IPRO 371
Sustainable Landscape Design & Implementation at the Rice Campus

29 April 2005
IIT Rice Campus
Problems

• Negative environmental effects
• Landscaping is not sustainable
• Landscape has limited benefits
Objective

• IPRO 371
  – Design & implement a landscape that reduces maintenance costs and improves the environment at IIT’s Rice Campus.

• Spring 2005
  – Research and design sustainable landscape elements for the campus.
Goals

• Improve environmental effects
• Introduce sustainability
• Invigorate campus & community
Team Framework

Stream Restoration

Stormwater Management

Native Vegetation
• Ordinances
• Requirements
  – 89 parking spaces
  – 14 trees
• Current Parking Lot
  – 291 parking spaces
  – 0 trees
• Porous Pavers
  – Allow infiltration of rain water
• Rain Garden
  – a garden, designed to retain and absorb stormwater

• Filter Strips
  – Overgrowth designed to filter runoff
• Willoway Brook
  – Pollution source to Rice Lake
  – Flashy stream
  – Downstream effects
    • Rice Lake
    • Morton Arboretum
    • DuPage River
- Stream Bank
  - Grading
  - Bioengineering
    - Fascines
    - Brush Mattressing
  - Riparian buffer
• Flow Alteration
  – Meander
  – Flood plain
  – Riffles
• Plant habitats
  – Native Prairie
  – Aquatic Plants
  – Riparian

• Appropriate vegetation
  – Sustainable
  – Attractive
• Sustainable plants
  – Reduce costs
  – Retain stormwater
  – Minimize runoff
    • Fertilizers
    • Pesticides
    • Herbicides
Benefits

• Improve environmental effects
  – Reduce runoff
  – Increase filtration
  – Reduce sedimentation

• Invigorate campus & community
  – Improve aesthetics
  – Connect with community
  – Encourage education

• Introduce sustainability
  – Reduce costs
  – Increase functionality
Looking Forward

Recommendations

1. Engage stakeholders
2. Identify funding sources
3. Develop schedule
4. Develop outreach plans
Reflection

- Researched sustainability & the environment
- Utilized several academic disciplines
- Experienced real world problem solving
- Contributed to campus’s development
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Questions?