

INDIANA DEPARTMENT OF NATURAL RESOURCES

-DIVISION OF WATER-



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References:

“Answers to Questions About the NFIP”

Illinois “Floodplain Management Handbook”

IDNR Division of Water “Floodplain Management Handbook”

“Region IV Supplemental Materials for Managing Floodplain Development Through the National Flood Insurance Program July 21-15, 1997”

“A Handbook For Rhode Island Communities”

“www.fema.gov”

*Funding for this project was provided under
a cooperative agreement with the
Federal Emergency Management Agency.
The contents do not necessarily reflect the views and
policies of the Federal Government.*

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1999/2000
Revised 2002

TABLE OF CONTENTS

I.	<u>Acronyms</u>	5
II.	<u>Introduction</u>	6
	A. The National Flood Insurance Program (NFIP) in Indiana	6
	B. Flood Insurance	6
III.	<u>State and Federal Floodplain Regulations</u>	7
IV.	<u>Local Floodplain Administration</u>	9
V.	<u>Permit Procedure: A Step-By-Step Guide</u>	12
VI.	<u>Permit Procedure Flowchart</u>	16
VII.	<u>NFIP Maps and Studies</u>	17
VIII.	<u>Letters of Map Amendment/Letters of Map Revision</u>	23
IX.	<u>Community Rating System</u>	26
X.	<u>Indiana Model Ordinance</u>	27
XI.	<u>Hazard Mitigation</u>	39
XII.	<u>Appendix</u>	40
	A. Glossary	40
	B. Forms	43
	1. Sample Application for Improvement Location Permit	43
	2. Sample Certificate of Occupancy	45
	3. Elevation Certificate	46
	4. Floodproofing Certificate	57
	5. LOMA MT-EZ Form	59
	6. Model Floodplain Variance Form	62
	C. Contacts for Assistance	65

I. ACRONYMS

BFE - Base Flood Elevation
CFR - Code of Federal Regulations
CLOMA -Conditional Letter of Map Amendment
CLOMR - Conditional Letter of Map Revision
CLOMR-F - Conditional Letter of Map Revision, based on Fill
CRS - Community Rating System
FBFM - Flood Boundary Floodway Map
FEMA - Federal Emergency Management Agency
FHBM - Flood Hazard Boundary Map
FIA -Flood Insurance Administration
FIRM - Flood Insurance Rate Map
FIS - Flood Insurance Study
FMA - Flood Mitigation Assistance
FPG - Flood Protection Grade
HMGP - Hazard Mitigation Grant Program
IDEM - Indiana Department of Environmental Management
IDOH - Indiana Department of Health
IDNR - Indiana Department of Natural Resources
LOMA - Letter of Map Amendment
LOMR - Letter of Map Revision
LOMR-F - Letter of Map Revision, based on Fill
NFIP - National Flood Insurance Program
NRCS - Natural Resources Conservation Service
NWS - National Weather Service
PMR - Physical Map Revision
SEMA - State Emergency Management Agency
SFHA - Special Flood Hazard Area
USACE - United States Army Corps of Engineers
USGS - United States Geological Survey
WYO - Write Your Own

II. INTRODUCTION

A. The National Flood Insurance Program (NFIP) in Indiana

The NFIP was created in 1968 as a partnership between the Federal and Local government to alleviate some of the problems associated with flooding. The program established national floodplain construction standards to mitigate future damage caused by flooding. To be eligible for participation in the program, a community must adopt and enforce an ordinance incorporating all applicable State and Federal floodplain regulations. Participation in the program allows the residents of the community to be eligible for the purchase of flood insurance.

Currently in Indiana, there are over 390 communities participating in the NFIP. Local governmental units participating in the program are given assistance on various levels within the partnership of the NFIP. The IDNR, Division of Water, functions as the administrator of the NFIP in the State of Indiana. The Division of Water's Floodplain Management staff work in conjunction with Local, State, and Federal entities to assist those communities which have recognized the need to enforce floodplain management standards.

In Indiana, the two major drainage basins are the Great Lakes and the Mississippi River Basins. These basins contain water resources from ground water, streams, and over 1,000 public freshwater lakes, reservoirs and ponds. Through participation in the NFIP, land areas are mapped and determined to be SFHAs. Despite the amount of land designated as SFHAs in Indiana, only 12% of structures within these areas are covered by flood insurance.

B. Flood Insurance

NFIP coverage is available to all owners of insurable property (a building and/or its contents) in a community participating in the NFIP, regardless of flood zone designation. Almost every type of walled and roofed building that is principally above ground and not entirely over water may be insured if it is in a participating community. In most cases, this includes manufactured (i.e., mobile) homes anchored to permanent foundations, but does not include travel trailers or converted buses or vans. Contents of insurable walled and roofed buildings also may be insured under separate coverage.

After a community joins the NFIP, a policy may be purchased from any licensed property insurance agent or broker who is in good standing in the State in which the agent is licensed. A policy may also be obtained through an agent representing a WYO company or an employee of the company authorized to issue the coverage.

The WYO Program, started in 1983, is a cooperative undertaking of the insurance industry and the FIA. The WYO Program allows participating property and casualty insurance companies to write and service the Standard Flood Insurance Policy in their own names. The companies receive an expense allowance for policies written and claims processed while the Federal government retains responsibility for underwriting losses. The WYO Program operates within the context of the NFIP, and is subject to its rules and regulations.

A number of factors are considered in determining the premium for flood insurance coverage. They include: the amount of coverage purchased; location of building; NFIP entry date; age of building; building occupancy; design of the building; and, for buildings in SFHAs, elevation of the building's lowest floor in relation to the BFE.

III. STATE AND FEDERAL FLOODPLAIN REGULATIONS

A. State Legislation

Indiana Flood Control Act (IC 14-28-1)

In 1945, the Indiana General Assembly determined that it was in the best interest of the citizens of the state to prevent and limit the damaging effects of floods by regulating, supervising, and coordinating the construction, operation, and design of flood control works; alteration of streams; and keeping floodways free and clear. The Natural Resources Commission has been given primary authority concerning flood control activities in the state.

The Act provides that it is illegal to construct a permanent abode or place of residence in a floodway. Any other structure, obstruction, deposit, or excavation in the floodway of any stream in the state must first be approved by the Commission. The IDNR Division of Water has been given authority from the Commission to act on its behalf concerning flood control activities in the state.

Proposed construction activities in a floodway are reviewed by the Department of Natural Resources to determine if the work will:

- adversely affect the efficiency of or unduly restrict the capacity of the floodway,
- create an unreasonable hazard to the safety of life or property, or
- result in unreasonably detrimental effects upon the fish, wildlife, and botanical resources.

Indiana Floodplain Management Act (14-28-3)

In 1973, the General Assembly directed the Natural Resources Commission to establish minimum standards for the delineation and regulation of all flood hazard areas within the state. The Commission promulgated rules and regulations (312 IAC 10) that are the minimum standards by which local units of government can develop floodplain management ordinances to regulate the flood hazard areas within their jurisdiction.

B. Federal Legislation

National Flood Insurance Act

The NFIP, enacted in 1968, was designed to alleviate damage to communities and individual hardships caused by flood. Under this program, insurance was made available to homeowners and businesses. New construction in a SFHA was required to be located and built in such a way that the potential for damages and loss of life would be kept at a minimum. The economic justification for the program was the potential to reduce the need for dependence on massive flood disaster relief through safer construction.

Flood Disaster Protection Act

The 1968 NFIP Act was expanded in 1973 by the Flood Disaster Protection Act. This act provided for affordable flood insurance through a federal subsidy. In return, communities were required to adopt and administer local measures that protect lives and regulate construction in the floodplain.

The Act provides that:

- limits on insurance coverage are increased;
- the emergency program (the initial phase of a community's participation) is continued, assuring that individuals and communities can obtain otherwise unavailable flood insurance;
- insurance is required on all federal or federally assisted financing of construction in flood-prone areas;
- and

- federal flood elevation determinations are accelerated.

Minimum regulation standards for a community enrolling in the NFIP require that permits be issued for all construction and substantial improvements in a flood hazard zone and that all permits must be reviewed to assure that sites are reasonably free from flooding. In addition, communities must require:

- proper anchoring of structures;
- the use of construction materials and methods that will minimize flood damage; and
- new or replacement utility systems to be located and designed to prevent flood loss.

Unified National Program for Floodplain Management (1976)

This program accomplishes the following:

- sets forth a conceptual framework for floodplain management;
- identifies available tools and strategies;
- assesses the implementation capability of existing Federal and State agencies and programs; and,
- makes recommendations for achieving a unified national floodplain management program. The program offers guidance applicable to both government and private interests.

Executive Order 11988

This floodplain management executive order signed by the President on May 24, 1977, requires federal agencies to avoid, to the extent possible, the long-term and short-term adverse impacts associated with the occupancy and modifications of floodplains and to avoid the direct or indirect support of floodplain development whenever there is a practicable alternative. The preferred method for satisfying this requirement is to avoid sites within the floodplain. If an action must be located within the floodplain, the executive order requires that agencies minimize potential harm to people and property and to natural and beneficial floodplain values by incorporating current floodplain management standards into the project.

National Flood Insurance Reform Act of 1994

- Creates a new Mitigation Insurance Benefit
- Improves compliance with mandatory flood insurance purchase requirement
- Creates a new Mitigation Assistance Program
- Increases flood insurance coverage limits
- Codifies the Community Rating System
- Increases the flood insurance policy waiting period to 30 days

IV. LOCAL FLOODPLAIN ADMINISTRATION

A. Become Familiar with Flood Risks

Local officials should utilize their flood maps and become familiar with the flood risks in their area. The most effective way to accomplish this is to tour the SFHAs in the community. As the tour is being done, a list of the structures at risk should be compiled.

B. Permit Process

1. Permit Development Correctly

By ensuring that new construction is compliant with the local floodplain ordinance, the need for future mitigation is eliminated or significantly reduced. Thus, when a flood occurs, the number of flood-damaged structures should be smaller.

2. Determining Floodplain Status

The first step in the permitting process is to determine the proposed or existing structure's floodplain status (e.g. floodway, floodway fringe). This process can be accomplished by utilizing the community's flood maps or by having a site-specific evaluation completed by the IDNR for the structure in question. Types of flood maps used may be FHBMs, FIRMs, or FBFMs. The site-specific evaluation will give the floodway status and the BFE for the area. Once the floodplain status is determined, State and Local regulations can then be applied according to each situation.

3. Building Protection Requirements

All buildings located in a community's SFHA are required to be protected from flood damage below the FPG. The FPG is the elevation of the regulatory flood plus two feet at any given location in the SFHA. These requirements are outlined in the local ordinance and apply to the following situations:

- a. Construction or placement of any new building having a floor area greater than 400 square feet;
- b. Structural alterations made to:
 1. an existing (previously unaltered) building, the cost of which equals or exceeds 50%* of the value of the pre-altered building (excluding the value of the land);
 2. any previously altered building
- c. Reconstruction or repairs made to a damaged building, the cost of which equals or exceeds 50%* of the market value of the building (excluding the value of the land) before damage occurred;
- d. Installing a manufactured home on a new site or a new manufactured home on an existing site. This ordinance does not apply to returning the existing manufactured home to the same site it lawfully occupied before it was removed to avoid flood damage; and
- e. Installing a travel trailer or recreational vehicle on a site for more than 180 days.

* Some communities choose to be more restrictive and use a value less than 50%.

4. Determining Cost of Repair/Improvement

This portion of the permit process only applies to those Pre-FIRM structures in the SFHA. These are the structures built before the flood maps were developed for the community participating in the NFIP. Therefore, these structures are most likely to have their lowest floor elevation below the BFE or the FPG. *Post-FIRM structures (those built after the community adopted its original flood maps) should be built in compliance with the community's floodplain ordinance.*

When determining the cost of repair/improvement, the permit official needs to have two pieces of information,

the structure's pre-repair/improvement fair market value and the cost of the repair/improvement. A main objective for the permit official is to use consistency in the method used. By being consistent, this leaves little room for argument about equality. Remember to maintain all documentation in the permit file. This will become especially important when the IDNR or FEMA evaluates the community for NFIP compliance.

a. Structure's Pre-Repair/Improvement Value

The structure's value is the fair market value of the structure only, excluding the land. Some ways of determining this value are an appraisal, a bill of sale (e.g. mobile, manufactured homes), an insurance settlement, or tax assessment records.

b. Cost of Repairs/Improvements

The two main items on a cost of repair/improvement list should include the materials used and the cost of labor. When looking at the materials used relative to repair/improvement cost, one must use the fair market value for these materials. This also applies to those materials that are donated. To determine the cost of labor, the Marshall & Swift Residential Cost Handbook can be a source for determining the prevailing wage in different parts of the country. Some exclusions in the cost of repair/improvement list may include: debris removal, clean-up, and building plans and permit fees.

5. Substantial Repair/Improvement

Substantial repair/improvement occurs when the cost of repairs/improvements equals or exceeds 50%* of the fair market value of the pre-damaged/improved structure.

** Some communities choose to be more restrictive and use a value less than 50%.*

6. Building Protection Requirements/Options

Currently, the two building protection requirements/options are elevation and dry floodproofing. Structures which are required to have their lowest floor elevated must be built to the FPG, which is two feet above the BFE. An elevation certificate containing the actual constructed lowest floor elevation should be obtained and placed in the permit file for the structure. Dry floodproofing applies only to non-residential structures floodproofed to the FPG. A floodproofing certificate should be maintained in the permit file.

7. Additional Permits

Depending on the situation, additional permits other than the local permit may be required. For example, the Indiana Flood Control Act (IC 14-28-1) requires a state permit for construction in the floodway. Other possible permits needed may be from the IDOH, IDEM, and/or the USACE.

8. Pursuing Violations

A violation occurs when construction or repairs are done without the proper permit(s) being obtained or by the failure to follow permit specifications. In these instances, the violations must be pursued. The permit official should ensure that due process is given to the violator. All options must be exhausted before more harsh measures such as notification on deed (title) or denial of flood insurance are instituted. For example, a chronological time frame of due process would include:

- a. Issuing letter(s) informing of need for permit
- b. Injunctions (e.g. stop work order)
- c. Fines (e.g. refer to local ordinance)
- d. Mitigate to the fullest extent practical to include elevation certificate for actuarial rating
- e. Notification on Deed or Title (a legal record that a structure is not built in compliance with local code)*; or,

- f. Request Denial of Flood Insurance (1316) from FEMA.*

* Contact the IDNR Floodplain Management Section for further information.

C. Public Awareness Campaign

To increase awareness about the risk of flooding in the community, newspaper articles or other forms of media can be used. In addition, information and educational programs can be implemented within the community. Some resources for these programs are the IDNR, Regional planning agencies, FEMA, USACE, NRCS, and the private sector. By bringing these issues to the forefront, the public will become more knowledgeable about the risks of building in SFHAs. As a result, individuals can make better informed choices when dealing with this issue.

D. Develop Post-Flood Standard Operating Procedure (SOP)

In developing a SOP, the first thing a community should do is take an inventory of its resources. Individuals and groups within the community that are directly involved with flooding issues should compile a list of actions to be taken in time of flooding. Examples of individuals and/or groups are: local permit official, sheriff, emergency manager, police department, fire department, veterinarian, county surveyor, volunteer groups (e.g. Red Cross), IDNR, local Soil and Water Conservation District, County Cooperative Extension Service, community officials, Board of Health, Solid Waste Management Districts, and local utility companies. This team approach to floodplain management will enable the community to collaborate ideas through a diversified group effort.

One possible element to incorporate in your SOP is the establishment of a flood warning and response system. This system should include flood forecasting, warning, and emergency preparedness. The local community can coordinate with the SEMA, NWS, FEMA, and the USACE for assistance in developing a flood warning and response system.

E. Evaluation

In order to make your floodplain management program more efficient, you should periodically evaluate the activities that have been performed. By examining your SOP, permit process, and pursuit of violations, your community can continue to improve.

Remember, by permitting new construction and substantial improvements correctly, your community and its citizens will enjoy the benefits of safer structures and reduce the risk of damage from flooding.

V. INDIANA LOCAL FLOODPLAIN PERMITTING PROCEDURES: A STEP-BY-STEP GUIDE

STEP 1

The key initial determination in reviewing an application is the location of the proposed development site relative to the SFHAs within the community, as shown on the effective floodplain map (FHBM, FIRM, FBFM) produced by FEMA. *This determination is made by comparing the location of the site with the flood zone delineation shown on the effective map.*

If the site of the proposed development is obviously outside of the shaded A-Zone (SFHA), then floodplain regulations do not apply.

If the project site is in a shaded A-Zone (SFHA) or is a borderline situation proceed to Step 2.

STEP 2

Determine if the project meets the NFIP or local ordinance definition of “development”.

“Development” includes:

- construction, reconstruction, or placement of a building or any addition to a building;
- installing a manufactured home on a site, preparing a site for a manufactured home or installing a recreational vehicle on a site for more than 180 days;
- installing utilities, erection of walls and fences, construction of roads, or similar projects;
- construction of flood control structures such as levees, dikes, dams, channel improvements, etc.;
- mining, dredging, filling, grading, excavation, or drilling operations;
- construction and/or reconstruction of bridges or culverts;
- storage of materials; or
- any other activity that might change the direction, height, or velocity of flood or surface waters.

“Development” does not include activities such as the maintenance of existing buildings and facilities such as painting, re-roofing; resurfacing roads; or gardening, plowing, and similar agricultural practices that do not involve filling, grading, excavation, or the construction of permanent buildings.

If the project does not meet the definition for “development”, then floodplain regulations do not apply.

If the project meets this definition, continue to Step 3.

STEP 3

Have the applicant complete and submit a local Floodplain Permit Application form. The applicant must also provide location information and plans for the proposed project.

A location or plat map of the site should be attached to every application form. Plans for the proposed development should also be attached showing existing and proposed conditions including all appropriate dimensions and elevations. Continue to Step 4.

STEP 4

Check to see if the proposed site is located in the regulatory floodway by measuring the floodway width on the FEMA FBFM (if available) and comparing this distance to the proposed project’s actual ground location.

If the site is located in a floodplain where the floodway limits have not been identified and *the drainage area is greater than one square mile**, the applicant must request and obtain a floodplain analysis/regulatory assessment from IDNR Division of Water that includes the base flood elevation and floodway boundary. (In some cases, the applicant may need to supply surveyed cross sections and/or detailed topographic mapping for the IDNR Division of Water to complete an analysis of the site.)

