



Federal Emergency Management Agency

Region IV
Federal Emergency Management Agency
3003 Chamblee Tucker Road
Atlanta, GA 30341

**NATIONAL FLOOD INSURANCE PROGRAM
SUBSTANTIAL DAMAGE / SUBSTANTIAL IMPROVED (SD/SI)
THE 50% RULE**

SUBSTANTIAL DAMAGE Pre-FIRM buildings must be elevated if damaged by any cause for which repair costs are 50% or more of the value of the building, over a *five year duration*. This is a “hidden cost” that actually reduces the value of the structure. Most homeowners never know about this until it happens to them. Ask Atlanta, Georgia residence after the 2009 September floods! Damage can occur from flooding, fire, earthquake, wind, or man. This applies to all buildings in a flood hazard area, regardless if the building has flood insurance.

The costs to repair must be calculated for full repair to “before-damage” condition, even if the owner elects to do less. The total costs to repair include both structural and finish materials and labor.

SUBSTANTIAL IMPROVEMENT When a Pre-FIRM building is proposed to be remodeled, renovated, rehabilitated, added to, or in any way improved, the proposed modifications must be evaluated for “substantial improvement”. If the total costs of improvement are 50% or more of the building value, over a *five year duration*, the building must be elevated, etc., just like “substantial damage”. “Total costs” means all structural costs, as well as all finish materials, built-in appliances, hardware, in addition to profit and overhead. The substantial improvement rule is a hidden potential cost that the owner/buyer needs to be aware of.

BUILDING VALUE Building value = market value of structure only. Land and exterior improvements are excluded, e.g. swimming pool, pool enclosure, landscaping, paving, etc. Market value = assessed value or properly depreciated appraised building value. The assessed value may be adjusted upward to reflect the market more accurately. Replacement cost, when authorized, can only be used if properly depreciated. Certified appraisals must be based on the comparable sales method. The land value must be deducted and it must be equal to or greater than that established by the County Assessor. The building value must be fairly depreciated to reflect the age of the building and the deterioration of building components. *Note: projected revenues cannot be used to determine the FMV.*

For more detail, See FEMA publication: *Substantial Improvement/Substantial Damage Desk Reference*, FEMA-758 / May 2010, Section 4.5 Determining Market Value.



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COSTS TO BE INCLUDED The construction costs to be calculated for both substantial damage and improvement include both structural and finish labor and materials. This includes lighting fixtures, built-in appliances, interior moldings, paneling, tiling, wall-to-wall carpet over subflooring, built-in cabinets, etc. The cost to demolish undamaged building components must be established and included. Overhead and profit are also included, but not the cost of permits. Many of these costs are not normally calculated for purposes of a building permit, nor are they regulated as part of the Building Code. But, they must be calculated for compliance with the 50% Rule. [see attached lists]

WHEN MAPS ARE REVISED Substantial Damage and Substantial Improvement can affect Post-FIRM buildings, too! If the FIRMs are revised, and the flood elevations increase, many Post-FIRM buildings may be affected. The 50% rule applies to them now as well! So, check the FIRMs, find out what flood elevation was in effect when the building was constructed, and what it is today. All additions to a Post-FIRM structure must be elevated to or above the current BFE and two feet freeboard whether they are “substantial” or not.

CUMULATIVE COSTS Substantial Damage and Substantial Improvement are subject to “cumulative” clauses in many community ordinances. FEMA generally requires that all separate permits for the same structure within a 1-2 year period are a single improvement and /or repair. This period runs from the date of final inspection or Certificate of Occupancy, not from the date the building permit was issued. *The City of Savannah’s Flood Damage Protection Ordinance requires the cumulative cost to be tracked over a 5 year period.*

SAMPLE APPLICATION FORM Please see our sample “Substantial Damage/Improvement” Application. It includes instructions on calculating all costs, as well as affidavits for the contractor and property owner.

