Roofmeadow® Type II Data Sheet

Our experience demonstrates that the most efficient designs for the vast majority of American green roofs can be derived from five basic green roof types (Type I, II, III, IV, V). Roofmeadow® has developed assemblies for each of these types.

The selected assembly depends in part on project conditions including climate, desired plant community, performance requirements, and load bearing capacity of the building. All assemblies will include the following elements: 1) protection of the waterproofing membrane from root and biological attack, 2) protection of the waterproofing membrane from physical abuse and accident, 3) a base drainage layer, 4) a separation layer to prevent fine-grained engineered soils from fouling or clogging the drainage layer system, and 5) an engineered soil to support the vegetation.

Type II: Single Media With Sheet Drain

Type II assemblies include a synthetic drain layer that offers a much lower resistance to water flow than growth media. In this assembly, the drainage layer is a geocomposite sheet drain, and the growth media exhibits a moderate permeability and porosity. A filter fabric separates the media from the underlying geocomposite sheet drain. The root-permeable filter fabric keeps media fines out of the drainage zone. A common variation, used mostly in conjunction with PMR roofing systems, utilizes a sheet drain with recesses to retain water. This type of sheet minimizes the loss of moisture into the underlying insulation. To reduce plant stress during drought conditions, the drainage layer should not exceed one-inch (2.5 cm) in thickness. Type II assemblies are probably the most common extensive assemblies in the United States, and typical assembly thicknesses range from 3 to 6 inches (8 to 15 cm). This assembly is not optimized for irrigation, which is not recommended in temperate climates.

The profile of a Type II assembly is as follows:

Wind Erosion Stabilization System
Growth Medium
Root-permeable Separation Fabric
Sheet Drain
Slope Stabilization Systems (for roof pitches exceeding 2:12)
Protection Layer
Root Barrier Membrane (when required)
Waterproofing System