Is that a COMPLETE Panel Number?

or Common Elevation Certificate Errors and What you can do to fix them... It's a CRS thing.

Community Rating System

- Rewards Communities for Higher Standards with Insurance Premium Discounts
- 6 Basic Requirements for Class 9
 - In the NFIP Regular Phase for 1 year
 - Must be in full compliance with the NFIP regulations
 - Must maintain FEMA Elevation Certificates on new buildings or substantial improvements in the SFHA
 - Address repetitive loss properties in the community
 - Maintain flood insurance where required on community-owned properties



National Flood Insurance Program Community Rating System

Coordinator's Manual

FIA-15/2017





NATIONAL FLOOD INSURANCE PROGRAM

ELEVATION CERTIFICATE

AND

INSTRUCTIONS

U.S. DEPARTMENT OF HOMELAND SECURITY

2015 EDI

Important: Follow the instruction		
copy all pages of this Elevation Certificate and all attachments for (1) community		
SECTION A – PROPERTY INFORMATION A1. Building Owner's Name	FOR INSUI	RANCE COMPANY US
A1. Building Owner's Name	Policy Nutr	iber:
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) o Box No.	P.O. Route and Company N	VAIC Number:
City State	ZIP Code	
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Leg	al Description, etc.)	
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory,	tc.)	
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 u		
A7. Building Diagram Number		
A8. For a building with a crawlspace or enclosure(s):		
Square footage of crawlspace or enclosure(s)	sa ft	
b) Number of permanent flood openings in the crawlspace or enclosure	(s) within 1.0 foot above adjacent or	ade
c) Total net area of flood openings in A8.b sq in	(-)	
d) Engineered flood openings? No 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	.0 foot above adjacent grade	
c) Total net area of flood openings in A9.b sq	in	
d) Engineered flood openings?		
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 E (Zone AO, us	Elevation(s) se Base Flood Depth)
B10. Indicate the source of the Base Flood Elevation (BFE) data or base fill FIS Profile FIRM Community Determined Other/Sou		
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		
EMA Form 086-0-33 (7/15) Replaces all previous e	ditions.	Form Page 1 c

OMB No. 1660-0008 Expiration Date: November 30, 2018

Why are Elevation Certificates (ECs) a PREREQUISITE???

- An accurate EC is the single most important source of information for flood insurance rating!
- NFIP Regs require elevation data, CRS requires ECs!
 - Communities must maintain a record of the lowest floor elevation for new or substantially approved buildings in SFHA [44CFR §60.3(b)(5)(iii)]
 - Communities must make building elevation data and related information available for public inspection and flood insurance rating. [44CFR §59.22(a)(9)(iii)]



The Sticky Wicket...

The Pesky Detail... Elevation Certificates must be CORRECT!

The CRS considers accurately completed Elevation Certificates to be evidence of a community's full compliance with the minimum requirements of the NFIP. Therefore, Elevation Certificates that are not accurately completed are taken as an indication that the community may not be in full compliance, and continued participation in the CRS may be an issue. - CRS Coordinator's Manual, Section 311



ISO Evaluates ECs for CRS in Two Ways

Credit

- ISO reviews all the ECs submitted using CRS EC Checklist.
- At Cycle Verification, credit is provided based on the first look.
- If only of a portion of submitted ECs are correct, credit is prorated.

Example:

38 possible points x (12 correct ECs \div 20 total ECs) = 22.8 points.

- No redo's on this. This is the score.
- Feedback is provided on all ECs –
 CRS Elevation Certificate
 Evaluation Report.

Compliance!!!

- To stay in the CRS, at least 90% of the community's ECs MUST be correct, e.g. have no problems.
- If less than 90% pass, the community MUST correct them to stay in the CRS.
- ECs reviewed with each Annual Certification.
- Compliance evaluated at Cycle Verification



