

# Making Substantial Improvement Determinations

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# Welcome!

- Today: **Making Substantial Improvement Determinations**
- April 14<sup>th</sup>: Making Substantial Damage Determinations

# Agenda

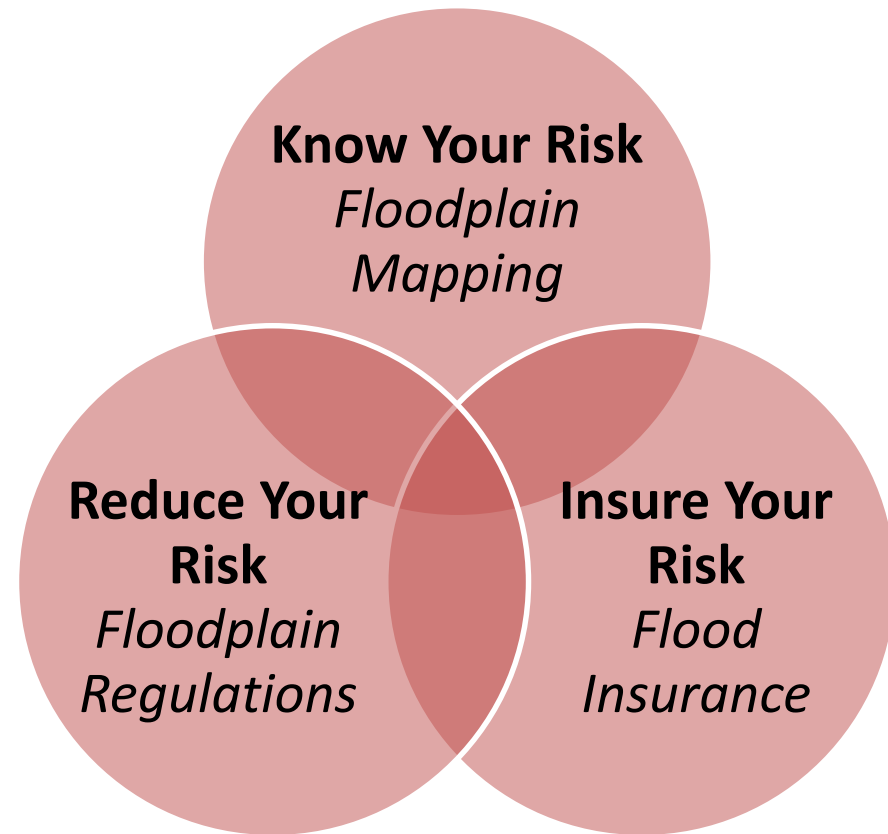
- National Flood Insurance Program (NFIP):  
Community Responsibilities
- Substantial Improvements (SI) Defined
- Making SI Determinations
- SI Building Scenarios
- Going Beyond Minimum NFIP Requirements
- Resources/Wrap Up

# **National Flood Insurance Program (NFIP): Community Responsibilities**



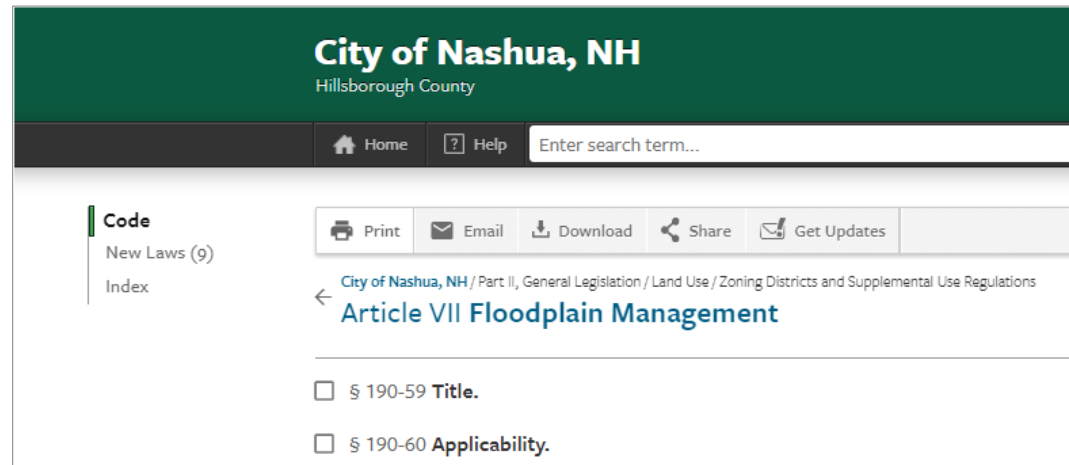
# The National Flood Insurance Program (NFIP)

- Voluntary partnership between FEMA and participating communities.
- Community agrees to adopt local floodplain regulations and enforce them through a local permitting process.
- NFIP flood insurance is available for purchase, for all property owners and renters in the community.



# Community Floodplain Regulations

- Adoption and enforcement of floodplain regulations that **meet minimum NFIP requirements** is required for a community to remain in good standing in the program.



The screenshot shows the City of Nashua, NH website interface. The header includes the city name and 'Hillsborough County'. A navigation bar contains 'Home' and 'Help' links, along with a search bar. A sidebar on the left lists 'Code', 'New Laws (9)', and 'Index'. The main content area features a breadcrumb trail: 'City of Nashua, NH / Part II, General Legislation / Land Use / Zoning Districts and Supplemental Use Regulations' leading to 'Article VII Floodplain Management'. Below the title, there are two sections: '§ 190-59 Title.' and '§ 190-60 Applicability.', each with a checkbox.

## ZONING ORDINANCE & BUILDING CODES OF THE TOWN OF HAMPTON, NH

**Substantial Damage** means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty (50) percent of the market value of the structure before the damage occurred.

**Substantial Improvement** means any combination of repairs, reconstruction, alteration, or improvements to a structure in which the cumulative cost equals or exceeds fifty (50) percent of the market value of the structure. The market value of the structure should equal:

- a. the appraised value prior to the start of the initial repair or improvement, or
- b. in the case of damage, the value of the structure prior to the damage occurring.

For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. This term includes structures that have incurred substantial damage, regardless of actual repair work performed. The term does not, however, include any project for improvement of a structure required to comply with existing health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions or any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure".

**Violation** means the failure of a structure or other development to be fully compliant with the community's flood plain management regulations. A structure or other development without the

# Local (Community) Role and Responsibilities

- Understand your community's regulations and FEMA flood maps.
- Ensure that local permits are applied for, for all development in Special Flood Hazard Areas within the community.
- Review and process permit applications for floodplain development.
- Ensure floodplain development (including community's) is built according to approved permits & floodplain regulations.
- Take enforcement actions; correct violations.
- Maintain all permit records and relevant documentation.

