EC QUICK REFERENCE GUIDE

DHS/FEMA Region IX **Version Date: August 2007**

- ❑ *If any item does not apply to building, enter "N/A" for not applicable.*
- ❑ *Comments in this guide cannot & are not intended to apply to all situations.*
- ❑ *Please refer to the "Elevation Certificate & Instructions" for details.*

SECTION A: A1.-A4. Enter building owner(s), **address of building being certified** & lot and block numbers. If address is a rural route or a P. O. box, enter lot & block numbers, tax parcel number, legal description, or a brief location description based on distance & direction from a fixed point of reference. A map may be attached to show building location on property.

A5. Provide latitude & longitude coordinates for center of front of building. Use either **decimal degrees** (e.g., 39.5043°, -110.7585°) to at least 4 decimal places or better, or **degrees, minutes, seconds** (e.g., 39° 30' 15.5", -110° 45' 30.7") with seconds to at least 1 decimal place or better. The lat & long coordinates must be accurate within 66 feet. If the EC is being certified by other than a licensed surveyor, engineer, or architect, this info. is not required. Provide type of datum used to obtain lat & long.

A6. For flood insurance through NFIP, provide at least 2 photos showing front & rear of building taken w/in 90 days of certification date with views confirming building description & diagram number in Item A7. For split-level/multi-level areas, provide 2 additional photos with side views of building. All photos must be color & be at least 3"x3". Digital photographs are acceptable.

A7. Enter appropriate diagram number (1 through 8) based on building type, as illustrated on Pages 6 & 7. If unsure of correct diagram number, select best option or provide a sketch or photograph of building & enter all elevations in C2.a-g.

A8.a & A9.a: Provide **square footage of crawl space or enclosure(s) below lowest elevated floor of elevated building and/or attached garage.** Measure from the outside. Examples of elevated buildings constructed with crawl space & enclosure(s) are shown in Diagrams 6-8 on page 8. Use Diagram 2 or 4 for a building constructed with a crawl space floor below the exterior grade on all sides.

A8.b-c & A9.b-c Enter in Item A8.b and/or A9.b number of **permanent flood openings** in crawl space / enclosure(s) walls / attached garage no higher than 1 foot above adjacent grade. Include **openings in garage door** no higher than 1 foot above adjacent grade. Estimate **total net area** of all permanent flood openings in square inches, excluding any bars, louvers, or other covers of permanent flood openings & enter total in Items A8.c and/or A9.c. **If net area cannot be estimated,** provide size of flood openings without consideration of any covers & indicate in Comments area type of cover in flood openings. If crawl space / enclosure(s) walls / garage have no permanent openings within 1 foot above adjacent grade, enter "0" (zero) in Items A8.b-c and/or A9.b-c.

SECTION C: For all zones except AO & A (without BFE), ***or*** if certificate is being used for a LOMA or LOMR-F. For Zone AO or Zone A (w/o BFE), complete Section E. To obtain all required elevations, it may be necessary to enter building. See Instructions, page 3, for more info. & tips on determining crawl space floor elevations.

C1. A post-construction EC is required when construction is complete.

- ❑ For **building under construction**, include only surveyed elevations in Items C2.a-g. Enter elevations from construction plans/drawings in Comments area of Section D.
- ❑ **Select "Finished Construction"** ***only*** after all machinery and/or equipment (i.e., furnaces, hot water heaters, heat pumps, a/c, elevators & associated equipment) have been installed ***&*** grading around building is complete.

C2. A field survey is required for Items C2.a-g. Provide benchmark used, vertical datum for benchmark & any datum conversion necessary. Most control networks will assign a unique identifier for each benchmark. For example, National Geodetic Survey uses Permanent Identifier (PID). For benchmark utilized, provide PID or other unique identifier assigned by maintainer of benchmark. Also provide vertical datum for benchmark elevation. Show conversion from field survey datum used if it differs from datum used for BFE entered in Item B9 & indicate conversion software used. **All elevations for EC, including elevations for Items C2.a-g, must be referenced to datum on which BFE is based.** Show datum conversion, if applicable, in this section or in Comments area of Section D. For property experiencing ground subsidence, the most recent reference mark elevations must be used for determining building elevations. If subsidence is involved, BFE should not be adjusted. Enter elevations in Items C2.a-g in tenths of feet or tenths of meters in Puerto Rico.