CRS EC Checklist

ational Flood Insur	cy Manageme ance Program	LAND SECURITY nt Agency		Ē	DMB No. 1660-0008 Expiration Date: November 30, 201
			TION CERT		
copy all pages of the			5.0		ent/company, and (3) building own
A1. Building Own		ION A - PROPERTY			FOR INSURANCE COMPANY US Policy Number:
Att. Dullding Own	ici s itario	CRS E	EC Checklist	ľ	rolley Humber.
A2. Building Stre Box No.	et Address (inc ither A2 of	luding Apt., Unit, Sui A3 must be com	te, and/or Bldg. No.) or P. opleted, with City, S	O. Route and tate, and Zip	Company NAIC Number:
City			State		ZIP Code
			ax Parcel Number, Legal I leted, with City, Stat		
A4. Building Use	(e.g., Resident	tial, Non-Residential,	Addition, Accessory, etc.)	1	
A5. Latitude/Lon	gitude: Lat	0.00	Long.	Horizontal Datum	: NAD 1927 NAD 1983
A6. Attach at lea	st 2 photograph	ns of the building if th	e Certificate is being used		
A7. Building Diag	gram Number	Must be full Dia	agram Number (e.g.	, "1A" of "1B", no	ot just "1")
b) Number of	f permanent flo	od openings in the c	NAME AND ADDRESS OF THE PARTY O		
d) Engineers If there as A9. For a building If there is n a) Square for	area of flood opening ed flood opening re engineered g with an attach o garage, you ootage of attach	gs? Yes I flood openings, at ed garage:	sq in No tach the certification fro ds blank or enter "0" if t	hat's the correct val	ne ICC Evaluation Service
d) Engineer If there as A9. For a buring If there is n a) Square for b) Number of	area of flood opening e engineered g with an attach o garage, you otage of attach	penings in A8.b gs? Yes Inflood openings, at the distribution of	sq in No tach the certification fro ds blank or enter "0" if t sq ft ttached garage within 1.0	m the engineer or th	ne ICC Evaluation Service
c) Total net d) Engineer If there an A9. For a building If there is n a) Square fo b) Number c c) Total net d) Engineer	area of flood op ed flood opening re engineered g with an attach o garage, you ootage of attach of permanent flo area of flood opening	gs? Yes In A8.b gs? Yes In flood openings, at ed garage: may leave the fiel ed garage ood openings in the allenings in A9.b	sq in No tach the certification fro ds blank or enter "0" if t sq ft ttached garage within 1.0 sq In	m the engineer or th hat's the correct val foot above adjacent g	ne ICC Evaluation Service
c) Total net: d) Engineer If there at A9. For a building, If there is n a) Square fc b) Number c c) Total net: d) Engineer If there ar	area of flood opening the engineered of swith an attack of garage, you obtage of attach of permanent floorage of flood opening the engineered SE	penings in A8.b gs?	sq in No tach the certification fro ds blank or enter "0" if t sq ft ttached garage within 1.0 gq in No tach the certification fro INSURANCE RATE MA	m the engineer or the hat's the correct valing the foot above adjacent grant the engineer or the price of the	e ICC Evaluation Service ue. rade e ICC Evaluation Service
c) Total net: d) Engineer If there at A9. For a building, If there is n a) Square fc b) Number c c) Total net: d) Engineer If there ar	area of flood opening the engineered of swith an attack of garage, you obtage of attach of permanent floorage of flood opening the engineered SE	penings in A8.b ps? Yee Inflood openings, at ed garage: may leave the fiel ed garage ood openings in the allenings in A9.b ps? Yes Inflood openings, att	sq in No tach the certification fro ds blank or enter "0" if t sq ft Ittached garage within 1.0 q in No tach the certification fro tach the certification fro	m the engineer or the hat's the correct valing the foot above adjacent grant the engineer or the price of the	e ICC Evaluation Service ue. rade e ICC Evaluation Service
c) Total net: d) Engineer If there at A9. For a building, If there is n a) Square fc b) Number c c) Total net: d) Engineer If there ar	area of flood opening the engineered of swith an attack of garage, you obtage of attach of permanent floorage of flood opening the engineered SE	penings in A8.b gs?	sq in No tach the certification fro ds blank or enter "0" if t sq ft ttached garage within 1.0 gq in No tach the certification fro INSURANCE RATE MA	m the engineer or the hat's the correct valing the foot above adjacent grant the engineer or the price of the	e ICC Evaluation Service e ICC Evaluation Service FION B3. State
c) Total net. d) Engineer If there at A9. For a building If there is n a) Square fe b) Number c c) Total net i d) Engineer If there at B1. NFIP Comm. B1. NFIP Comm. B4. Map/Pane) Number B10. Indicate the	area of flood opening engineered grating with an attach or garage, you cotage of attach of permanent floorage of flood opening engineered SE: B5, Suffix B5,	senings in A8.b gs?	sq in No tach the certification fro ds blank or enter "0" if t sq ft ttached garage within 1.0 sq in No tach the certification fro tach the certification fro INSURANCE RATE MA B2. County Nar B7. FIRM Panel Effective/ Revised Date (BFE) data or base flood mined Other/Source: 38: NGVD 1929 I	m the engineer or the hat's the correct valing foot above adjacent grammather than the engineer or the property of the propert	e ICC Evaluation Service e ICC Evaluation Service FION B3. State B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) B9:

