

26 VOLUMES

Asterisks (*) indicate problems that have partial answers given in Appendix G.

26.1 Why is a roadway in cut normally wider than the same roadway in fill?

From Section 26.4, paragraph 2: The roadway is usually wider in cut than on fills to provide for drainage ditches.

26.2 Prepare a table of end areas versus depths of fill from 0 to 20 ft by increments of 2 ft for level sections, a 30-ft-wide level roadbed with side slopes of 1-1/2:1.

$$\text{Area} = 1.5h^2 + 30h$$

| Fill Depth (ft) | End Area (ft ²) |
|-----------------|-----------------------------|
| 0 | 0 |
| 2 | 66 |
| 4 | 144 |
| 6 | 234 |
| 8 | 336 |
| 10 | 450 |
| 12 | 576 |
| 14 | 714 |
| 16 | 864 |
| 18 | 1026 |
| 20 | 1200 |