

Agenda

Presented by Gregory Robinson

General Considerations

- Introduction
- Historical considerations
- ASCE 7-10 and the commentary
- Classifying buildings and structures by occupancy category
- Load combinations

Dead Loads, Soil Loads and Hydrostatic Pressure

- Defining dead loads
- Soil loads and earth pressure
- Hydrostatic pressure

Live Loads

- Defining live loads
- Uniform and concentrated live loads
- Live load reduction
- Lateral live loads
- Vehicle loads, impact loads, aircraft wheel loads

Wind Loads

- Wind speed, importance factor, exposure, enclosure classifications
- Computation procedures, methods 1, 2 and 3
- Wind speed, importance factor, exposure, enclosure classifications
- Main wind force resisting system vs. components and cladding

Rain, Ice and Snow Loads

- Computing rain, ice and snow loads on roofs
- Unbalanced, drifting and sliding loads
- Computing ice loads on structures

Flood Loads

- Still and moving water
- Hydrostatic and hydrodynamic loads
- Wave loads
- Loads on breakaway walls, pile structure

Earthquake Loads

- Scope and application
- Seismic ground motion values, short and long period coefficients
- Seismic design category
 - Importance factor and occupancy category
 - Seismic design category
 - Simplified structural design criteria for bearing walls and building frame systems
 - Design requirements for non-structural components

Structural Design Loads under the ASCE 7 Standard

Chapel Hill, NC - Tuesday, March 24, 2020



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Learning Objectives

You'll be able to:

Classify buildings and structures by occupancy category.

Define requirements for handling dead loads, soil loads and hydrostatic pressure.

Meet design requirements for uniform and concentrated live loads, as well as lateral live loads.

Design for wind, rain, ice and snow loads.

Identify requirements for handling earthquake loads.



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Classify buildings by occupancy category

Learn how to design for dead loads, soil loads, and hydrostatic pressure

Meet requirements for uniform and concentrated live loads

Design for loads resulting from flood waters and waves

Calculate rain, ice and snow loads on roofs

Receive design guidance related to wind and earthquake loads

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