



Substantial Improvement Workbook

Nahant, MA

Notice to Property Owners & Contractors

Owner/Contractor to fill out below:

Project Address: _____

Flood Zone: _____

Zoning District: _____ Map & Lot: _____

FROM: Nahant Building/Inspectional Services Department

SUBJECT: Work on Existing Buildings in Special Flood Hazard Areas, i.e. Substantial Improvement, Damage & Foundation Repair Worksheets

The Town of Nahant's flood plain management regulations & the State of Massachusetts Building Code specify that **all new buildings** to be constructed in Special Flood Hazard Areas (SFHAs) **are required** to have their lowest floor elevated to or above the base flood elevation (BFE).

The regulations also specify that if the following work is performed on existing buildings:

- **Substantial Improvement** of existing buildings (remodeling, rehabilitation, improvement or additions as per the 2015 IRC, R105.3.1.1), or
- **Substantial Repair of a Foundation** (exceeding 50% replacement, as per the 2015 IRC R105.3.1.1.1), or
- **Substantially Damaged Existing Building** (exceeding 50% repair as per the 2015 IRC, R105.3.1.1)

Then the building must be brought into compliance with the requirements for new construction; i.e. flood regulation compliance.

*Please note that a building may be substantially damaged by any cause, including fire, flood, high wind, seismic activity, land movement, or neglect. It is important to note that **ALL** costs to repair a substantially damaged building to its pre-damage condition must be identified.*

There are several aspects that must be addressed to achieve compliance with the floodplain management requirements: the requirements depend on several factors, including the flood zone at your property. The most significant compliance requirement is that the lowest floor, as defined in the regulations/code, must be elevated to or above the BFE in accordance with the State Building Code.

Please plan to meet with this department to review your proposed project, to go over the requirements, and to discuss how to bring your building into compliance.

DEFINING SUBSTANTIAL CHANGE

The Massachusetts State Building Code (2015 IRC, Section 105.3) defines these terms as follows:

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to it’s before damaged condition would equal or exceed 50% of the market value of the structure before the damaged occurred.

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 that have incurred “substantial damage”, regardless of the actual repair work performed. The term does not, however, include either:

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

Substantial repair of a foundation means repair or replacement of a foundation that equals or exceeds 50% of the perimeter along the base of the foundation or replacement of more than 50% of the existing piers of the foundation.

DEFINING SUBSTANTIAL CHANGE

To make the substantial improvement determination or the substantial damage determination, we compare the cost of the proposed improvement or repairs to the market value of the building (excluding land, accessory structures and landscaping). If the resulting ratio equals or exceeds 50%, the existing building must be brought into compliance with the flood plain management requirements for new buildings.

Cost of Improvement or Cost to Repair to Pre-Damage Condition

≥ 50%

Market Value of Building

PLEASE NOTE

- You must provide a **detailed estimate** of the cost to perform the proposed improvements or repairs. If your building has been damaged, the cost estimate must include all work required to repair the building to its pre-damage condition. The cost estimate must include all labor materials. If the work will be done by the owner or volunteers, market rates must be used to estimate the cost of materials and the value of labor. Attached to this notice is a list of costs that must be included and costs that are excluded. After we review the cost estimate, we may require that it be broken down to show all materials and labor estimates.

If you have any questions regarding this information, please contact the Building/Inspectional Services Department.

Requirements for Permit Applications for Substantial Improvements and Repair of Substantial Damage

Please contact the Nahant Building/Inspectional Services Department if you have any questions about the substantial improvement and substantial damage requirements. Your building may need to be brought into compliance with the flood plain management requirements for new construction.

