#### Which of these is a Safe Room?

- A place where people go after their home has been destroyed?
- A place where people evacuate in order to be protected from storm surge & high winds?
- A hardened structure that provides life-safety protection from an extreme wind event?
- A place of last resort providing only limited protection from the effects of an extreme wind event?
- A building staffed by the American Red Cross or FEMA that 'must provide protection from a wind event'

#### What is a Safe Room?

A Safe Room is a Shelter that meets FEMA criteria and provides

**Near Absolute Protection** 

from wind events!

#### NEAR ABSOLUTE PROTECTION

...near absolute protection means that, based on our current knowledge of tornadoes & hurricanes, the occupants of a safe room built according to this guidance will have a very high probability of being protected from injury or death....from FEMA 361, Chapter 1

#### FEMA 361 Guidance

Design and Construction Guidance for Community Safe Rooms (2008) –

Apply to Community and Residential

 Detailed design & construction criteria for hurricane, tornado and combined safe rooms

#### FEMA 361 Guidance -

#### Contains guidance on:

- Risk assessment
- Structural design & performance criteria
- Wall systems
- Window & door systems
- Existing facility evaluations
- Emergency management aspects
- Floodplain regulations/requirements

#### FEMA 320 Guidance

#### Taking Shelter From the Storm (2008)

- Prescriptive solutions for safe rooms that hold 16 or fewer individuals
- Solutions are based on design criteria in FEMA 361
- Contain drawings for safe rooms of different material types up to 14 x14 sq ft
- Discusses how to select good safe room designers & contractors
- How to determine products from manufacturers & installers meet FEMA criteria

## Looks GREAT....?



# **Baldwin County Safe Room**



#### ICC 500 & ASCE 7-98 & 05

Alternate design criteria & basis for the 361 standards.

#### FEMA 361 & 320 are more conservative

- Emergency Management considerations
- Maintain near absolute protection
- Siting restrictions for hurricanes
- Hurricane debris impact criteria
- HMA Unified Guidance Part IX
- MRR-2-09-1



### Why Build a Safe Room in your Home?





# They Work.....

