Emerald Cut Geometry - Parameters, Assumptions and Naming Conventions

Emerald Cut Shape
There are two parameters which determine the overall shape.
Parameters:
1) Length-to-Width Ratio
2) Corner Ratio Percentage

Emerald Cut Crown
Emerald cuts have crowns containing 3 tiers of facets.

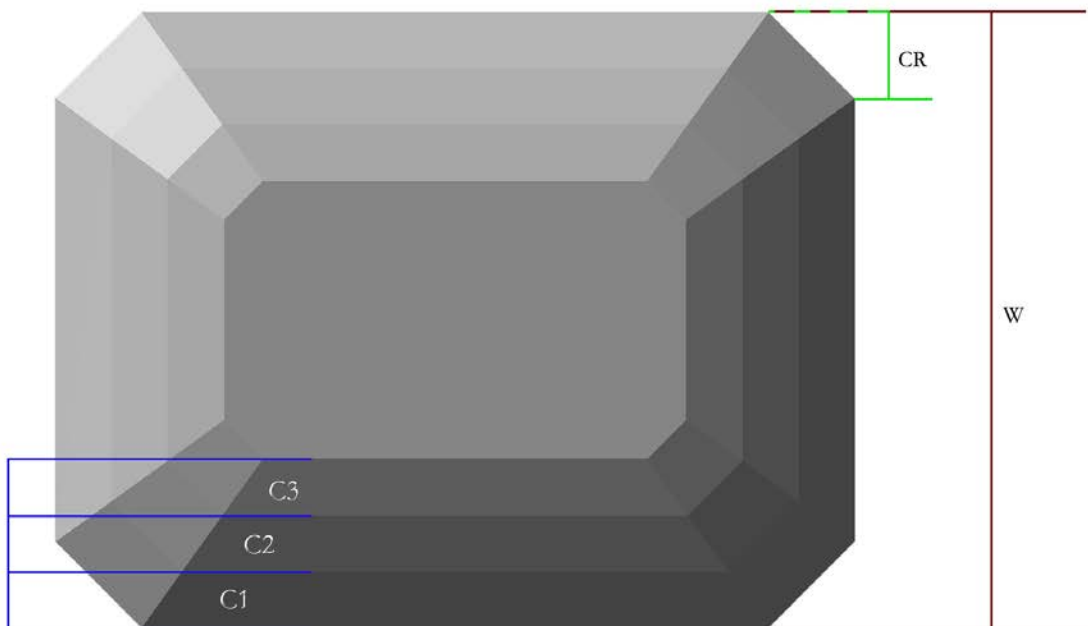The Emerald cut crown is defined by 1 assumption and 4 parameters.
Assumption:
1) In a bird's eye view, the widths of all three crown tiers or step facets are equal.

Parameters:
1) Table diameter percentage
2) Crown angle 1
3) Crown angle 2
4) Crown angle 3

Corner Ratio (CR) is equal to CR/W, where W is the width.

The widths of Crown 1, 2 and 3 are equal.

Length to width ratio is determined by dividing the length by the width.
For example: If length = 9 and width = 6 then the length to width ratio is 1.5:1
In the above picture length to width ratio is 1.3:1

Emerald Cut Girdle
The girdle is defined by 1 parameter:

Parameter:
1) Girdle thickness percentage = girdle thickness divided by stone width.

Emerald Cut Pavilion

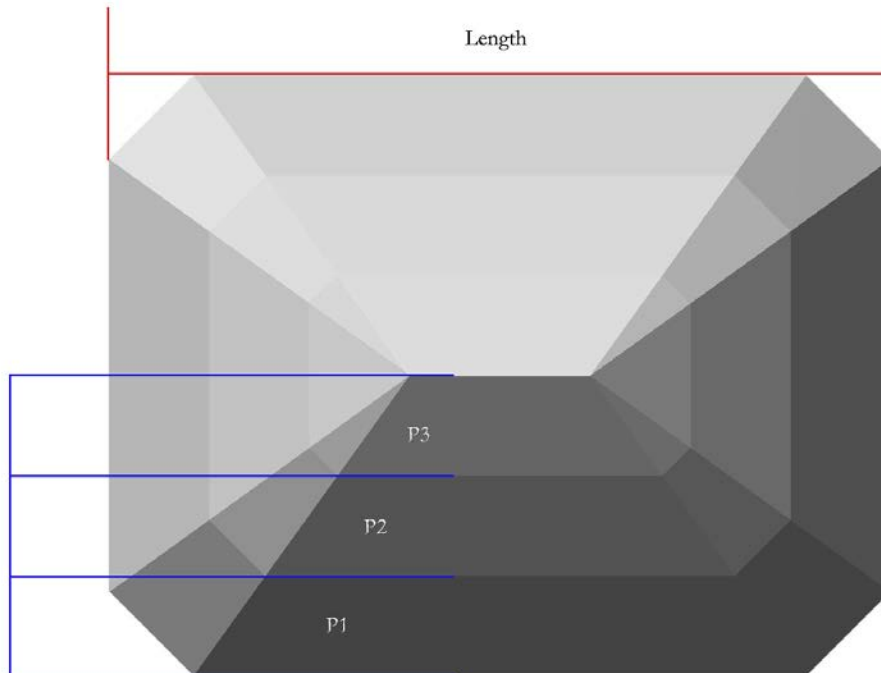Emerald cuts have pavilions containing 3 tiers of facets.

An Emerald Cut pavilion is defined by 1 assumption and 3 parameters.

Assumption:
   1) In a bird's eye view, the widths of all three pavilion tiers or step facets are equal.

Parameters:
   1) Pavilion angle 1
   2) Pavilion angle 2
   3) Pavilion angle 3

The widths of Pavilion 1, 2 and 3 are equal.

Length to width ratio is determined by dividing the length by the width. For example: If length = 9 and width = 6 then the length to width ratio is 1.5:1 In the above picture length to width ratio is 1.3:1