

3.2M Horizontal Alignment

3.2.6M Horizontal Alignment: Design Domain Additional Application Heuristics

3.2.6.1M General Application

The TAC Subsection **3.2.6.1** is applicable to the Department's highways with the following substitutions:

4. Minimum curve lengths, based on the functional classifications is as follows:

- Collectors: the minimum curve length shall be 150 m where the central angle is equal to or greater than 5 degrees, and the minimum length is to be increased by 30 m for each 1 degree decrease in the central angle.
- Primary and Secondary Arterials: the minimum curve length is to be equal to 3 times the design speed or $L = 3(V)$.
- Expressways and Freeways: the minimum curve length is to be equal to 6 times the design speed or $L = 6(V)$.

If the radius of the curve is sufficiently large to maintain a normal crown, minimum curve lengths do not apply.

11. The minimum desirable tangent length between reverse curves is 175 m. This length is sufficient to effect superelevation runoff and tangent runout between the two curves. If, due to extremely constrained site conditions, the above tangent length is not achievable, the absolute minimum for design is the distance required to achieve superelevation runoff only. In this case special care must be taken to ensure adequate longitudinal drainage of the level section of pavement where the back to back spirals meet.

14. The minimum allowable distance between the beginning or ending of a curve and a structure is somewhat dependent on the width of the structure but is generally taken as 100 m. In all cases the designer should ensure that minimum sight distance requirements are met. The 100 m does not apply to curves on interchange ramps.

16. On Provincial Trunk Highways and Provincial Roads, the minimum distance between a curve and an intersection (i.e. all access points) is as follows:

- For intersection treatments beyond a simple intersection: 300 m
- For simple intersections and private accesses: 150 m

If the radius of the curve is sufficiently large to maintain a normal crown, minimum distances to intersections do not apply.