

# Map MODERNIZATION

Federal Emergency Management Agency



**FEMA's Flood Hazard Mapping Program**

# Guidelines and Specifications for Flood Hazard Mapping Partners

*Appendix K: Format and Specifications  
for Flood Insurance Rate Maps*



**FEDERAL EMERGENCY MANAGEMENT AGENCY**

[www.fema.gov/mit/tsd/dl\\_cgs.htm](http://www.fema.gov/mit/tsd/dl_cgs.htm)

**FINAL**  
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## Appendix K

### Formats and Specifications for Flood Maps

Mapping Partners are to use this Appendix as a guide for the production and use of Flood Insurance Rate Maps (FIRMs). It sets forth specifications for the graphic elements that are shown on the FIRMs, including the mapping format representation, presentation of base map information, map frame sizing, legend, title block and notes to user appearance, and presentation of flood hazard information. It also addresses the specifications for the FIRM Map Index, Flood Boundary and Floodway Map (FBFM) Map Index and all Preliminary and Final map deliverables.

*\*NOTE: FEMA recognizes that not all Computer-Assisted Drafting and Design software support identical font styles. Therefore, the font specifications listed throughout this Appendix are to be used as a starting reference point only; any font herein that cannot be matched shall be emulated as closely as possible using True Type fonts, with consideration given to space constraints and the overall presentation of the finished product.*

[February 2002]

#### K.1 Mapping Methods and Formats

There are two methods of FIRM production- Digital and Manual. There are several distinct classifications of FIRM formats. These are Map Initiatives, Partial Map Initiatives, Countywide, Single-Jurisdiction, FIRM/Flood Insurance Study (FIS) Report Combination, and Standard (separate FIRM and FBFM). Many of these methods and formats can be mixed and interchanged, as with a Digital Partial Map Initiatives FIRM.

[February 2002]

##### K.1.1 Digital Method

The assigned Mapping Partner shall produce Digital FIRMs whenever possible for new FIRMs and for revisions of existing FIRMs. Manual (non-digital) techniques shall be employed in FIRM production only when it is more cost effective to do so and when there is not a specific request from the FEMA Regional office to convert the FIRM to digital format.

[February 2002]

##### K.1.2 Manual Method

The word “manual” refers to the standard color separation techniques primarily used in the 1970s, 1980s, and early 1990s for FIRM production. Other factors may also influence the conversion of a manual cartographic FIRM to a digital FIRM such as a community’s ability and desire to use a digital product and the availability of digital base maps.

It is important to note that when processing the revision of an existing FIRM manually, the assigned Mapping Partner must maintain the appearance of the existing FIRM by emulating all fonts, line weights, line styles, and screens. The specifications found in the Guidelines and Specifications for Flood Map Production Coordination Contractors, Appendix B, dated February 17, 1999, shall serve as guidance. Additionally, Mapping Partners performing manual revisions shall remove Elevation Reference Marks shown on the panels and identify the locations of bench marks within the community. See Volume 1, Section 1.4 for a discussion of bench mark selection.

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### **K.1.3 Map Initiatives Format**

The assigned Mapping Partner shall produce all FIRM creations and revisions in the Map Initiatives format whereby the information formerly shown separately on the FIRM and FBFM are combined and shown on the FIRM. The Map Repository address shall be added to the FIRM Index and in the legend of the panels that have been updated to the Map Initiatives format. If a full conversion to the Map Initiatives format cannot be justified, the Partial Map Initiatives format should be used.

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### **K.1.4 Partial Map Initiatives Format**

The assigned Mapping Partner shall use the Partial Map Initiatives format for revisions of Standard format FIRMs that do not affect the majority of the FIRM panels. The Partial Map Initiatives format combines all flood hazard information to be shown on the revised FIRM panels, thereby eliminating specific FBFM panels. The Partial Map Initiatives format should only be chosen for a revision that is not large enough to justify converting the entire community FIRM to Map Initiatives or Countywide format. An example of this would be a 10-panel Standard format community FIRM requiring a revision of two panels. In this case, the assigned Mapping Partner would revise the two affected panels in the Map Initiatives format and eliminate the corresponding FBFM panels.

When the Partial Map Initiatives option is chosen, the assigned Mapping Partner shall include special paragraphs to explain the mixed format in the FIS Report. The specifics of this are detailed in Appendix J of these Guidelines. Because the Partial Map Initiatives format often requires the FBFM Index to be reprinted, this appendix includes notes to be used for FBFM Index revisions (see Section K.3.1). These notes explain the elimination of FBFM panels. As with Map Initiative format, the Map Repository Address shall be added to the FIRM panels and Index.

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### **K.1.5 Countywide Map Format**

FIRMs will often be prepared in the FEMA Countywide format, whereby all jurisdictions within a given county are shown on one set of map panels. The assigned Mapping Partner shall prepare

new Countywide FIRMs in Map Initiatives format using digital production techniques. FEMA encourages the use of community- or county-supplied digital base maps for the production of countywide FIRMs; therefore, each base map supplied for this purpose will have its own unique specifications and appearance. The assigned Mapping Partner shall focus on the intent of the presentation and make every effort to conform to the standard base map specifications presented in Subsection K.4.1. A digital base map supplied by a community may contain unique graphic specifications, such as the portrayal of road centerlines or edge of pavement. The assigned Mapping Partner shall make changes to a digital base map only to facilitate map presentation, ease of use, or internal consistency in base map features; the assigned Mapping Partner shall coordinate these changes with the community that provided the data. Any significant deviations from the format presented in these Guidelines must be coordinated with the FEMA Lead or other designated FEMA staff.

There are several additional points to consider when creating a Countywide FIRM:

- Countywide mapping must provide seamless coverage within the entire county area. Any mismatches in floodplains, flood hazard information, base map information, etc., that previously existed between communities must be resolved.
- To ensure seamless coverage, portrayal of floodplains, Flood Profile and Floodway Data table information should be continuous for the length of the flooding sources. With that, the cross-section information must be re-lettered sequentially for the length of the detailed flooding sources.

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### **K.1.6 Multiple-County Communities**

When processing a countywide FIRM that contains a multiple-county community, the assigned Mapping Partner shall select from one of the three options listed in order of preference- retain the subject community-based FIRM (and revise if necessary) as indicated in Option 1 below, or superseded the community-based FIRM as indicated in Options 2 or 3 below. Seamless mapping coverage between all affected jurisdictions must be obtained and that overlapping coverage and/or disclaimed flood hazard information shall be avoided.

Before a decision is made on the processing method which occurs during Project Scoping phase (see Volume 1, Section 1.3), the following questions must be answered:

- Does the subject community prefer to keep its community-based FIRM?
- In how many counties does the subject community lie?
- How are the multiple-county communities shown on the FIRMs of surrounding counties?
- What is the status of the surrounding counties relative to countywide processing?
- Does the subject community have full jurisdiction over its lands?

- How much of the subject community falls within the county that is being processed?
- What is the map scale of the existing community-based FIRM?
- How many panels would be added to the countywide FIRM in order to include the subject community in its entirety?

Once the questions above have been answered and all information has been obtained, the final decision regarding processing shall be made in consultation with the FEMA Project Officer. The three options discussed below ensure seamless mapping coverage for all jurisdictions, and prevent overlapping and/or duplicated flood hazard information from being shown on two separate FIRMs.

#### **K.1.6.1 Processing Option 1**

Under this option, the community-based FIRM would be retained as a separate map, and the community would be shown as an “Area Not Included” (no flood hazard or base map information shown) on the countywide FIRM being processed and on the FIRMs for all surrounding of the counties in which the subject community falls. If a Digital Orthophoto Quadrangle (DOQ) base map is used for the FIRM, the base map imagery will continue through the Area Not Included. When this option is chosen, a concurrent community-based FIRM revision must be processed, if required, to ensure that seamless coverage between the multiple-county community and its surrounding counties in which it is located will be maintained. Minor revisions of the FIRMs for adjacent counties to ensure that no overlaps or gaps in coverage exist.

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#### **K.1.6.2 Processing Option 2**

Under this option, the entire community is mapped on the new countywide FIRM. This option shall be used when the following criteria are met:

- The multiple-county community can be shown on the new countywide FIRM without substantially increasing the panel count; and
- At least 70% of the community area is located within the countywide FIRM being processed.

When Option 2 is chosen, the assigned Mapping Partner shall notify the FEMA Map Service Center (MSC) to supersede the community-based FIRM for the multiple-county community. The MSC must also be notified to include a notation in the Flood Map Status Information System that the subject multiple-county community is shown in its entirety on the new countywide FIRM. The adjacent counties will continue to show the subject multiple-county community as an Area Not Included on their FIRMs, even if their FIRMs are converted to the countywide format at a future date. This decision will be made on a case-by-case basis with the FEMA Project Officer.

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### **K.1.6.3 Processing Option 3**

Apportion the multiple-county community such that it is shown on multiple countywide FIRMs. This option shall be used only when the following criteria are met:

- All adjacent counties in which the multiple-county community is located either already have Countywide FIRMs or will have in the near future; and
- The multiple-county community has been consulted and has not expressed significant concerns with being shown on more than one FIRM.

When Option 3 is chosen, if the processing of any of the contiguous countywide FIRMs that share the subject community are delayed (usually as a result of an appeal, protest, or other study complication), thereby making it impossible for all countywide FIRMs to become effective at the same time, the multiple-county community shall retain the community-based FIRM (see Option 1 above). In this situation, the assigned Mapping Partner must consult the FEMA Project Officer for a decision on how to proceed. Decisions will be made on a case-by-case basis, but must result in continuing and non-conflicting coverage for all land areas being mapped. Once all issues causing the delay are resolved, the assigned Mapping Partner can then proceed with the inclusion of the community into each countywide FIRM.

When Option 3 is chosen, the assigned Mapping Partner must notify the MSC to supersede the community-based FIRM for the multiple-county community.

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### **K.1.7 Single-Jurisdiction (Community-Based) Format**

For single-jurisdiction FIRMs, all areas within a single community's jurisdiction are shown on one FIRM. The assigned Mapping Partner shall prepare a single-jurisdiction FIRMs when funding constraints or lack of suitable base map data prohibit full countywide mapping.

Many FIRM updates affect only a portion of a community (i.e., only a few map panels instead of the entire community). When this is the case, a decision must be made on whether to convert an entire manual FIRM to digital format during the revision or whether to process revisions manually. The decision shall be made with the following in mind:

- FEMA's goal is to convert its entire inventory of manual maps to a digital format.
- One of the primary benefits of digital mapping is that it will reduce the cost of future revisions.
- Many of the steps required to convert a study to digital format require nearly as much time for a partial digital study as for a full digital study, thus reducing costs in the long run.

Digital conversion of only the revised panels (partial digital conversion) is not the preferred option, but may be undertaken when funding constraints prohibit full digital conversion.

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### **K.1.8 Report/Map Combination Format**

For small communities that are shown on single-jurisdiction FIRMs, a combination FIRM and FIS report may be created. This involves printing one FIRM panel as defined under the Map Initiates format described above containing all identified floodplains for the community as well as a condensed version of the FIS report. The use of this format should eliminate the requirement to create and print a separate FIS report. Space limitations will guide the decision on using this map format. At a minimum, the assigned Mapping Partner shall include the Flood Profiles, and Floodway Data and Summary of Flood Discharges tables on the FIRM. The assigned Mapping Partner shall also modify the FIRM Notes to Users to reference the map instead of the FIS report as the source of certain pertinent information. Examples of the notes and how they are modified are shown in Section K.7.1. The decision to create a combination FIRM and FIS report shall be made in consultation with a FEMA Project Officer.

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### **K.1.9 Standard Map Format**

Unless specifically directed to do otherwise, the assigned Mapping Partner shall not produce new or revised FIRMs and FBFMs in the Standard format as separate FIRM and FBFM panels. All revisions should be processed in either one or a combination of the formats described above.

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## **K.2 Map Frames**

Mapping Partners shall select frame sizes for Map Indexes and FIRM panels depending on whether the FIRM is being produced digitally or manually and whether the Index may be produced on 8 ½" x 11" paper.

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### **K.2.1 Z-fold Digital Frame Sizes**

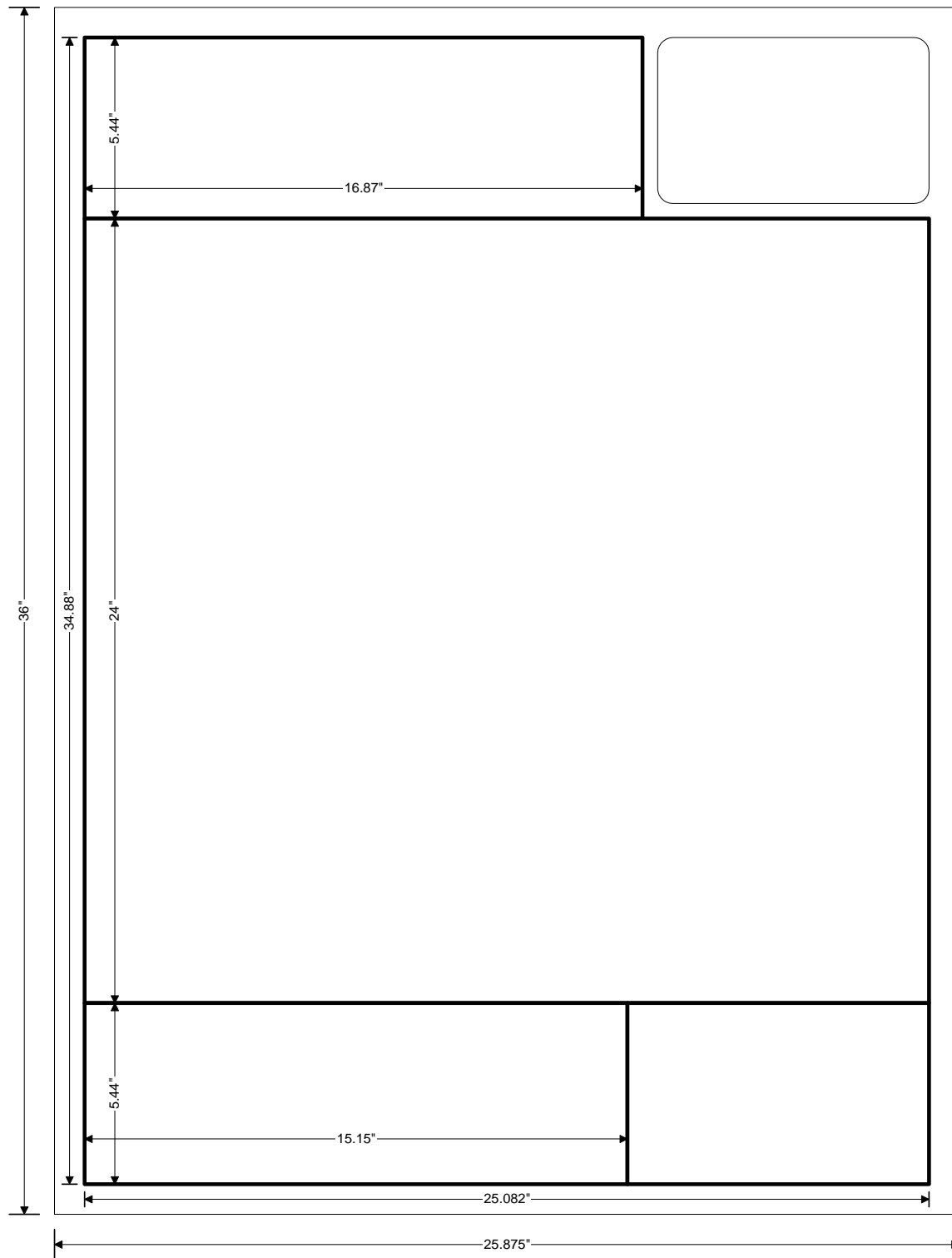
All Digital FIRMs, including most Map Indexes, shall be printed in map frames of the dimensions shown below:

- Trimmed paper size: Height 25.875" x Width 36"
- Map border size: Height 25.082" x Width 34.880"
- Legend borders: Height 16.87" x Width 5.44"
- Notes to User borders: Height 15.15" x Width 5.44"
- Title Block box:
  - Overall dimensions: Height 7.85" x Width 4.40"
  - Striped side box: Height 7.225" x Width 1.10"
  - Title box: Height 7.225" x Width 3.30"
  - Striped upper box: Height 0.50" x Width 1.10"
  - Upper box: Height 0.50" x Width 3.30"

The map image size (the image inside the FIRM neatline) shall vary depending on the latitude of the community being mapped. Overedge areas may be included if they fit inside the map border.

Figure K-1 provides the dimensions of a Digital FIRM map frame.





**Figure K-1. Digital Map Frame Dimensions**

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## **K.2.2 Z-fold Manual Frame Sizes**

Manually-prepared FIRMs are printed in one of five map frame sizes, the dimensions of which are shown below. Refer to the diagram in Figure K.14-2 for additional Map Index dimensions.

|         |                     |                              |
|---------|---------------------|------------------------------|
| A Frame | Trimmed paper size: | Height 25.79" x Width 18.76" |
|         | Map neatline size:  | Height 25.0" x Width 14.2"   |
| B Frame | Trimmed paper size: | Height 25.79" x Width 22.33" |
|         | Map neatline size:  | Height 25.0" x Width 18.0"   |
| C Frame | Trimmed paper size: | Height 25.79" x Width 26.28" |
|         | Map neatline size:  | Height 25.0" x Width 21.6"   |
| D Frame | Trimmed paper size: | Height 25.79" x Width 29.03" |
|         | Map neatline size:  | Height 25.0" x Width 25.4"   |
| E Frame | Trimmed paper size: | Height 25.79" x Width 37.52" |
|         | Map neatline size:  | Height 25.0" x Width 32.9"   |

Figure K-2 provides the dimensions of a Manual FIRM map frame.

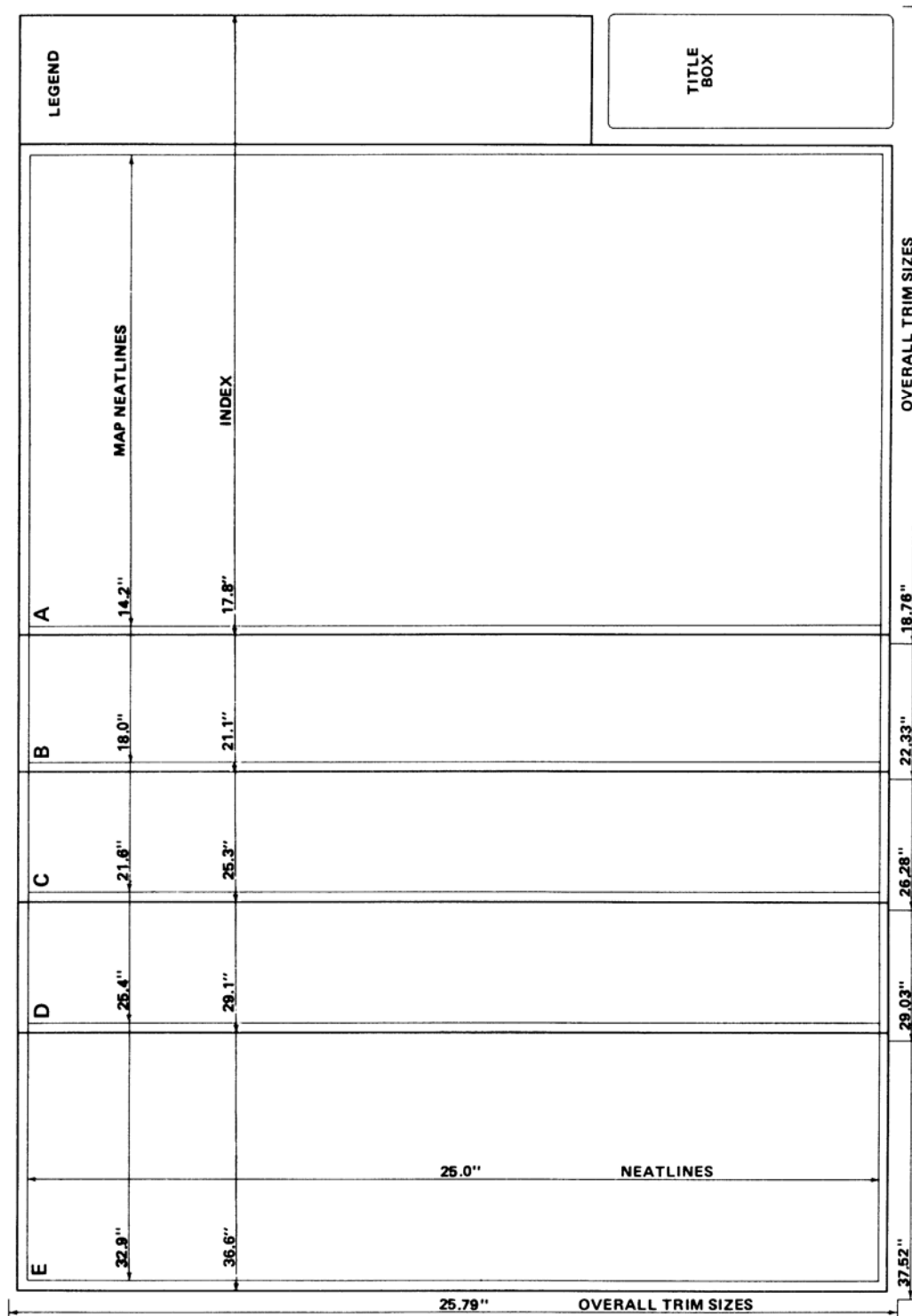


Figure K-2. Manual Map Frame Dimensions

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### **K.2.3 8½” x 11” Frames**

Map Indexes for small communities with few map panels may be printed on 8½” x 11” paper. The dimensions of this map frame are shown below:

- Trimmed paper size: Height 8 ½ ” x Width 11”
- Map border size: Height 7.5” x Width 10.0”
- Title Block box:
  - Overall dimensions: Height 6.00” x Width 3.30”
  - Striped side box: Height 5.60” x Width 0.78”
  - Title box: Height 5.60” x Width 2.50”
  - Striped upper box: Height 0.385” x Width 0.78”
  - Upper box: Height 0.385” x Width 2.50”

Section K.3 provides an example of an 8½” x 11” Map Index.

