Planning Information Exchange (PIE) Webinar:
Post-Disaster Temporary Housing: Urban Planning Considerations
3/23/2017, 1:00pm-2:00pm CT

Planning Information Exchange (PIE)
QUARTERLY WEBINAR SERIES PRESENTS:
Post-Disaster Temporary Housing: Urban Planning Considerations

Shannon S. Van Zandt, Ph.D., AICP
Professor, Interim Dept. Head
Landscape Architecture & Urban Planning
Texas A&M University

Thomas A. Womeldurf, AIA,
AICP, CEM, PMP, LEED AP+
Director, Fed. & State Prog.
Institute for Building Technology & Safety (IBTS)

March 23, 2017
1:00 – 2:00pm CT

What is the biggest hurdle to post-disaster temporary housing in your community?
Obstacles to Rapid Re-housing after disaster: Lessons from Dolly and Ike in Texas

Dr. Shannon Van Zandt, AICP
Professor and Interim Head
Landscape Architecture & Urban Planning

More information can be found in “The Texas Experience with 2008’s Hurricanes Dolly and Ike,” by Shannon Van Zandt and Madison Sloan, in:

Coming Home after Disaster: Multiple Dimensions of Housing Recovery

Hurricanes Dolly and Ike

$38 billion in damage in Texas

Hurricane Ike struck Galveston and the Houston Metro on September 13, 2008

Hurricane Dolly struck the Lower Rio Grande Valley on July 23, 2008

© Shannon S. Van Zandt, svanzandt@arch.tamu.edu
Natural disasters expose pre-existing inequalities within the affected communities. Why? Because disasters both magnify and accelerate processes already occurring in communities (Olshansky et al., 2012).

Predominant development patterns in the US maximize the intersection of physical vulnerability and social vulnerability—the most socially vulnerable populations live in the most physically vulnerable locations (Peacock et al., 2015).

These households are likely to receive the highest levels of damage (Highfield et al., 2014).
A meta-analysis of over 40 post-disaster reports from the last 10 years reveals these

**Challenges to Post-disaster recovery**

- Rapid, fact-based decision-making
- Participatory decision-making
- Building and using local capacity
- Navigating resources and assistance
- Restoration vs. resilience

The national statutory disaster recovery scheme is not set up to handle catastrophic regional disasters

- One of the core principles of disaster recovery is deference to state and local governments in the planning and management of recovery.
- FEMA’s National Disaster Recovery Framework (2011) places the burden of disaster recovery on local, state, and tribal governments.
- The Stafford Act requires a governor to certify that combined state and local resources are insufficient when seeking a presidential disaster declaration.
- Yet, the reality of large-scale, regional disasters is that the bulk of resources needed for recovery will come from the federal government.
Poor data availability and waivers of federal program requirements may lead to misallocation of funds

- Multiple administrative layers at the different levels of government and difficulties encountered by local governments in administering these complex grant programs hamper efficient, effective, and timely use of disaster recovery funds
- Inequitable distribution of initial recovery funding resulted in a conciliation agreement between US HUD and the State of Texas, which brought more than $3 Billion in disaster recovery funding to coastal Texas
Planning Information Exchange (PIE) Webinar:
Post-Disaster Temporary Housing: Urban Planning Considerations
3/23/2017, 1:00pm-2:00pm CT

More Information at:
http://bit.ly/1H6g9Wr

Building Method

Graphics courtesy of bcWORKSHOP

© Shannon S. Van Zandt, svanzandt@arch.tamu.edu
Engaged Design & Outreach Process

Organizational Collaboration

More Information at:
http://bit.ly/1H6g9Wr
Pre-Disaster Recovery Planning

“Pre-covy” planning institutionalizes temp-to-perm solutions. Enhances resilience by mitigating population displacement, maintaining social networks, speeding recovery and rebuilding, and providing cost-effective solutions.