Note: This informational packet, that includes the affidavits and Cost Estimate/Contract, can only be used if the accumulative five year construction valuation is under 50% of the structure's Fair Market Value. Otherwise, need to show how the building currently meets the Flood Damage Prevention Ordinance or provide building plans and valuation showing how to bring the structure into compliance.



SUBSTANTIAL IMPROVEMENT / DAMAGE NOTICE TO PROPERTY OWNERS

Rebuilding your Home after the storm?
Adding on, renovating, or remodeling your home?

Here is the information YOU need to know about the 50% Rule.

If your home or business is below the 100-year flood elevation, the City of Savannah has flood damage prevention regulations that may affect how you remodel, renovate, or add on to your building. If your home or business sustained structural and/or interior damage, these regulations may affect how you rebuild. These laws are required by the National Flood Insurance Program to protect your lives and investment from future flood damages. Your community must adopt and enforce these laws in order for federally-backed flood insurance to be made available to community residents and property owners.

Save yourself time, aggravation and money. Please read the following information:

SUBSTANTIAL DAMAGE means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damage condition would equal or exceed 50 percent of the market value or replacement cost of the structure before the damage occurred. (Note: The cost of the repairs must include all costs necessary to fully repair the structure to its before damage condition.)

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.

If a building is “substantially damaged” or “substantially improved”, it must be brought into compliance with the City of Savannah flood damage prevention regulations, including elevating the building to or above the 100-year flood elevation.

City of Savannah, following National Flood Insurance Program requirements, has the responsibility to determine “substantial damage” and “substantial improvement” and has implemented the following procedures to do so:

- 1 -) City of Savannah will estimate Market Value by using the tax assessment value of your structure (excluding the land). If you disagree with this estimate of Market Value, you may hire a state licensed appraiser and submit a comparable property appraisal for the depreciated value of the structure.



SUBSTANTIAL IMPROVEMENT / DAMAGE

- 2 -) You must obtain and submit to the City of Savannah a detailed and complete cost estimate for the addition, remodeling, reconstruction or for repair of all the damages sustained by your home, prepared and signed by a licensed general contractor. The contractor must sign an affidavit indicating that the cost estimate submitted includes all damages or all improvements to your home, not just structural. (see copy attached)

City of Savannah will evaluate the cost of improvements or repairs and determine if they are fair and reasonable. For damage repairs, pre-storm prices and rates will be utilized. The cost of improvements or repairs does not include items not considered a permanent part of the structure. (i.e., Plans, Surveys, Permits, Sidewalks, pools, screens, sheds, Gazebos, Fences, etc.; See attached copy)

- 3 -) If your home is determined to have “substantial damage” or is proposed to be “substantially improved”, then an Elevation Certificate must be submitted to the City of Savannah to determine the lowest floor elevation. Garages and carports are not considered to be the “lowest floor”.

- 4 -) Of the lowest floor is below the Design Flood Elevation (DFE) which is the 100-year flood elevation, plus two feet freeboard, the building must be elevated to or above that level. Likewise, all electrical and mechanical equipment (heating and cooling, etc.), bathrooms, and laundry rooms must be elevated to or above the DFE. Only parking, building access, and limited, incidental storage is allowed below the flood level. Non-residential buildings may be “flood-proofed” instead of being elevated up to 3 feet.

If the lowest floor, electrical and mechanical, equipment, laundry and bathroom are already above the DFE elevation, the building can be repaired and reconstructed without further modifications.

- 5 -) Building plans must be prepared to show how the building is to be elevated. If located in a V-Zone, Coastal High Hazard Area, or if the building is to be floodproofed, these plans must be prepared and certified by a registered professional engineer or architect. Certificates for this purpose are available from the Building Official. A non conversion agreement must be recorded with the Property Deed. If Flood Proof a structure the Floodproof Certificate and standard operation procedure must be recorded with the Property Deed.