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## **K.3 Map Index**

The assigned Mapping Partner shall produce a Map Index for every community that requires more than one printed map panel. Map Indexes may be prepared in an 8½” × 11” format for small- to medium-sized communities. When the panel count becomes large enough to render an 8½” × 11” Index unusable or illegible, a Z-fold Index is required. Z-fold Indexes must always be prepared for countywide FIRMs. Countywide FIRMs may require more than one Map Index sheet. A Map Index may be revised to include changes in community boundaries; the addition of map panels to the grid layout; the addition of roads, drainage lines, and other physical features; and revisions of dates and notes. When such revisions are necessary, the assigned Mapping Partner shall make these changes in a format consistent with that of the existing Map Index and according to the standards applied in the preparation of that Index.

When a new Map Index layout is necessary for a single-panel FIRM that must be expanded to a multiple-panel FIRM, or when an existing layout must be completely revised, the Assigned Mapping Partner shall prepare a new FIRM Map Index.

[February 2002]

### **K.3.1 Map Index Body Elements and Specifications**

The entire jurisdictional area of the community, including corporate and Extraterritorial Jurisdictional (ETJ) limits, if appropriate, shall be divided into map panels, following standard grid layout procedures (see Section 1.4 of these Guidelines) . The Map Index shall have the same directional orientation as the individual map panels; for all digital FIRMs, north shall be oriented to the top of the page. Panel neatlines shall be accurately placed with respect to the community layout. The locations and names of major flooding sources, major roads, corporate limits, and selected railroads shall be shown to facilitate the orientation and location of the individual panels. Areas within the corporate limits that were not studied shall be labeled as such whenever the scale of the Map Index permits.

[February 2002]

#### **K.3.1.1 Map Numbers**

Each panel shown on the Map Index must contain a map number. The map number may be comprised of the Community Identification Number (CID), four-digit panel number, and suffix, or the countywide FIPS code, the letter “C”, the four-digit panel number, and the suffix. The Map Index shall identify unprinted panels with asterisks and footnotes which define the reason(s) for the panel not being printed.

The appropriate reason(s) for the panel not being printed shall appear below the lower left corner of the grid layout. A listing of appropriate footnotes are listed in “Panel Not Printed” Footnotes table available later in this section.

Suffix changes shall be reflected both on the FIRM panel and the Map Index. The suffixes for unprinted panels should not change unless all panels are revised.

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### **K.3.1.2 Map Dates**

The FIRM Map Index shall show the FIRM effective date in the title block. This date shall be designated in the title block as “Effective Date” (on the first FIRM for the subject jurisdiction or first countywide) or “Map Revised” (on FIRMs that have been revised at least once). When the preliminary copy of the Map Index is prepared, this date should be left blank. When the final copy of the Map Index is prepared, the date determined for the FIRM shall be added. Sample Map Index title blocks are shown in Section K.3.3. Similar type styles and sizes are acceptable, and may vary due to Map Index size limitations.

Map Indexes shall also list the effective date of each FIRM panel below the panel number on the Map Index to assist the user in determining current panel dates, as shown in Figure K-3.

|                          |                          |
|--------------------------|--------------------------|
| 17097C0159 B<br>06/20/97 | 17097C0159 B<br>06/20/97 |
| 17097C0159 A<br>09/04/94 | 17097C0159 A<br>09/04/94 |

**Figure K-3. Panel Effective Dates on Map Index**

When adding map dates under the panel numbers becomes problematic due to high levels of base map detail on the body of the Map Index, a second option is to list the dates of all printed panels in a separate FIRM Panel Dates table on the Map Index. When multiple Map Index panels exist, this table will list FIRM panels on a Map Index panel-specific basis. Figure K-4 shows a sample table with suggested font specifications.

10 Pt. Arial Bold CLC

| FIRM Panel Dates For Printed Panels of Johnson County, FL (All Jurisdictions) |                  |        |                  |        |                  |
|---|------------------|--------|------------------|--------|------------------|
| Panel   | Effective Date   | Panel  | Effective Date   | Panel  | Effective Date   |
| 0035 D  | May 3, 2000      | 0145 D | May 3, 2000      | 0237 C | December 6, 1991 |
| 0039 E  | July 7, 2001     | 0152 E | July 7, 2001     | 0242 B | January 8, 1988  |
| 0045 E  | July 7, 2001     | 0155 E | July 7, 2001     | 0244 B | January 8, 1988  |
| 0053 D  | May 3, 2000      | 0160 E | July 7, 2001     | 0252 D | May 3, 2000      |
| 0061 D  | May 3, 2000      | 0164 B | January 8, 1988  | 0255 D | May 3, 2000      |
| 0062 D  | May 3, 2000      | 0165 D | May 3, 2000      | 0256 D | May 3, 2000      |
| 0063 D  | May 3, 2000      | 0166 B | January 8, 1988  | 0257 D | May 3, 2000      |
| 0064 D  | May 3, 2000      | 0167 B | January 8, 1988  | 0258 D | May 3, 2000      |
| 0068 D  | May 3, 2000      | 0168 B | January 8, 1988  | 0259 B | January 8, 1988  |
| 0086 C  | December 6, 1991 | 0169 B | January 8, 1988  | 0261 B | January 8, 1988  |
| 0088 C  | December 6, 1991 | 0176 D | May 3, 2000      | 0262 B | January 8, 1988  |
| 0090 C  | December 6, 1991 | 0177 D | May 3, 2000      | 0263 B | January 8, 1988  |
| 0095 C  | December 6, 1991 | 0178 D | May 3, 2000      | 0264 B | January 8, 1988  |
| 0110 D  | May 3, 2000      | 0179 D | May 3, 2000      | 0267 B | January 8, 1988  |
| 0113 D  | May 3, 2000      | 0181 D | May 3, 2000      | 0268 B | January 8, 1988  |
| 0114 D  | May 3, 2000      | 0186 B | January 8, 1988  | 0269 B | January 8, 1988  |
| 0115 D  | May 3, 2000      | 0201 C | December 6, 1991 | 0276 B | January 8, 1988  |
| 0119 D  | May 3, 2000      | 0202 C | December 6, 1991 | 0277 B | January 8, 1988  |
| 0130 D  | May 3, 2000      | 0204 D | May 3, 2000      | 0281 B | January 8, 1988  |

9 Pt. Arial CLC

Figure K-4 FIRM Panel Dates

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### K.3.1.3 Panel Not Printed Footnotes

The following notes shall be added to the Map Index to identify why certain FIRM or FBFM panels are not printed.

| Panel Not Printed Footnotes                                     |  |                    |
|---|--|--------------------|
| *Font specifications that cannot be matched may be approximated |  |                    |
| Example   | Usage  | Specification      |
| PANEL NOT PRINTED – NO SPECIAL FLOOD HAZARD AREAS               | This note is used to designate panels not printed because the entire panel area does not contain floodplain areas. | 7-9 Pt. Arial CAPS |

| <b>Panel Not Printed Footnotes</b>   |  |                    |
|--|--|--------------------|
| *Font specifications that cannot be matched may be approximated  |  |                    |
| Example  | Usage  | Specification      |
| PANEL NOT PRINTED – AREA IN ZONE D   | This note is used to indicate panels not printed because the panel area is entirely Zone D.  | 7-9 Pt. Arial CAPS |
| PANEL NOT PRINTED – AREA NOT INCLUDED  | This note is used when the area of an entire panel is contained in an Area Not Included.   | 7-9 Pt. Arial CAPS |
| PANEL NOT PRINTED – OPEN WATER AREA  | This note is used when an area of all water and no land is contained within the panel area.  | 7-9 Pt. Arial CAPS |
| PANEL NOT PRINTED – AREA ALL WITHIN ZONE AE (ELEVATION)  | This note is used when the entire panel falls entirely within one flood hazard zone with one flood elevation. If the panel contains land area, this procedure shall only be used with the approval of a FEMA Project Officer, as normally any land areas on a FIRM with identified flood hazards should be printed. The elevation value is given in parentheses. | 7-9 Pt. Arial CAPS |
| PANEL NOT PRINTED – AREA OUTSIDE CORPORATE / COUNTY BOUNDARY   | This note is used to indicate paneled areas outside the subject jurisdiction.  | 7-9 Pt. Arial CAPS |
| PANEL NOT PRINTED - NO FLOODWAY DELINEATED; FOR FLOODPLAIN BOUNDARIES, SEE CORRESPONDING FLOOD INSURANCE RATE MAP PANEL PUBLISHED SEPARATELY | This note is used as a footnote on the FBFM Index to designate panels not printed because no floodway has been designated on that panel. Omit “published separately” if the FBFM Index is part of a Partial Map Initiatives publication. Omit “corresponding” if the FBFM paneling scheme is different from the FIRM.  | 7-9 Pt. Arial CAPS |
| PANEL NOT PRINTED – FLOODWAY DELINEATION SHOWN ON FLOOD INSURANCE RATE MAP   | This note is used as a footnote on the FBFM Index to indicate that the floodway is now shown on the FIRM panel.  | 7-9 Pt. Arial CAPS |



| Panel Not Printed Footnotes   |  |                    |
|---|--|--------------------|
| *Font specifications that cannot be matched may be approximated   |  |                    |
| Example   | Usage  | Specification      |
| PANEL NOT PRINTED - AREA WITHIN <i>(community name)</i> , WHICH HAS A SEPARATELY PUBLISHED FLOOD INSURANCE RATE MAP; THE PORTION OF <i>(community name)</i> ON MAP NUMBER <i>(map number)</i> IS NOT WITHIN SPECIAL FLOOD HAZARD AREAS. | This note is used to indicate a panel that is partially within an Area Not Included and partially within an area that does not contain floodplains | 7-9 Pt. Arial CAPS |

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### K.3.1.4 Index Body Notes

The following notes shall be used on the body of the Map Index, when appropriate. On a single-jurisdiction FIRM Index, the Map Repository address shall be shown above or in close proximity to the north arrow.

| Index Body Notes  |   |  |
|---|---|--|
| *Font specifications that cannot be matched may be approximated   |   |  |
| Example   | Usage   | Specification  |
| THIS AREA OF THE COMMUNITY NOT PRINTED – ALL IN OPEN WATER  | This note is used on the body of the Map Index to indicate an unmapped area of the community that is entirely in open water.  | 7-9 Pt. Arial CAPS   |
| THIS AREA OF THE COMMUNITY CONTAINS NO SPECIAL FLOOD HAZARD AREAS AND IS THEREFORE NOT PRINTED  | This note is used on the body of the Map Index to indicate an area of the community that does not have floodplain areas and is not paneled.   | 7-9 Pt. Arial CAPS   |
| <p style="text-align: center;"><b><u>MAP REPOSITORY</u></b><br/>(Maps available for reference only, not for distribution.)</p> <p style="text-align: center;">Manatee County Building Division<br/>Floodplain Section, 2<sup>nd</sup> Floor<br/>1112 Manatee Avenue West Bradenton,<br/>Florida 34205</p> | This is an example of a Map Repository listing for a single jurisdiction FIRM Index. The Map Repository is the location that the community has designated for storing its FIRM. The address is placed just above or in close proximity to the north arrow on the Map Index. The disclaimer, as stated, immediately follows the heading for the address. | <p><b>(Header)</b><br/>12 Pt. Arial CAPS with underscore and CLC</p> <p><b>(Reference note, Community Name, and Address)</b><br/>10 Pt. Arial CAPS and CLC</p> |

| Index Body Notes  |  |  |
|---|--|--|
| *Font specifications that cannot be matched may be approximated   |  |  |
| Example   | Usage  | Specification  |
| <p style="text-align: center;"><b>NOTICE TO MAP USERS</b></p> <p><b>FEMA maintains information about map features, such as street locations and names, in or near designated flood hazard areas. Requests to revise information in or near designated flood hazard areas may be provided to FEMA during the community review period, at the final Consultation Coordination Officer’s meeting, or during the statutory 90-day appeal period. Approved requests for changes will be shown on the final printed FIRM.</b></p> | <p>The following note must be added to all Preliminary FIRM Indexes and/or panel if panel is Only Panel Printed. It is also a standard paragraph in the transmittal letters to the communities. The note reminds the community to submit changes for street locations and names in or near the floodplains for incorporation into the final printed FIRM. The note does not appear on the final FIRM that is delivered to the Government Printing Office for printing. If the FIRM does not contain any Base Flood Elevations, the reference to the 90-day appeal period is omitted from the note.</p> | <p><b>(Header)</b><br/>12-20 Pt. Arial Bold<br/>CAPS</p> <p><b>(Reference note)</b><br/>12-20 Pt. Arial Bold<br/>CLC</p> |
| <p style="text-align: center;">– NOTE –</p> <p>DESIGNATED COASTAL BARRIERS ARE LOCATED ON PANELS 14, 18, 155<sup>1</sup>, 161<sup>1</sup>, 188, 304, 308, AND 309.</p> <p><sup>1</sup>PANEL NOT PRINTED</p>   | <p>This note is added above the Map Index north arrow for any community that contains Coastal Barrier units. All panels containing Coastal Barrier units and/or Otherwise Protected Areas, including panels that are not printed are listed. Non-printed panels are listed with a footnote.</p>  | <p>10 Pt. Arial CAPS</p>   |

| Index Body Notes   |   |  |
|--|---|--|
| *Font specifications that cannot be matched may be approximated  |   |  |
| Example  | Usage   | Specification  |
| <p style="text-align: center;"><b><u>MAP DATES</u></b></p> <p>This FIRM Index displays the map date for each FIRM panel at the time that this Index was printed. Because this Index may not be distributed to unaffected communities in subsequent revisions, users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website at <a href="http://web1.msc.fema.gov">http://web1.msc.fema.gov</a>, or by calling the Map Service Center at 1-800-358-9616.</p> <p>Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the numbers listed above.</p> | <p>An inventory of NFIP panels is available through the Map Service Center website. Therefore, this note shall be placed on all countywide format FIRM Indexes above the FIRM Panel Dates table (if this option is chosen) or in a clear area of the FIRM Index (if the dates are shown within the individual map grids). If more than one FIRM Index is required to show the jurisdiction, this note is placed on each FIRM Index panel.</p> | <p><b>(Header)</b><br/>10 Pt. Arial Bold CAPS with underscore</p> <p><b>(Reference note)</b><br/>9 Pt. Arial CLC</p> |

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### K.3.1.5 Flood Boundary and Floodway Map Index

FBFM Indexes shall be revised whenever the FIRM is prepared in the Partial Map Initiatives format. The Partial Map Initiatives format may be used for restudy or revision map action when it is determined that total conversion to Map Initiatives is not cost effective.

When the Partial Map Initiatives format is used, the FBFM panel(s) is superseded by the FIRM panel and the FBFM Index reflects this change. The appropriate “Panel Not Printed” footnote should be added to the Index for FBFM panels that are superseded by Partial Map Initiatives FIRM panels. See the table below for the proper wording of the “Panel Not Printed” footnote.

In addition to the “Panel Not Printed” footnote, a note shall be added to the body of the FBFM Index informing the user that the former FBFM panels have been superseded by the FIRM panels. See the table below for the proper wording of the note.

When preparing a revised FBFM Map Index, map dates may appear beneath each FBFM panel number within the map grid. The assigned Mapping Partner shall ensure that the remaining separately printed FBFM panels have the correct date under the panel number. Dates that appear on non-printed panels shall be removed.








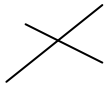
The assigned Mapping Partner shall notify the MSC by memorandum or e-mail when Map Initiatives FIRM panels supercede Flood Boundary and Floodway Map panels.

