

Common Floodplain Permit & Elevation Certificate Errors



To Protect and Enhance Kentucky's Environment

Outline



- Floodplain Permit Errors
 - Why is this required
 - How to avoid errors
- Elevation Certificate Errors
 - Common errors
 - Simple solutions
- Elevation Certificate Game



Floodplain Permitting



#1: Owner Contact Info

- 401 KAR 4:060, Section 9(e)
 - Application is Incorporated by Reference in the Kentucky regulations
- Required to provide the applicant their permit or to request additional information as part of the application review process.



#1: Owner Contact Info Cont.

BAD

- No full mailing address
 - City and Zip often forgotten
- Sloppy handwriting
- No email address
- No area code on phone number

BETTER

- Typed is best
 - Form fillable application is available
- Emails and phone numbers are required for good follow-up communication
 - Permits provided digitally

EMAIL: ^{???}beruennaeke@ [REDACTED]

MAILING ADDRESS: 27 OVERLOOK CIRCLE ????



#4: Description

- You know what you want to do. You're familiar with your site. We're Not!
- Things we need to know
 - What are you proposing to do?
 - How project will be completed?
 - What is being done?
 - Will there be fill? If yes, how much?
 - How will your project comply with state requirements?



#4: Description Example

BAD

- *none*
- “Building a building”
- “New Shed”
- “Raising the ground elevation”
- “Cleaning out the creek”

BETTER

- Building a new home in the floodplain of water creek. Lowest floor will be above the BFE. Crawlspace will have #X of vents to protect areas below BFE. Structure will be built of flood damage resistant materials below BFE. No fill material is being added to the site.

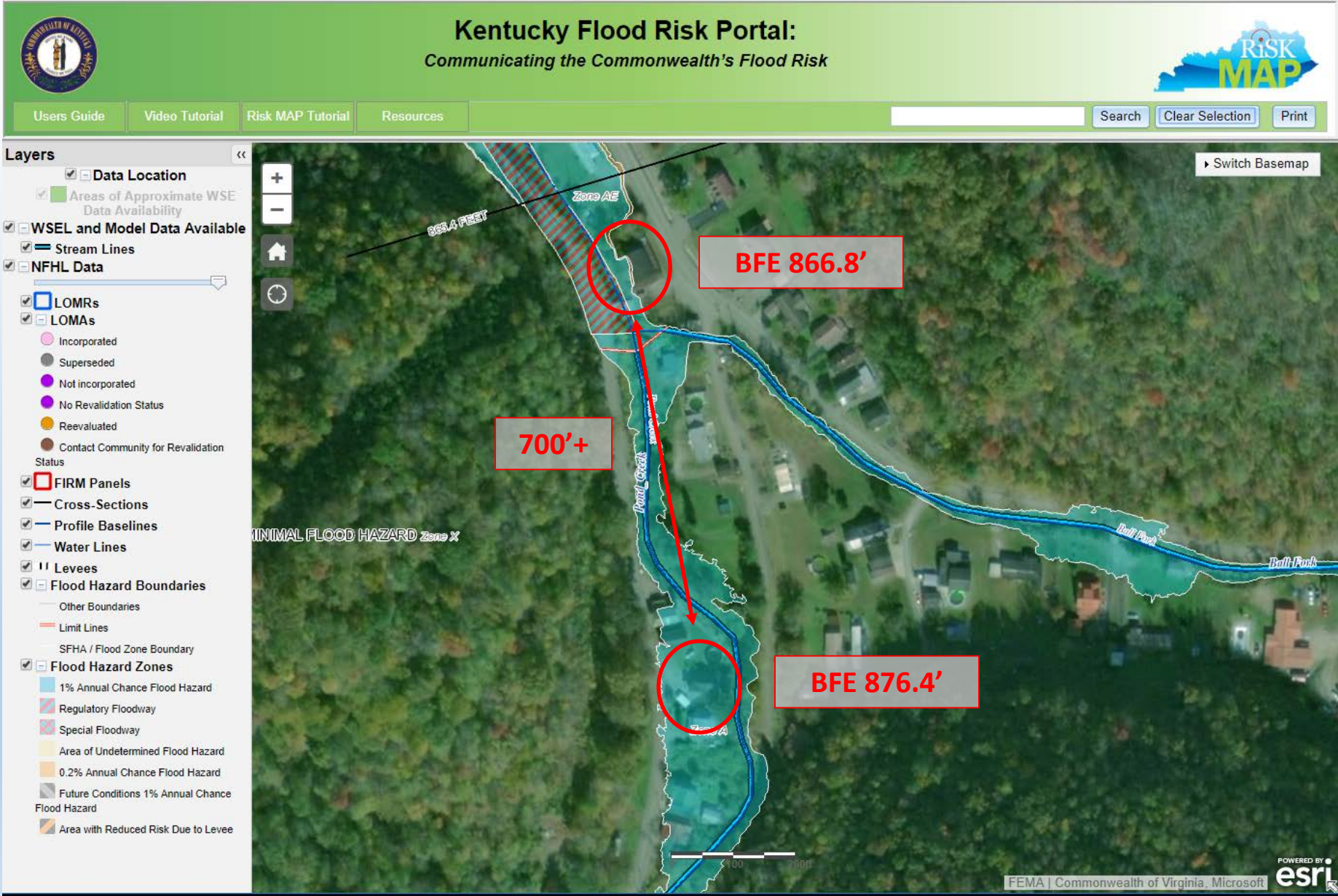


#6: Latitude & Longitude

- 401 KAR 4:060, Section 9(e)
 - Application is Incorporated by Reference in Kentucky regulations
- Street addresses can get you close but Latitude and Longitude is the most accurate
 - No mistakes when given a Lat/Long



