

SECTION 16 – VERTICAL CURVES

0329. When two slopes meet the transition from one gradient to the other should be gradual. On summits if the change is abrupt as on a hump-backed bridge vehicles will tend to leave the road but the chief drawback is loss of sight distance. In valleys or dips an abrupt change causes increased pressure on tires and springs and amplifies the impact on the road surface; sight distance is also reduced when driving with headlamps.

0330. The Vertical momentum of the moving vehicle is changed gradually rather than suddenly by introducing a vertical curve at the change of gradient having the effect of chopping of the top of a summit or filling in the bottom of a valley.

0331. The curve is normally a simple parabola in shape and its length is determined by:

- a. The grade angle, between the first gradient line (produced) and the second gradient-line).
- b. The sight distance required.
- c. The rate of change of gradient which will allow smooth travel at a given speed.

0332. A quick method of setting out for hasty work in the field is described in section 64