



Green Roofs: Plant Production and Installation Methods

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Design Intent

Intensive



Extensive











Why Green Roofs?













Benefits

- Aesthetics
- Recovery of green space
- Biodiversity
- Water and air purification
- Longevity of roof
- Noise reduction
- Stormwater management – Quantity and Quality
- Moderation of urban heat island
- Building insulation
- Carbon sequestration
- Urban food production

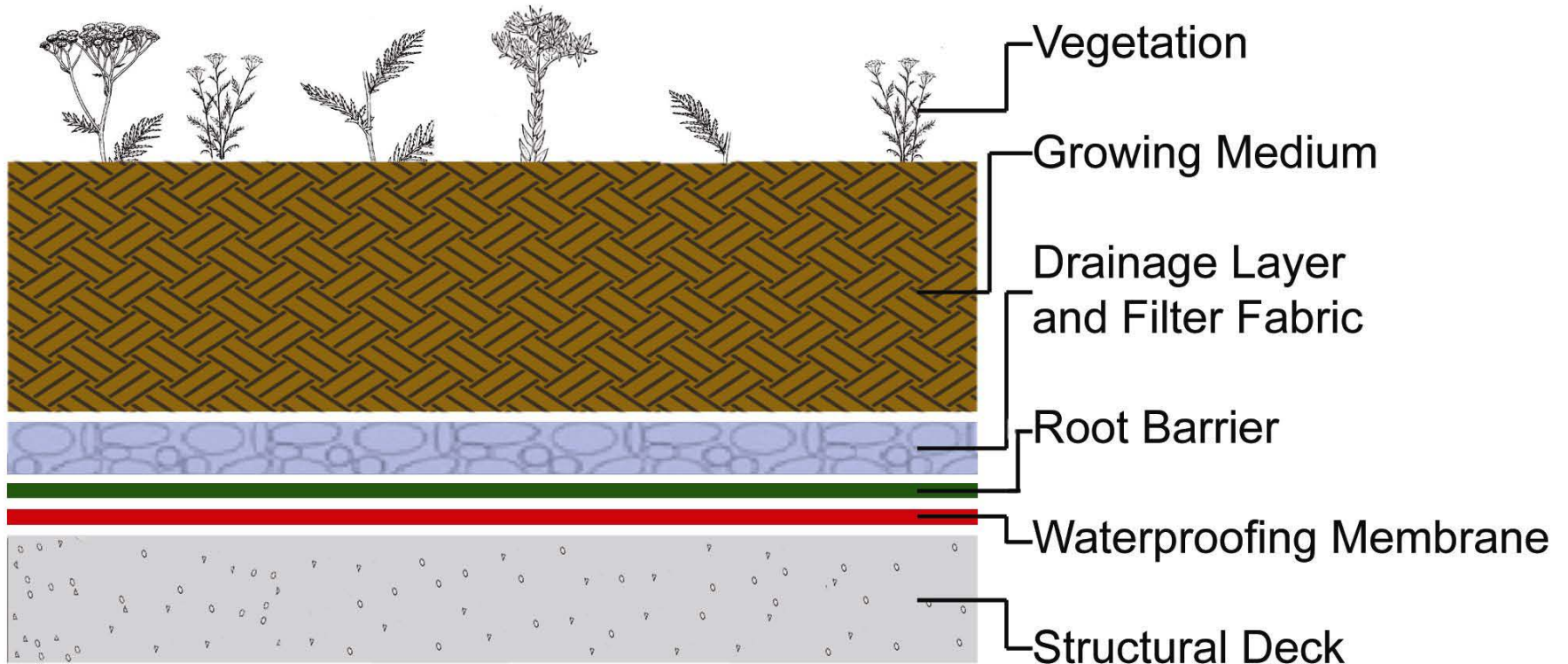


Installation options

- Conventional built-up system
 - Spontaneous colonization
 - Plugs
 - Seed
 - Cuttings
- Modules
- Pre-vegetated mats