If the site is located in the floodway or in a floodplain where the floodway limits have not been identified and the *drainage area is less than one square mile**, the applicant must provide a hydraulic analysis including a base flood elevation for the site.

If the site is located in a regulatory floodway, do not issue the local permit until the applicant obtains either a IDNR permit or verification/documentation that an IDNR permit is not required. A copy of the IDNR permit or verification/documentation should be kept with the local permit application. Keep in mind that a local permit cannot be less restrictive than a State issued permit.

If the site is not located in a regulatory floodway, only local floodplain regulations apply and no IDNR permit is needed.

**If it is uncertain whether the drainage area is greater than one square mile, you may request a drainage area determination from IDNR.*

Continue on to Step 5.

STEP 5

Determine if the project includes construction of a new building or substantial improvement of an existing building.

A “building” is a structure that is principally above ground and is enclosed by walls and a roof. The term includes a gas or liquid storage tank, a manufactured home, or a prefabricated building. The term also includes recreational vehicles to be installed on a site for more than 180 days.

A “substantial improvement” means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50%* of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage” regardless of the actual repair work performed. The term does not include improvements of structures to correct existing violations of state or local health, sanitary, or safety code requirements or any alteration of a “historic structure”, provided that the alteration will not preclude the structures’ continued designation as a “historic structure”. **Some communities are more restrictive (i.e. 40%)*

If the project includes a new building, a substantial improvement made to an existing previously unaltered building, or a structural alteration made to a previously altered building, proceed to Step 6.

If the project does not include a new building, a substantial improvement made to an existing previously unaltered building, or a structural alteration made to a previously altered building, go on to Step 8.

STEP 6

Determine the base flood elevation (BFE) for the site. If your community has BFE information for the site in either the profiles found in the FIS or the FIRM, you should determine the BFE for the proposed site from these sources.

If the applicant in Step 4 previously obtained a floodplain analysis/regulatory assessment from IDNR, use the BFE information provided by IDNR.

If the base flood elevation information is not available from the FIS profile or FIRM and not previously obtained from IDNR, have the applicant request the base flood elevation (floodplain analysis/regulatory assessment) for the site from the IDNR Division of Water. *(In some cases, the applicant may need to supply surveyed cross sections and/or detailed topographic mapping for the Division of Water to complete an analysis of the site.)*

IDNR Division of Water can only provide floodplain information for sites with upstream drainage areas greater than one square mile. For sites with upstream drainage areas that are less than one square mile, you must require the applicant to provide a hydraulic analysis which includes the BFE for the site. If it is uncertain whether the drainage area is greater than one square mile, you can request a drainage area determination from IDNR.

Proceed to Step 7

STEP 7

If the development is the placement of a new building having a floor area greater than 400 square feet*, a substantial improvement made to an existing previously unaltered building, or a structural alteration made to a previously altered building, the building protection requirements of your floodplain ordinance must be met. Review the construction plans to make sure the building will be protected to the FPG, which is two feet above the base flood elevation. Protecting buildings to the FPG can be achieved by one of three methods:

a. Elevating on fill: Check the plans to ensure that the top of the fill is at or above the FPG and meets all other requirements of Local, State, and Federal standards. Ensure that fill extends at least 10 feet beyond the foundation of the building before sloping below the FPG. The slopes should be no steeper than 3 horizontal to 1 vertical when using vegetative cover

b. Elevating on posts piers, columns, an enclosure below the elevated structure, or other types of similar foundation: Check the plans to ensure that

- the structure will be properly anchored to resist collapse or flotation;
- materials used below the lowest floor are resistant to flood damage;
- all electrical, heating, ventilating, plumbing, and air conditioning equipment and utility meters are located at or above the flood protection grade;
- all water and sewer pipes, electrical and telephone lines located below the flood protection grade are waterproof; and,
- if an enclosure is used, there must be permanent openings no higher than one foot above grade (openings of at least 1 square inch for every square foot of enclosed area subject to flooding).

c. Floodproofing: *This is only an option for non-residential buildings.* A registered professional engineer must certify that the building has been designed so that below the flood protection grade, the structure and attendant utility facilities are watertight and capable of resisting the effects of the regulatory flood. The registered engineer must sign and certify a floodproofing certificate.

*Some communities may be more restrictive

Proceed to Step 8.

STEP 8

Once you are assured that the proposed project satisfies all of the applicable Local, State, and Federal regulations pertaining to development/construction, a permit may be issued. Be sure to maintain all appropriate documentation in the applicant's permit file for your records.

Proceed to Step 9.

STEP 9

Perform a site inspection to ensure that the project is proceeding in accordance with the permitted plans. For new or substantially improved structures/buildings, obtain documentation of the as-built lowest floor elevations. It is strongly suggested that this documentation be placed on an approved NFIP Elevation Certificate or Floodproofing Certificate (non-residential).

Proceed to Step 10.

STEP 10

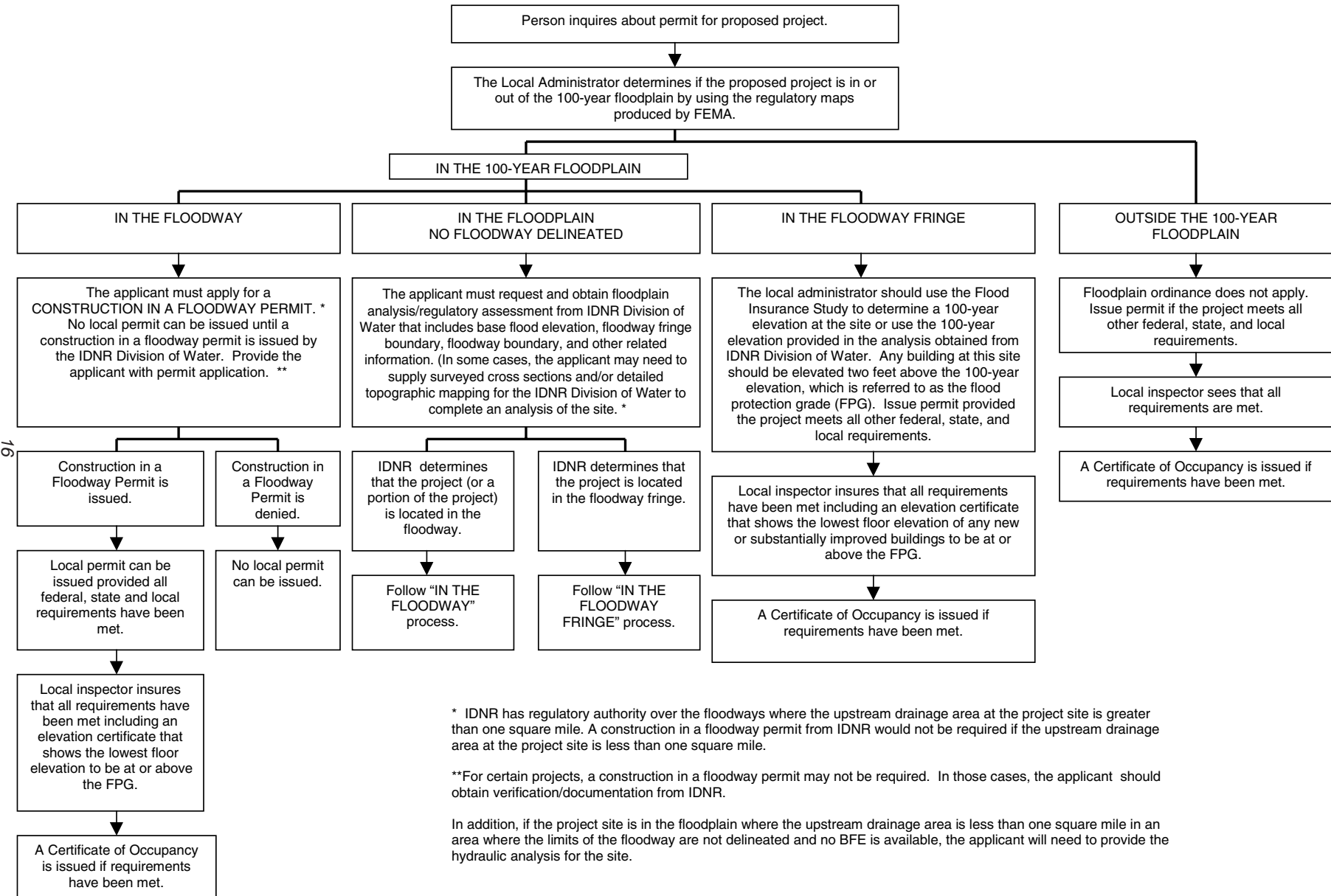
If it is your community's practice to issue occupancy certificates, one may be issued once all Federal, State, and Local requirements have been met.

Continue to Step 11

STEP 11

Maintain a record of all permit files, both issued and denied.

VI. PERMIT PROCEDURE FLOWCHART



VII. NFIP MAPS AND STUDIES

Floodplain data is furnished to participating NFIP communities by the Federal Emergency Management Agency (FEMA) to serve as the basis for local administration and enforcement of the program.

In order to effectively administer the NFIP's floodplain management standards, the local officials need information on the location and characteristics of the floodplain in their communities. Specifically, local officials need to know:

Where flood hazard areas have been designated;

Whether there are floodways designated;

What the projected base flood elevation (BFE) is at various points in the community; and

How to locate development sites relative to designated flood hazard areas in order to determine flood zone designations, establish which NFIP standards apply to projects, and determine the applicable flood protection elevation for projects.

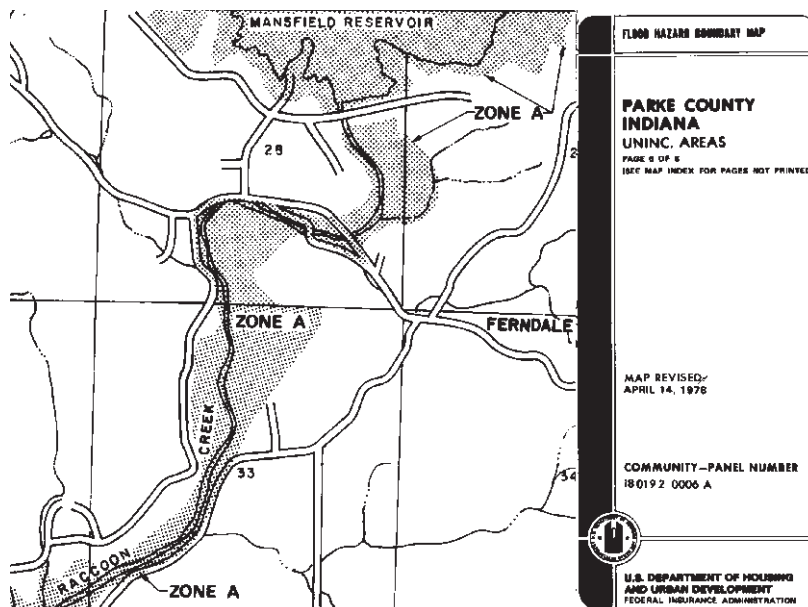
The type and amount of data and degree of detail provided varies with the phase of the NFIP in which a community is enrolled. The principal informational documents provided are the Flood Hazard Boundary Map, Flood Insurance Study, Flood Insurance Rate Map, and the Flood Boundary Floodway Map.

For ordering printed copies of effective NFIP Flood Hazard Maps and related documents, call the FEMA Map Service Center at 1-800-358-9616. You may also order by fax at 1-800-358-9620. Ordering through the Internet will soon be available. To look for this service, go to <http://www.fema.gov>.

Flood Hazard Boundary Map

A Flood Hazard Boundary Map (FHBM) is provided by FEMA to a community when the community first joins the Emergency Phase (initial phase) of the NFIP. It provides a preliminary delineation of the 100-year floodplain in the community, but does not provide specific data on floodwater depths, risk factors, or floodways. The 100-year floodplain is illustrated as a shaded area on the maps of the community. **See Figure VII-1**

Figure VII-1

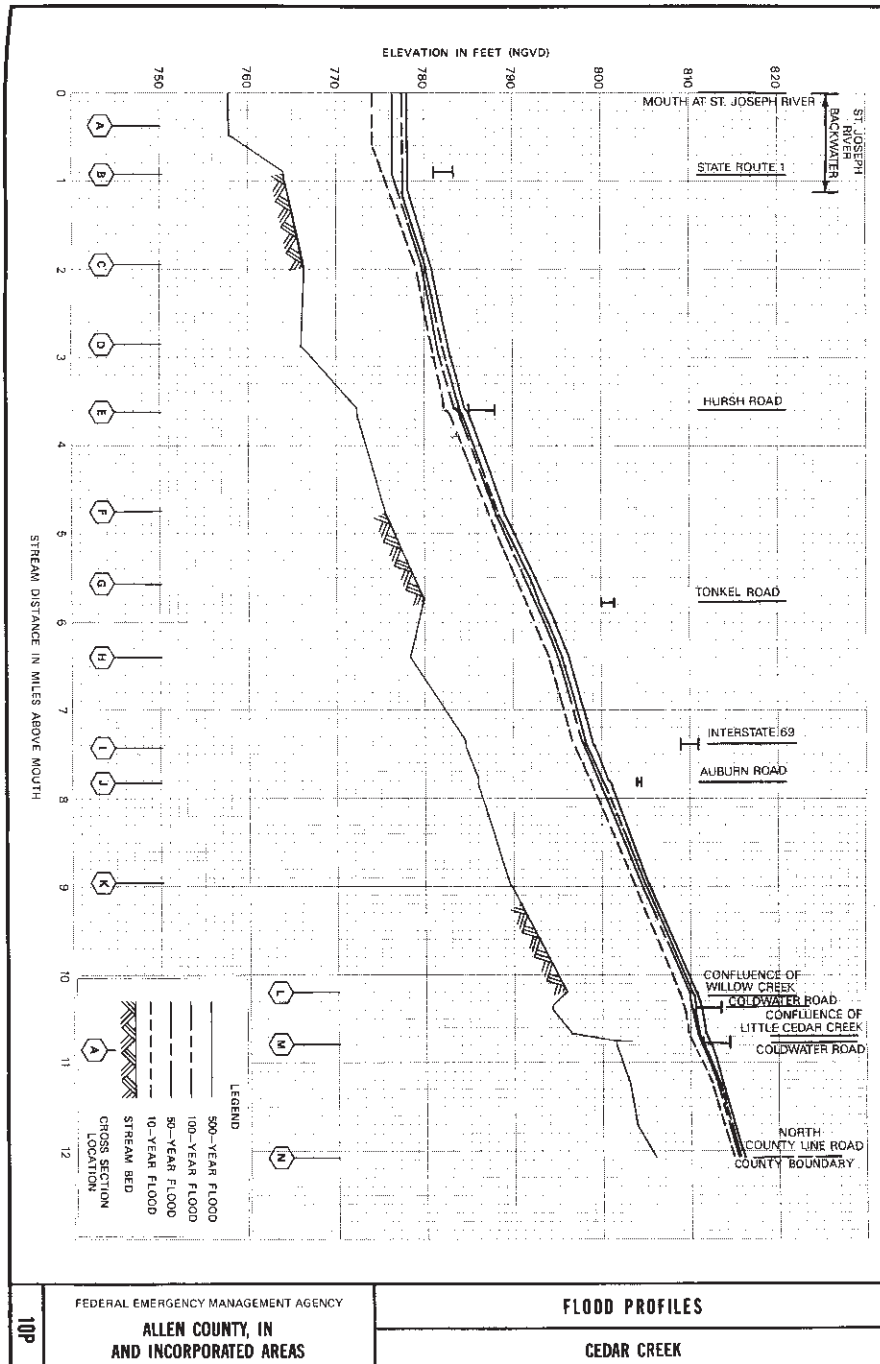


Flood Insurance Study

A Flood Insurance Study (FIS) is a published report by FEMA which examines, evaluates and determines flood hazards for a participating NFIP community. It forms the basis for development of the Flood Insurance Rate Map and Flood Boundary Floodway Map, which are used in the administration of the NFIP's land management and construction standards during the Regular Phase of the program.

In addition to describing the study methodology and providing background on the community's flooding history, the FIS contains stream profiles used to calculate water surface elevations for various flooding conditions, including the base flood elevation or 100-year flood. Data on the width, base flood elevation, and cross-sectional area of floodways are also given in the FIS for each stream segment studied in detail. **See Figure VII-2**

Figure VII-2

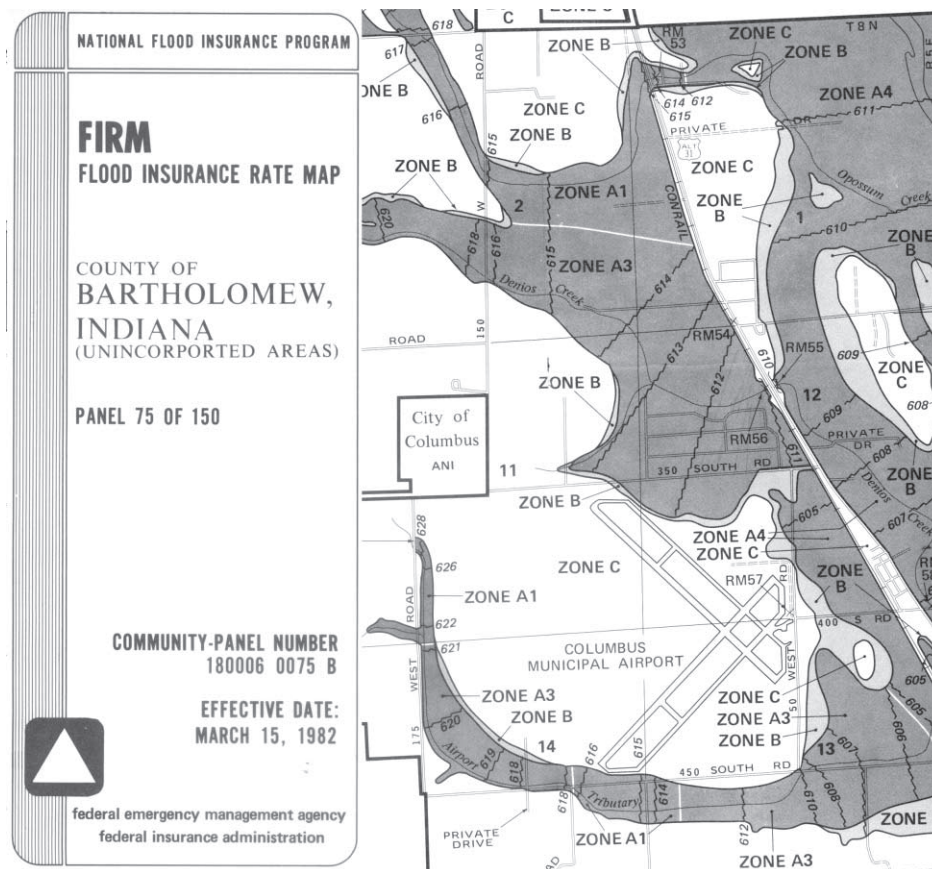


Flood Insurance Studies are developed and published following a standard procedure. After a community is identified as flood-prone and the community joins the NFIP, FEMA contracts for a FIS of the community. FEMA, its contractor, and staff from the State Coordinating Agency (IDNR Division of Water) meet with local officials to determine areas of the community which are developed or are expected to be developed in the future. These areas are examined in detail by the study contractor using hydrologic and hydraulic modeling. Parts of the community judged likely to remain undeveloped are studied by less costly approximate methods. When the contractor completes a preliminary draft of the study, a second community meeting is held to review the results. IDNR Division of Water also reviews the draft study. The preliminary maps are transformed into the NFIP's standard mapping format. Review drafts of the FIS and its accompanying map(s) are produced, which following further public review and revision, are finalized, accepted by the community, and published by FEMA.