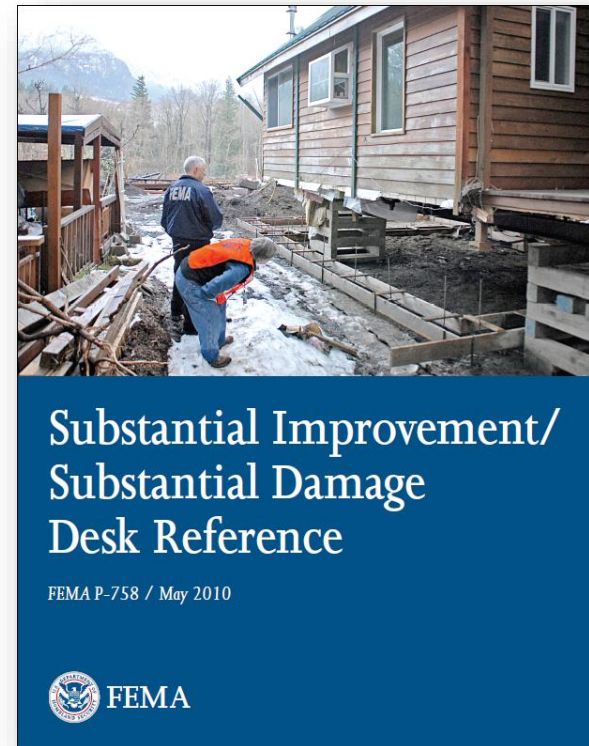
# **“Substantial Improvements” (SI) Defined**





# FEMA Substantial Improvement / Substantial Damage Desk Reference (FEMA-P-758)

- Provides detailed guidance on all aspects of Substantial Improvement/Substantial Damage.
- Will be referenced throughout this training.
- [www.fema.gov/sites/default/files/2020-07/fema\\_nfip\\_substantial-improvement-substantial-damage-desk-reference.pdf](http://www.fema.gov/sites/default/files/2020-07/fema_nfip_substantial-improvement-substantial-damage-desk-reference.pdf)



# The Substantial Improvement Provision

- Definition included in your community's floodplain ordinance.
- Proposed development in a Special Flood Hazard Area that is determined to be an SI must meet applicable requirements in the ordinance.
- Enforcement of this provision is a minimum NFIP requirement for all participating communities.

## SECTION 10 – STRUCTURE REQUIREMENTS

- A. New construction of a residential structure, or an existing residential structure to be substantially improved or replaced, or that has incurred substantial damage, located in a special flood hazard area shall have the lowest floor elevated at least one foot above the base flood elevation.
- B. New construction of a non-residential structure, or an existing non-residential structure to be substantially improved or replaced, or that has incurred substantial damage, located in a special flood hazard area shall:
  - 1. Have the lowest floor elevated at least one foot above the base flood elevation; or
  - 2. Together with attendant utility and sanitary facilities:
    - a. Be floodproofed at least one foot above the base flood elevation so that below this elevation the structure is watertight with walls substantially impermeable to the passage of water;
    - b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy; and
    - c. Be certified by a registered professional engineer or architect that the dry floodproofing design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this section. Such certification shall be provided to the Floodplain Administrator in the form of a completed and signed Floodproofing Certificate for Non-Residential Structures.
- C. A fully enclosed area for new construction of a structure, or an existing structure to be substantially improved or replaced, or that has incurred substantial damage located in a special flood hazard area that is below the lowest floor of a structure, below the base flood elevation, and therefore, subject to flooding, shall meet the following

# Intent of the Substantial Improvement Provision

- Best opportunity for older building stock to be brought up to modern flood damage-resistant building standards.
- Reduces future costs associated with flood damage and keeps residents safer.
- Opportunity to break the cycle of disaster damage, reconstruction, and repeated damage.



# Substantial Improvement Definition

**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.

The term includes structures which have incurred “**Substantial Damage**”, regardless of the actual repair work performed.

The term does **not**, however, include either:

- a. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
- b. Any alteration of a “historic structure,” provided that the alteration will not preclude the structure's continued designation as a “historic structure.”

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$$\text{Percent Improvement} = \frac{\text{Cost of Improvement}}{\text{Pre-Improvement Market Value of Structure}}$$

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The term includes structures which have incurred **“Substantial Damage”**, regardless of the actual repair work performed.

# Substantial Damage Definition

**Substantial Damage (SD)** means damage of **any origin** sustained by a structure whereby the cost of restoring the structure would **equal or exceed 50 percent of the market value** of the structure before the damage occurred.

$$\text{Percent Damage} = \frac{\text{Cost of Repairs}}{\text{Pre-Damage Market Value of Structure}}$$

**Get the Details at the Next Webinar!**  
**Making Substantial Damage Determinations**  
**April 14<sup>th</sup>, 10 – 11:30 am**

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# Historic Structures Exception

- Definition of 'historic structure' is included in your community floodplain ordinance. Does not include structures that:
  - are merely old
  - residents or officials simply refer to as historic



# Historic Structures Definition

**Historic Structure** means any structure that is:

- a. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- c. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
- d. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
  - (i) by an approved state program as determined by the Secretary of the Interior; or
  - (ii) directly by the Secretary of the Interior in states without approved programs.

# State-Specific Requirements

## ▪ Massachusetts – State Building Code

SUBSTANTIAL REPAIR OF A FOUNDATION. When work to repair or replace a foundation results in the repair or replacement of a portion of the foundation with a perimeter along the base of the foundation that equals or exceeds 50% of the perimeter of the base of the foundation measured in linear feet, or repair or replacement of 50% of the piles, columns or piers of a pile, column or pier supported foundation, the building official shall determine it to be substantial repair of a foundation. Applications determined by the building official to constitute substantial repair of a foundation shall require all existing portions of the entire building or structure to meet the requirements of 780 CMR.

# Making Substantial Improvement Determinations



# Whose Responsibility is it to Make Substantial Improvement Determinations?

- A. FEMA
- B. The State
- C. The applicant
- D. The community

# Whose Responsibility is it to Make Substantial Improvement Determinations?

- A. FEMA
- B. The State
- C. The applicant
- D. The community**

# Community Substantial Improvement Responsibilities

1. Review permit application to verify if an SI determination must be made.
2. Verify the cost of improvements to the structure.
3. Verify the market value of the structure.
4. Make the SI determination and issue it to property owner.
5. Permit development/ensure compliance with community ordinance.
6. Maintain documentation.



# 1. Review Permit Application

- Is the proposed development site in a Special Flood Hazard Area?
- Will the proposed development activity involve improving or repairing an existing building?
- If so, has the applicant provided the necessary information for you to make an SI determination?
  - e.g., Detailed description of proposed work and associated costs



Source: FEMA photo library

# Examples of Work that May Trigger SI Requirements



Source: FEMA Region III,

*Vertical addition of a substantial improvement*

- Remodeling the interior of a building with or without modifying its external dimensions
- Repairing foundations, including replacing or extending foundations
- Lateral additions
- Vertical additions
- Repair of Substantial Damage

# Phased Improvements

- Property owners may want to break an improvement into multiple parts and request separate permits for each phase to avoid having to comply with SI requirements, or other reasons.
- Some communities address this issue in their permit application or require owners/contractors to confirm that work described in an application is all of the work that will be done.
- Adopting revised language into your ordinance can also help prevent SI requirements being circumvented due to phased improvements.

# New! Substantial Improvement/Damage Application Packet and Property Owner Guide

- Ensures that applicants submit the necessary information for community to make an SI determination.
- Helps you communicate information about SI to applicants and treat all applicants consistently.
- Makes it easier to document determinations and retain the documentation in community's permanent records.

