

Pass Christian, Mississippi

Relating Observed Flood Damage to the Flood Insurance Rate Map

The purpose of this map illustration is to show the relationship between a building in Pass Christian, Mississippi that survived Hurricane Katrina and mapped flood hazard boundaries, observed impacts of the storm (including the destruction of neighboring buildings) and relevant elevation data. The graphic utilizes post-event aerial and ground photography, GIS-based flood hazard data, and the Flood Insurance Rate Maps (FIRMs) in effect at the time of the storm.

The story told in this graphic is that the surviving building is situated, according to the effective FIRM at the time of Hurricane Katrina, in Zone A¹ with a Base Flood Elevation (BFE) of 13 feet. The parking slab of the building is at 14.7 feet, with the bottom of the floor beams at 22 feet. The homeowner, a structural engineer who also designed and built the house, based the elevation of the house on the storm surge caused by Hurricane Camille in 1969. A FEMA Mitigation Assessment Team (MAT) observed the remains of other buildings that had been located along the same street within approximately 1,000 feet of Highway 90. All of the houses surrounding this surviving building had been destroyed by surge, waves and debris. The estimated surge/wave damage elevation inside the surviving house was +/- 29 feet (4 feet above the elevated first floor slab). Although the flood line was around 7 feet above the bottom of the floor beams, there was no structural damage because of the robustness of the structural system, which consists of a reinforced concrete frame with insulated concrete form walls.

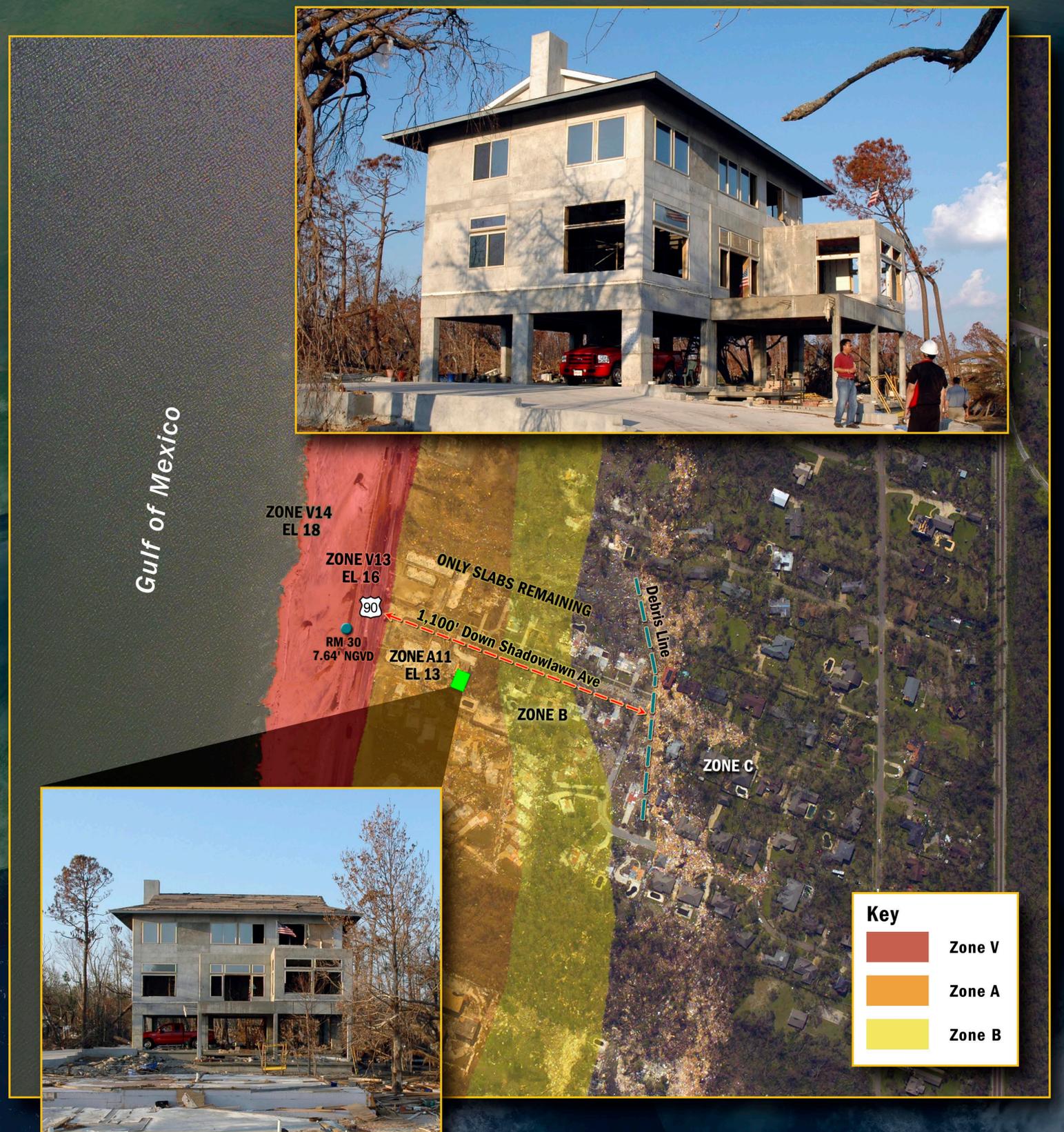
For more information about Flood Insurance Rate Maps:

www.fema.gov/hazard/map/firm.shtm

For more information about FEMA's Mitigation Assessment Team (MAT) Program:

www.fema.gov/rebuild/mat/

¹ A Zones are defined as portion of the SFHA not mapped as a V Zone. Although FIRMs depict A Zones in both riverine and coastal floodplains (as Zones A, AE, A1-30, and AO), the flood hazards and flood forces acting on buildings in those different floodplains can be quite different. In coastal areas, A Zones are subject to wave heights less than 3 feet and wave run-up depths less than 3 feet.



Overview of Graphic Development

This graphic was created using NOAA aerial imagery overlaid with flood zone delineations based on FEMA Digital Q3 Flood Data. Adobe PhotoShop® was used to highlight the surviving building and label other key pieces of information, including the location of the debris line, the location of homes where only the slabs remained, names of the relevant flood zones, and elevation data from the effective FIRMs. The addition of a ground photograph showing the depth of flooding further enhances the effectiveness of the illustration.