Applications for permits to work on existing buildings that are located in Special Flood Hazard Areas must include the following:

- Current photographs of the exterior (Front, rear, sides)
- If you building has been damaged, include photographs of the interior and exterior; provide damage photos of the exterior, if available
- Detailed description of the proposed improvement (rehabilitation, remodeling, addition, etc.) or repairs
- Cost estimate of the proposed improvement or the cost estimate to repair the damaged building to its before-damage condition
- Elevation certificate or elevation survey
- Owner's affidavit (signed and dated)
- Contractor's affidavit (signed and dated)

Costs for Substantial Improvements & Repair of Substantial Damage

Included Costs

Items that must be included in the costs of improvement or costs to repair are those that are directly associated with the building. The following list of costs that must be included is not intended to be exhaustive, but characterizes the types of costs that must be included:

- Materials & labor, including the estimated value of donated or discounted materials & owner or volunteered labor
- Site preparation related to the improvements or repair (foundation excavation, filling in basements)
- Demolition & construction debris disposal
- Labor & other costs associated with demolishing, moving or altering building components to accommodate improvements, additions and making repairs
- Costs associated with complying with any other regulation or code requirement that is triggered by the work, including costs to comply with the requirements of the Americans with Disabilities Act (ADA)
- Costs associated with elevating a structure to an elevation that is lower than the BFE
- Construction management & supervision
- Contractor's overhead & profit
- Sales taxes on materials
- Structural elements & exterior finishes, including:
 - × Foundations (e.g., spread or continuous foundation footings, perimeter walls, chain walls, pilings, columns, posts, etc.)
 - × Monolithic or other types of concrete slabs
 - × Bearing walls, tie beams, trusses
 - × Joists, beams, subflooring, framing, ceilings
 - × Interior non-bearing walls
 - × Exterior finishes (e.g., brick, stucco, siding, painting & trim)
- Structural elements & exterior finishes (cont.):
 - × Windows & exterior doors
 - × Roofing, gutters & downspouts
 - × Hardware
 - × Attached decks & porches
- Interior finish elements including:
 - × Floor finishes (e.g., hardwood, ceramic, vinyl, linoleum, stone, and wall-to-wall carpet over subflooring)
 - × Bathroom tiling & fixtures
 - × Wall finishes (e.g., drywall, paint, stucco, plaster, paneling & marble)
 - × Built-in cabinets (e.g., kitchen, utility, entertainment, storage & bathroom)
 - × Interior doors
 - × Interior finish carpentry
 - × Built-in bookcases & furniture
 - × Hardware
 - × Insulation
- Utility & service equipment, including:
 - × HVAC equipment
 - × Plumbing fixtures & piping
 - × Electrical wiring, outlets & switches
 - × Light fixtures & ceiling fans
 - × Security systems
 - × Built-in appliances
 - × Central vacuum systems
 - × Water filtration, conditioning and recirculation systems

Excluded Costs

Items that can be excluded are those that are not directly associated with the building. The following list characterizes the types of costs that may be excluded:

- Clean-up and trash removal
- Costs to temporarily stabilize a building so that it is safe to enter to evaluate required repairs
- Costs to obtain or prepare plans and specifications
- Land survey costs
- Permit fees & inspection fees
- Carpeting & re-carpeting installed over finished flooring such as wood or tiling
- Outside improvements, including landscaping, irrigation, sidewalks, driveways, fences, yard lights, swimming pools, pool enclosures and detached accessory structures (e.g., garages, sheds, and gazebos)
- Costs required for the minimum necessary work to correct existing violations of health, safety and sanitary codes*
- Plug-in appliances such as washing machines, dryers and stoves

***Existing Violation Exclusion**

- a. This exclusion does not include old, existing work that is to be upgraded as a part of the overall proposed scope of work.**
- b. Violations to be excluded must be specifically cited, in writing by the AHJ and must pre-date application status.**
- c. Work requested to be excluded must cite, in writing, any exemption as per FEMA P-758, Section 4.4.8.**

**Owner's Affidavit: Substantial Improvement or Repair of
Substantial Damage**

Property Address:

Map/Lot:

Owner's Name:

Owner's Address/Phone/Email:

Contractor:

Contractor's License Number:

Date of Contractor's Estimate:

I HEREBY ATTEST that the description included in the permit application for the work on the existing building that is located at the property identified above, is all of the work that will be done, including all improvements, rehabilitation, remodeling, repairs, additions and any other form of improvement.