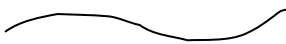
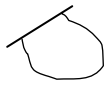





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| <b>FBFM Index Body Notes</b><br><small>*Font specifications that cannot be matched may be approximated</small>  |   |                      |
|---|---|----------------------|
| Example   | Usage   | Specification        |
| <p style="text-align: center;"><b>NOTE TO USER:</b></p> <p><b>Floodways on Flood Boundary and Floodway Map panel(s)</b> <i>(list affected FBFM panel numbers)</i> <b>are shown on the corresponding Flood Insurance Rate Map panel(s).</b></p>  | <p>This note is used on the body of the FBFM Index in conjunction with the footnote to indicate that the FIRM has superseded the FBFM panel(s) when the floodway is now shown on the FIRM panel(s). Omit the word “corresponding” if the panel numbers are different the FIRM and FBFM.</p> | <p>20 Pt. Impact</p> |
| <p style="text-align: center;"><b>NOTE TO USER:</b></p> <p><b>PANEL(S)</b> <i>(list affected FBFM panel numbers)</i> <b>SHOULD BE USED FOR FLOODWAY INFORMATION ONLY. PLEASE REFER TO THE CORRESPONDING FLOOD INSURANCE RATE MAP PANELS FOR UP-TO-DATE 100- AND 500-YEAR FLOODPLAIN BOUNDARY INFORMATION.</b></p> | <p>This note is used on the body of the FBFM Index when the floodplain boundaries have been modified but the floodway boundaries have remained the same and therefore, the FBFM panels were not revised.</p>  | <p>20 Pt. Impact</p> |

### K.3.1.6 Map Index Panel Element Graphic Specifications

The table below provides graphic specification standards for the depiction of information on Map Indexes. Note that separate specifications for 8½” x 11” Map Indexes appear in Subsection K.3.4.

| Map Index Panel Elements  |                            |  |
|---|----------------------------|--|
| *Font specifications that cannot be matched may be approximated                     |                            |  |
| Example   | Feature                    | Specification  |
|    | North Arrow                | Line weight .010”<br>Width 1.20”<br>Height 0.70”   |
|    | Major Road                 | Line weight .030”  |
| CAPITAL STREET  | Street, Road, Avenue Name  | 8 Pt. Arial CAPS   |
|  | Interstate Highway Symbol  | Standard Interstate Route Shield<br>Line weight .010”<br>Size .200” x .200” to .400” x .480”<br>8 Pt. Arial Bold Narrow CAPS |
|  | U.S. Highway Symbol        | Standard U.S. Route Shield<br>Line weight .010”<br>Size .200” x .200” to .400” x .480”<br>8 Pt. Arial Bold Narrow CAPS       |
|  | State Highway Symbol       | Circle<br>Line weight .010”<br>Diameter .200” to .280”<br>8 Pt. Arial Bold Narrow CAPS                                       |
|  | County Highway Symbol      | Rectangle<br>Line weight .010”<br>Size .150” x .250” to .300” x .400”<br>8 Pt. Arial Bold Narrow CAPS                        |
|  | Railroad and Railroad Name | Line weight .015”<br>Tie length .060”, spacing .300”<br>8 Pt. Arial Italics CAPS   |
|  | Airport                    | Line weight .010”  |

| Map Index Panel Elements  |  |   |
|---|--|---|
| *Font specifications that cannot be matched may be approximated   |  |   |
| Example   | Feature  | Specification   |
| <br><i>Eighteen Mile Creek</i>                     | River, Stream, Lake, or Other Hydrographic Feature and Feature Name                    | Line weight .008" to .010"<br>6 – 18 Pt. Times New Roman Bold Italics<br>CLC  |
| SHIP ISLAND   | Small or Large Island  | 6 - 14 Pt. Arial CAPS   |
| <br>ASSABET RIVER DAM                              | Major Dam and Dam Name   | Line weight .010<br>8 Pt. Arial CAPS or CLC   |
|    | International, State, County Boundary  | Line weight .030"<br>Dashing: 1.500" .050" .150" .050" .150"<br>.050" 1.500"  |
|    | Corporate, Extraterritorial Jurisdiction Boundary (Countywide)                         | Line weight .030"<br>Color: 63% Gray<br>No dashing  |
|    | Corporate, Extraterritorial Jurisdiction Boundary (Single jurisdiction)                | Line weight .030"<br>Dashing: 1.500" .050" .150" .050" 1.500"   |
| CITY OF BLADES  | Community Label  | 6 – 10 Pt. Times New Roman CAPS or CLC  |
| <br><br>City of Lafayette<br>(AREA NOT INCLUDED) | Area Not Included Note   | Line weight .020"<br><b>(Community name)</b><br>8-24 Pt. Times New Roman CAPS or CLC<br><b>(Note)</b><br>8 – 11 Pt. Arial CAPS  |
| FOREST BOUNDARY<br><br>ROOSEVELT STATE FOREST    | Forest, Park or Reservation Boundary, Boundary Label and Area Label (Large areas only) | <b>(Boundary Label)</b><br>6-8 Pt. Arial CAPS<br><b>(Boundary)</b><br>Line weight .015"<br>Dot diameter .030", spacing .400"<br><b>(Area Label)</b><br>6-10 Pt. Times New Roman CAPS or CLC |
| 1202300275 C<br>41050C0050 E  | FIRM Map Numbers   | 8 – 18 Pt. Arial Narrow Bold CAPS   |

| <b>Map Index Panel Elements</b>                                 |                            |                         |
|---|----------------------------|-------------------------|
| *Font specifications that cannot be matched may be approximated |                            |                         |
| Example   | Feature                    | Specification           |
| 8/30/00   | FIRM Panel Effective Dates | 8 Pt. Arial Narrow CAPS |

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### **K.3.2 Countywide Index**

Countywide Map Index contains unique elements that enable the user to identify pertinent information for each individual community. These elements include a Listing of Communities table, a list of the Map Repositories, and multiple index sheets where applicable.

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#### **K.3.2.1 Listing of Communities**

The assigned Mapping Partner shall ensure that the Countywide Map Index contains a Listing of Communities table that lists, in alphabetical order and in tabular form, all jurisdictions included in the FIS. The table shall also list non-floodprone communities in the county, footnoted with an indication of their non-floodprone status. The listing shall not include communities that are labeled as Areas Not Included. Each community shall have its CID listed on the table in the “Community Number” column. Each panel showing any portion of a community, including non-printed panels shall be listed next to the community in the “Located on Panel(s)” column. Non-printed panels shall be footnoted as “Panel Not Printed.”

Historical map dates shall be listed in the “Initial NFIP Map Date,” “Initial FIRM Date,” and “Most Recent FIRM Panel Date” columns. The Initial NFIP Map Date is the date of the community’s first flood hazard map, which may be a Flood Hazard Boundary Map (FHBM), a combined FHBM/FIRM, or a FIRM. If the Initial NFIP Map Date does not correspond to the Initial Identification Date in the legend of the most recent map panel, a footnote shall be placed beneath the table to state the Initial Identification Date.

The Initial FIRM Date is the date of the community’s first FIRM. The Most Recent FIRM Panel Date column shall list the last date on which a panel within that community was published. This date is added to clarify which communities are affected by the republication of the Map Index, since the Map Index is updated every time a panel within the county is republished. An example of a Listing of Communities table is shown in Figure K-5.

The following note shall be added above the north arrow of a countywide Map Index to clarify the meaning of the dates in the Listing of Communities table.

**LISTING OF COMMUNITIES**

| COMMUNITY NAME                | COMMUNITY NUMBER | LOCATED ON PANEL(S)  | INITIAL NFP MAP DATE | INITIAL-FIRM DATE | MOST RECENT FIRM PANEL DATE |
|-------------------------------|------------------|--|----------------------|-------------------|-----------------------------|
| LAKE FOREST CITY OF           | 170374           | 0169, 0188, 0190, 0257, 0259, 0276, 0277, 0278, 0279, 0285   | FEBRUARY 1, 1974     | FEBRUARY 18, 1981 | SEPTEMBER 4, 1994           |
| LAKE VILLA VILLAGE OF         | 170375           | 0029, 0035, 0036, 0037, 0038, 0039, 0041   | MAY 3, 1974          | JULY 2, 1981      | SEPTEMBER 4, 1994           |
| LAKE ZURICH VILLAGE OF        | 170376           | 0228, 0229, 0233, 0236, 0237, 0241   | MARCH 29, 1974       | JULY 5, 1983      | JUNE 20, 1997               |
| LIBERTYVILLE VILLAGE OF       | 170377           | 0134, 0142, 0161, 0162, 0163, 0164, 0166, 0168, 0252   | NOVEMBER 2, 1973     | JANUARY 16, 1980  | SEPTEMBER 4, 1994           |
| LINCOLNSHIRE VILLAGE OF       | 170378           | 0254, 0258, 0259, 0262, 0266, 0267   | NOVEMBER 9, 1973     | JULY 16, 1980     | SEPTEMBER 4, 1994           |
| LINDENHURST VILLAGE OF        | 170379           | 0041, 0042, 0044   | APRIL 5, 1974        | JANUARY 2, 1980   | SEPTEMBER 4, 1994           |
| LONG GROVE VILLAGE OF         | 170380           | 0144, 0231, 0232, 0233, 0234, 0241, 0242, 0251, 0253, 0254, 0261, 0263                               | APRIL 5, 1974        | MAY 19, 1981      | SEPTEMBER 4, 1994           |
| METTAWA VILLAGE OF            | 170381           | 0164, 0168, 0169, 0252, 0256, 0257   | OCTOBER 18, 1974     | MARCH 28, 1980    | SEPTEMBER 4, 1994           |
| MUNDELEIN VILLAGE OF          | 170382           | 0139, 0142, 0143, 0144, 0161, 0163, 0232, 0251   | JUNE 28, 1974        | JULY 2, 1981      | SEPTEMBER 4, 1994           |
| NORTH BARRINGTON VILLAGE OF   | 170383           | 0207, 0208, 0209, 0217, 0226, 0228, 0236   | MARCH 22, 1974       | OCTOBER 18, 1983  | SEPTEMBER 4, 1994           |
| NORTH CHICAGO CITY OF         | 170384           | 0169, 0167, 0180, 0186, 0190   | APRIL 5, 1974        | DECEMBER 5, 1980  | JUNE 20, 1997               |
| OLD MILL CREEK VILLAGE OF     | 170385           | 0055, 0061, 0062   | AUGUST 30, 1974      | AUGUST 1, 1980    | SEPTEMBER 4, 1994           |
| PARK CITY CITY OF             | 170386           | 0156, 0157, 0159   | MARCH 1, 1974        | OCTOBER 15, 1981  | SEPTEMBER 4, 1994           |
| RIVERWOODS VILLAGE OF         | 170387           | 0259, 0266, 0267, 0270, 0286   | MARCH 1, 1974        | AUGUST 15, 1980   | SEPTEMBER 4, 1994           |
| ROUND LAKE VILLAGE OF         | 170388           | 0110, 0126, 0127, 0128, 0129   | MARCH 29, 1974       | AUGUST 1, 1980    | SEPTEMBER 4, 1994           |
| ROUND LAKE BEACH VILLAGE OF   | 170389           | 0038, 0039, 0043, 0126, 0127, 0131   | APRIL 5, 1974        | AUGUST 1, 1980    | SEPTEMBER 4, 1994           |
| ROUND LAKE HEIGHTS VILLAGE OF | 170390           | 0038   | MARCH 29, 1974       | JANUARY 2, 1980   | SEPTEMBER 4, 1994           |
| ROUND LAKE PARK VILLAGE OF    | 170391           | 0127, 0129, 0133, 0137, 0141, 0142   | MARCH 29, 1974       | JUNE 4, 1980      | SEPTEMBER 4, 1994           |
| THIRD LAKE VILLAGE OF         | 170392           | 0044, 0132, 0165   | SEPTEMBER 6, 1974    | DECEMBER 25, 1981 | JUNE 20, 1997               |
| TOWER LAKES VILLAGE OF        | 170393           | 0206, 0207   | APRIL 5, 1974        | MARCH 2, 1981     | SEPTEMBER 4, 1994           |
| VERNON HILLS VILLAGE OF       | 170394           | 0163, 0164, 0251, 0252, 0253, 0254, 0256, 0258   | FEBRUARY 4, 1977     | AUGUST 1, 1980    | SEPTEMBER 4, 1994           |
| VOLO VILLAGE OF               | 170402           | 0135, 0110, 0112, 0116, 0117   | JANUARY 17, 1975     | NOVEMBER 3, 1982  | SEPTEMBER 4, 1994           |
| WADSWORTH VILLAGE OF          | 170395           | 0055, 0056, 0057, 0058, 0059, 0062, 0064, 0066, 0067, 0068   | MARCH 1, 1974        | FEBRUARY 4, 1981  | SEPTEMBER 4, 1994           |
| WAUCONDA VILLAGE OF           | 170396           | 0116, 0117, 0118, 0119, 0140, 0207   | APRIL 5, 1974        | DECEMBER 1, 1981  | SEPTEMBER 4, 1994           |
| WAUKEGAN CITY OF              | 170397           | 0066, 0067, 0068, 0069, 0086, 0087, 0088, 0089, 0095, 0154, 0156, 0157, 0158, 0159, 0166, 0177, 0180 | MAY 10, 1974         | JUNE 15, 1981     | SEPTEMBER 4, 1994           |
| WINTHROP HARBOR VILLAGE OF    | 170398           | 0076, 0077, 0078, 0079, 0081   | MARCH 8, 1974        | DECEMBER 2, 1980  | SEPTEMBER 4, 1994           |
| ZION CITY OF                  | 170399           | 0057, 0059, 0076, 0077, 0078, 0079, 0081, 0085, 0086, 0087   | MARCH 29, 1974       | JANUARY 16, 1981  | SEPTEMBER 4, 1994           |

10 - 12 Pt. Arial Narrow CAPS

14 - 22 Pt. Arial CAPS with underscore

8 - 10 Pt. Arial Narrow CAPS

Figure K-5 Listing of Communities Table



| <b>Listing of Communities Table Note</b><br><small>*Font specifications that cannot be matched may be approximated</small>  |  |  |
|---|--|--|
| Example   | Usage  | Specification  |
| <p style="text-align: center;"><b><u>NOTICE</u></b></p> <p>Future revisions to this FIRM index will only be issued to communities that are located on FIRM panels being revised. This FIRM index therefore remains valid for FIRM panels dated [<i>date</i>] or earlier. Please refer to the "most recent FIRM panel date" column in the <u>Listing of Communities</u> table below to determine the most recent FIRM index date for each community.</p> | <p>This note is added to all countywide Map Indexes to inform map users that the Map Index may be republished in the future but not distributed to them unless they are affected by the revision. See Figure K.3.2-1 for an example of a Listing of Communities table referenced in this note.</p> | <p><b>(Header)</b><br/>10 Pt. Arial Bold CAPS with underscore</p> <p><b>(Reference note)</b><br/>9 Pt. Arial CLC</p> |

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### **K.3.2.2 Community Map Repository List**

The assigned Mapping Partner shall ensure that Countywide Map Index contains a Community Map Repository list containing an alphabetical listing of the map repository address of each community that will receive a copy of the FIRM. The communities that are classified as Areas Not Included will not receive a copy of the FIRM and communities that are classified as non-floodprone will receive copies of the Map Index only. The Community Map Repository list shall be placed above or in close proximity to the north arrow. A sample Community Map Repository list is provided below.

| <b>Countywide Map Repositories Note</b><br><small>*Font specifications that cannot be matched may be approximated</small>  |  |   |
|--|--|---|
| Example  | Usage  | Specification   |
| <p><b><u>MAP REPOSITORIES</u></b><br/>                     (Maps available for reference only, not for distribution.)</p> <p>DAVIDSON COUNTY<br/>                     (UNINCORPORATED AREAS):<br/>                     Davidson County Government Center<br/>                     Planning Department<br/>                     913 Greensboro Street<br/>                     Lexington, North Carolina 27293</p> <p>DENTON, TOWN OF:<br/>                     Denton Town Hall<br/>                     101 West Newsome Avenue<br/>                     Denton, North Carolina 27239</p> <p>LEXINGTON, CITY OF:<br/>                     City of Lexington Community Development Department<br/>                     31 West First Street<br/>                     Lexington, North Carolina 27292</p> | <p>This is an example of a Map Repository list for a countywide FIRM. The Map Repository is the location that the community has designated for storing its FIRM. The Map Repository address for each community included in the study is listed in alphabetical order on the body of the Map Index. If feasible, the list of addresses is placed just above the north arrow on the Map Index. The disclaimer, as stated, immediately follows the heading for the addresses.</p> | <p><b>(Header)</b><br/>                     16-22 Pt. Arial Bold<br/>                     CAPS with underscore</p> <p><b>(Reference note, Community Name, and Address)</b><br/>                     9-12 Pt. Arial CAPS and CLC</p> |

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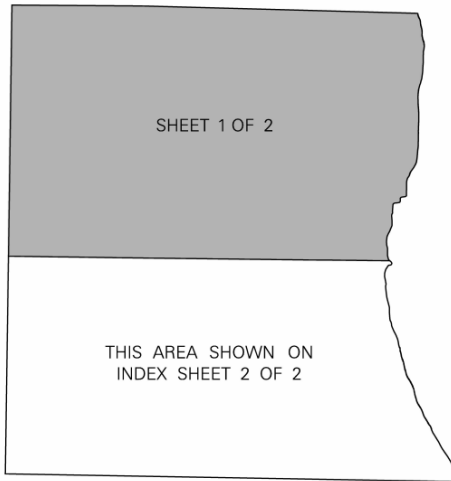
### K.3.2.3 Multiple Map Index Panels

FIRMs that are contained on one Map Index panel have the Map Number “IND0.” It may sometimes be necessary to create multiple Map Index panels for large countywide FIRMs. In such cases, the Listing of Communities table and Community Map Repository list shall appear separately on a second Map Index sheet. Sometimes, it may also be necessary to split the image of the community itself onto multiple Map Index sheets. In such cases, a match line shall be added and labeled with a note that references the adjoining Map Index sheet. When multiple Map Index sheets are created, the Map Numbers of those sheets shall be IND1, IND2, etc., and an Index Locator Diagram shall be added to the Map Index, proportionate in size to other elements. Examples of an Index Locator Diagram are shown in Figures K-6 and K-7.

[February 2002]

*Guidelines and Specifications for Flood Hazard Mapping Partners*

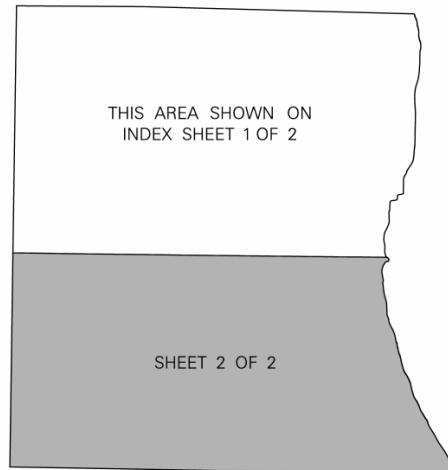
LAKE COUNTY, IL  
INDEX LOCATOR DIAGRAM



**See Sheet 2 of 2 for  
MAP REPOSITORY LISTING**

**Figure K-6 Index Locator Diagram Sheet 1 of 2**

LAKE COUNTY, IL  
INDEX LOCATOR DIAGRAM



**See Sheet 1 of 2 for  
LISTING OF COMMUNITIES**

**Figure K-7 Index Locator Diagram Sheet 2 of 2**

### **K.3.3 Index Title Block**

The Index title block must be similar in appearance to the FIRM title block, with the exception that it must contain a listing of all of the printed panels instead of community-specific information. The following pages contain examples of the following Map Index title blocks:

- Countywide DFIRM Index Title Block (Figure K-8);
- Countywide Multi-sheet DFIRM Index Title Block, Sheet 1 of 2 (Figure K-9);
- Countywide Multi-sheet DFIRM Index Title Block, Sheet 2 of 2 (Figure K-10);
- Single-Jurisdiction DFIRM Index Title Block (Figure K-11);
- Single-Jurisdiction Manual FIRM Index Title Block (Figure K-12); and
- Single-Jurisdiction Manual FBFM Index Title Block (Figure K-13).

