



Design of Resilient Buildings for a Changing Climate

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Presentation Outline



- Basic purpose of buildings
- Building types and considerations
- Overview of design considerations
 - Climate change
 - Durability and redundancy
- Teaching, training and apprenticeship



Purpose of Buildings

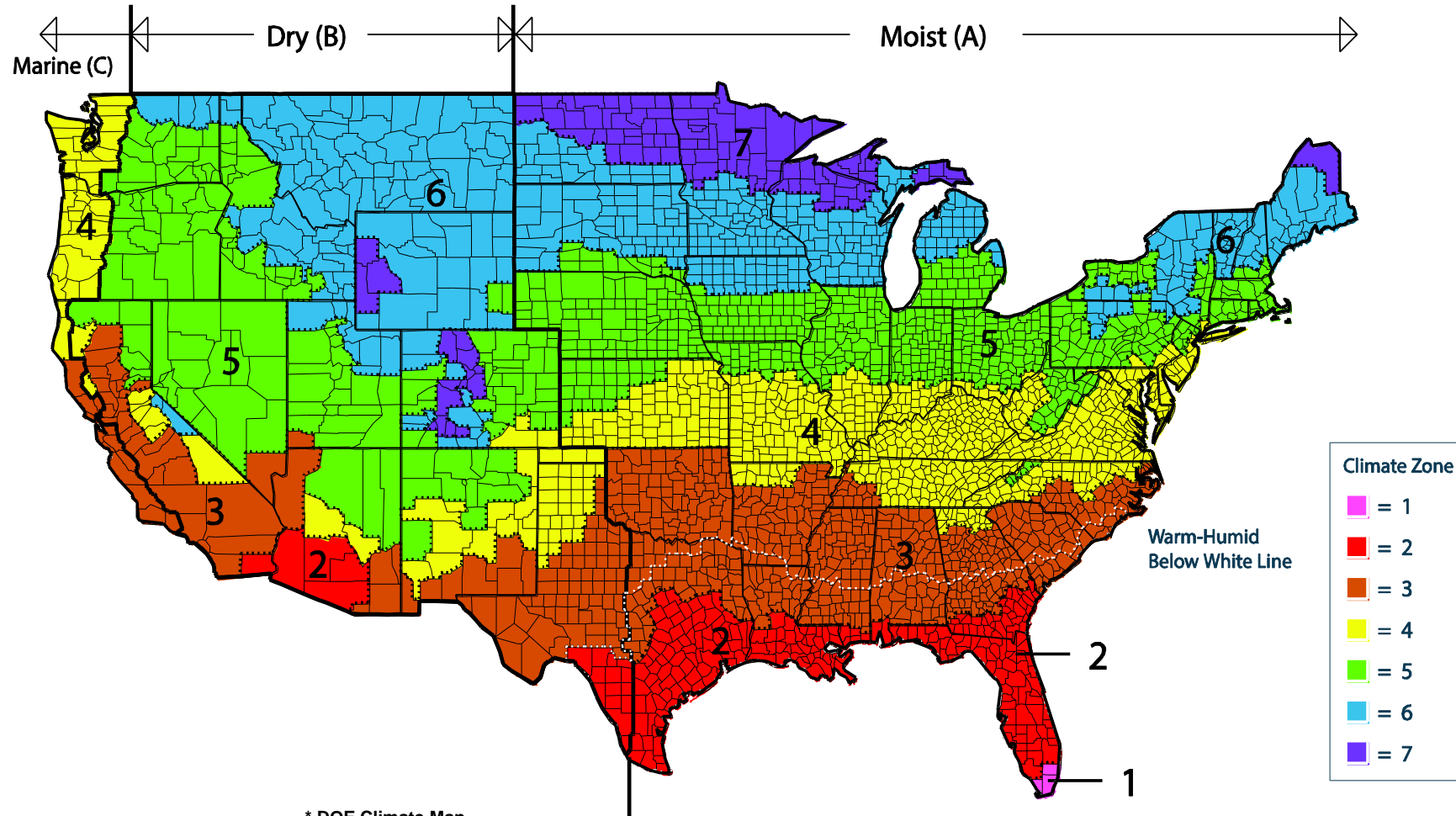
- Provide shelter
- Separate and protect us from outside environment
- Life safety
- Building science considerations
- User experience



