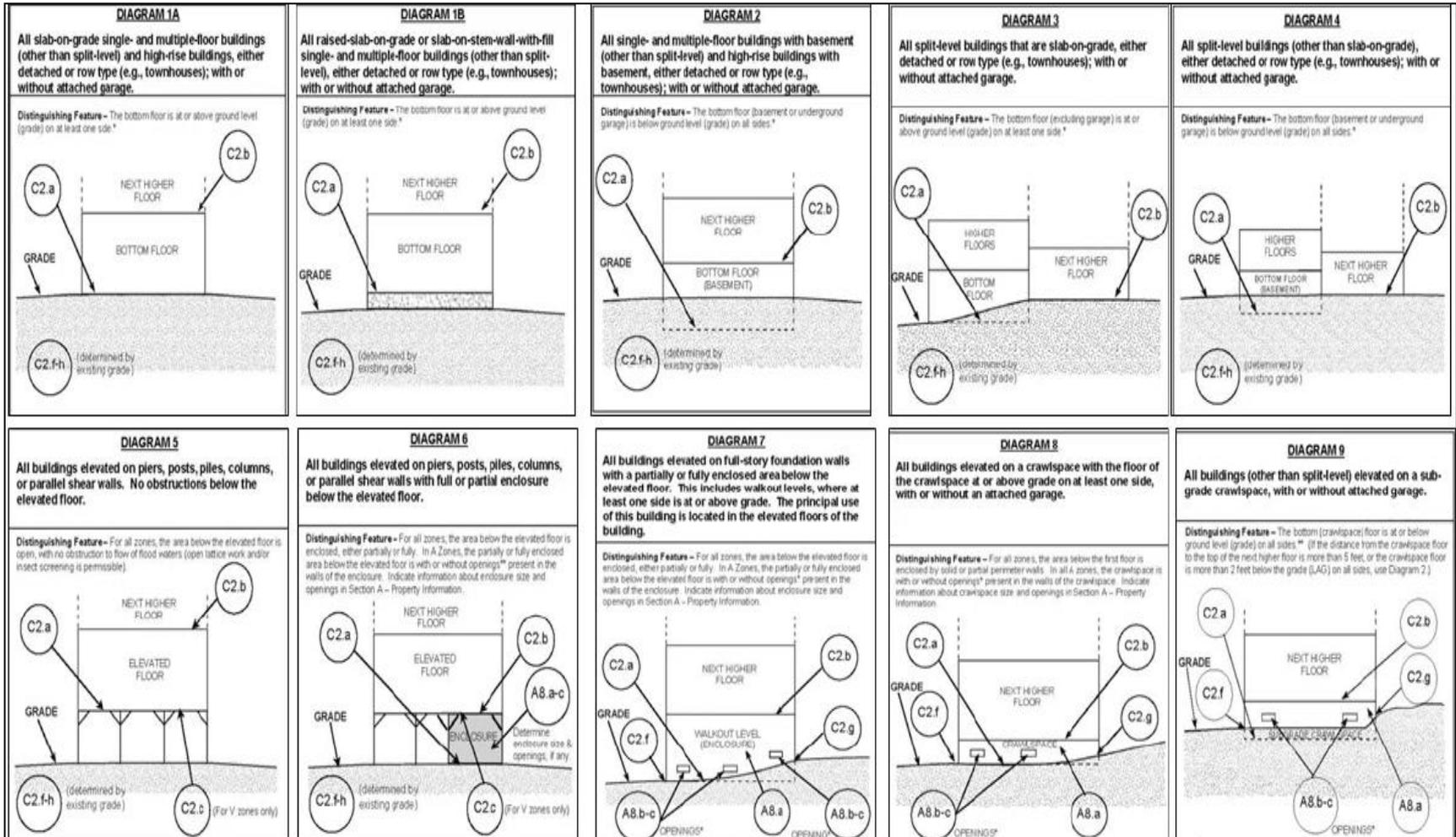
d) Engineered flood openings?  Yes  No



# Elevation Certificate

## Section A

### A7: Building Diagram Numbers



# **Elevation Certificate**

## **Section A**

### A7: Building Diagram Numbers

Diagrams 1-4: Non-elevated buildings; slab-on-grade or full/partial basement

Diagrams 5-8: Elevated buildings; crawlspace, elevated on piers/posts

Diagram 9: Subgrade crawlspace; if subgrade crawlspace does not meet 2/5 rule, use Diagram 2

# Elevation Certificate

## Section A

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

### ELEVATION CERTIFICATE

**IMPORTANT:** Follow the instructions on pages 1-9.

OMB No. 1660-0008  
Expiration Date: July 31, 2015

SECTION A - PROPERTY INFORMATION		FOR INSURANCE COMPANY USE
A1. Building Owner's Name		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 (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)

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

A5. Latitude/Longitude: Lat. \_\_\_\_\_ Long. \_\_\_\_\_ Horizontal Datum:  NAD 1927  NAD 1983

**Provide square footage and measurements of the crawl space.**

A8. For a building with a crawlspace or enclosure(s):

a) Square footage of crawlspace or enclosure(s) \_\_\_\_\_ sq ft

b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 feet above adjacent grade \_\_\_\_\_

A9. For a building with an attached garage:

a) Square footage of attached garage \_\_\_\_\_ sq ft

b) Number of permanent flood openings in the attached garage within 1.0 feet above adjacent grade \_\_\_\_\_

**Provide the number of permanent flood openings (openings that allow the free passage of water in both directions without human intervention).**

**Enter "0" if there are no permanent openings OR if openings are not within 1.0 feet above grade.**

# Elevation Certificate

## Section A

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

### ELEVATION CERTIFICATE

**IMPORTANT:** Follow the instructions on pages 1–9.

OMB No. 1660-0008  
Expiration Date: July 31, 2015

SECTION A – PROPERTY INFORMATION		FOR INSURANCE COMPANY USE
A1. Building Owner's Name		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 (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)

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

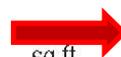
A5. Latitude/Longitude: Lat. \_\_\_\_\_ Long. \_\_\_\_\_ Horizontal Datum:  NAD 1927  NAD 1983

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):

a) Square footage of crawlspace or enclosure(s) \_\_\_\_\_ sq ft



A9. For a building with an attached garage:

a) Square footage of attached garage \_\_\_\_\_ sq ft

**Provide square footage and measurements, along with any permanent opening information.**

# FEMA Technical Bulletin 1-08



## Openings in Foundation Walls and Walls of Enclosures

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

Technical Bulletin 1 / August 2008



## Openings Requirements:

- Located below BFE
- Two openings on exterior walls
- Automatic entry/exit of floodwaters
- 1 sq in per 1sq ft
- Bottom of opening can not be higher than one foot from *ADJACENT* grade

## Engineered Openings:

- Specifically designed and certified
- Engineered opening certificate from state building is located in OR  
ICC-ES evaluation report (applies to commercially approved flood vents)

## Non-Engineered Openings

- Must meet openings requirements above

# Example Engineered Openings Certificate

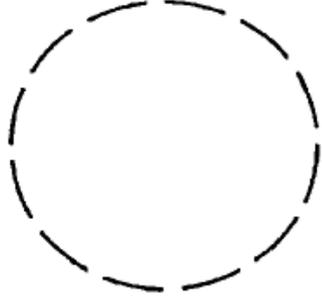
_____	
Project Name	
I, _____ do hereby certify that the opening(s) designed <b>for installation</b> in the aforementioned building will allow for the automatic equalizing of hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater during floods up to and including the base ( 100-year) flood.	
_____	_____
Signature	Date
_____	
Title	
_____	_____
Type of Licence	Licence Number
_____	
Address	
	
PROFESSIONAL SEAL	

Figure 4. Example of Openings Certificate

# Elevation Certificate

## Section B

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: <input 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 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 type="checkbox"/> No Designation Date: ____/____/____ <input type="checkbox"/> CBRS <input type="checkbox"/> OPA					

If a LOMA or LOMR-F has been issued, provide letter, date, and case number in Comments area of Section D (Surveyors) or comment area of Section G (community official).

For a newly incorporated community or annexed area: enter annexed community information in B1-B6, and the actual FIRM data for B4, B5, B7-B9.

NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

CITY OF  
**KALISPELL, MONTANA**  
FLATHEAD COUNTY

ONLY PANEL PRINTED

COMMUNITY-PANEL NUMBER  
**300025 0005 C**

MAP REVISED:  
SEPTEMBER 30, 1992



Federal Emergency Management Agency

Single Community

NATIONAL FLOOD INSURANCE PROGRAM

**B1. NFIP Community Name**  
**B1. NFIP Community Number**

**FLATHEAD COUNTY,**  
MONTANA  
(UNINCORPORATED AREAS)

PANEL 1185 OF 3425  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

**B4. Map Number**  
**B4. Panel Number**

COMMUNITY-PANEL NUMBER  
**300023 1185 C**

EFFECTIVE DATE:  
SEPTEMBER 5, 1984



Federal Emergency Management Agency

Single Community

PANEL 0425G

**FIRM**  
FLOOD INSURANCE RATE MAP  
FLATHEAD COUNTY,  
MONTANA  
AND INCORPORATED AREAS

PANEL 425 OF 3525  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
FLATHEAD COUNTY	300023	0425	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



**MAP NUMBER**  
**30029C0425G**

EFFECTIVE DATE  
SEPTEMBER 28, 2007

Federal Emergency Management Agency

Countywide

**B6. Firm Index Date**

NATIONAL FLOOD INSURANCE PROGRAM

**FIRM  
FLOOD INSURANCE RATE MAP**

**FLATHEAD  
COUNTY,  
MONTANA**  
(UNINCORPORATED AREAS)

**MAP INDEX**

PANELS PRINTED: 450, 725, 730, 740, 745, 775, 845, 865, 1050, 1055, 1060, 1065, 1070, 1080, 1090, 1095, 1110, 1115, 1120, 1135, 1140, 1145, 1155, 1180, 1185, 1195, 1400, 1405, 1410, 1415, 1420, 1430, 1435, 1440, 1445, 1590, 1595, 1625, 1800, 1805, 1810, 1815, 1820, 1830, 1835, 1840, 1845, 1865, 1975, 2000, 2250, 2275, 2280, 2285, 2290, 2305, 2310, 2315, 2320, 2330, 2340, 2725

**COMMUNITY-PANEL NUMBERS  
300023 0001-3425**

**MAP REVISED:  
SEPTEMBER 30, 1992**



Federal Emergency Management Agency

MAP INDEX

**FIRM  
FLOOD INSURANCE RATE MAP  
FLATHEAD COUNTY,  
MONTANA  
AND INCORPORATED AREAS**  
(SEE LISTING OF COMMUNITIES TABLE)

**MAP INDEX**

**SHEET 1 OF 2**

PANELS PRINTED: 425, 450, 725, 730, 735, 740, 745, 775, 825, 845, 850, 865, 1050, 1055, 1060, 1065, 1070, 1080, 1090, 1095, 1110, 1115, 1120, 1130, 1135, 1140, 1145, 1155, 1180, 1185, 1195, 1370, 1380, 1385, 1390, 1395, 1405, 1410, 1415, 1420, 1430, 1435, 1440, 1445, 1590, 1595, 1625

(SEE SHEET 2 FOR ADDITIONAL PANELS  
PRINTED)



**MAP NUMBER  
30029CIND1A**

**EFFECTIVE DATE  
SEPTEMBER 28, 2007**

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

CITY OF  
**KALISPELL, MONTANA**  
FLATHEAD COUNTY

ONLY PANEL PRINTED

COMMUNITY-PANEL NUMBER  
300025 0005 C

MAP REVISED:  
SEPTEMBER 30, 1992



Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

**FLATHEAD COUNTY,**  
**MONTANA**  
(UNINCORPORATED AREAS)

PANEL 1185 OF 3425  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER  
300023 1185 C

EFFECTIVE DATE:  
SEPTEMBER 5, 1984



Federal Emergency Management Agency

PANEL 0425G

**FIRM**  
FLOOD INSURANCE RATE MAP  
**FLATHEAD COUNTY,**  
**MONTANA**  
AND INCORPORATED AREAS

PANEL 425 OF 3525

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
FLATHEAD COUNTY	300023	0425	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



Federal Emergency Management Agency

MAP NUMBER  
30029C0425G

EFFECTIVE DATE  
SEPTEMBER 28, 2007

B7. Firm Panel Effective or Revised Date

# How To Find A FIRM Panel

- The Map Service Center Website (MSC)
  - [www.msc.fema.gov](http://www.msc.fema.gov)
- Google Earth and the National Flood Hazard Layer
- FEMA Mapping Information Platform
  - [www.hazards.fema.gov](http://www.hazards.fema.gov)
- Need help: 1-877-FEMA-MAP

# Elevation Certificate

## Section B

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)
<div style="border: 2px solid red; padding: 5px;">           B10. B8. Use the flood zone that the actual structure is located within.         </div>					
<div style="border: 2px solid red; padding: 5px;">           B9: Base Flood Elevation: BFE - Use floodway data table, or FIS profiles to obtain BFE at upstream edge of structure         </div>					

In Approximate A Zones, developments >5 acres or 50 acres requires the BFE to be determined by applicant through engineering analysis. BFE's from other sources must be acknowledged by the Community and they must complete comments section or attach separate paper accepting the estimated BFE. If no BFEs available, enter N/A and complete Section E

# Elevation Certificate

## Section B

### 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)

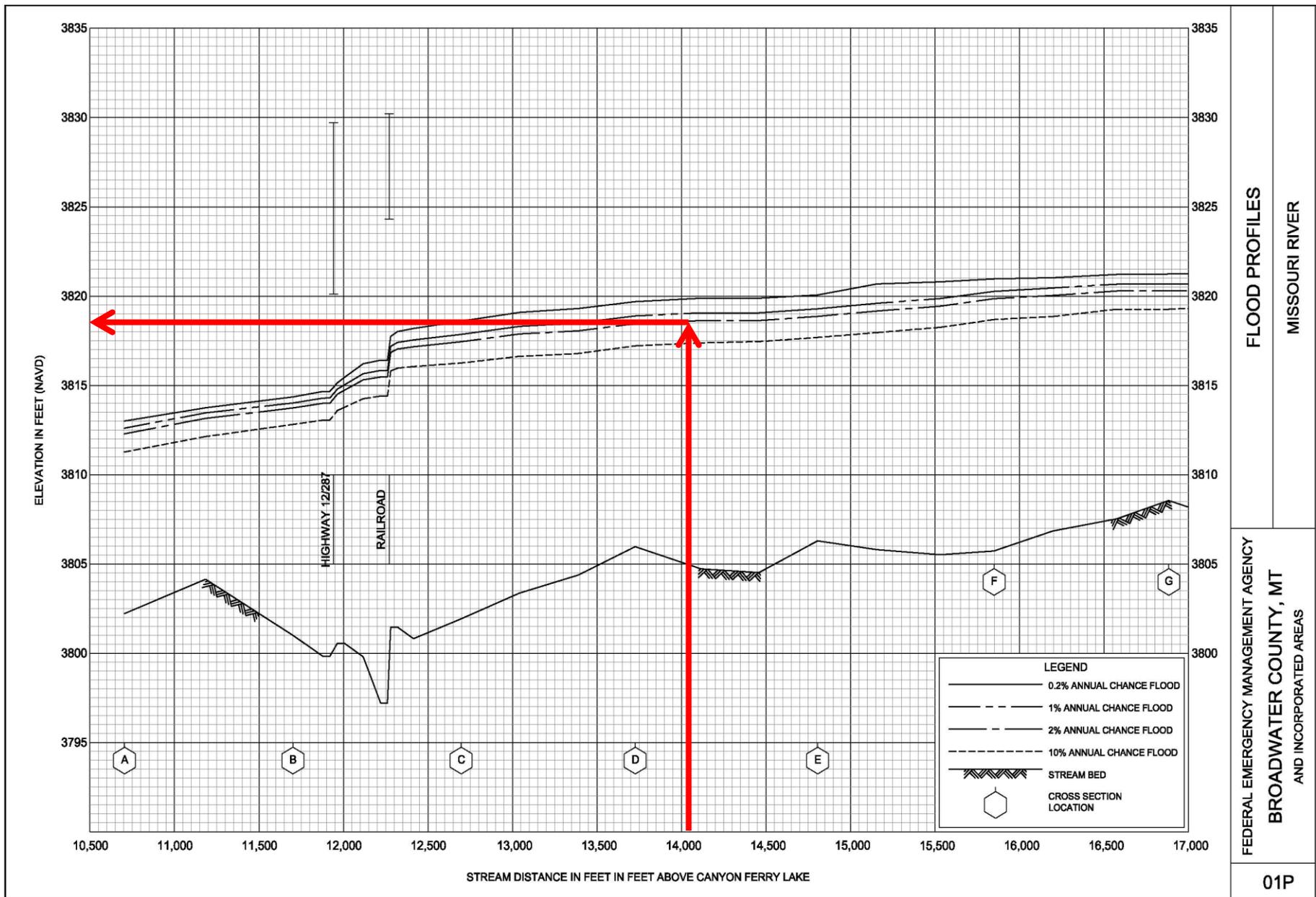
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9:

**B10: Source of BFE - describe and document. (FIS, Approximate, etc.)**

B11. Indicate elevation datum used for BFE in Item B9:  NGVD 1929  NAVD 1988  Other/Source: \_\_\_\_\_

**B11: Datum - IF EC is being used for insurance rating: Must be in same datum as Section C. The BFE datum is REQUIRED. Example: datum from FIRM is 1929, it is preferred that Section C be reported in 1929.**

In Approximate A Zones, developments >5 acres or 50 acres requires the BFE to be determined by applicant through engineering analysis. BFE's from other sources must be acknowledged by the Community and they must complete comments section or attach separate paper accepting the estimated BFE. If no BFEs are available, enter N/A and complete Section E.



# Example – Flood Profile

# **Elevation Certificate**

## **Section C**

Complete this section if a BFE is provided on the FIRM maps or if a BFE was developed from other sources.

Note: Use FIS profiles, summary of stillwater table or floodway data table to develop BFE at upstream edge of structure.

The surveyor should try to gain access to the crawl space to shoot the elevation of the crawl space floor.

If access to the crawl space cannot be gained: Use a yardstick or tape measure to measure the floor height to the “next higher floor,” then subtract the crawl space height from the elevation of the “next higher floor.”

