



## Structural Design Required Minimum Load Assumptions and Data

### Structural Design Load Minimum Requirements IBC 2018

- a- Floor live loads. (Section 1603.1.1)
- b- Any special additional superimposed dead load if applicable.
- c- Roof live loads. (Section 1603.1.2). Minimum roof live load is **30psf. (County amendment)**
- d- Snow Loads: (Section 1603.1.3)
  - Ground snow load ( $P_g$ ) Minimum ground snow load shall be **30 psf (County amendment)**
  - Minimum flat roof snow load ( $P_f$ ), if applicable. If none specified,  $P_f$  will be calculated per ASCE 7/IBC. Calculated as per ASCE 7-16- based on the risk category.
  - Minimum sloped roof snow load ( $P_s$ ), if applicable. If none specified,  $P_s$  will be calculated per ASCE 7/IBC. Calculated as per ASCE 7-16.
  - List all assumed coefficients utilized for the calculation of the flat /slope roof snow load  
Snow exposure factor,  $C_e$ ; Snow importance factor,  $I_s$ ; Thermal factor,  $C_t$ ; Drift surcharge loads(s),  $P_d$ , where the sum of  $P_d$  and  $P_f$  exceeds 20psf.; Width of snow drift(s),  $w$ .
- e- Wind Loads: (Section 1603.1.4)

Based on the risk category verification by SER V and  $V_{asd}$  values required by County are as follows;

Risk Category I:  $V=105$  mph;  $V_{asd}=82$  mph

Risk Category II:  $V=115$  mph;  $V_{asd}=89$  mph

Risk Category III :  $V=120$  mph;  $V_{asd}=93$  mph

Risk Category IV:  $V=125$  mph;  $V_{asd}=97$  mph

Additional to the assumed wind speed following information shall be shown on structural notes;

- Internal pressure coefficient
  - Exposure category
  - Minimum and maximum design wind pressure for component and cladding.
  - Importance factor based on the selected risk category as per **ASCE 7-16, table 1.5-2**.
  - For roof types (Monoslope, pitched or troughed) verified information on the notes and provide required wind load reference table for the manufacturer.
- f- Earthquake Design Data: (Section 1603.1.5)
- Parameters and coefficients required to be shown on drawings:
- Risk category
  - Seismic importance factor ( $I_e$ ).

- Mapped spectral response accelerations  $S_s$  and  $S_1$ . Spectral response accelerations for short period and one second shall be  **$S_s=13.5\%$  and  $S_1=4.3\%$** . (County amendment)
- Site class.
- Design spectral response acceleration parameters,  $S_{ds}$  and  $S_{d1}$ .
- Seismic design category.
- Basic seismic force-resisting system(s).
- Design base shear(s).
- Seismic response coefficient(s),  $C_s$ .
- Response modification factor(s),  $R$ .
- Analysis procedure used.