I FURTHER ATTEST that I have requested the above-identified contractor to prepare a cost estimate for all the work, including the contractor's overhead and profit.

I ACKNOWLEDGE that if, during the course of construction, I decide to add more work or to modify the work described, that the Town of Nahant will re-evaluate its comparison of the cost of work to the market value of the building to determine if the work is substantial improvement. Such re-evaluation may require revision of the permit and may subject the property to additional requirements.

I ALSO UNDERSTAND that I am subject to enforcement action and/or fines if inspection of the property reveals that I have made or authorized repairs or improvements that were not included in the description of work and the cost estimate for that work that were the basis for issuance of a permit.

Owner's Signature:

Date:

Notarized:

Contractor's Affidavit: Substantial Improvement or Repair of Substantial Damage

Property Address:

Map/Lot:

Contractor's Name:

Contractor's Address/Phone/Email:

Contractor's License Number:

Date of Contractor's Estimate:

I HEREBY ATTEST that I have personally inspected the building located at the above-referenced address and discussed the nature and extent of the work requested by the owner, including all improvements, rehabilitation, remodeling, repairs, additions and any other form of improvement.

At the request of the owner, I have prepared a cost estimate for all of the improvement work requested by the owner and the cost estimate includes, at a minimum, the cost elements identified by the Town of Nahant that are appropriate for the nature of the work. If the work is repair of damage, I have prepared a cost estimate to repair the building to its pre-damage condition.

I ACKNOWLEDGE that if, during the course of construction, the owner requests more work or modification of the work described in the application, that a revised cost estimate must be provided to the Town of Nahant, which will re-evaluate its comparison of the cost of work to the market value of the building to determine if the work is substantial improvement. Such re-evaluation may require revision of the permit and may subject the property to additional requirements.

I ALSO UNDERSTAND that I am subject to enforcement action and/or fines if inspection of the property reveals that I have made or authorized repairs or improvements that were not included in the description of work and the cost estimate for that work that were the basis for issuance of a permit.

Contractor's Signature:

Date:

Notarized:

Substantial Improvement Ration Worksheet

(for reconstruction, rehabilitation, addition, or other improvements, and repair of damage from any cause)

Applicant to fill out in box below:

Property Owner: _____
Address: _____
Permit #: _____
Location: _____
Description
of improvements: _____

Present Market Value of structure ONLY (adjusted assessed value, BEFORE improvement, or if damaged, before the damage occurred), not including land value

\$

Cost of Improvement -

Actual cost of the construction ** (see items to include/exclude)

Include volunteer labor and donated supplies.

\$

Ratio =
$$\frac{\text{Cost of Improvement (or Cost to Repair)}}{\text{Market Value}} \times 100$$

%

If ration is 50% or greater (**Substantial Improvement**), entire structure including the existing building must be elevated to the base flood elevation (BFE) and all other aspects brought into compliance.

Important Notes:

1. Review cost estimates to ensure that all appropriate costs are included or excluded.
2. If a residential pre-FIRM building is determined to be substantially improved, it must be elevated to or above the BFE. If a non-residential pre-FIRM building is substantially improved, it must be elevated or dry floodproofed to the BFE.
3. Proposals to repair damage from any cause must be analyzed using the formula shown above.
4. Any proposed improvements or repairs to a post-FIRM building must be evaluated to ensure that the improvements or repairs comply with floodplain management regulations and to ensure that the improvements or repairs do not alter any aspect of the building that would make it non-compliant.
5. Alterations to and repairs of designated historic structures may be granted a variance or be exempt
6. Any costs associated with directly correcting health, sanitary and safety code violations may be excluded from the cost of improvement. The violation must have been officially cited prior to submission of the permit application.