## Substantial Improvement and Substantial Damage Application Packet for Structures Located in Special Flood Hazard Areas

As a participating community of FEMA's National Flood Insurance Program (NFIP), the [Insert Municipality's Name] has adopted and enforces at least the minimum NFIP requirements in its [Insert Name of the Municipal Document where floodplain regulations can be found] in order to protect lives and property from future flood damages. These requirements are also included in the State's Building Code (2015 IBC (Section 104.2.1) and IRC (R105.3.1.1)). The community must adopt and enforce these requirements in order to continue to participate in the NFIP and in order for federally-backed flood insurance to be made available to all residents.

The purpose of this Application Packet is for property owners to provide the community with the required information in regards to any proposed reconstruction, rehabilitation, repairs, addition, or other improvements to a structure that is located in a Special Flood Hazard Area. The application documents, which must be completed and submitted by the applicant to the community, will be used to assist the community in making their substantial improvement or substantial damage determination in a fair and consistent manner.

Please review the Application Packet Checklist and documentation to ensure an understanding of what is required to obtain a community floodplain development permit for the proposed development. Please also review the *Property Owner Guide to Understanding Community Substantial Improvement and Substantial Damage Requirements for Structures located in Special Flood Hazard Areas*. This document provides property owners with information about the community's floodplain requirements and the process the community must follow to make these determinations of substantial improvement or substantial damage.

Please contact the following for any questions or assistance:

**Insert Name of Municipal Official and their Title or Community Department and Contact Information**

# Substantial Improvement/Damage Application Packet

## Substantial Improvement or Substantial Damage Application Packet Checklist

The following is the checklist of the documents that an applicant must submit as part of the community permits application process for substantial improvement or substantial damage of structure located in a Special Flood Hazard Area. |

APPLICANT MUST SUBMIT ALL OF THE FOLLOWING (please check off each item):

- Completed and signed application** for substantial damage/improvement review (included in this packet).
- Completed, Certified, and Signed FEMA Elevation Certificate** with elevations for the existing structure, which will be used to determine what measures will be needed to bring the existing structure into compliance.
- Current Photographs** of the structure's exterior (front, rear, sides). If the structure has been damaged, include photographs of the interior and exterior and, if available, pre-damaged photos of the exterior.
- Estimated Cost** of reconstruction/improvement form (included in this packet) and all supporting documents. Include subcontractor's bids and itemized cost lists (see footnote on Cost Estimate Form).
- Property Owner's Affidavit** signed and dated (included in this packet).
- Contractor's Affidavit** signed and dated (included in this packet).
- This Checklist.**

## Floodplain Development Application for Substantial Improvement/Substantial Damage

Completion of this application along with the Floodplain Development Permit Application is required for any proposed addition, renovation, repair, and/or maintenance to an existing residential or non-residential structure or manufactured home located in the Special Flood Hazard Area (SFHA) shown on the community's Flood Insurance Rate Map (FIRM).

Please check:  
 I have read and understand the Property Owner Guide to Understanding Community Substantial Improvement and Substantial Damage Requirements for Structures Located in Special Flood Hazard Areas.

Date: \_\_\_\_\_

### Contact Information for the Structure:

Property Owner Name: \_\_\_\_\_ Contractor Name: \_\_\_\_\_

Property Owner Phone Number: \_\_\_\_\_ Contractor Phone Number: \_\_\_\_\_

The primary contact person for this project is the  Property Owner  Contractor (Check one)

### Property Information for the Structure

Property Address: \_\_\_\_\_

Tax Map No. \_\_\_\_\_ Lot No. \_\_\_\_\_

Original Construction Date of Current Structure: \_\_\_\_\_

Flood Zone: \_\_\_\_\_ Base Flood Elevation: \_\_\_\_\_ Structure located in regulatory floodway?  Yes  No

Is the structure listed on the National Register of Historic Places or other such registry for historic buildings?  Yes  No

If yes, please provide the Registry name and number that applies: \_\_\_\_\_

### Market Value of the Structure

Check one of the following:

- I accept the community's tax assessment value of the structure.
- I have attached a market value appraisal of the structure prepared by a licensed professional appraiser.

### Signature

Property Owner's or Contractor's Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Cost Estimate of Reconstruction / Improvement

Property Address: \_\_\_\_\_

Parcel ID Number: \_\_\_\_\_

This cost estimate of reconstruction/improvement must be prepared by and signed by the contractor or by the owner if the owner acts as the contractor. Owners who act as their own contractors must estimate their labor cost—the current market value for any work they intend to perform, including construction supervision costs.

	Sub-Contractor Bids		Contractor or Owner Estimates	
	Bid Amounts (see note "D")		Material Costs	Labor Costs
1 Masonry/Concrete				
2 Carpentry Material (rough)				
3 Carpentry Labor (rough)				
4 Roofing				
5 Insulation and Weather-Strip				
6 Exterior Finish (Siding/Stone/etc)				
7 Doors, Windows & Shutters + (Trim)				
8 Lumber Finish				
9 Hardware				
10 Drywall				
11 Cabinets (Bath-ins)				
12 Floor Covering				
13 Plumbing (rough)				
14 Shower / Tub / Toilet / Sinks				
15 Electric & Light Fixtures				
16 Kitchen/Couentertops/Baths-ins				
17 Beds/Stairs/Guards & Rails				
18 HVAC				
19 Paint				
20 Demolition & Removal				
21 Overhead & Profit				
22 Construction Supervision Costs				
Subtotals:				
Total Estimate Cost (all three subtotals added together)				

- A. A copy of the signed construction contract must accompany this estimate.
- B. Subcontractor bids may be used for any material and/or labor cost breakdown. INCLUDE donations and volunteer labor.
- C. If any amounts appear in the "Sub-contractor" columns, a copy of each signed and dated bid must accompany this form.
- D. Cost backup must be provided for every line item entry. If any amounts appear in the "Sub-contractor" column, a copy of each signed and dated bid must accompany this form. For all other costs, you must list the quantity of materials to be installed and their unit cost on a separate sheet that references the line number.

For example, the backup documentation may contain a section called "Drywall to be installed (line 10)":

This Sheet (Line 10)	Separate Sheet
Materials: \$2,000.00	1,000 L.F. Drywall @ \$2.00/L.F. = \$2,000.00
Labor: \$320.00	16 MH to Hang Drywall @ \$20.00 / MH = \$320.00

# Property Owner Guide to Understanding Community SI and SD Requirements

## Property Owner Guide to Understanding Community Substantial Improvement and Substantial Damage Requirements for Structures Located in Special Flood Hazard Areas

As a participating community of FEMA's National Flood Insurance Program (NFIP), the [Insert Municipality's Name] has adopted and enforces at least the minimum NFIP requirements in its [Insert Name of the Municipal Document where floodplain regulations can be found] in order to protect lives and property from future flood damages. These requirements are also included in the State's Building Code (2015 IBC (Section 104.2.1) and IRC (R105.3.1.1)). The community must adopt and enforce these laws in order to continue to participate in the NFIP and in order for federally-backed flood insurance to be made available to all residents.

The purpose of this document is to provide property owners with information about the community's floodplain requirements in regards to any proposed reconstruction, rehabilitation, repairs, addition, or other improvements to a structure that is located in a Special Flood Hazard Area. The application documents that must be completed and submitted to the community are to assist the community in making their substantial improvement or substantial damage determination in a fair and consistent manner.

Please review this document to understand the process the community must follow to make these determinations of substantial improvement or substantial damage. Please also review the Substantial Improvement/Damage Application Packet, which includes the application form and required accompanying documents.