Example: 3490 Pond Creek Rd, Pinsonfork, KY



#6: Lat/Long Example

BAD

- Degrees Decimal Minutes

38° 11.7314' N

84° 52.4317' W

- State Plane Coordinates

1600 1576741.357mE

1207031.996mN

- Universal Transverse Mercator

686182.69, 4229645.66, UTM Zone 16S

- Street Address

120 Logan St., Frankfort, KY

BETTER

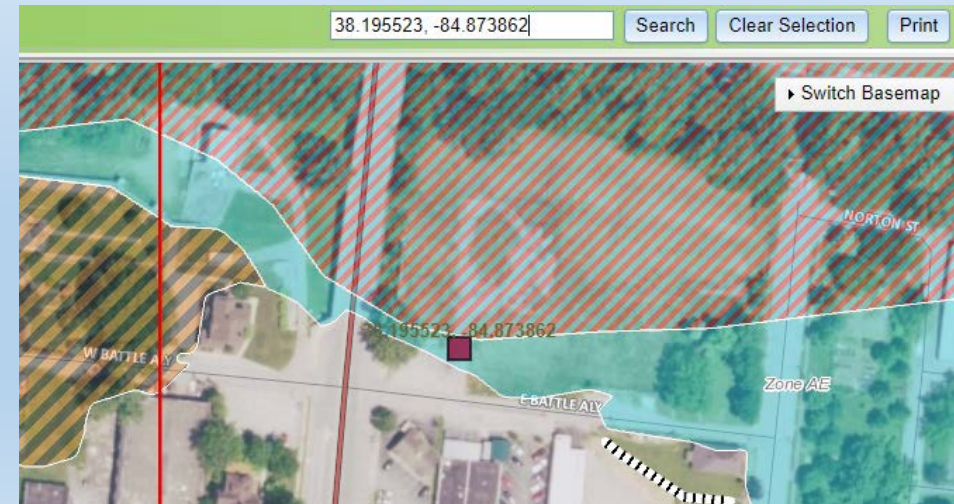
- Decimal Degrees

38.195523, -84.873862

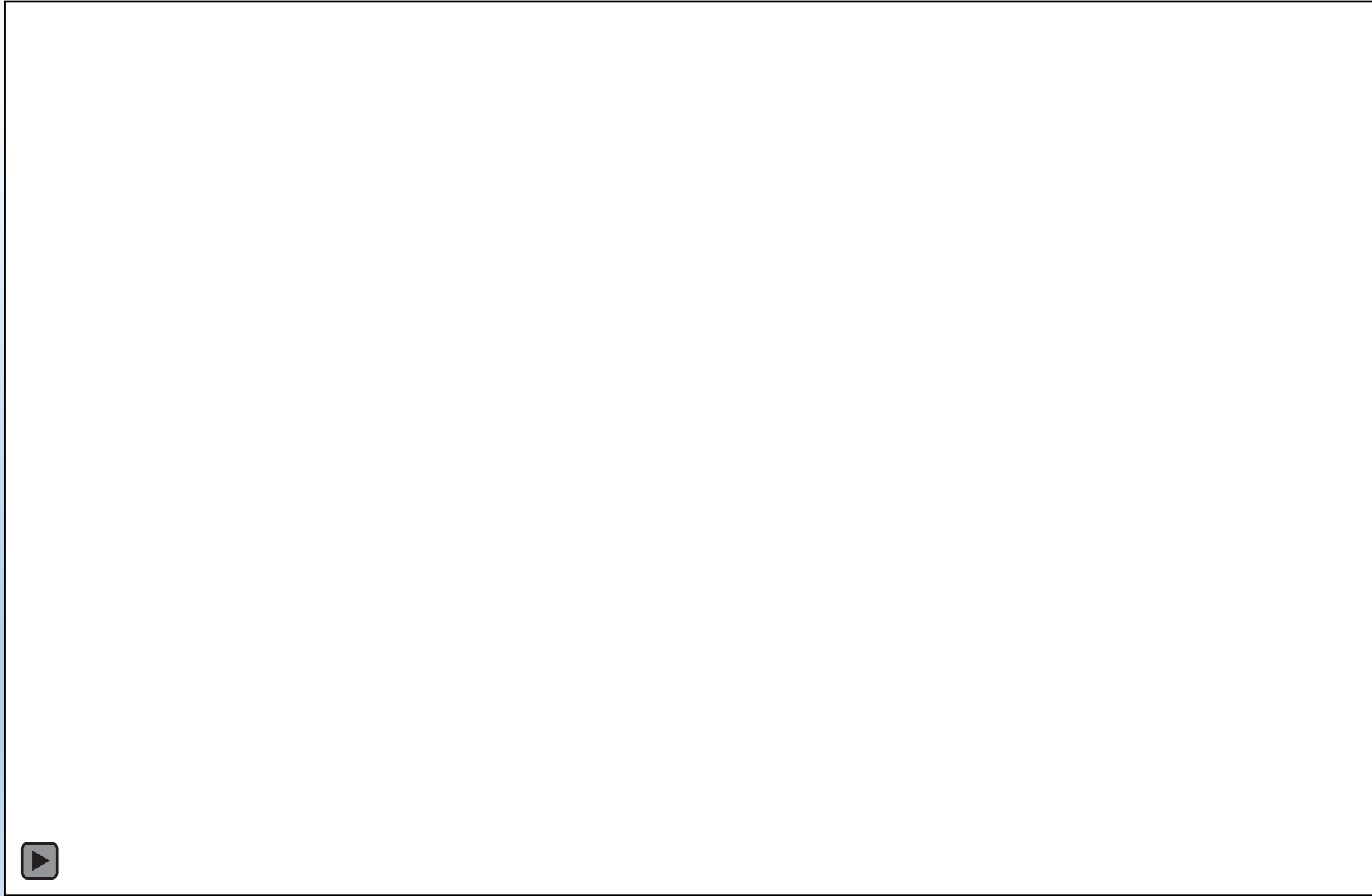
- Degrees Minutes Seconds

38° 11' 43.88" N

84° 52' 25.90" W



Finding a Lat/Long



#14: Public Notice

- 401 KAR 4:060, Section 3(4)(a-c)
 - (a) **As part of the stream construction permit issuance procedure, each applicant shall provide notice to all parties who may incur additional flood-related damages as a result of the construction for which a permit has been requested, except as provided in subparagraph 3 of this paragraph.**
- Applicant is required to satisfy the Cabinet that all affected parties have been notified of the proposed project.



#14: Public Notice Example

BAD

- *None*
- “No”
- “I don’t want to fuss with it”
- “Its too expensive”
- “My neighbor doesn’t want me to do this project”

BETTER

- Copy of the newspaper notice
- A signed affidavit from all affected property owners

— Public Notice —

Notice is hereby given that **(NAME AND ADDRESS)**, has filed an application with the Energy & Environment Cabinet to **(BRIEF DESCRIPTION OF CONSTRUCTION)**. The property is located **(LOCATION DESCRIPTION, INCLUDE MILES FROM NEAREST TOWN OR MAJOR ROAD INTERSECTION AND NAME OF STREAM)**. Any comments or objections concerning this application shall be directed in writing to: Kentucky Division of Water, Floodplain Management Section, 300 Sower Blvd 3rd Floor, Frankfort, Kentucky 40601.

AFFIDAVIT OF UNDERSTANDING

I, _____
(Printed Name)

of _____
(Address)

An adjacent landowner to the Applicant below, herein confirm that I have been made aware that _____
(Printed Name of Applicant)

of _____
(Address of Applicant)

has made application to the Kentucky Division of Water, Water Resources Branch for a permit to _____
(Brief Description of Project)

at _____
(Location of Project)

I am aware that any comments or objections concerning this application can be made by writing the Floodplain Management Section, of the Division of Water at:

Floodplain Management Section
Division of Water
300 Sower Boulevard
Frankfort, Kentucky 40601
(502) 564-3410

(Signature of Adjacent Property Owner) (Date)

(Signature of Applicant) (Date)

Subscribed and sworn to before me this _____ day of _____ 20__.

Notary Public:
My commission expires: _____
0000/00/00



#14: Public Notice Cont.

- Public Notice waiver request
- Notice may be waved for the following reasons:
 - 1) Repair/maintenance/internal retrofit within existing structure footprint
 - 2) Emergency work per DOW policy memo 84-01
 - 3) Watershed <1 sq. mile with exception of structures
 - 4) Subfluvial utilities that involve subsurface and/or directional drilling
 - 5) Repaving individual residential driveways, curbs, or sidewalks (must not increase ground surface elevations)
 - 6) Extensions of previously public noticed permit



#17: Easement Rights

- “An easement is a legal right to use another's land for a specific limited purpose.”
 - i.e. Legally being able to use a piece of land without being the owner
- 401 KAR 4:060, Section 9(e)
 - Application is Incorporated by Reference in the Kentucky regulations

17. I, _____ (owners Initials) CERTIFY THAT THE OWNER OWNS OR HAS EASEMENT RIGHTS ON ALL PROPERTY ON WHICH THIS PROJECT WILL BE LOCATED OR ON WHICH RELATED CONSTRUCTION



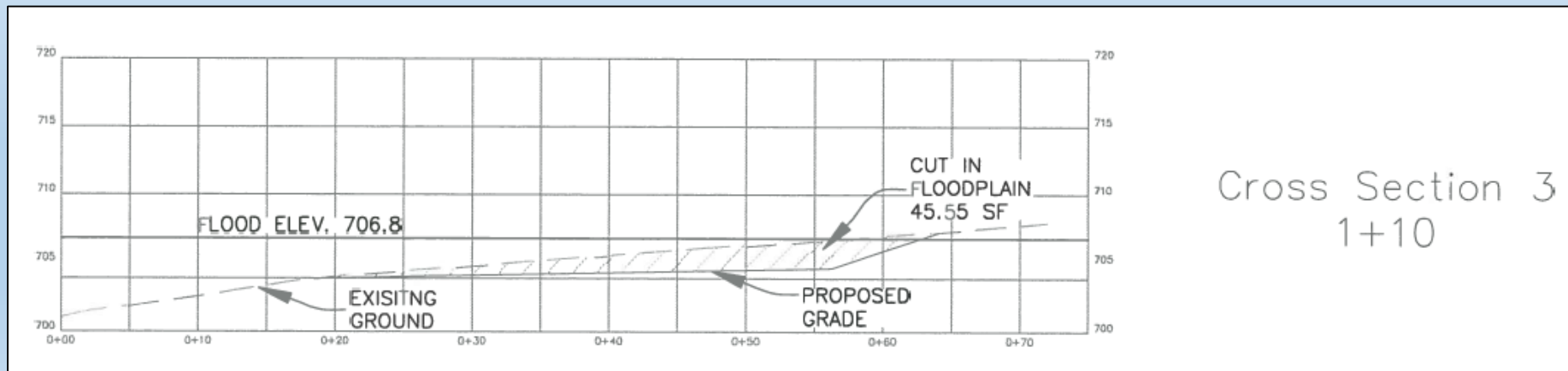
#16: Attachments & Maps

- KRS 151.250(2)
 - “...unless **plans and specifications for such work have been submitted to and approved by the cabinet** and a permit issued as required...”
- 401 KAR 4:060 Section 9(e)
 - The application states that applicant shall attach “...**plans, profiles, or other drawings and data submitted...map clearly showing the project location.**”



