



First, the total area must be computed to determine what one-fourth should be. Whether you use a program, use D.M.D.'s, or use coordinate cross multiplication, you should arrive at an area of 28,027,438 square feet or 7,006,860 sq. ft. for each one quarter (rounded to the nearest square foot).

Next, for the first cut to be a rhombus with all sides equal, with H-J (or G-D) as a base of x , side G-H (or D-J) must be $x \cdot \cos 2^\circ 19' 00''$ and their product must be 7,006,860 and therefore $x = 2648.13$ with bearings parallel with the exterior sides.

For the second cut to be of uniform width, say w , extend L-H to M-L at P. Area P-M-G-H will be $w \cdot 2648.13$ and area P-J-K-L will be $w \cdot (2648.13 + w/\cos 2^\circ 19' 00'')$ and their sum will be 7,006,860: to wit, $2648.13 \cdot w + w \cdot \frac{w}{\cos 2^\circ 19' 00''} = 7,006,860$ from which $w = 1095.995$

So M-G and J-K = $1095.995/\cos 2^\circ 19' 00'' = 1096.89$, J-P = K-L = $2648.13 + 1096.89 = 3745.02$

The third cut can be determined by first constructing a perpendicular from L to A-F, at, say N', then calculate the area of L-K-E-F-N' and adjust it as necessary to equal 7,006,860 sq. ft. The length and bearing of L-N' calculates to be N $4^\circ 49' 42''$ E 1877.733', the area, however you calculate it, is 7,354,082 sq. ft., or 347,222 sq. ft. too much.

The triangle L-N-N' therefore equals 347,222 sq. ft., so $\frac{1}{2}(N-N')(1877.733) = 347,222$ and $N-N' = 369.83'$, making the length of F-N = 1026.32 and N-L to be N $6^\circ 18' 50''$ W 1913.81'

The final missing dimension is A-N which equals 1648.72'.