

Reverse Circular Curves

These curves consist of two consecutive curves of the same or different radii without any intervening straight section and with their centres of curvature falling on opposite sides of their common tangent point. They are much more common than compound circular curves and, like them, can be used to avoid obstacles. More usually, however, they are used to connect two straights which are nearly parallel and that would otherwise require a very long simple circular curve.

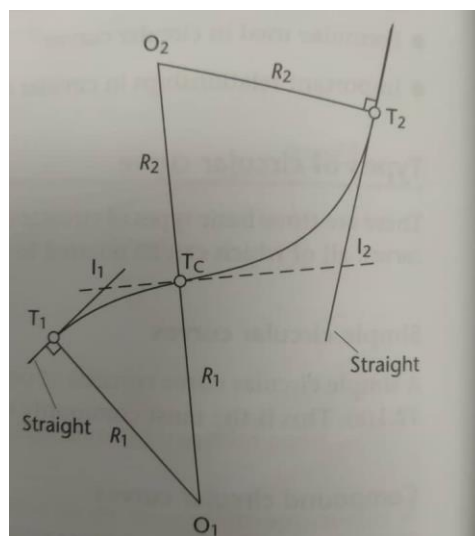


Figure 12.3- Reverse curve

A typical reverse circular curve is shown in Figure 12.3. In order to connect the two straights T_1 and T_2 , it is necessary to introduce an additional straight I_1I_2 . During the design process, several additional straights could be tried until a suitable solution is found and common tangent point T_c is chosen.

Once point T_c has been selected, the reverse curve can be considered as two separate simple curves with no intermediate straight section, that is, T_1T_c and T_cT_2 . With reference to Figure 12.3, $T_1I_1 = I_1T_c$ and $T_cI_2 = I_2T_2$, but I_1T_c does not necessarily equal T_cI_2 .