Flood Insurance Rate Map

Following completion of the Flood Insurance Study, a Flood Insurance Rate Map (FIRM) is issued, superseding the Flood Hazard Boundary Map, and signaling the community's entry into the Regular Phase of the NFIP. **See Figure VII-3**

Figure VII-3



FIRMs are used by citizens, community officials, insurance agents, lenders, Federal agencies, and State agencies to determine the nature and extent of flood hazards in various portions of the community. They provide data needed to identify areas subject to flooding, determine the base flood elevation and flood risks of specific properties, and locate reference marks needed to establish the elevation of specific sites.

FIRMs generally offer far superior floodplain data content and accuracy compared to FHBMs. Under FEMA's Special Conversion Program, however, the FHBMs of some rural communities having relatively low flood risk are converted into FIRMs *without* a detailed Flood Insurance Study. Although having the official stature of a

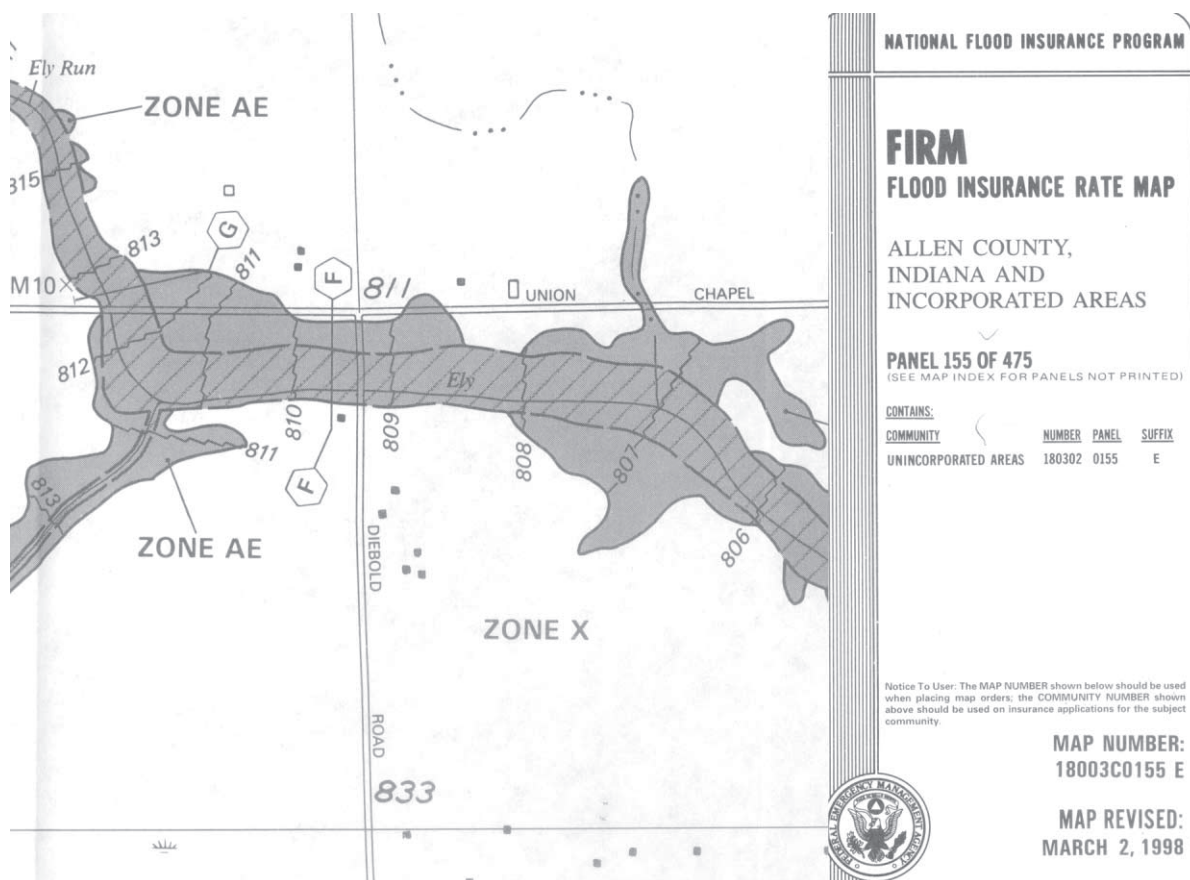
FIRM, these are the same FHBMs with only the effective date revised to reflect the date of conversion.

Most FIRMs are printed in a “Z-fold” (road map style) with each sheet or panel covering a portion of the community. Small communities may have only one panel, or may be combined with neighboring communities on a county-wide FIRM. A map index sheet is provided for all FIRMs consisting of more than one panel. All FIRMs provide basic orientation and location data including cultural features such as the corporate boundaries of the community, roads and streets (more detail may be provided in flood hazard areas), railroads, and waterbodies. FIRMs also list and locate a series of ground elevation reference points or “bench” marks in flood hazard areas. These are included to assist developers and local administrators in assuring that floodplain construction conforms to the NFIP elevation requirements.

The most significant data provided on FIRMs are the calculated base (100-year) flood elevations, which are given for all areas studied in detail. Flood elevation data are denoted by wavy lines crossing the floodplain (generally perpendicular to the stream) at periodic intervals. The base flood elevation is given at each line, expressed in feet above mean sea level (rounded to the nearest foot).

FIRMs published since 1986 also include floodway delineation and cross-section data. Designated floodways are shown as hatched areas within the boundaries of the A-Zones of riverine floodplains on these newer FIRMs. **See Figure VII-4**

Figure VII-4



Flood Insurance Rate Map Zones:

- A1-30 ZONES Areas of 100-year flood, base flood elevations determined (pre-1987 maps).
- AE ZONES Areas of 100-year flood, base flood elevations determined (post-1986 maps).

A ZONES	Areas of 100-year flood, base flood elevations <u>NOT</u> determined.
AO ZONES	Areas of 100-year shallow flooding between 1 and 3 feet depth, average depths determined.
AH ZONES	Areas of 100-year shallow flooding (generally ponding), base flood elevations determined.
A99 ZONES	Areas of 100-year flood to be protected by construction of Federal flood protection system, base flood elevations NOT determined.
B ZONES	500-year flood hazard areas (pre-1987 maps).
C ZONES	Areas of minimal flood hazards (pre-1987 maps).
X ZONES (dark shaded)	Areas of the 500-year flood; areas of 100-year flood with depths of less than 1 foot or less than one square mile drainage area, or areas of 100-year flood protected by levees (post-1986 maps).
X ZONES (no shading)	Areas determined to be outside 500-year floodplain (post-1986 maps)
D ZONES	Areas in which flood hazards are undetermined.

Flood Boundary Floodway Map

Flood Boundary and Floodway Maps (FBFM) delineate the boundaries of designated floodways. Similar in appearance to the FIRMs, FBFBMs differ by including designated floodways as white areas within the dark-shaded 100-year flood hazard areas. **See Figure VII-5** FBFBMs also indicate the locations and designations of stream cross-sections, or points along a river or stream course for which detailed data on the dimensions and flood characteristics of the floodway are provided in the FIS Floodway Data Table. **See Figure VII-6**

Figure VII-5

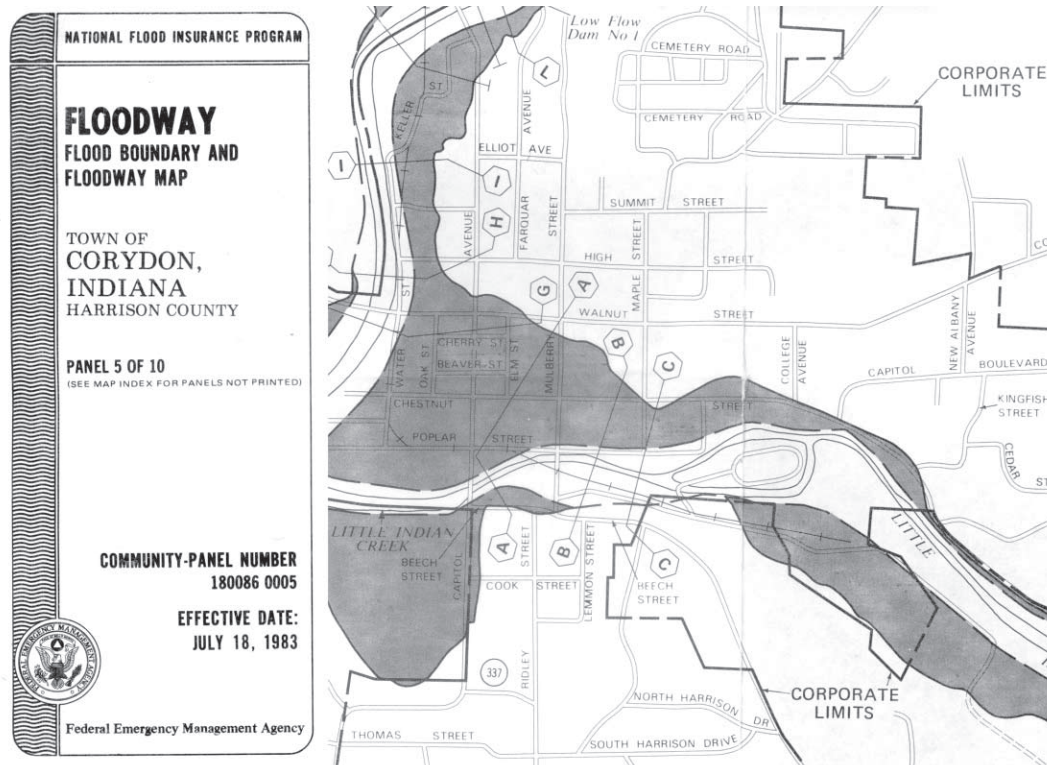


Figure VII-6

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (FEET)
LITTLE INDIAN CREEK								
A	0.37	153	1485	3.2	546.0	543.7 ²	543.7	0.0
B	0.51	455	2813	4.3	546.0	546.0	546.0	0.0
C	0.59	441	2412	5.0	546.7	546.7	546.7	0.0
D	1.53	532	3959	3.1	566.1	566.1	566.1	0.0
E	1.78	458	1997	5.9	568.7	568.7	568.7	0.0
F	1.98	347	1211	9.2	575.5	575.5	575.5	0.0
G	2.47	132	1594	7.0	585.4	585.4	585.4	0.0

¹MILES ABOVE MOUTH
²ELEVATIONS WITHOUT CONSIDERING BACKWATER EFFECT FROM INDIAN RIVER

TABLE 2	FEDERAL EMERGENCY MANAGEMENT AGENCY	FLOODWAY DATA
	TOWN OF CORYDON, IN (HARRISON CO.)	LITTLE INDIAN CREEK

FBFMs were published as separate documents until 1986, and many remain in effect. Since 1986, the floodway delineation and cross-section data have been incorporated into the FIRM, and a separate FBFM is no longer published.

Digital Flood Insurance Rate Map

Since the 1970's, FEMA has been creating, storing, and updating flood hazard maps for communities across the United States. Over the same time period, there has been a computer revolution — from mainframes to PCs to local area networks to the Internet. Advancements in hardware and software have enabled a mapping revolution – from manual cartography to computer-aided design to Geographic Information Systems to real-time high-resolution digital satellite imagery.

Through their Map Modernization Program, FEMA plans to take advantage of technology to automate various products, especially in the development of future mapping products. FEMA has developed base map specifications for its new Digital Flood Insurance Rate Map (DFIRM) product. The new DFIRM will exploit computer technology to allow for more efficient map updates, production and distribution. In this way, the DFIRM is a vast improvement over traditional FIRMs, which are produced using manual cartographic methods and are distributed only through paper copies. The new digital computer technology used for DFIRMs will allow for cost-efficient, rapid conversion of the entire mapping inventory to a digital format.

The new DFIRM may be prepared for communities for which new engineering analyses are required, as well as those communities with adequate existing flood data that only need their maps to be converted to digital format.

VIII. LETTERS OF MAP AMENDMENT/LETTERS OF MAP REVISION

A. Why so many mapping problems?

Flood Insurance Rate Maps (FIRMs) usually utilize USGS 7.5 Minute Quads as the base map upon which the flood hazard areas are portrayed. These topographic maps usually have a scale of 1":2000', with contour intervals of 5', 10', or 20'. These two factors create serious problems for accurately depicting the boundaries of the Special Flood Hazard Areas (SFHAs) on the FIRMs.

1. The scale of the FIRMs is often at 1":500' or 1":1000', and much detail is missing from the USGS 1":2000' Quads.
2. The contour line of the base (100-year) flood elevation (BFE) must be interpolated between the contours shown on the USGS Quads.

B. Legal status of the FEMA maps.

The FIRMs and the Flood Hazard Boundary Maps (FHBM) portray the SFHA, within which the purchase of flood insurance is required as a condition for granting a mortgage from a federally backed or federally regulated lending institution. The lender must use the boundaries of the SFHAs shown on the FEMA maps to determine if mandatory flood insurance applies. Thus, even though an elevation survey may indicate that a home site is above the BFE and is technically outside the floodplain, if the home site is within the SFHA (dark gray shaded area/Zone A) on the map, flood insurance must be required.

C. How does FEMA correct the maps?

So, how does FEMA amend/revise their maps to reflect better survey or topographic information, new flood studies, channel improvements, drainage programs, or new land developments? They do it through the Letter of Map Amendment or Map Revision (LOMA/LOMR) processes. Letters are issued by FEMA formally removing lots or portions of lots, by legal description, from the SFHA or changing the boundaries of the SFHA. The latter are accompanied by "annotated map panels", a small photocopy of a portion of the FIRM showing the revised SFHA boundaries. All are dated and sent to the applicant. Copies are also filed with the IDNR and the municipality or county within which the property is located.

D. Letter of Map Amendment (LOMA):

This is used to revise the SFHA boundary based on detailed elevation surveying and/or topographic mapping of **natural conditions**. If the natural ground elevation of a site is above the BFE, FEMA can amend the map to remove the property from the SFHA. Thus the mandatory flood insurance purchase is lifted. However, the lender always has the option of requiring flood insurance. For example, a home site might be just a few inches above the BFE, so the lender feels that there is still a threat of flood damage to their "secured property". On the plus side, once the flood zone has been changed to B, C, or X, the building qualifies for a *PREFERRED RISK POLICY*, the least expensive flood insurance available.

E. Letter of Map Revision, based on fill (LOMR-F):

When fill dirt is placed on property to raise the building site above the BFE, FEMA can remove the raised area from the boundaries of the SFHA, thus revising the FIRM. This is a man-made change to the floodplain. ***If the revision includes a change in the BFE or limits of the floodway, FEMA must obtain concurrence from IDNR.*** As with the LOMA, a LOMR-F lifts the mandatory flood insurance purchase. Again, however, the lender always has the option of requiring flood insurance.

F. Letter of Map Revision (LOMR):

This is used for new detailed flood studies, drainage improvements, channel alterations, etc., where the boundaries of the SFHA are altered. ***If the revision includes a change in the BFE or limits of the floodway, FEMA must obtain concurrence from IDNR.***

G. What is a “Conditional” LOMA or LOMR?

A “Conditional” LOMA or LOMR (CLOMA or CLOMR) is one that is approved tentatively, based on construction plans. “As-built” survey information must be submitted in order for approval to be finalized. Two separate letters are issued. The LOMA or LOMR is not legally valid until the as-builts are submitted and acknowledged by the second letter.

H. What is a PMR (Physical Map Revision)?

A PMR is a reprinted FEMA map incorporating changes to floodplains, floodways, or flood elevations. These are usually based on a complete restudy of a series of streams in a community. These are reviewed by FEMA and IDNR.

I. Can only a portion of a parcel be removed?

Yes. If FEMA is provided with a legal description of the land area above the base flood elevation, they can issue a LOMA or LOMR for only a portion of the parcel. Or, the LOMA or LOMR may state that only the immediate building site is removed from the SFHA, but that portions of the property remain within the SFHA, subject to all floodplain management regulations.

J. How can someone apply for a LOMA or LOMR?

A completed application form should be submitted to FEMA. The application must be accompanied by supporting survey/elevation documentation. The following forms are available for these processes:

1. **MT-EZ.** Used by a property owner or lessee to request removal of a single structure or single parcel of land from a designated SFHA. (**LOMA**)
2. **MT-1.** Used by a property owner, lessee, or developer to remove a single structure, single parcel of land, or multiple lots from a designated SFHA. (**LOMA, CLOMA, LOMR-F, CLOMR-F**)
3. **MT-2.** Used by a property owner or person with legal authority to represent a group/firm/organization or other entity to request a revision of the current FEMA map to show changes to floodplains, floodways, or flood elevations. (**LOMR, PMR**)

K. How much does it cost?

A LOMA is *FREE* because it is based on natural conditions and **corrects** the FEMA map. However, fees are charged for LOMR-Fs and LOMRs because these are based on man-made changes. The fee is considered part of the cost of developing in a floodplain. For a current fee schedule, you can go to <http://www.fema.gov/mit/tsd> or you may contact FEMA by phone at **1-877-FEMA MAP**.