Figure K-14, “Title Block Element Specifications,” lists the specifications for the title block elements.


|   |   |
|---|---|
| <b>NFIP</b>                             | <b>MAP INDEX</b>  |
| <b>NATIONAL FLOOD INSURANCE PROGRAM</b> | <p><b>FIRM</b><br/><b>FLOOD INSURANCE RATE MAP</b><br/><b>PIKE COUNTY,</b><br/><b>PENNSYLVANIA</b><br/><b>(ALL JURISDICTIONS)</b><br/><small>(SEE LISTING OF COMMUNITIES TABLE)</small></p> <p><b>MAP INDEX</b></p> <p><b>PANELS PRINTED:</b> 30, 35, 40, 45, 65, 90, 95, 110, 115, 120, 130, 135, 140, 155, 159, 160, 165, 167, 170, 178, 179, 183, 186, 187, 191, 192, 211, 213, 214, 230, 235, 240, 245, 255, 260, 265, 270, 280, 285, 290, 295, 305, 310, 315, 320, 330, 332, 333, 334, 337, 339, 340, 341, 351, 352, 380, 385, 410, 420, 430, 435, 440, 445, 455, 460, 465, 470, 480, 510, 530</p> <p> <b>MAP NUMBER</b><br/><b>42103CINDO</b></p> <p><b>EFFECTIVE DATE</b><br/><b>OCTOBER 6, 2000</b></p> <p>Federal Emergency Management Agency</p> |

Figure K-8. Countywide DFIRM Index Title Block

|   |  |
|---|--|
| <b>NFIP</b>                             | <b>MAP INDEX</b>   |
| <b>NATIONAL FLOOD INSURANCE PROGRAM</b> | <p><b>FIRM</b><br/><b>FLOOD INSURANCE RATE MAP</b><br/><b>LAKE COUNTY,</b><br/><b>ILLINOIS</b><br/><b>AND INCORPORATED AREAS</b></p> <p><b>MAP INDEX</b><br/><b>SHEET 1 OF 2</b></p> <p><b>PANELS PRINTED:</b> 5, 10, 15, 19, 20, 26, 27, 28, 29, 32, 34, 35, 36, 37, 38, 39, 41, 42, 43, 44, 55, 56, 57, 58, 59, 61, 62, 63, 64, 66, 67, 68, 69, 76, 77, 78, 79, 81, 85, 86, 87, 88, 89, 95, 105, 110, 126, 127, 128, 129, 131, 132, 133, 134, 153, 154, 155, 156, 157, 158, 159, 177, 180</p> <p><b>(SEE SHEET 2 FOR ADDITIONAL PANELS PRINTED)</b></p> <p><b>MAP NUMBER</b><br/><b>17097CIND1</b></p> <p><b>MAP REVISED</b><br/><b>OCTOBER 6, 2000</b></p> <p>Federal Emergency Management Agency</p> |

Figure K-9. Countywide Multi-sheet DFIRM Index Title Block, Sheet 1 of 2


|  |  |
|--|--|
| <b>NFIP</b><br><b>NATIONAL FLOOD INSURANCE PROGRAM</b> | <b>MAP INDEX</b>   |
|  | <b>FIRM</b><br><b>FLOOD INSURANCE RATE MAP</b><br>LAKE COUNTY,<br>ILLINOIS<br>AND INCORPORATED AREAS<br><br><b>MAP INDEX</b><br><b>SHEET 2 OF 2</b><br><br><b>PANELS PRINTED:</b> 112, 114, 116, 117, 118, 119,<br>137, 139, 140, 141, 142, 143, 144, 161, 162,<br>163, 164, 166, 167, 168, 169, 186, 188, 190,<br>205, 206, 207, 208, 209, 215, 216, 217,<br>219, 226, 227, 228, 229, 231, 232, 233, 234,<br>236, 237, 238, 241, 242, 251, 252, 253,<br>254, 256, 257, 258, 259<br><br>(SEE SHEET 1 FOR ADDITIONAL PANELS<br>PRINTED)<br><br><br><b>MAP NUMBER</b><br><b>17097CIND2</b><br><br><b>MAP REVISED</b><br><b>OCTOBER 6, 2000</b><br><br>Federal Emergency Management Agency |

Figure K-10. Countywide Multi-sheet DFIRM Index Title Block, Sheet 2 of 2


**NFIP**

**MAP INDEX**

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
CITY OF  
ALLAGASH,  
MAINE  
AROOSTOOK COUNTY

**MAP INDEX**

**PANELS PRINTED:** 10, 20, 40, 65, 80  
85, 101, 102, 105, 106, 107, 108, 109, 115  
130



**MAP NUMBER**  
**230440INDO**

**MAP REVISED**  
**SEPTEMBER 22, 1999**

Federal Emergency Management Agency

**NATIONAL FLOOD INSURANCE PROGRAM**

Figure K-11. Single-Jurisdiction DFIRM Index Title Block



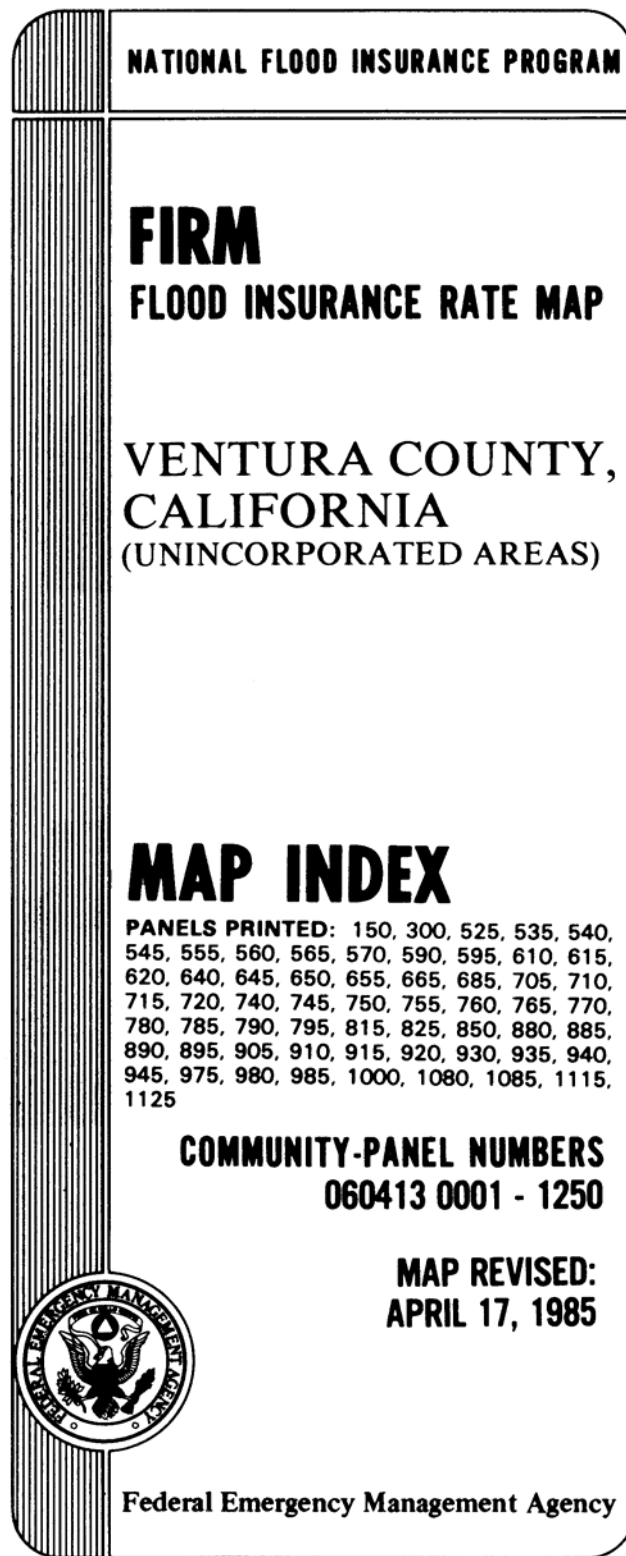


Figure K-12. Single-Jurisdiction Manual FIRM Index Title Block

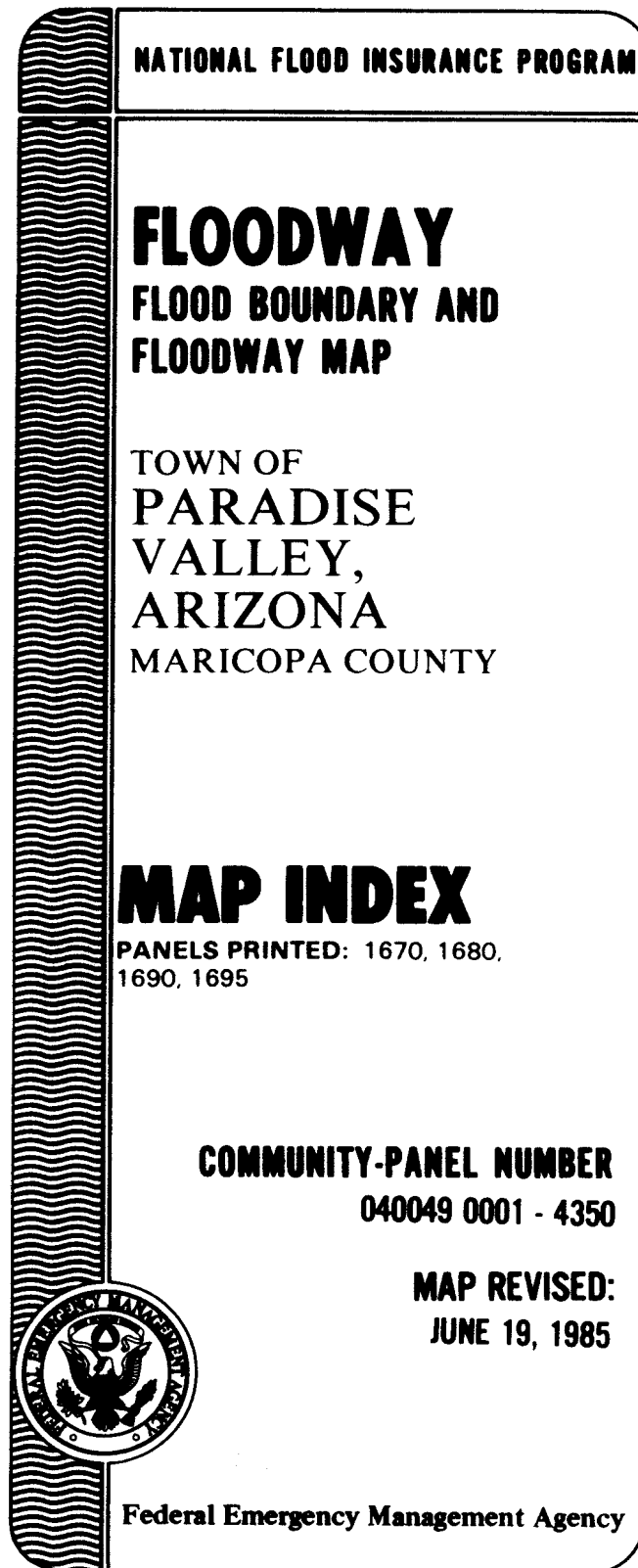


Figure K-13. Single-Jurisdiction Manual FBFM Index Title Block

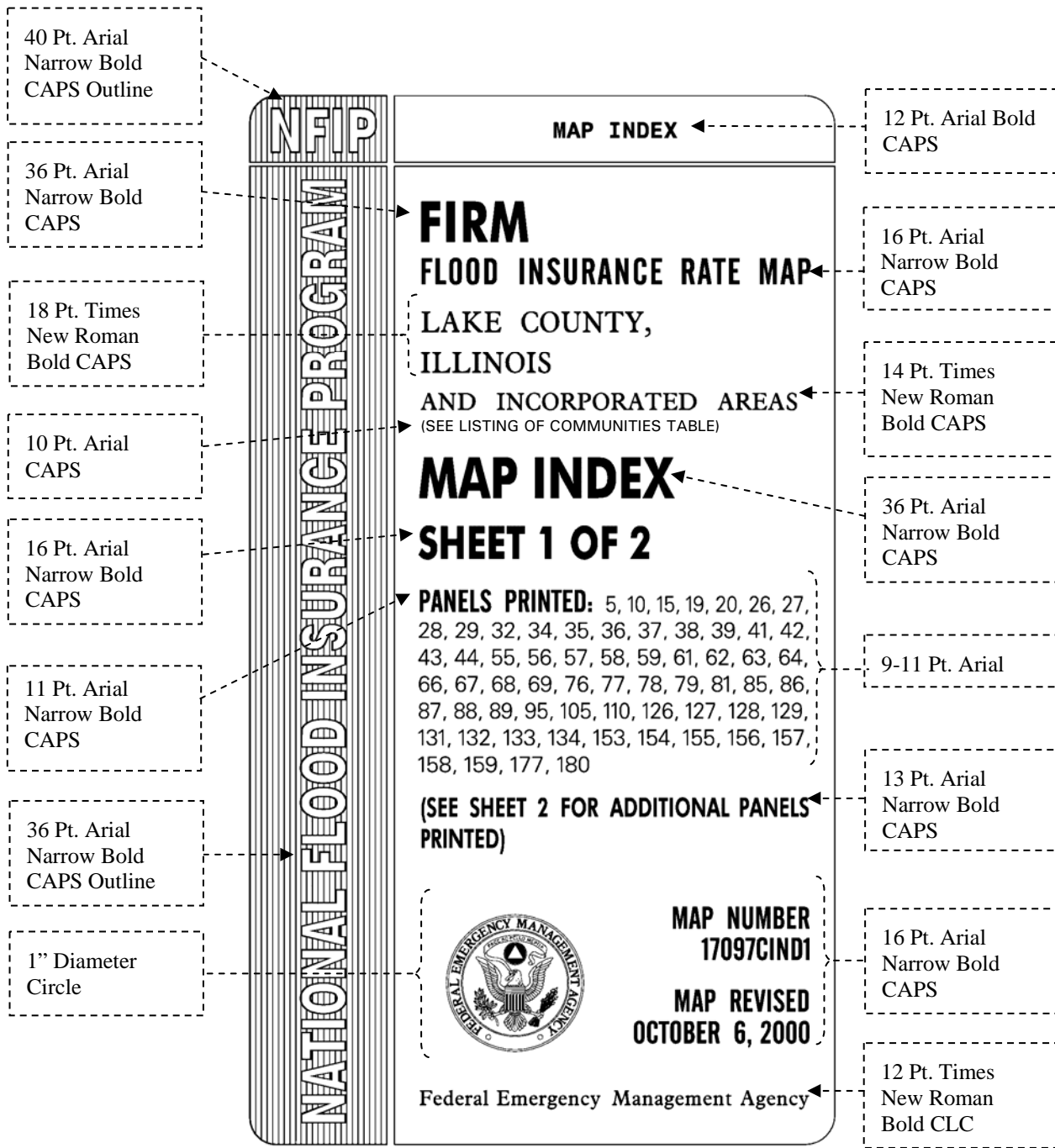


Figure K-14. Map Index Title Block Element Suggested Font Specifications

[February 2002]

### **K.3.4 8½"x11" Map Index**

An example of an 8½" x 11 Map Index is presented in Figure K-15. As shown in Figure K-15, the specifications appear exactly as presented for the Z-fold Index but are at a smaller scale. Figure K-16 provides suggested font specifications for an 8½" x 11 Map Index. The table that follows Figure K-16 provides graphic specification standards for the depiction of information on 8½" x 11 Map Indexes.

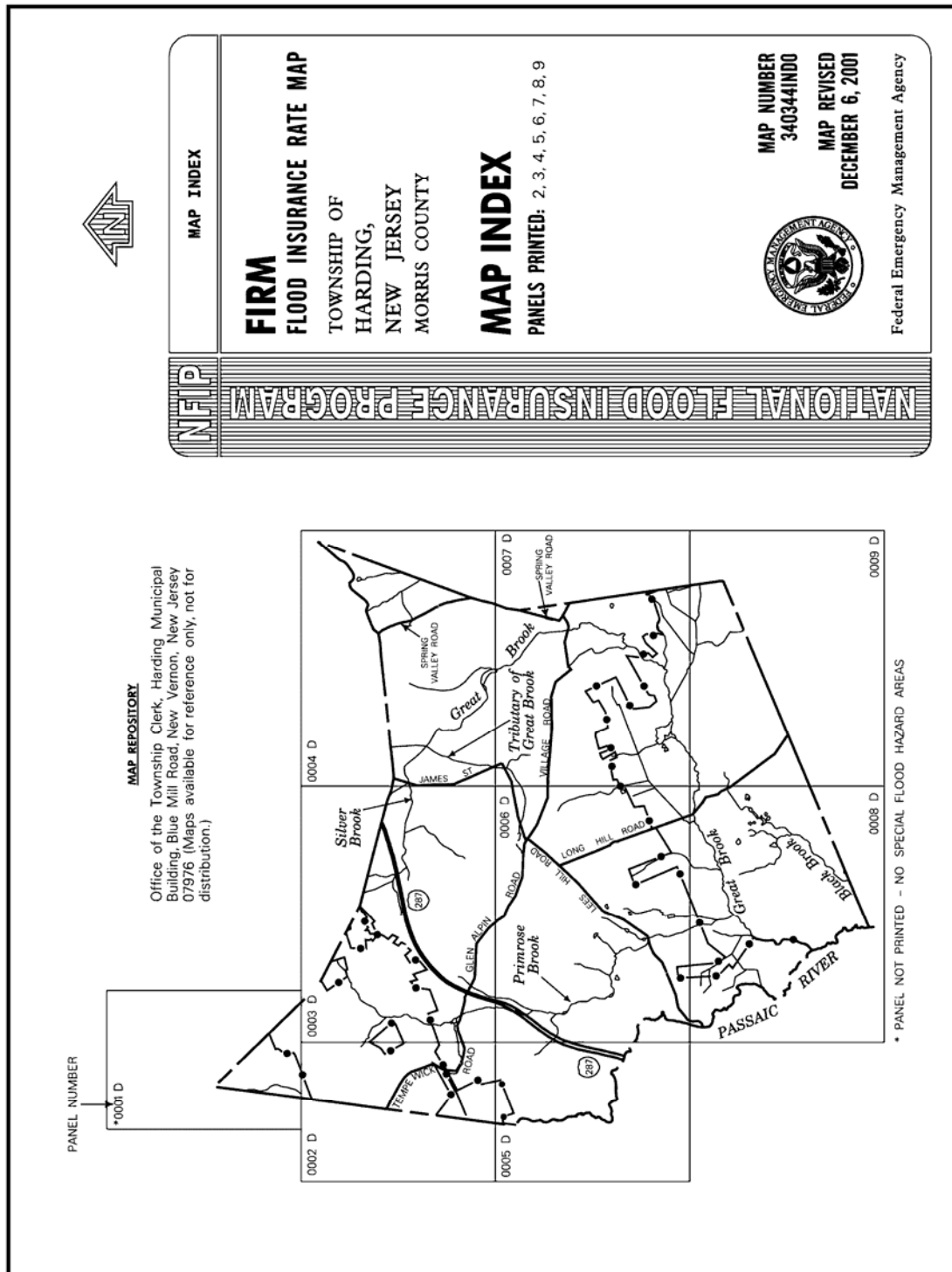


Figure K-15. Example of 8 1/2" x 11" Map Index

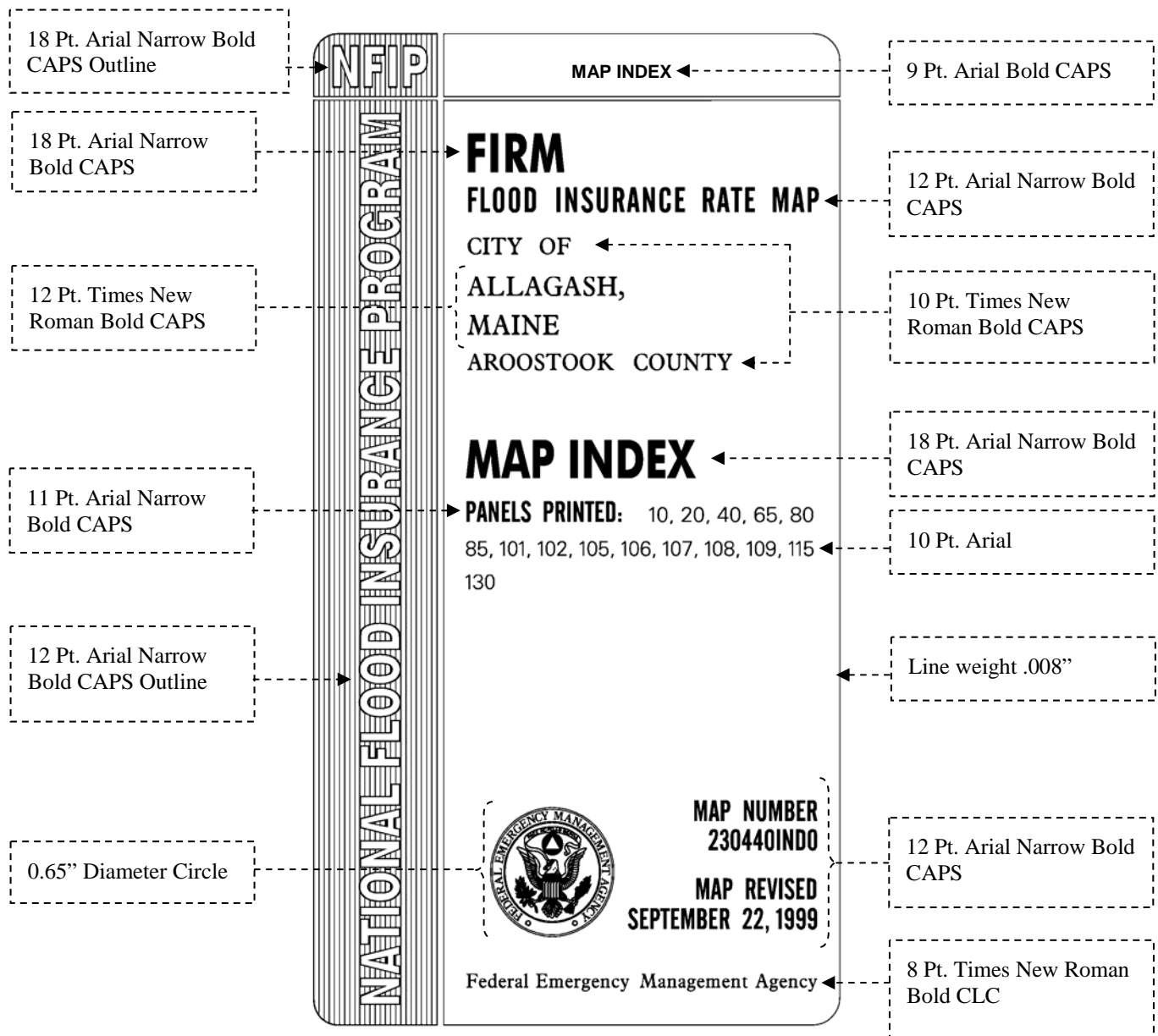

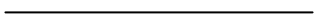





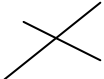
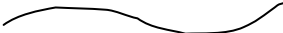








