Extensive Green Roof Conditions

- Thin media
- Mostly mineral media
- Fractured media, little or no capillary action
- Long periods of dry and heat
- Winter wet
- Windy
- Low maintenance

Plant Selection Criteria

- Geographic region
- Soil depth and composition
- Functional design intent
- Light conditions
- Client desires
- Aesthetics
- Accessibility to the roof by occupants
- Maintenance constraints

Plant Characteristics for Extensive Green Roofs

- Lateral roots not tap roots
- Drought and wind tolerant
- More horizontal growth than vertical
- Not wind blown seeds
- Low nutrition requirements
- Low maintenance requirements
- Longevity
- Light weight at maturity
Methods

- Seeds & Cuttings
- Plugs
- Modules
- Mats

Cuttings are inexpensive
Cuttings are often covered with Hydromulch.
Design Choices

- Winter Interest
- Foliage, Color & Texture
- Bloom Color
- Bloom Duration
- Accents
- Specific Functional Design

Proper design elements don’t assure good design

Sedum Meadow Mix

- Low Weight
- Low Inputs
- Low Nutrient Outfall
- Low Maintenance
- Limited Design Options
Sedum Design

- Low Weight
- Low Inputs
- Low Nutrient Outfall
- Higher Maintenance
- More Design Options
Self Sowing

- Design Will Change Over Time
- Bare Spots Fill in
- Plants Can Escape off the Roof
Native

- No Proven Plant List
- Opportunities for Restoration
- Need for Knowledgeable Maintenance
- Provides Local Habitat
- Educational Opportunities

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Courtesy of Dr. Bradley Rowe Michigan State University

Oaklyn Public Library
Evansville, Indiana
18,500 s.f.
$3.2 million
Sedum/Herbs

- More Design Options
- Culinary Use
- High Maintenance
- Higher Nutrient Loading

Perennials/Grasses

- Possible Fire Hazard in Dormancy
- More Loading
- Greatest Design Options
- Higher Maintenance
- High Nutrient Loading
- High Storm Water Retention
Brown Roofing

- Low Plant Cost
- Unpredictable Results
- May be Hard to Sell