# **Elevation Certificate**

## **Section C**

Ask the property owner if they have documentation or know the height from the crawl space floor to the next higher floor. (Try to verify this by looking inside the crawl space through any openings or vents.)

Contact the local floodplain administrator and see if there may be documentation of the elevation of the crawl space floor as part of the previously issued permit for the building.

In all cases, provide the elevation in the comments area and a brief description of how the elevation was obtained.

# Elevation Certificate

## Section C

C1: Building elevations are based on: Construction Drawings, Building Under Construction elevations, and/or Finished Construction Drawings.

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: Survey required! Document; the benchmark utilized, vertical datum, and any conversion method used. Provide the Permanent Identifier (PID) or other unique identifier assigned to the benchmark. (NGS, OPUS, CORS, or Real-Time Network)

a) Top of bottom floor (including basement, crawlspace, or enclosure floor) \_\_\_\_\_ . \_\_\_\_\_  feet  meters

All elevations for the certificate, including elevations for Items C2 a-h, must use the same datum that the BFE is referenced to.

b) Finished garage (top of slab) \_\_\_\_\_ . \_\_\_\_\_  feet  meters

C2 a-d: building elevations refer back to the building diagram number used in Item A7.

c) Lowest adjacent finished grade next to building (LAFG) \_\_\_\_\_ . \_\_\_\_\_  feet  meters

g) Highest adjacent (finished) grade next to building (HAG) \_\_\_\_\_ . \_\_\_\_\_  feet  meters

h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support \_\_\_\_\_ . \_\_\_\_\_  feet  meters

# Elevation Certificate

## Section C

### 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: \_\_\_\_\_ Vertical Datum: \_\_\_\_\_

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.

**C2(d): Record the elevation for attached garages only at top of slab. An attached garage means that the garage is an adjacent structure, not one underneath the residence, or a separate structure.**

d) Attached garage (top of slab) \_\_\_\_\_ . \_\_\_\_\_  feet  meters

e) Lowest elevation of machinery or equipment servicing the building \_\_\_\_\_ . \_\_\_\_\_  feet  meters

**C2(e): Machinery and equipment servicing the building located in an attached garage, enclosure, or on a open utility platform. Includes furnaces, heat pumps, air conditioners, ductworks, and sump pumps.**

structural support

# Elevation Certificate

## Section C

### 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: \_\_\_\_\_ Vertical Datum: \_\_\_\_\_

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) \_\_\_\_\_ . \_\_\_\_\_  feet  meters

**C2f: Lowest adjacent (finished) grade next to bldg (LAG)  
Ground, sidewalk, patio slab, ATTACHED GARAGE, etc.**

**C2g: Highest adjacent (finished) grade next to bldg (HAG). Ground,  
sidewalk, patio slab, ATTACHED GARAGE, etc.**

f) Lowest adjacent (finished) grade next to building (LAG) \_\_\_\_\_ . \_\_\_\_\_  feet  meters

g) Highest adjacent (finished) grade next to building (HAG) \_\_\_\_\_ . \_\_\_\_\_  feet  meters

h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support \_\_\_\_\_ . \_\_\_\_\_  feet  meters

**C2h: Lowest adjacent grade at lowest elevation of deck or stairs, including structural support**

# Elevation Certificate

## Section D

### SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

- Check here if comments are provided on back  
 Check here if attachments.

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

Certifier's Name			
Title			
Address	City	State	ZIP Code
Signature	Date	Telephone	

**D: Latitude and Longitude verification**

**Official Stamped Certification is required.**

FEMA Form 086-0-33 (7/12)

See reverse side for continuation.

Replaces all previous editions.

ELEVATION CERTIFICATE

**D: Use the Comments area to provide datum, elevation, openings, or other relevant information not specified on the form.**

City	State	ZIP Code	Company NAIC Number:
------	-------	----------	----------------------

### SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION (CONTINUED)

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

Comments

Signature

Date

# Elevation Certificate

## Section E

### 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.

**E: For Zones AO and Zone A without BFE, a survey is not required for the EC to be used for insurance rating.**

b) Top of bottom floor (including basement, crawlspace, or enclosure) is \_\_\_\_ . \_\_\_\_  feet  meters  above or  below the LAG.

E2. For Building Diagrams 6–9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 8–9 of Instructions),

the next higher floor (elevation C2 b in the diagram) of the building is \_\_\_\_ . \_\_\_\_  feet  meters  above or  below the HAG.

**E: Enter measurements to nearest tenth of foot.**

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.

**E: Provide comments in Section F if based on the “natural grade”**

# Elevation Certificate

## Section F

### 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.

Applies when Section E is completed.

The address entered in this section must be the mailing address of the property owner or property owner’s representative who provided the information on the certificate.

# Elevation Certificate

## Section G

G1: Community officials can transfer information from a previously certified document.

- 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–G9) is provided for community floodplain management purposes.

G2: An authorized community official who completes Sections C or E must complete this section.

G3: An authorized community official may complete the form for informational purposes only.

Community Name

Telephone

Signature

Date

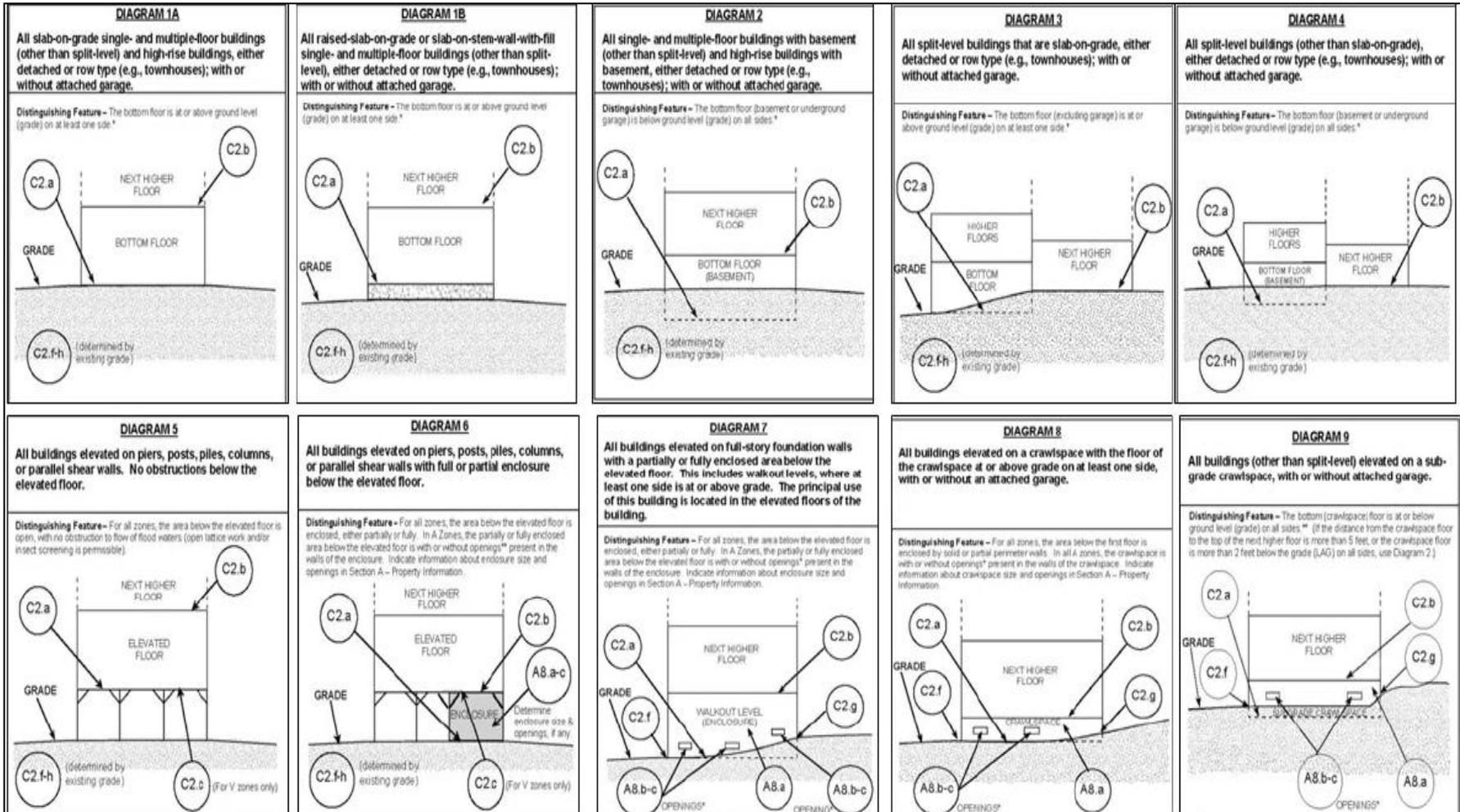
Comments

Check here if attachments.