Figure K-16. Title Block for 8½" x 11" Map Index, with Suggested Font Specifications

| <b>8½" x 11" Map Index Elements</b><br>*Font specifications that cannot be matched may be approximated            |   |  |
|---|---|--|
| Example   | Feature   | Specification  |
|                                  | North Arrow   | Line weight .008"<br>Width 0.675"<br>Height 0.40"  |
|                                  | Major Road  | Line weight .020"  |
| CAPITAL STREET  | Street, Road, Avenue Name                                     | 8 Pt. Arial CAPS   |
|                                  | Interstate Highway Symbol                                     | Standard Interstate Route Shield<br>Line weight .010"<br>Size .200" x .200" to .400" x .480"<br>6 Pt. Arial Bold Narrow CAPS |
|                                  | U.S. Highway Symbol   | Standard U.S. Route Shield<br>Line weight .010"<br>Size .200" x .200" to .400" x .480"<br>6 Pt. Arial Bold Narrow CAPS       |
|                                | State Highway Symbol  | Circle<br>Line weight .010"<br>Diameter .200" to .280"<br>6 Pt. Arial Bold Narrow CAPS                                       |
|                                | County Highway Symbol   | Rectangle<br>Line weight .010"<br>Size .150" x .250" to .300" x .400"<br>6 Pt. Arial Bold Narrow CAPS                        |
| <br>CHESSIE SYSTEM<br>RAILROAD | Railroad and Railroad Name                                    | Line weight .008"<br>Tie length .060", spacing .300"<br>6 Pt. Arial Italics CAPS   |
|                                | Airport   | Line weight .010"  |
| <br>Eighteen Mile Creek        | River, Stream, or Other Hydrographic Feature and Feature Name | Line weight .008"<br>6-10 Pt. Times New Roman Bold Italics CLC   |
| SHIP ISLAND   | Island  | 10 Pt. Arial CAPS  |

| 8½" x 11" Map Index Elements  |  |  |
|---|--|--|
| *Font specifications that cannot be matched may be approximated   |  |  |
| Example   | Feature  | Specification  |
| <br>ASSABET RIVER DAM                                | Major Dam and Dam Name   | Line weight .010<br>6 Pt. Arial CAPS or CLC  |
|    | International, State, County Boundary  | Line weight .015"<br>Dashing: .6" .05" .15" .05" .15"<br>.05" .6"  |
|    | Corporate, Extraterritorial Boundary   | Line weight .015"<br>Dashing: .6" .05" .15" .05" .6"   |
| CITY OF BLADES  | Community Label  | 10 Pt. Times Roman CAPS  |
| <br>City of Lafayette<br>(AREA NOT INCLUDED)         | Area Not Included Note   | Line weight .015"<br><b>(Community name)</b><br>6-10 Pt. Times New Roman<br>CAPS or CLC<br><b>(Note)</b><br>5-8 Pt. Arial CAPS   |
| FOREST BOUNDARY<br><br>ROOSEVELT STATE FOREST      | Forest, Park or Reservation Boundary,<br>Boundary Label and Area Label<br>(Large areas only)   | <b>(Boundary Label)</b><br>6-8 Pt. Arial CAPS<br><b>(Boundary)</b><br>Line weight .015"<br>Dot diameter .030", spacing .400"<br><b>(Area Label)</b><br>6-10 Pt. Times New Roman<br>CAPS or CLC |
|    | FIRM Panel Neatline  | Line weight .008"  |
| 0005 B  | FIRM Map Numbers   | 8 Pt. Arial Narrow CAPS  |
| 8/30/00   | FIRM Panel Effective Dates   | 8 Pt. Arial Narrow CAPS  |
| MAP NUMBER  | Map Number Label   | 8 Pt. Arial CAPS   |
| - NOTE -<br>DESIGNATED COASTAL BARRIERS<br>ARE LOCATED ON PANELS 14, 18,<br>155', 161', 188, 304, 308, AND 309.<br>'PANEL NOT PRINTED | This note is added near the Map Index<br>north arrow for any community that<br>contains Coastal Barrier units. All<br>panels containing Coastal Barrier units<br>and/or Otherwise Protected Areas,<br>including panels that are not printed are<br>listed. Non-printed panels are listed<br>with a footnote. | 8 Pt. Arial CAPS   |



## 8½” x 11” Map Index Elements

\*Font specifications that cannot be matched may be approximated

| Example   | Feature   | Specification  |
|---|---|--|
| <p style="text-align: center;"><u>MAP REPOSITORY</u></p> <p>Office of the Township Clerk, Harding Municipal Building, Blue Mill Road, New Vernon, New Jersey 07976 (Maps available for reference only, not for distribution.)</p>   | <p>This is an example of a Map Repository listing for a single jurisdiction FIRM Index. The Map Repository is the location that the community has designated for storing its FIRM. The address is placed just above or in close proximity to the north arrow on the Map Index. The disclaimer, as stated, immediately follows the address.</p>  | <p><b>(Header)</b><br/>9 Pt. Arial CAPS with underscore</p> <p><b>(Reference note, Community Name, and Address)</b><br/>7 Pt. Arial CAPS and CLC</p> |
| <p style="text-align: center;"><b>NOTICE TO MAP USERS</b></p> <p><b>FEMA maintains information about map features, such as street locations and names, in or near designated flood hazard areas. Requests to revise information in or near designated flood hazard areas may be provided to FEMA during the community review period, at the final Consultation Coordination Officer’s meeting, or during the statutory 90-day appeal period. Approved requests for changes will be shown on the final printed FIRM.</b></p> | <p>The following note must be added to all Preliminary FIRM Indexes and/or panel if panel is Only Panel Printed. It is also a standard paragraph in the transmittal letters to the communities. The note reminds the community to submit changes for street locations and names in or near the floodplains for incorporation into the final printed FIRM. The note does not appear on the final FIRM that is delivered to the Government Printing Office for printing. If the FIRM does not contain any BFEs, the reference to the 90-day appeal period is omitted from the note.</p> | <p><b>(Header)</b><br/>9 Pt. Arial Bold CAPS</p> <p><b>(Reference note)</b><br/>9 Pt. Arial Bold CLC</p>   |
| <p>*PANEL NOT PRINTED – NO SPECIAL FLOOD HAZARD AREAS</p>   | <p>“Panel Not Printed” Notes</p>  | <p>7-8 Pt. Arial CAPS</p>  |

[February 2002]

## **K.4 Map Body**

The body of the FIRM shall be comprised of base map information and flood hazard information, including any special notes needed for clarification, and, in applicable communities, areas designated as Coastal Barrier Resources System (CBRS) units where federal flood insurance is unavailable.

[February 2002]

### **K.4.1 Base Map**

Base maps form the backdrop against which flood hazard information is viewed. Digital base maps also provide horizontal control for effective information compiled from existing FIRMs, FBFMs and FHBMs. Base maps cover the entire geographical area of a community and include planimetric data such as transportation features, hydrographic features, hydraulic structures, landforms, political boundaries. The printed FIRM shall not depict topographic (elevation) data such as contour lines. Base map features are employed by map users to locate properties and structures relative to the floodplains; therefore, the accuracy of the base maps used in the production of FIRMs is important to the overall precision of the FIRMs.

Once a base map has been accepted for use in FIRM production, the locations of features in the base map data files are used as is. To facilitate fitting data together from multiple sources, base map features from one source may be clipped where they meet those from another source. Small graphical mismatches between communities where roads or other features cross community boundaries must then be resolved. This processing should allow for the creation of seamless digital data files.

[February 2002]

#### **K.4.1.1 Base Map Images**

Whenever possible, the assigned Mapping Partner shall use DOQ images as they are received from the U.S. Geological Survey (USGS) or the community. The DOQ image shall cover the entire FIRM panel, even if some of the image falls outside the jurisdiction being studied. The assigned Mapping Partner shall not crop the image at the jurisdiction's boundary. However, no imagery shall be shown outside the FIRM panel neatline. On FIRM panels that are only partially covered by the studied jurisdiction, a note shall be added in areas outside the jurisdiction to clarify that flood hazards may exist outside the jurisdictional boundary. An example of the note is shown in Subsection K.4.3.

[February 2002]

#### **Raster Images**

Raster maps can be produced from digital data or they can result from the digital scanning of paper maps, map negatives, and aerial photographs, and/or from the orthorectification of those images so that they are accurately georeferenced with any distortions removed. Georeferencing

means that the map depicts the spherical earth projected as a plane map, normally with Universal Transverse Mercator (UTM) or State Plane coordinates, with or without tick marks or lines that depict parallels (lines of equal latitude) or meridians (lines of equal longitude). Human interpretation of scanned or imaged features shall be required to derive intelligence from raster maps. The most common form of raster image map is the digital orthophotos, especially the standard DOQs produced by the USGS.

Variations in tones between DOQ images are acceptable. If more than one DOQ image is included on a FIRM panel, lightening or darkening of individual images to balance tones is not necessary. Overall lightening of all DOQ images for a Flood Map Project using a single factor may be done so that flood hazard features can be clearly seen.

The assigned Mapping Partner shall portray updates to roads or other features that have occurred since the DOQs were produced as vectors on top of the DOQs. A note shall be added to the map to clarify significant additions as necessary.

The assigned Mapping Partner shall show vectors that depict studied flooding sources on top of the DOQs to clarify their locations. Vectors shall not be shown outside the Special Flood Hazard Areas (SFHAs) unless specifically authorized by the FEMA Project Officer.

[February 2002]

### **Vector Images**

Vector base maps share to depict linear features (e.g., roads, railroads, streams) digitized as single-line centerlines or, alternatively, as dual lines showing the outer extremities of linear features (e.g., left and right banks of streams, curb lines on both sides of streets). Roadway right-of-ways or buffered road centerlines are not desirable because they do not depict a feature that can be physically located by users, who rely on the base map features for general orientation. Users often measure distances from road features in order to locate structures for insurance rating purposes. Road centerlines or edges of pavement are more suitable for this type of use. Vector maps must be digitized so that features are topologically correct. Then, a Geographic Information System (GIS) can automatically derive intelligence from the vector features and perform adjacency, proximity, and connectivity analyses.

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#### **K.4.1.2 Base Map Features**

The following are the types of base map features that the assigned Mapping Partner shall depict on the FIRM if they occur within the community:

- Transportation features, including roads, railroads, and airports shall be depicted. If digital orthophotos are supplied, these features must be clearly visible. Bridges that are included in the hydraulic models shall be included on the FIRM. Unimproved roads or trails (i.e., those travelways not intended for motorized vehicles or not usually used by motorized vehicles due to width or seasonal conditions) may be included, particularly if they cross the floodplains.

## *Guidelines and Specifications for Flood Hazard Mapping Partners*

- Hydrographic features (e.g., streams, rivers, lakes, shorelines) shall be depicted.
- Hydraulic structures (e.g., levees, dams, weirs, floodwalls, jetties) shall be depicted.
- NGS bench marks shall be depicted.
- Political and other boundaries that identify corporate limits, extraterritorial jurisdictional areas, military lands, Native American lands, parks, forests, state gamelands, wildlife refuges, and similar areas shall be depicted.
- U.S. Public Land Survey System (PLSS) features, also known as range, township, and section lines, and their designators, shall be depicted.. Graphic and usage specifications for other horizontal reference grid systems are also included here; and
- Other features and notes shall be depicted.

The assigned Mapping Partner shall separately symbolize base map features that are not clearly visible on the DOQ due to their location within a floodplain. For example, a dam symbol should be outlined if it is not visible on the DOQ or if other floodplain features obscure it.

In general, the hierarchy of base map features is as follows: (1) political boundaries, (2) flood hazard areas, and (3) physical features such as shorelines. Coincident base map features are to be shown such that the heaviest or widest line is most prominent. For example, if a corporate boundary, a road, and a floodplain boundary are coincident, only the corporate boundary is to be shown.

The assigned Mapping Partner shall derive base map feature names from community-supplied files or hardcopy sources, current FIRM panels, U.S. Census Bureau Topologically Integrated Geographic Encoding and Reference System files, and/or other sources. All feature names that are available in digital format shall be shown on the FIRM. All feature labels on DOQ-based FIRMs shall be shown as black text with a white halo around the letters to enable the names to be clearly read against the intensity of the background image. Feature labels on non-DOQ FIRMs shall be shown as black text. Further graphic specifications are provided in the tables below, with separate paragraphs emphasizing information of particular importance.

Please note that the tables contain specifications for DOQ and non-DOQ base maps. In general, the non-DOQ-based examples also apply to FIRMs that are produced manually. Specific exceptions are individually noted. In general, bold type fonts surrounded by a white halo are used on DOQ-based FIRMs. Medium type fonts are used on non-DOQ-based FIRMs where the background allows them to show more clearly. All base map features and labels are shown on the FIRM in black unless otherwise noted.

[February 2002]

### **Roads**

All primary roads, all roads located inside or within one inch of SFHA, and any road shown and labeled on a Flood Profile shall be labeled on the map. When space permits, secondary and

tertiary roads farther than one inch from SFHA shall be labeled. If a community supplies digital road labels beyond the stated minimums, these labels shall be shown on the FIRM, provided they meet the text placement standards and do not render the map unusable due to excessive clutter.




Road name labels shall be placed parallel to the road and spaced so that there is no more than one-half inch between each word in the road name. Additional road name labels shall be added for roads that traverse entire FIRM panels, or as necessary for clarity.

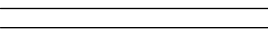





[February 2002]


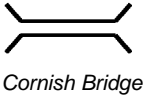
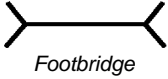
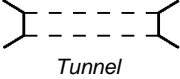


**Railroads**

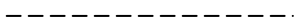
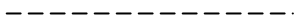
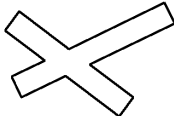

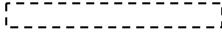
All railroads that traverse the community’s mapped area shall be labeled. When available, the formal name taken from the sources defined above is to be used. The name shall be placed along the feature when feasible or leadered, if space is limited. If several different names for the same feature are available and would cause clutter and/or confusion, the generic term “Railroad” shall be used. If the generic name option is used, the formal name shown on the unrevised flood profiles shall not be changed.

[February 2002]

| <b>Base Map Features</b>  |                 |  |
|---|-----------------|--|
| <small>*Font specifications that cannot be matched may be approximated</small>      |                 |  |
| <b>Transportation</b>   |                 |  |
| <b>Example</b>  | <b>Feature</b>  | <b>Specification</b>   |
|  | Primary Road    | <b>(DOQ)</b><br>Line weight .020”<br><br><b>(Non-DOQ)</b><br>Line weight .015”                               |
|  | Secondary Road  | <b>(DOQ)</b><br>Line weight .017”<br><br><b>(Non-DOQ)</b><br>Line weight .010”                               |
|  | Unimproved Road | Dash .05”, space .010”<br><br><b>(DOQ)</b><br>Line weight .010”<br><br><b>(Non-DOQ)</b><br>Line weight .008” |

| <b>Base Map Features</b><br>*Font specifications that cannot be matched may be approximated |  |  |
|---|--|--|
| <b>Transportation</b>   |  |  |
| Example   | Feature  | Specification  |
| <p><b>CAPITAL STREET</b><br/>CAPITAL STREET</p>   | Street, Road, Avenue Name                                | <p><b>(DOQ)</b><br/>8 Pt. Arial Bold CAPS</p> <p><b>(Non-DOQ)</b><br/>8 Pt. Arial CAPS</p>   |
| <p><i>Private Road</i><br/><i>Unnamed Road</i></p>  | Private Road, Unimproved Road, Unnamed Road Label        | 8 Pt. Arial Italics CLC  |
|            | Road Shown on Manual FIRM at 1"=700' and Larger Scale    | Line weight .006"<br>Lane width .088"  |
|            | Road Shown on Manual FIRM at 1"=800' to 1"=1,500' Scale  | Line weight .004"<br>Lane width .028"  |
|            | Road Shown on Manual FIRM at 1"=1,600' and Smaller Scale | Line weight .004"<br>Lane width .014"  |
|          | Interstate Highway Symbol                                | <p>Standard Interstate Route Shield<br/>Size .200" x .200" to .400" x .480"<br/>6 – 8 Pt. Arial Bold Narrow CAPS</p> <p><b>(DOQ)</b><br/>Line weight .010"</p> <p><b>(Non-DOQ)</b><br/>Line weight .008"</p> |
|          | U.S. Highway Symbol                                      | <p>Standard U.S. Route Shield<br/>Size .200" x .200" to .400" x .480"<br/>6 – 8 Pt. Arial Bold Narrow CAPS</p> <p><b>(DOQ)</b><br/>Line weight .010"</p> <p><b>(Non-DOQ)</b><br/>Line weight .008"</p>       |
|          | State Highway Symbol                                     | <p>Circle<br/>Diameter .200" to .280"<br/>6 – 8 Pt. Arial Bold Narrow CAPS</p> <p><b>(DOQ)</b><br/>Line weight .010"</p> <p><b>(Non-DOQ)</b><br/>Line weight .008"</p>                                       |

| Base Map Features   |   |  |
|---|---|--|
| *Font specifications that cannot be matched may be approximated                     |   |  |
| Transportation  |   |  |
| Example   | Feature                                 | Specification  |
|    | County Highway Symbol                   | Rectangle<br>Size .150" x .250" to .300" x .400"<br>6 – 8 Pt. Arial Bold Narrow CAPS<br><b>(DOQ)</b><br>Line weight .010"<br><b>(Non-DOQ)</b><br>Line weight .008"             |
|    | Road or Railroad Bridge and Bridge Name | Line weight .010"<br>Wing tick length .025", angle 45°<br>8 Pt. Arial Italics CLC  |
|    | Footbridge and Label                    | Wing tick length .025", angle 45°<br>8 Pt. Arial Italics CLC<br><b>(DOQ)</b><br>Line weight .010"<br><b>(Non-DOQ)</b><br>Line weight .008"                                     |
|  | Road or Railroad Tunnel and Label       | Dash .050", space .010"<br>Wing tick length .025", angle 45°<br>8 Pt. Arial Italics CLC<br><b>(DOQ)</b><br>Line weight .010"<br><b>(Non-DOQ)</b><br>Line weight .006" to .010" |
|  | Railroad and Name or Label              | Tie length .060", spacing .300" - .500"<br>8 Pt. Arial Italics CAPS<br><b>(DOQ)</b><br>Line weight .010"<br><b>(Non-DOQ)</b><br>Line weight .006" to .010"                     |
|  | Abandoned Railroad                      | Tie length .060", spacing .300" - .500"<br>Dash .300", space .020"<br><b>(DOQ)</b><br>Line weight .010"<br><b>(Non-DOQ)</b><br>Line weight .006" to .010"                      |

| <b>Base Map Features</b>  |  |  |
|---|--|--|
| *Font specifications that cannot be matched may be approximated   |  |  |
| <b>Transportation</b>   |  |  |
| Example   | Feature  | Specification  |
|    | Dismantled Railroad, Old Railroad Grade                            | Dash .100", space .020"<br><b>(DOQ)</b><br>Line weight .010"<br><b>(Non-DOQ)</b><br>Line weight .006" to .010" |
| <p><i>ABANDONED RAILROAD</i></p> <p><i>Abandoned Railroad</i></p> <p><i>OLD RAILROAD GRADE</i></p> <p><i>Old Railroad Grade</i></p> <p><i>Dismantled Railroad</i></p> | Abandoned Railroad, Dismantled Railroad, Old Railroad Grade Labels | 8 Pt. Arial Italics CAPS or CLC  |
| <br><i>Ferry</i>   | Ferry and Label  | Line weight .010"<br>Dash .050", space .020"<br>8 Pt. Arial Italics CLC  |
| <br>HAGERSTOWN AIRPORT   | Airport and Airport Name   | <b>(DOQ)</b><br>Line weight .017"<br><b>(Non-DOQ)</b><br>Line weight .010"<br>8 – 10 Pt. Arial CAPS            |
| <br>HAGERSTOWN AIRFIELD<br><i>Airfield</i>   | Airfield, Airfield Name, Airfield Label                            | Line weight .017"<br><b>(Name)</b><br>8 – 10 Pt. Arial CAPS<br><b>(Label)</b><br>8 Pt. Arial Italics CLC       |
| <br><i>Landing Strip</i>   | Landing Strip and Label  | Line weight .017"<br>8 Pt. Arial Italics CLC   |

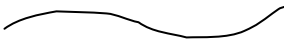

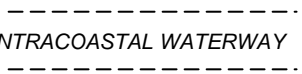
### **Hydrographic Features**

All hydrographic features (streams, lakes, ponds, bays, and oceans) that have an identified flood hazard associated with them shall be labeled. Stream name labels shall be placed parallel to the feature and spaced so that there is no more than one-half inch between each word in the stream name. Additional stream name labels may be added for streams that traverse entire FIRM panels, or as necessary for clarity. Large hydrographic features, such as oceans and lakes, shall



be labeled in larger type fonts or more than once on individual FIRM panels (as necessary for clarity).