How to Obtain LOMA/LOMR Forms:

Forms can be downloaded from <http://www.fema.gov/mit/tsd>

or

Call or Write the Indiana Department of Natural Resources
Division of Water
402 W. Washington St., Rm. W264
Indianapolis, IN 46204
(317) 232-4160
toll free# 1-877-928-3755
FAX (317) 233-4579

IX. COMMUNITY RATING SYSTEM

The CRS is a component of the NFIP. Under the CRS, there is an incentive for communities to do more than just regulate construction of new buildings to minimum national standards. Under this voluntary program, flood insurance premiums are adjusted to reflect community activities that reduce flood damage to existing buildings, manage development in areas not mapped by the NFIP, protect new buildings beyond the minimum NFIP protection level, help insurance agents obtain flood data, and help people obtain flood insurance.

The objective of the CRS is to reward communities that are doing more than meeting the minimum NFIP requirements to help their citizens prevent or reduce flood losses. The CRS also provides an incentive for communities to initiate new flood protection activities. The goal of the CRS is to encourage, by the use of flood insurance premium adjustments, community and state activities beyond those required by the NFIP to:

- 1) Reduce flood losses by
 - a) protecting public health and safety
 - b) reducing damage to buildings and contents
 - c) preventing increases in flood damage from new construction
 - d) reducing the risk of erosion damage
 - e) protecting natural and beneficial floodplain functions
- 2) Facilitate accurate insurance rating
- 3) Promote the awareness of flood insurance

X. INDIANA MODEL ORDINANCE

INDIANA MODEL ORDINANCE FOR FLOOD

HAZARD AREAS

Ordinance No _____

You can find an updated version of the model ordinance at <http://www.in.gov/dnr/water/files/IndianaModelOrdinance.pdf>

Be it ordained by the (City Council/Town Board/ County Commissioners) of the (City/County/Town) of _____, Indiana, as follows:

SECTION 1. STATUTORY AUTHORIZATION.

Sections 1 & 2 explain the purpose of the floodplain ordinance and indicate what piece of legislation establishes the local unit of government's authority to control land use.

The Indiana Legislature granted the power to local units of government (IC 36-7-4) to control land use within their jurisdictions in order to accomplish the following.

SECTION 2. STATEMENT OF PURPOSE.

The purpose of this ordinance is to guide development in the flood hazard areas in order to reduce the potential for loss of life and property, reduce the potential for health and safety hazards, and to reduce the potential for extraordinary public expenditures for flood protection and relief. Under the authority granted to local units of government to control land use within their jurisdiction, which includes taking into account the effects of flooding, the _____ (City Council/Town Board of Trustees/County Commissioners) hereby adopts the following floodplain management regulations in order to accomplish the following:

- a. to prevent unwise developments from increasing flood or drainage hazards to others;
- b. to protect new buildings and major improvements to buildings from flood damage;
- c. to protect human life and health from the hazards of flooding;
- d. to lessen the burden on the taxpayer for flood control projects, repairs to flood-damaged public facilities and utilities, and flood rescue and relief operations;
- e. to maintain property values and a stable tax base by minimizing the potential for creating flood blighted areas; and
- f. to make federally subsidized flood insurance available for structures and their contents in the (City/Town/County) by fulfilling the requirements of the National Flood Insurance Program.

SECTION 3. DEFINITIONS.

For the purpose of this ordinance, the following definitions are adopted:

When interpreting this ordinance, the definitions found in Section 3 should be used. NFIP definitions can be located in 44 CFR 59.1. Standard definitions found in a dictionary should be used for any words not found in Section 3.

- a. Building - see "structure."

- b. Development - any man-made change to improved or unimproved real estate including but not limited to:
1. construction, reconstruction, or placement of a building or any addition to a building;
 2. installing a manufactured home on a site, preparing a site for a manufactured home or installing a recreational vehicle on a site for more than 180 days;
 3. installing utilities, erection of walls and fences, construction of roads, or similar projects;
 4. construction of flood control structures such as levees, dikes, dams, channel improvements, etc.;
 5. mining, dredging, filling, grading, excavation, or drilling operations.
 6. construction and/or reconstruction of bridges or culverts;
 7. storage of materials; or
 8. any other activity that might change the direction, height, or velocity of flood or surface waters.

“Development” does not include activities such as the maintenance of existing buildings and facilities such as painting, re-roofing; resurfacing roads; or gardening, plowing, and similar agricultural practices that do not involve filling, grading, excavation, or the construction of permanent buildings.

- c. Existing manufactured home park or subdivision - means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of this ordinance.
- d. Expansion to an existing manufactured home park or subdivision - means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).
- e. FBFM - Flood Boundary and Floodway Map.
- f. FEMA - Federal Emergency Management Agency.
- g. FHBM - Flood Hazard Boundary Map.
- h. FIRM - Flood Insurance Rate Map.
- i. Flood - a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow, the unusual and rapid accumulation, or the runoff of surface waters from any source.
- j. Floodplain - the channel proper and the areas adjoining any wetland, lake or watercourse which have been or hereafter may be covered by the regulatory flood. The floodplain includes both the floodway and the floodway fringe districts.
- k. Flood Protection Grade or the “FPG” - the elevation of the regulatory flood plus two feet at any given location in the SFHA.
- l. Floodway - the channel of a river or stream and those portions of the floodplains adjoining the channel which are reasonably required to efficiently carry and discharge the peak flood flow of the regulatory

flood of any river or stream.

- m. Floodway fringe - those portions of the floodplain lying outside the floodway.
- n. Letter of Map Amendment (LOMA) - An amendment to the currently effective FEMA map that establishes that a property is not located in a Special Flood Hazard Area (SFHA). A LOMA is only issued by FEMA.
- o. Letter of Map Revision (LOMR) - An official revision to the currently effective FEMA map. It is issued by FEMA and changes flood zones, delineations, and elevations.
- p. Lowest Floor - means the lowest of the following:
 - (1) the top of the basement floor;
 - (2) the top of the garage floor, if the garage is the lowest level of the building;
 - (3) the top of the first floor of buildings elevated on pilings or constructed on a crawl space with permanent openings; or
 - (4) the top of the floor level of any enclosure below an elevated building where the walls of the enclosure provide any resistance to the flow of flood waters unless:
 - (a). the walls are designed to automatically equalize the hydrostatic flood forces on the walls by allowing for the entry and exit of flood waters, by providing a minimum of two openings (in addition to doorways and windows) having a total area of one (1) square inch for every square foot of enclosed area subject to flooding. The bottom of all such openings shall be no higher than one (1) foot above grade.
 - (b). such enclosed space shall be usable for the parking of vehicles and building access.
- q. Manufactured home - means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle."
- r. New manufactured home park or subdivision - means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of this ordinance.
- s. Recreational vehicle - means a vehicle which is (1) built on a single chassis; (2) 400 square feet or less when measured at the largest horizontal projections; (3) designed to be self-propelled or permanently towable by a light duty truck; and (4) designed primarily not for use as a permanent dwelling, but as quarters for recreational camping, travel, or seasonal use.
- t. Regulatory Flood - means the flood having a one percent probability of being equaled or exceeded in any given year, as calculated by a method and procedure which is acceptable to and approved by the Indiana Natural Resources Commission and the Federal Emergency Management Agency. The regulatory flood elevation at any location is as defined in Section 5 of this ordinance. The "Regulatory Flood" is also known by the term "Base Flood."
- u. SFHA or Special Flood Hazard Area - means those lands within the jurisdiction of the (City/Town/County) that are subject to inundation by the regulatory flood. The SFHAs of the (City/Town/County) are generally identified as such on the Flood Insurance Rate Map of the (City/Town/County) prepared by the Federal Emergency Management Agency and dated _____. The SFHAs of those parts of unincorporated _____ County that are within the extraterritorial jurisdiction of the (City/

Town) or that may be annexed into the (City/Town) are generally identified as such on the Flood Insurance Rate Map prepared for _____ County by the Federal Emergency Management Agency and dated _____.

The IDNR/DOW has information pertaining to the dates of FEMA published floodplain maps.

- v. Structure - means a structure that is principally above ground and is enclosed by walls and a roof. The term includes a gas or liquid storage tank, a manufactured home, or a prefabricated building. The term also includes recreational vehicles to be installed on a site for more than 180 days.
- w. Substantial Improvement means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures that have incurred "substantial damage" regardless of the actual repair work performed. The term does not include improvements of structures to correct existing violations of state or local health, sanitary, or safety code requirements or any alteration of a "historic structure", provided that the alteration will not preclude the structures continued designation as a "historic structure".

SECTION 4. DUTIES OF THE ADMINISTRATOR.

This section (Section 4) summarizes the duties of the local floodplain administrator.

_____ (i.e. Plan Commission Director, Building Inspector, Clerk Treasurer, etc.) shall implement this ordinance and hereafter be referred to as the Zoning Administrator. The Zoning Administrator for the _____ is appointed to review all development and subdivision proposals to ensure compliance with this ordinance, including but not limited to the following duties:

- a. Ensure that all development activities within the SFHAs of the jurisdiction of the (City/Town/County) meet the requirements of this ordinance.
- b. Provide information and assistance to citizens upon request about permit procedures and floodplain construction techniques.
- c. Ensure that construction authorization has been granted by the Indiana Natural Resources Commission for all development projects subject to Section 7 of this ordinance, and maintain a record of such authorization (either copy of actual permit or floodplain analysis/regulatory assessment).

State requirement under IC 14-28-1.

- d. Maintain a record of the "as-built" elevation of the top of the lowest floor (including basement) of new and/or substantially improved buildings constructed in the SFHA. Inspect before, during and after construction.

NFIP requirements for subsections d. and e.: 44CFR 60.3 (b) (5) (iii) and 59.22 (a) (9) (iii).

- e. Maintain a record of the engineer's certificate and the "as-built" floodproofed elevation of all buildings subject to Section 8 of this ordinance.
- f. Cooperate with state and federal floodplain management agencies to improve base flood and floodway data and to improve the administration of this ordinance. Submit reports as required for the National Flood Insurance Program.

- g. Maintain for public inspection and furnish upon request regulatory flood data, SFHA maps, Letters of Map Amendment (LOMA), Letters of Map Revision (LOMR), copies of DNR permits and floodplain analysis/regulatory assessment, federal permit documents, and “as-built” elevation and floodproofing data for all building constructed subject to this ordinance.
- h. Notify adjacent communities and the State Coordinating Office prior to any alteration or relocation of a watercourse, and submit copies of such notifications to FEMA.

SECTION 5. REGULATORY FLOOD ELEVATION.

This ordinance’s protection standard is the regulatory flood. The best available regulatory flood data is listed below. Whenever a party disagrees with the best available data, the party submitting the detailed engineering study needs to replace existing data with better data and submit it to the Department of Natural Resources for review and approval.

The IDNR/DOW has information pertaining to Flood Insurance Studies and FEMA maps.

- a. The regulatory flood elevation and floodway limits for the SFHAs of _____ River and _____ Creek shall be as delineated on the 100 year flood profiles in the Flood Insurance Study of the (City/Town/ County) dated _____ and the corresponding (FBFM/ FIRM) dated _____ prepared by the Federal Emergency Management Agency.
- b. The regulatory flood elevation for each SFHA delineated as an “AH Zone” or “AO Zone” shall be that elevation (or depth) delineated on the Flood Insurance Rate Map of the (City, Town or County).
- c. The regulatory flood elevation for each of the remaining SFHAs delineated as an “A Zone” on the Flood Insurance Rate Map of the (City/Town/County) shall be according to the best data available as provided by the Department of Natural Resources.
- d. The regulatory flood elevation and floodway limits for the SFHAs of those parts of unincorporated _____ County that are within the extraterritorial jurisdiction of the (City/Town) or that may be annexed into the (City/Town) shall be as delineated on the 100 year flood profiles in the Flood Insurance Study of _____ County dated _____ and the corresponding (FBFM/FIRM) dated _____ prepared by the Federal Emergency Management Agency.
- e. If the SFHA is delineated as “AH Zone or AO Zone,” the elevation (or depth) will be delineated on the County Flood Insurance Rate Map. If the SFHA is delineated as “Zone A” on the County Flood Insurance Rate Map, the regulatory flood elevation shall be according to the best data available as provided by the Department of Natural Resources.

SECTION 6. IMPROVEMENT LOCATION PERMIT.

This section explains floodplain permit requirements emanating from 44 CFR 60.3 (b) (1).

No person, firm, corporation, or governmental body not exempted by state law shall commence any “development” in the SFHA without first obtaining an Improvement Location Permit from the Zoning Administrator. The Zoning Administrator shall not issue an Improvement Location Permit if the proposed “development” does not meet the requirements of this ordinance.

- a. The application for an Improvement Location Permit shall be accompanied by the following:
 - 1. A description of the proposed development.

2. Location of the proposed development sufficient to accurately locate property and structure in relation to existing roads and streams.
 3. A legal description of the property site.
 4. A site development plan showing existing and proposed development locations and existing and proposed land grades.
 5. Elevation of the top of the lowest floor (including basement) of all proposed development. Elevation should be in National Geodetic Vertical Datum of 1929 (NGVD) or North American Vertical Datum (NAVD). In either case the conversion formula should be included.
- b. Upon receipt of an application for an Improvement Location Permit, the Zoning Administrator shall determine if the site is located within an identified floodway, floodway fringe or within the floodplain where the limits of the floodway have not yet been determined.

1. If the site is in an identified floodway the Zoning Administrator shall require the applicant to forward the application, along with all pertinent plans and specifications, to the Department of Natural Resources and apply for a permit for construction in a floodway.

Under the provisions of IC 14-28-1 a permit from the Natural Resources Commission is required prior to the issuance of a local building permit for any excavation, deposit, construction or obstruction activity located in the floodway. This includes land preparation activities such as filling, grading, clearing and paving etc. undertaken before the actual start of construction of the building.

No action shall be taken by the Zoning Administrator until a permit has been issued by the Natural Resources Commission granting approval for construction in the floodway. Once a permit has been issued by the Natural Resources Commission, the Zoning Administrator may issue the local Improvement Location Permit, provided the provisions contained in Sections 7 and 8 of this ordinance have been met. The Improvement Location Permit cannot be less restrictive than the permit issued by the Natural Resources Commission.

2. If the site is located in an identified floodway fringe, then the Zoning Administrator may issue the local Improvement Location Permit provided the provisions contained in Sections 7 and 8 of this ordinance have been met. The key provision is that the top of the lowest floor of any new or substantially improved structure shall be at or above the Flood Protection Grade (FPG).

Flood Protection Grade (FPG) requirement: 312 IAC 10-3-5.

3. If the site is in an identified floodplain where the limits of the floodway and floodway fringe have not yet been determined, and the drainage area upstream of the site is greater than one square mile, the Zoning Administrator shall require the applicant to forward the application, along with all pertinent plans and specifications, to the Department of Natural Resources for review and comment.

No action shall be taken by the Zoning Administrator until either a permit for construction in the floodway or a floodplain analysis/regulatory assessment citing the 100 year flood elevation and the recommended Flood Protection Grade has been received from the Department of Natural Resources.

Once the Zoning Administrator has received the proper permit or floodplain analysis/regulatory assessment approving the proposed development, an Improvement Location Permit may be issued provided the conditions of the Improvement Location Permit are not less restrictive than the conditions received from Natural Resources and the provisions contained in Sections 7

and 8 of this ordinance have been met.

4. If the site is in an identified floodplain where the limits of the floodway and floodway fringe have not yet been determined and the drainage area upstream of the site is less than one square mile, the Zoning Administrator shall require the applicant to provide an engineering analysis showing the limits of the floodway, floodway fringe and 100 year elevation for the site.

Upon receipt, the Zoning Administrator may issue the local Improvement Location Permit, provided the provisions contained in Sections 7 and 8 of this ordinance have been met.

SECTION 7. PREVENTING INCREASED DAMAGES.

No development in the SFHA shall create a damaging or potentially damaging increase in flood heights or velocity or threat to public health and safety.

- a. Within the floodway identified on the Flood Boundary and Floodway Map, the Flood Insurance Rate Map, or engineering analysis as provided in Section 6.b.4., the following standards shall apply:
 1. No development shall be allowed which acting alone or in combination with existing or future development, will cause any increase in the elevation of the regulatory flood; and
 2. For all projects involving channel modifications or fill (including levees) the (City/Town/County) shall submit the data and request that the Federal Emergency Management Agency revise the regulatory flood data.
- b. Within all SFHAs identified as A Zones (no 100 year flood elevation and/or floodway/floodway fringe delineation has been provided) the following standard shall apply:
 1. The total cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the regulatory flood elevation more than one-tenth (0.1) of one foot and will not increase flood damages or potential flood damages.
- c. Public Health Standards in all SFHAs
 1. No development in the SFHA shall include locating or storing chemicals, explosives, buoyant materials, flammable liquids, pollutants, or other hazardous or toxic materials below the Flood Protection Grade, unless such materials are stored in a floodproofed storage tank or building constructed according to the requirements of Section 8 of this ordinance.
 2. New and replacement sanitary sewer lines and on-site waste disposal systems may be permitted providing all manholes or other above ground openings are located above the FPG, or those which are located below the FPG are watertight.

SECTION 8. PROTECTING BUILDINGS.

This section sets minimum development standards for buildings in the community's SFHA and should be used as the primary reference for local floodplain administrators.

In addition to the damage prevention requirements of Section 7, all buildings to be located in the SFHA shall be protected from flood damage below the FPG.

