

FEMA National Floodplain Insurance Program (NFIP)

Substantial Improvement/Substantial Damage Determination

Determining Structure/Market Value

For additional clarification of requirements, please refer to FEMA Publication P-758, Substantial Improvement and Substantial Damage Desk Reference.

Initial Screening Thresholds

IC = Improvement Cost
SV = Structure Value

- $(IC/SV) (100) \leq 40\%$ Not a substantial improvement
- $(IC/SV) (100) \geq 50\%$ Is a substantial improvement
- $40\% < (IC/SV) (100) < 60\%$ A detailed evaluation is required if it is questionable within this range*

* The same improvement/repair cost estimate that was used for initial evaluation is used for the detailed evaluation.

➤ Acceptable Methods for Determining Structure/Market Value

It is important to note two basic NFIP requirements:

1. Market Value must always be based on the condition of the structure before the improvement is undertaken or before the damage occurred.
2. Only the Market Value of the structure is pertinent. The value of the land and site improvements (landscaping, driveway, detached accessory structures, etc.) and the value of the use and occupancy (business income) are not included. Any value associated with the location of the property should be attributed to the land and not the building.

Acceptable methods include:

- Professional Property Appraisals - Property appraisals prepared by a licensed appraiser in accordance with the Uniform Standards of Professional Appraisal Practice utilizing the cost approach method including age/life depreciation.
- Adjusted Assessed Value - Adjusted property assessments through the Tax Assessor's Office used for tax assessment purposes. Typically, the Assessor's Office must provide an adjustment factor because the assessed values can not be used as a direct equivalent for current market value. Note – this method can yield lower than actual structure value.
- Actual Cash Value - Estimated as the cost to replace a building on the same parcel with a new building of like-kind and quality, minus depreciation due to age, use and neglect. Depreciation does not include functional obsolescence. A number of commercial sources of construction cost information are available to support estimates utilizing this method.
- Qualified Estimates - Qualified estimates from tax assessor or local building officials. This approach should be used only when the other above stated approaches can not be used.

Notes:

- Market Value of the structure is estimated utilizing one of the above methods. Land value is not included in determining structure value and must be deducted.
- Replacement Cost does not equal Market Value.
- Replacement Cost may be used to estimate Market Value only if “depreciated” (Actual Cash Value).

FEMA National Floodplain Insurance Program (NFIP)

Substantial Improvement/Substantial Damage Determination

Definitions:

- Replacement Cost – Cost to replace a structure having utility equivalent to one being appraised with modern materials and to current standards.
- Depreciation – Loss of property value from age, use, physical deterioration or neglect.
- Actual Cash Value – Current cash value of structure after depreciation. Equals Replacement Cost minus Depreciation.
- Market Value – The highest price which a structure (excluding the land and other all site improvements) will bring in a competitive and open market under conditions of a fair sale.

Determining Costs of Improvements/Costs to Repair

➤ Acceptable Methods of Estimating Improvement/Repair Cost

The term “costs of improvements” includes the complete costs associated with all of the types of work. The term “costs to repair” includes the costs of all work necessary to restore a damaged building to its pre-damaged condition. Both terms include the cost of all materials, labor and other items necessary to perform the proposed work. Costs that must be included and costs that may be excluded, are contained within this document. The acceptable sources of cost information are as follows:

- Itemized costs of materials and labor, or estimates of materials and labor that are prepared by licensed contractors or professional construction cost estimators.
- Building valuation tables published by building code organizations and cost estimating manuals and tools available from professional building cost estimating services. These sources can be used as long as the limitations are recognized, notably that there are local variations in costs and the sources do not list all types and qualities of structures. These sources should not be used for structures that are architecturally unique, exceptionally large or significantly different from the class of structures that are listed.
- Qualified estimates of costs that are prepared by the local official using professional judgment and knowledge of local and regional construction costs. This approach is most often used post-disaster when there are large numbers of damaged buildings and when permits must be quickly processed.

➤ Sources for Building Cost Estimating Publications

Improvement/repair cost is determined by reference to a building cost estimating guide recognized by the building construction industry. Acceptable sources are as follows:

- National Association of Home Builders
- Consumer Reports Books
- American Society of Appraisers
- Marshall and Swift, Inc.

FEMA National Floodplain Insurance Program (NFIP)

Substantial Improvement/Substantial Damage Determination

Improvement Costs That Must Be Included

Items that must be included in the costs of improvement and the 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 and labor, including the estimated value of donated or discounted materials and owner or volunteer labor
- Site preparation related to the improvement or repair (e.g. foundation excavation or filling in basements)
- Demolition and construction debris disposal
- Labor and other costs associated with demolishing, moving or altering building components to accommodate improvements, additions and making repairs
- Costs associated with complying with any other regulations or code requirements that are triggered by the work, including costs to comply with the requirements of the Americans with Disabilities Act (ADA)
- Costs associated with elevating a structure when the proposed elevation is lower than the Base Flood Elevation
- Construction management or supervision
- Contractor's overhead and profit
- Sales tax on materials
- **Structural elements and 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 and trusses
 - Joists, beams, subflooring, framing and ceilings
 - Interior non-bearing walls
 - Exterior finishes (e.g., brick, stucco, siding, painting and trim)
 - Windows and exterior doors
 - Roofing, gutters and downspouts
 - Floors and ceilings, including insulation
 - Hardware
 - Attached decks and porches
- **Interior finish elements, including, but not limited to:**
 - Floor finishes (e.g. hardwood, ceramic, vinyl, linoleum, stone, wall-to-wall carpeting over subflooring, marble, etc.)
 - Bathroom tiling and fixtures
 - Wall finishes (e.g. drywall, paint, stucco, plaster, paneling and marble)
 - Built-in cabinets (e.g. kitchen, utility, entertainment, storage and bathroom)
 - Interior doors