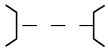

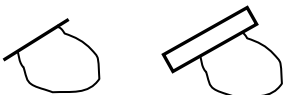

[February 2002]

| <b>Base Map Features</b>   |  |   |
|--|--|---|
| *Font specifications that cannot be matched may be approximated  |  |   |
| <b>Hydrographic</b>  |  |   |
| Example  | Feature  | Specification   |
|   | River, Stream, or Other Hydrographic Feature         | <b>(DOQ)</b><br>Line weight .010"<br><b>(Non-DOQ)</b><br>Line weight .008"  |
| <b><i>Eighteen Mile Creek<br/>Utah Lake</i></b>  | Name of River, Stream, or Other Hydrographic Feature | 7 – 24 Pt. Times New Roman Bold Italics<br>CLC  |
| <b><i>Unnamed Tributary<br/>Tributary No. 1</i></b>  | Unnamed Stream, Unnamed Tributary Label              | 7 – 11 Pt. Times New Roman Bold Italics<br>CLC  |
| <br><b><i>Century Wash</i></b>          | Wash or Glacier and Name                             | Dash .050", space .010"<br>7 – 11 Pt. Times New Roman Bold Italics<br>CLC<br><b>(DOQ)</b><br>Line weight .010"<br><b>(Non-DOQ)</b><br>Line weight .008" |
| <br><b><i>INTRACOASTAL WATERWAY</i></b> | Intracoastal Waterway and Label                      | Line weight .010"<br>Dash .070", space .020"<br>8 – 10 Pt. Arial Italic CAPS  |
| <i>Canal<br/>Ditch<br/>Pond<br/>Wash<br/>Glacier<br/>Swamp<br/>Marsh<br/>Cranberry Bog</i>                                 | Unnamed Hydrographic Feature Label                   | 8 Pt. Arial Italics CLC   |

## Hydraulic Structures

All hydraulic structures (dams, culverts, weirs, levees, and floodwalls) in or near identified floodplains (detailed or approximate) shall be labeled. The labels shall be placed near the structure and leadered in as appropriate. If no official name for the structure is available, the appropriate feature symbol and a label identifying the structure type (e.g., culvert) shall be added.

[February 2002]

| Base Map Features   |  |  |
|---|--|--|
| *Font specifications that cannot be matched may be approximated   |  |  |
| Hydraulic Structures  |  |  |
| Example   | Feature  | Specification  |
| <br><i>Culvert</i><br><i>Flume</i><br><i>Penstock</i><br><i>Aqueduct</i>                                     | Culvert, Flume, Penstock,<br>Aqueduct and Labels | Dash .050", space .010"<br>Wing tick length .025", angle 45°<br>8 Pt. Arial Italics CLC<br><br><b>(DOQ)</b><br>Line weight .008"<br><br><b>(Non-DOQ)</b><br>Line weight .006" to .008" |
| <br><i>Levee</i>   | Levee and Levee Name or<br>Label                 | Line weight .010"<br>Length .060", space .010"<br>8 Pt. Arial Italics CLC  |
| <br><i>Assabet River Dam</i><br>Dam<br>ASSABET RIVER DAM<br>DAM  | Dam or Weir and Name or<br>Label                 | <b>(DOQ)</b><br>Line weight .017"<br>8 Pt. Arial CLC<br><br><b>(Non-DOQ)</b><br>Line weight .010"<br>8 Pt. Arial CAPS or CLC   |
| <br><i>Pier</i><br><i>Sea Wall</i><br>Dock<br><i>Diversion Structure</i><br><i>Flood Control Structure</i> | Pier, Dock, Jetty, Sea Wall,<br>etc., and Labels | 8 Pt. Arial Italics CLC<br><br><b>(DOQ)</b><br>Line weight .010"<br><br><b>(Non-DOQ)</b><br>Line weight .008" to .010"   |

## **Bench Marks**

The assigned Mapping Partner shall show all qualifying bench marks within a given jurisdiction that are cataloged by the National Geodetic Survey (NGS) and entered in the National Spatial Reference System (NSRS) as First or Second Order Vertical, having a stability classification ranking of A, B, or C on the FIRM. The marks shall be identified by their NSRS Permanent Identifier (PID).

When local jurisdictions have established their own vertical monument network, these monuments may also be shown on the FIRM with the appropriate designations. The assigned Mapping Partner shall show local monuments on the FIRM only if the community has requested that they be included, the monuments meet the aforementioned inclusion criteria, and the community maintains the monuments and provides public access to information about the monuments such as their location, description, and elevation.

Refer to Volume 1, Section 1.4 for additional information on the criteria for showing bench marks on FIRMs.

| <b>Base Map Features</b>   |                |  |
|--|----------------|--|
| <i>*Font specifications that cannot be matched may be approximated</i> |                |  |
| <b>Bench Marks</b>   |                |  |
| <b>Example</b>   | <b>Feature</b> | <b>Specification</b>   |
| DX5510 ✕   | Bench Mark     | 10 Pt. Arial CAPS<br>Line Length .100" to .150"<br>Angle 45°<br><b>(DOQ)</b><br>Line weight .017"<br><b>(Non-DOQ)</b><br>Line weight .010" |

[February 2002]

## **Political Boundaries**

All political boundaries shall be labeled with the appropriate jurisdiction name on each side of the boundary. The adjoining community's boundary label should be determined by the hierarchy of the areas being identified (e.g., City of Fairfield [if the community is within the same state], City of Fairfield, Wisconsin [if the community is in a different state], or Washington County, Wisconsin [if the county is in a different state]). If the community boundary is also a state boundary, the state name shall be shown in conjunction with the outside area's community name.

If there is not enough space along the boundary for a label because the jurisdiction area on the panel is small, the boundary itself shall not be labeled.

If a multiple-county community is shown in its entirety on a countywide FIRM, the county boundary that divides the community shall be labeled with the county names on each side. If the boundary is also a state boundary, the state names shall be shown. If the boundary labels do not fit inside the area of the multiple-county community, these labels shall be placed outside the community as close as possible to the community and leadered to the boundary. The corporate limits of a multiple-county community that lies in more than one county on a countywide FIRM should be labeled with the jurisdiction name on each side of the boundary. The corporate boundary outside the subject county should be labeled with the community label on the community side of the boundary and the adjacent community (incorporated or unincorporated) on the other side of the boundary.

When Extraterritorial Jurisdictional (ETJ) areas are significant for the purposes of the NFIP, they shall be shown on the FIRM. ETJ boundaries shall be labeled on the ETJ side of the boundary with “*Community Name* Extraterritorial Jurisdiction Limits.” If there are space constraints, the label may be shortened to “*Community Name* ETJ Limits.”

Jurisdiction names and CIDs shall be placed near the center of the jurisdiction, if possible to label the area. For incorporated communities, the community type shall be followed by the name of the community (e.g., City of Smithville), and the CID placed immediately under the community name. For unincorporated county areas, the county name should be shown with “Unincorporated Areas” beneath it and the county CID should be placed immediately under that label.

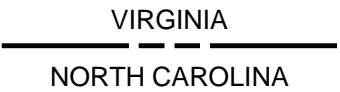
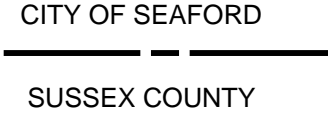


The ETJ area shall be labeled with the community name, followed by the words “(Extraterritorial Jurisdiction),” and the CID number of the community exercising its extraterritorial jurisdiction authority.

[February 2002]

### **Other Boundaries**

All areas governed by agencies other than those of the community being studied (military lands, Native American lands, parks, forests, state gamelands, wildlife refuges) shall be labeled with the official name at least once. If the area is large, additional labels should be added as needed. If the label does not fit inside the area, the label should be placed nearby and leadered into the area. The boundary of a park or other cultural feature should be labeled “PARK BOUNDARY” (or whatever the land use area boundary represents) along the outside, parallel to the boundary. If there is not enough space along the boundary, the boundary label may be omitted, but the area itself must always be labeled.

[February 2002]

| Base Map Features   |   |  |
|---|---|--|
| *Font specifications that cannot be matched may be approximated                     |   |  |
| Boundaries  |   |  |
| Example   | Feature   | Specification  |
|    | International, State, County Boundary and Label                           | Dashing: 1.500" .050" .150" .050" .150" .050" 1.500"<br>10 Pt. Arial CAPS<br><b>(DOQ)</b><br>Line weight .030"<br><b>(Non-DOQ)</b><br>Line weight .020" to .030"                           |
|    | Corporate, Extraterritorial Jurisdiction, Urban Growth Boundary and Label | Dashing: 1.500" .050" .150" .050" 1.500"<br>10 Pt. Arial CAPS<br><b>(DOQ)</b><br>Line weight .030"<br><b>(Non-DOQ)</b><br>Line weight .020" to .030"                                       |
|   | Community Area Label and Community Identification Number                  | 8 – 24 Pt. Times New Roman Bold CAPS or CLC  |
|  | Forest, Park or Reservation Boundary, Boundary Label and Area Label       | <b>(Boundary Label)</b><br>10 Pt. Arial CAPS<br><b>(Boundary)</b><br>Line weight .015"<br>Dot diameter .030", spacing .400"<br><b>(Area Label)</b><br>8-24 Pt. Times New Roman CAPS or CLC |

### Horizontal Reference Grids

The assigned Mapping Partner shall ensure that the FIRM contains a primary horizontal reference grid and secondary horizontal reference grid ticks to orient map readers to real-world coordinates; the latitude and longitude in degrees, minutes, and seconds shall be referenced at each of the four corners of the map panel; and the Universal Transverse Mercator (UTM) reference grid (or grid ticks) are included on the FIRM. Other reference grids (e.g., State Plane) may also be included. UTM, State Plane, and latitude/longitude reference grids or grid ticks shall be shown on the FIRM extending to the FIRM neatline.

[February 2002]

## **U.S. Public Land Survey System**

U.S. Public Land Survey System (PLSS) features (i.e. range, township, and section lines) shall be shown on a digital FIRM if they are available in digital format and/or were shown on a previous FIRM. The assigned Mapping Partner shall avoid mix-and-match situations where only some FIRM panels in a given jurisdiction contain section information. If the selected base map for a Countywide FIRM does not include PLSS information, but some of the community-based FIRMs within the county showed this information previously, a concerted effort shall be made to ensure that the PLSS information is obtained and shown on the entire FIRM. The PLSS information shall meet the following specifications:


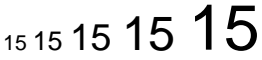


- Section numbers shall be placed in the center of the section (or portion of the section shown on the panel) parallel to the horizontal neatlines of the panel.
- Township lines shall be labeled at the left and right edges of the panel along both sides of the line.
- Range lines shall be labeled at the top and bottom edges of the panel along both sides of the line.
- Range, township, and section lines shall be terminated at the panel neatline and at the political boundaries of the subject community.

If the community being studied uses a PLSS grid, the primary grid shown on the FIRM shall be the PLSS. Otherwise, the primary horizontal reference grid shall be the same as the coordinate system of the digital data. For example, if the digital files are referenced to the UTM coordinate system, a UTM grid shall be shown on the map. If the digital files are referenced to the State Plane coordinate system, a State Plane grid of Northings and Eastings shall be shown on the map.

If the community being studied uses a PLSS grid, the secondary grid ticks shall be the same as the coordinate system of the digital data. When digital files are referenced to the UTM coordinate system, UTM grid ticks shall be shown as cross hairs within the body of the map and ticks along the edge. State Plane grid ticks are not required but may also be shown along the edges of the panel. When the digital files are referenced to the State Plane coordinate system, both UTM and State Plane grid ticks shall be required.

If the community does not use a PLSS grid, the secondary grid ticks shall be shown as cross hairs within the body of the map and ticks along the edge. When the primary grid is UTM, the secondary grid ticks shall be State Plane. When the primary grid is State Plane, the secondary grid ticks shall be UTM.

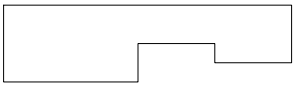
The grid interval shown on the FIRM shall not vary between panels within the same FIRM even if the panels are shown at different scales. Generally, a UTM grid interval of 1,000 meters and a State Plane grid interval of 5,000 feet shall be used.

| <b>Base Map Features</b><br>*Font specifications that cannot be matched may be approximated |   |   |
|---|---|---|
| <b>Horizontal Reference Grids</b>   |   |   |
| <b>Example</b>  | <b>Feature</b>                                      | <b>Specification</b>  |
|            | Range, Township, Section Line                       | <b>(DOQ)</b><br>Line weight .008"<br><b>(Non-DOQ)</b><br>Line weight .004" to .006" |
| R. 43 W. T. 22 N.   | Range, Township Number                              | 10 Pt. Arial CAPS   |
|            | Section Number                                      | 8, 10, 14, 18, 24 Pt. Arial   |
|            | Horizontal Reference Grid                           | <b>(DOQ)</b><br>Line weight .008"<br><b>(Non-DOQ)</b><br>Line weight .006"          |
|            | Horizontal Reference Grid Ticks                     | Line weight .020"<br>Length .300"   |
| 4276 000 M  | Horizontal Reference Grid Coordinates (UTM)         | 10 Pt. Arial CAPS   |
| 365,000 FT  | Horizontal Reference Grid Coordinates (State Plane) | 10 Pt. Arial CAPS   |
| 80° 16' 52.5"   | Corner Coordinates (Latitude, Longitude)            | 10 Pt. Arial CAPS   |

[February 2002]

**Other Base Map Features and Notes**

The following features and notes shall be added to the FIRM as needed.

| Other Base Map Features and Notes   |  |  |
|---|--|--|
| *Font specifications that cannot be matched may be approximated   |  |  |
| Example   | Feature/Usage  | Specification  |
| SHIP ISLAND   | Name of Large Island   | 14 – 24 Pt. Arial CAPS   |
| Green Island  | Name of Small Island   | 8 – 11 Pt. Arial CAPS or CLC   |
| Cape Cod  | Name of Point, Cape, Neck  | 8 – 24 Pt. Arial CAPS or CLC   |
| Lost Canyon   | Name of Gulch, Canyon, Draw  | 8 – 10 Pt. Arial CAPS or CLC   |
| CORPORATE LIMITS COINCIDENT WITH SHORELINE  | This note is used when the corporate limits of a community or county boundary are coincident with a coastal shoreline. In these cases, only the shoreline is shown; the community boundary is not shown. See Section K.7 for coincident flood hazard features notes. | 10 Pt. Arial CAPS  |
| THIS AREA SHOWN AT A SCALE OF <i>(scale)</i> ON MAP NUMBER <i>(number)</i>                                | This note is used in the blank area of a breakout panel. The map number includes the 10-digit map number without the suffix. See Section K.1.4 for a discussion of map scales, map layout, and FIRM tiling.  | 24 Pt. Arial CAPS  |
|  <p>BENTON COLLEGE</p> | Significant Outlined Landmark and Name   | 8 Pt. Arial Italics CAPS<br><b>(DOQ)</b><br>Line weight .010”<br><b>(Non-DOQ)</b><br>Line weight .008” |



| Other Base Map Features and Notes                               |   |  |
|---|---|--|
| *Font specifications that cannot be matched may be approximated |   |  |
| Example   | Feature/Usage   | Specification                                    |
| ● M1.5  | River Mile Marker   | Dot Diameter .030" to .090"<br>10 Pt. Arial CAPS |
| ⊕   | Gaging Station (shown if referenced in the hydrologic analysis) | Diameter .100"                                   |

[February 2002]

## K.4.2 Flood Hazard Features

This subsection provides guidance for showing floodplains and regulatory floodways, flood insurance risk zone labels, Base Flood Elevations (BFEs), cross sections, limits of study, coastal transects, and other items needed to depict hydrologic and hydraulic analyses, and contains a table of their graphic specifications.

[February 2002]

### K.4.2.1 Floodplains and Floodways

The 1-percent-annual-chance (100-year) and 0.2-percent-annual-chance (500-year) floodplain boundaries must be shown on the FIRM. The boundaries of Zone D areas must be shown unless they abut the 1-percent-annual-chance floodplain, in which case the 1-percent-annual-chance floodplain boundary shall take precedence.

Regulatory floodways shall be shown on the FIRM and, at cross-section locations, must agree with the values shown on the Floodway Data table in the FIS report within a maximum tolerance of five percent of the map scale or five percent of the distance, whichever is greater. When the 1-percent-annual-chance and regulatory floodway boundaries converge such that they become coincident, only the floodway boundary shall be shown.

The use of GIS and automated mapping techniques for the delineation of floodplain and floodway boundaries allows very small areas of flooding to be shown in the digital files. Mapping Partners must exercise some judgment in selecting which of these areas to show on the FIRM. Extremely small areas may be eliminated in some cases. However, in general, all 0.2-percent-annual-chance floodplain areas that are adjacent to 1-percent-annual-chance floodplain areas, no matter how thin, must be retained in the digital files.

[February 2002]

#### **K.4.2.2 Flood Hazard Information Based on Future-Conditions Analyses**

At the request of a community and with the approval of FEMA, FIRMs may include, for informational purposes, flood hazard areas based on projected- or future-conditions hydrologic and hydraulic analyses. If community officials request that FEMA show the future-conditions 1-percent-annual-chance floodplains on the FIRM, the future-conditions floodplains and flood insurance risk zone shall be shown on the FIRM and referenced in the accompanying FIS report. Although graphic specifications are flexible for the mapping of this flood insurance risk zone, the zone label will be “Zone X (Future Base Flood).” The future-conditions flood insurance risk zone shall be defined in the FIRM legend as follows:

Zone X (Future Base Flood) is the flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that are determined based on future-conditions hydrology. No BFEs or base flood depths are shown within this zone.

FEMA opted to use the Zone X (shaded) screen, in lieu of a new flood hazard zone designation, to depict the future-conditions 1-percent-annual-chance (100-year) floodplain to minimize confusion by users of the FIRM that make determinations regarding Federal mandatory flood insurance purchase requirements. Those users now recognize that areas designated as Zone X (shaded) are floodprone, but that the mandatory flood insurance purchase requirement does not apply. Because the risk premium rates for buildings located in the future-conditions 1-percent-annual-chance (100-year) floodplain will be the rate comparable to other areas outside the SFHA, FEMA believes designating these areas as “Zone X (Future Base Flood)” will be sufficient distinction.

[February 2002]

#### **K.4.2.3 Zone Labels**

All zone areas shall be labeled at least once with their appropriate flood zone and static elevation or depth, if appropriate. Zone labels should be repeated as necessary for clarity in large or complicated areas.

Very thin areas of 0.2-percent-annual-chance floodplain that border 1-percent-annual-chance floodplain areas shall be labeled where the areas become wide enough to be seen at the printed map scale.

In the 1-percent-annual-chance floodplains, the floodway fringe areas should not be considered separate areas requiring labels. One zone label should be sufficient for both the regulatory floodway and the floodway fringe.

When it is necessary to leader a label to isolated Zone X areas (shaded and unshaded) or clusters of Zone A areas, one label with two or more leaders may be used.

[February 2002]

#### **K.4.2.4 Base Flood Elevations**

BFEs of increasing elevation values shall be shown in floodplains as wavy lines perpendicular to the flow of the 1-percent-annual-chance flood. All BFEs should be labeled with an elevation value that is located above, below, or at the end of the line (i.e., where it meets the 1-percent-annual-chance floodplain boundary). If the BFE value cannot be placed within 0.1 inch of the BFE line, a leader line should be used to connect the BFE value to the BFE line. BFEs in floodplains with uniform elevations shall be shown as static (single) values. The value shall be placed below the zone label.