SUBSTANTIAL IMPROVEMENT / DAMAGE

ITEMS TO BE INCLUDED

All structural elements 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

Floors and ceilings

Attached decks and porches

Interior partition walls

Exterior wall finishes (e.g. Brick, stucco, or siding) including
painting and decorative moldings

Windows and doors

Reshingling or retiling a roof

Hardware

All interior finish elements, including:

Tiling, linoleum, stone, or carpet over subflooring

Bathroom tiling and fixtures

Wall finishes, e.g. drywall, painting, stucco, plaster, panelling,
marble, or other decorative finishes

Kitchen, utility and bathroom cabinets

Built-in bookcases, cabinets, and furniture

Hardware

All utility and services 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

Water filtration, conditioning or recirculation systems

Also:

Labor and other costs associated with demolishing, removing or
altering building components

Overhead and profit



SUBSTANTIAL IMPROVEMENT / DAMAGE

ITEMS TO BE EXCLUDED

Plans and specifications
Survey costs
Permit fees

Debris removal (e.g., removal of debris from building or lot, dumpster rental, transport fees to Landfill and landfill tipping fees), and clean-up (e.g. dirt and mud removal, building dry out, etc.)

Items not considered real property such as: throw rugs (carpeting over finished floors), furniture, refrigerators, stoves not built-in, etc.

Outside improvements, including:

Landscaping
Sidewalks
Fences
Yard lights
Swimming pools
Screened pool enclosures
Sheds
Gazebos
Detached structures (including garages)
Landscape irrigation systems



**ITEMS REQUIRED TO DETERMINE
SUBSTANTIAL DAMAGE / IMPROVEMENT**

Applicant must submit the following (make sure you have extra copies for your files)

- 1-Complete the attached application
- 2-Detailed Cost of Improvement/Reconstruction Estimate and affidavit, signed by a General contractor and a copy of his license certificate
- 3-Elevation Certificate
- 4-Current photos, or photos before and after the storm (if available)
- 5-Floor Plan drawing (if available)
- 6-Owner's affidavit signed and dated
- 7-Contractor's affidavit signed and dated

**GUIDELINES TO COMPLETE THE ATTACHED
RECONSTRUCTION/IMPROVEMENT COST ESTIMATE**

**** Need to set up Crews: Forman \$35 + 1 laborer \$15 = \$50**

	Quantity	Labor	Material
Flooring (Carpet)	sf <u>(14 X 16) = 224 sf.</u>	<u>\$50/ crew* hr. 3 X hrs = \$150</u>	<u>* \$1.60/ SF carpet = \$360</u>
ELECTRICAL(service/wiring)	lf. <u>3,000</u>	<u>50/ crew hr. X 32 hrs = \$1,600</u>	<u>15 Rolls X \$110 = \$1,650</u>
ELECTRICAL FIXTURES			
Outlets	ea <u>24</u>	<u>24 X \$2.00= \$48</u>	<u>24es X \$5 = \$120</u>
Lights	ea <u>10</u>	<u>10 X \$50 X = \$500</u>	<u>10ea X \$300 = 3,000</u>
Other	ea _____	_____	_____
HVAC (unit & duct work installed)		<u>Sub Contractor installed : \$3,000</u>	<u>* see attached signed contract</u>
PAINT			
Interior	sf <u>4,440</u>	<u>\$35 / crew X 16 hrs = \$560</u>	<u>12gal X \$110 = \$1,020</u>
Exterior	sf <u>2,160</u>	<u>\$35 / crew X 24 hrs = \$840</u>	<u>7 gal X \$85 = \$595</u>
Individual Labor & Material Costs		<u>\$ 3,698</u>	<u>\$ 9,744 (with sub' costs)</u>
Combined Labor and Material Costs:	<u>\$13,443</u>		
OVERHEAD AND PROFIT	<u>\$ 500.00</u>		
TOTAL	<u>\$13,943</u>		

NOTE: Need to provide labor and material costs even if you are doing the work yourself and the materials were donated or you already own the construction material. Need to apply reasonable labor rates and work hours.