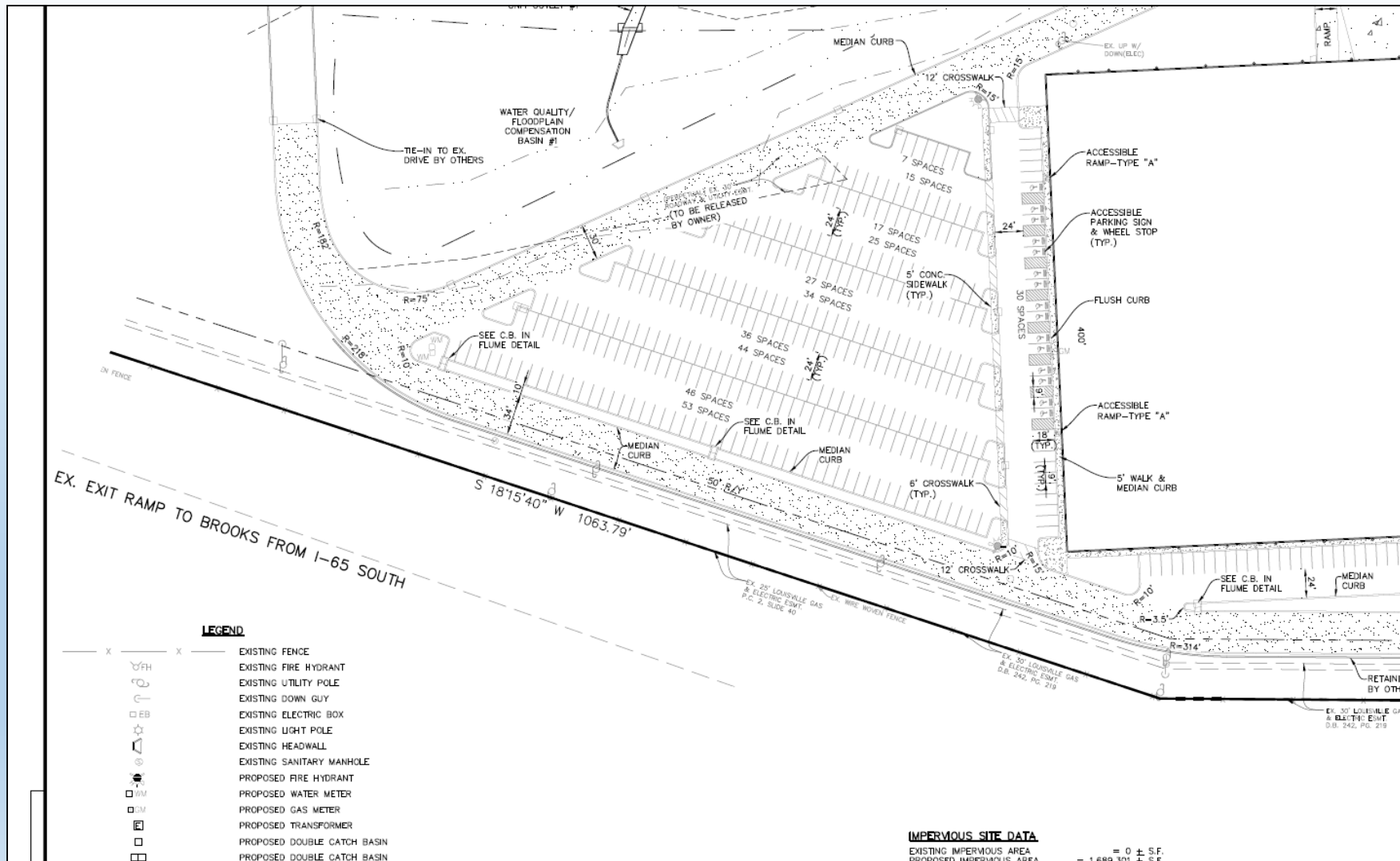
What Makes a Good Attachment?

- Water features
- Floodplain and floodway
- Transportation features
- Existing and proposed structures
- Cross sections
- Property lines
- Latitude and longitude
- North arrow & Scale
- Dimensions for the proposal
 - Development site property boundaries
 - Development footprint
 - Setback distances
 - Top of Fill elevation
- Description of construction materials used
- Maps shall be drawn to scale, when possible