The basic intent of plotting BFEs on a FIRM is to represent the Flood Profile to within 0.5 foot of elevation tolerance. If BFEs are plotted correctly, the FIRM can be used to recreate the flood profile within 0.5 foot.

[February 2002]

#### **K.4.2.5 Cross Sections**

Cross sections shall be shown on the FIRM for all watercourses for which regulatory floodways have been determined. Cross-section locations and designations must correspond exactly to those shown on the Flood Profiles and in the Floodway Data tables presented in the FIS Report. The distances between cross sections and those between cross sections and physical features shown on the FIRM must agree with those shown on the Profiles within a maximum tolerance of 5 percent of the distance measured on the FIRM or FBFM.

[February 2002]

#### **K.4.2.6 Cross-Section Labeling**

Cross sections for each stream studied by detailed methods shall be labeled alphabetically from the downstream to the upstream limit of the study. At the request of a community and with the approval of the Project Officer, cross sections may also be labeled numerically. The typical numbering sequence is from the downstream to the upstream limit of study using the stream distance value at that location. Cross sections shall be labeled on the map with a hexagon at each end of the cross-section line. If there is not enough space to add a hexagon on each end, a hexagon may be placed on only one end. Cross-section hexagons shall be oriented so that the letter or number can be clearly read and is not upside down. If necessary to achieve this, the cross-section line should be trimmed or bent once it crosses the 0.2-percent-annual-chance boundary. Cross-section letters or numbers may follow the orientation of the hexagon or may be placed parallel to the bottom of the map sheet (0°).

Cross-section lines shall cross the entire floodplain (past the limits of the 0.2-percent-annual-chance whenever possible). If the cross-section line cannot exit either side of the floodplain on the panel, the hexagon should be placed in the middle of the cross-section line and the line removed behind the hexagon. All graphic adjustments to cross sections shall remain separate from modeled cross-section locations that are stored in the FIRM GIS files.

[February 2002]

#### **K.4.2.7 Limit of Detailed Study and Limit of Study**

Limit of Detailed Study labels shall be placed at the beginning and at the end of every area studied by detailed methods, when the terminus is indicated on the Flood Profile. Note that implied Limits of Detailed Study occur where the detailed study stops because of a stream confluence or when the stream exits the FIRM, and these situations should not be labeled on the FIRM. Also note that the same rules apply to Flood Profiles. A Limit of Detailed Study shall be depicted as a zone boundary and labeled as a Limit of Detailed Study when it divides areas of different zone designations (e.g., Zone AE from Zone A).

Limit of Study labels should be used whenever the study (approximate or detailed) ends abruptly and has no corresponding Flood Profile. This situation occurs most often along streams studied by approximate methods but can also occur on backwater arms of detailed studied streams.

[February 2002]

#### **K.4.2.8 Coastal Transects**

For coastal flood hazard studies, the assigned Mapping Partner shall perform an evaluation of the effects of waves accompanying the storm surge flood event on BFEs and hazard zones. The wave analyses performed shall be referenced in the FIS report and mapped on the FIRM. Wave transects shall be located with careful consideration of physical and cultural characteristics of the land so that they will closely represent conditions at those locations. Transect lines shall be delineated and labeled on the FIRM to identify the physical location of the wave transects described in the FIS Report.

The transect delineation on the FIRM should also help users to determine which wave transect analysis may influence or directly affect their property or area of interest. The wave effects mapped for any transect begin at the shoreline and end at the limits of 1-percent-annual-chance flood hazards, even though the actual transect line on the FIRM extends further seaward and landward of the flood hazard areas.

[February 2002]

#### **K.4.2.9 Coastal Transect Labeling**

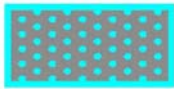



Coastal transect numbers shall be placed in a circle on both ends of the transect line. If both ends of the line cannot be labeled due to space limitations, one label at either end or a label placed in the middle of the transect line with the line removed behind the circle should be sufficient. Transect numbers may follow the orientation of the transect line or may be placed parallel to the bottom of the map sheet (0°).



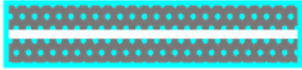

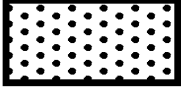


Transect numbering should generally proceed consecutively from north to south or west to east along a shoreline. New coastal transects inserted between existing transects should be numbered with an alphanumeric sequence (i.e., transects 5A and 5B might be inserted between existing transects 5 and 6).







If constraints due to clutter limit the visibility of the transect lines on the FIRM, a Transect Location Map shall be used to portray the transects. Depending upon the coastal area to be shown, this map may be an 8 ½” x 11” page or 11”x17” foldout page placed in the FIS report. When a Transect Location Map is used, the FIRM GIS files include the transects in their correct geographic location relative to the other FIRM features. Refer to Appendix J for additional information on the Transect Location Map.


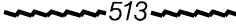

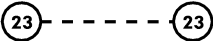
The table below provides examples of these flood hazard map features and their graphic portrayal on FIRMs. Two sets of examples, one for FIRMs that are DOQ-based and one for those that are non-DOQ-based are provided. In general, the non-DOQ-based examples also apply to FIRMs that are produced manually. Specific exceptions to this are individually noted. Color shall be used to distinguish certain flood hazard features on DOQ-based FIRMs. Bold type fonts surrounded by a white halo shall be used on DOQ-based FIRMs. Medium type fonts shall be used on non-DOQ-based FIRMs where the gray shading used for flood hazard areas allows them to show more clearly.

All flood hazard features shall be shown on the FIRM in black unless otherwise indicated.



| <b>Flood Hazard Features and Notes</b>  |   |   |
|---|---|---|
| *Font specifications that cannot be matched may be approximated   |   |   |
| Example   | Feature/Usage   | Specification   |
| <p>(DOQ)</p>  <p>(Non-DOQ)</p>  | <p>1% annual chance Flood Hazard Area<br/>(Zones A, AE, AO, AH, AR, A99, V, and VE)</p> | <p><b>(DOQ)</b><br/>Area fill pattern<br/>Dot Diameter .020”<br/>Spacing .030”<br/>Offset between rows .025”<br/>Color: Cyan</p> <p><b>(Non-DOQ)</b><br/>50% 133 lines per inch screen tint or equivalent area fill pattern</p> |
| <p>(DOQ)</p>  <p>(Non-DOQ)</p>  | <p>1% annual chance Flood Hazard Boundary Line</p>                                      | <p><b>(DOQ)</b><br/>Line weight .020”<br/>Color: Cyan</p> <p><b>(Non-DOQ)</b><br/>Line weight .015”</p>   |

| <b>Flood Hazard Features and Notes</b><br>*Font specifications that cannot be matched may be approximated   |   |  |
|---|---|--|
| Example   | Feature/Usage   | Specification  |
| LIMIT OF STUDY<br>LIMIT OF DETAILED STUDY<br><br>(DOQ)<br><br><br>(Non-DOQ)<br> | <p>The <b>Limit of Study</b> note is used to indicate the truncated terminus of a 1% annual chance floodplain of a stream or backwater area that has not been independently studied by detailed analyses (e.g., no flood profile is associated with this location).</p> <p>The <b>Limit of Detailed Study</b> note is used to indicate the terminus of a 1% annual chance floodplain of a stream that has been studied by detailed methods. The stream name may also be added to this note for clarity.</p> | <p><b>(Label)</b><br/>8 Pt. Arial CAPS</p> <p><b>(Line - DOQ)</b><br/>Line weight .020"<br/>Color: Cyan</p> <p><b>(Line - Non-DOQ)</b><br/>Line weight .015"<br/>Color: Black</p>                                |
| (DOQ)<br><br><br>(Non-DOQ)<br>  | Boundary Dividing SFHAs of Different Elevations, Velocities, or Depths  | <p>Color: White</p> <p><b>(DOQ)</b><br/>Line weight .020"</p> <p><b>(Non-DOQ)</b><br/>Line weight .015"</p>  |
| (DOQ)<br><br><br>(Non-DOQ)<br>  | 0.2% annual chance Flood Hazard Area (shaded Zone X)  | <p><b>(DOQ)</b><br/>Area fill pattern<br/>Dots .020" diameter<br/>Spacing .030"<br/>Offset between rows .025"</p> <p><b>(Non-DOQ)</b><br/>20% 133 lines per inch screen tint or equivalent area fill pattern</p> |
|    | 0.2% annual chance Flood Hazard Boundary Line   | <p><b>(DOQ)</b><br/>Line weight .020"</p> <p><b>(Non-DOQ)</b><br/>Line weight .015"</p>  |
|   | Areas Outside 1% or 0.2% annual chance Flood Hazard Areas (Zone X, D)   | No screen or tint  |

| <b>Flood Hazard Features and Notes</b><br>*Font specifications that cannot be matched may be approximated   |                         |   |
|---|-------------------------|---|
| Example   | Feature/Usage           | Specification   |
|    | Zone D Boundary         | Dash .500", space .050<br><b>(DOQ)</b><br>Line weight .020"<br><b>(Non-DOQ)</b><br>Line weight .015"  |
| <p><b>(DOQ)</b></p>  <p><b>(Non-DOQ)</b></p>     | Floodway Area           | <b>(DOQ)</b><br>Area fill pattern<br>Dots .020" diameter<br>Spacing .030"<br>Offset between rows .025"<br>Color: Cyan<br>Surprinted with diagonal hatching at 45° angle<br>10 lines per inch<br>Line weight .010"<br>Color: White<br><b>(Non-DOQ)</b><br>50% 133 lines per inch screen tint or equivalent area fill pattern<br>Surprinted with diagonal hatching at 45°<br>10 lines per inch,<br>Line weight .004" to .010" |
|    | Colorado River Floodway | Area fill pattern<br>Diagonal cross-hatching at 45° and 135° angles<br>10 lines per inch<br>Line weight .010"   |
| <p><b>(DOQ)</b></p>  <p><b>(Non-DOQ)</b></p>  | Floodway Boundary Line  | Dash .375", space .050"<br><b>(DOQ)</b><br>Line weight .020"<br>Color: Cyan<br><b>(Non-DOQ)</b><br>Line weight .015"  |

| <b>Flood Hazard Features and Notes</b><br>*Font specifications that cannot be matched may be approximated |   |  |
|---|---|--|
| Example   | Feature/Usage   | Specification  |
|                          | The <b>Limit of Floodway</b> note is used to indicate the terminus of a floodway in an area where the detailed analysis extends beyond the end of the floodway. | <b>(Label)</b><br>8 Pt. Arial CAPS<br>Line Color: Black<br><br><b>(Line - DOQ)</b><br>Line weight .004"<br><br><b>(Line – Non-DOQ)</b><br>Line weight .004" to .006" |
| <b>ZONE AE</b>  | Zone Designation  | 11 Pt. Arial Bold CAPS   |
| (EL 10)<br>(DEPTH 2')<br>(VEL 15 FPS)   | Static Base Flood Elevation, Depth, or Velocity   | 8 Pt. Arial CAPS   |
|                        | Base Flood Elevation Line   | <b>(DOQ)</b><br>Line weight .017"<br><br><b>(Non-DOQ)</b><br>Line weight .010" to .030"  |
| 646   | Base Flood Elevation Value  | 10 Pt. Arial Italics   |
|                        | Cross Section   | Hexagon .200" across<br>10 Pt. Arial Bold CAPS<br><br><b>(DOQ)</b><br>Line weight .017"<br><br><b>(Non-DOQ)</b><br>Line weight .010"                                 |
|                        | Coastal Transect  | 10 Pt. Arial Bold CAPS<br>Circle Diameter .200"<br>Dash .050", space .010"<br><br><b>(DOQ)</b><br>Line weight .017"<br><br><b>(Non-DOQ)</b><br>Line weight .010"     |



| <b>Flood Hazard Features and Notes</b><br>*Font specifications that cannot be matched may be approximated  |  |  |
|--|--|--|
| Example  | Feature/Usage  | Specification  |
|   | Arrowhead Leader   | <b>(DOQ)</b><br>Line weight .010"<br><b>(Non-DOQ)</b><br>Line weight .006"                       |
|   | Dot Leader   | Dot Diameter .020"<br><b>(DOQ)</b><br>Line weight .010"<br><b>(Non-DOQ)</b><br>Line weight .006" |
| FLOODING EFFECTS FROM<br><i>(source name)</i>  | This note is used: 1) where the detailed flooding source is physically located outside of the community and cannot be shown on the FIRM panels, 2) where the flooding source is located within the study area but is shown more than one full panel away from the floodplain to be labeled, or 3) in countywide studies where the flooding source is shown on a panel that a community will not receive. | 10 Pt. Arial CAPS  |
| FLOODWAY IN THIS AREA TOO<br>NARROW TO SHOW TO SCALE;<br>REFER TO FLOODWAY DATA<br>TABLE   | This note is used to indicate that map scale limitations do not allow the visible and accurate portrayal of the actual width of the floodway.  | 10 Pt. Arial CAPS  |
| <b>1% ANNUAL CHANCE FLOOD DISCHARGE<br/>                     CONTAINED IN CHANNEL</b><br><br><b>1% ANNUAL CHANCE FLOOD DISCHARGE<br/>                     CONTAINED IN CULVERT</b>     | These notes are used to indicate where the 1% annual chance flood discharges do not overtop the channel banks or are completely contained within a culvert pipe. This area may be bordered by a 0.2% annual chance floodplain.   | 8 Pt. Arial Bold CAPS  |
| <b>0.2% ANNUAL CHANCE FLOOD<br/>                     DISCHARGE CONTAINED IN CHANNEL</b><br><br><b>0.2% ANNUAL CHANCE FLOOD<br/>                     DISCHARGE CONTAINED IN CULVERT</b> | These notes are used to indicate where both the 1% and 0.2% annual chance flood discharges do not overtop the channel banks or are completely contained within the culvert pipe.   | 8 Pt. Arial Bold CAPS  |

| <b>Flood Hazard Features and Notes</b><br>*Font specifications that cannot be matched may be approximated  |  |                       |
|--|--|-----------------------|
| Example  | Feature/Usage  | Specification         |
| <b>FLOODWAY CONTAINED IN CHANNEL</b><br><br><b>FLOODWAY CONTAINED IN CULVERT</b>   | These notes are used to indicate where the floodway boundaries coincide with the banks of a channel or where the floodway is contained within a culvert pipe.  | 8 Pt. Arial Bold CAPS |
| <b>THIS AREA PROTECTED FROM THE 1% ANNUAL CHANCE FLOOD BY LEVEE, DIKE OR OTHER STRUCTURE SUBJECT TO POSSIBLE FAILURE DURING LARGER FLOODS</b>        | This note is used to indicate that an area that has been shown as shaded Zone X on the landward side of the levee has an inherent flood risk in the event of a levee failure.<br><br>In situations where there is a substantial area of 0.2% annual chance floodplain that exists in combination with the area protected from the 1% annual chance flood, the note below may be substituted. | 8 Pt. Arial Bold CAPS |
| <b>THIS AREA INCLUDES AREAS PROTECTED FROM THE 1% ANNUAL CHANCE FLOOD BY LEVEE, DIKE, OR OTHER STRUCTURE SUBJECT TO FAILURE DURING LARGER FLOODS</b> | This note is normally used in combination with a dashed line to identify and differentiate the 0.2% annual chance floodplain area from the area that is protected from the 1% annual chance flood.   | 8 Pt. Arial Bold CAPS |
| <b>COASTAL BASE FLOOD ELEVATIONS APPLY ONLY LANDWARD OF 0.0 FEET (NGVD / NAVD)</b>   | This note is used to indicate where a wave height analysis is in effect. The note varies according to the vertical datum used, and is placed on the map panel near the shoreline of the open body of water.  | 8 Pt. Arial Bold CAPS |

| <p style="text-align: center;"><b>Flood Hazard Features and Notes</b></p> <p style="text-align: center;">*Font specifications that cannot be matched may be approximated</p>                                 |   |                          |
|--|---|--------------------------|
| Example  | Feature/Usage   | Specification            |
| <p>FLOOD HAZARD INFORMATION IS NOT SHOWN ON THIS MAP IN AREAS OUTSIDE OF <i>[community/county name]</i></p>  | <p>This note is used on DOQ-based FIRM panels that are only partially covered by the studied jurisdiction. The note is added in areas outside the jurisdiction to clarify that flood hazards may exist outside the jurisdictional boundary but are not shown on this map. On a countywide study, if the area is adjacent to a dual/multiple-county community shown in its entirety, include both the community name and the name of the county (community name AND county name). This note shall not to be used in addition to or in place of Area Not Included labeling.</p> | <p>10 Pt. Arial CAPS</p> |
| <p>FLOOD HAZARD INFORMATION IS SHOWN WITHIN THE <i>[community name]</i> FOR INFORMATION ONLY. FOR FLOOD INSURANCE, REFER TO SEPARATELY PRINTED FLOOD INSURANCE RATE MAP FOR THE <i>[community name]</i>.</p> | <p>This note is retained on countywide map panels, if applicable, to indicate that the named community is not included in the FIS because portions of it are also located within one or more other counties that currently are not in the countywide mapping format. This note should not be added to new countywide FIRMs because it corresponds to a method of handling multiple-county communities that is no longer used.</p>   | <p>14 Pt. Arial CAPS</p> |

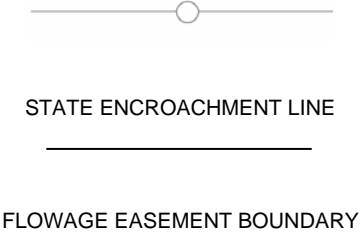
| Flood Hazard Features and Notes  |  |                          |
|--|--|--------------------------|
| *Font specifications that cannot be matched may be approximated  |  |                          |
| Example  | Feature/Usage  | Specification            |
| <p>FLOOD INSURANCE INFORMATION ON THIS MAP APPLIES ONLY TO THE AREAS WITHIN THE CORPORATE LIMITS OF THE [community name]. SPECIAL FLOOD HAZARD AREAS ARE SHOWN OUTSIDE OF THE [community name] FOR PLANNING PURPOSES ONLY.</p> | <p>This note is used on a FIRM when a Standard Format FBFM panel that showed additional flood hazard information outside of the jurisdiction being studied is now being combined with the FIRM in Map Initiatives format. The flood hazard information outside the studied jurisdiction may be kept on the map at FEMA’s discretion.</p> | <p>14 Pt. Arial CAPS</p> |


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### K.4.3 Map Body Features and Notes

The following notes shall be added to the FIRM as needed to clarify flood hazard areas or features within the flood hazard areas, or to help locate related information on the FIRM.

| Map Body Features and Notes                                     |  |   |
|---|--|---|
| *Font specifications that cannot be matched may be approximated |  |   |
| Example   | Feature/Usage  | Specification   |
| <p>_____</p> <p>JOINS PANEL (<i>panel number</i>)</p>           | <p><b>Panel Neatline and Joins Panel note:</b><br/>This note is used along each neatline of the map panel to indicate the number of the adjacent panel. The panel number includes only the 4-digit panel number and not the community number or the 5-digit FIPS code used for countywide FIRMs. In cases where more than one panel joins the subject panel (as is the case where a smaller scale panel abuts two larger scale panels), more than one “Joins Panel” note is shown along a single neatline.</p> | <p>(Note)<br/>10 Pt. Arial CAPS<br/>(Neatline - DOQ)<br/>Line weight .010”<br/>(Neatline - Non-DOQ)<br/>Line weight .006”</p> |

| <b>Map Body Features and Notes</b><br>*Font specifications that cannot be matched may be approximated   |  |  |
|---|--|--|
| Example   | Feature/Usage  | Specification  |
|  <p>STATE ENCROACHMENT LINE</p> <p>FLOWAGE EASEMENT BOUNDARY</p> | <p>These or similar notes are used to label the boundary of areas in which a community enforces more restrictive criteria for floodplain management than the minimum requirements of the NFIP.</p>   | <p><b>(Label)</b><br/>8 Pt. Arial CAPS</p> <p><b>(State Encroachment Line)</b><br/>Line weight .010”<br/>Circle diameter .060”</p> <p><b>(Flowage Easement Boundary Line)</b><br/>Line weight .010” to .020”</p> |
| <p>ZONE D BOUNDARY<br/>COINCIDENT WITH<br/>CORPORATE LIMITS</p>   | <p>This is an example of a note that may be used to clarify coincident features. Roads that are coincident with other features generally do not need to be clarified by notes. See Section K.4.1.2 for an example of a coincident political boundary note.</p> | <p>10 Pt. Arial CAPS</p>   |

| <b>Map Body Features and Notes</b><br>*Font specifications that cannot be matched may be approximated      |   |   |
|--|---|---|
| Example  | Feature/Usage   | Specification   |
| <p>PROFILE BASE LINE</p>  | <p>This note is used to identify a line on a map panel that indicates the modeled flow path of a stream when it does not coincide with the hydrographic feature shown on the map. The profile base line is used to represent channel distances as indicated on the Flood Profiles and Floodway Data tables. It is shown as a single line with one dash and labeled “Profile Base Line.” A profile base line may be added to detailed studied streams for the following reasons:</p> <p>The hydraulic model reflects a more direct flow path than the channel configuration shown on the map. This is most often the case when the stream displays extensive meandering;</p> <p>An island splits the river shoreline. The profile base line is used to identify the main channel;</p> <p>A lake through which a stream flows is present, and the reservoir routing modeling method has been used to effect a continuous Flood Profile; or</p> <p>The flood flow path is undefined on the map but the flow path has been modeled.</p> | <p><b>(Line label)</b><br/>8 Pt. Arial CAPS</p> <p><b>(Line)</b><br/>Line weight .010”<br/>Dashing: 1” .050” .100” .050” 1”</p> |

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#### **K.4.4 Coastal Barrier Resources System Map Components**

In cooperation with the U.S. Department of the Interior, FEMA transfers CBRS boundaries to FIRMs using Congressionally adopted CBRS source maps. FIRMs clearly depict the different CBRS areas and their effective dates with special map notes and symbologies. It should be noted that although FEMA shows CBRS areas on FIRMs, the U.S. Congress is the only entity that may authorize a revision to CBRS boundaries.