- a. This building protection requirement applies to the following situations:
 1. construction or placement of any new building having a floor area greater than 400 square feet;

2. structural alterations made to:
 - a. an existing (previously unaltered) building, the cost of which equals or exceeds 50% of the value of the pre-altered building (excluding the value of the land);
 - b. any previously altered building;
 3. reconstruction or repairs made to a damaged building that are valued at or more than 50% of the market value of the building (excluding the value of the land) before damage occurred;
 4. installing a manufactured home on a new site or a new manufactured home on an existing site. This ordinance does not apply to returning the existing manufactured home to the same site it lawfully occupied before it was removed to avoid flood damage; and
 5. installing a travel trailer or recreational vehicle on a site for more than 180 days.
- b. This building protection requirement may be met by one of the following methods. The Zoning Administrator shall maintain a record of compliance with these building protection standards as required in Section 4 of this ordinance.
1. A residential or nonresidential building may be constructed on a permanent land fill in accordance with the following:
 - (a). The fill shall be placed in layers no greater than 1 foot deep before compacting to 95% of the maximum density obtainable with the Standard Proctor Test method.
 - (b). The fill should extend at least ten feet beyond the foundation of the building before sloping below the FPG.
 - (c). The fill shall be protected against erosion and scour during flooding by vegetative cover, riprap, or bulkheading. If vegetative cover is used, the slopes shall be no steeper than 3 horizontal to 1 vertical.
 - (d). The fill shall not adversely affect the flow of surface drainage from or onto neighboring properties.
 - (e). The top of the lowest floor including basements, (see definition of lowest floor in Section 3. Definitions) shall be at or above the FPG.
 2. A residential or nonresidential building may be elevated in accordance with the following:

NFIP requirements: 44CFR 60.3 (a) (3) and 60.3 (c) (5).

- (a). The building or improvements shall be elevated on posts, piers, columns, extended walls, or other types of similar foundation provided:
 - (1). Walls of any enclosure below the elevated floor shall be designed to automatically equalize hydrostatic flood forces on the walls by allowing for the entry and exit of flood waters, through providing a minimum of two openings (in addition to doorways and windows) having a total area of one (1) square inch for every square foot of enclosed area subject to flooding. The bottom of all such opening shall be no higher than one (1) foot above grade.

- (2). Any enclosure below the elevated floor is used for storage of vehicles and building access.
 - (b). The foundation and supporting members shall be anchored and aligned in relation to flood flows and adjoining structures so as to minimize exposure to known hydrodynamic forces such as buoyancy, current, waves, ice, and floating debris.
 - (c). All areas below the FPG shall be constructed of materials resistant to flood damage. The top of the lowest floor (including basement) and all electrical, heating, ventilating, plumbing, and air conditioning equipment and utility meters shall be located at or above the FPG. Water and sewer pipes, electrical and telephone lines, submersible pumps, and other waterproofed service facilities may be located below the FPG.
3. Manufactured homes and recreational vehicles to be installed or substantially improved on a site for more than 180 days must meet one of the following anchoring requirements:
- (a). The manufactured home shall be elevated on a permanent foundation such that the lowest floor shall be at or above the FPG and securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement. This requirement applies to all manufactured homes to be placed on a site;
 - (1). outside a manufactured home park or subdivision;
 - (2). in a new manufactured home park or subdivision;
 - (3). in an expansion to an existing manufactured home park or subdivision; or
 - (4). in an existing manufactured home park or subdivision on which a manufactured home has incurred “substantial damage” as a result of a flood.
 - (b). This requirement applies to all manufactured homes to be placed on a site in an existing manufactured home park or subdivision that has not been substantially damaged by a flood.
- The manufactured home shall be elevated so that the lowest floor of the manufactured home chassis is supported by reinforced piers or other foundation elements that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
4. Recreational vehicles placed on a site shall either:

NFIP requirements: 44CFR 60.3(c)(14).

- (a). be on the site for less than 180 consecutive days;
 - (b). be fully licensed and ready for highway use (defined as being on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions); or
 - (c). meet the requirements for “manufactured homes” in paragraph (3) of this section.
5. A non-residential building may be floodproofed to the FPG (in lieu of elevating) if done in accordance with the following:

NFIP requirements 44CFR 60.3 (c) (4).

- (a). A Registered Professional Engineer shall certify that the building has been designed so that below the FPG, the structure and attendant utility facilities are watertight and capable of resisting the effects of the regulatory flood. The building design shall take into account flood velocities, duration, rate of rise, hydrostatic pressures, and impacts from debris or ice.
- (b). Floodproofing measures shall be operable without human intervention and without an outside source of electricity.

SECTION 9. OTHER DEVELOPMENT REQUIREMENTS.

- a. The Zoning Administrator shall review all proposed subdivisions to determine whether the subdivision lies in a flood hazard area as defined else where by ordinance. If the Zoning Administrator finds the subdivision to be so located, the Zoning Administrator shall forward plans and materials to the Indiana Department of Natural Resources for review and comment. The Zoning Administrator shall require appropriate changes and modifications in order to assure that:
 - 1. it is consistent with the need to minimize flood damages;
 - 2. all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage;
 - 3. adequate drainage is provided so as to reduce exposure to flood hazards;
 - 4. onsite waste disposal systems, if provided, will be so located and designed to avoid impairment of them or contamination from them during the occurrence of the regulatory flood.
- b. Developers shall record the 100 year flood elevation on all subdivision plats containing lands (identified elsewhere by this ordinance) within a flood hazard area prior to submitting the plats for approval by the Plan Commission.
- c. All owners of manufactured home parks or subdivisions located within the SFHA identified as Zone A on the community's FHBM or FIRM shall develop an evacuation plan for those lots located in the SFHA and file it with the local Plan Commission and have it filed with and approved by the appropriate community emergency management authorities.

SECTION 10. VARIANCES.

NFIP requirement: 44CFR 60.6.

Variations should be granted only in unique circumstances and thought should be given to each request to avoid setting a wrong precedent or pattern.

- a. The Board of Zoning Appeals may consider issuing a variance to the terms and provisions of this ordinance provided the applicant demonstrates that:
 - 1. There exists a good and sufficient cause for the requested variance;
 - 2. The strict application of the terms of this ordinance will constitute an exceptional hardship to the applicant, and

3. The granting of the requested variance will not increase flood heights, create additional threats to public safety, cause additional public expense, create nuisances, cause fraud or victimization of the public, or conflict with existing laws or ordinances.

Communities in the NFIP are required to maintain a record of all variance actions, including justification for their issuance. FEMA may review variances and suspend a community from the NFIP if the review “indicates a pattern inconsistent with the objectives of sound floodplain management...”

- b. The Board of Zoning Appeals may issue a variance to the terms and provisions of this ordinance subject to the following standards and conditions:
 1. No variance or exception for a residential use within a floodway subject to Section 7 (a) or (b) of this ordinance may be granted.
 2. Any variance or exception granted in a floodway subject to Section 7 (a) or (b) of this ordinance will require a permit from Natural Resources.
 3. Variances or exceptions to the Building Protection Standards of Section 8 may be granted only when a new structure is to be located on a lot of one-half acre or less in size, contiguous to and surrounded by lots with existing structures constructed below the flood protection grade.
 4. Variance or exception may be granted for the reconstruction or restoration of any structure individually listed on the Register of Historic Places or the Indiana State Survey of Historic Architectural, Archaeological and Cultural Sites, Structures, Districts, and Objects;
 5. All variances shall give the minimum relief necessary and be such that the maximum practical flood protection will be given to the proposed construction; and
 6. The Board of Zoning Appeals shall issue a written notice to the recipient of a variance or exception that the proposed construction will be subject to increased risks to life and property and could require payment of increased flood insurance premiums.

The Standard Flood Insurance Policy permits an insurance adjuster to deny payment for damages caused by something the owner did which increased the hazard to the property. Section 1316 of the National Flood Insurance Act authorizes local officials to request denial of flood insurance for buildings in violation of local floodplain codes.

SECTION 11. DISCLAIMER OF LIABILITY.

This section explains that this ordinance does not guarantee that flood damage will not occur, and that the community, state, or enforcing official is not liable for decisions made lawfully under this ordinance.

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on available information derived from engineering and scientific methods of study. Larger floods can and will occur on rare occasions. Therefore, this ordinance does not create any liability on the part of the community, Natural Resources, or the State of Indiana, for any flood damage that results from reliance on this ordinance or any administrative decision made lawfully thereunder.

SECTION 12. VIOLATIONS.

This section explains the penalty for not abiding by this ordinance and explains what actions the enforcement official may take in seeking compliance.

NFIP requirement: 44CFR 60.1 (b).

Failure to obtain an Improvement Location Permit in the SFHA or failure to comply with the requirements of a permit or conditions of a variance shall be deemed to be a violation of this ordinance. All violations shall be considered a common nuisance and be treated as such in accordance with the provisions of the Zoning Code for the _____ (name of community). All violations shall be punishable by a fine not exceeding \$_____.

- a. A separate offense shall be deemed to occur for each day the violation continues to exist.
- b. The _____ Planning Commission shall inform the owner that any such violation is considered a willful act to increase flood damages and therefore may cause coverage by a Standard Flood Insurance Policy to be suspended.
- c. Nothing herein shall prevent the _____ (City/Town/County) from taking such other lawful action to prevent or remedy any violations. All costs connected therewith shall accrue to the person or persons responsible.

SECTION 13. ABROGATION AND GREATER RESTRICTIONS.

This section explains which other ordinances are repealed when this ordinance is adopted.

This ordinance repeals and replaces other ordinances adopted by the (City Council/Town Board/County Commissioners) to fulfill the requirements of the National Flood Insurance Program, including: _____. However, this ordinance does not repeal the original resolution or ordinance adopted to achieve eligibility in the Program. Nor does this ordinance repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. Where this ordinance and other ordinance easements, covenants, or deed restrictions conflict or overlap, whichever imposes the more stringent restrictions shall take precedence. In addition, the (City Council/Town Board/County Commissioners) shall assure that all National Flood Insurance Program regulations and laws (312 IAC 10, IC 14-28-1 and IC 14-28-3) are met.

SECTION 14. SEPARABILITY.

This section explains that if one part of this ordinance is ruled to be invalid by the courts, the remainder of the ordinance stays in effect.

The provisions and sections of this ordinance shall be deemed separable and the invalidity of any portion of this ordinance shall not affect the validity of the remainder.

SECTION 15. EFFECTIVE DATE.

This section establishes the date when the ordinance goes into effect and contains sections which the authorized officials must sign to approve the passage of the ordinance.

This ordinance shall take effect upon its passage by the _____ (City Council/

Town Board/County Commissioners).

Passed and enacted by the _____ of _____, Indiana
on the _____ day of _____, 19____. _____ of
_____, Indiana _____

Attest: _____

XI. HAZARD MITIGATION

Hazard Mitigation is any action taken to reduce or permanently eliminate the long-term risk to human life and property from natural hazards. FEMA currently has two assistance programs for flood mitigation.

A. Hazard Mitigation Grant Program (HMGP)

The HMGP was created in November 1988 by Section 404 of the Robert T. Stafford Disaster Relief and Emergency Act. The HMGP assists states and local communities in implementing long-term hazard mitigation measures following a major disaster declaration.

The program's objectives are:

- to implement state and local hazard mitigation plans;
- prevent future losses of lives and property due to disasters;
- provide funding for previously identified mitigation measures that benefit the disaster area; and
- to enable mitigation measures to be implemented during immediate recovery from a disaster.

State and Local governments, certain private non-profit organizations or institutions, and Indian tribes or authorized tribal organizations are eligible to participate in the program. The HMGP can be used to fund projects to protect either public or private property. Some examples of these projects are: structural hazard control, such as debris basins or floodwalls; retrofitting, such as floodproofing to protect structures from future damage; acquisition and relocation of structures from hazard prone areas; and development of state or local standards to protect new and substantially improved structures from disaster damage.

To be eligible for the HMGP funds, the anticipated benefits of a proposed mitigation project must exceed the total project cost. Funding is based on 15% of the Federal funds spent on public and individual assistance programs (minus administrative expenses) for each disaster. FEMA can fund up to 75% of the eligible costs of each project. State or local match does not need to be cash. For example, in-kind services may be used.

Once a community applies for HMGP funding, the SEMA notifies the IDNR of the potential project. IDNR conducts a community assistance visit to evaluate the community and determine NFIP compliance. The findings of the Community Assistance Visit are provided to SEMA to incorporate in the evaluation procedure. Proposed projects must meet certain minimum criteria. These criteria are designed to ensure that the most cost effective and appropriate projects are selected for funding. For further information contact SEMA at 317-232-3980.

B. Flood Mitigation Assistance (FMA)

The FMA is the newest mitigation assistance program. FMA assists states and communities in planning and developing projects to reduce claims against the NFIP. Unlike the HMGP, this program is not dependent upon a major disaster declaration.

The main objective of the FMA is to provide technical assistance in the planning and project implementation process of the acquisition of flood-prone structures. The program is funded through an annual allotment based on each state's flood insurance policy foundation. Like the HMGP, this assistance is a 75/25 cost share program. This program is also administered by SEMA. For further information, contact SEMA at 317-232-3833.

XII. APPENDIX

A. GLOSSARY

A-Zone: See "Zone A"

Base Flood Elevation (BFE): The elevation of the crest of the base flood.

Base Flood: The flood having a one percent chance of being equaled or exceeded in any given year (often called the 100-year or Regulatory Flood).

Basement: Any fully enclosed area of a building below grade on all sides.

Best Available Data: The most recent hydraulic and hydrologic information to show what the 100-year flood elevations and floodplain boundaries are for a particular area. (Unless the drainage area of the site is less than a square mile, this data should be reviewed and approved by the IDNR.)

Building: A structure that is principally above ground and is enclosed by walls and a roof including manufactured homes and prefabricated buildings. The term also includes recreational vehicles and travel trailers to be installed on a site for more than 180 days.

Code of Federal Regulations (CFR): A master coding system to identify the federal agency regulations that have been published in the Federal Register. 44 CFR includes all the regulations published by the Federal Emergency Management Agency.

Community Rating System (CRS): A program of the Federal Insurance Administration where communities who regulate floodplain areas above and beyond minimum NFIP requirements are rewarded for their efforts through reduced flood insurance premiums for the citizens of that community.

Development: Any man-made change to the ground that may affect flood flows. Development includes construction of buildings, filling, channel changes, dredging, grading, excavating and storage of materials.

Elevation Certificate: A form supplied by the Federal Emergency Management Agency (FEMA) used to document pertinent elevation information such as the lowest floor of a structure and its lowest adjacent grade.

Federal Emergency Management Agency (FEMA): The federal government agency that administers the NFIP.

Federal Insurance Administration (FIA): A component of FEMA which administers the NFIP.

Flood Insurance Study (FIS): A booklet which provides detailed information on a community's flood hazard areas. The FIS normally includes topographic information, floodplain and floodway data charts, study information, and stream profiles.

Flood Fringe: Those portions of the floodplain lying outside of the floodway.

Flood Boundary Floodway Map (FBFM): A detailed map delineating floodway from flood fringe.

Flood Hazard Boundary Map (FHBM): A FEMA map based on approximate data and identities, in general, the SFHAs within the community.

Flood Insurance Rate Map (FIRM): A FEMA map published after a FIS is completed for a community showing areas within the 100-year flood boundary.

Floodplain: The channel proper and the areas adjoining any wetland, lake or watercourse which have been or hereafter may be covered by the regulatory flood. The floodplain includes both the floodway and flood fringe.

Floodproofing: Measures taken to protect a building from flood damage that is not elevated above the FPG. Floodproofing consists of ensuring that the walls and floor are watertight and capable of withstanding hydrostatic pressures and hydrodynamic forces.

Floodway: The channel of a river or stream and those portions of the floodplains adjoining the channel which are reasonably required to efficiently carry and discharge the peak flood flow of the regulatory flood of any river or stream.

Flood Protection Grade (FPG): The elevation of the regulatory flood plus two feet at any given location in the SFHA.

Hydrodynamic Forces: The forces on a structure from currents, waves, debris, ice, etc.

Hydrostatic Pressure: The pressure standing water places on the walls and floor of a structure. Hydrostatic pressure of 3-4 feet of standing water can collapse walls or buckle basement floors.

Local Floodplain Administrator: The person responsible for administering and enforcing a community's floodplain ordinance. Depending on the local ordinance, this person could be the city engineer, zoning administrator, building inspector, mayor, clerk, or other official.

Letter of Map Amendment (LOMA): The result of an administrative procedure in which FEMA reviews scientific or technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA based on elevation data. A LOMA amends the currently effective FEMA map and establishes that a property is not located in a SFHA.

Letter of Map Revision (LOMR): An official revision to the currently effective FEMA map used to change flood zones, floodplain and floodway delineations, flood elevations and planimetric features. A LOMR is usually followed by a physical map revision.

National Flood Insurance Program (NFIP): A federal program enabling property owners to purchase insurance protection against losses from flooding. Participation in the NFIP is voluntary and based on an agreement between local communities and the federal government which states that if a community will implement and enforce measures to reduce future flood risks to new construction in SFHAs, the federal government will make flood insurance available within the community as a financial protection against flood losses which do occur.

Special Flood Hazard Area (SFHA): Those lands within the jurisdiction of the city, town, or county that are subject to inundation by the regulatory flood.

Substantial Repair/Improvement: Repairs/improvements to a building whereby the cost of the repair/improvement equals or exceeds 50% of the market value of the building before the repair/improvement took place.

Zone A: The 100-year floodplain as shown on NFIP maps. There are six types of A Zones:

- A Floodplain where no base flood elevation data is provided.
- AE Floodplain base flood elevations are provided.
- A1-A30 Riverine SFHA where a Flood insurance Study provided base flood elevations.

- AO Floodplain with sheet flow or shallow flooding, base flood depths are provided.
- AH Floodplain characterized by shallow ponding, base flood depths are provided.
- A99 Floodplain area which will ultimately be protected upon completion of an under construction federal flood protection system

Zone B: The area depicted on Flood Insurance Rate Maps as between the limits of the 100-year and 500-year flood zones.

Zone C: Areas of minimal flooding located outside of both the 100-year and 500-year flood zones.

Zone X: Areas determined on newer floodplain maps to be outside the 100-year flood zone (used instead of B and C zones on newer FEMA maps).