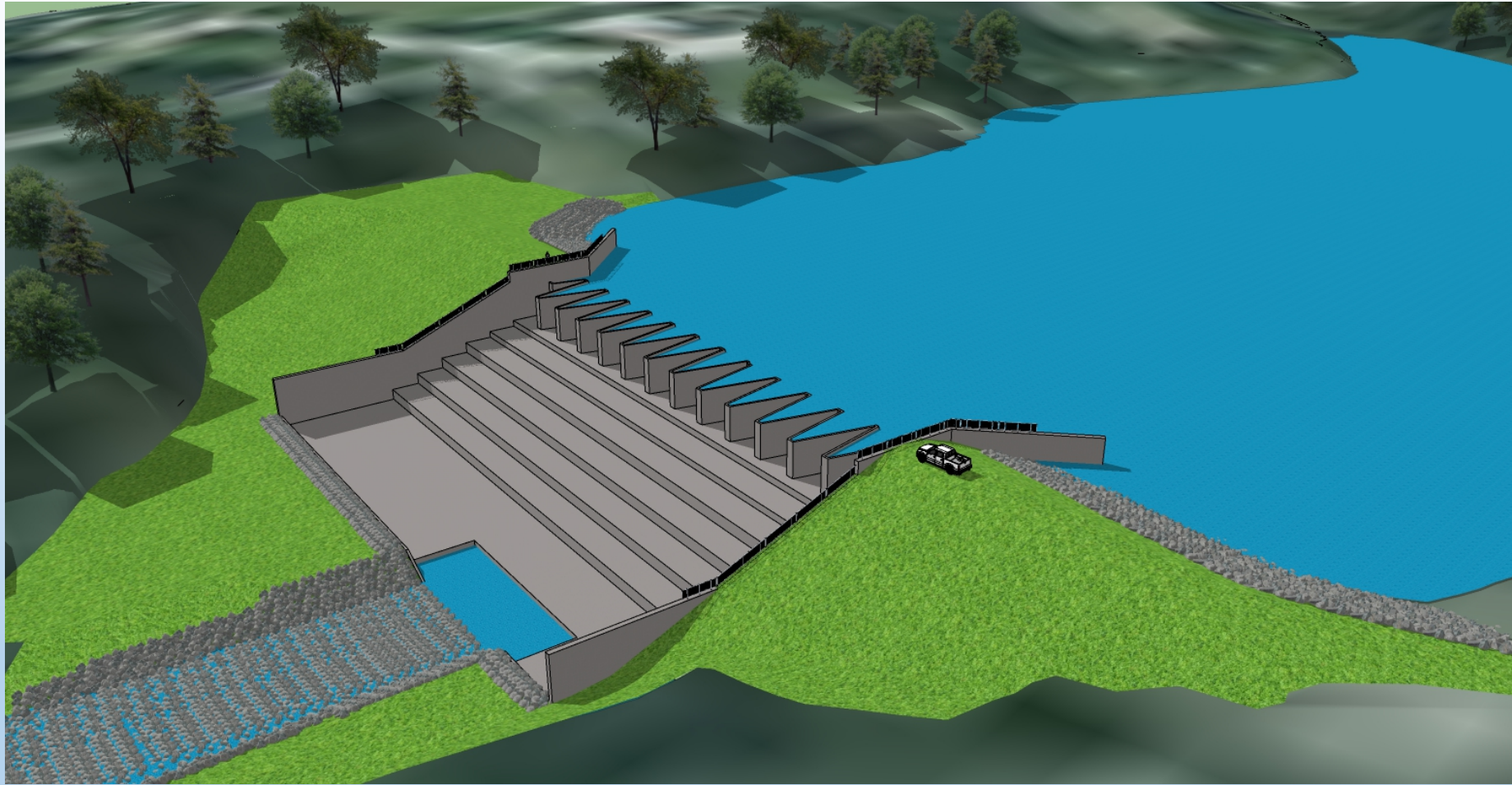


Good Drawing

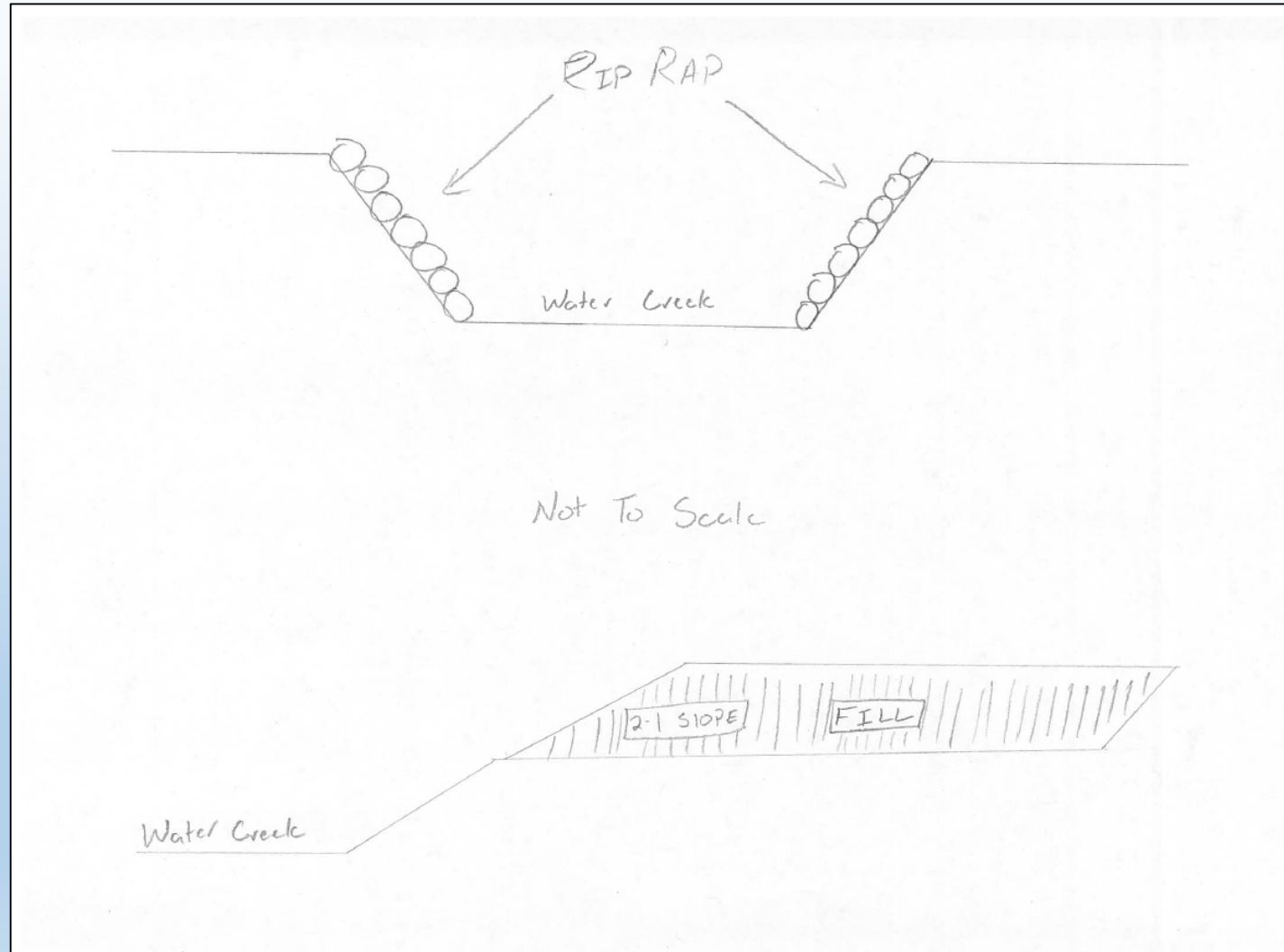
- Engineered drawings



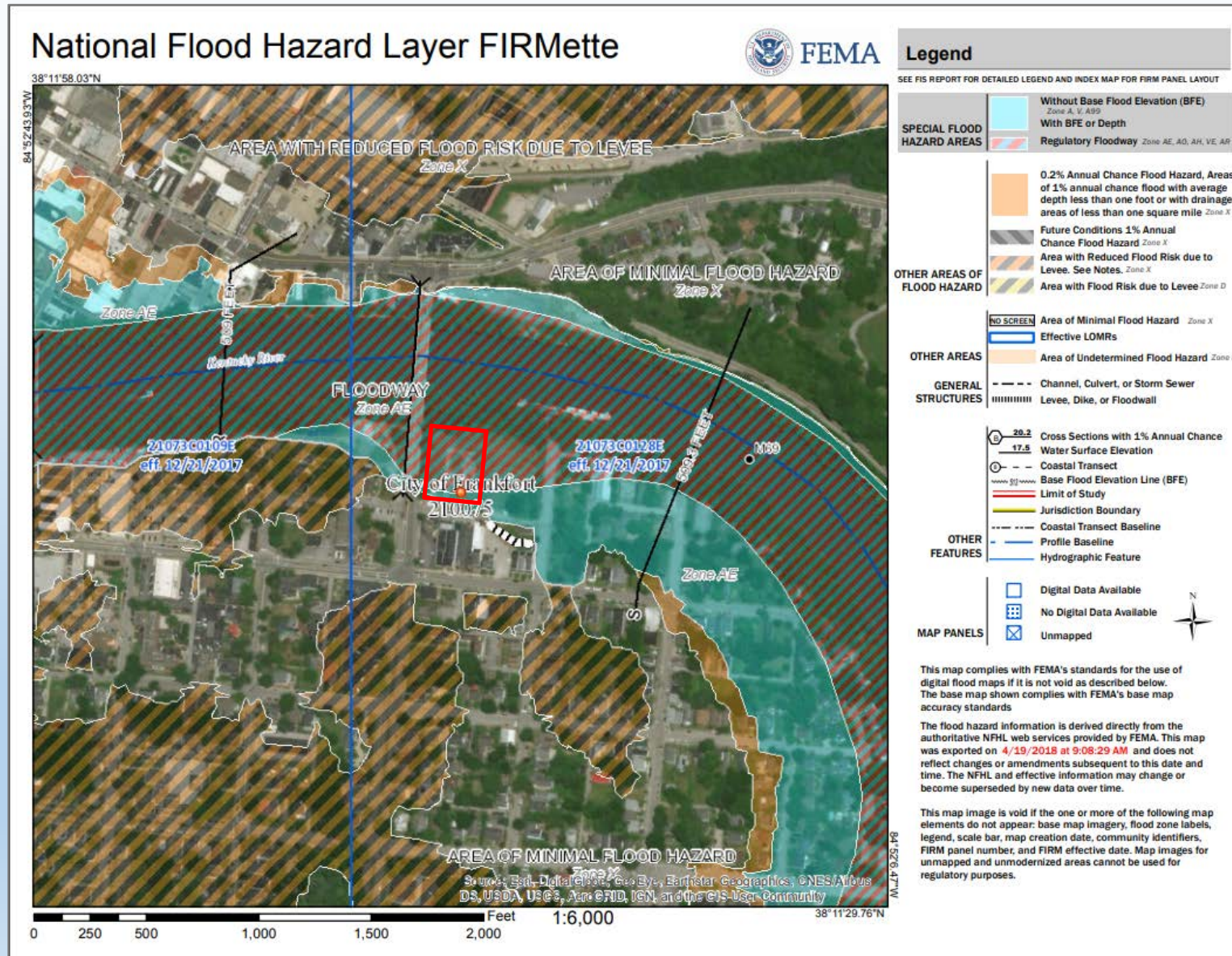
Good Drawing Cont.