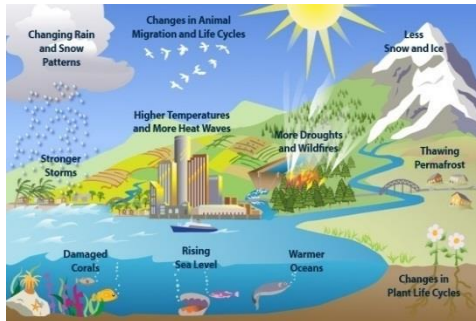
Building Examples and Types



Climate Zones

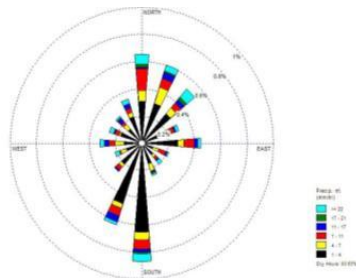
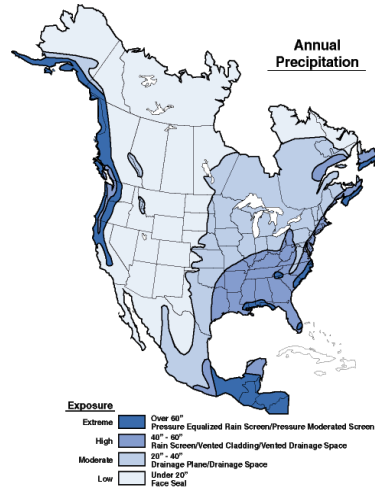


Impact of Climate Change



- Change in type of precipitation events
 - *Increased volume/shorter duration*
 - *More severe storms/higher winds*
 - *Flooding*
- Solar considerations
 - *Increased radiation*
 - *Examine SHGC and window films*
- Need for improved durability and redundancy

Importance of Climate Variation



- Review of macro and micro climate
 - *Understand the climate zone*
 - *Rain fall volume considerations*
- Micro climate specific to your site
 - *Review of site topography*
 - *Development density*
 - *Neighboring existing buildings and planned future development*
- Existing building versus new construction
- Orientation of building and considerations by elevation

Climate Responsive Building Design

- Responsiveness of systems
- Controls
- How it reacts to the environment



Image Courtesy of Hickok Cole Architects - Designer

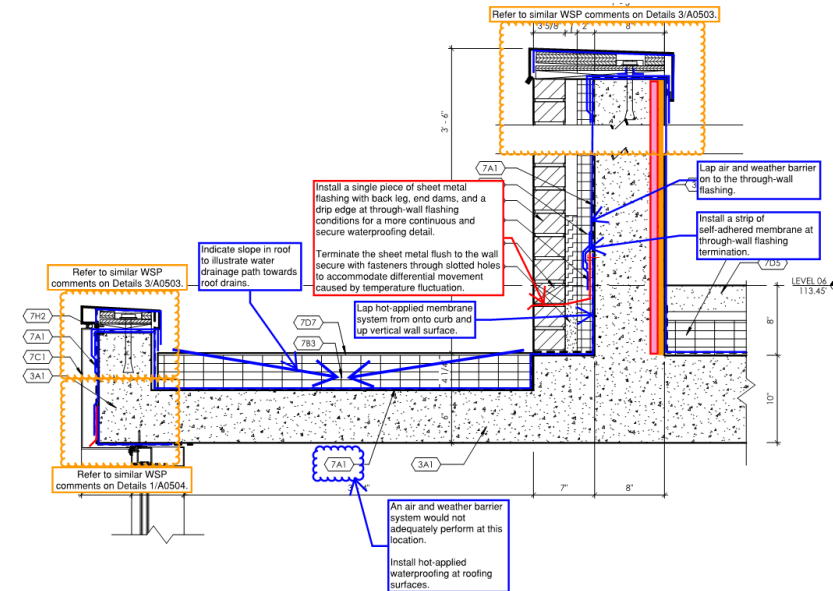
People Importance

- Materials made by people
- Designed by people
- Constructed by people



People Importance

- Educate K-12 (STEAM)
- Higher education - growth of building science degree programs
- Educate designers - WBDC, Knowledge Resources
- Apprenticeship programs



13 SECTION DETAIL - 4TH ST BAY LEVEL 06
SCALE: 1/2" = 1'-0"

Thank you!

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