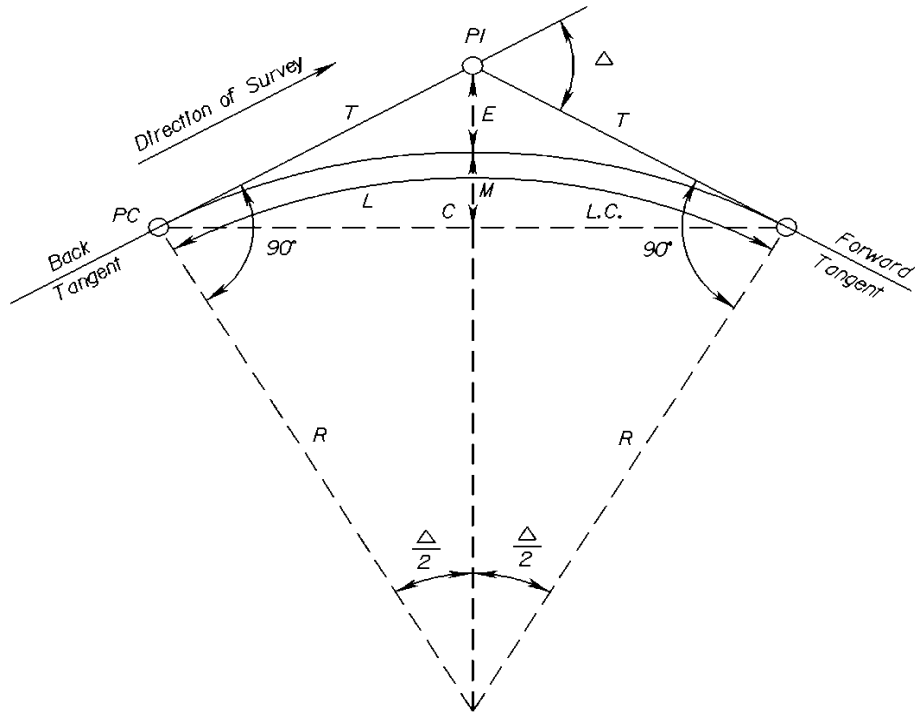

LEGEND

P. I. - Point of Intersection

P. C. - Point of Curvature

P. T. - Point of Tangency

Δ - Deflection Angle Between the Tangents

T - Tangent Distance

E - External Distance

R - Radius of the Circular Arc

M - Middle Ordinate

L. C. - Long Chord (Distance Between P. C. and P. T.)

C - Midpoint of Long Chord

D - Degree of Curvature

L - Length of Curve

FORMULAS FOR ARC DEFINITION

$\Delta = \frac{DL}{100}$

$D = \frac{5729.58}{R}$

$T = R \text{ Tan } \frac{\Delta}{2}$

$L = \frac{100\Delta}{D}$

$R = \frac{5729.58}{D}$

$E = T \text{ Tan } \frac{\Delta}{4} = R \text{ Sec } \frac{\Delta}{2} - R = \text{Exsec } \frac{\Delta}{2}$

$M = R \text{ Vers } \frac{\Delta}{2}$

$L.C. = 2 R \text{ Sin } \frac{\Delta}{2}$

Locating the P. C. and P. T.

Sta. P. C. = Sta. P. I. - T

Sta. P. T. = Sta. P. C. + L

FIGURE C-7-4 SIMPLE CURVE COMPUTATIONS*

* Rev. 7/12