Introducing:

**I-LAST**

Illinois - Livable and Sustainable Transportation Rating System and Guide

Product of a collaboration between:
- Illinois DOT
- Consulting Engineers Council
- Roadbuilders
What is I-LAST?

The purpose of I-LAST is threefold:

• Provide a list of potentially sustainable practices $153 \text{ items}$!
• Establish a simple way to evaluate the sustainability of projects
• Recognize the use of sustainable practices in the transportation industry

Why I-LAST?

• Growing interest in sustainability among:
  1. Public
  2. Legislators
  3. Engineers

• No comprehensive guide available for roadways.

• Requirements for sustainable measures are sure to come.

  An opportunity to be proactive.
What is Sustainability?

“What meeting the needs of the present generation without compromising the ability of future generations to meet their own needs.”

United Nations, Bruntland Commission

Sustainable Highways

Sustainable Highways includes three principal ideas:

1. Protecting, maintaining and preserving natural resources
2. Designing to enable and encourage lower impact forms of transportation
3. Selecting construction practices that reduce the environmental costs and impacts
I-LAST Team

Cooperative effort between members of:

Doug Knuth, Jacobs - Chairman

IDOT Representatives
- John Fortmann
- Abdul Dahhan
- Rick Wanner
- Michelle Aquino

ACEC-IL and IRTBA Members
- Gary Baker, MACTEC Engineering and Consulting
- Dave Heslinga, V3 Companies
- Michael Gold, Lighting Solutions
- Linda Huff, Huff & Huff
- Robert Israel, MACTEC Engineering and Consulting
- John Lazzara, HDR
- David McDonald, Hanson Professional Services
- Peter Mesha, Wight & Company
- Jerry Payonk, Clark Dietz
- Allen Staron, Clark Dietz
- Michael Stirk, Christopher B. Burke Engineering
- Burak F. Tanyu, Geosyntec Consultants
- Craig Williams, LYKAH

Other Systems

NYSDOT
- GreenLITES (Leadership in Transportation and Environmental Sustainability)

University of Washington
- Greenroads (www.greenroads.us)

Transportation Research Board
- Two year study

European systems

FHWA will be developing a new system
What is in I-LAST?

Over 150 sustainable items that can be considered in the design of highway projects. The items are in eight major categories:

1. Planning
2. Design
3. Environmental
4. Water Quality
5. Transportation
6. Lighting
7. Materials
8. Innovation
9. Construction

Organized generally:
- In job progress order
- Grouped by type of professional

Check List

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>ID</th>
<th>DESCRIPTION</th>
<th>Available Points</th>
<th>Project Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-1 Content Sensitive Solutions</td>
<td>P-1a</td>
<td>Identify Stakeholders and develop Stakeholders Involvement Plan</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P-1b</td>
<td>Engage Stakeholders to conduct Context Audit and develop project purpose</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P-1c</td>
<td>Involve Stakeholders to develop and evaluate alternatives</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P-1d</td>
<td>Employ Stakeholder involvement techniques to achieve consensus for Preferred Project Alternative</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td>P-2a</td>
<td>Promote reduction in vehicle trips by accommodating increased use of public transit</td>
<td>2</td>
<td></td>
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<tr>
<td></td>
<td>P-2b</td>
<td>Accommodate multi-modal transportation uses (e.g. transit riders, pedestrians, and bicyclists)</td>
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<tr>
<td></td>
<td>P-2c</td>
<td>Increase transportation efficiencies for moving freight through features such as dedicated rail or intermodal facilities</td>
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<td></td>
<td>P-2d</td>
<td>Partnerships that provide environmental or technological advancements while promoting environmental stewardship</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P-2e</td>
<td>Project is consistent with regional plans and local managed growth-based Master or Comprehensive Plans</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P-2f</td>
<td>Project is compatible with local efforts for Transit Oriented Design</td>
<td>1</td>
<td></td>
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</table>
Category Intent and Rationale

P-2: Land Use / Community Planning

Intent
The objective of this section is to consider balancing community goals and transportation needs through increased consideration of transportation alternatives that accommodate a broad perspective of community interests.

Rationale
Sustainable transportation alternatives can emphasize the relationship between land use and transportation planning. Local and Regional planners are incorporating sustainable design principles into their development plans, thus reflecting the diverse goals and interests of communities. Social and environmental issues, such as congestion, greenhouse gas emissions, and energy consumption, can be addressed through consideration of managed growth planning initiatives. The growing concern for the environment is leading to the objective of developing multi-modal transportation solutions that address mobility needs in an effective, efficient, and responsible manner. By focusing on land use and transportation planning from a holistic perspective and considering all users, transportation projects can achieve higher levels of sustainability.

Item Descriptions

P-2a Promote reduction in vehicle trips by accommodating increased use of public transit (2 points)

Criteria
Two points will be awarded for incorporation of design elements offering alternatives to single occupancy vehicular usage such as Park-and-Ride lots, dedicated bus lanes, or High Occupancy Vehicle (HOV) lanes.

P-2b Accommodate multi-modal transportation uses (e.g. transit riders, pedestrians, and bicyclists) (2 points)

Criteria
Two points will be awarded to projects applying “Walkable Communities” and/or the “Complete Streets” concepts by providing safe access for all users including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. These designs include considerations for older people, children, and people with disabilities.
Source Material References

Sources & Resources

- ITE. *Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities*, 2006.

Scoring

- Scoring is *not* the most important part
- It was the most difficult
  - Hard to fairly compare items
    - *NOT* carbon footprint based, for example
    - Level of Effort difficult to quantify
- Make it *simple*
Scoring Philosophy

- Total of 233 points on 153 items
- Very difficult to compare projects of different size and scope
  - A very sustainable small project may score fewer points than a much larger project where not much was done.
- It was decided to score the projects based on the percentage of applicable items that were addressed
- Two scoring steps:
  1. Determine at the start of the project which items are applicable to the project
  2. Evaluate at the end for which of those items the goal was accomplished
- Resulting score is a percentage

Weighted Scoring

<table>
<thead>
<tr>
<th>Required Design Elements</th>
<th>1 Point</th>
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<tbody>
<tr>
<td>Design Beyond Requirements</td>
<td>2 Points</td>
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<tr>
<td>Unique, Innovative, Special</td>
<td>3 Points</td>
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## Sample Scoring

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<tr>
<th>Max</th>
<th>8/12 = 67%</th>
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<td>12 applicable</td>
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### Scoring

- **Self Scoring system**
  - No certification, record keeping or outside auditing
  - No calculations, either an objective was accomplished, or not
  - Project Manager should be able to score a project in an hour or so

- **Scoring summary**
  - Not enough data to develop a scoring curve
Implementation

• Voluntary Trial Period – First Year
  – Volunteers to score completed projects
    Report results and suggestions
  – Volunteers to use I-LAST at project initiation
    to evaluate applicable items
    Report results and suggestions
  – IDOT staff to report suggestions and changes
    necessary to make it an IDOT system
  – Joint Committee updates I-LAST
  – Develop a scoring curve based on reports

What is the Future?

• Multiple rating systems
  – Comprehensive Systems
    • Broad performance measurements
    • Better address overall sustainability
    • More complex
  – Practice Specific Systems
    • More prescriptive measurements
    • Weaker link to sustainability
    • Simpler, easier to implement

• Future consolidation?
• Funding tied to ratings?
How to get I-LAST

Download from:

www.acec-il.org/handouts/I-LASTGuidebook.pdf