

Are there different kinds of mitigation required by the City?

Yes.

Storm Water Detention Mitigation is required to offset the amount of additional storm runoff from a site due to the increase in the amount of impervious cover (concrete, for example) on the ground. Chapter 9 of the Infrastructure Design Manual addresses this.

Fill Mitigation is required under Chapter 19 (Floodplain Ordinance) to offset the amount of fill material brought on to a site in the floodplain. The fill material that is placed between the elevation of natural ground and the Designated Flood Elevation (DFE) is what is regulated.

Floodway Conveyance Offset Volume is required under Chapter 19 (Floodplain Ordinance) to offset the potential loss of conveyance in the floodway due to new construction on vacant land.

Why is Fill Mitigation important?

The Special Flood Hazard Area (SFHA) serves dual purposes which include the storage of floodwaters and movement of flows downstream. Unregulated fill within the floodplain reduces the amount of flood storage and has the potential to increase flows and BFE's/DFE's along the stream. The fill mitigation serves to maintain no net overall loss of floodplain storage.

Do I have to dig a hole on my property to provide fill mitigation?

No. Construction of a basin area or "hole" is the traditional option. Creating landscape low areas or ponds are also options that must be demonstrated with topographic surveys and engineered designs. However, standing water area in a permanent pond cannot be counted for mitigation but area between the water surface and natural ground can be.

Are there any other considerations on my site?

The purpose of the fill mitigation area is to provide storage for floodwaters. This requires the mitigation area be connected to the drainage system so floodwaters can enter and leave the area. Annual certifications and/or inspections of mitigation areas are required.

Can I provide more mitigation capacity than I need for my site and sell the rest?

Yes. Excess mitigation capacity can be reserved by the applicant for their future use on their own site or could be sold/transferred for mitigation on another property. Approval of a transfer of this excess capacity is required from the City Engineer's Office; the sites must be within the same sub-watershed and within a ¼ mile of each other.

For fees and more information, contact the City of Houston Floodplain Management Office (FMO) at (832) 394-8854, visit FMO at 1002 Washington Avenue or at www.floodplain.houstontx.gov

What is a Substantial Improvement?

Chapter 19 states “substantial improvement” shall mean 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 the construction of the improvement in the delineated 100 year floodplain and floodway.

Why is it important to know if the improvement is “substantial”?

Per Chapter 19, substantial improvements will require the ENTIRE structure to be brought into compliance with Chapter 19 regulations, not just the proposed improvement.

Can I still get a development permit for a Substantial Improvement?

Yes, as stated above, the ENTIRE structure will have to be brought into compliance with Chapter 19 regulations.

Does it matter if the property is in the floodway or 100 year floodplain?

No. Substantial improvement determines whether the ENTIRE structure must be brought into compliance with the Chapter 19 requirements for floodplain or floodway.

Can cumulative improvements to my structure qualify as a substantial improvement?

No. With the revisions to Chapter 19, cumulative improvements to structures do not trigger substantial improvements.

Who determines the market value of my structure?

The market value of the structure may be documented by the respective County Appraisal Districts, the FEMA Residential Substantial Damage Estimator (RSDE), a TALCB certified real estate appraiser or other methods approved by the City Engineer.

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Residential Additions

IN THE FLOODPLAIN

Documents Needed to Obtain a Floodplain Development Permit for a Residential Addition:

■ Project Cost Estimate

An itemized cost estimate including labor and materials that is signed and notarized by the owner and contractor or signed and sealed by an architect or engineer is required. (See [FMO Project Cost Estimate Form](#) or use your own form with the same information.)

■ Value of Existing Building

Provide a Harris County Appraisal District Summary (hcad.org) or a private appraisal of the market value of the existing structure (building only not land) from a certified real estate appraiser licensed by the Texas Appraiser Licensing and Certification Board.

■ Mitigation Plan

A Mitigation Plan is required demonstrating zero net fill in the floodplain below Designated Flood Elevation (DFE). The mitigation plan will be based on the topographic survey.

■ Elevation Certificate

An elevation certificate provided by a Texas registered land surveyor showing the addition will be 24 inches above the DFE is required. If the project is a substantial improvement (project cost estimate greater than or equal to 50% of value of existing building), the entire structure must be 24 inches above the DFE.

■ Elevation Plan Sheet

Provide an elevation plan sheet demonstrating compliance. Side views of buildings must be labeled with DFE, Lowest Floor Elevation, Next Lowest Floor Elevation and adjacent finished grade. If applicable, show flood openings and provide flood opening calculations.

■ Conveyance Analysis

If the property lies in the Conveyance Zone, a Conveyance Analysis is required.

Additional required building permits are dependent on the project.

Learn more at:

houstonpermittingcenter.org

Find more resources on floodplain requirements at floodplain.houstontx.gov.

Residential Interior Remodel

IN THE FLOODPLAIN

In order to obtain a floodplain permit for a residential interior remodel project in the floodplain, first determine if the improvement is **substantial** or **non-substantial** if located in the floodplain or floodway.

Less than 50%
Non-substantial

Value of
Proposed Work

Market Value
of Existing Structure

Greater than or equal to
50% Substantial

Documents Needed to Obtain a Non-substantial Floodplain Permit:

- One of the following types of an **itemized cost estimate**:
 - A signed, sealed and dated itemized cost estimate provided by a professional engineer or architect, each licensed by the state of Texas.
- OR -
 - A notarized contract of work signed and dated by the property owner and a contractor.
- OR -
 - An owner-certified cost estimate may be submitted when the property owner proposes to construct the repairs. The cost estimate must itemize the cost of materials and a reasonable estimate of the *market value* of labor for work done by the owner. FMO has a form which may be used for owner self-certification.
- One of the following types of documentation of the **Market Value of the Existing Structure**:
 - Harris County Appraisal District Summary (hcad.org)
- OR -
 - An appraisal performed by a certified real estate appraiser licensed by the Texas Appraiser Licensing and Certification Board.

Documents Needed to Obtain a Substantial Floodplain Permit:

- All of the above documents are required for a Substantial Floodplain Permit;
- AND -
- An elevation certificate provided by a Texas registered land surveyor showing the existing structure is compliant to complete the Substantial Improvement project.
- OR -
- An elevation certificate provided by a Texas registered land surveyor based on construction documents showing that the structure will be elevated and the plans showing how the elevation will be done.

Additional required building permits are dependent on the project. Learn more at houstonpermittingcenter.org.

Find more resources on floodplain requirements at floodplain.houstontx.gov.