e corresponding informati	ion from Section A.	FOR INS	OR INSURANCE COMPANY USE		
Building Street Address (Including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.					
State ZiP Code			Company NAIC Number		
_ RUII DING ELEVATION		V PEOUIPED	Ň		
			Finished Construction		
시트 (1 4일 : 1) 16일 16일 (16일 16일 16일 16일 16일 16일 16일 16일 16일 16일	생각 : : : : : : : : : : : : : : : : : : :	FORMATON TANA	_ Fillibiled Colleduction		
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.					
and an					
1988 Other/Source:					
must be the same as that u	used for the BFE.	or "NI/A" Chan	t the many remark and		
		el IV/A Cried	feet meters		
outliness, ordinopolog, or on			feet meters		
structural member (V Zones	s only)		feet meters		
or defined from the control			feet meters		
or equipment servicing the I	building		feet meters		
de next to building (LAG)		[feet meters		
de next to building (HAG)			feet meters		
st elevation of deck or stairs	, including		feet meters		
D – SURVEYOR, ENGINE	ER, OR ARCHITECT CER	RTIFICATION			
tificate represents my best e	efforts to interpret the data a	ed by law to ce available. I und	rtify elevation information. erstand that any false		
		No C	neck here if attachments.		
License	Number	15 02			
		_			
			Place Seal		
		_	Here		
State	ZIP Code				
Date	Telephone				
te and all attachments for (1)	community official (2) insura	ance agent/com	nany and (3) huilding owne		
			pany, and (e) samang come		
	Jnit, Suite, and/or Bidg. No. State BUILDING ELEVATION Construction Drawing required when construction that, a with BFE), VE, V1-V cording to the building diagramment of the provided by the same as that we a number. If items b) assement, crawlespace, or er structural member (V Zone or equipment servicing the cording the discation in Comments) de next to building (IAG) at elevation of deck or stairs b)—SURVEYOR, ENGINE aled by a land surveyor, entificate represents my best imprisonment under 18 U. A provided by a licensed lar License State State Date e and all attachments for (1)	State State SIP Code SIP Code SIP Code SIP Construction Drawings* Suitiding Under Correquired when construction of the building is complete with A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A cording to the building diagram specified in Item A7. In the elevations in Items a) through h) below. Signature of the building diagram specified in Item A7. In the elevations in Items a) through h) below. Signature of the building diagram specified in Item A7. In the elevations in Items a) through h) below. Signature of the building has been as that used for the BFE, we a number. If Items b) - e) are not relevant, entreasement, crawispace, or enclosure floor) structural member (V Zones only) or equipment servicing the building did location in Comments) service of the building (IAG) de next to building (IAG) de next to building (IAG) st elevation of deck or stairs, including D - SURVEYOR, ENGINEER, OR ARCHITECT CEI saled by a land surveyor, engineer, or architect authorize Itificate represents my best efforts to interpret the date a improviment under 18 U.S. Code, Section 1001. A provided by a licensed land surveyor? Yes State State State ZIP Code Telephone	State ZIP Code Company Bull DING ELEVATION INFORMATION (SURVEY REQUIRED Date Construction Drawings* Building Under Construction* Grequired when construction of the building is complete. At A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE,		



CRS Elevation Certificate Evaluation Report

For internal use only. Protected by the Privacy Act of 1974

Community: Denver	NFIP #:080046	Report Date: 6/7/2018 6:58:54 PM	Round: 1
Codes: C: Culled R: Residential NR: Non-Residential NA: Not Applicable P: Possible			
Address	Culled Certificate Diagram # Res/Non-Residential Flood Zone BFE	Lowest Floor Freeboard Mach/Equip Freeboard Att Garage Freeboard Enclosure Size	Errors: (refer to Error Key for detailed explanation)