This Appendix uses the terms “Coastal Barriers” and “Coastal Barrier Resources System” units (CBRS). These terms are intended to be inclusive of all classifications of Coastal Barriers within the CBRS, including areas designated as Otherwise Protected Areas (OPAs). For additional information regarding the CBRS, see Volume 2, Section 2.2 of these Guidelines.

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#### K.4.4.1 Coastal Barrier Resources System Boundaries

The CBRS source maps show direct horizontal relationships between existing houses and the CBRS unit boundaries; these relationships must be maintained. Most often, the Coastal Barrier boundary has been delineated to keep existing homes out of the designated Coastal Barrier.

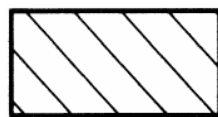
The CBRS source maps use thick lines to represent CBRS unit boundaries. Although standard cartographic practice is to follow the center of a boundary, if the boundary has a direct relationship with a linework feature (such as being against the edge of a road), that relationship must be maintained, even if it means the edge of the boundary line shown on the CBRS source map will be used.

Boundary lines must be shown to differentiate between contiguous barriers of different classifications, because each CBRS classification carries a different insurance prohibition. All barriers must be labeled or identified by notes that identify the CBRS classification of each area.

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#### K.4.4.2 Map Screens for Coastal Barrier Resources System Areas

Although there are several different types of Coastal Barriers, there are only two unique map screens. Coastal Barriers shall be portrayed with the two map symbols shown below to differentiate between CBRS and OPA units, which contain differing prohibitions. The CBRS and OPA prohibition dates (i.e., the date that the CBRS or OPA area was originally designated) shall be shown within each separate CBRS and OPA unit to assist users in determining the proper insurance prohibition date for each unit.

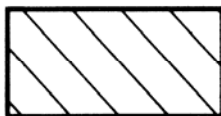


CBRS unit



OPA unit

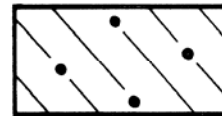
FIRMs prepared after 1991 and prior to November 2000 show three unique map screens to reflect the three classifications of CBRS units. The three screens are as follows:



1983  
Coastal Barriers



1990 or later  
Coastal Barriers



1991 or later  
Otherwise Protected Areas

Because the official CBRS source maps may show CBRS boundaries open to the sea, CBRS screens should not be terminated at shorelines unless the shoreline is coincident with the CBRS or OPA boundary. The boundaries and screens shall extend into the open water to the edge of the SFHA screen unless the Coastal Barrier boundary is closed on the official CBRS map and includes areas beyond the limit of the SFHA screen.

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### **K.4.4.3 Coastal Barrier Notes for the Body of the FIRM**

CBRS and OPA notes shall be located, whenever possible, on or near the land area, and shall not overprint existing base or floodplain features. When the note cannot be located on the land area because of space and clarity considerations, the note shall be placed in the open water within the CBRS or OPA screen, near the land area. When the note cannot be placed within the CBRS or OPA screen without creating overprints, the note shall be leadered to the land area.

| <b>CBRS Features and Notes</b>   |   |                      |
|--|---|----------------------|
| *Font specifications that cannot be matched may be approximated  |   |                      |
| <b>Example</b>   | <b>Feature/Usage</b>  | <b>Specification</b> |
| FLOOD INSURANCE NOT AVAILABLE FOR STRUCTURES NEWLY BUILT OR SUBSTANTIALLY IMPROVED ON OR AFTER OCTOBER 1, 1983, IN DESIGNATED COASTAL BARRIERS.  | This note identifies an area classified as a 1983 CBRS unit. An abbreviated note (see below) accompanied by a special Coastal Barrier Legend may be used instead. See Section K.5.1.1 for examples of the Coastal Barrier Legend.                         | 7 Pt. Arial CAPS     |
| FLOOD INSURANCE NOT AVAILABLE FOR NEW CONSTRUCTION OR SUBSTANTIALLY IMPROVED STRUCTURES ON OR AFTER (date), IN DESIGNATED COASTAL BARRIERS   | This note identifies an area classified as a 1990 or later CBRS unit. An abbreviated note (see below) accompanied by a special Coastal Barrier Legend may be used instead. See Section K.5.1.1 for examples of the Coastal Barrier Legend.                | 7 Pt. Arial CAPS     |
| FLOOD INSURANCE NOT AVAILABLE FOR STRUCTURES - NEWLY BUILT OR SUBSTANTIALLY IMPROVED ON OR AFTER (date) - NOT USED IN A MANNER CONSISTENT WITH THE PURPOSE OF THE OTHERWISE PROTECTED AREAS. | This note identifies an area classified as a 1991 or later Otherwise Protected Area. An abbreviated note (see below) accompanied by a special Coastal Barrier Legend may be used instead. See Section K.5.1.1 for examples of the Coastal Barrier Legend. | 7 Pt. Arial CAPS     |
| COASTAL BARRIER RESOURCES SYSTEM BOUNDARY COINCIDENT WITH CORPORATE LIMITS   | This note is an example of one that may be used to clarify coincident features. See Section K.4.1.2 for an example of a coincident political boundary note.   | 10 Pt. Arial CAPS    |



| <b>CBRS Features and Notes</b><br>*Font specifications that cannot be matched may be approximated |   |                         |
|---|---|-------------------------|
| Example   | Feature/Usage   | Specification           |
| <b>COASTAL BARRIER<br/>IDENTIFIED <i>(date)</i></b><br>(SEE COASTAL BARRIER LEGEND)               | This is the abbreviated Coastal Barrier note for 1983 or 1990 or later Coastal Barriers. This note is used on all FIRM panels containing CBRS areas for a community with more than one different prohibition date. When this procedure is used, a special Coastal Barrier Legend is placed below the Notes to Users section of the FIRM border. This legend shows the entire CBRS map note for each classification of CBRS unit present on all of the FIRM panels in the community or county. See Section K.5.1.1 for examples of the Coastal Barrier Legend. | 7 Pt. Verdana Bold CAPS |
| <b>OTHERWISE PROTECTED AREA<br/>IDENTIFIED <i>(date)</i></b><br>(SEE COASTAL BARRIER LEGEND)      | This is the abbreviated note for 1991 or later Otherwise Protected Areas. This note is used on all FIRM panels containing CBRS areas for a community with more than one different prohibition date. When this procedure is used, a special Coastal Barrier Legend is placed below the Notes to Users section of the FIRM border. This legend shows the entire CBRS map note for each classification of OPA present on all of the FIRM panels in the community or county. See Section K.5.1.1 for examples of the Coastal Barrier Legend.                      | 7 Pt. Verdana Bold CAPS |
| <b>THIS AREA IS CONTAINED WITHIN<br/>THE COASTAL BARRIER<br/>RESOURCES SYSTEM</b>                 | This note is used on FIRM panels when a Coastal Barrier overlaps an area of floodway.   | 10 Pt. Arial Bold CLC   |

| <b>CBRS Features and Notes</b><br>*Font specifications that cannot be matched may be approximated  |  |  |
|--|--|--|
| Example  | Feature/Usage  | Specification  |
| <p><b>Comments or concerns regarding the Coastal Barrier Resources System or Otherwise Protected Area should be directed to the Coastal Barrier Coordinator at the U.S. Fish and Wildlife Service:</b><br/>                     (---) -----.</p> | <p>This note refers map users to the Fish and Wildlife Service’s Regional Coastal Barrier Coordinator. It is placed in the body of the FIRM panel close to the CBRS units. If the abbreviated Coastal Barrier notes and special Coastal Barrier Legend are used, this note appears below the Coastal Barrier Legend. See Section K.5.1.1 for examples of the Coastal Barrier Legend.</p> <p>The phone number is inserted into the above note as follows:</p> <p><b>(413) 253-8657</b> CT, DE, MA, ME, MD, NJ, NY, RI, VA<br/> <b>(404) 679-7106</b> AL, FL, GA, LA, MS, NC, PR, SC, VI<br/> <b>(612) 713-5350</b> MI, MN, OH, WI<br/> <b>(505) 248-6454</b> TX</p> | <p>10 Pt. Tahoma Bold CLC</p>  |
|   | <p>Coastal Barrier Resources System Area</p>   | <p>Area fill pattern<br/>                     Diagonal hatching at 135° angle<br/>                     8 to 10 lines per inch<br/>                     Line weight .006” to .010”</p>  |
|   | <p>Otherwise Protected Area</p>  | <p>Area fill pattern<br/>                     Broken diagonal hatching at 135° angle<br/>                     8 to 10 lines per inch<br/>                     Line weight .006” to .010”<br/>                     Dash .130” to .150” space .750” to .850”</p> |
|   | <p>Coastal Barrier Boundary</p>  | <p>Dotted line<br/>                     Diameter .0875” spacing .0335”</p>   |
|   | <p>Coastal Barrier Boundary on Manual FIRM</p>   | <p>Line weight .015”</p>   |

[February 2002]

## **K.5 Map Legend**

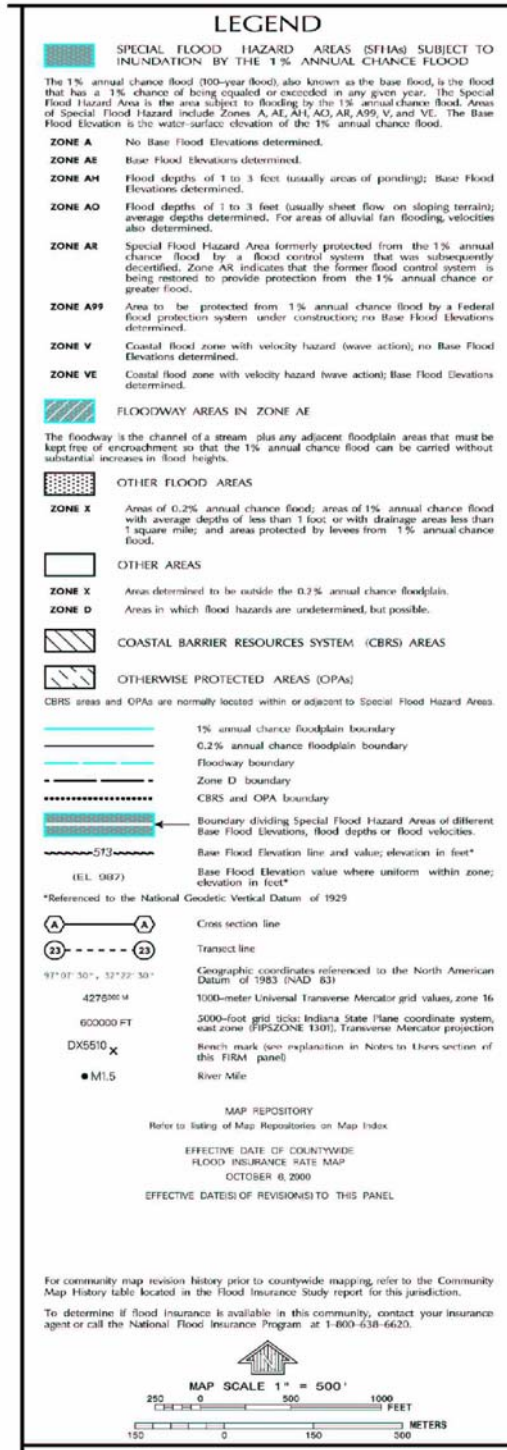
The map legend shall contain those items that are needed to assist the map user in interpreting map symbols, flood hazard screens, linework, flood hazard zone information, and other data within the body of the map. Planimetric data (such as railroads and political boundaries) shall not be included in the FIRM legend.

Most of the FIRM legend elements are standardized and do not vary. However, the content of the FIRM legend varies slightly based on the chosen base map, its coordinate system and horizontal datum, the vertical datum used for the study, community variables (e.g., map repository, previous FIRM editions), whether Coastal Barrier Resources System (CBRS) areas are included on the map, and the map scale.

The figures on the following pages contain examples of map legends for the following different types of FIRMs:

- Countywide DFIRM, DOQ Base Map (Figure K-17);
- Countywide DFIRM, Non-DOQ Base Map (Figure K-18);
- Single-Jurisdiction DFIRM, DOQ Base Map, Map Revised (Figure K-19);
- Single-Jurisdiction DFIRM, Non-DOQ Base Map, Effective Date (Figure K-20);
- Single-Jurisdiction DFIRM, Non-DOQ Base Map, Map Revised (Figure K-21);
- Single-Jurisdiction Manual FIRM, Map Initiatives Format, Map Revised (Figure K-22);  
and
- Single-Jurisdiction Manual FIRM, Standard Format (Figure K-23);.

**Figure K-17.**  
**Countywide DFIRM,**  
**DOQ Base Map Legend**



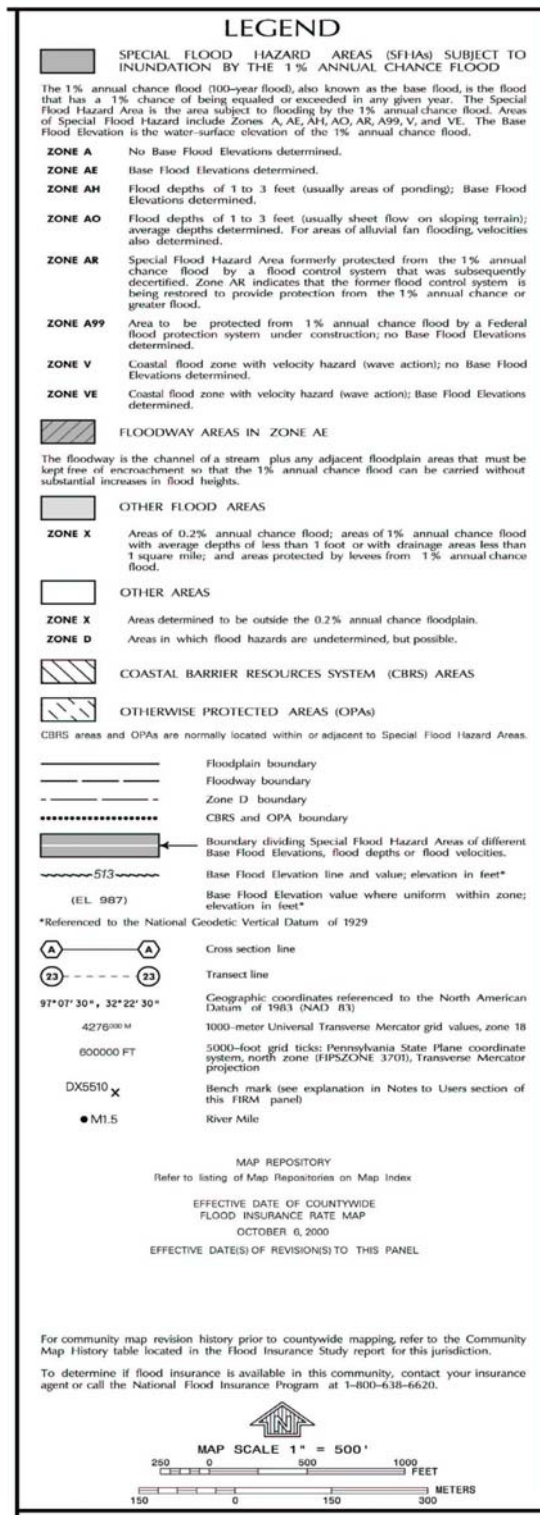


Figure K-18. Countywide DFIRM, Non-DOQ Base Map Legend

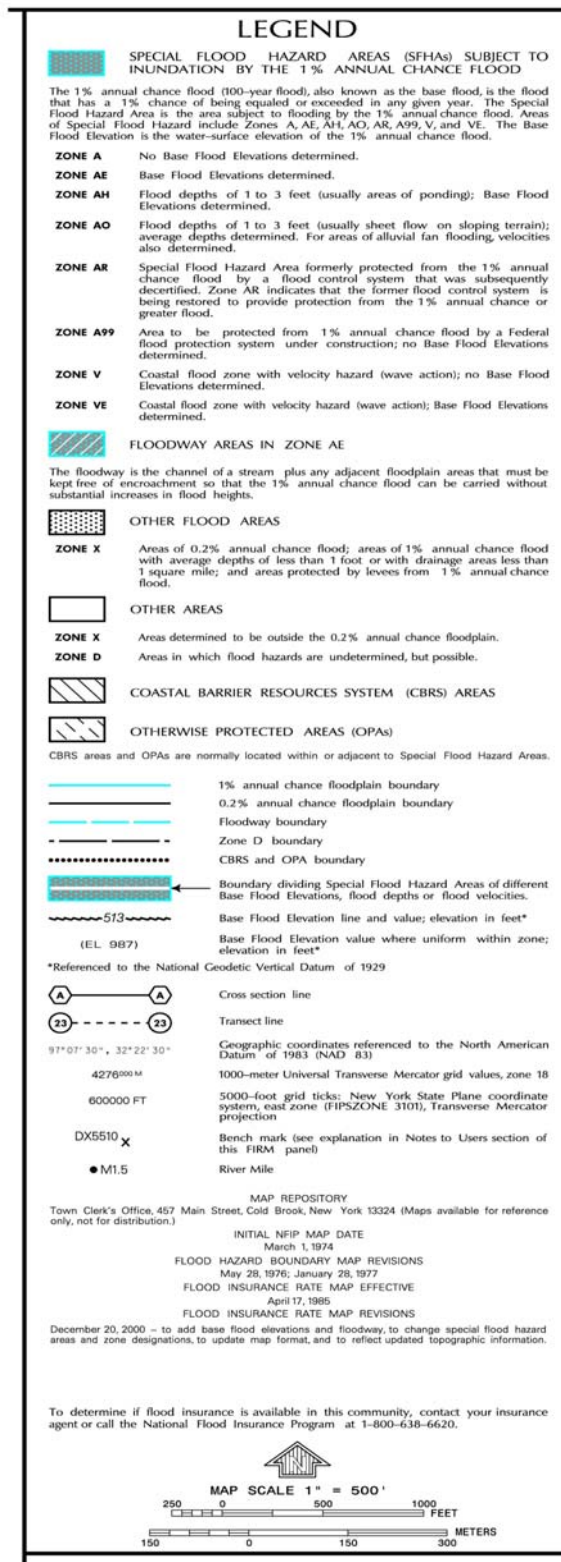


Figure K-19. Single-Jurisdiction DFIRM, DOQ Base Map, Map Revised Legend