

Revision H: Key Changes Moving Forward for ANSI/TIA-222-H

LOADING



Wind Speed

Wind speed maps revised based on newer weather data.

Rooftop Wind Speed Up Factor

New factor required for structures on isolated buildings taller than 50 feet and on buildings 50 feet taller than adjacent buildings.

Ground Elevation Factor

New factor that reduces wind pressure due to lower air density at higher elevations.

Wind Force Coefficient for Poles

For poles without external pieces, force coefficients reduced by 3% to 25%.

Wind Direction Probability Factor

Factor increased from 0.95 to 1.00 for concealment poles.

Ice Loading

Ice thickness maps revised based on newer weather data; conversion factor built in.

Seismic Loading

Every tower must be analyzed for seismic loads. Calculations based on newer ASCE 7-16 standard.

STRENGTH



AISC Standard

Steel calculations based on newer AISC 360-16 standard.

Bolt Shear Strength

Changed formula for bolt shear strength with component that depends on connection length.

STRUCTURAL ELEMENTS & APPURTENANCES



Fabrication

Fabricators for new towers and poles must be certified per AISC 201-06.

Grounding

Specific details provided for configuration of grounding rods and wires. Revised standard grounding cables from 2/0 AWG to #2 AWG.

Climbing

Strength requirements changed for step bolts, rest platforms, ladders, support rails, safety climb systems, and fall protection anchorage. Installation of appurtenances cannot degrade climbing facility.

Existing Structures

5% overstress allowed for changed conditions on existing structures. Additional 5% capacity gained by using load modification factors in Annex S.

Appurtenances Mounting Systems

New specifications for analyzing mounts. Annex J addresses mount mapping requirements.

Maintenance and Condition Assessment

Added requirements for inspecting weld cracks under radomes/shrouds in concealment sections, obstructions to lighting system, obstructions to climbing path, and safety climb system.

Mapping of Structural Members and Connections

Added requirements for bracing offsets, number of guy cable strands, details of torque arms and guy lugs, porthole welds, and member edge distances, gauges, and coping.

Initial Construction Inspection

Inspection must be performed during new construction.

Existing Structures Modification Inspection

Inspection must be performed during modification construction.

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