Determination completed by: _____

Date: _____

IMPORTANT FAQ's

- **ALL** work taking place on an existing structure in a Flood Zone is subject to review under these guidelines. This includes any work that falls within the work definition of Substantial Improvement including cabinets & countertops, trim, paint, etc. exclusive of exclusions per code R105.2.
- Completion of this workbook is required for all projects that are being Substantially Improved as defined by the Massachusetts State Building Code in all Flood Zones.
- Completion of this workbook is required for ALL projects that exceed, or are likely to exceed, **25%** of the value of the structure as determined by the Building Commissioner.
- You must attach/provide ALL information as identified on the checklist.
- You must fill out the workbook fully as identified on the checklist.
- You must submit all documents in their original, paper format.
- Please be aware – should the value of the work in place exceed the 50% value, or show that it is likely to exceed the 50% value, during construction due to unforeseen condition; the project may be subject to a STOP WORK ORDER.
- This project is also subject to regulations of and enforcement as allowed under the State of Massachusetts Building Code, MGL 143.
- The Building Department will review all documentation and has the jurisdiction to determine if your values and estimates are acceptable when measured against standards.
- Per Code: ALL work permitted within a 12 month period will be considered as a Single Project and Work Values will be summed for purposes of determining Compliance.
- FEMA P-758 'Substantial Improvement/Substantial Damage Desk Reference' will be used as a guideline. You may download your own copy from the FEMA website.
- If a project is determined to have exceeded the 50% value target, it will require compliance with all current NFIP and Building Code flood regulations for the entire structure.

Substantial Improvement Worksheet Checklist

Complete the Substantial Improvement Workbook Including the following:

- A. _____ Owner to Initial each Page, bottom right hand corner
- B. _____ Complete Substantial Improvements Affidavits – Owner & Contractor
- C. _____ Complete Substantial Improvement Ratio Worksheet
- D. _____ Attach Two (2) each Independent Appraisals and/or Assessors Record Card
- E. _____ Completed Substantial Improvement Cost Breakdown
 - 1. _____ Provide copies of Contractor's estimates/bids for PGEM, non-self performed trades, all materials
 - 2. _____ Provide copies of invoices/materials estimates for all Owner supplied materials, labor or trade work
- F. _____ Include Photographs of Existing Conditions included in Work Scope
- G. _____ Submit all documents in paper format with original signatures, notaries stamps
- H. _____ Elevation Certificate for Floor elevations (for existing structures only)
- I. _____ FEMA Firmette for Project Address (FEMA Flood Map site)

Addition Documents to be Provided as required:

- J. _____ Copy of Acceptance Letter for MT-1 for LOMA/CLOMA/LOMR/ CLOMR
- K. _____ V-Zone Engineering Certificate (for all projects in a V Flood Zone)
- L. _____ Site Plan indicating Mean Grade, Flood Zone, Design Flood elevation (DFE) and Base Flood Elevation (BFE)
- M. _____ Copy of Conservation Approval via Recorded & Stamped NOI

Applicant Signature

SUBSTANTIAL IMPROVEMENT COST BREAKDOWN

PROJECT ADDRESS: _____

WORKSCOPE: _____

OWNER: _____

CONTRACTOR: _____ DATE: _____

- A dollar value is required for both labor & material for each category listed including but not limited to the following:
 - If a category does not apply, enter N/A
- If work is proposed that is not covered in this document, provide additional info to document/verify the cost
- All Sub-Contractor estimates must have a copy of the bid/estimate attached

LEGEND

LS – LUMP SUM

SF – SQUARE FOOT

LF – LINEAL FOOT

SQ – ROOF SQUARE

Interior Demolition

Description of Work _____

Quantity _____ MH

\$ _____ Labor

(desc cont.) _____

\$ _____ Matl.

