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COUNTY OF RIVERSIDE BUILDING & SAFETY DEPARTMENT DESIGN LOAD CRITERIA

GOVERNING CODE AND REFERENCE STANDARD CBC

2019, ASCE 7-16

SEISMIC AND WIND DESIGN

Seismic and wind design values for buildings and other structures can be obtained from:

<https://hazards.atcouncil.org>

<http://www.seismicmaps.org>

The following wind speeds, taken from ASCE 7-16 Figure 26.5-1, can be conservatively used in non-special wind regions within the County of Riverside:

Risk Category I, Exposure C: 95 mph (V_{ult})

Risk Category II, Exposure C: 100 mph (V_{ult})

Risk Category III & IV, Exposure C: 110 mph (V_{ult})

SPECIAL WIND REGIONS

Special wind regions are identified on Figure 26.5-1 of ASCE 7-16. County of Riverside communities that lie within a special wind region may include, but not limited to:

Eagle Mountain, Joshua Tree, Chiriaco Summit, Chocolate Mountain, Salton, Desert Beach, North Shore, Oasis, Mecca, Valerie, Arabia, Thermal, Vista Santa Rosa, Santa Rosa, Indio, Bermuda Dunes, Indio Hills, Palm Desert, Sun City Palm Desert, Desert Palm, Rancho Mirage, Thousand Palms, Sky Valley, Palm Springs, Desert Haven, Cabazon, San Gorgonio, Desert Edge, Garnet, North Palm Springs, Desert Hot Springs, Painted Hills, Whitewater, Mission Lakes, Banning, Cherry Valley, Lake Tamarisk, and Desert Center.

The design professional can also refer to the ATC Hazards by Location website at <https://hazards.atcouncil.org> to determine whether the project lies within a special wind region. For projects in the County of Riverside that lie within a special wind region, use the following 3-second gust wind speed:

Risk Category I & II, Exposure C: 130 mph

WIND GENERATORS

Wind generators require micro-siting study and development of a Loads Document in accordance to ASCE/AWEA RP2011 and IEC 61400-1, considering various normal and extreme wind conditions on the turbine and mast. Where wind loads set forth in the Loads Document differ from the governing Building Code, it is the responsibility of the design professional to demonstrate that they meet or exceed the wind criteria set forth in the Building Code.

Wind generators shall be designed as Risk Category II structures, while associated substations shall be designed as Risk Category III structures.

GROUND SNOW LOAD

Ground snow load, P_g , used in determining the design snow loads for roofs can be obtained from Figure 7.2-1 of ASCE 7-16. Where the project site elevation exceed the mean sea level elevation of 1000ft, site-specific case studies may be required to establish ground snow loads.

In such cases, the design professional must verify whether the project site elevation exceed the upper limits indicated in Figure 7.2-1, and use the following to determine the ground snow load:

$$P_g \text{ (psf)} = 30 + 1.6 \cdot (\text{EL} - \text{H}) / 100$$

Where:

EL = Above Mean Sea Level elevation at the project location

H = Limit elevation specified on Figure 7.2-1 of ASCE 7-16

Note:

1. Ground snow load P_g need not exceed 90psf.
2. Where flat roof snow load, P_f , exceeds 30 psf, 20% shall be combined with seismic loads per CBC 1605.3 Exception #2.