

28 Foot Parabolic Dome

The upper three courses of this dome were first assembled within a homeless camp, but when a rancher was kind enough to allow the residents to camp on his property in exchange for a specified number of hours of labor per week, it was moved and completed there. This 615 square foot dome was soon joined by a couple of smaller structures for sleeping and showers.

This dome then became the community facility – replete with a propane refrigerator and solar electric lighting. Coarse sand found on site made a firm bedding to support indoor/outdoor carpeting.

Soon 100 yards of 1/2" tubing from the nearest watering trough provided fresh water. A discarded hot water heater modified to be powered by firewood, and a shower structure further civilized the setting.

The tubing was top rail, as used along the tops of chain-link fencing. The ends of the cut pieces were flattened, and holes for the 3/8" by 3" bolts were centered about an inch in from each end.

The strut lengths given in the table below are for the center-to-center distance of the bolt holes. These are provided in decimal fractions of a foot. So be sure to add two tenths of a foot so each bolt hole can be spaced about one tenth of a foot in from each end.

The pattern on the right is repeated six times around the center of the dome.

	Chord factor	Radius	strut length	qty	tot.strut lengths
AB	0.2577	14.0	3.6077	6	21.6463
BB	0.2500	14.0	3.5000	6	21
BC	0.3125	14.0	4.3750	6	26.25
BD	0.3621	14.0	5.0700	12	60.84056
CD	0.2588	14.0	3.6235	12	43.48158
CF	0.4532	14.0	6.3447	12	76.13695
CE	0.4002	14.0	5.6027	6	33.6164
DF	0.4142	14.0	5.7986	12	69.58333
EF	0.2605	14.0	3.6466	12	43.75933
EH	0.5523	14.0	7.7320	12	92.78369
EG	0.5039	14.0	7.0545	6	42.32685
FF	0.2605	14.0	3.6466	6	21.87966
FH	0.5095	14.0	7.1333	12	85.59995
FI	0.5260	14.0	7.3642	12	88.37097
GHI	0.2611	14.0	3.6547	24	87.71357

tot.len.=

814.9891

