

trian or vehicular), paving is the obvious choice. Where occasional traffic might occur, such as in maintenance roads or emergency access ways, a combination of vegetation and paving might be desirable. A number of products are available to use in turf as vehicle support systems. The advantages of minimizing paving are reduced runoff and a smaller supporting network of pipes and detention basins.

Paving is required for general- or heavy-use parking lots and cartways. The traditional impervious paving of concrete or asphalt concrete is giving way to wider applications of pavers, permeable paving systems, and even stabilized soil for minimal-use areas. These alternatives reduce the amount of runoff from a site and allow more runoff to be collected to recharge aquifers.

For areas outside of parking and cartways, vegetative cover is usually used. As we have already discussed, one effect of construction activities is the destruction of soil structure, which decreases the soil's ability to support plant growth. Soil structure is determined by the way in which soil particles are arranged into aggregates in combination with organic matter and microorganisms. The aggregates include pore spaces for the movement of water and air through the soils. The loss of soil structure increases erodability and reduces permeability. Before vegetation can be expected to grow and become established in this difficult environment, the soil and the site must be properly prepared. Although preparation does not immediately restore the soil structure, it does provide the elements necessary for the soil to "heal" itself over time.

## Mulches

Mulches are generally recommended for all revegetation efforts. The choice of materials is so broad and the variety of characteristics so great that careful consideration needs to be given to the selection of a mulch (see Table 3.5). The complexity of the choice aside, the role of mulch in the vegetation plan should not be overlooked. To different degrees each mulch material has the following attributes: It insulates soil to affect temperatures, it provides runoff protection, it reduces evaporation, it encourages infiltration, and it holds seed in its place. Different materials perform these tasks with different degrees of success. In

**TABLE 3.5 Comparison of Mulch Materials**

Material	Advantages	Disadvantages
Straw	Low cost, available, absorbent, light color, short application distance, 3000–8000 lb/acre, biodegradable	Must be anchored in place, cost of nets or tackifier, allows weed growth, can be a fire hazard
Wood fiber mulch	Holds seeds and plants in place, can be hydroseeded, inexpensive, stays on slopes, available, 1000 lb/acre	Does not resist erosion or protect from rainfall
Netting/fiber	Resists erosion, protects from rainfall, absorbs water, holds moisture, provides good slope protection	Expensive, installation must be in contact with soil