B. FORMS

1. SAMPLE APPLICATION FOR IMPROVEMENT LOCATION PERMIT (FLOODPLAIN PERMIT)

_____, INDIANA
Application for Improvement Location Permit

Application No.: _____ Date Filed: _____

Applicant: _____

Address: _____ Phone: _____

Owner: _____

Address: _____ Phone: _____

Location of Improvement or Construction Activity: _____

Other Description: _____

Is proposed “development” considered to be:

- New construction
- Substantial modifications
- Other (provide description) _____

Present Use of Property:

Residential () Commercial () Industrial () Recreational ()

Property located in Zone _____ on FIRM dated _____

Location of proposed “development” is within:

- Floodplain District
- Floodway Fringe
- Floodway

Applicant must notify Department of Natural Resources in writing along with site plans for approval if located in floodway or undetermined floodplain areas:

Indiana Department of Natural Resources
Division of Water
402 W. Washington Street Rm. W264
Indianapolis, IN 46204

Attach a copy of IDNR permit or floodplain analysis/regulatory assessment.

2. SAMPLE CERTIFICATE OF OCCUPANCY

_____, **INDIANA**

Certificate of Occupancy

Improvement (Floodplain) Location Permit No. _____

Certificate of Occupancy No. _____ Issued: _____, 19_____

Issued to: _____

This certifies that the action of work for which an Improvement Location Permit was issued for the premises identified as:

Address: _____

Other description as follows: _____

has been inspected and found to be in compliance with the applicable laws of the State of Indiana and the _____, _____ (Community's floodplain ordinance)

_____ (Title of Official)

_____, Indiana (Name of Community)

3. ELEVATION CERTIFICATE



FEDERAL EMERGENCY MANAGEMENT AGENCY

NATIONAL FLOOD INSURANCE PROGRAM

ELEVATION CERTIFICATE

AND

INSTRUCTIONS

NEW EDITION

NATIONAL FLOOD INSURANCE PROGRAM ELEVATION CERTIFICATE

PAPERWORK REDUCTION ACT NOTICE

Public reporting burden for the Elevation Certificate is estimated to average 2.25 hours per response. Burden means the time, effort, or financial resources expended by persons to generate, maintain, retain, disclose, or provide information to the Federal Emergency Management Agency (FEMA). You are not required to respond to the collection of information unless a valid OMB control number is displayed in the upper right corner of each form. You may send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472, Paperwork Reduction Project (3067-0077). Do not send completed form(s) to the above address. To obtain or retain benefits under the National Flood Insurance Program (NFIP), you must respond to this collection of information.

PURPOSE OF THE ELEVATION CERTIFICATE

The Elevation Certificate is an important administrative tool of the National Flood Insurance Program (NFIP). It is to be used to provide elevation information necessary to ensure compliance with community floodplain management ordinances, to determine the proper insurance premium rate, and to support a request for a Letter of Map Amendment or Revision (LOMA or LOMR-F).

The Elevation Certificate is required in order to properly rate post-FIRM buildings, which are buildings constructed after publication of the Flood Insurance Rate Map (FIRM), for flood insurance Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, and AR/AO. The Elevation Certificate is not required for pre-FIRM buildings unless the building is being rated under the optional post-FIRM flood insurance rules.

As part of the agreement for making flood insurance available in a community, the NFIP requires the community to adopt a floodplain management ordinance that specifies minimum requirements for reducing flood losses. One such requirement is that the community obtain the elevation of the lowest floor (including basement) of all new and substantially improved buildings, and maintain a record of such information. The Elevation Certificate provides a way for a community to comply with this requirement.

Use of this certificate does not provide a waiver of the flood insurance purchase requirement. Only a LOMA or LOMR-F from the Federal Emergency Management Agency (FEMA) can amend the FIRM and remove the Federal mandate for a lending institution to require the purchase of flood insurance. However, the lending institution has the option of requiring flood insurance even if a LOMA/LOMR-F has been issued by FEMA. The Elevation Certificate may be used to support a LOMA or LOMR-F request. Lowest floor and lowest adjacent grade elevations certified by a surveyor or engineer will be required if the certificate is used to support a LOMA or LOMR-F request.

This certificate is used only to certify building elevations. A separate certificate is required for floodproofing. Under the NFIP, non-residential buildings can be floodproofed up to or above the Base Flood Elevation (BFE). A floodproofed building is a building that has been designed and constructed to be watertight (substantially impermeable to floodwaters) below the BFE. Floodproofing of residential buildings is not permitted under the NFIP unless FEMA has granted the community an exception for residential floodproofed basements. The community must adopt standards for design and construction of floodproofed basements before FEMA will grant a basement exception. For both floodproofed non-residential buildings and residential floodproofed basements in communities that have been granted an exception by FEMA, a floodproofing certificate is required.

FEDERAL EMERGENCY MANAGEMENT AGENCY
NATIONAL FLOOD INSURANCE PROGRAM

O.M.B. No. 3067-0077
Expires July 31, 2002

ELEVATION CERTIFICATE

Important: Read the instructions on pages 1 - 7.

SECTION A - PROPERTY OWNER INFORMATION		For Insurance Company Use:
BUILDING OWNER'S NAME		Policy Number
BUILDING STREET ADDRESS (Including Apt., Unit, Suite, and/or Bldg. No.) OR P.O. ROUTE AND BOX NO.		Company NAIC Number
CITY	STATE	ZIP CODE
PROPERTY DESCRIPTION (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)		
BUILDING USE (e.g., Residential, Non-residential, Addition, Accessory, etc. Use a Comments area, if necessary.)		
LATITUDE/LONGITUDE (OPTIONAL) (##° - ##' - ##.###" or ###.#####°)	HORIZONTAL DATUM: <input type="checkbox"/> NAD 1927 <input type="checkbox"/> NAD 1983	SOURCE: <input type="checkbox"/> GPS (Type): _____ <input type="checkbox"/> USGS Quad Map <input type="checkbox"/> Other: _____

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP COMMUNITY NAME & COMMUNITY NUMBER		B2. COUNTY NAME		B3. STATE	
B4. MAP AND PANEL NUMBER	B5. SUFFIX	B6. FIRM INDEX DATE	B7. FIRM PANEL EFFECTIVE/REVISED DATE	B8. FLOOD ZONE(S)	B9. BASE FLOOD ELEVATION(S) (Zone AO, use depth of flooding)

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in B9.
 FIS Profile FIRM Community Determined Other (Describe): _____

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

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? Yes No
 Designation Date: _____

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: Construction Drawings* Building Under Construction* Finished Construction
 *A new Elevation Certificate will be required when construction of the building is complete.

C2. Building Diagram Number _____ (Select the building diagram most similar to the building for which this certificate is being completed - see pages 6 and 7. If no diagram accurately represents the building, provide a sketch or photograph.)

C3. Elevations – Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO
 Complete Items C3.a-i below according to the building diagram specified in Item C2. State the datum used. If the datum is different from the datum used for the BFE in Section B, convert the datum to that used for the BFE. Show field measurements and datum conversion calculation. Use the space provided or the Comments area of Section D or Section G, as appropriate, to document the datum conversion.
 Datum _____ Conversion/Comments _____

Elevation reference mark used _____ Does the elevation reference mark used appear on the FIRM? Yes No

<input type="checkbox"/> a) Top of bottom floor (including basement or enclosure)	_____ . ____ ft.(m)	License Number, Embossed Seal, Signature, and Date
<input type="checkbox"/> b) Top of next higher floor	_____ . ____ ft.(m)	
<input type="checkbox"/> c) Bottom of lowest horizontal structural member (V zones only)	_____ . ____ ft.(m)	
<input type="checkbox"/> d) Attached garage (top of slab)	_____ . ____ ft.(m)	
<input type="checkbox"/> e) Lowest elevation of machinery and/or equipment servicing the building (Describe in a Comments area.)	_____ . ____ ft.(m)	
<input type="checkbox"/> f) Lowest adjacent (finished) grade (LAG)	_____ . ____ ft.(m)	
<input type="checkbox"/> g) Highest adjacent (finished) grade (HAG)	_____ . ____ ft.(m)	
<input type="checkbox"/> h) No. of permanent openings (flood vents) within 1 ft. above adjacent grade _____		
<input type="checkbox"/> i) Total area of all permanent openings (flood vents) in C3.h _____ sq. in. (sq. cm)		

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information.
 I certify that the information in Sections A, B, and C on this certificate represents my best efforts to interpret the data available.
 I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

CERTIFIER'S NAME	LICENSE NUMBER
TITLE	COMPANY NAME
ADDRESS	CITY STATE ZIP CODE
SIGNATURE	DATE TELEPHONE

INSTRUCTIONS FOR COMPLETING THE ELEVATION CERTIFICATE

The Elevation Certificate is to be completed by a land surveyor, engineer, or architect who is authorized by law to certify elevation information when elevation information is required for Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, or AR/AO. Community officials who are authorized by law or ordinance to provide floodplain management information may also complete this form. For Zones AO and A (without BFE), a community official, a property owner, or an owner's representative may provide information on this certificate, unless the elevations are intended for use in supporting a LOMA or LOMR-F. Certified elevations must be included if the purpose of completing the Elevation Certificate is to obtain a LOMA or LOMR-F.

In Puerto Rico only, elevations for building information and flood hazard information may be entered in meters.

SECTION A - PROPERTY OWNER INFORMATION

This section identifies the building, its location, and its owner. Enter the name(s) of the building owner(s), the building's complete street address, and the lot and block number. If the building's address is different from the owner's address, enter the address of the building being certified. If the address is a rural route or a Post Office box number, enter the lot and block numbers, the tax parcel number, the legal description, or an abbreviated location description based on distance and direction from a fixed point of reference. For the purposes of this certificate, "building" means both a building and a manufactured (mobile) home.

A map may be attached to this certificate to show the location of the building on the property. A tax map, FIRM, or detailed community map is appropriate. If no map is available, provide a sketch of the property location, and the location of the building on the property. Include appropriate landmarks such as nearby roads, intersections, and bodies of water. For building use, indicate whether the building is residential, non-residential, an addition to an existing residential or non-residential building, an accessory building (e.g., garage), or other type of structure. Use the Comments area of Section F if needed.

If latitude and longitude data are available, enter them in degrees, minutes, and seconds, or in decimal degrees, taken at the center of the front of the building. Enter arc seconds to two decimal places. Indicate the horizontal datum and the source of the measurement data (for example, taken with GPS, scaled from a USGS Quad Map, etc.).

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

Complete the Elevation Certificate on the basis of the FIRM in effect at the time of the certification.

The information for Section B is obtained by reviewing the FIRM panel that includes the building's location. Information about the current FIRM and a pamphlet titled "Guide to Flood Maps" are available from the Federal Emergency Management Agency (FEMA) website at <http://www.fema.gov> or by calling 1-800-427-4661. If a Letter of Map Amendment (LOMA) or Letter of Map Revision (LOMR-F) has been issued by FEMA, please provide the letter date and case number in the Comments area of Section D or Section G, as appropriate.

Item B1. NFIP Community Name & Community Number. Enter the complete name of the community in which the building is located and the associated 6-digit community number. For a building that is in an area that has been annexed by one community but is shown on another community's FIRM, enter the community name and 6-digit number of the annexing community. For a newly incorporated community, use the name and 6-digit number of the new community. Under the NFIP, a "community" is any State or area or political subdivision thereof, or any Indian tribe or authorized native organization, that has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction. To determine the current community number, see the NFIP *Community Status Book*, available on FEMA's website at <http://www.fema.gov> or by calling 1-800-427-4661.

Item B2. County Name. Enter the name of the county or counties in which the community is located. For an unincorporated area of a county, enter "unincorporated area." For an independent city, enter "independent city."

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

Item B4. Map and Panel Number. Enter the 10-digit number shown on the FIRM panel where the building or manufactured (mobile) home is located. The first six digits will not match the NFIP community number: 1) when the sixth digit is a “C,” in which case the FIRM panel is in a countywide format; or 2) when one community has annexed land from another community but the FIRM panel has not been updated to reflect this annexation. If the sixth digit is a “C,” it is followed by a four-digit map number. For maps not in countywide format, enter the “community panel number” shown on the FIRM.

Item B5. Suffix. Enter the suffix letter shown on the FIRM panel that includes the building’s location.

Item B6. FIRM Index Date. Enter the effective date or map revised date shown on the FIRM Index.

Item B7. FIRM Panel Effective/Revised Date. Enter the map effective date or the map revised date shown on the FIRM panel. This will be the latest of all dates shown on the map. The current FIRM panel effective date can be determined by calling 1-800-427-4661.

Item B8. Flood Zone(s). Enter the flood zone, or flood zones, in which the building is located. All flood zones containing the letter “A” or “V” are considered Special Flood Hazard Areas. The flood zones are A, AE, A1-A30, V, VE, V1-V30, AH, AO, AR, AR/A, AR/AE, AR/A1-A30, AR/AH, and AR/AO. Each flood zone is defined in the legend of the FIRM panel on which it appears.

Item B9. Base Flood Elevation(s). Using the appropriate Flood Insurance Study (FIS) Profile, Flood Elevation Table, or FIRM panel, locate the property and enter the BFE (or base flood depth) of the building site. If the building is located in more than one flood zone in Item B8., list all appropriate BFEs in Item B9. BFEs are shown on a FIRM or FIS Profile for Zones A1-A30, AE, AH, V1-V30, VE, AR, AR/A, AR/AE, AR/A1-A30, AR/AH, and AR/AO; flood depth numbers are shown for Zone AO. Use the AR BFE if the building is located in any of Zones AR/A, AR/AE, AR/A1-A30, AR/AH, or AR/AO. In A or V zones where BFEs are not provided on the FIRM, the community may have established BFEs or obtained BFE data from other sources. For subdivisions and other developments of more than 50 lots or 5 acres, establishment of BFEs is required by the community’s floodplain management ordinance. If the BFE is obtained from another source, enter the BFE in Item B9.

Item B10. Indicate the source of the BFE that you entered in Item B9.

Item B11. Indicate the elevation datum to which the elevations on the applicable FIRM are referenced.

Item B12. Indicate whether the building is located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA). Federal flood insurance is prohibited in designated CBRS areas for buildings or manufactured (mobile) homes built or substantially improved after the date of the CBRS designation. An information sheet explaining CBRS areas may be obtained on FEMA’s website at <http://www.fema.gov> or by calling 1-800-427-4661.

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

Complete Section C if the building is located in any of Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, or AR/AO, or if this certificate is being used to support a LOMA or LOMR-F. If the building is located in Zone AO or Zone A (without BFE), complete Section E instead.

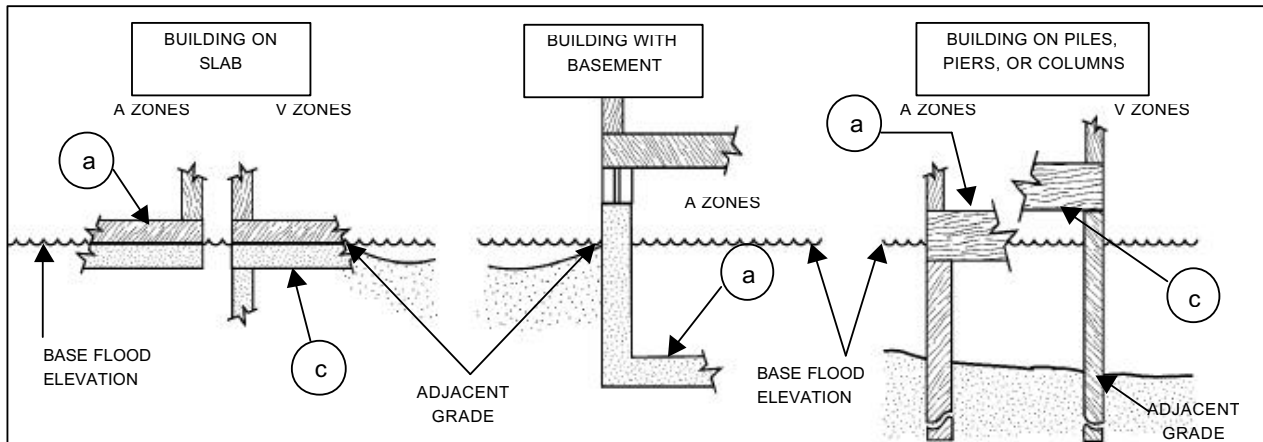
Item C1. Indicate whether the elevations to be entered in this section are based on construction drawings, a building under construction, or finished construction. For either of the first two choices, a post-construction Elevation Certificate will be required when construction is complete. Select “finished construction” only when all machinery and/or equipment such as furnaces, hot water heaters, heat pumps, air conditioners, and elevators and their associated equipment have been installed and the grading around the building is completed.

Item C2. Select the diagram on pages 6 and 7 that best represents the building. Then enter the diagram number and use the diagram to identify and determine the appropriate elevations requested in Items C3.a-g. If you are unsure of the correct diagram, select the diagram that most closely resembles the building being certified, or provide a sketch or photograph of the building and enter all elevations in Items C3.a-g.

Item C3. Indicate whether the elevation reference mark (benchmark) used during the field survey is an elevation mark on the FIRM. If it is not, indicate the source and datum for the elevation. Vertical control benchmarks other than those shown on the

FIRM are acceptable for elevation determinations. Show the conversion from the field survey datum used to the datum used for the BFE(s) entered in Item B9. All elevations for the certificate must be referenced to the datum on which the BFE is based. Show the datum conversion, if applicable, in this section or in the Comments area of Section D. For property experiencing ground subsidence, the most recently adjusted reference mark elevations must be used for determining building elevations. However, when subsidence is involved, the BFE should not be adjusted. Enter elevations in Items C3.a-g to the nearest tenth of a foot (nearest tenth of a meter, in Puerto Rico).

Items C3.a-d. Enter the building elevations (excluding the attached garage) indicated by the selected building diagram (Item C2.) in Items C3.a-c. If there is an attached garage, enter the elevation for top of attached garage slab in Item C3.d. (Because elevation for top of attached garage slab is self-explanatory, attached garages are not illustrated in the diagrams.) If the building is located in a V zone on the FIRM, complete Item C3.c. If the flood zone cannot be determined, enter elevations for all of Items C3.a-g. For buildings in A zones, elevations a, b, d, and e should be measured at the top of the floor. For buildings in V zones, elevation c must be measured at the bottom of the lowest horizontal structural member of the floor (see drawing below). *If any item does not apply to the building, enter "N/A" for not applicable.*



Item C3.e. Enter the lowest elevation of machinery and/or equipment such as furnaces, hot water heaters, heat pumps, air conditioners, and elevators and their associated equipment in an attached garage or enclosure or on an open utility platform that provides utility services for the building. If the machinery and/or equipment is mounted to a wall, pile, etc., enter the platform elevation of the machinery and/or equipment. Indicate machinery/equipment type in the Comments area of Section G or Section D, as appropriate. *If this item does not apply to the building, enter "N/A" for not applicable.*

Items C3.f-g. Adjacent grade is defined as the elevation of the ground, sidewalk, patio slab, or deck support immediately next to the building. For Zone AO, use the natural grade elevation, if available. This measurement must be to the nearest tenth of a foot (nearest tenth of a meter, in Puerto Rico) if this certificate is being used to support a request for a LOMA or LOMR-F.

