Actual axial unit compressive stress = ... f_a

Actual bending unit stress = ... f_b

MAXIMUM SLENDERNESS RATIOS:

Top chord panels (interior) = 85
Top chord end panels = 120
Compression members other than top chord = 200
Tension members = 240

FILLERS OR TIES:

Members in compression composed of two components shall have fillers or ties spaced so that the ratio of ℓ/r of each component shall not exceed the ratio of ℓ/r of the whole member. The minimum "r" shall be used in calculating the critical ratio ℓ/r of any component.

SHEAR CONNECTORS:

Shall be considered to provide a minimum 15 ksi horizontal shear per web end connector imbedded in the concrete. This is for 3,000 psi concrete. (f_c)

DEFLECTION:

Applicable deflection formula for uniform load.

Maximum deflection $\Delta = \frac{25.88\ (WL^4)}{29{,}000{,}000I}$

COMPOSITE SLAB AND JOIST DESIGN:

Design values

Total depth of combined slab and truss in inches = ... D_t

Effective width of concrete flange in inches equal to 2 x 8t = ... B_{eff}

Distance from top of concrete flange to neutral axis of concrete flange = ... y_1

Distance from top of concrete flange to neutral axis of top chord angles = ... y_2

Distance from top of concrete flange to neutral axis of bottom chord angles = ... y_3

Distance from top of concrete flange to neutral axis of composite section = ... y

Distance from neutral axis of composite section to neutral axis of concrete flange = ... d_1