Trash Removal (Dumpsters or Truckloads) _____

Quantity _____ EA

Labor, Material, Trash Total

\$ _____

Source of Value:

☐ Sub- Contractor Estimate

☐ Detailed Estimate

☐ Sq. Ft. Method

☐ Detailed Labor & Material Takeoff

Foundation/Concrete

Description of Work _____

Quantity _____ LF

\$ _____ Labor

(desc cont.) _____

\$ _____ Matl.

Labor & Material Total

\$ _____

Source of Value:

☐ Sub- Contractor Estimate

☐ Detailed Estimate

☐ Sq. Ft. Method

☐ Detailed Labor & Material Takeoff

Foundation/Piers

Description of Work _____

Quantity _____ EA

\$ _____ Labor

(desc cont.) _____

\$ _____ Matl.

Labor & Material Total

\$ _____

Source of Value:

☐ Sub- Contractor Estimate

☐ Detailed Estimate

☐ Sq. Ft. Method

☐ Detailed Labor & Material Takeoff

Masonry

Description of Work _____

Quantity _____ SF

\$ _____ Labor

(desc cont.) _____

\$ _____ Matl.

Labor & Material Total

\$ _____

Source of Value:

☐ Sub- Contractor Estimate

☐ Detailed Estimate

☐ Sq. Ft. Method

☐ Detailed Labor & Material Takeoff

SUBSTANTIAL IMPROVEMENT COST BREAKDOWN

Framing w/Studs, Lumber

Description of Work

Quantity

LF

\$

Labor

\$

Matl.

(desc cont.)

Labor & Material Total

\$

Source of Value:

☐ Sub- Contractor Estimate

☐ Detailed Estimate

☐ Sq. Ft. Method

☐ Detailed Labor & Material Takeoff

Framing w/Engineered Lumber

Description of Work

Quantity

EA

\$

Labor

\$

Matl.

(desc cont.)

Labor & Material Total

\$

Source of Value:

☐ Sub- Contractor Estimate

☐ Detailed Estimate

☐ Sq. Ft. Method

☐ Detailed Labor & Material Takeoff

Framing w/Decks & Exterior Stairs

Description of Work

Quantity

SF

\$

Labor

\$

Matl.

(desc cont.)

Labor & Material Total

\$

Source of Value:

☐ Sub- Contractor Estimate

☐ Detailed Estimate

☐ Sq. Ft. Method

☐ Detailed Labor & Material Takeoff

Roofing

Description of Work

Quantity

SF

\$

Labor

\$

Matl.

(desc cont.)

Labor & Material Total

\$

Source of Value:

☐ Sub- Contractor Estimate

☐ Detailed Estimate

☐ Sq. Ft. Method

☐ Detailed Labor & Material Takeoff

Siding

Description of Work

Quantity

SF

\$

Labor

\$

Matl.

(desc cont.)

Labor & Material Total

\$

Source of Value:

☐ Sub- Contractor Estimate

☐ Detailed Estimate

☐ Sq. Ft. Method

☐ Detailed Labor & Material Takeoff

Insulation

Description of Work

Quantity

LF

\$

Labor

\$

Matl.

(desc cont.)

Labor & Material Total

\$

Source of Value:

☐ Sub- Contractor Estimate

☐ Detailed Estimate

☐ Sq. Ft. Method

☐ Detailed Labor & Material Takeoff

SUBSTANTIAL IMPROVEMENT COST BREAKDOWN

Drywall/Plaster \$ Labor

Description of Work Quantity LF \$ Matl.
(desc cont.)

Labor & Material Total \$

Source of Value:

Sub- Contractor Estimate Detailed Estimate Sq. Ft. Method Detailed Labor & Material Takeoff

Finished Carpentry/Doors & Windows \$ Labor

Desc. of Work/Doors Quantity LF \$ Matl.