Items C3.h-i. Enter the number of permanent openings (flood vents) in the walls supporting the building that are no higher than 1.0 foot above the adjacent grade. Determine the total area of all such openings in square inches (square cm, in Puerto Rico), and enter the total in Item C3.i. If the building has no permanent openings (flood vents) within 1.0 foot above adjacent grade, enter "0" (zero) for each of Items C3.h and C3.i.

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

Complete as indicated. This section of the Elevation Certificate may be signed by only a land surveyor, engineer, or architect who is authorized by law to certify elevation information. Place embossed seal and signature in the box next to elevations in Section C. A flat stamp is acceptable only in states that do not authorize use of an embossed seal over the signature of a professional. You are certifying that the information in Sections A, B, and C on this certificate represents your best efforts to interpret the data available and that you understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001. Use the Comments area of Section D, on the back of the certificate, to provide datum, elevation, or other relevant information not specified on the front.

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

Complete Section E if the building is located in Zone AO or Zone A (without BFE). Otherwise, complete Section C instead.

Item E1. Select the diagram on pages 6 and 7 that best represents the building; then enter the diagram number. If you are unsure of the correct diagram, select the diagram that most closely resembles the building, or provide a sketch or photograph.

Item E2. Enter the height in feet and inches (meters and centimeters, in Puerto Rico) of the top of the bottom floor (as indicated in the applicable diagram) above or below the highest adjacent grade (HAG). For post-FIRM buildings in Zone AO, the community's floodplain management ordinance requires that this value equal or exceed the base flood depth on the FIRM. Buildings in Zone A (without BFE) may qualify for a lower insurance rate if an engineered BFE is developed at the site.

Item E3. For Building Diagrams 6-8 with "proper openings" (see page 7), enter the height in feet and inches (meters and centimeters, in Puerto Rico) of the next higher floor or elevated floor (as indicated in the applicable diagram) above the highest adjacent grade (HAG). Be sure that you have completed Items C3.h and C3.i on the front of the form to show the number of permanent, proper openings (flood vents) within 1 foot above adjacent grade and the total area of the openings.

Item E4. For those communities where this base flood depth is not available, the community will need to determine whether the top of the bottom floor is elevated in accordance with the community's floodplain management ordinance.

SECTION F - PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION

Complete as indicated. This section is provided for certification of measurements taken by a property owner or property owner's representative when responding to Sections A, B, C (Items C3.h and C3.i only), and E. The address entered in this section must be the actual mailing address of the property owner or property owner's representative who provided the information on the certificate.

SECTION G - COMMUNITY INFORMATION (OPTIONAL)

Complete as indicated. The community official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. If the authorized community official completes Sections C, E, or G, complete the appropriate item(s) and sign this section.

Check **Item G1.** if Section C is completed with elevation data from other documentation, including elevations obtained from the Community Rating System Elevation Software, that has been signed and embossed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. Indicate the source of the elevation data and the date obtained in the Comments area of Section G. If you are both a community official and a licensed land surveyor, engineer, or architect authorized by law to certify elevation information, and you performed the actual survey for a building in Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/A1-A30, AR/AE, AR/AH, or AR/AO, you must also complete Section D.

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

Check **Item G3.** if the information in Items G4.-G9. has been completed for community floodplain management purposes to document the as-built lowest floor elevation of the building. Section C of the Elevation Certificate records the elevation of various building components but does not determine the lowest floor of the building or whether the building, as constructed, complies with the community's floodplain management ordinance. This must be done by the community. Items G4.-G9. provide a way to document these determinations.

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

Item G5. Date Permit Issued. Enter the date the permit was issued for the building.

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

Item G7. New Construction or Substantial Improvement. Check the applicable box. "Substantial Improvement" means any reconstruction, rehabilitation, addition, or other improvement of a building, the cost of which equals or exceeds 50 percent of the market value of the building before the start of construction of the improvement. The term includes buildings that have incurred substantial damage, regardless of the actual repair work performed.

Item G8. As-built lowest floor elevation. Enter the elevation of the lowest floor (including basement) when the construction of the building is completed and a final inspection has been made to confirm that the building is built in accordance with the permit, the approved plans, and the community's floodplain management laws or ordinances. Indicate the elevation datum used.

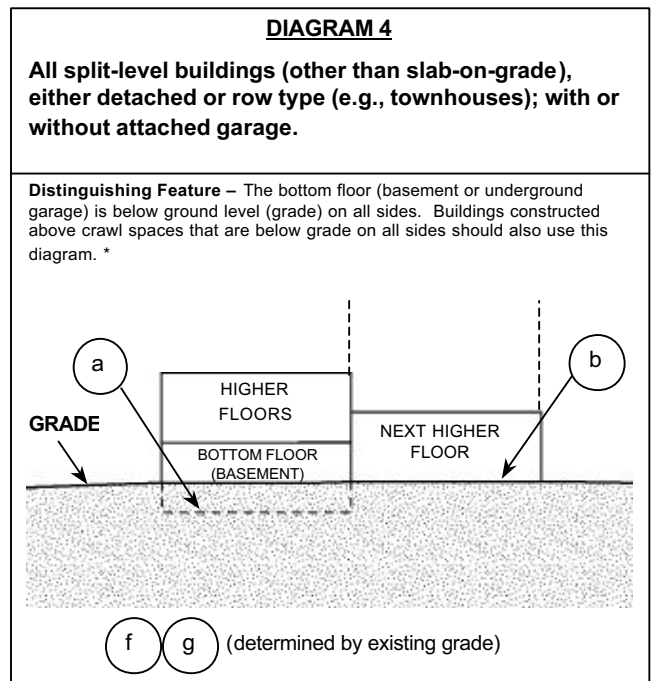
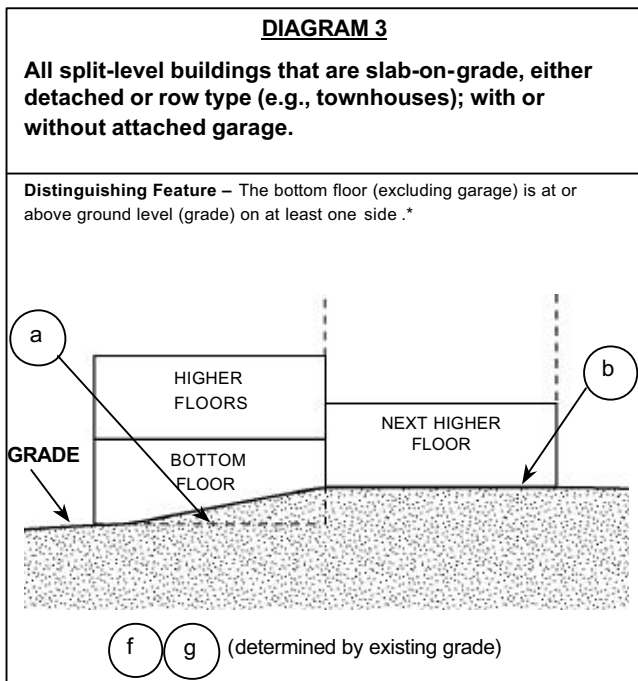
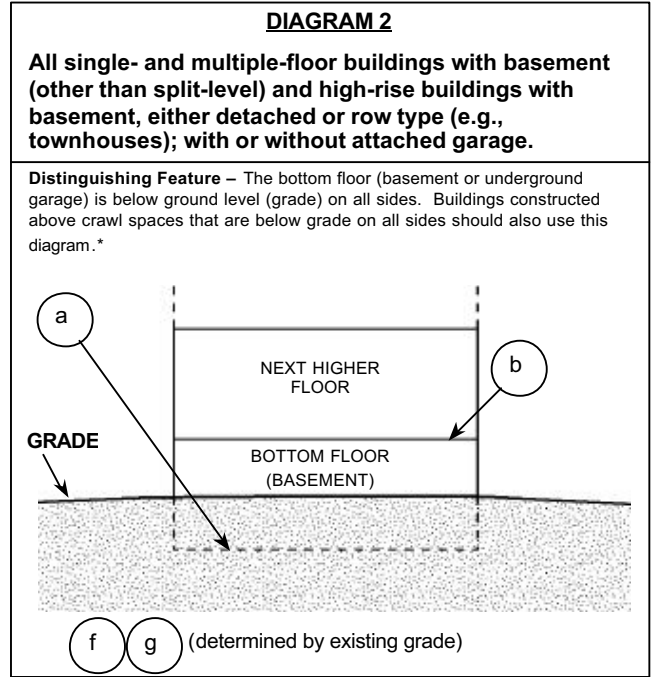
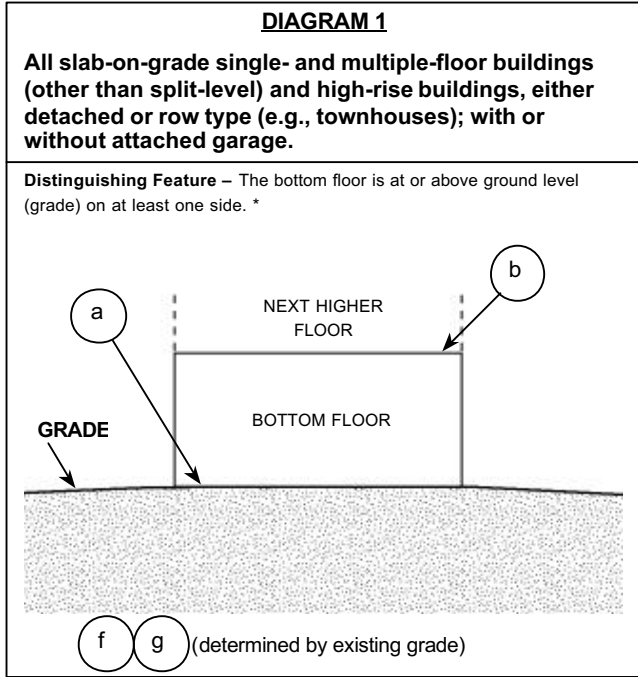
Item G9. BFE. Using the appropriate FIRM panel, FIS, or other data source, locate the property and enter the BFE (or base flood depth) of the building site. Indicate the elevation datum used.

Enter your name, title, and telephone number, and the name of the community. Sign and enter the date in the appropriate blanks.

BUILDING DIAGRAMS

The following eight diagrams illustrate various types of buildings. Compare the features of the building being certified with the features shown in the diagrams and select the diagram most applicable. Enter the diagram number in Item C2. and the elevations in Items C3.a-C3.g.

In A zones, the floor elevation is taken at the top finished surface of the floor indicated; in V zones, the floor elevation is taken at the bottom of the lowest horizontal structural member (see drawing in instructions for Section C).



* A floor that is below ground level (grade) on all sides is considered a basement even if the floor is used for living purposes, or as an office, garage, workshop, etc.

DIAGRAM 5

All buildings elevated on piers, posts, piles, columns, or parallel shear walls. No obstructions below the elevated floor.

Distinguishing Feature – For all zones, the area below the elevated floor is open, with no obstruction to flow of flood waters (open lattice work and/or readily removable insect screening is permissible).

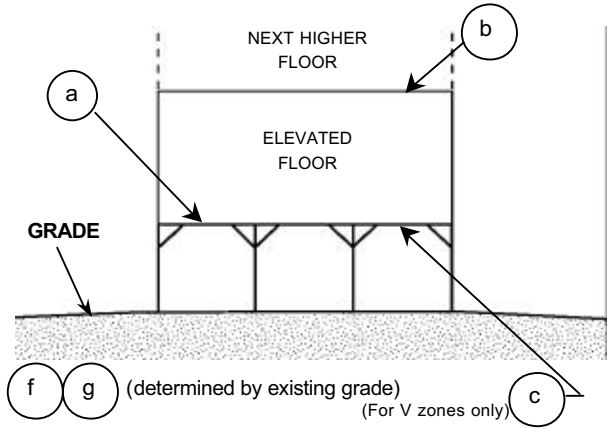


DIAGRAM 6

All buildings elevated on piers, posts, piles, columns, or parallel shear walls with full or partial enclosure below the elevated floor.

Distinguishing Feature – For all zones, the area below the elevated floor is enclosed, either partially or fully. In A Zones, the partially or fully enclosed area below the elevated floor is with or without openings** present in the walls of the enclosure. Indicate information about openings in Section C, Building Elevation Information (Survey Required).

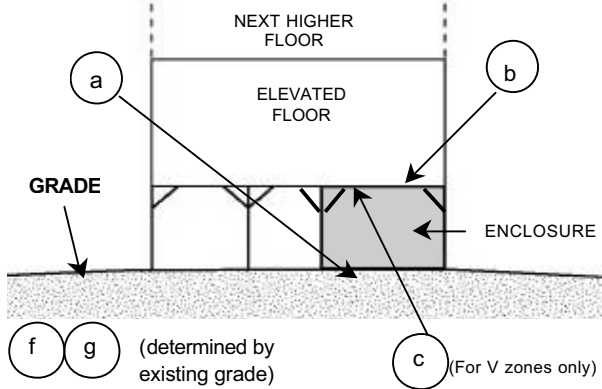


DIAGRAM 7

All buildings elevated on full-story foundation walls with a partially or fully enclosed area below the elevated floor. This includes walkout levels, where at least one side is at or above grade. The principal use of this building is located in the elevated floors of the building.

Distinguishing Feature – For all zones, the area below the elevated floor is enclosed, either partially or fully. In A Zones, the partially or fully enclosed area below the elevated floor is with or without openings** present in the walls of the enclosure. Indicate information about openings in Section C, Building Elevation Information (Survey Required).

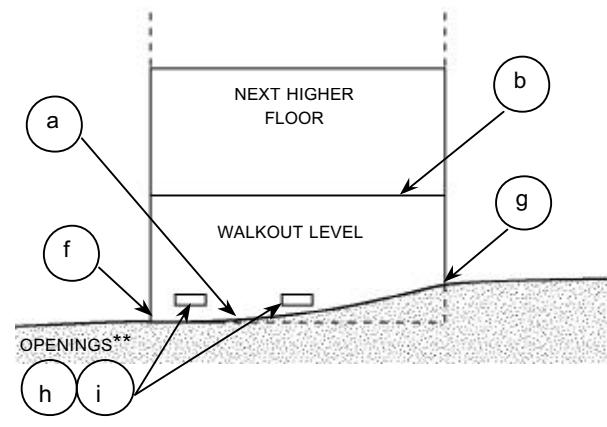
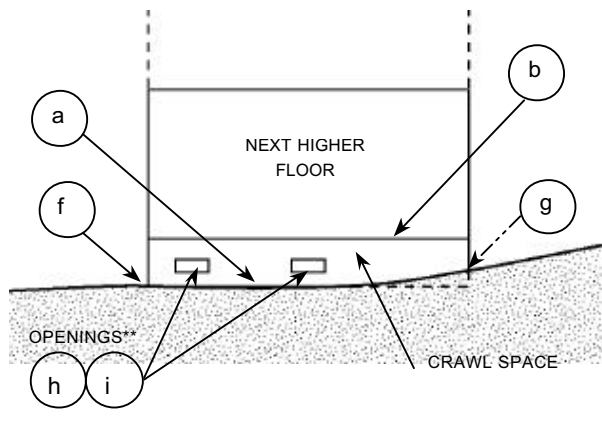


DIAGRAM 8

All buildings elevated on a crawl space with the floor of the crawl space at or above grade on at least one side, with or without an attached garage.

Distinguishing Feature – For all zones, the area below the first floor is enclosed by solid or partial perimeter walls. In all A zones, the crawl space is with or without openings** present in the walls of the crawl space. Indicate information about the openings in Section C, Building Elevation Information (Survey Required).



** An "opening" (flood vent) is defined as a permanent opening in a wall that allows for the free passage of water automatically in both directions without human intervention. Under the NFIP, a minimum of two openings is required for enclosures or crawl spaces with a total net area of not less than one square inch for every square foot of area enclosed. Each opening must be on different sides of the enclosed area. If a building has more than one enclosed area, each area must have openings on exterior walls to allow floodwater to directly enter. The bottom of the openings must be no higher than one foot above the grade underneath the flood vents. Alternatively, you may submit a certification by a registered professional engineer or architect that the design will allow for the automatic equalization of hydrostatic flood forces on exterior walls. A window, a door, or a garage door is not considered an opening.

4. FLOODPROOFING CERTIFICATE

O.M.B. NO. 3067-0077
Expires July 31, 2002

FEDERAL EMERGENCY MANAGEMENT AGENCY
NATIONAL FLOOD INSURANCE PROGRAM

FLOODPROOFING CERTIFICATE FOR NON-RESIDENTIAL STRUCTURES

The floodproofing of non-residential buildings may be permitted as an alternative to elevating to or above the Base Flood Elevation; however, a floodproofing design certification is required. This form is to be used for that certification. Floodproofing of a residential building does not alter a community's floodplain management elevation requirements or affect the insurance rating unless the community has been issued an exception by FEMA to allow floodproofed residential basements. The permitting of a floodproofed residential basement requires a separate certification specifying that the design complies with the local floodplain management ordinance.

BUILDING OWNER'S NAME _____
STREET ADDRESS (Including Apt., Unit, Suite, and/or Bldg. Number) OR P.O. ROUTE AND BOX NUMBER _____
OTHER DESCRIPTION (Lot and Block Numbers, etc.) _____

FOR INSURANCE COMPANY USE
POLICY NUMBER
COMPANY NAIC NUMBER

CITY _____ STATE _____ ZIP CODE _____

SECTION I FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

Provide the following from the proper FIRM:

COMMUNITY NUMBER	PANEL NUMBER	SUFFIX	DATE OF FIRM INDEX	FIRM ZONE	BASE FLOOD ELEVATION (In AO Zones, Use Depth)

SECTION II FLOODPROOFING INFORMATION (By a Registered Professional Engineer or Architect)

Floodproofing Design Elevation Information:

Building is floodproofed to an elevation of feet NGVD. (Elevation datum used must be the same as that on the FIRM.)

