Concepts for Public Restrooms
June 2014
ASFPM 2014 Conference
What? Public Restrooms Are:

- Residential?
- Non-Residential?
"Come on in, the water's fine!" Lower Matecumbe Key, Florida. Farm Security Administration photo. Jan. 1938 — Arthur Rothstein
Survey Response Percentage of V-zone Public Restrooms Below BFE

- Below BFE: 58%
- Above BFE: 42%
Florida Floodplain Managers Association
Coastal Committee

DRAFT
Policy and Design Options for Public Restrooms in Special Flood Hazard Areas
March 26, 2014

Download the White Paper
www.FLfloods.org/ffmawhitepaper

The above Florida public restroom in a VE18 zone was granted a variance (the minimum necessary to afford relief) from elevation requirements after maps changed from AE 10 during the design phase. Meeting V zone requirements on-site would have rendered the construction of this facility infeasible according to the design engineering firm. The design was developed to accommodate disabled citizens and to partially address a “hardship” in the limited land area because of sensitive, ecologically-significant mangrove habitat. Composting toilets are used with no running water or on-grid electricity. An emergency action plan was required as a condition for the variance which includes removal of effluent from tanks and filling them with clean water, removal of battery-powered electrical equipment and material that could block flood openings one to two days before expected landfall of a hurricane. All building materials below BFE are flood damage resistant.
PROPOSED DEFINITION

"Public Restroom" in a special flood hazard area is a structure designed and constructed to meet the sanitary needs of the public when visiting coastal and non-coastal properties. Such structures may include toilet rooms, changing rooms, shower stalls, required plumbing including backflow preventers, a minimum service drop for electrical equipment for lighting and receptacles, grinder pumps, lift stations, and/or septic tanks and drainfields. Public restrooms shall provide the above elements only, and may also be called “comfort stations”, “bath houses” or “bathrooms”. Public restrooms shall be designed and constructed to withstand hydrodynamic, hydrostatic and wave load impacts, and extended periods of flood inundation. Such structures shall meet or exceed the NFIP, IBC, FBC and the ASCE-24 standards for construction in A zones and V zones when constructed either above or below BFE.
Flood Resistant Design and Construction

This document uses both the International System of Units (SI) and customary units.
Coastal Construction Manual
FEMA P-55 / Volume I / August 2011
Elevation Not Required

ASCE 24-05, Section 9.3.2:
In Coastal High Hazard Areas, Coastal A Zones, and other High Risk Flood Hazard Areas, garages and carports that are not structurally connected to a structure are permitted below the elevations specified in Table 4-1 if designed in accordance with the requirements of Section 4. If enclosed, garage or carport walls shall conform to the breakaway wall requirements in Section 4.6.
FRONT ELEVATION RAISED WITH ADA RAMP

SCALE: NTS
WALL FOOTING SECTION@ GRADE - DRY FLOOD PROOFED

SCALE: NTS
Email us at comment@flfloods.org
Download the White Paper and view the FAQ at www.FLfloods.org/ffmawhitepaper
The end!