Please contact the following for any questions or assistance:

Insert Name of Municipal Official and their Title or Community Department and Contact Information

### Definitions to Know:

"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 improvement.

"SUBSTANTIAL DAMAGE" means damage of any origin (not just flooding) sustained by a structure where the cost of restoring the structure to its before-damage condition would equal or exceed 50% of the market value of the structure before the damage occurred.

The above definitions come from the NH state model ordinance. If the definitions in the community's floodplain regulations differ from these listed above, please revise the definitions above to match the community's definitions.

### FEMA Resources to Review:

Substantial Improvement/Damage Desk Reference (FEMA P-758, 2010)  
<https://www.fema.gov/media-library/assets/documents/18562>

Answers to Questions about Substantially Improved/Substantially Damaged Buildings (FEMA 213, 2018)  
<https://www.fema.gov/media-library/assets/documents/169099>

### Substantial Improvement or Substantial Damage Items to be Included

#### ALL STRUCTURAL ELEMENTS AND EXTERIOR FINISHES INCLUDING:

- Spread or continuous foundation footings and pilings
- Monolithic or other types of concrete slabs
- Bearing walls, tie beams and trusses
- Wood or reinforced concrete decking or roofing
- Joist, beams, subflooring, framing, and ceilings
- Attached decks and porches
- Interior non-bearing and partition walls
- Exterior wall finishes (e.g., brick, stucco or siding) including painting and decorative moldings
- Windows and exterior doors
- Re-shingling or re-tilling a roof
- Hardware

#### ALL INTERIOR FINISH ELEMENTS, INCLUDING:

- Tiling, linoleum, stone or carpet over sub-flooring
- Bathroom tiling and fixtures
- Wall finishes (e.g., drywall, painting, stucco, plaster, paneling, marble or other decorative finishes)
- Kitchen, Counter-tops, utility and bathroom cabinets
- Built-in bookcases, cabinets and furniture
- Hardware
- Insulation

#### ALL UTILITY AND SERVICE EQUIPMENT, INCLUDING:

- HVAC equipment
- Repair or reconstruction of plumbing and electrical services
- Light fixtures and ceiling fans
- Security systems
- Built-in kitchen appliances
- Central vacuum systems and Generators
- Water filtration, conditioning or recirculation systems
- Solar panels and equipment

See next page for additional costs to include

#### OTHER COSTS:

- Materials and labor, including the estimated value of donated or discounted materials and owner or volunteer labor (see box below)
- Site preparation related to the improvement or repair, such as foundation excavation or filling in basements
- Demolition and construction debris removal
- Labor and other costs associated with demolishing, removing or altering structure components to accommodate improvements, additions, and making repairs
- Costs associated with complying with other requirements and codes that may be triggered by the work
- Overhead and profit
- Construction management and supervision

#### USE OF DONATED MATERIALS AND/OR OWNER OR VOLUNTEER LABOR

The value of any donated materials and volunteer labor must be included in the cost estimate.

To determine the value of donated materials, especially in regards to Substantial Damage, use the "pre-storm" normal retail cost for each item donated.

Labor cost estimates should reflect applicable wage scales for the type of construction work to be performed regardless of whether the labor is to be paid, provided by the owner or volunteered.

# 2. Verify Cost of Improvements

*Cost of improvements = The complete cost associated with the proposed improvements on the structure.*

## Acceptable sources of cost information include:

- Itemized construction cost estimates prepared by licensed contractors (Template available in SI/SD Application Packet).
- Building valuation tables published by building code organizations and other professional building cost-estimating services.

**Cost Estimate of Reconstruction / Improvement**

Property Address: \_\_\_\_\_

Parcel ID Number: \_\_\_\_\_

This cost estimate of reconstruction/improvement must be prepared by and signed by the contractor or by the owner if the owner acts as the contractor. Owners who act as their own contractors must estimate their labor cost at the current market value for any work they intend to perform, including construction supervision costs.

	Sub-Contractor Bids	Contractor or Owner Estimates	
	Bid Amounts (see note *D)	Material Costs	Labor Costs
1 Masonry/Concrete			
2 Carpentry Material (rough)			
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4 Roofing			
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6 Exterior Finish (Siding/Stucco etc)			
7 Doors, Windows & Shutters + (Trim)			
8 Lumber Finish			
9 Hardware			
10 Drywall			
11 Cabinets (Built-in)			
12 Floor Covering			
13 Plumbing (rough)			
14 Shower / Tub / Toilet / Sinks			
15 Electrical & Light Fixtures			
16 Kitchen/Countertops/Built-ins			
17 Decks/Stairs/Guards & Rails			
18 HVAC			
19 Paint			
20 Demolition & Removal			
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22 Construction Supervision Costs			
Subtotals:			
Total Estimate Cost (all three subtotals added together)			

A. A copy of the signed construction contract must accompany this estimate.  
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**For example,** the backup documentation may contain a section called "Drywall to be installed (Line 10)":

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Labor: \$320.00	16 MH to Hang Drywall @ \$20.00 / MH = \$320.00

# Which Costs Should Be Included?

- Costs directly associated with the building.
- Must include all costs even when donated or discounted.
- Must include all labor even when self-done or volunteer labor.



# Which Costs Should NOT Be Included?

- Costs not directly associated with building (e.g. landscaping, septic, well, engineering or permits).
- Any costs required to correct existing violations of state or local health, sanitary, or safety code specifications.

# Substantial Improvements

## Costs that must be included

- Materials and labor  
estimated value of all labor and materials, including value of donated/discounted materials and owner or volunteer labor
- Site prep work
- Demolition and construction debris removal
- Exterior (foundation, exterior finishes, windows, doors, attached deck/porches )
- Interior finishes (flooring, wall finishes, built-in cabinets)
- Utilities (HVAC, plumbing, electrical, lighting, built-in appliances, security systems)

## Costs that can be excluded

- Clean-up/trash removal
- Land surveying costs
- Cost to obtain plans/specs
- Permit and inspection fees
- Costs to correct **previously cited** health/safety/sanitary violations
- Outside improvements (landscaping, sidewalks, detached accessory structures)
- Plug-in appliances

*See FEMA's Substantial Improvement/Substantial Damage Desk Reference for a more comprehensive list*

# 3. Verify Market Value of Structure

*The market value of the structure (not including the value of the land) before the start of construction of the improvement (or occurrence of damage).*

**Acceptable sources of cost information include:**

- Assessed value of the structure, developed for property tax assessment purposes.
- Professional appraisals by a licensed professional appraiser.



***See FEMA's Substantial Improvement/Substantial Damage Desk Reference for more information.***

# 3. Verify Market Value of Structure

- If the applicant disagrees with the source of market value selected, they may hire a licensed property appraiser to submit a comparable property appraisal (for the total market value of only the structure) at their own cost.

# 4. Make the SI Determination

$$\text{Percent Improvement} = \frac{\text{Cost of Improvement}}{\text{Pre-Improvement Market Value of Structure}}$$

**Does the Percent Improvement equal or exceed 50 percent?**

# Issue the Determination to Property Owner

- Determination should be communicated to property owner in an official letter (needed even if it's not a Substantial Improvement).
- Sample letters for different scenarios available in FEMA's *SI/SD Desk Reference*.