	Error Key - Detailed Explanations					
ID	Description					
23	If Diagram# = 1, 1a, 1b, or 5, Area of Crawl must be blank					
24	24 If Diagram# = 1a, 1b, 2, 5, or 7, Difference between C2a and C2b cannot be less than 5					
47	47 Map/Panel Number is not the correct format.					
58	58 C2a_TopOfBottomFloor must be lower than C2f_LowestAdjacent when A7_BuildingDiagramNumber = 2, 2A, 2B, 4, or 9.					
153	C1_BuildingElevationLevels cannot be blank					
	Non-Compliance Key - Detailed Explanations					
ID	D Description					
P1	The Lowest Floor for compliance is below B9. (Base Flood Elevation).					
P11	C2.e. (machinery and/or equipment) is not elevated to at least the Base Flood Elevation level.					

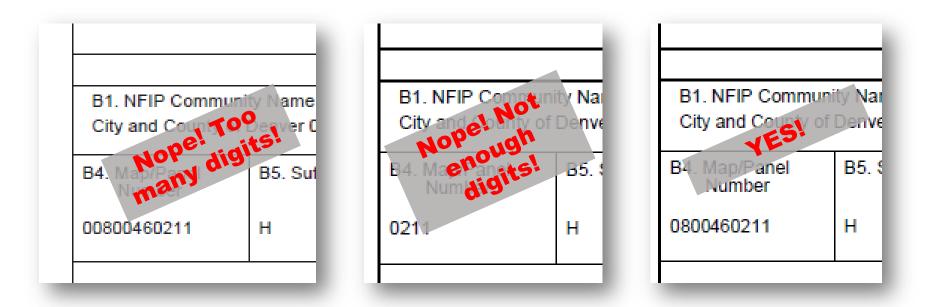


Common Errors

Can you believe how nitpicky that dang Panel Number is???



Common Errors - Is that a COMPLETE Panel Number???

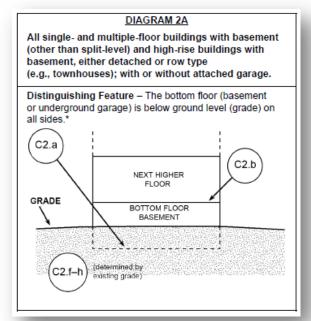


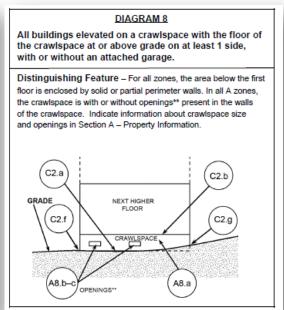
Map Panel number must be 10 digits – 6 digit CID+ 4 digit Panel number



Common Errors – Building Diagram

- Double check the selected Building Diagram.



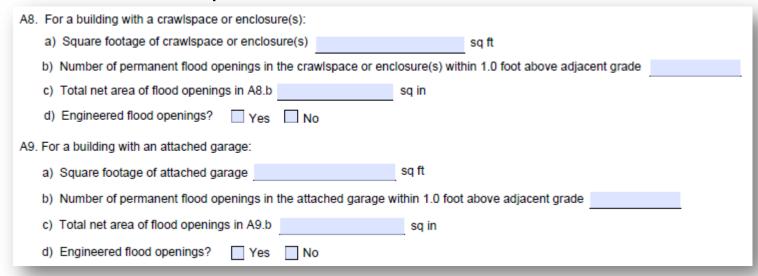


- Make sure the data entry makes sense based on the Building Diagram used.
 - For example on Diagram 2A, Item C2a, Top of Bottom Floor must be LOWER than Item C2f, Lowest Adjacent Grade.
- Diagrams 5 and 6 not common in Colorado. (Piers, Posts, Piles, Columns)
 - Exception: Manufactured homes with skirting that is only decorative are Diagram 5



Common Errors – Crawlspaces, Garages, Flood Vents

- At Items A8 and A9, if one row is filled in, there should be answers for EVERY row.
- If Item A9 is completed, so must be Item C2d.



- If you have engineered flood vents:
 - Make sure to include the current certification from the engineer or the ICC Evaluation Service.
 - Also make sure to include the actual coverage area in the notes (it's usually more than 1 ft²!)



Common Errors – Machinery & Equipment, Building Address

 Item C2.e. must ALWAYS be completed unless the building has NO machinery. Include descriptions and locations in the Comments section.