# Elevation Certificate

## Section A

### A7: Building Diagram Numbers

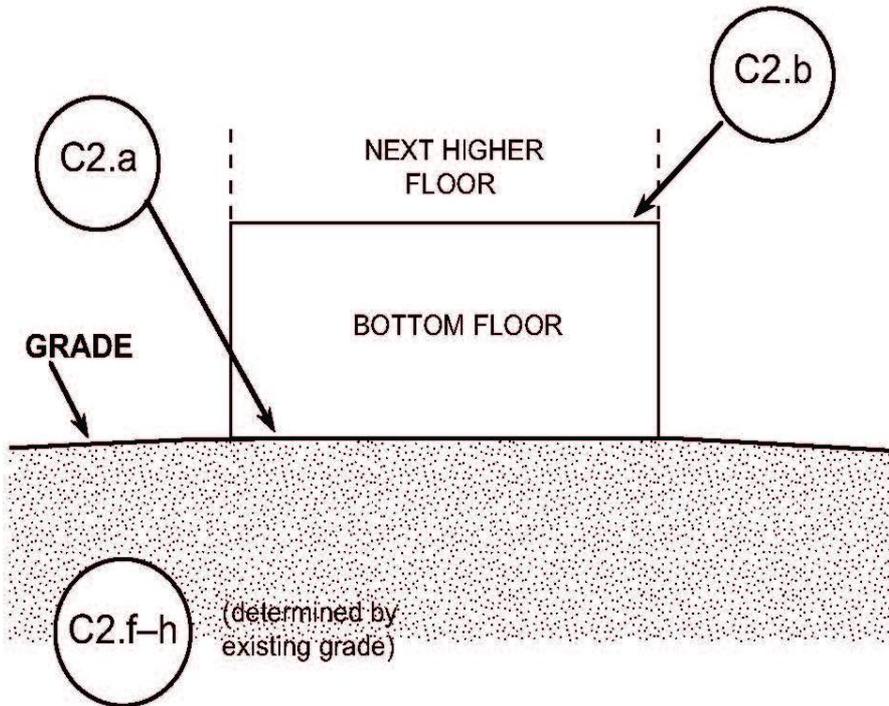


# Elevation Certificate Building Diagrams

**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 1 side.\*



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

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

# Elevation Certificate Building Diagrams

## Diagram 1A



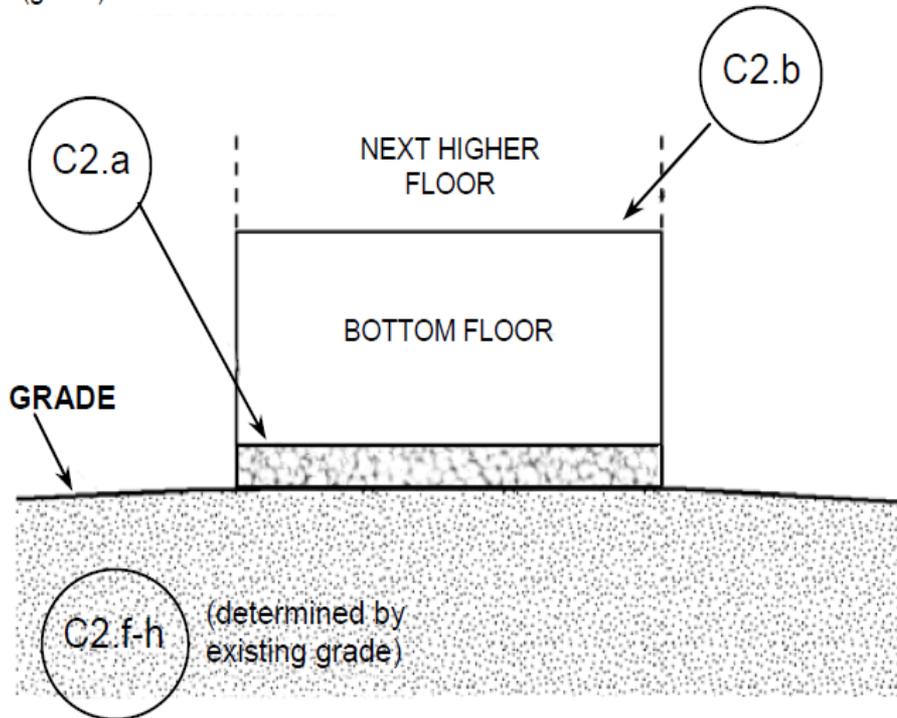
Slab-on-grade, one-story building with attached garage

# Elevation Certificate Building Diagrams

**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.\*



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

The bottom floor is at or above the ground level (grade) on at least one side.

# Elevation Certificate Building Diagrams

## Diagram 1B



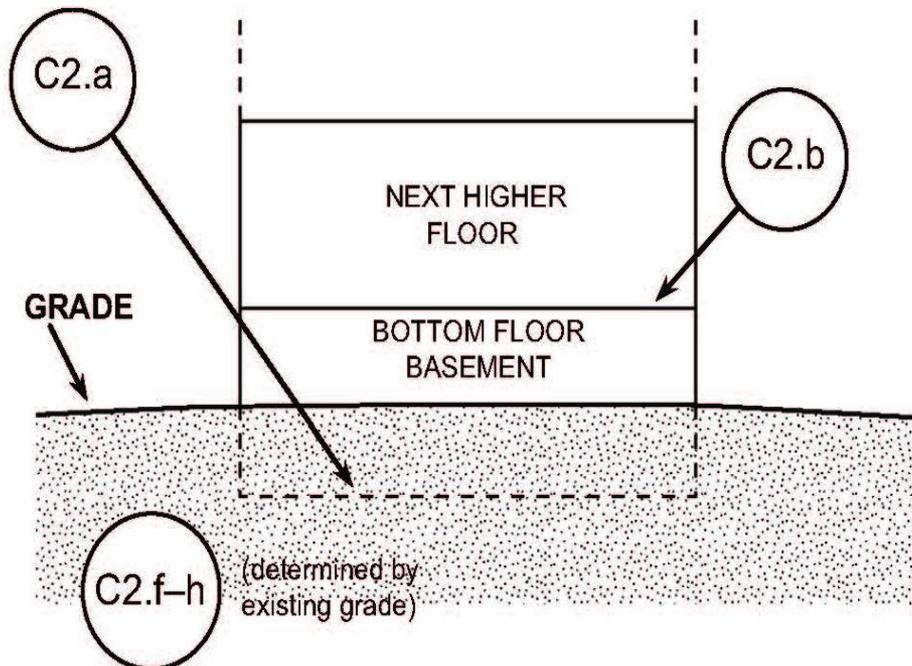
Elevated slab on back-filled stemwall

# Elevation Certificate Building Diagrams

**DIAGRAM 2**

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.\*

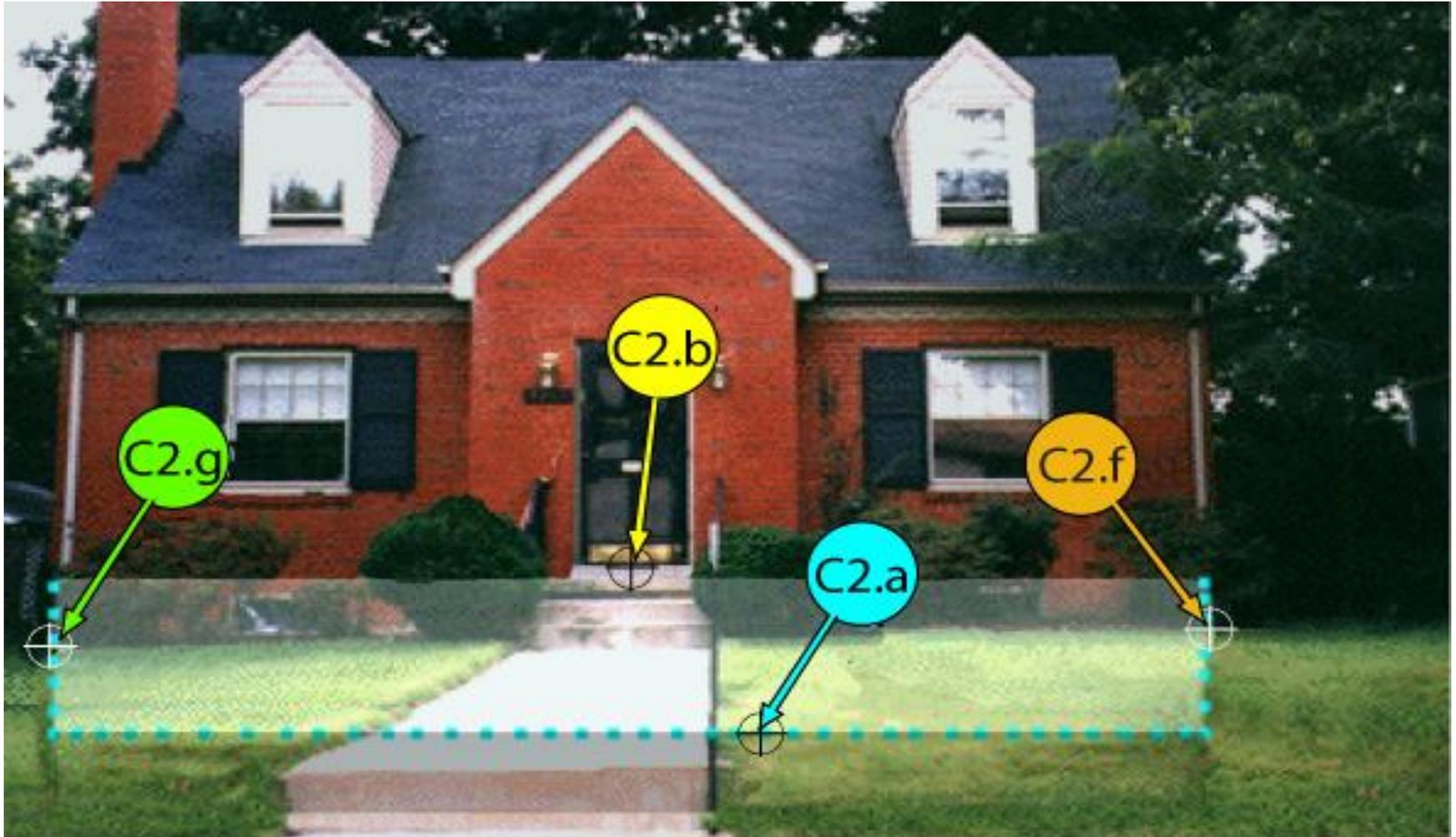


All single- and multiple-floor buildings with basement (other than split level) and high rise buildings with basement, either detached or row type (e.g., townhouses); with or without attached garage.