## Sample Letter to Notify Property Owners of a Determination That Work Constitutes Substantial Improvement

### Notice of Substantial Improvement Determination (Residential)

Dear Property Owner:

We have reviewed your recent application for a permit to [describe proposed improvement/addition] your existing home that is located in a mapped Special Flood Hazard Area. As required by our floodplain management regulations and/or building code, we have determined that the proposed work constitutes substantial improvement of the building. This determination is based on a comparison of the cost estimate of the proposed work to the market value of the building (excluding land value). When the costs equal or exceed 50 percent of the market value of the building, the work is substantial improvement.

As a result of this determination, you are required to bring the building into compliance with the flood damage-resistant provisions of the regulations and/or code [cite pertinent sections].

We would be pleased to meet with you and your designated representative (architect/builder) to discuss how to bring your home into compliance. There are several aspects that must be addressed to achieve compliance. The most significant requirement is that the lowest floor, as defined in the regulations/code, must be elevated to or above the base flood elevation (BFE) [or the elevation specified in the regulations/code]. You may wish to contact your insurance agent to understand how raising the lowest floor higher than the minimum required elevation can reduce NFIP flood insurance premiums.

Please resubmit your permit application along with plans and specifications that incorporate compliance measures. Construction activities that are undertaken without a proper permit are violations and may result in citations, fines, or other legal action.

# Appeals of SI Determinations

The property owner may appeal an SI determination on the basis of:

- Repair/Improvement costs that should be included/excluded
- Inappropriate valuations of costs for the proposed work
- Inappropriate method to determine market value of building

# Best Practices

## Ensure SI determinations are consistent and fair:

- Use written procedures that meet the NFIP requirements and SI guidance.
- Use the same methods for building market value and improvement estimates on a community-wide basis.
- Implement the procedures on a consistent basis to make fair and defensible determinations.
- Document decisions and maintain all required records in community files.



# 5. Permit Development

## For proposed work determined to be a SI:

- Must be brought into compliance with requirements in your community ordinance:
  - Lowest floor elevation elevated to or above Base Flood Elevation (+1 foot -- NH State Building Code)
  - Basements not allowed
  - Enclosure requirements
  - Protection of utility systems
  - Use of flood damage-resistant materials
- Specific requirements vary by zone (e.g., A zones vs. V zones)

# 5. Permit Development

## For proposed work determined to be a SI:

- Require submission of revised plans compliant with community ordinance requirements.
- Once a new permit application is received with new building plans that are compliant with the local ordinance, the improvement permit can be issued.

# 5. Permit Development

For proposed work determined to **NOT** be a SI:

- Work does not need to meet the ordinance requirements that apply for SI and new construction.
- Permit can be issued once all other Federal or State permits have been received and any other local requirements met.
- Recommend that the applicant consider taking other mitigation measures such as elevating utilities and using flood-resistant materials to decrease the flood risk to the property.



## Flood Damage-Resistant Materials Requirements

for Buildings Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program

Technical Bulletin 2 / August 2008



## Protecting Building Utility Systems From Flood Damage

Principles and Practices for the Design and Construction of Flood Resistant Building Utility Systems

FEMA P-348, Edition 2 / February 2017



# Ordinance Enforcement

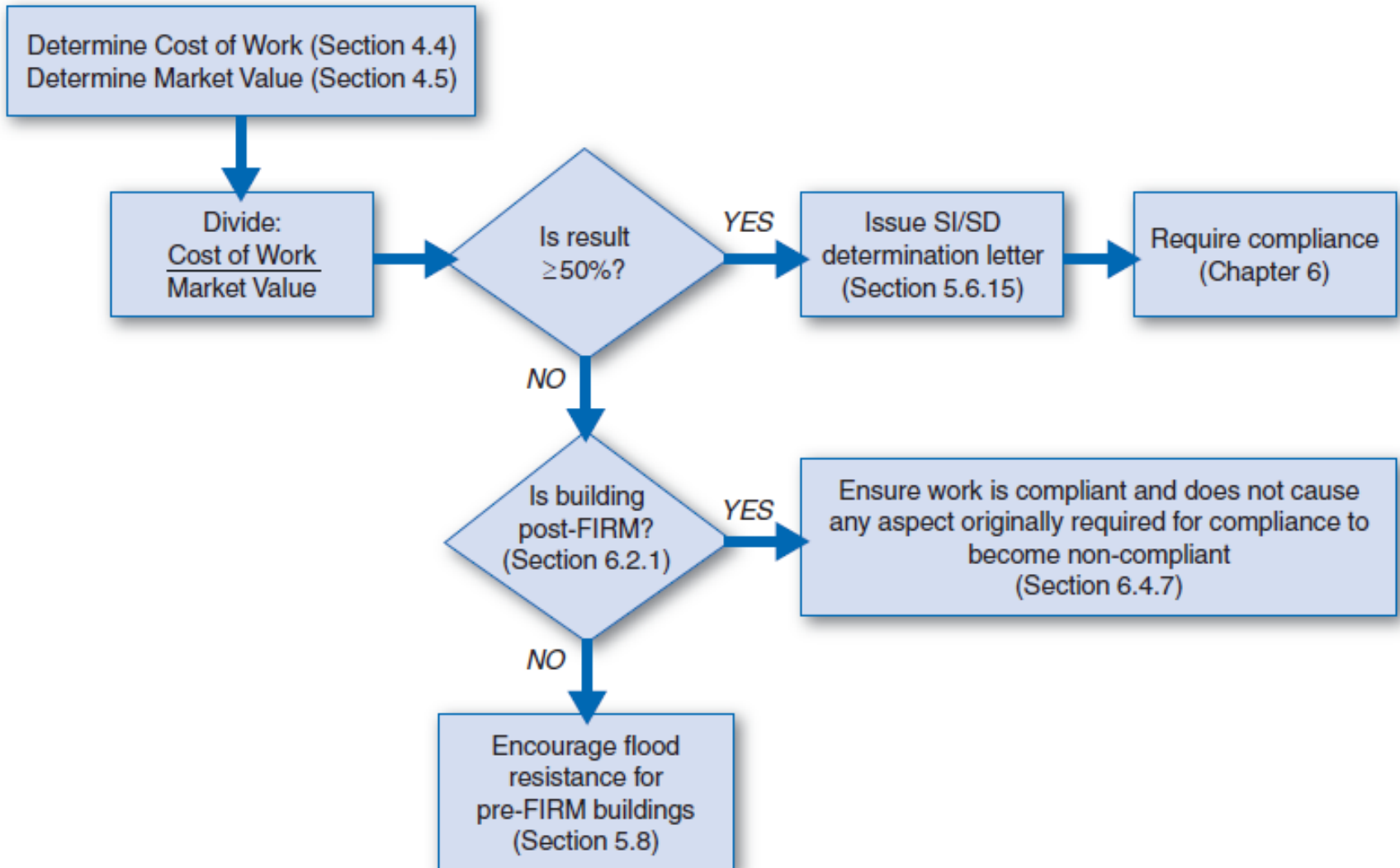
Failure to enforce the SI provision of your local ordinance can result in negative ramifications for both the community and structure owner.

- Structures that are in violation can get flood insurance, but the premiums will be significantly higher. This may make the structure difficult to sell.
- Communities that fail to enforce their ordinance may be suspended from the National Flood Insurance Program.