Summary of Policy Recommendations

• Engage community stakeholders in decision making by undertaking “pre-covy” and comprehensive planning
• Planning for recovery can institutionalize temporary-to-permanent solutions
• Encourage and support the development and maintenance of data that supports fact-based planning
• Recognize and prioritize investments in projects that will reduce vulnerability and increase resilience
• Establish a clear administrative structure for recovery to help community members navigate resources
• Use housing recovery to increase housing choice for vulnerable populations

© Shannon S. Van Zandt, svanzandt@arch.tamu.edu
Planning Information Exchange (PIE) Webinar: 
Post-Disaster Temporary Housing: Urban 
Planning Considerations 
3/23/2017, 1:00pm-2:00pm CT

Network of Plans

Comprehensive Plan

Hazard Mitigation Plan

Pre-Disaster Recovery Plan

Consolidated Housing Plan

Capital Investment Plan

Post-Disaster Emergency Housing
Insights from Louisiana Flooding DR4277

Thomas A Womeldurf, AIA, AICP
Director - Federal and State Programs
Institute for Building Technology and Safety (IBTS)

More Information at:
http://bit.ly/1H6g9Wr
Planning Information Exchange (PIE) Webinar:
Post-Disaster Temporary Housing: Urban Planning Considerations
3/23/2017, 1:00pm-2:00pm CT

ABOUT US

The Institute for Building Technology and Safety is a 501(c)(3) nonprofit organization established to provide unbiased professional services, while enhancing the communities in which we work.

At IBTS, our mission is to deliver quality services to meet the challenges of governance at all levels while enhancing public safety, economic development, and the general welfare of the community.

WHAT WE DO

© 2017 Institute for Building Technology and Safety

http://bit.ly/1H6g9Wr

© Institute for Building Technology & Safety
Thomas A. Womeldurf, twomeldurf@ibts.org
Planning Information Exchange (PIE) Webinar:
Post-Disaster Temporary Housing: Urban Planning Considerations
3/23/2017, 1:00pm-2:00pm CT

AUGUST 2016 LOUISIANA SEVERE STORMS & FLOODING

Presidential Declared Disaster (DR-4277)

Scope of Work:
- Perform reviews of MHU designs submitted by manufacturers
- Perform In-Plant Inspections of MHU's during the manufacturing process.
- Conduct forensic analysis and investigations of potential defects or other issues in manufactured homes.
- Conduct environmental, health and safety reviews of manufactured homes.
- Conduct forensic analysis and investigations of MHU defects.
- Perform installations and conduct inspections of MHU residential fire sprinkler systems.
- Conduct analysis and verify compliance with FEMA's contract requirements including HUD Standards, FEMA Rugged Based Requirements and National Fire Protection Association (NFPA) 50, NFPA 50A and NFPA 13D.
- Provide recommendations if there are issues resulting from manufacturing; storage; transportation; installation; or, maintenance.
- Investigate root causes of incidents within MHU's such as fires, leaks, and all other potential failures within MHU's.

Individual Assistance Designated Parishes:

© 2017 Institute for Building Technology and Safety

© Institute for Building Technology & Safety
Thomas A. Womeldurf, twomeldurf@ibts.org
LOUISIANA SEVERE STORMS & FLOODING (DR-4277)

- Over 146,000 homes and thousands of businesses damaged

Contact us:

© 2017 Institute for Building Technology and Safety

© Institute for Building Technology & Safety
Thomas A. Womeldurf, twomeldurf@ibts.org
REGULATORY BACKGROUND:
FEMA'S AUTHORITY TO PROVIDE TEMPORARY HOUSING

- Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended
  - Stafford Act
- FEMA may provide several types of temporary housing assistance
  - MHUs are available to individuals or households who, because of a lack of available housing, would be unable to make use of financial housing assistance (>51% damage)
  - Shelter at Home Program (<51% damage)
  - MultiFamily Lease and Repair Program (shortage of rental housing, quick turnaround)
- MHUs shall be built to the Department of Housing and Urban Development (HUD) standards
  - 24 CFR 3280 (Manufactured Home Construction Safety Standards)
  - Additional FEMA “Rugged Requirements”