The bottom floor (basement or underground garage) is below ground level (grade) on all sides. Buildings constructed above crawl spaces that are below grade on all sides should also use this diagram.

# Elevation Certificate Building Diagrams

## Diagram 2



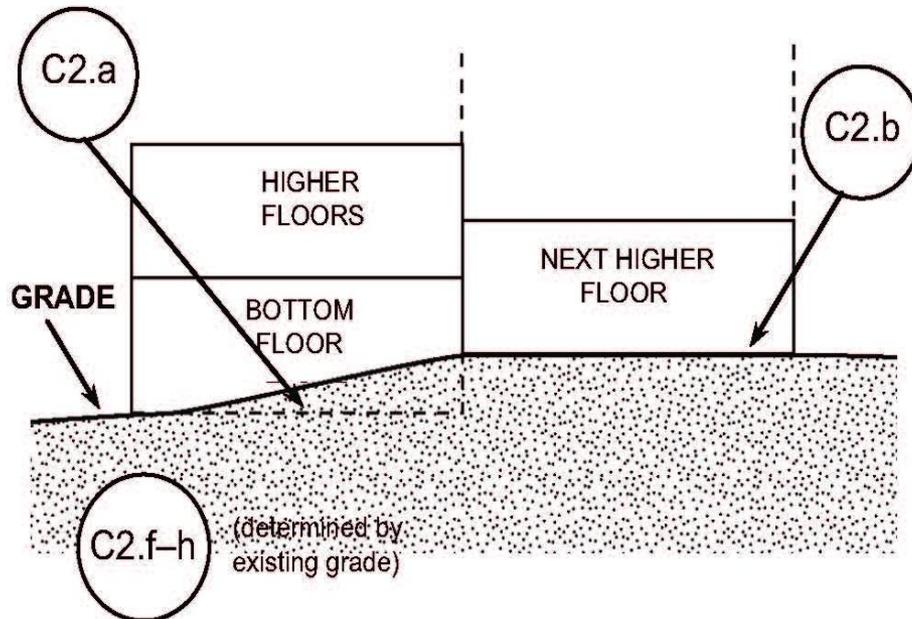
Multiple-floor building with basement, w/o attached garage

# Elevation Certificate Building Diagrams

## DIAGRAM 3

All split-level buildings that are slab-on-grade, either detached or row type (e.g., townhouses); with or without attached garage.

**Distinguishing Feature** – The bottom floor (excluding garage) is at or above ground level (grade) on at least 1 side.\*



All split-level buildings that are slab-on-grade, either detached or row type (e.g., townhouses); with or without attached garage.

The bottom floor (excluding garage) is at or above the ground level (grade) on at least one side.

# Elevation Certificate Building Diagrams

## Diagram 3



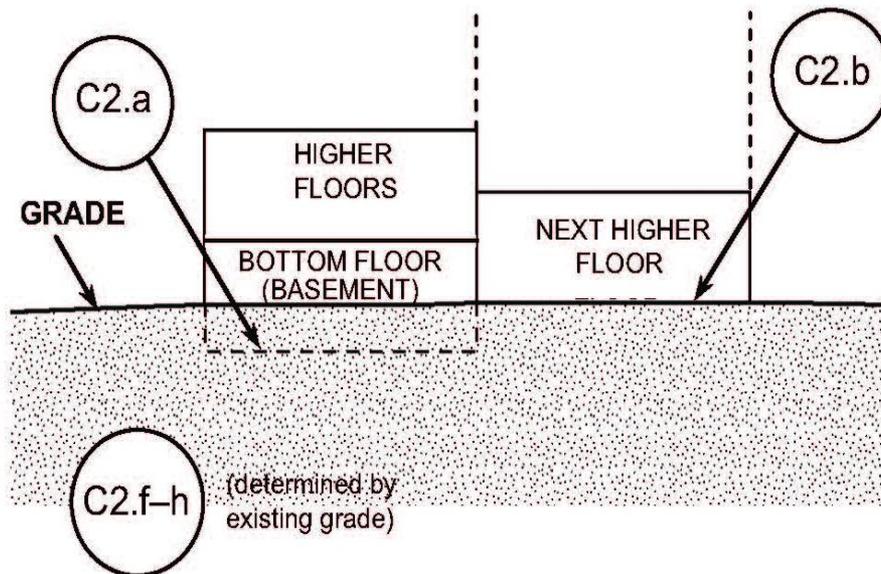
Slab-on-grade, split-level building w/o attached garage

# Elevation Certificate Building Diagrams

## DIAGRAM 4

All split-level buildings (other than slab-on-grade), 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.\*

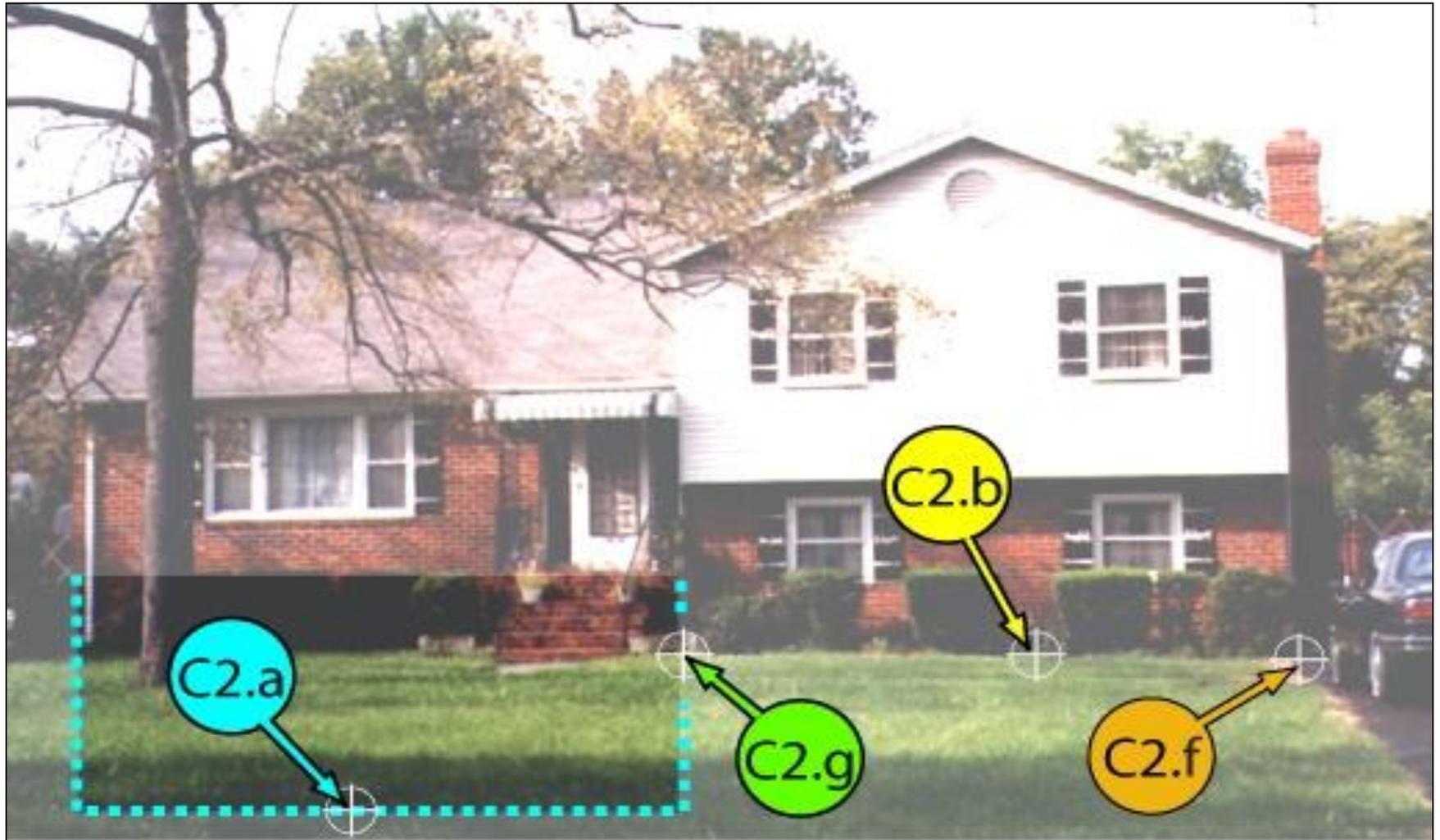


All split-level buildings (other than slab-on-grade), either detached or row type (e.g., townhouses); with or without attached garage.

