

□ **Width:**

The top width of large earthen dams should be sufficient to keep the seepage line well within the dam, when the reservoir is full. It should also be sufficient to withstand earthquake shocks and wave action. For small dams, this top width is generally governed by minimum roadway width requirements.

➤ **Upstream and Down Stream Slopes:**

The side slopes depend upon various factors such as the type and nature of dam and foundation materials, height of dam etc., The various dimensions of low earth dams for preliminary section may be selected from the recommendations of Strang, as given in the following table:

Height of dam In meters	Maximum Freeboard in meters	Top width(A) in meters	Upstream slope (H: V)	Down stream Slope (H: V)
Up to 4.5	1.2 to 1.5	1.85	2:1	1.5:1
4.5 to 7.5	1.5 to 1.8	1.85	1.5:1	1.75:1
7.5 to 15	1.85	2.50	3:1	2:1
15 to 22.5	2.1	3.0	3:1	2:1

14. Design and Calculation

A) Design of Earthen Bund: -

By plotting the Area – Elevation-Curve for the given site, the FTL is obtained. The top width, free board required and side's slopes are fixed based on Strang's recommendations for earthen dam. The nature of foundation, body wall and its dimension etc. are depending upon the

Extensive Survey Project

L Reisser



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