Lee County
Southwest Florida

Procedures for Post-Disaster Rebuilding/Repair of Historic Resources

Lee County Historic Preservation Board

November 17, 2022

Background

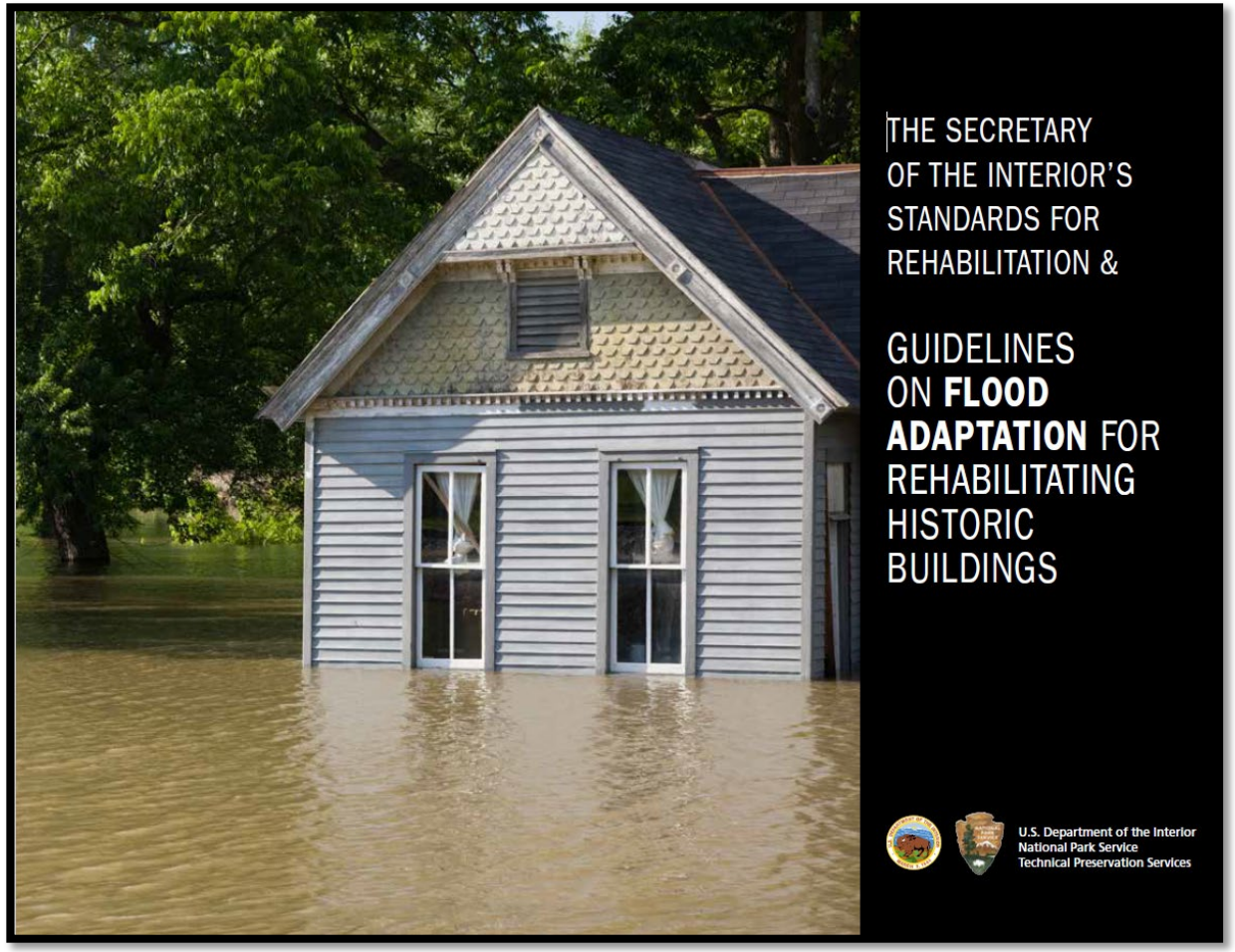
- Staff completed site visit with NPS/FEMA staff on October 27, 2022
- Focused on Matlacha Historic District and post-disaster recovery

NPS Recommendations

- Focus on adaptive approaches during rehabilitation
- Reconstruction/new construction should rely on established design guidelines
  - Maintains sense of place
- Consider high water mark measurements for elevation standards

Guidelines on Flood Adaptation for Rehabilitating Historic Buildings

- Prepared by NPS in 2019
- Provides for adaptation strategies of varying scope and complexity
  - Temporary protective measures
  - Dry floodproofing
  - Wet floodproofing
  - Elevate buildings on a new foundation
- Includes case studies for various strategies



Temporary Protective Measures

Photo: Liz Petrella/NPS

- Deployed/activated when flooding is predicted
  - Requires time and people
- Low impact on historic character
- Affordable
- Not failproof
  - Designed for relatively shallow floods of limited duration
  - Requires storage space
  - Must not rely on continual on-site monitoring

Dry Floodproofing

- Designed to keep water out
- Involves significant alterations
  - Windows/doors/utility penetrations must be sealable
  - Exterior foundation surfaces must be impervious to water
- Only appropriate for:
  - Load-bearing masonry buildings
  - Frame buildings with masonry foundations
    - Established flood risk must be below top of foundation
- Requires regular maintenance, monitoring, and repair to remain effective

Photo: Brian Mesmer

Wet Floodproofing

Photo: Mary Delaney Krugman, JD, MSHP

- Allows water to enter/drain out of a building
  - Controlled by vents
  - May require structural reinforcement
  - Utility systems must be located above established flood risk level
- Interior spaces must be altered
  - Use of water-resistant/impervious materials
  - Wall cavities need to opened/accessed for cleaning/drying
    - May involve harsh chemicals
    - May take extended periods of time