Height of floodproofing on the building above the lowest adjacent grade is feet.

(NOTE: for insurance rating purposes, the building's floodproofed design elevation must be at least one foot above the Base Flood Elevation to receive rating credit. If the building is floodproofed only to the Base Flood Elevation, then the building's insurance rating will result in a higher premium.)

SECTION III CERTIFICATION (By Registered Professional Engineer or Architect)

Non-Residential Floodproofed Construction Certification:

I certify that, based upon development and/or review of structural design, specifications, and plans for construction, the design and methods of construction are in accordance with accepted standards of practice for meeting the following provisions:

The structure, together with attendant utilities and sanitary facilities, is watertight to the floodproofed design elevation indicated above, with walls that are substantially impermeable to the passage of water.

All structural components are capable of resisting hydrostatic and hydrodynamic flood forces, including the effects of buoyancy, and anticipated debris impact forces.

I certify that the information on this certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

CERTIFIER'S NAME _____ LICENSE NUMBER (or Affix Seal) _____
TITLE _____ COMPANY NAME _____
ADDRESS _____ CITY _____ STATE _____ ZIP CODE _____
SIGNATURE _____ DATE _____ PHONE _____

Copies should be made of this Certificate for: 1) community official, 2) Insurance agent/company, and 3) building owner.

PAPERWORK BURDEN DISCLOSURE NOTICE

GENERAL—This information is provided pursuant to Public Law 96-511, (The Paper Reduction Act of 1980, as amended), dated December 11, 1980, to allow the public to participate more fully and meaningfully in the Federal paperwork review process.

AUTHORITY—Public Law 96-511, amended; 44 U.S.C. 3507; and 5 CFR 1320

PAPERWORK REDUCTION ACT NOTICE—Public reporting burden for Floodproofing Certificate is estimated to average 3.25 hours per response. Burden means the time, effort, or financial resources expended by persons to generate, maintain, disclose, or provide information to the Federal Emergency Management Agency . You are not required to respond to this collection of information unless a valid OMB control number is displayed in the upper right corner of each form. You may send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collection Management, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20427, Paperwork Reduction Project (3067-0077). To ensure timely receipt and processing of the completed forms, return them to the address provided in the instructions to the forms. Do not send form(s) to the above address. Your response to this collection of information is required to obtain or retain benefits under the National Flood Insurance Program.

5. MT-EZ FORM

**FEDERAL EMERGENCY MANAGEMENT AGENCY
APPLICATION FORM FOR SINGLE RESIDENTIAL LOT OR STRUCTURE AMENDMENTS TO
NATIONAL FLOOD INSURANCE PROGRAM MAPS**

*O.M.B. NO. 3067-0257
Expires May 31, 2005*

PAPERWORK REDUCTION ACT

Public reporting burden for this form is estimated to average 2.4 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number is displayed in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington DC 20472, Paperwork Reduction Project (3067-0257). Submission of this form is required to obtain or retain benefits under the National Flood Insurance Program.

This form should be used to request that the Federal Emergency Management Agency (FEMA) remove a single structure or legally recorded parcel of land or portions thereof, described by metes and bounds, certified by a registered professional engineer or licensed land surveyor, from a designated Special Flood Hazard Area (SFHA), an area that would be inundated by the flood having a 1%-chance of being equaled or exceeded in any given year (base flood), via Letter of Map Amendment (LOMA). It shall not be used for requests submitted by developers, for requests involving multiple structures or lots, for property in alluvial fan areas or coastal high hazard areas (V zones), or requests involving the placement of fill. (NOTE: Use MT-1 forms for such requests). Fill is defined as material placed to raise the grade to or above the Base Flood Elevation (BFE). The common construction practice of removing unsuitable existing material (topsoil) and backfilling with select structural material is not considered the placement of fill if the practice does not alter the existing (natural grade) elevation, which is at or above the BFE. Also, fill that is placed before the date of the first National Flood Insurance Program (NFIP) map showing the area in an SFHA is considered natural grade.

LOMA:

A letter from FEMA stating that an existing structure or parcel of land that has not been elevated by fill would not be inundated by the base flood.

A – This section may be completed by the property owner or by the property owner's agent.

1. Has fill been placed on your property?

- No Yes – If Yes, STOP!! – You must complete the MT-1 application forms; visit http://www.fema.gov/mit/tsd/dl_mt-1.htm or call the FEMA Map Assistance Center toll free: (877-FEMA MAP) (877-336-2627)

2. Legal description of Property (Lot, Block, Subdivision) and street address of the Property (if different from mailing address):

3. Are you requesting that the flood zone designation be removed from (check one):

- Your entire legally recorded property?
- A portion of your legally recorded property? (a metes and bounds description and map of the area to be removed, certified by a registered professional engineer or licensed land surveyor are required)
- A structure on your property? What is the date of construction?

All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Applicant's Name:	Company:
Mailing Address:	Daytime Telephone No.:
E-mail address:	Fax No.:
Signature of Applicant (required)	Date

End of Section A

B -- This section must be completed by a registered professional engineer or licensed land surveyor.

NOTE: If an NFIP Elevation Certificate has already been completed for this property, it may be submitted in addition to this form.

Applicable Regulations

The regulations pertaining to LOMAs are presented in the National Flood Insurance Program (NFIP) regulations under Title 44, Chapter I, Parts 70 and 72, Code of Federal Regulations. The purpose of Part 70 is to provide an administrative procedure whereby FEMA will review information submitted by an owner or lessee of property who believes that his or her property has been inadvertently included in a designated SFHA. The necessity of Part 70 is due in part to the technical difficulty of accurately delineating the SFHA boundary on an NFIP map. Part 70 procedures shall not apply if the topography has been altered since the effective date of the first NFIP map [e.g., a Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map (FHBM)] showing the property to be within the SFHA.

Basis of Determination

FEMA's determination as to whether a structure or legally recorded parcel of land, or portions thereof, described by metes and bounds, may be removed from the SFHA will be based upon a comparison of the Base (1%-annual-chance) Flood Elevation (BFE) with certain elevation information. For Zone A, with no BFE determined, refer to *Managing Floodplain Development in Approximate Zone A Areas, A Guide for Obtaining and Developing Base (100-Year) Flood Elevations*. The elevation information required is dependent on whether a structure, or a legally recorded parcel of land, is to be removed from the SFHA.

Item to be Removed from the SFHA: (check one)	Elevation Information Required: (complete item 4)
<input type="checkbox"/> Structure located on natural grade (LOMA)	Lowest Adjacent Grade to the structure (the elevation of the lowest ground touching the structure including attached decks or garage)
<input type="checkbox"/> Undeveloped legally recorded parcel of land (LOMA)	Elevation of the lowest ground on the parcel or within the portion of land to be removed from the SFHA (skip to Item 2)

1. What is the type of construction? (check one) crawl space slab on grade basement/enclosure
 other (explain)

2. BUILDING INFORMATION

Building Street Address (including Apt. Unit, Suite, and/or Bldg. No.):

Property Description (Lot and Block Number, Tax Parcel Number, Legal Description, etc.):

3. FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

NFIP Community Number:	Map & Panel Number:	Base Flood Elevation:
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4. ELEVATION INFORMATION (SURVEY REQUIRED)

- Lowest Adjacent Grade (LAG) to the structure _____ ft. (m)
- Elevation of the lowest grade on the property; or, metes and bounds area _____ ft. (m)
- Indicate the datum (and datum conversion if different from NGVD 29 or NAVD 88)
- Has FEMA identified this area as subject to land subsidence or uplift? Yes No
- If Yes, what is the date of the current releveling?

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name:	License No.:	Expiration Date:	Seal (optional)
Company Name:	Telephone No.:	Fax No.:	
Signature:		Date:	
(See attached address listing for LOMAs)			

In addition to this form (MT-EZ), ALL requests must include the following:

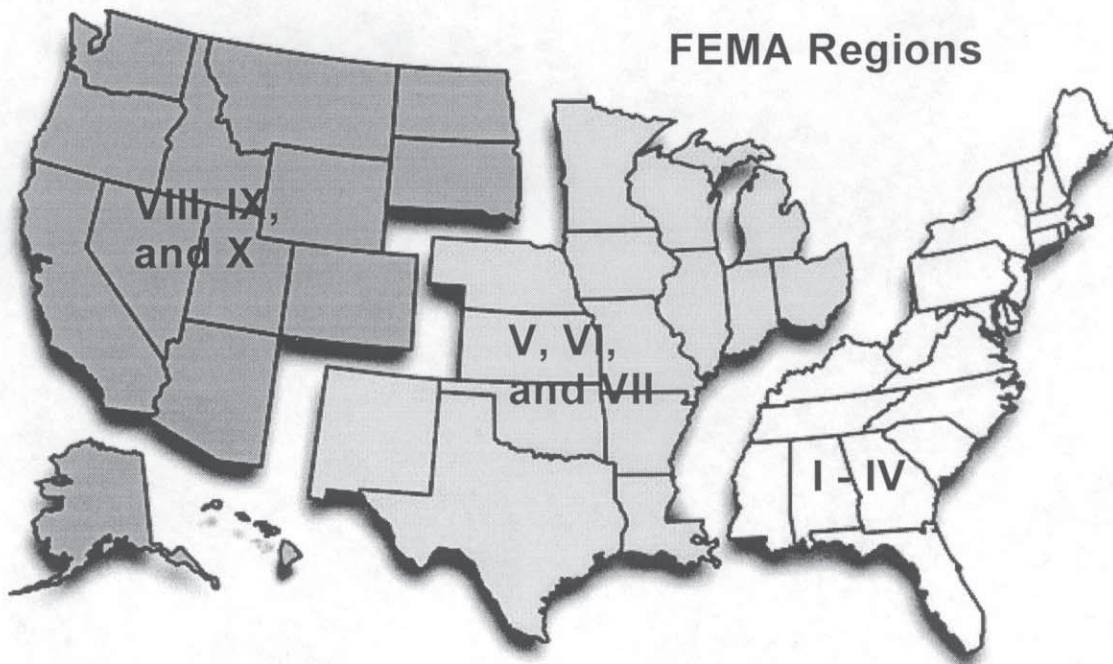
- Copy of the Subdivision Plat Map (with recordation data and stamp of the Recorder's Office)
OR
Copy of the Property Deed (with recordation data and stamp of the Recorder's Office), accompanied by a tax assessor's map or other certified map showing the surveyed location of the property relative to local streets and watercourses
- Copy of the effective FIRM panel and/or Flood Boundary and Floodway Map (FBFM) (if applicable) on which the property location has been accurately plotted
- Please include a map scale on all maps submitted

If your request concerns property in...

FEMA Regions VIII, IX, and X	FEMA Regions V, VI, and VII	FEMA Regions I - IV
Include: Alaska, American Samoa, Arizona, California, Colorado, Guam, Hawaii, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, U.S. Trust Territory of the Pacific Islands, Utah, Washington, and Wyoming	Include: Arkansas, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Missouri, Nebraska, New Mexico, Ohio, Oklahoma, Texas, and Wisconsin	Include: Alabama, Connecticut, Delaware, District of Columbia, Florida, Georgia, Kentucky, Maine, Maryland, Massachusetts, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Puerto Rico, Rhode Island, South Carolina, Tennessee, U.S. Virgin Islands, Vermont, Virginia, and West Virginia

Mail your request to...

FEMA LOMA Depot 3601 Eisenhower Avenue, Suite 600 Alexandria, VA 22304-6425 Attn.: LOMA Manager	FEMA LOMA Depot 12101 Indian Creek Court Beltsville, MD 20705	FEMA LOMA Depot P.O. Box 2210 Merrifield, VA 22116-2210 Attn.: LOMA Manager
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6. Sample Model Floodplain Variance and Appeal Record for Indiana

You can view or download a copy of the FEMA Variance Guidelines at http://www.IN.gov/dnr/water/publications/pdf/variance_guidelines.pdf

Model Floodplain Variance and Appeal Record for Indiana

A variance is a grant of relief given by a community from the terms of specific standards required in its floodplain regulations. The issuance of a variance is for floodplain management purposes only. Insurance premium rates are determined by the federal government according to actuarial risk and will not be modified by the granting of a variance. ANY VARIANCE GRANTED BY A COMMUNITY MUST BE CONSISTENT WITH THE NFIP GUIDELINES AND WITH STATE AND LOCAL LAW.

Name of Applicant: _____

Property Address: _____

Type of structure and intended use: _____

1. Floodplain Status (check which one applies)

Floodway _____

(Note: no variances for the construction of new residences in the floodway are allowed that are not in accordance with IC 14-28-1)

Floodway Fringe _____

The variance applicant must meet all criteria under Ordinance (Resolution) No. _____, IC 14-28-1, 60.6(a) of the Code of Federal Regulations (CFR), and in accordance with 60.3(d)(3) CFR, demonstrate that no increase in flood stages will result. If the applicant cannot meet all of the aforementioned codes and regulations, then do not grant the variance.

2. Has the applicant shown that there exists a good and sufficient cause for the requested variance?

Yes* _____ *(continue on to next question)*

No _____ *(variance should not be granted)*

*A variance request by an applicant that is based on good and sufficient cause is one that solely deals with the physical characteristics of the property, subdivision lot, or land parcel under question. For further explanation, please refer to FEMA's Variance Guidelines handbook.

Please state what the good and sufficient cause is: _____

3. Has the applicant shown that the strict application of the terms of Ordinance (Resolution) No. _____ will constitute an exceptional hardship?

Yes* _____ *(continue on to next question)*

No _____ *(variance should not be granted)*

*The hardship that would result from failure to grant a requested variance must be exceptional, unusual, and peculiar to the property involved. Economic or financial hardship, inconvenience, aesthetic considerations, physical handicaps, personal preferences, the disapproval of one's neighbors, or

homeowners association restrictions likewise cannot, as a rule, qualify as exceptional hardship. For further explanation, please refer to Variance Guidelines.

Please state what the exceptional hardship is: _____

4. Has the applicant shown that the approval of the requested variance will not increase flood heights, create additional threats to public safety, cause additional public expense, create nuisances, cause fraud or victimization of the public or conflict with existing laws or ordinances?

Yes _____

No _____ (*variance should not be granted*)

*Please refer to the Variance Guidelines before answering this question.

Please state why the approval of the variance would not cause the occurrence of the aforementioned items in question #4: _____

If the proposed construction meets the requirements of question #1, and questions #2, #3, and #4 were all answered “yes”, then the body of government responsible for granting appeals may issue a variance to the terms and provisions of Ordinance (Resolution) No. _____ subject to the following standards and conditions:

(Please refer to Variance Guidelines for assistance in meeting the following standards and conditions.):

1. If the requested variance is an exception to the flood protection elevation requirements, the lot should be one-half acre or less in size and contiguous to and surrounded by lots with existing structures constructed below the flood protection elevation.

(Reminder: If the lot is greater than one-half acre in size, applicant must submit technical justification. Please attach justification.)

2. If the requested variance or exception is for the construction of a structure listed on the National Register of Historic Places or the State Historic Register, please attach a letter or appropriate documentation from either agency that shows that the structure is a historic building.

3. Variances are issued only to give the minimum relief necessary. Please describe what the applicant is required to do in order to provide the maximum practical flood protection. (i.e., raise all utilities to or above the base flood elevation, use flood resistant materials, and use watertight sealant)

4. The appointed body of government needs to issue a written notice to the petitioner of the variance or exception that the proposed construction will be subject to increased risks to life and property and could require payment of excessive flood premiums (Up to \$25 per \$100 for structural coverage). Please attach a copy of this notice.

AN APPLICANT RECEIVING A VARIANCE TO BUILD A STRUCTURE WITH THE LOWEST FLOOR ELEVATION BELOW THE BASE FLOOD ELEVATION (100-YEAR) IS HEREBY NOTIFIED THAT THE REDUCED FLOOR ELEVATION WILL RESULT IN INCREASED PREMIUM RATES FOR FLOOD INSURANCE UP TO AMOUNTS AS HIGH AS \$25 PER \$100 OF INSURANCE COVERAGE. CONSTRUCTION BELOW THE BASE FLOOD LEVEL INCREASES RISKS TO LIFE AND PROPERTY.

Applicant's Signature _____ Date _____ Administrator's Signature _____ Date _____

RECORD OF VARIANCE ACTIONS

Variance request submitted to _____ on _____ (date) _____

In accordance with the criteria and guidelines of the floodplain regulations in Ordinance (Resolution) No. _____ the _____ (appeal board) _____ (community name) hereby approves [], denies [] the above request for variance.

By: _____ (Signature) _____, _____ Title _____

Date: _____

Decisions (vote) of the board: _____

Special provisions of Variance Approval: _____

Note: As provided in _____, those aggrieved by the decision of the appeal board may appeal such decisions to the _____.

C. CONTACTS FOR ASSISTANCE

Indiana Department of Natural Resources (IDNR)
Division of Water
402 W. Washington St., Rm W264
Indianapolis, IN 46204
317-232-4160
1-877-928-3755 (toll free)

Federal Emergency Management Agency (FEMA)
Region V
536 South Clark St., 6th Floor
Chicago, IL 60605
(312) 408-5500

U.S. Army Corps of Engineers, Detroit
P.O. Box 1027
Detroit, MI 48231-1027
(313) 226-6768

U.S. Army Corps of Engineers, Louisville
P.O. Box 59
Louisville, KY 40201-0059
(502) 582-5848

Indiana Department of Environmental Management (IDEM)
100 N. Senate Ave.
Indianapolis, IN 46204
(317) 232-8611

Indiana Department of Health
2 North Meridian St.
Indianapolis, IN 46204
(317) 233-1325

Indiana State Emergency Management Agency (SEMA)
302 W. Washington St., Rm E208
Indianapolis, IN 46204
(317) 232-3980

U.S. Department of Agriculture (USDA)
Natural Resources Conservation Service (NRCS)
6013 Lakeside Blvd.
Indianapolis, IN 46278-2933
(317) 290-3200

For additional information on the topics covered in this handbook please contact:

IDNR Division of Water
Floodplain Management Section
402 W. Washington St. W264
Indianapolis, IN 46214
1-317-232-4160
1-877-928-3755 (toll free)
Fax (317)233-4579



Frank O'Bannon - Governor
John R. Goss - Director, Department of Natural Resources
State of Indiana

