

CHAPTER 3. STRUCTURAL EROSION CONTROL MEASURES

3.1 BENCH



Figure 3.1. Bench cut, upper level (Source: Department of Civil, Construction, and Environmental Engineering, Iowa State University)

Overview

Description: Slightly reverse sloping steps, 8 to 10 ft wide horizontally, on a back slope at intervals of 20 to 25 feet in vertical height.

Problem identification: The combination of precipitation, steep slopes, and erosive soils can cause sheet and gully erosion.

Design purpose: Reduce runoff volume and increase infiltration.

Associated practices: Requires provision for runoff disposal and slope protection.

Installation: Constructed as a part of the grading operation. As soon as possible, the exposed soil should be fertilized, seeded, and mulched.

Maintenance/inspection: The site should be inspected after each precipitation event, both slope areas and down drains from each bench. All problem areas should be repaired as soon as possible; it may be necessary to reseed, remulch, or repair some of the down drains.

Design life: Permanent.

Estimated cost: Included in grading.



Figure 3.2. Bench cut, profile view (Source: Department of Civil, Construction, and Environmental Engineering, Iowa State University)



Figure 3.3. Bench cut, interchange application (Source: Department of Civil, Construction, and Environmental Engineering, Iowa State University)