



DEPARTMENT OF ADMINISTRATIVE SERVICES

June 18, 2020

Brendan Smith, P.E.
American Tower Corporation
3500 Regency Parkway, Suite 100
Cary, NC 27518

I-20-07

Re: Interpretation of 2018 State Building Code – Communication Tower Structural Design

Mr. Smith,

You requested a formal interpretation regarding the requirements of section 3108 and 1609 of the 2015 International Building Code portion of the 2018 Connecticut State Building Code which states:

3108.1 General. Towers shall be designed and constructed in accordance with the provisions of TIA-222. Towers shall be designed for seismic loads; exceptions related to seismic design listed in Section 2.7.3 of TIA-222 shall not apply. In Section 2.6.6.2 of TIA 222, the horizontal extent of Topographic Category 2, escarpments, shall be 16 times the height of the escarpment.

1609.1.1 Determination of wind loads. Wind loads on every building or structure shall be determined in accordance with chapters 26 to 30 of ASCE 7 or provisions of the alternate all-heights method in Section 1609.6. The type of opening protection required, the ultimate design wind speed, Vult, and the exposure category for a site is permitted to be determined in accordance with Section 1609 or ASCE 7. Wind shall be assumed to come from any horizontal direction and wind pressures shall be assumed to act normal to the surface considered.

Exceptions:

5. Designs using TIA-222 for antenna-supporting structures and antennas, provided the horizontal extent of Topographic Category 2 escarpments in Section 2.6.6.2 of TIA-222 shall be 16 times the height of the escarpment.

Question 1:

Would an installation done to the TIA-222-H standard be compliant under the current State Building Code?

Answer 1:

Yes. The 2015 International Building Code references TIA-222-G plus several amendments. TIA-222-H is an updated version of the TIA-222-G standard and is the reference standard in the 2018 International Building Code. Designs complying with the updated standard would be deemed to comply with the current code.



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Question 2:

If TIA-222-H is compliant under the current State Building Code, is the use of ASCE 7-16 Wind Speeds, as referenced by TIA-222-H, compliant? Or does CT have specific wind and ice parameters that must be utilized?

Answer 2:

Per 1609.1.1 exception 5, telecommunication towers may be designed to TIA-222 with conditions. Since TIA-222-H is a compliant design standard and references ASCE-7-16, the parameters found in that standard may be utilized.

Sincerely,

A handwritten signature in blue ink, appearing to read "JCassidy", is written over the printed name.

Joseph V. Cassidy, P.E.
State Building Inspector

Cc: Darren Hobbs, Deputy State Building Inspector