EC QUICK REFERENCE GUIDE  
DHS/FEMA Region IX  
Version Date: August 2007  
This guide is for use only as a quick reference for completing the Electrical Code (EC) Form B-11. It is not intended to apply to all situations.  
Please refer to the "Elevation Certificate & Instructions" for details.

SECTION A: Enter building owner(s) address of building being certified & lot and block numbers. If the 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.

A.1. Provide latitude & longitude coordinates for center of front of building. Use either degrees, minutes, seconds (e.g., 39°30’15.5”, -110°45’30.7”) with seconds to at least 1 decimal place or better, or degrees, minutes, seconds (e.g., 39°30.2”, -110°45.5”) with decimal degrees to at least 1/100th of a degree. 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. Type of data used to obtain lat & long.

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

A.3. Enter approximate 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.

A.4. Provide square footage of crawl space or enclosure(s) below lowest elevated floor of building &/or attached garage. Measure the outside. Examples of elevated buildings constructed with crawl space &/or enclosure(s) are shown in Diagrams 2 & 4. Use 0 sq. ft. for a building constructed with a crawl space floor below the exterior grade on all sides. A8.b & A9.b: Enter in Item A8.b & A9.b number of permanent flood openings in crawl space/enclosure walls/enclosed garage wall. A9.b: Enter height of permanently above exterior 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 feet, including any bars, louver, or grated openings of 1/4 ft. opening (1” x 1”); enter 0 if no such openings exist. A9.c: Enter either: “0” (zero) or a) Square footage of space or enclosure(s), provide: b) Total net area of flood openings in the space or enclosure(s) walls within 1.0 foot above adjacent grade c) Total net area of flood openings in A9.b/sq ft sq m

B.1. Enter Building Owner’s Name, Building Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.

B.2. City, State ZIP Code

B.3. Enter complete name of community in which building is located & associated 6-digit community number. For a newly incorporated community, indicate source of BFE in Item B9. For Zone A (w/o BFE), complete Section E & enter N/A in Item B9. 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 units of feet or tenths of meters in Puerto Rico.

B.5. FIRM Index

B.6. Map/Panel Number

B.7. Effective/Revised Effective Date

B.8. Flood Zone(s)

B.9. Base Flood Elevations: Use Flood Insurance Study (FIS) Profile, Floodway Data Table, or FIRM panel, locate building & enter all applicable BFEs (or base floor depth for Zone A) 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 units of feet or tenths of meters in Puerto Rico.

B.10. Indicate the source of the Base Flood Elevation (BFE) data or base floor depth entered in Item B9.

C.1. A post-construction EC is required when construction is complete.

C.2. 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 maintainor of benchmark. Also provide vertical datum for benchmark elevation. Show conversion from field survey datum used if it differs from datum used 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 conversion data, 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 building is newly constructed, BFE should not be adjusted. Enter elevations in Items C2.a-g in units of feet or tenths of meters in Puerto Rico.

C.2.a. Building elevations:

C.2.b. In Items C2.a-c, measure, without any attached garage, & using the selected building diagram in Item A7.

C.2.c. In Items C2.d-c, measure, using Flood Insurance Study (FIS) Profile, Floodway Data Table, or FIRM panel, locate building & enter all applicable BFEs (or base floor depth for Zone A) 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 units of feet or tenths of meters in Puerto Rico.

C.2.d. Elevate 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.

C.2.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 on or open a utility platform that provide utility services for building. Enter machinery/equipment type in the Comments area of Section D or Section G. For additional information on Insurance & floodplain management, see Instructions.
IMPORTANT: In these spaces, copy the corresponding information from Section A.

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

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).

- Top of foot of foundation (including basement, crawl space, or enclosure) is
  - feet meters above or below the HAG.
- Top of foot of building equipment servicing the building is
  - feet meters above or below the HAG.

E2. For Buildings Diagrams 6-8 with permanent flood openings, the next higher floor or elevated floor (elevation C2.b in the applicable diagram) above or below the highest adjacent grade (HAG). For buildings in Zone AO, the community's floodplain management ordinance requires the lowest floor of the building to be elevated above the highest adjacent grade at least as high as the elevation of the bottom floor (elevation C2.a in the applicable diagram) above or below the lowest adjacent grade (LAG).

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 measurement is available, the top of the bottom floor elevated in accordance with the community's floodplain management ordinance?
  - Yes
  - No

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

SECTION F: The property owner or owner's representative 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 determine whether the lowest floor of the building is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG). If the community official completes Sections E, or G, the community official will meet the floodplain management documentation requirement.

G1. Check if Section C is completed with elevation data from other documents, 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. If the authorized community official completes Sections E, or G, complete the appropriate item(s) and sign this section.

G2. Check if Section D is completed with elevation data from other documents, 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. If the authorized community official completes Sections E, or G, complete the appropriate item(s) and sign this section.

G3. If you are both a community official and a licensed land surveyor, engineer, or architect authorized by law to certify elevation information, you must also complete Section D.

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.

G7. Check "New Construction" or "Substantial Improvement." See Elevation Certificate instructions or the community's floodplain management ordinances for definitions of "substantial improvement" and "substantial damage." Determine & enter the as-built lowest floor elevation after building construction is complete & final inspection has been made to confirm that the building is in accordance with the permits, the approved plans, and the community's floodplain management laws or ordinances.

G8. Determine if the building is located in Zone A (without BFE) or Zone AO.

G9. BFE or (in Zone AO) depth of flooding at the building site.

Local Officials Name Title

Community Name Telephone

Signature Date

Comments

FEMA Form 81-31, February 2006
See reverse side for continuation.

Replaces all previous editions

E2. For Buildings Diagrams 6-8 with permanent flood openings, 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.

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.

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.

G1. Property owner or owner's representative: Enter all listed information for property owner or property owner's representative who provided the information on the certificate.

G2. Check if Section C is completed with elevation data from other documents, 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, and you performed the actual survey for a building in Zones AI-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR-AI-A30, AR/RE, AR/AL/AH, or AR/AO, you must also complete Section D.

G3. If information is entered in Section E by the community official for a building in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.

G4. If information is entered in Section E by the community official for a building in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.

G5. If information is entered in Section E by the community official for a building in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.

G6. If information is entered in Section E by the community official for a building in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.

G7. Check "New Construction" or "Substantial Improvement." See Elevation Certificate instructions or the community's floodplain management ordinances for definitions of "substantial improvement" and "substantial damage." 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 in accordance with the permit, the approved plans, and the community's floodplain management laws or ordinances.

G8. Determine if the building is located in Zone A (without BFE) or Zone AO.

G9. BFE or (in Zone AO) depth of flooding at the building site. If this item does not apply to the building, enter "N/A" for not applicable.

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