Homeowners can apply for FEMA housing assistance at: DISASTERASSISTANCE.GOV

© Institute for Building Technology & Safety
Thomas A. Womeldurf, twomeldurf@ibts.org
Planning Information Exchange (PIE) Webinar:
Post-Disaster Temporary Housing: Urban Planning Considerations
3/23/2017, 1:00pm-2:00pm CT

TECHNOLOGY/STANDARDS/RESILIENCY:
FEMA’S “RUGGED REQUIREMENTS”

- FEMA MHUs have:
  - Fire sprinkler systems
  - Double I-beams for supporting structural frame
  - Chassis welds and outrigger placement
  - Drywall (no vinyl-covered panels)
  - Grab bars
  - Roof shingles installed for Wind Zone III
  - Enhanced quality assurance processes

© 2017 Institute for Building Technology and Safety

REGULATORY BACKGROUND:
CITIZENS WITH SPECIAL NEEDS

- A percentage of the MHUs are built to meet the Uniform Federal Access Standards.
- UFAS is the Federal government’s implementation to meet the Architectural Barriers Act (ABA):
  - That facilities designed, built, altered or leased with funds supplied by the US Government are accessible to people with disabilities
  - Equal access to federal programs & services for people with disabilities

© 2017 Institute for Building Technology and Safety

© Institute for Building Technology & Safety
Thomas A. Womeldurf, twomeldurf@ibts.org
Planning Information Exchange (PIE) Webinar:  
*Post-Disaster Temporary Housing: Urban Planning Considerations*  
3/23/2017, 1:00pm-2:00pm CT

**FEMA’S CHALLENGE:**  
*GETTING MHUs TO FLOOD VICTIMS*

© 2017 Institute for Building Technology and Safety

---

**PLANNING CHALLENGES TO MHU DEPLOYMENT**

- National Challenges
  - MHU inventory
  - MHU manufacturer readiness and capability
  - Transportation of MHUs to FEMA storage sites
  - Retrofits, quality control, availability of parts/equipment
  - Contractor selection
  - FEMA determination of needs

© 2017 Institute for Building Technology and Safety

© Institute for Building Technology & Safety  
Thomas A. Womeldurf, twomeldurf@ibts.org
Planning Information Exchange (PIE) Webinar:
Post-Disaster Temporary Housing: Urban
Planning Considerations
3/23/2017, 1:00pm-2:00pm CT

PLANNING CHALLENGES TO MHU DEPLOYMENT

- Local Challenges
  - Political landscape and Policies
  - Local Planning
    - Zoning
    - Permitting
    - Authority
  - Deployment logistics
    - Commercial sites
      - How do they fit into fabric of community?
    - Planned communities
      - How quickly can they be ready?
    - Private lots
      - What are access & size constraints?
  - Availability and hook up of Utilities
  - Ready For Occupancy (RFO)

ENGAGEMENT, COMMUNICATION, COLLABORATION, COOPERATION

KEYS TO POST-DISASTER SUCCESS

© Institute for Building Technology & Safety
Thomas A. Womeldurf, twomeldurf@ibts.org
Planning Information Exchange (PIE) Webinar:
Post-Disaster Temporary Housing: Urban Planning Considerations
3/23/2017, 1:00pm-2:00pm CT

STRENGTH OF COMMUNITY

Thanks to Our Presenters

Shannon S. Van Zandt, Ph.D., AICP
Professor, Interim Dept. Head
Landscape Architecture & Urban Planning
Texas A&M University
svanzandt@arch.tamu.edu

Thomas A. Womeldurf, AIA, AICP, CEM,
PMP, LEED AP+
Director, Fed. & State Prog.
Institute for Building Technology & Safety
TWomeldurf@ibts.org

© 2017 Institute for Building Technology and Safety

More Information at:
http://bit.ly/1H6g9Wr