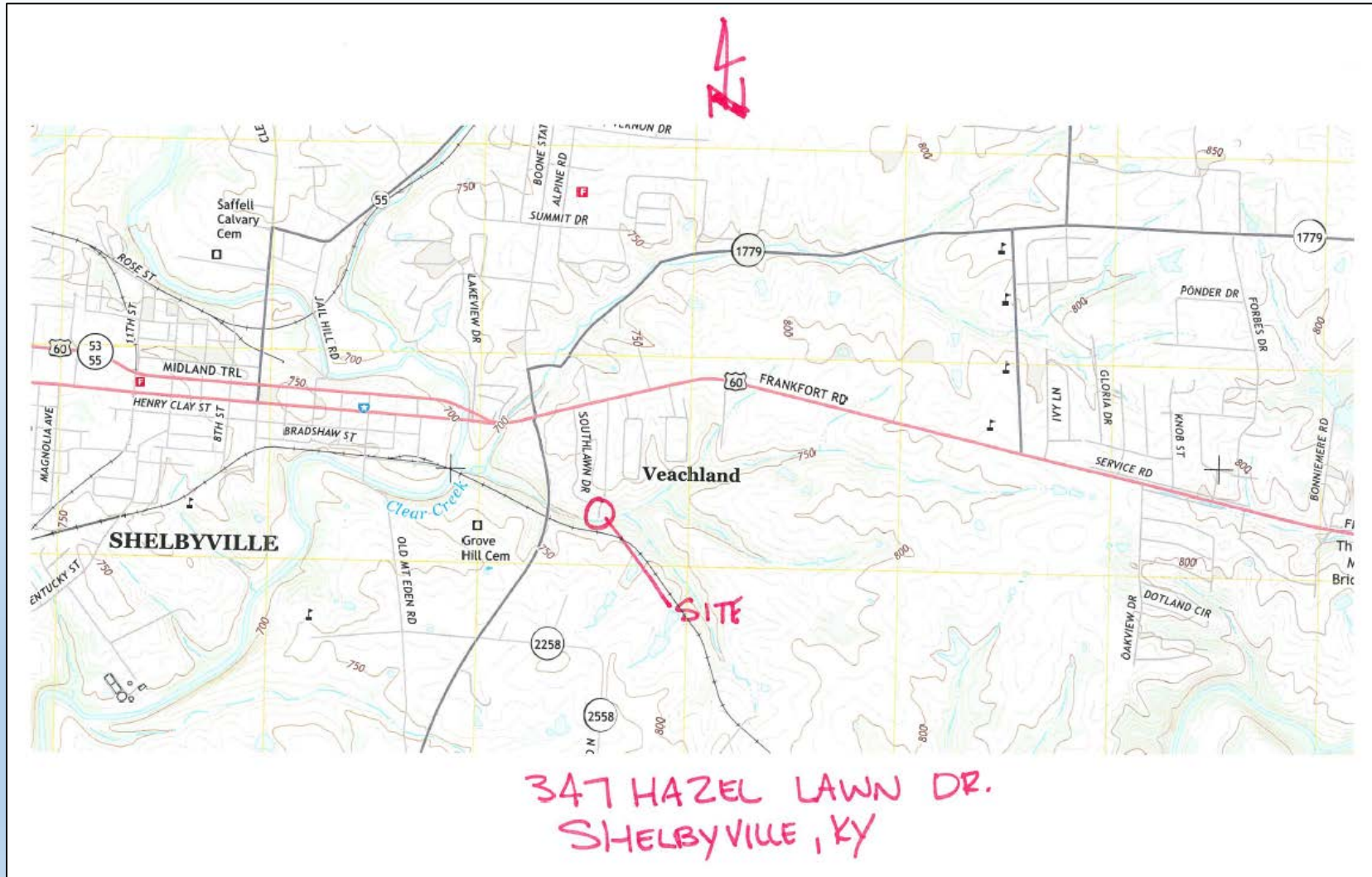
OK Drawing



Good Map Example



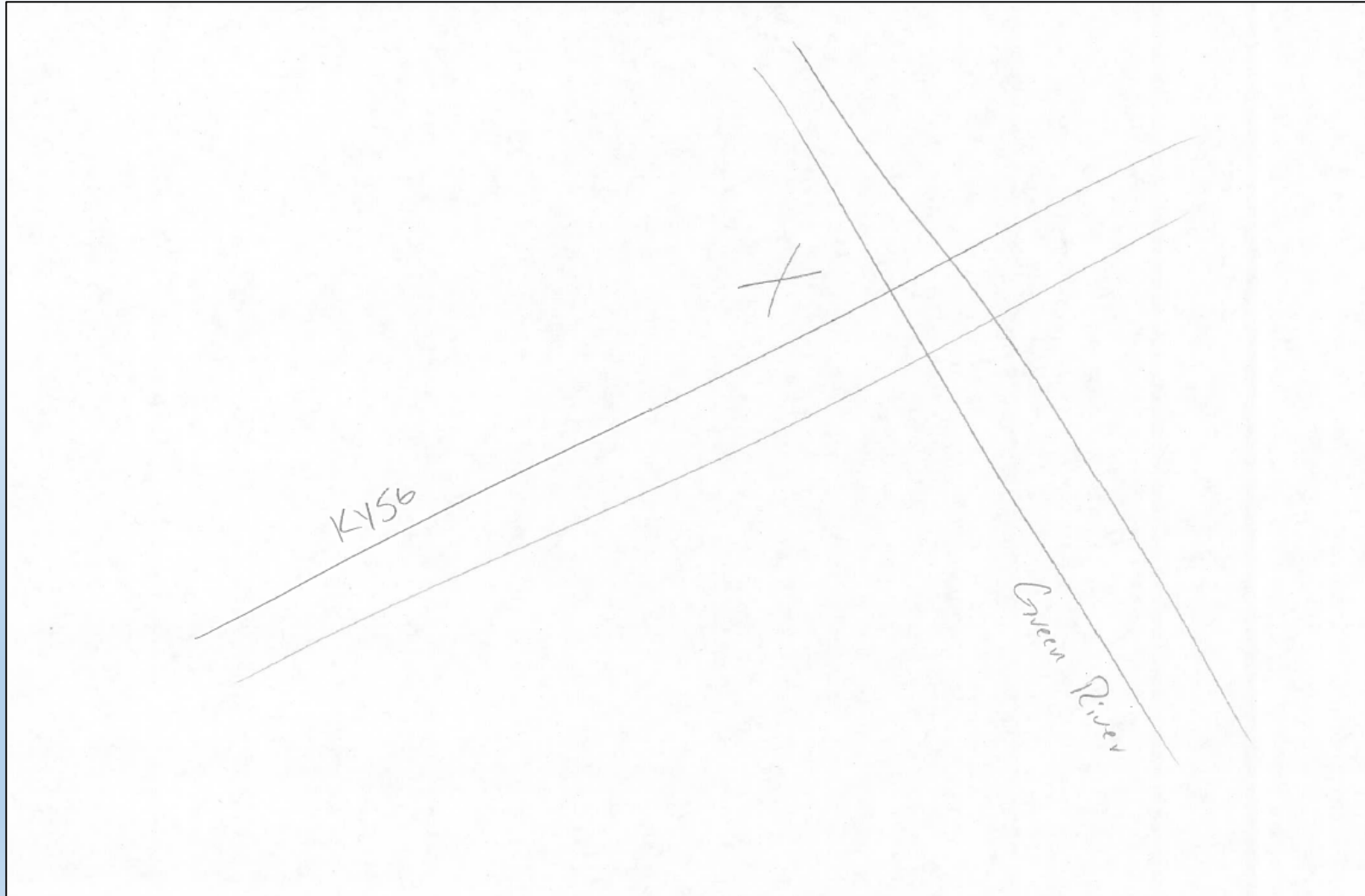
OK Map Example



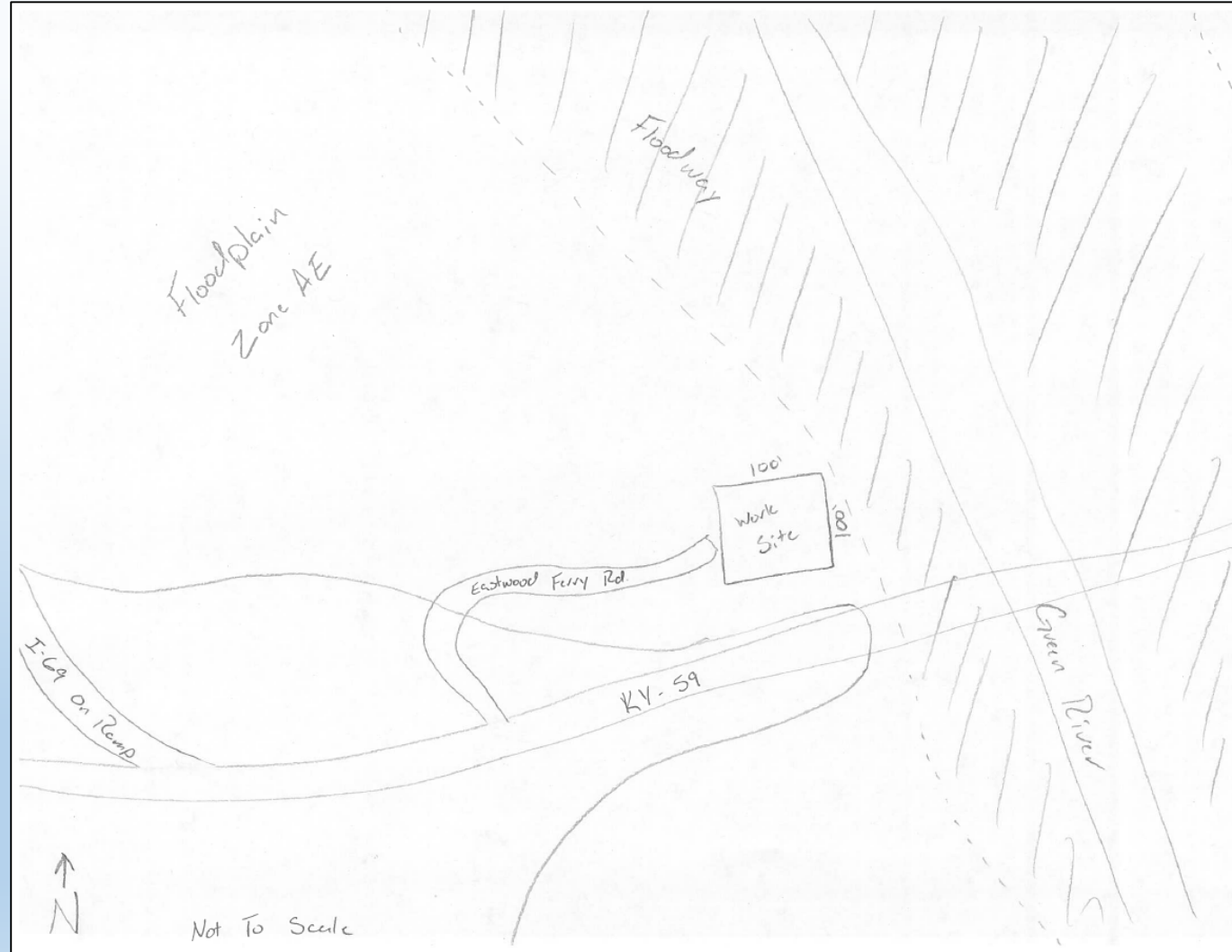
OK Map Example Cont.



Bad Map



Bad Map "Fixed"

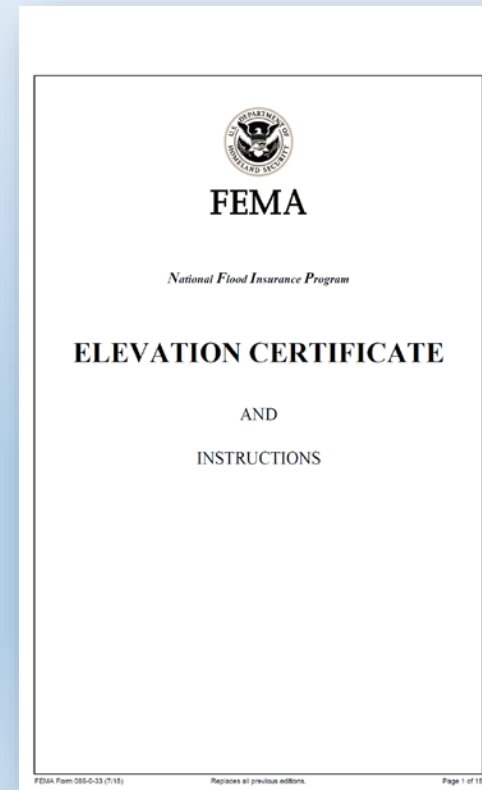


Elevation Certificates



FEMA Elevation Certificate

- Required to rate post-FIRM and some pre-FIRM buildings
- Determine compliance with floodplain management ordinance
- Support LOMA/LOMR-F
- Prerequisite for the CRS



Who Uses Them?

- Lenders
- Insurance Agents
- Communities and Community Officials
- Floodplain Coordinators
- Property Owners
- Realtors
- FEMA



Not Reading Instructions

- Instructions clarify how the surveyors should complete the EC correctly!
 - Clearly states how specific instances should be included to be properly understood

Items A9.b–d. Enter in Item A9.b the number of permanent flood openings in the attached garage that are no higher than 1.0 foot above the higher of the exterior or interior grade or floor immediately below the opening. (A permanent flood opening is a flood vent or other opening that allows the free passage of water automatically in both directions without human intervention.) If the interior grade elevation is used, note this in the Comments area of Section D. This includes any openings that are in the garage door that are no higher than 1.0 foot above the adjacent grade. Estimate the total net area of all such permanent flood openings in square inches and enter the total in Item A9.c. If the net area cannot be reasonably estimated, provide the size of the flood openings without consideration of any covers and indicate in the Comments area the type of cover that exists in the flood openings. Indicate in Item A9.d whether the flood openings are engineered. If applicable, attach a copy of the Individual Engineered Flood Openings Certification or an Evaluation Report issued by the International Code Council Evaluation Service (ICC ES), if you have it. If the garage has no permanent flood openings, or if the openings are not within 1.0 foot above adjacent grade, enter "N/A" for not applicable in Items A9.b–c.