Elevating a Building on a New Foundation

- Most common solution for addressing flood risk
- Easiest for frame buildings above crawlspaces, piers, or post foundations
- Must be carefully planned/considered
  - Size/shape of lot
  - Placement of building/setbacks
  - Horizontal/vertical orientation
  - Access
- Elevations in historic districts can be coordinated to maintain historic spatial/architectural relationships

Photo: p3elevation.com

NPS Recommendations

- Focus on adaptive approaches during rehabilitation
- Reconstruction/new construction should rely on established design guidelines
  - Maintains sense of place
- Consider high water mark measurements for elevation standards
  - Also consider established NFIP BFEs

NPS Recommendations

- Focus on adaptive approaches during rehabilitation
  - The strategies outlined herein are all adaptive approaches
  - Adaptive approaches have been used before

2644 Cajuput Street, Matlacha
Photo: Anthony Rodriguez

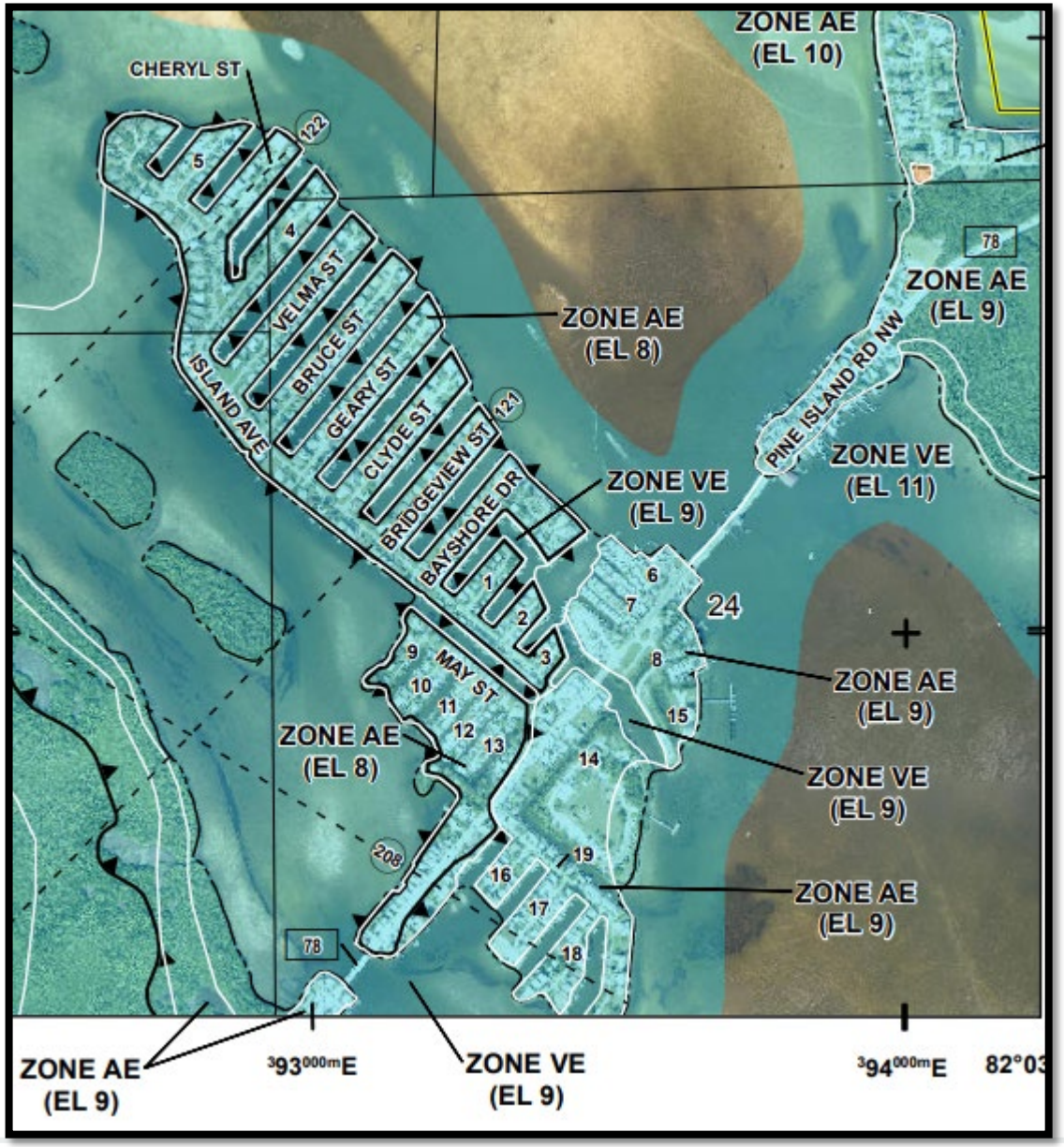
NPS Recommendations

- Reconstruction/new construction should rely on established design guidelines
  - Maintains sense of place

2672 Cajuput Street, Matlacha
Photo: Anthony Rodriguez

NPS Recommendations

- Consider high water mark measurements for elevation standards
  - High water mark +/- 4 feet
- Also consider established NFIP BFEs
  - New NFIP maps effective today



Staff Approach

- Remain flexible and accommodating
  - Provide technical assistance
  - Consider administrative changes when possible/appropriate
- Maintain consistency with:
  - NPS recommendations
  - Guidelines on Flood Adaptation for Rehabilitating Historic Buildings
- Encourage Pre-application meetings prior to SCA applications for adaptive approaches

Questions and Contacts

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