FEMA National Floodplain Insurance Program (NFIP)

Substantial Improvement/Substantial Damage Determination

- Interior finish carpentry
- Built-in bookcases and built-in furniture
- Hardware
- **Utility and service equipment, including, but not limited to:**
 - Heating, ventilation and air conditioning (HVAC) equipment
 - Plumbing fixtures and piping
 - Electrical wiring, outlets and switches
 - Light fixtures and ceiling fans
 - Built-in appliances
 - Security systems (including fire alarms and suppression)
 - Central vacuum systems
 - Water filtration, conditioning and recirculation systems
- **Donated or Discounted Materials**
 - The value placed on all donated or discounted materials should be equal to the actual or estimated cost of such materials and must be included in the total cost. Where materials or servicing equipment are donated or discounted below normal market values, the value should be adjusted to an amount that would be equivalent to that estimated through normal market transactions.
- **Self or Volunteered Labor**
 - The situation described above may also involve volunteer labor. Also, property owners may undertake fairly significant improvement and repair projects. In both cases, the normal “market” value or “going rate” for labor must be included in the estimates of the costs of improvements and the costs to repair. The value placed on labor should be estimated based on applicable minimum-hour wage scales for the skill and type of construction work that is done.
- **Demolition and Construction Debris Disposal**
 - Demolition and construction debris disposal is not the same as clean-up and trash removal. Demolition may be part of an improvement project and usually is a necessary part of repairing damage. The cost of demolition, including the costs of disposal of the resulting debris must be included in the cost of the work

FEMA National Floodplain Insurance Program (NFIP)

Substantial Improvement/Substantial Damage Determination

Improvement Costs That May Be Excluded

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 and identify required repairs
- Costs to obtain or prepare plans and specifications
- Land survey costs
- Permit fees and inspection fees
- Carpeting and 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, gazebos, etc.)
- Costs required for the minimum necessary work to correct existing violations of health, safety and sanitary codes (see additional information below)
- Plug in appliances such as washing machines, dryers and stoves
- Wells and septic systems

➤ Items Not Considered Real Property

- Throw rugs
- Furniture
- Refrigerators
- Other contents not connected/attached to, or are a part of, the structure

* See notes below for additional requirements for exclusion:

➤ Clean-up and trash removal

- Clean-up and trash removal are distinguished from demolition and construction debris and disposal. Clean-up and trash removal costs are not included in the costs because they are not related to the actual cost of improving or repairing a building. Clean-up costs include such work as draining a basement, removing dirt and mud, and cleaning, disinfecting and drying out buildings. Trash removal costs include disposing of trash piled in the interior of the building or accumulated on the lot and related costs (e.g. dumpster, hauling and tipping fees) as well as removal of abandoned contents and debris related to general clean-up of the structure before the improvements or repairs can be performed.

➤ Costs to correct existing health, safety and sanitary code violations

- This allows for the exclusion of costs to correct existing violations of State health, safety or sanitary code specifications which have been identified by community preservation and which are the minimum necessary to assure safe living conditions. This work must be:
 - Limited to that necessary to correct an existing violation. This means that only work that is directly required for correction can be excluded.

FEMA National Floodplain Insurance Program (NFIP)

Substantial Improvement/Substantial Damage Determination

- Required to correct an existing violation. This means the condition considered in violation pre-dates the application for a permit and, importantly, a local official must have prior knowledge of the violation and must have verified that it constitutes a violation prior to the application for permit.
- Required to correct an existing violation. Violations of the community's health, safety and sanitary codes represent threats to public health and safety. Such conditions are considered violations only if they have been identified as violations. The mere presence of a condition that does not conform to current codes does not qualify as a violation.

➤ **Identified by the local community preservation official**

- An official who has the authority to enforce the community's health, safety and sanitary codes must have knowledge of, and have identified the condition, and must have verified or determined that the condition constitutes a violation (this normally involves issuing a citation or other official notice). If the violation is identified by the property owner or contractor during the course of deciding what work to perform and before any improvements or repairs are made, the costs to address those code violations may be excluded only if the local official has made the determination that they can be excluded.

➤ **Minimum necessary to ensure safe living conditions**

- The cost of correcting existing violations must be only those costs for the work that are the minimum necessary to address and resolve the violation. Costs of work in excess of the minimum necessary must be included.

Note* A clear distinction must be made between violations and elements that simply do not meet present day design and building code standards.