The Houston Experience

One Path to Market-Driven

Green Infrastructure
Green Infrastructure, a.k.a. Low Impact Development (LID)

- Common obstacles to implementation
  - Focus on water quality regulatory impetus obscures ‘market-friendly’ attributes
  - “It won’t work here. Our conditions…”
  - Requires 180° shift in site design approach
    - Countering a 2000 year-old model
Houston Land/Water Sustainability Forum

- Get all constituencies with a ‘vested interest’ in development on the same page
  - Anticipate regulatory impetus
  - Explore options for change in local context
  - If change is inevitable, we need to lead
- Provide ‘nuts & bolts’ education
- Foster communication and relationships
  - Sustainable design requires integrated teams
Common Understanding

- Costs of traditional development soaring
- Developing ‘the way we’ve always done it’ is more and more counterproductive
- For public agencies, costs of keeping pace with results of traditional development becoming massive burden
HLWSF Steering Committee

Education is having an impact, but how do we leverage it, and speed up the process of widespread adoption, adaptation and implementation?

American Institute of Architects
HOUSTON CHAPTER

American Society of Civil Engineers
HOUSTON CHAPTER
LID Design Competition

- Increase general awareness
- Provide ‘hands on’ learning opportunity
- Overcome ‘chicken or the egg’ dilemma
- Generate exploration and design experience
- Let the process prove the value proposition
- Provide exposure to those willing to lead
Keys to the Competition

- Real properties, real projects as subjects for design challenge
  - Variety of challenges brings more players
- Focus on local issues rather than SWQ
  - Require designs to reduce runoff below pre-development curve
  - Require designers to compare costs to traditionally designed project costs
Keys to the Competition

• Publicity and promotion within design community
• High-profile Finals Event
• Vested–interest groups have ‘skin in the game’
  • City/County agencies
  • Engineering, Architecture, Landscape Architecture, Environmental organizations
Participation Drivers

- Peer pressure from competitors, sponsors and property providers
- **Pressure from City/County staff**
  - Pressure from advancing regulations
  - Strength of Expert Judges Panel
  - Composition of Finals Event Jury Panel
- Potential to get work from property owner
Participant Demographics

• 22 submitting teams
  – 9 Green Roadway
  – 4 Urban Redevelopment
  – 9 Suburban Residential
• 42 firms (TX, IL, NC, GA, CO, CA, KS)
• 230 design professionals
  – Architects, Civil Engineers, Landscape Architects, Hydrologists, Urban Planners, Construction Consultants, Homebuilders, Environmentalists, Transportation Engineers, Irrigation Consultants
Consistent Results

• Mimicking nature really works
  • Significant reductions in runoff
  • Significant cost savings compared to traditional development methods
  • Major improvements in water quality
  • Consistent results produced by all teams

• Conservative civil engineering firms proselytize for ‘green infrastructure.’
Lessons

• LID is a superior design approach even when Water Quality is a secondary goal
• Regulatory pressure isn’t needed to make LID the dominant method of development
• The opportunity to learn for yourself is extremely valuable
• Sustainable design thrives in a collaborative approach in design
Impacts

- Permitting for LID-based projects has increased dramatically
  - Large scale suburban residential & commercial
  - Urban residential
  - City and County roadway projects
- Spawned collaborative LID Design Guide Workshops
  - Fast-tracked performance-based ‘Interim’ ordinance solution
Ultimate Value

- Quickly educated and energized a large segment of the design community
- Proved that water quality is not the only reason LID makes sense
- Demonstrated the economic benefits to developers and municipalities
- Created a ‘community’ of sustainable site design among local design firms
What You Can Do

- Call a meeting of ‘vested-interest’ groups
- Put together a Competition Committee
- Choose real projects (library, park, fire station, office/maintenance facility) that generate designs which have transferrable elements
- Put on a highly visible competition
- ‘Strongly encourage’ all design professionals who work for, or want to work for, the City to participate.
Resources

www.houstonLWSforum.org

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