Design of Transmission Tower in SAP2000

- D.L = 30K, L.L= 35k, on top most joint in gravity direction
- Unit = k-ft
- New model = 3D truss.

Transmission Tower

S. No	Elevation	Wud in	a (H)	b (W)
1	0	40	0	0
2	16	32	0.3	0.3
3	32	24	0.3	0.3
4	48	16	0.3	0.3
5	64	8	1	1
6	72	8	0	0
7	80	8	0	0
8	88	8	0	0

Chord = W18 x 35 Braces = W 18 x 35

Define:

- Define > material, steel, modifying fy = 36 ksi. Fx = 58ksi.

- Define > load cases add D.L & in L.L

- Self wt =0

- Define > add default combo select steel & convert to user check boxes.

- Select top most joints.

Assign

- Assign > Joint loads> forces apply loads.

- Select all.

- Assign > frame> release/Partial fixity, check $m^3$3 both check boxes.

Analyze

- Analyze >select analysis option. Select 3D trauss.

- Display > show forces> frames. Select UDSTL2 & axial force. Uncheck fill , check show values, check boxes and view the values on top most and bottom most members