Incorrect FIRM Data

- FIRM data indicates which maps the surveyor is using
- Should be the effective FIRMs
 - Incorrect Community Name or Number
 - Different Community, County, or State
 - Incorrect flood zone
 - BFEs
 - Frequent Typos

SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION					
B1. NFIP Community Name & Community Number			B2. County Name		B3. State
<input type="text"/>			<input type="text"/>		<input type="text"/>
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)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>



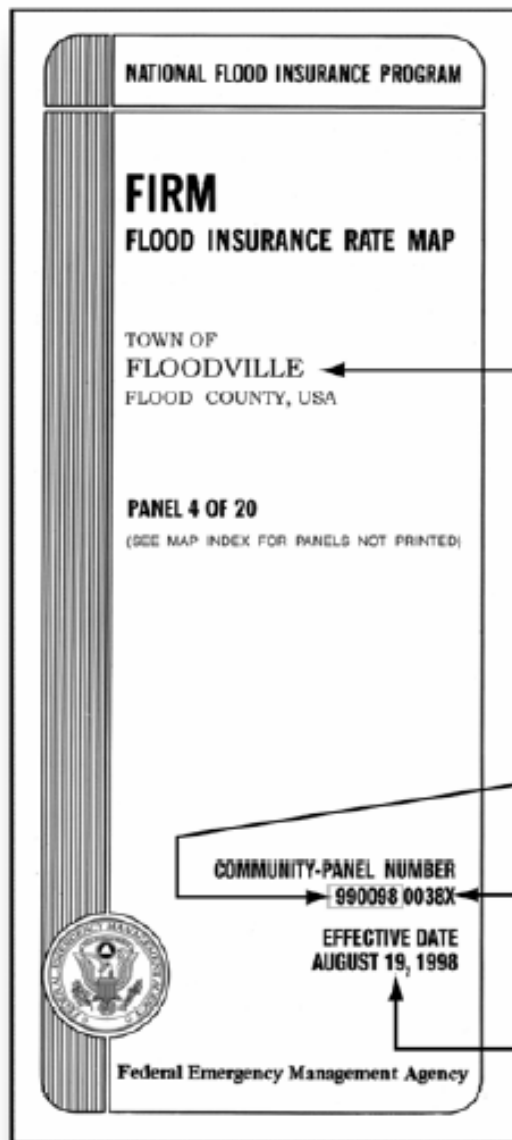


Figure 1. Sample FIRM Panel
(Single Community)

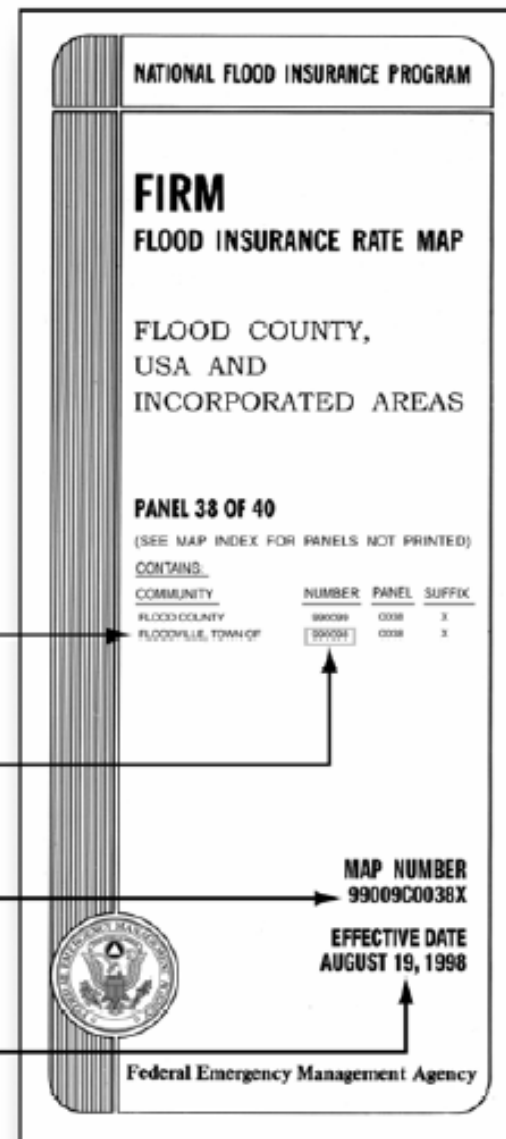


Figure 2. Sample FIRM Panel
(Countywide)



Incorrect Datum

- Three places for the surveyor to indicate which vertical datum he is using
 - Different datum marked, or
 - No datum marked

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.

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

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.



Surveyor Information

- ECs must be completed by a surveyor that is licensed in Kentucky
 - No License Number
 - No Seal

SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION			
This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.			
Were latitude and longitude in Section A provided by a licensed land surveyor? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Check here if attachments.			
Certifier's Name	License Number		Place Seal Here
Title			
Company Name			
Address			
City	State	ZIP Code	
Signature	Date	Telephone	



Elevation Certificate Status

- Surveyor indicates what the elevations are based upon
 - Pre
 - During
 - Post
 - No final EC completed

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.



Building Elevation Information

- Not properly listing all required elevations
 - Incorrect lowest flood
 - No vents
 - Is a deck attached or no?
 - LAG higher than the HAG
 - Incorrectly Lowest machinery elevation

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



Section C2.a) – h)

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)	Every time . _____	<input type="radio"/> feet	<input type="radio"/> meters
b) Top of the next higher floor	If >1 floor . _____	<input type="radio"/> feet	<input type="radio"/> meters
c) Bottom of the lowest horizontal structural member (V Zones only)	V Zones . _____	<input type="radio"/> feet	<input type="radio"/> meters
d) Attached garage (top of slab)	If garage . _____	<input type="radio"/> feet	<input type="radio"/> meters
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	Every time . _____	<input type="radio"/> feet	<input type="radio"/> meters
f) Lowest adjacent (finished) grade next to building (LAG)	Every time . _____	<input type="radio"/> feet	<input type="radio"/> meters
g) Highest adjacent (finished) grade next to building (HAG)	Every time . _____	<input type="radio"/> feet	<input type="radio"/> meters
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	_____ . _____	<input type="radio"/> feet	<input type="radio"/> meters

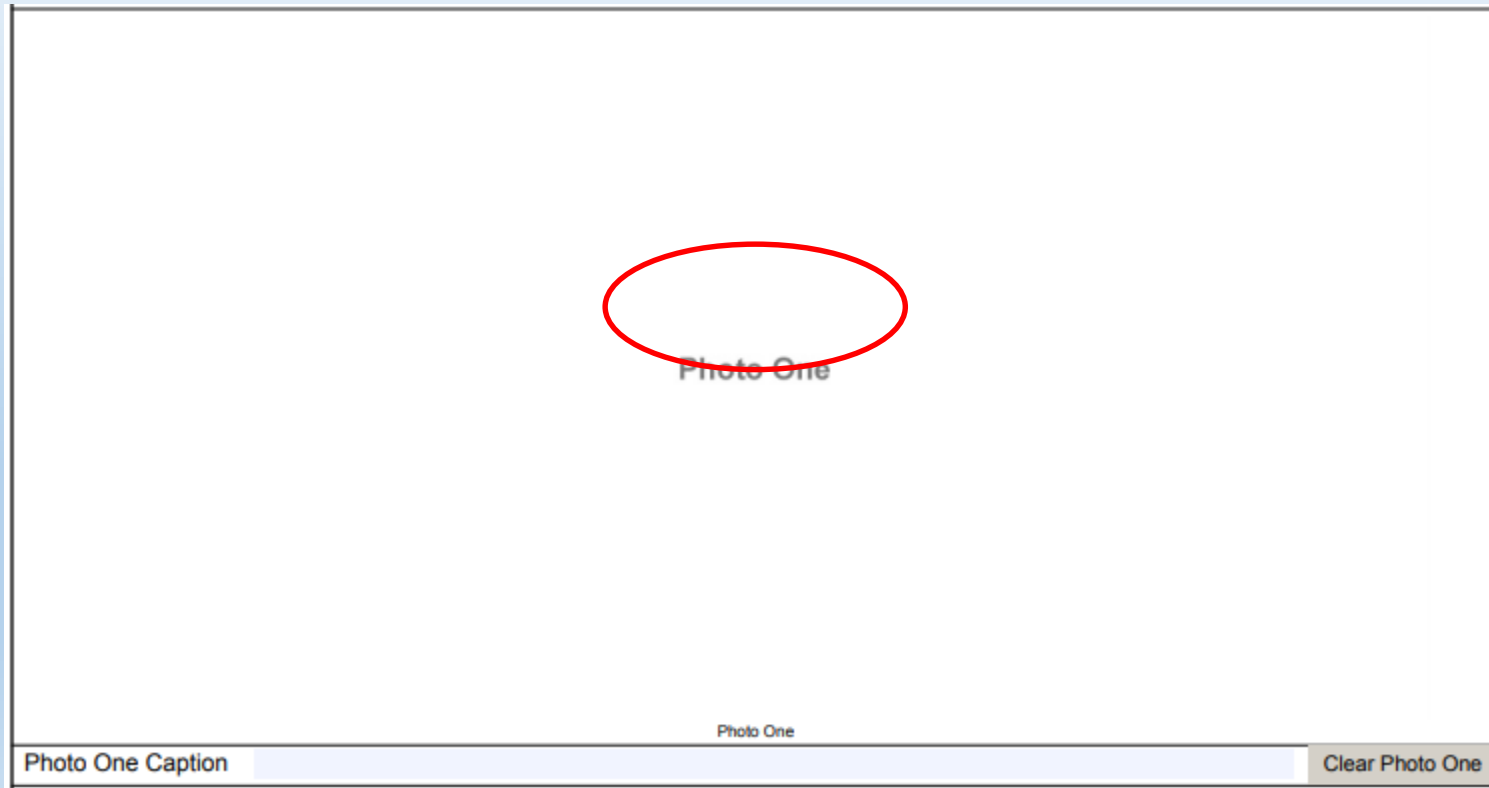
Items a), f) and g) must always have a number. If items b) - e) are not relevant, enter "N/A"