# 6. Maintain Required NFIP Documentation

- Permit applications and supporting docs.
- Documentation of SI/SD determinations including:
  - Community determination calculation.
  - Official determination letter to property owner.
  - Historic structures documentation (if applicable).
- As-built elevation data for new construction and SI/SD buildings, post-construction.
- Any variance proceedings, including justifications/notifications.
- Any other documentation/certifications required in community floodplain ordinance.

# Summary of SI Determination Process



# Substantial Improvement - Building Scenarios



# Substantial Improvement Within Existing Footprint of Structure

From FEMA Substantial Improvement/Substantial Damage Desk Reference

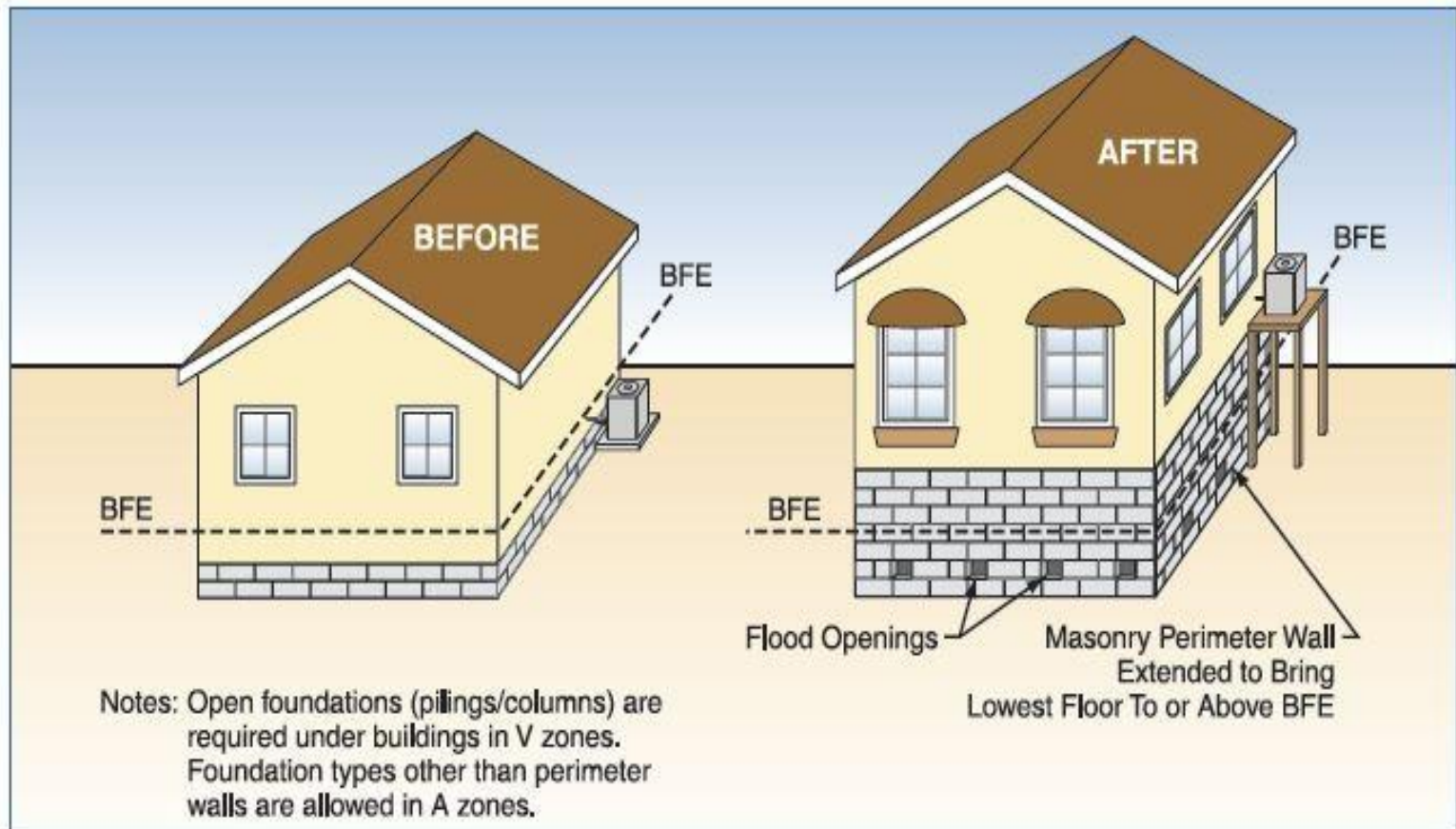


Figure 6-1. Rehabilitation or remodel (no increase in footprint) of residential building in an A zone – the proposed work was determined to be a substantial improvement. The building is brought into compliance by elevating it on an extended perimeter foundation wall, installing flood openings, and raising the HVAC equipment onto a platform.



# Substantial Improvement to Existing Structure with a Basement

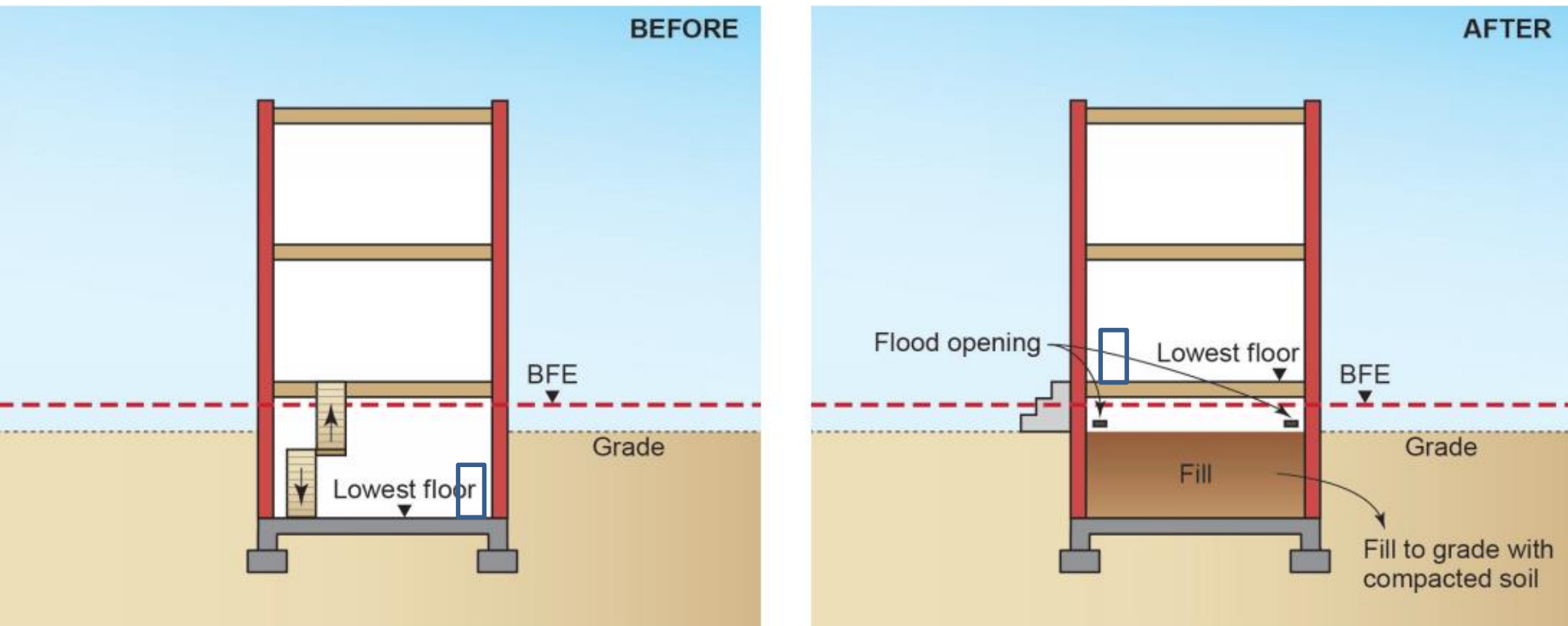
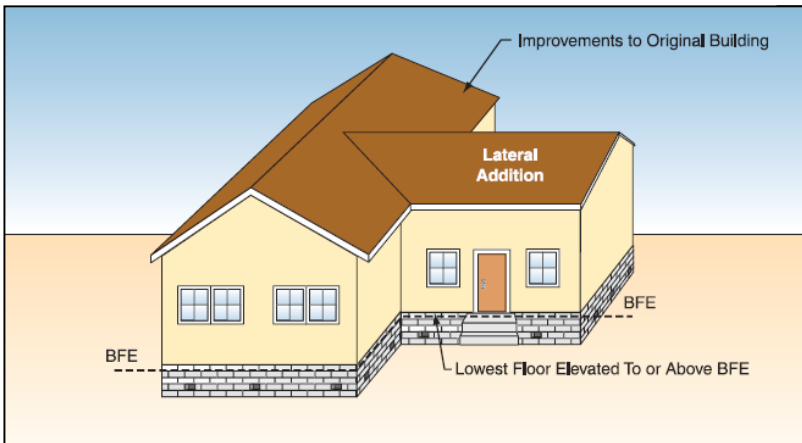