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

ELEVATION CERTIFICATE

Important: Read the instructions on pages 1-8

OMB No. 1660-0008
Expires February 28, 2009

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 crawl space or enclosure(s), provide:
- a) Square footage of crawl space or enclosure(s) _____ sq ft
- b) No. of permanent flood openings in the crawl space or enclosure(s) walls within 1.0 foot above adjacent grade _____
- c) Total net area of flood openings in A8.b _____ sq in

A9. For a building with an attached garage, provide:
- a) Square footage of attached garage _____ sq ft
- b) No. of permanent flood openings in the attached garage walls within 1.0 foot above adjacent grade _____
- c) Total net area of flood openings in A9.b _____ sq in

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.
☐ FIS Profile ☐ FIRM ☐ Community Determined ☐ Other (Describe) _____

B11. Indicate elevation datum used for BFE in Item B9: ☐ NGVD 1929 ☐ NAVD 1988 ☐ Other (Describe) _____

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☐ No
Designation Date_____ ☐ CBRS ☐ 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-g below according to the building diagram specified in Item A7.

Benchmark Utilized _____ Vertical Datum _____

Conversion/Comments _____

		Check the measurement used.	
a)	Top of bottom floor (including basement, crawl space, or enclosure floor) _____.___	☐ feet	☐ meters (Puerto Rico only)
b)	Top of the next higher floor _____.___	☐ feet	☐ meters (Puerto Rico only)
c)	Bottom of the lowest horizontal structural member (V Zones only) _____.___	☐ feet	☐ meters (Puerto Rico only)
d)	Attached garage (top of slab) - lowest point on slab _____.___	☐ feet	☐ meters (Puerto Rico only)
e)	Lowest elevation of machinery or equipment servicing the building (Describe type of equipment in Comments) _____.___	☐ feet	☐ meters (Puerto Rico only)
f)	Lowest adjacent (finished) grade (LAG) _____.___	☐ feet	☐ meters (Puerto Rico only)
g)	Highest adjacent (finished) grade (HAG) _____.___	☐ feet	☐ meters (Puerto Rico only)

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.

Certifier's Name License Number

Title Company Name

Address City State ZIP Code

Signature Date Telephone

PLACE SEAL HERE

FEMA Form 81-31, February 2006 See reverse side for continuation. Replaces all previous editions

SECTION B: Complete all items (B1-12) as described. **Complete EC using FIRM panel for the building's location in effect at time of certification.** If a **LOMA or LOMR-F** has been issued by FEMA, provide letter date & case number in the Comments area of Section D or Section G, as appropriate.

For a building in an area annexed by one community but shown on another community's FIRM, enter: (1) the community name & 6-digit number of the annexing community in Item B1, (2) the name of the new county in Item B2, and (3) the FIRM index date for the annexing community in Item B6. **Enter information from actual FIRM panel that shows building location**, even if it is the FIRM for previous jurisdiction, in Items B4, B5, B7, B8, & B9.

B1. Enter complete name of community in which building is located & associated 6-digit community number. For a newly incorporated community, use name and 6-digit number of the new community.

B2. Enter **county** or counties where community is located. Where applicable, enter "unincorporated area" or "independent city."

B3. Enter 2-letter state abbreviation (for example, VA, TX, CA).

B4.-B5. Map/Panel Number & Suffix: Enter 10-character "Map Number" or "Community Panel Number" on FIRM where building is located. Enter suffix in Item B5.

B6. FIRM Index Date: enter effective date or map revised date on FIRM Index.

B7. FIRM Panel Effective/Revised Date: enter map effective date or map revised date on the FIRM panel (i.e., latest of all dates shown on map).