e) Describe the machinery or equipment in Section D's comments



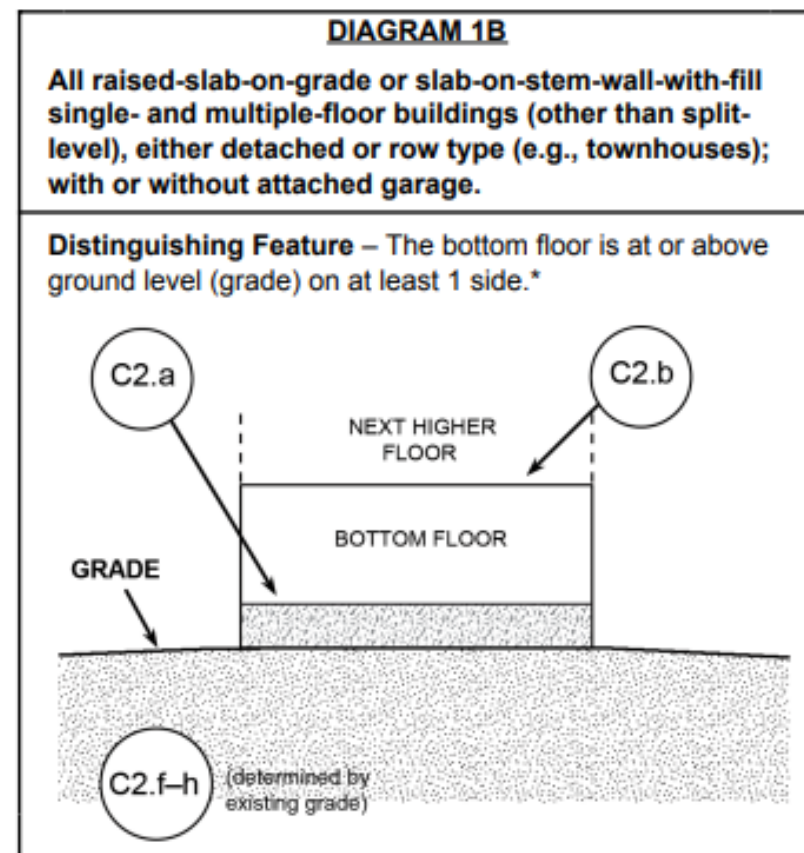
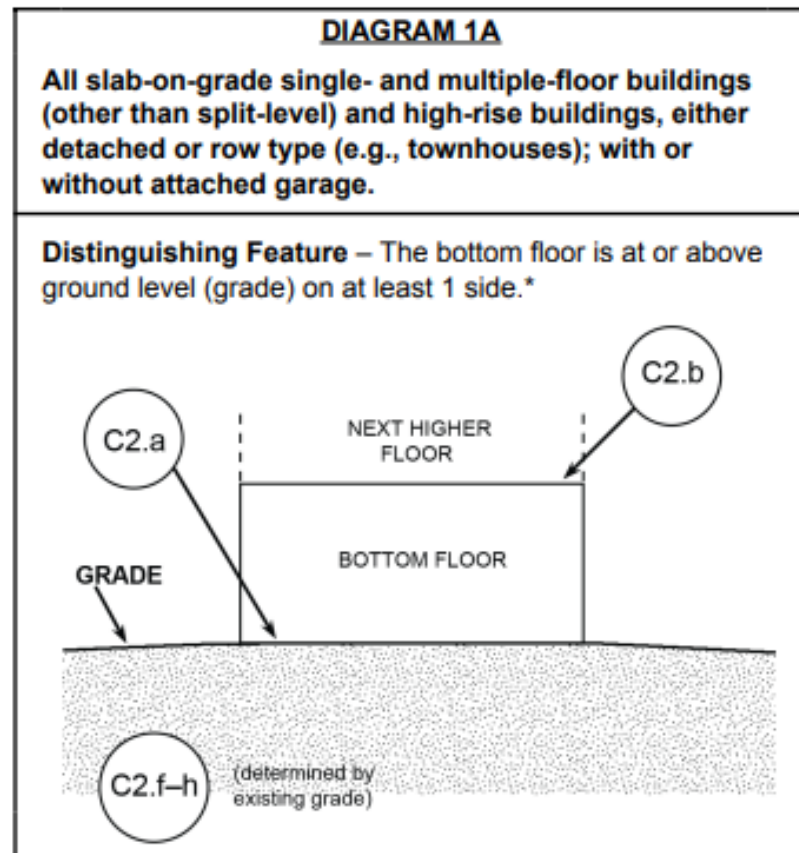
Photographs

- Not including photos from all aspects
 - Minimum all 4 sides of the structure
 - Any other pertinent elevation information



Building Diagram

- Incorrect building diagram included
 - Diagrams help people using the EC understand the building and what the elevations relate to



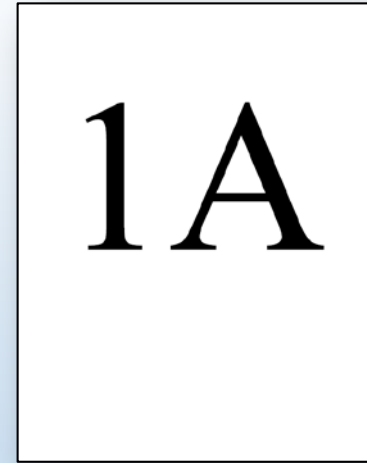
Elevation Certificates Diagram Game



Game Rules

Diagram Number Game

- 1) We'll show a photo of a building
- 2) We assume each building is compliant
 - You see the whole building – don't invent things on the other side of the building
- 3) Determine the diagram number for each building
- 4) Raise the appropriate diagram number card
 - If a table raises more than one card, it is disqualified



FEMA Elevation Certificates

- What diagram?



FEMA Elevation Certificates

- What diagram?



FEMA Elevation Certificates

- What diagram?



FEMA Elevation Certificates

- What diagram?



FEMA Elevation Certificates

- What diagram?



FEMA Elevation Certificates



FEMA Elevation Certificates

- What diagram?



FEMA Elevation Certificates

- What diagram?



FEMA Elevation Certificates

- What diagram?



FEMA Elevation Certificates

- What diagram?



FEMA Elevation Certificates

- What diagram?



Contact Info

- Alex VanPelt, CFM
 - NFIP Coordinator

alex.vanpelt@ky.gov

(502) 782-7120 (Direct Line)

Division of Water

300 Sower Blvd., 3rd Floor

Frankfort, KY 40601

- Christina Groves, CFM
 - CRS Specialist

christina.groves@verisk.com



Questions