The bottom floor (basement or underground garage) is below ground level (grade) on all sides. **Buildings constructed above crawl spaces that are below grade on all sides should also use this diagram.**

# Elevation Certificate Building Diagrams

## Diagram 4



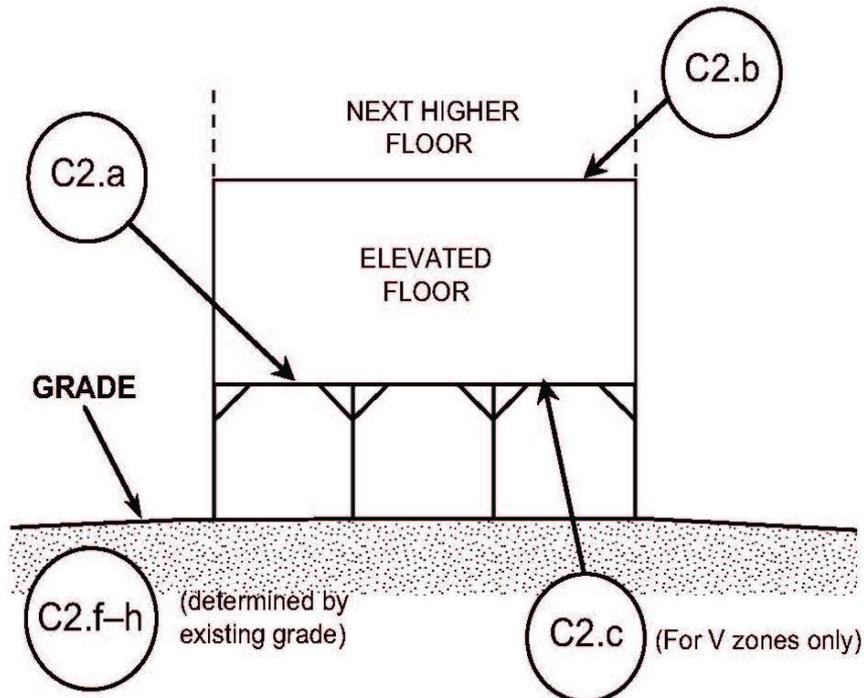
Split-level building w/o attached garage

# Elevation Certificate Building Diagrams

**DIAGRAM 5**

All buildings elevated on piers, posts, piles, columns, or parallel shear walls. No obstructions below the elevated floor.

**Distinguishing Feature** – For all zones, the area below the elevated floor is open, with no obstruction to flow of floodwaters (open lattice work and/or insect screening is permissible).

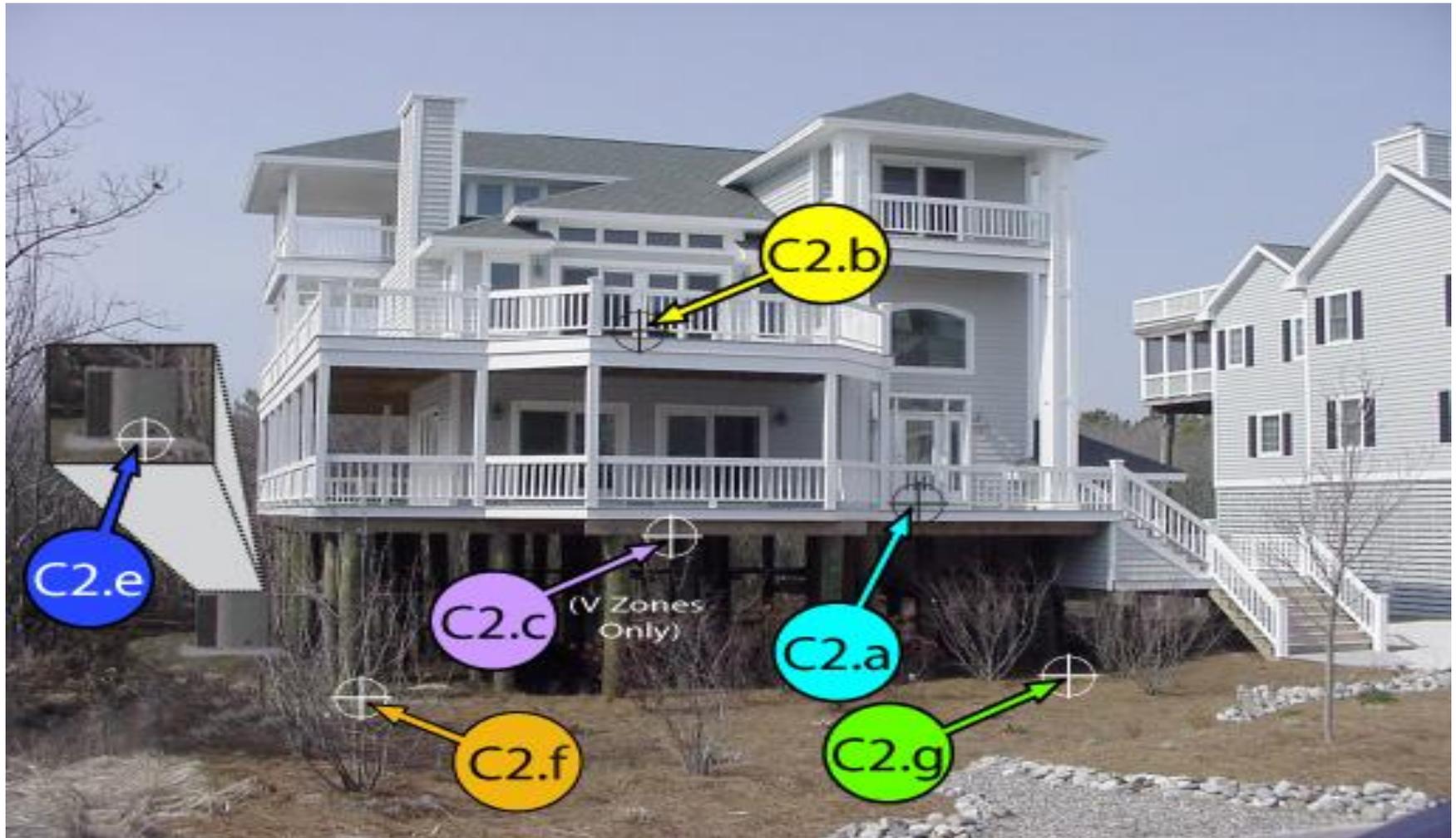


All buildings elevated on piers, posts, piles, columns, or parallel shear walls. No obstructions below the elevated floor.

For all zones, the area below the elevated floor is open, with no obstruction to flow of flood water (open lattice work and/or insect screening is permissible).

# Elevation Certificate Building Diagrams

## Diagram 4



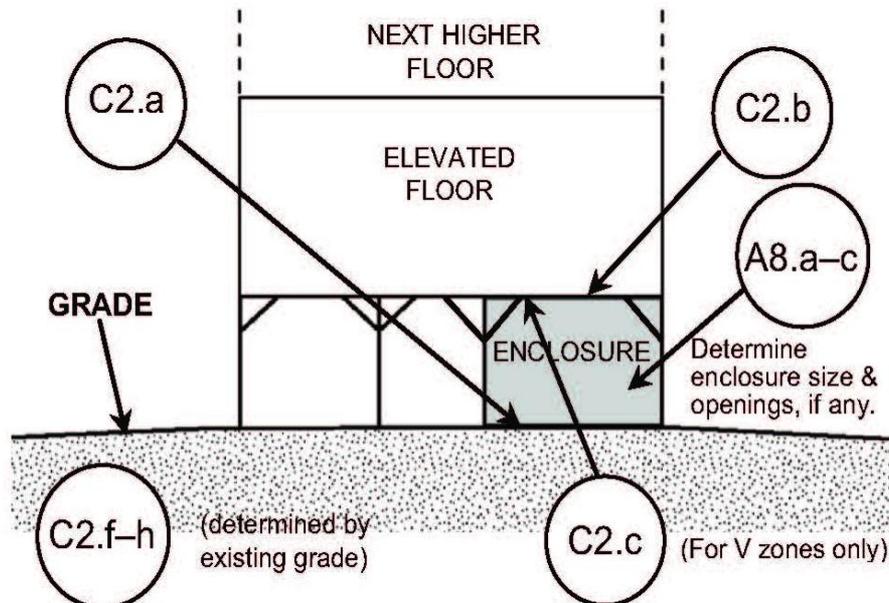
Multi-level building elevated on piles, no obstructions below the elevated floor

# Elevation Certificate Building Diagrams

**DIAGRAM 6**

All buildings elevated on piers, posts, piles, columns, or parallel shear walls with full or partial enclosure below the elevated floor.