B8. Flood Zone(s): enter all flood zones, in which building is located.

B9. Base Flood Elevation(s): using Flood Insurance Study (FIS) Profile, Floodway Data Table, or FIRM panel, locate building & enter all appropriate BFEs (or base flood depth for Zone AO) for each flood zone in Item B8. For BFE obtained from another source, enter in Item B9. For Zone A (w/o BFE), complete Section E & enter N/A in Item B9. Enter BFE in tenths of feet or tenths of meters in Puerto Rico.

B10. Indicate source of BFE in Item B9. If "Other," describe source.

B11. Indicate vertical elevation datum for BFE's on FIRM. Datum is shown in "Map Legend" and/or "Notes to Users" on the FIRM.

B12. Indicate if building is located in a CBRS area or OPA. Information on CBRS areas & OPAs may be found at www.fema.gov/fhm/fmc_cbrs.shtm.

C2.a-d. Building elevations:

- ❑ **In Items C2.a-c:** measure, excluding any attached garage, & using the selected building diagram in Item A7.
- ❑ **In A zones:** measure elevation at top of each floor & complete Items C2.a & C2.b.
- ❑ **Elevated on a crawl space, Diagram 8:** enter elevation of top of crawl space floor in Item C2.a, whether or not crawl space has permanent flood openings.
- ❑ **Attached garage:** measure lowest point of top of garage slab & complete Item C2.d.
- ❑ **In V zones:** complete Item C2.c after measuring elevation at bottom of lowest horizontal structural member supporting the floor (see drawing in Instructions).

C2.e. Enter the **lowest platform elevation** of at least one of the following machinery & equipment items: elevators & their associated equipment, furnaces, hot water heaters, heat pumps & a/c in an attached garage or enclosure or on an open utility platform that provides utility services for building. Indicate machinery/equipment type in the Comments area of Section D or Section G. For additional information on insurance & floodplain management, see Instructions.

C2.f-g. Adjacent grade is elevation of ground, sidewalk, patio slab, or deck support immediately next to building. For Zone AO, use natural grade elevation, if available. If the certificate is to be used to support a request for a LOMA or LOMR-F:

- ❑ Provide in the Comments area the lowest adjacent grade elevation measured at the deck support or stairs if lower than the building's lowest adjacent grade.
- ❑ Measure in tenths of feet or tenths of meters in Puerto Rico.

SECTION D: This section of the EC may be signed by only a land surveyor, engineer, or architect authorized by law to certify elevation information. Note certification statement & penalties. Place license number, seal (as allowed by State licensing board), signature, and the date in the box in Section D. Use the Comments area of Section D, on the back of the certificate, to provide datum, elevation, or other relevant information not specified on the front.

Repeat address information from Section A in order to correctly match pages 1 and 2.

SECTION D (continued): **When making copies, copy both sides of the certificate.** Use comments area to provide datum, elevation, or other relevant information not specified on the front. **For item C2.e, describe machinery/equipment type here.**

SECTION E: Complete if the building is located in Zone AO or Zone A (without BFE). Otherwise, complete Section C instead. To support a LOMA or a LOMR-F request, complete Sections A, B, and C. Explain in Section F Comments area if measurements provided in Items E1-E4 are based on "natural grade."

E1.a The height (in tenths of feet or tenths of meters in Puerto Rico) of the top of the bottom floor (elevation C2.a in the applicable diagram) above or below the highest adjacent grade (HAG).

E1.b. The height (in tenths of feet or tenths of meters in Puerto Rico) of the top of the bottom floor (elevation C2.a in the applicable diagram) above or below the lowest adjacent grade (LAG).

For buildings in Zone AO, the community's floodplain management ordinance requires the lowest floor of the building be elevated above the highest adjacent grade at least as high as the depth number on the FIRM. Buildings in Zone A (without BFE) may qualify for a lower insurance rate if an engineered BFE is developed at the site.

SECTION G: The **community 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.