Components





Spontaneous generation







National Audiovisual Conservation Center
Library of Congress, Culpeper, VA

JUN 30 2006





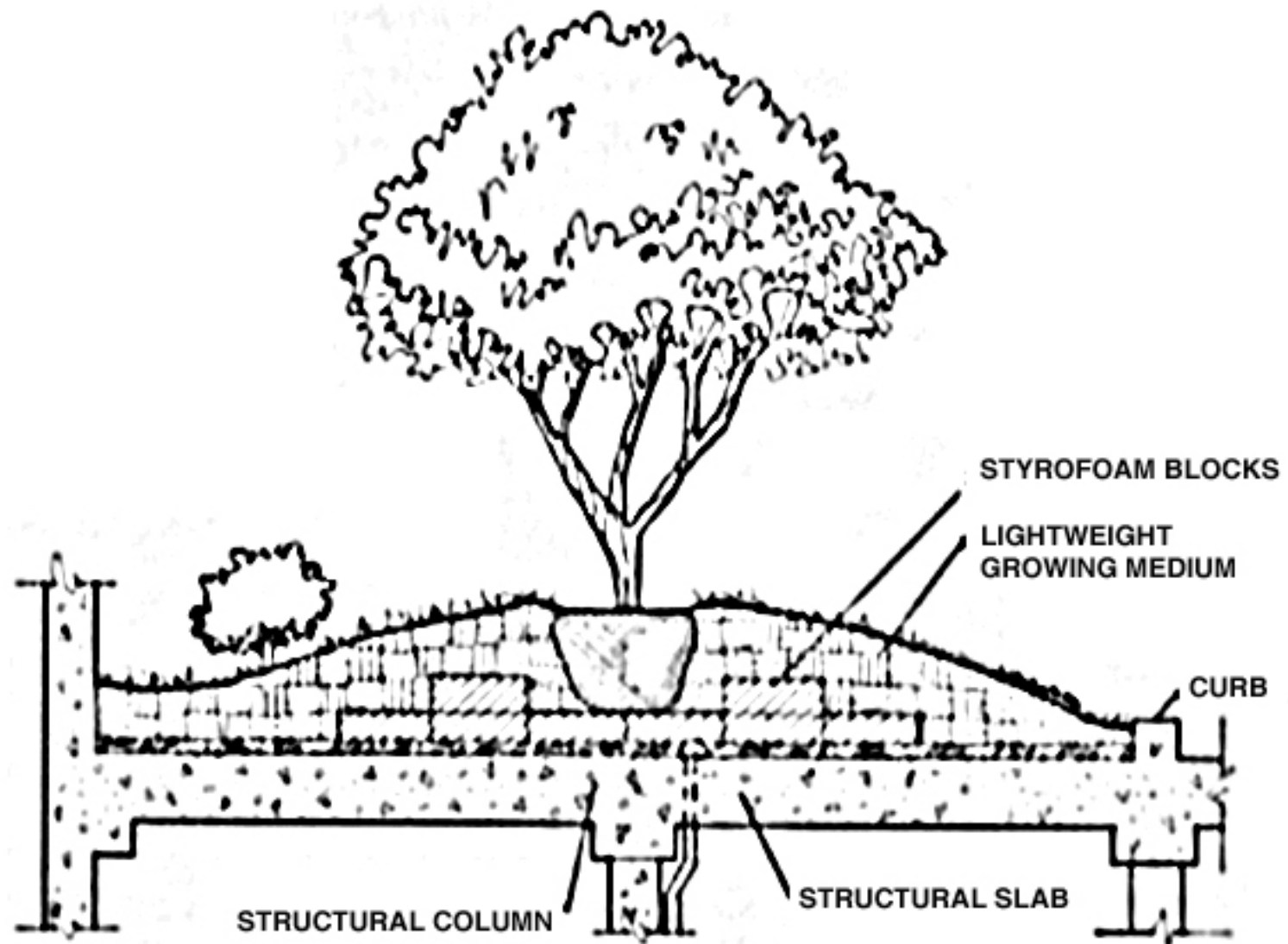
Millenium Park, Chicago



Source: Jeffrey Bruce



Source: Terry Guen



Source: Monica Kuhn and Steven W. Peck



August 2003







July 2009



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Source: Green Grid







































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Ford Motor Company Truck Assembly Plant, Dearborn

Photo © Waltrudye Alvinge











Vegetation

Growing medium

Water retention fabric

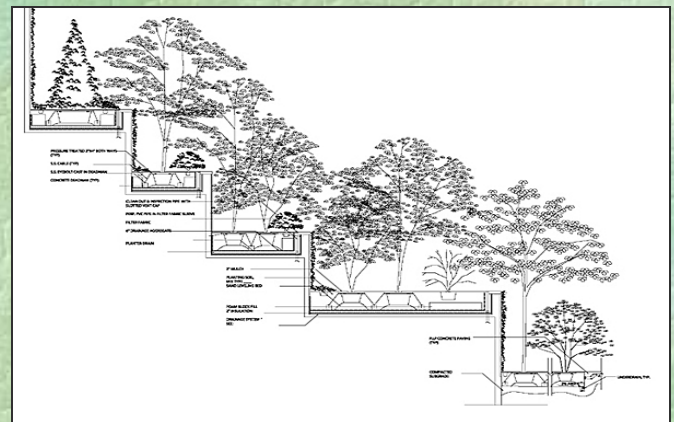
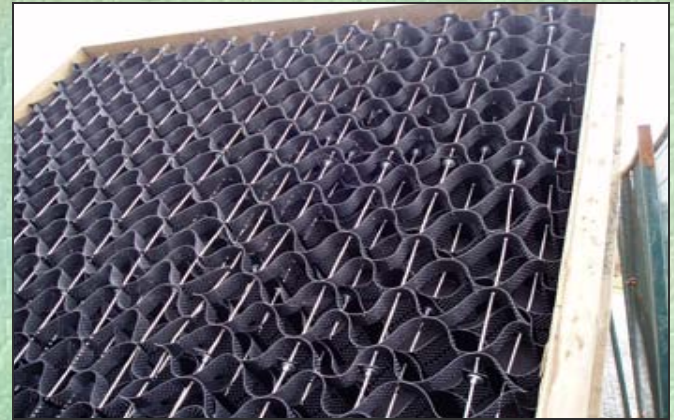
Filter fabric

Drainage layer



Slope

- Growing medium
- Reinforcement system
- Structural grid
- Terraces
- Moisture
- Installation method









Green Roof Design Goals

- Building stays up
- No leaks
- Keep plants alive