**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.



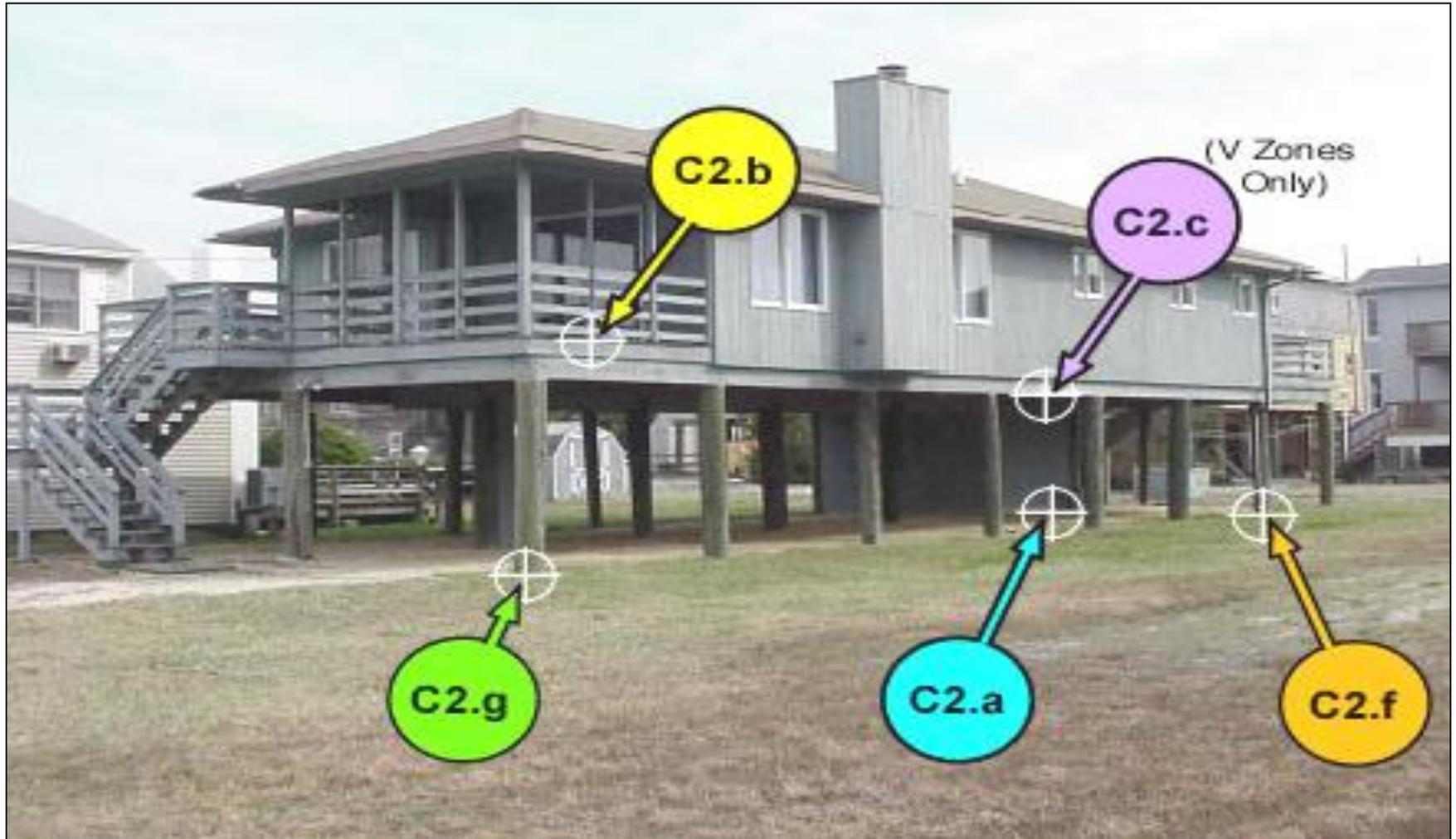
All buildings elevated on piers, posts, piles, columns, or parallel shear walls with full or partial enclosure below the elevated floor.

**Enclosure:** That portion of an elevated building below the lowest elevated floor that is either partially or fully shut-in by rigid walls.

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.

# Elevation Certificate Building Diagrams

## Diagram 6



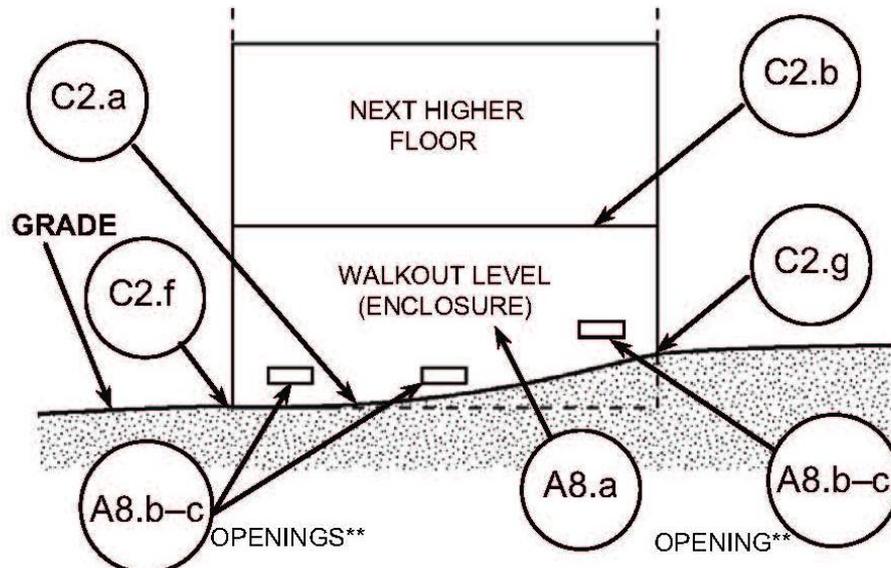
Elevated building, partial enclosure

# Elevation Certificate Building Diagrams

## 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 1 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.



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.

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.

# Elevation Certificate Building Diagrams

## Diagram 7



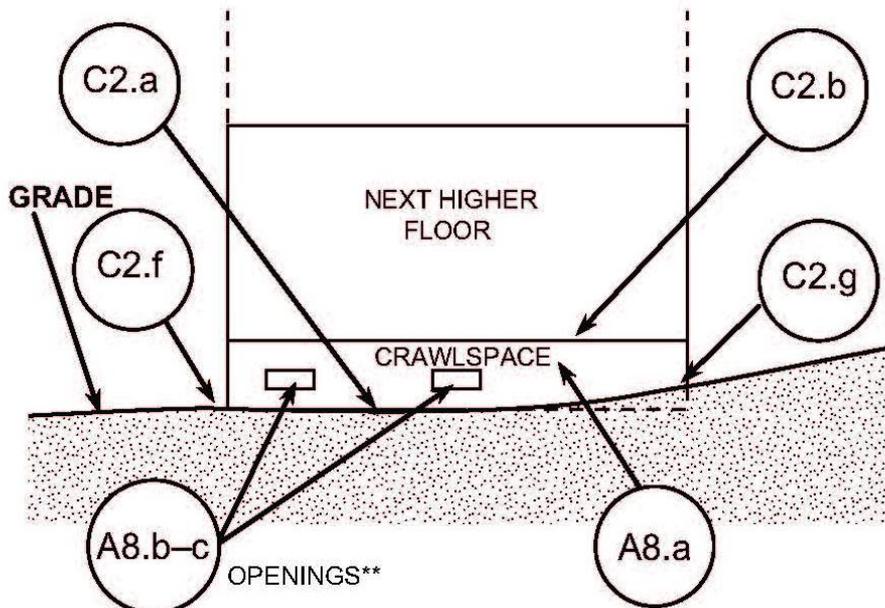
Building elevated on full-story foundation walls, fully enclosed area below the elevated floor

# Elevation Certificate Building Diagrams

**DIAGRAM 8**

All buildings elevated on a crawlspace with the floor of the crawlspace at or above grade on at least 1 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.