ESTIMATED COST OF RECONSTRUCTION/IMPROVEMENT

PIN# _____ - _____ - _____ - _____ ADDRESS _____ Permit No. _____

Total Square footage of the Home _____ SF

ITEMS	QUANTITIES	COST LABOR	COST MATERIALS
EXAMPLE: Flooring (Carpet)	sf (14 X 16) = 224 sf.	\$50/crew X 3 hrs. = \$150	\$1.60/ SF carpet = \$36
DEMOLITION AND REMOVAL	LS _____	_____	_____
FOUNDATION, REPAIRS & ADDITIONS	dimensions		
slab	_____	_____	_____
conventional	_____	_____	_____
piers	_____	_____	_____
CARPENTRY MATERIAL (ROUGH)			
floor	sf _____	_____	_____
ceiling Joists	sf _____	_____	_____
wall studs	sf _____	_____	_____
CARPENTRY, LABOR (rough)	sf _____	_____	_____
ROOFING	sf _____	_____	_____
INSULATION	sf _____	_____	_____
EXTERIOR FINISH			
lap siding	sf _____	_____	_____
vinyl	sf _____	_____	_____
siding	sf _____	_____	_____
stucco	sf _____	_____	_____
brick	sf _____	_____	_____
other	sf _____	_____	_____
DOORS	ea _____	_____	_____
WINDOWS	ea _____	_____	_____
SHUTTERS	ea _____	_____	_____
LUMBER FINISH			
base mold	If _____	_____	_____
shoe mold	If _____	_____	_____
chair rail	If _____	_____	_____
other	If _____	_____	_____
CARPENTER, LABOR, FINISH			
Wainscot	sf _____	_____	_____
HARDWARE (finish)	ea _____	_____	_____
HARDWARE (rough)	ea _____	_____	_____
CABINETS (built-in)			
base	If _____	_____	_____
wall	If _____	_____	_____

Print Name: _____

Signature: _____

*Must sign both sheets for the submittal to be valid.



ADDRESS _____ **Permit No.** _____

ITEMS	QUANTITIES	COST LABOR	COST MATERIALS
EXAMPLE: Flooring (Carpet)	sf (14 X 16) = 224 sf.	\$50/crew X 3 hrs. = \$150	\$1.60/ SF carpet = \$36
FLOOR COVERING			
tile	sy _____	_____	_____
vinyl	sy _____	_____	_____
carpet	sy _____	_____	_____
wood	sy _____	_____	_____
other	sy _____	_____	_____
WALL PREPARATION			
Sheetrock w/M, T&F	sf _____	_____	_____
Paneling	sf _____	_____	_____
Other	sf _____	_____	_____
PLUMBING (rough)			
PLUMBING FIXTURES			
shower	ea _____	_____	_____
tub	ea _____	_____	_____
toilet	ea _____	_____	_____
ELECTRICAL (service/wiring)			
ELECTRICAL FIXTURES			
outlets	ea _____	_____	_____
lights	ea _____	_____	_____
other	ea _____	_____	_____
HVAC (unit & duct work installed)			
PAINT			
interior	sf _____	_____	_____
exterior	sf _____	_____	_____
Other: Describe			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Individual Labor and Material Cost \$ _____ \$ _____ *

Combined Labor and Materials Cost \$ _____

Profit and Overhead Costs: + \$ _____

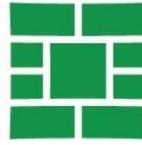
TOTAL COST \$ _____

CONTRACTOR _____ **LICENSE #** _____

ADDRESS _____ **PHONE #** _____

SIGNATURE _____ **DATE** _____

* Must provide a detailed cost breakdown of ALL material (such as a printout of an shopping cart from a supply store)



**CONTRACTOR
RECONSTRUCTION / IMPROVEMENT AFFIDAVIT**

Address of Construction: _____

Tax ID PIN #: 2 - _____ - _____ - _____ Permit No. _____

Contractor Name: _____ GA. License # _____

Address: _____ Phone: (_____) _____

I hereby attest to the fact that I, or a member of my staff, personally inspected the above mentioned property and produced the attached itemized list of repairs, reconstruction and / or remodeling list which are hereby submitted for a **Substantial Damage/ Improvement** review. These damages / improvements are **ALL OF THE DAMAGES / IMPROVEMENTS** sustained by this structure, and that all additions, improvements, or repairs proposed on the subject building are included in this estimate.