	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.	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)						
	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)						
	e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)						
	f) Lowest adjacent (finished) grade next to building (LAG)						
	g) Highest adjacent (finished) grade next to building (HAG)						
	h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support feet meters						

Provide the Building Street Address info on EVERY page.

IMPORTANT: In these spaces, co	opy the corresponding information	on from Section A.	F
Building Street Address (including	Apt., Unit, Suite, and/or Bldg. No.)	or P.O. Route and Box No.	F
City	State	ZIP Code	C
	SECTION C COMMUNITY	INFORMATION (ORTIONAL)	



Crikey, there's an error...



The Community CAN fix some sections...

- -Only Sections A & B
- Do not redline a signed form!
- Use the Correction Form, akaMemo for Correctness andCompletion

But NOT others...

- Only the surveyor can changeSection C
- Only the property owner or their rep can change Section E

[Community letterhead]

Memo of Review For Correctness and Completion

The attached FEMA Elevation Certificate has been reviewed by this office.

The items noted below are not correct on the attached form and should read as entered on this page.

			SECTI	ON A - PROPERTY INFOR	MATION	For Insurance Company Use:
A1.	Building Owner's Nam	ne				Policy Number
A2.	Building Street Addres	ss (including Apt.,	Unit, Suite, and/or Blo	lg. No.) or P.O. Route and Box	No.	Company NAIC Number
	City State	ZIP Code				
A3.	Property Description (Lot and Block Nu	mbers, Tax Parcel Nu	mber, Legal Description, etc.)		
A5. A6. A7.	Building Use (e.g., Re Latitude/Longitude: La Attach at least 2 photo Building Diagram Nun For a building with a c a) Square footage of b) No. of permanent enclosure(s) within c) Total net area of fi d) Engineered flood	at Long. ographs of the bunber rawlspace or enc crawlspace or er flood openings in 1.0 foot above a	Horiz Ilding if the Certificate Ilosure(s): Inclosure(s) the crawlspace or Indiparent grade	ontal Datum: NAD 1927 s being used to obtain flood ins A9. For a sq ft a) S b) N y sq in c) T	urance. a building with an attac Square footage of attac	hed garage sq ft openings in the attached garage ljacent grade openings in A9.b sq in
	a) Engineered flood			ISURANCE RATE MAP (FII	•	
				,	•	
B1.	NFIP Community Nam	e & Community N	lumber E	2. 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) (Zo AO, use base flood depth)
311.	☐ FIS Profile Indicate elevation date	☐ FIRM um used for BFE in a Coastal Barr	☐ Community Determin Item B9: ☐ NGVD	_ ,	be) Other (Describe) Yes
Loc	al Official's Name			Title		
Cor	nmunity Name			Telephone		
				Date		
Sign	nature			Date		

Best Practices



Best Practices – Recommendations for Owners/Submitters

- Don't pay the surveyor until the community approves the EC.
 There's no leverage to get corrections once the surveyor has been paid.
- Submit a draft EC BEFORE its signed to community comments.
- ALWAYS include pictures; show the whole building, each side, equipment, vents.
- ALWAYS use the comments sections to provide additional details needed to clarify any.



Best Practices for Communities

- -Get a draft copy of the EC before it's signed. Provide comments and have them resubmit.
- –Don't submit ECs to ISO that you don't need to submit!
 - Only submit ECs for insurable structures (not detached garages, sheds, etc.)
 - Only submit ECs for new construction or Substantial Improvement
 - ISO will review all ECs they receive; don't set yourself up for more work.
- -File management is important for your own sanity.
 - Keep ECs not needed for CRS separate.
 - Use a descriptive file naming convention.
- –Sign up to get the NFIP/CRS Update Newsletter. https://crsresources.org/100-2/newsletter/



Let's chat...

aka Questions???

18 Presentation Tit



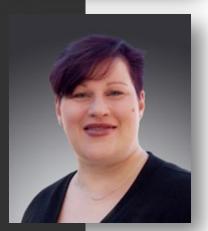
May the EC review odds be ever in your favor!

Thank you!



Jeremy Hamer, PE, CFM
Floodplain Administrator
City & County of Denver, Public Works –
Engineering and Regulatory

jeremy.hamer@denvergov.org



Kimberley Pirri, PE, CFM Senior Engineer AECOM

kimberley.pirri@aecom.com