Figure 1: Basement infill before and after mitigation

# Lateral Additions

## Lateral addition, structurally connected – SI

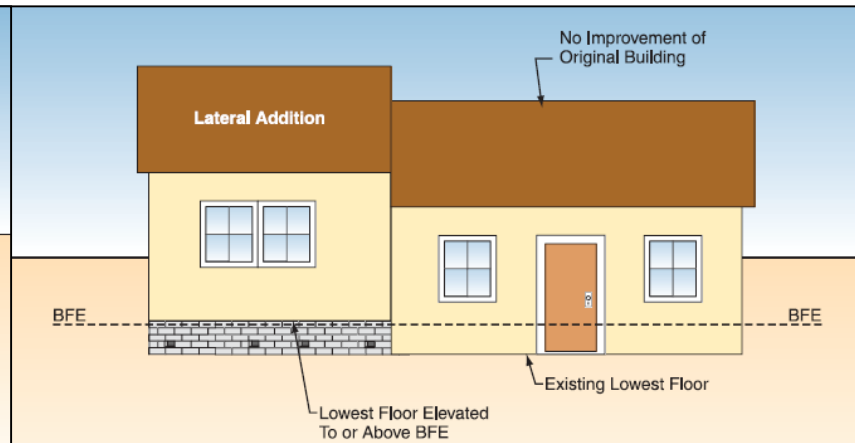
Addition required to comply;  
existing building required to comply



Structurally connected

## Lateral addition, not structurally connected - SI

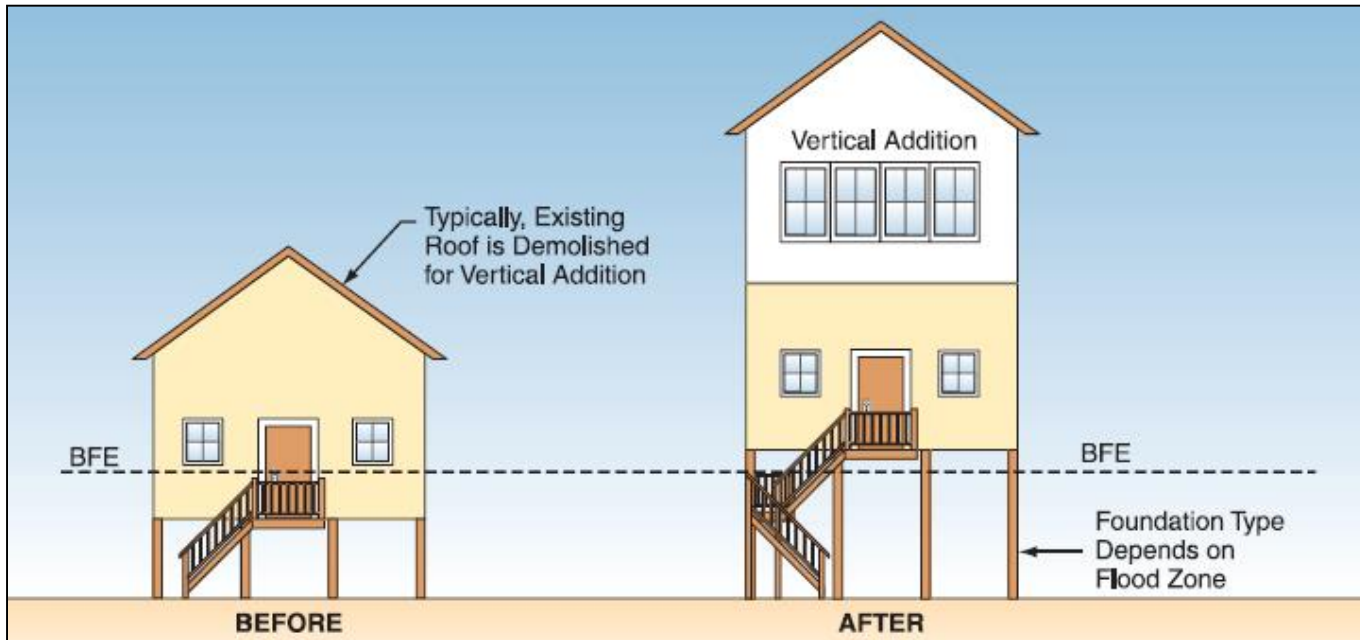
Addition required to comply;  
existing building NOT required to comply



