

ANSI/TIA-222-H - CHANGES OVERVIEW

TR-14 Committee – Task Group 3 Chair: Mark Malouf, PE, SECB, IPF – December 15, 2016

The new ANSI/TIA-222-H Standard, the “*Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Structures*” is a new revision of the TIA-222 Standard that builds on the changes introduced in the Revision G and enhances and expands them. Loading and design strength provisions are revised to be in conformance with changes in the referenced source national standards. Several new annexes are added to address industry practice and requirements.

The new revision of the standard is expected to be published in the third quarter of 2017.

The changes in the upcoming ANSI/TIA-222-H Standard are summarized as follows:

- Incorporates ASCE 7-16 Standard revised Wind maps with ultimate wind speeds based on risk category and the Wind and Ice Maps.
- Update the load factors to account for the ultimate wind speeds and adds a ground elevation factor.
- Enhances Section 2 (Loads) provisions including Exposure Categories based on surface roughness, more defined Risk Categories, expands Topographic effects approach using 3 methods and adds rooftop wind speed-up factor.
- Update and enhances the Seismic section 2.7 to be in conformance with ASCE 7-16 and ACI 318-14 standards and eliminates the exception for seismic loading analysis in low seismic regions.
- Update Section 4 (Design Strength) requirements for changes in the Steel and Concrete Standards, AISC 360-16 & ACI 318-14, revises the Anchor Rods section and adds a new section to address U-bolts design strength.
- Update Section 9 (Foundation and Anchorages) for changes to ACI 318-14 and enhances several provisions including direct embed foundations.
- Update Section 10 (Protective Grounding) provisions.
- Update Section 12 (Climbing Facilities) to be in sync with other safety standards including ASSE A10.48.
- Update Section 15 (Existing Structures), defines comprehensive structural analysis and feasibility study and adds the existing structures load modification factors.
- Addition of new Section 16 for Mounting Systems to address their criteria.
- Incorporates and enhances the Tubular Pole Base Plate from Revision G Addendum 3 as a new Annex Q and the Small Wind Turbine Structures from Revision G addendum 4 as a new Section 17.
- Addition of new annexes for Wind Induced Structural Oscillations (Annex M), New Tower Construction (Annex N), Existing Tower Modification Inspection (Annex O) and Tubular Pole Weld Toe Crack Evaluation (Annex P).
- Updates to the other sections and annexes to reflect changes in the main sections of standard.