

NONSTRUCTURAL GUIDANCE OVERVIEW AND UPDATES

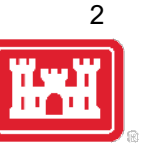
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NEED FOR NEW POLICY/GUIDANCE



- We continue to see a significant number of nonstructural features in Recommended Plans. The reasons are numerous:
 - Climate Change, including Sea Level Rise;
 - A shift away from the preference for grey infrastructure;
 - High costs associated with OMRR&R of many structural projects;
 - A push across the board for more holistic and comprehensive planning; and,
 - An increased ability for building community resilience capacity.



EXISTING NONSTRUCTURAL GUIDANCE

- Flood Proofing Systems and Techniques, Dec 1984
- Physical and Economic Feasibility of Nonstructural Flood Plain Management Measures, March 1978
- Raising and Moving the Slab-On-Grade House, 1990
- Flood Proofing: How to Evaluate Your Options, July 1993
- Local Flood Proofing Programs, June 1994
- ER 1165-2-314, Flood Proofing Regulations, 15 Dec 1995

- *ER 1105-2-100, Planning Guidance Notebook*
- *ER-1105-2-103, Policy for Conducting Civil Works Planning Studies*



EXISTING NONSTRUCTURAL GUIDANCE

- Although the National Nonstructural Committee has released numerous FAQs, BPGs, etc., there have been no substantial efforts to address Nonstructural planning and implementation in guidance since the late 1990s.
- We intend to rescind ER 1165-2-314. Most references to building codes are outdated.
- Guidance for elevations was released on 22 July 2024 and is currently being formatted/edited for future release as ER 1105-2-104.
- There will be changes/additions to the elevation guidance regarding wind risk, addition of structures, and real estate.



FUTURE NONSTRUCTURAL GUIDANCE

- HQUSACE is currently developing guidance for wet and dry floodproofing.
- It will include the following information:
 - General definitions, descriptions, and types of systems for wet and dry floodproofing
 - Restrictions
 - Eligible Structures
 - Betterments and Windfall Benefits.
 - Design and Cost Engineering
 - Agreements and RE
 - Certification
 - OMRR&R.
 - Building Codes and Standards
- In general, design of floodproofing systems will follow most standards in the most recent version of ASCE 24. Some information will also be borrowed from FEMA NFIP Technical Bulletins.
- ASCE 24 is being updated – the current target is release around the holidays.



FUTURE NONSTRUCTURAL GUIDANCE

- After Floodproofing, HQUSACE plans to address guidance for Acquisitions and Relocations.
- Currently, only mandatory buyouts are allowed under current policy.
- If a PDT intends to pursue voluntary buyouts, it will need to request a policy exception from ASA(CW).
- Voluntary buyouts can be fairly controversial in certain areas, particularly rural parts of the Nation.
- Voluntary buyouts can create concern over loss of potential tax base, loss of city, county, or state services, and disruption to social cohesion.
- Voluntary buyouts must also address concerns with vacant lands that may need to be maintained.
- HQUSACE and ASA(CW) do not support redevelopment of buyout lands, even if the structures would be elevated or floodproofed.



FEEDBACK FROM THE FIELD



- PDTs have been able to develop Class 3 cost estimates as required by guidance from E&C.
- PDT had to add geotechnical reviewer - never had to do this before.
- No example or guidance on what a “reasonable amount of time for a property owner to enter into agreement.”
- Limited institutional experience and no examples of completed large-scale projects.
- State laws for real estate vary by state – For LA, it requires a language variance from the model restrictive easement and a non-standard Land Use Restriction shall be requested through MVD to HQUSACE Real Estate for approval.



DESIGN ELEVATIONS



- USACE uses a climate-informed science approach to determine the height of buildings above the base flood elevation.
- Although USACE generally relies on ASCE for building codes and standards, it does not utilize the criteria for building height of elevations.
- Additionally, USACE is not required to comply with local or state building codes for elevation height of structures or freeboard above the base flood elevations.
- The NFI must request a locally-preferred plan to elevate structures higher than the level above the base flood elevations determined in a feasibility study using a climate-informed science approach.



STRUCTURE INVENTORIES



- For large structure inventories, there needs to be a spot check of structures to ensure assumptions are correct.
- After feedback, it is likely that districts may need to show a maps demonstrating why some structures were not included (e.g. 50yr vs 100 yr floodplain). Some individuals may want to know why they weren't included in the project like their neighbors.
- During project implementation, if it becomes apparent through discussion with community members, field observations, or other means that additional structures in the study area should have been included in the authorized plan due to incorrect or missing data in the structure inventory or modeling uncertainty, then the PDT may conduct an assessment to determine which additional structures will be included in the project.



STRUCTURE INVENTORIES

- These structures must meet the flood risk criteria that were approved in the Chief's Report.
- If a decision is made to include these additional structures, it must be documented in district files and updated for all total project costs.
- The addition of structures and potential cost increases cannot exceed the Chief of Engineer's discretionary authority.
- Specifically, Division Commanders will ensure the inclusion of additional structures does not exceed 20 percent of the originally authorized cost.
- Additionally, this does not change any requirements to comply with 33 USC 2280 (also known as "Section 902).



HTRW



- HQUSACE is working on revising some of the guidance regarding potential HTRW for elevations.
- We want to ensure any language that we use for the public is not “alarming,” and also that we don’t trigger any unnecessary issues.
- ER 1105-2-104 will also address HTRW concerns for floodproofing, which could be more substantial for buildings such as industrial facilities. Floodproofing can be more invasive than elevations, as some floodproofing systems can require minor structural modifications, opening of walls, etc.



NONSTRUCTURAL GUIDANCE - PPA



- The PPAs are with the Agreements team and close to being sent to the ASA(CW) for review and approval. Not likely that we will have approval prior to February 2025. If a team is at the point where it is ready to negotiate a PPA with the NFI, the PM should contact the Agreements team for guidance.



NONSTRUCTURAL GUIDANCE - LOCAL INDUSTRY CAPACITY



- Local Industry Capacity
 - Local industry capacity may have substantial effects on the ability of a district to construct a nonstructural project within estimated costs and timeframes.
 - Districts with authorized projects to construct nonstructural projects or those that are conducting FRM or CSRSM studies that could likely include nonstructural measures will assess the capacity of local industry to efficiently and successfully construct a project.
 - Assessments should be factored into the study risk register, cost risk, and implementation plan. Districts are encouraged to hold “Industry Days” to establish open communication channels and inform the public of potential construction projects.
- MVD and NAD have done excellent jobs on holding Industry Days targeted at potential contractors.
- NOAA has received app. \$10M in grant funding to establish a program for contractors.