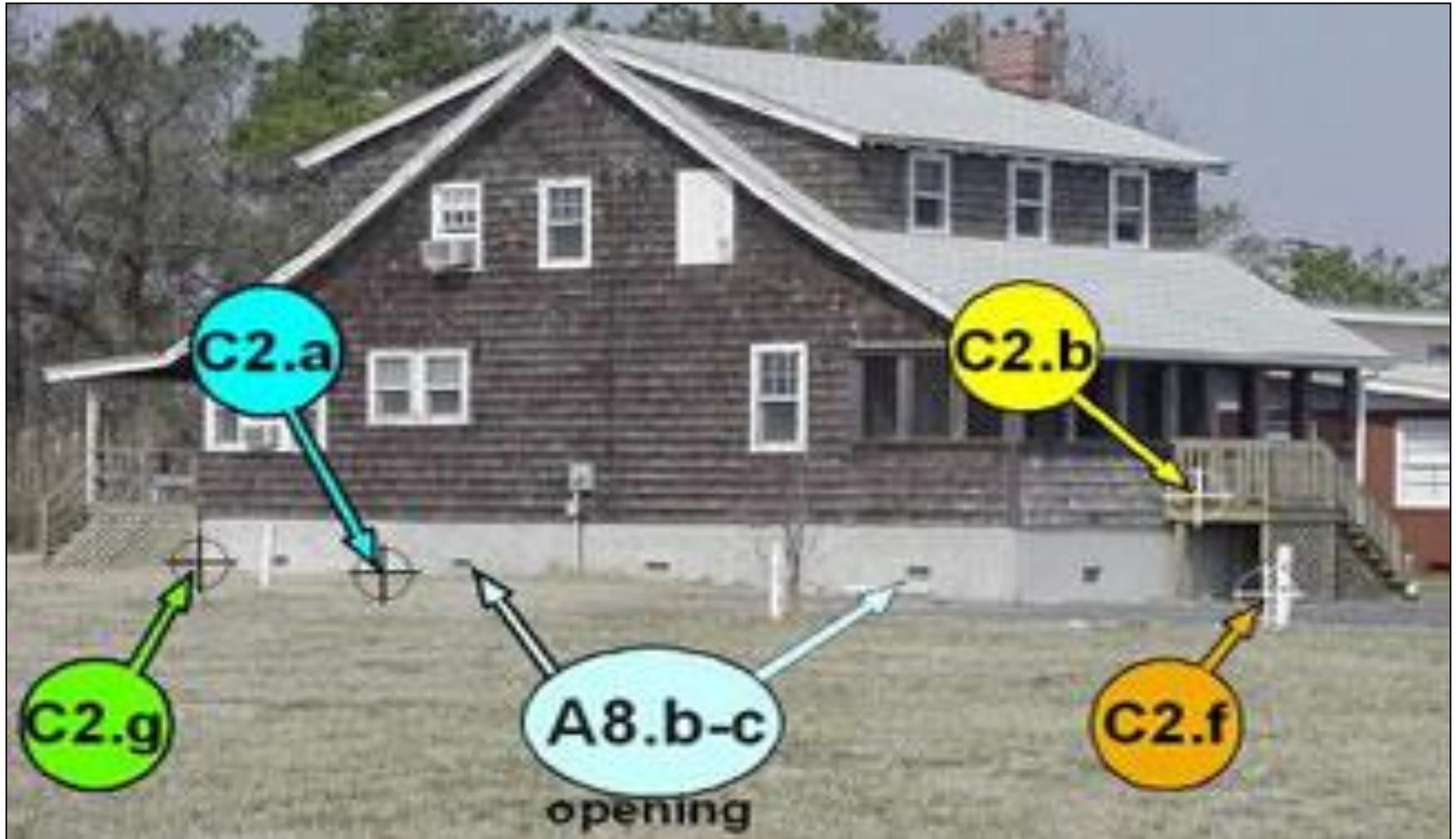


All buildings elevated on a crawl space with the floor of the crawl space at or above grade on at least one side, with or without an attached garage.

For all zones, the area below the first floor is enclosed by solid or partial perimeter walls. 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.

# Elevation Certificate Building Diagrams

## Diagram 8



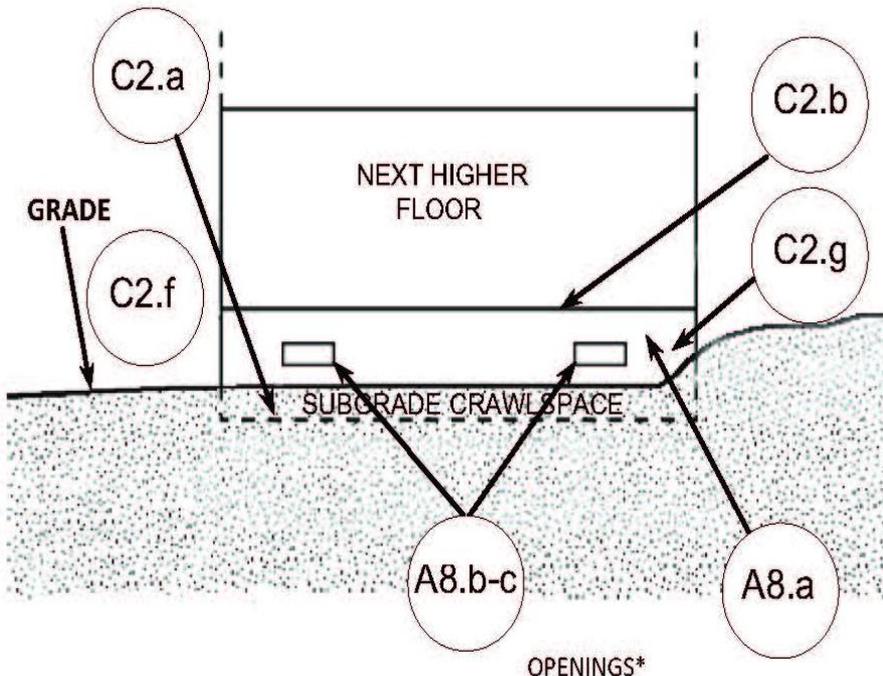
Multi-level building elevated on crawl space

# Elevation Certificate Building Diagrams

## 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 5 feet, or the crawlspace floor is more than 2 feet below the grade [LAG] on all sides, use Diagram 2.)

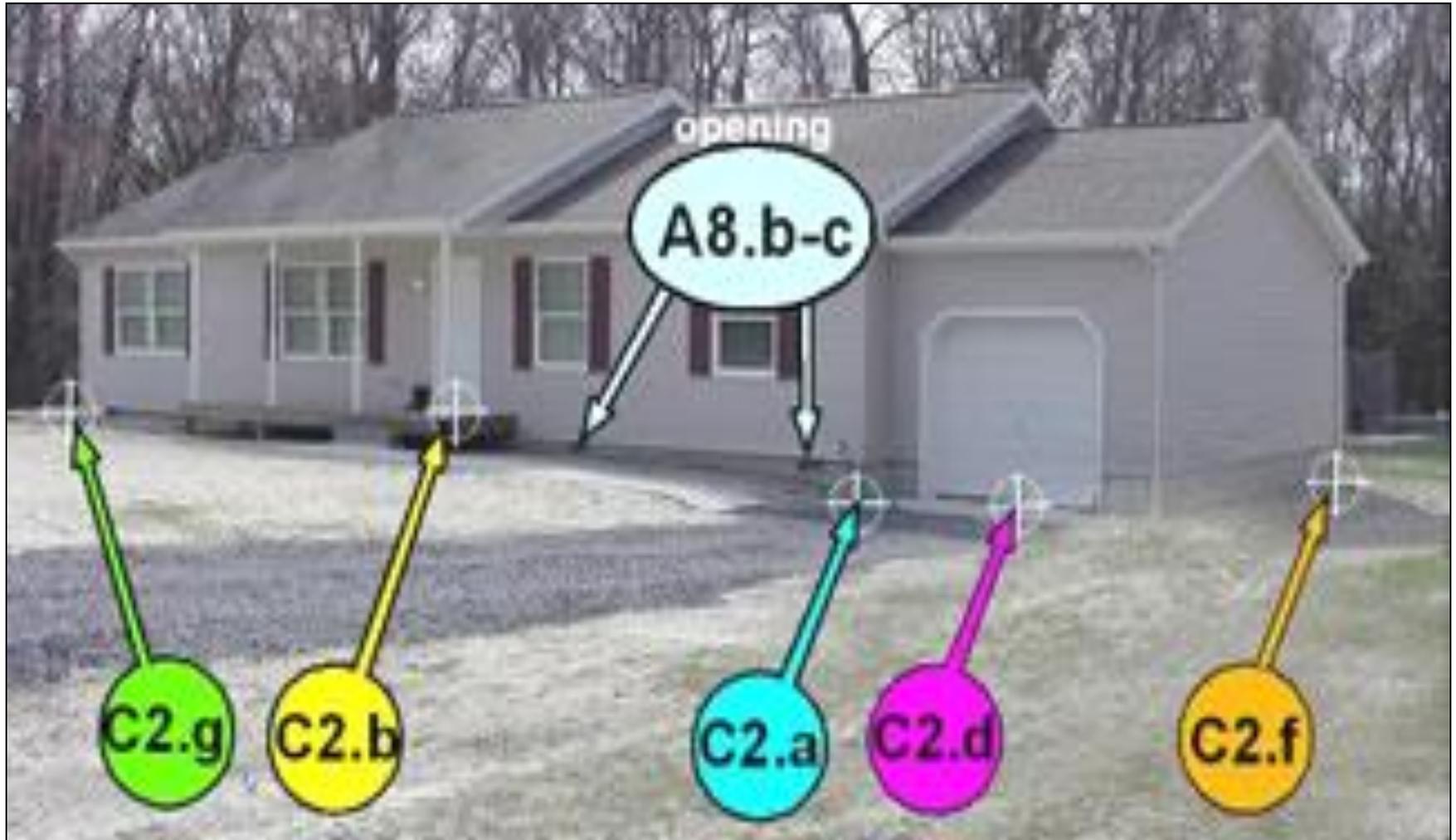


All buildings (other than split-level) elevated on sub-grade crawlspace, with or without an attached garage.

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 floor is more than 5 feet, or the crawlspace floor is more than 2 feet below the grade (LAG) on all sides, use Diagram 2.**

# Elevation Certificate Building Diagrams

## Diagram 8



One-story building on crawl space with attached garage

# Contacts

- FEMA Publications
  - 1-800-480-2520 (Toll Free)
- FEMA FIRM and FIS Ordering
  - 1-800-358-9616 (Toll Free)
- General Mapping and LOMC Questions
  - 1-877-FEMA-MAP (Toll Free)
- [www.fema.gov](http://www.fema.gov)
- [msc.fema.gov](http://msc.fema.gov)

# Floodplains: The Basics

Questions?

DNRC Website

[http://www.dnrc.mt.gov/wrd/water\\_op/floodplain/default.asp](http://www.dnrc.mt.gov/wrd/water_op/floodplain/default.asp)

FEMA Map Store

<https://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1>