Not structurally connected

# Vertical Additions

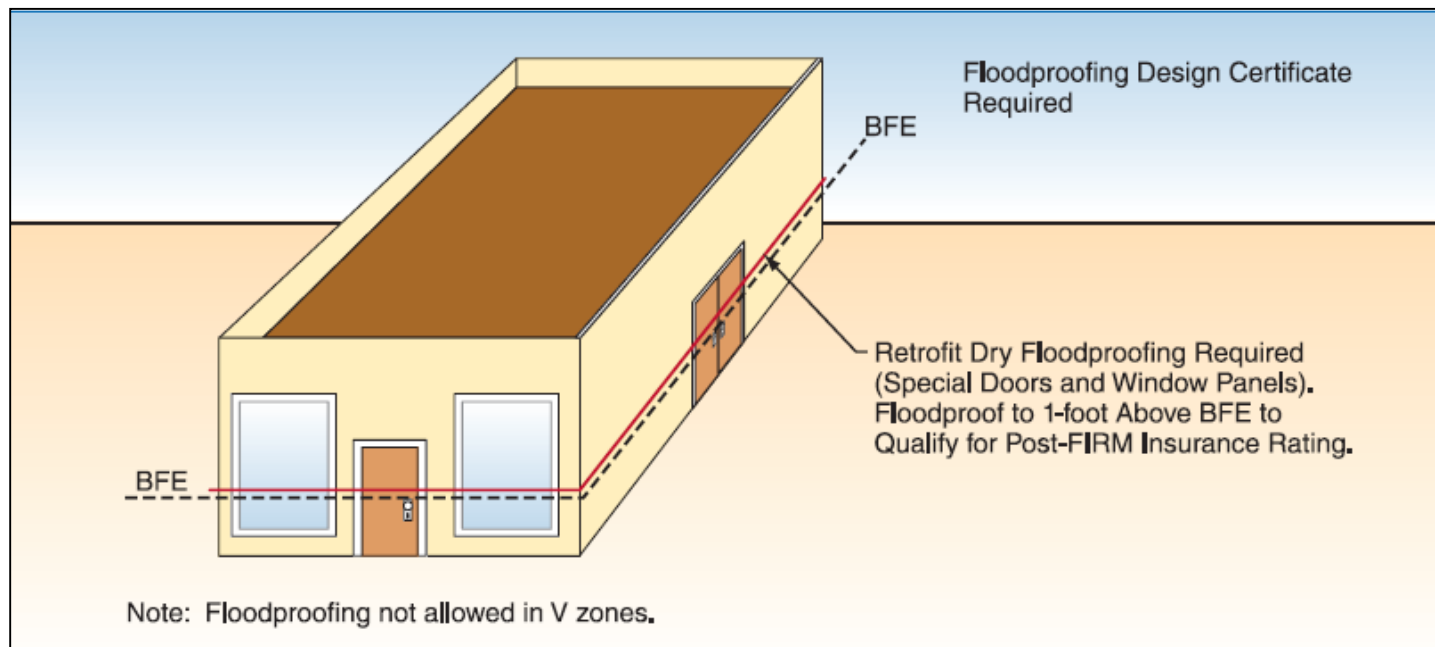
- If SI, the lowest floor must be elevated to or above the Base Flood Elevation and the foundation must be compliant with the applicable zone.



*FEMA Substantial Improvement/Substantial Damage Desk Reference*

# Substantial Improvement to a Non-Residential Structure

- Lowest floor elevated to or above the Base Flood Elevation (A and V Zones) or dry floodproofed (A Zones)

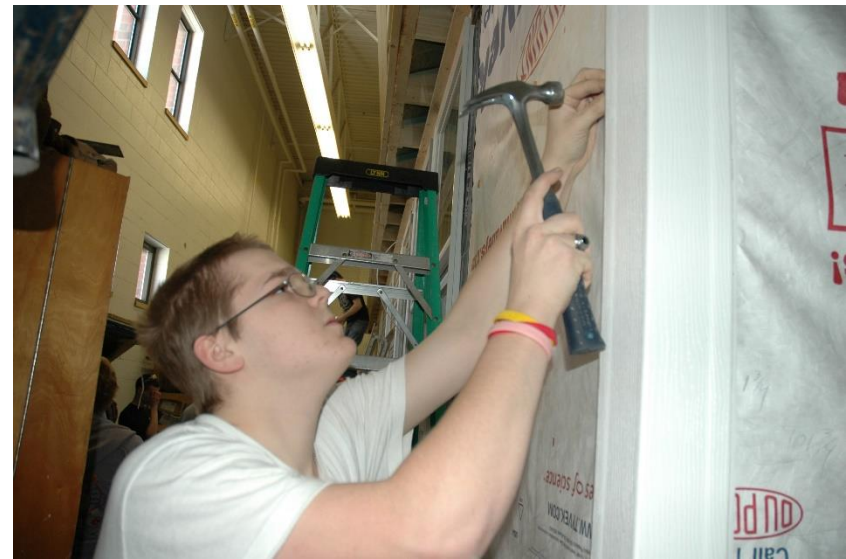


# Going Beyond Minimum NFIP Requirements



# Incorporating Higher Standards

- SI/SD: the only provisions in your floodplain ordinance that will reduce risk to existing structures.
- Consider adopting higher standards into the ordinance that will increase the effectiveness of these provisions.



# Cumulative Substantial Improvements

- Adopt an ordinance with updated language in the SI definition to capture phased improvements over a set timeframe (e.g., 3, 5, 10 years, etc.)
- Prevents property owners from splitting up improvement projects over time to circumvent SI requirements.
- Communities should have detailed written procedures on how improvements will be tracked cumulatively. See Section 5.7.3 of SI/SD Desk Reference.
- Credit for communities that participate in the Community Rating System (CRS) (Maximum credit: 90 points)

# Cumulative Substantial Improvements

**Substantial Improvement** means any reconstruction, rehabilitation, addition, or other improvement of a structure taking place during a {number of years}-year period, the cumulative cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the first improvement. The period of accumulation begins when the first improvement of the structure is permitted subsequent to {insert the actual date identified by month, day, year, on which the revised ordinance will be effective}.



# Lower Threshold for Substantial Improvements

- Adopt an ordinance with updated language in the SI definition to lower the % threshold that triggers the SI requirement (e.g., 40% or 30% instead of 50%).
- See Section 5.7.2 of SI/SD Desk Reference.
- Credit for communities that participate in the Community Rating System (CRS) (Maximum credit: 20 points)

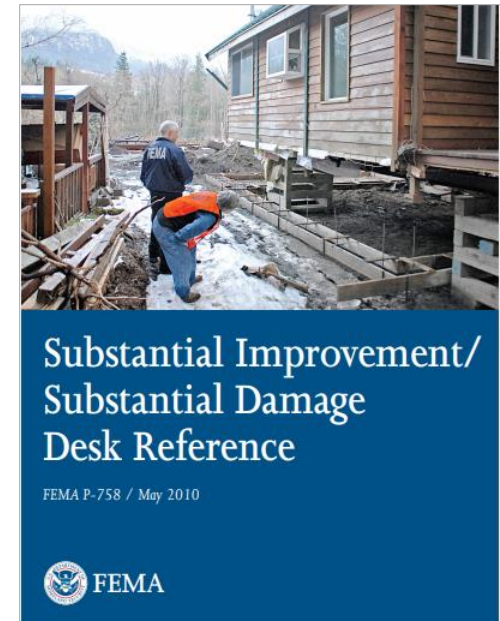
**Substantial Improvement:** means any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of **which equals or exceeds {Number less than 50} percent of the market value** of the structure before the “start of construction” of the improvement.

# Resources/Wrap Up



# Resources

- [FEMA Substantial Improvement / Substantial Damage Desk Reference](#)
- [Answers to Questions About Substantially Improved/ Substantially Damaged Buildings](#)
- NH Floodplain Management Program website – Substantial Improvement page
  - Substantial Improvement/Substantial Damage Application Packet
- Other Useful FEMA Publications
  - [Protecting Building Utilities from Flood Damage](#)
  - [Flood Damage-Resistant Materials Requirements](#)
  - [Floodplain Management Bulletin on Historic Structures](#)



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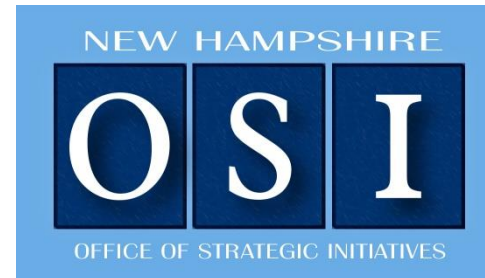
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