Desc. of Work/Windows

Labor & Material Total \$

Interior Exterior Sliders Garage

Source of Value:

Sub- Contractor Estimate Detailed Estimate Sq. Ft. Method Detailed Labor & Material Takeoff

Finished Carpentry/Trim & Millwork \$ Labor

Description of Work Quantity LF \$ Matl.

(desc cont.)

Labor & Material Total \$

Source of Value:

Sub- Contractor Estimate Detailed Estimate Sq. Ft. Method Detailed Labor & Material Takeoff

Finished Carpentry/Casework, Cabinets & Countertops \$ Labor

Desc. of Work/Doors Quantity LF \$ Matl.

(desc cont.)

Labor & Material Total \$

Countertops
Laminate Solid Surface Granite Other
Cabinets
Laminate Modular Wood Custom Other

Source of Value:

Sub- Contractor Estimate Detailed Estimate Sq. Ft. Method Detailed Labor & Material Takeoff

SUBSTANTIAL IMPROVEMENT COST BREAKDOWN

Painting/Wall Finish\$ Labor

Description of Work _____ Quantity _____ LF\$ Matl.

(desc cont.)_____

Labor & Material Total \$

☐ Paint ☐ Tile ☐ Other _____

Source of Value:

☐ Sub- Contractor Estimate ☐ Detailed Estimate ☐ Sq. Ft. Method ☐ Detailed Labor & Material Takeoff

Flooring\$ Labor

Description of Work _____ Quantity _____ LF\$ Matl.

(desc cont.)_____

Labor & Material Total \$

☐ Tile _____ SF

☐ Carpet _____ SF

☐ Wood _____ SF

☐ Other _____ SF

Source of Value:

☐ Sub- Contractor Estimate ☐ Detailed Estimate ☐ Sq. Ft. Method ☐ Detailed Labor & Material Takeoff

Plumbing & Gas\$ Labor

Description of Work _____ Quantity _____ FIXT\$ Matl.

(desc cont.)_____

Labor & Material Total \$

☐ Lavs ☐ Toilets ☐ Showers ☐ Tubs

☐ Kitchen Sink ☐ Other _____

Source of Value:

☐ Sub- Contractor Estimate ☐ Detailed Estimate ☐ Sq. Ft. Method ☐ Detailed Labor & Material Takeoff

Electrical\$ Labor

Description of Work _____ Quantity _____ FIXT\$ Matl.

(desc cont.)_____

Labor & Material Total \$

☐ Service/New ☐ Service Upgrade ☐ Sub Panel ☐ Devices

☐ Smoke/CO ☐ Lights ☐ Ceiling Fans

☐ Other _____

Source of Value:

☐ Sub- Contractor Estimate ☐ Detailed Estimate ☐ Sq. Ft. Method ☐ Detailed Labor & Material Takeoff

SUBSTANTIAL IMPROVEMENT COST BREAKDOWN

Mechanical HVAC

\$ Labor

Description of Work

Quantity LF

\$ Matl.

(desc cont.)

Labor & Material Total

\$

☐ Mini Splits

☐ Furnace/Heat Only

☐ Furnace w/AC

Source of Value:
☐ Sub- Contractor Estimate ☐ Detailed Estimate ☐ Sq. Ft. Method ☐ Detailed Labor & Material Takeoff

Appliances/Built In

\$ Labor

Description of Work

Quantity LF

\$ Matl.

(desc cont.)

Labor & Material Total

\$

☐ Kitchen

EA

☐ Laundry

EA

☐ Other

EA

Source of Value:
☐ Sub- Contractor Estimate ☐ Detailed Estimate ☐ Sq. Ft. Method ☐ Detailed Labor & Material Takeoff

General Contract Overhead & Profit

LS

\$

Contingency per Contract

\$

Other Work within 12 Mos.

Permit#

Description

EA

\$

Permit#

Description

EA

\$

TOTAL PROJECTED COST

\$