SECTION 12 – CAMBER AND CROSSFALL

0309. Single lane roads are usually given a cross fall. Double lane roads should be cambered, but cross fall should be provided on curves (see Section 13).

0310. The degree of camber or cross fall is expressed as the ratio of vertical to horizontal (e.g. 1 in 24). It should be just sufficient to allow surface water to overcome frictional resistance and clear quickly to the drainage system. The general rule is therefore " The rougher the surface the steeper the slope."

Unnecessary steep camber may be dangerous, especially on smooth surfaces. The degree of camber or crossfall recommended for military roads is given in Table 3.8.

0311. On military roads camber is normally applied by forming a uniform stope form the center to each side.

TABLE 3.8 –DEGREE OF CAMBER OR CROSSFALL

Serial No.	Road surface	Recommended transverse slope	Remarks
(a)	(b)	(c)	(d)
1.	Timber (corduroy)	1 in 20	Vehicles tend to slip if this transverse slope is exceeded ditto Depending on nature of soil and degree of compaction Depending on compaction
2.	Timber (sleepers)	1 in 40	
3.	Earth and softorrough surfaces	From 1 in 16 to 1 in 24	
4.	Well stabilized and compacted earth	1 in 24	
5.	Gravel	From 1 in 24 to 1 in 30	
6.	Waterbound macadam	1 in 30	
7.	Bituminous or tar macadam	1 in 30 1 in 40	
8.	Asphalt or concrete	1 in 48	

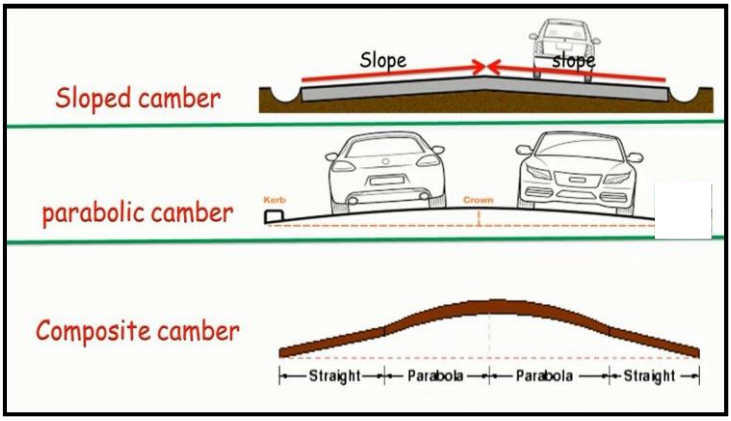

Figure 3-2 (a): Camber

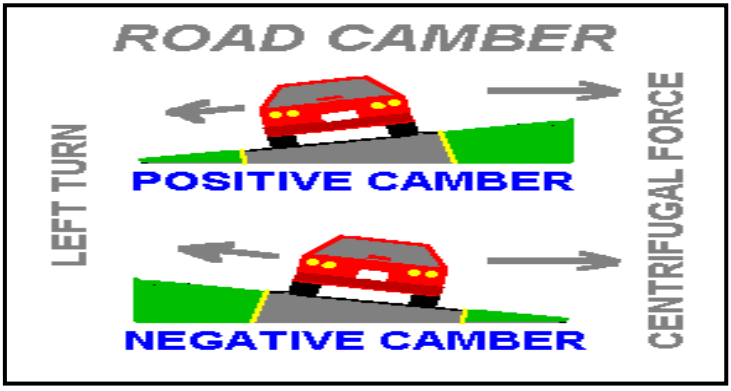

Figure 3-1 (b): Road Camber