$$0.6D + 0.7E + H \qquad\qquad \textbf{(Equation 16-15)}$$

Exceptions:
1. Crane hook loads need not be combined with roof live load or one-half of the wind load.
2. Roof live loads of 30 psf (1.44 kN/m^2) or less need not be combined with seismic loads.

1605.3.1.1 Stress increases. Increases in allowable stresses specified in the appropriate material chapter or the referenced standards shall not be used with the load combinations of Section 1605.3.1, except that increases shall be permitted in accordance with Chapter 23.

1605.3.1.2 Flood loads. Where flood loads, F_a, are to be considered in design, the load combinations of Section 2.4.2 of ASCE 7 shall be used.

1605.3.2 Alternative basic load combinations. In lieu of the basic load combinations specified in Section 1605.3.1, structures and portions thereof shall be permitted to be designed for the most critical effects resulting from the following combinations. When using these alternative basic load combinations that include wind or seismic loads, allowable stresses are permitted to be increased or load combinations reduced where permitted by the material chapter of this code or the referenced standards. For load combinations that include the counteracting effects of dead and wind loads, only two-thirds of the minimum dead load likely to be in place during a design wind event shall be used. Where wind loads are calculated in accordance with Chapter 6 of ASCE 7, the coefficient ω in the following equations shall be taken as 1.3. For other wind loads, ω shall be taken as 1. When using these alternative load combinations to evaluate sliding, overturning and soil bearing at the soil-structure interface, the reduction of foundation overturning from Section 12.13.4 in ASCE 7 shall not be used. When using these alternative basic load combinations for proportioning foundations for loadings, which include seismic loads, the vertical seismic *load effect, E_v, in* Equation 12.4-4 of ASCE 7 is permitted to be taken equal to zero.

$$D + L + (L_r \text{ or } R) \qquad\qquad \textbf{(Equation 16-16)}$$

$$D + L + (\omega W) \qquad\qquad \textbf{(Equation 16-17)}$$

$$D + L + \omega W \qquad\qquad \textbf{(Equation 16-18)}$$

$$D + L + \omega W/2 \qquad\qquad \textbf{(Equation 16-19)}$$

$$D + L + E/1.4 \qquad\qquad \textbf{(Equation 16-20)}$$