Section C of the Elevation Certificate records the elevation of various building components. **The community must: (1) determine the lowest floor of the building and (2) whether the building, as constructed, complies with the community's floodplain management ordinance.** Completion of Section G by the community official will meet the floodplain management documentation requirement.

If the authorized community official completes Sections C, E, or G, complete the appropriate item(s) and sign this section.

G1.

- ☐ Check if Section C is completed with elevation data from other documentation, including elevations obtained from the Community Rating System Elevation Software, that has been signed and embossed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. Indicate the source of the elevation data and the date obtained in the Comments area of Section G.
- ☐ If you are both a community official and a licensed land surveyor, engineer, or architect authorized by law to certify elevation information, and you performed the actual survey for a building in Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/A1-A30, AR/AE, AR/AH, or AR/AO, you must also complete Section D.

G2. Check if information is entered in Section E by the community for a building in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.

G3. Check if the information in Items G4.-G9. has been completed for community floodplain management purposes to document the as-built lowest floor elevation of the building.

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

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

☐ Check here if attachments

SECTION E - BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE)

For Zones AO and A (without BFE), complete Items E1-E5. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C. For Items E1-E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.

E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).
a) Top of bottom floor (including basement, crawl space, or enclosure) is _____. ____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.
b) Top of bottom floor (including basement, crawl space, or enclosure) is _____. ____ ☐ feet ☐ meters ☐ above or ☐ below the LAG.

E2. For Building Diagrams 6-8 with permanent flood openings provided in Section A Items 8 and/or 9 (see page 8 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's 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)~~ Strike

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. and G9.

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 (PR) Datum_____

G9. BFE or (in Zone AO) depth of flooding at the building site: _____. _____ ☐ feet ☐ meters (PR) Datum_____

Local Official's Name | Title

Community Name | Telephone

Signature | Date

Comments

☐ Check here if attachments

E2. For Building Diagrams 6-8 with permanent flood openings, the height (in tenths of feet or tenths of meters in Puerto Rico) of the next higher floor or elevated floor (elevation C2.b in the applicable diagram) above or below the highest adjacent grade (HAG).

E3. For an attached garage, the height (in tenths of feet or tenths of meters in Puerto Rico) of the top of garage slab. *If this item does not apply to the building, enter "N/A" for not applicable.*

E4. Platform elevation supporting the machinery and/or equipment servicing the building: enter height (in tenths of feet or tenths of meters in Puerto Rico), in relation to the highest adjacent grade (HAG) next to the building. Indicate machinery/ equipment type in the Comments area of Section F. *If this item does not apply to the building, enter "N/A" for not applicable.*

E5. For Zone AO without flood depth, the community will need to determine whether the top of the bottom floor is elevated in accordance with the community's floodplain management ordinance & certify this information in Section G.

SECTION F: This section is for certification of measurements taken by a property owner or property owner's representative in Sections A, B, and E. The address entered must be the actual mailing address of the property owner or property owner's representative who provided the information on the certificate.. Community officials completing Section E certify in Section G.

G4. Permit number or other identifier to key the Elevation Certificate to the permit issued for this building.

G5. Date permit issued for this building.

G6. Date Certificate of Compliance/Occupancy Issued or similar written official documentation of as-built lowest floor elevation was issued by the community as evidence that all work authorized by the floodplain development permit has been completed in accordance with the community's floodplain management laws or ordinances.

G7. Check "New Construction" or "Substantial Improvement." See Elevation Certificate instructions or the community's floodplain ordinances for definitions of "substantial improvement" & "substantial damage."

G8. Determine & enter the as-built lowest floor elevation (including basement) after building construction is complete & final inspection has been made to confirm that the building is built in accordance with the permit, the approved plans, and the community's floodplain management laws or ordinances. Indicate elevation datum used.

G9. Verify the specific BFE (or base flood depth) for this building using appropriate FIRM panel, FIS Profile, or other data source & indicate the elevation datum used.

Enter all listed information for community official: title, telephone number and name of community. Official must sign and date certificate.

When items G4-G9 are completed, use the comment section to document building compliance for building features such as machinery/equipment.