

# Elevated Residential Buildings

Federal Perspective of Applicable Regulations

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# Elevated Residential Buildings

## Federal Perspective of Applicable Regulations

- 44 CFR 60.3
  - (a)(3) Reasonably Safe From Flooding
  - (b)(4) Using Best Available Data
  - (c)(2)  $LF \geq BFE$
  - (c)(5) Enclosures
  - (c)(6), (c)(12) Mobile Homes
  - (c)(7), (c)(8) AO Zones

# Elevated Residential Buildings

## Federal Perspective of Applicable Regulations

### Building

- A structure with 2 or more outside rigid walls and a fully secured roof, that is affixed to a permanent site; *or*
- A manufactured home
  - (a “manufactured home,” also known as a mobile home, is a structure built on a permanent chassis, transported to its site in 1 or more sections, and affixed to a permanent foundation); *or*
- A travel trailer without wheels, built on a chassis and affixed to a permanent foundation, that is regulated under the community’s floodplain management and building ordinances or laws.
- “Building” does not mean a gas or liquid storage tank or a recreational vehicle, a park trailer, or other similar vehicle, except as described above.

# Elevated Residential Buildings

Federal Perspective of Applicable Regulations

## Methods to elevate building:

Fill

Posts

Piers

Pilings

Columns

Shallow footings (strip footings)

aka stemwall foundations

# Elevated Residential Buildings

## Federal Perspective of Applicable Regulations

- **Elevated Building**
  - A building that has no basement and that has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.
- **Enclosure**
  - That portion of an elevated building below the lowest elevated floor that is either partially or fully shut in by rigid walls.

*Source: Flood Insurance Manual*

# Elevated Residential Buildings

## Federal Perspective of Applicable Regulations

- **Enclosure**
  - That portion of an elevated building below the lowest elevated floor that is either partially or fully shut in by rigid walls.
- **Proper Openings – Enclosures (Applicable to Zones A, A1–A30, AE, AO, AH, AR, and AR Dual).**
  - All enclosures below the lowest elevated floor must be designed to:
    1. Automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters,
    2. A minimum of 2 openings, with positioning on at least 2 walls,
    3. Have a total net area of not less than 1 square inch for every square foot of enclosed area subject to flooding must be provided.
    4. The bottom of all openings must be no higher than 1 foot above the higher of the exterior or interior grade (adjacent) or floor immediately below the openings.

# Elevated Residential Buildings

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- Enclosures
  - Types/Examples
    - Area below living space (think of coastal homes on piers)
    - Crawlspace (PO + 5' rule)
    - Subgrade Crawlspaces\*
    - Attached garage (lateral) to Single Family Home
    - Garage below building
    - Buildings with a walkout level\*
  - With or Without Proper Openings
    - Impacts insurance rating

# Elevated Residential Buildings

## Federal Perspective of Applicable Regulations

- Subgrade Crawlspace
  - Must meet Proper Openings and 2/5 rule, else area is considered a BASEMENT and rated as such (and is no longer rated as an elevated building).
- Buildings with a “walkout” level
  - Elevated or not elevated?
    - Why or why not
- Mobile homes
  - Elevated or not elevated?
    - Why or why not?

# Elevated Residential Buildings

## Federal Perspective of Applicable Regulations

- **Basement**
  - Any area of the building, including any sunken room or sunken portion of a room, having its floor below ground level (subgrade) on all sides.
  - A building with a basement IS NOT an elevated building.