I understand that I am subject to enforcement and penalties for violation action and /or fines if the inspection of the property reveals that I have made repairs or improvements NOT INCLUDED ON THE ATTACHED LIST OF REPAIRS / IMPROVEMENT to THIS STRUCTURE or any non-conforming or illegal structures/additions, or repairs is included to the existing structure without having presented plans for such additions. I understand that any permit issued by the City of Savannah pursuant to this affidavit does not authorize the reconstruction, repair or maintenance of any illegal additions; fences, sheds or non-conforming uses or structures on the subject property.

See, (please check one): Attached Itemized List **or** Attached detailed signed contract

Total Labor & Materials: \$ _____
Overhead & Profit: \$ _____
Total Cost: \$ _____

A. Costs of Owner's responsibility to provide any materials or labor not included in valuation of referenced Contract. Amount: \$ _____. (Owner to provide Estimated Cost summary sheet)

In the State of Georgia and County of Chatham

Before me this day personally appeared (*print name*) _____ who, being duly sworn deposes and says that he/she has read, understands, and agrees to comply with all of the aforementioned conditions.

Contractor's Signature

Date

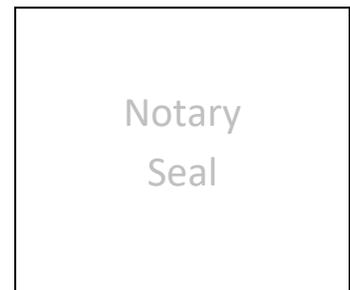
Sworn to an subscribed before me
this _____ day of _____ A.D., 20_____.

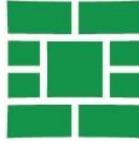
Name (*print name*) _____

Signature: _____

Notary Public State of _____

My commission expires: _____





**OWNER
RECONSTRUCTION / IMPROVEMENT AFFIDAVIT**

- A. Address of Construction: _____
Tax ID PIN #: _____ Permit No. _____
- B. Owner Name(s): _____
Owner Address: _____
City: _____ State _____ Phone: (____) _____
- C. Contractor Name: _____ GA. License #: _____

I hereby attest to the fact that the repairs / reconstruction and /or remodeling list submitted for the **Substantial Damage/Improvement Review** by my contractor are **ALL OF THE DAMAGES/IMPROVEMENTS** sustained by this structure and will be done to the existing building and that all additions, improvements, or repairs on the subject building are included in this estimated construction herewith. Other than any previous approved permitting through the City of Savannah, **I or no other contractor has made any repairs or reconstruction or additions or remodeling not included in the attached list.** As owner, I have provided a separate summary of costs of any materials or labor not included in referenced contractor's contract.

I understand that I am subject to enforcement action and/or fines if inspection of the property reveals that I have made repairs or improvements NOT INCLUDED ON THE ATTACHED LIST OF REPAIRS to MY STRUCTURE or that I have included non-conforming or illegal structures/additions, to the existing structure without having presented plans for such additions. I understand that any permit issued by City of Savannah pursuant to this affidavit does not authorize the reconstruction, repair or maintenance of any illegal additions, fences, sheds or non-conforming uses or structures on the subject property.

- A. Construction cost of all construction as outlined above to include all materials, labor, profit & overhead. Amount: \$_____. (Provide Signed contract)
- B. Owner's cost of materials and labor not included in valuation of referenced contractor's contract. Amount: \$_____. (Provide signed Estimated Cost summary sheet)

In the State of Georgia and County of Chatham:

Before me this day personally appeared (*print name(s)*): _____
_____ who, being duly sworn deposes and says that
he/she has read, understands, and agrees to comply with all of the aforementioned conditions.

Owner's Signature

Co Owner's Signature

Sworn to and subscribed before me
this _____ day of _____ A.D., 20_____.

Name (*print name*) _____

Signature: _____

Notary Public State of _____

My commission expires: _____

Notary
Seal
Seal