Signalization in Context Sensitive Solutions for Design of Major Urban Thoroughfares

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What is CSS?

- Balance
  - Safety
  - Mobility
  - Community objectives
  - Environment
- Multimodal
- Involve public, stakeholders
- Interdisciplinary teams
- Flexibility in design
- Incorporate aesthetics
Provide For All Users

- Older drivers
- Bicyclists
- Pedestrians
- Transit

Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities

ITE Proposed Recommended Practice

Sponsors:
- Federal Highway Administration
- Environmental Protection Agency

Prepared by:
- Institute of Transportation Engineers
- Congress for the New Urbanism
Focus of the Proposed RP

- "Major":
  - Arterials and collectors

- "Urban":
  - Development intensity
  - Mix of land uses
  - Efficient, attractive choices
    - Walking
    - Transit
    - Biking

Contents of the Proposed RP

- Introduction
  - Overview

- Planning
  - Network and corridor planning
  - Design framework

- Design
  - Principles, criteria, guidelines
    - Roadside
    - Traveled way
    - Intersections
  - Design in constrained rights-of-way
    - Flexibility
    - Examples
## The Concept of Context Zones

<table>
<thead>
<tr>
<th>Suburban</th>
<th>General Urban</th>
<th>Urban Center</th>
<th>Urban Core</th>
</tr>
</thead>
<tbody>
<tr>
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<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
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</table>

Source: Duany Plater-Zyberk and Company

## CSS vs. Conventional Thoroughfare Design Approach

<table>
<thead>
<tr>
<th>Conventional</th>
<th>CSS Approach</th>
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</thead>
<tbody>
<tr>
<td>Context:</td>
<td>Context:</td>
</tr>
<tr>
<td>Urban</td>
<td>Suburban</td>
</tr>
<tr>
<td>Rural</td>
<td>General urban</td>
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<tr>
<td></td>
<td>Urban center</td>
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<td></td>
<td>Urban core</td>
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<tr>
<td>Design criteria primarily based on:</td>
<td>Design criteria primarily based on:</td>
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<tr>
<td>Functional class</td>
<td>Community objectives</td>
</tr>
<tr>
<td>Design speed</td>
<td>Functional class</td>
</tr>
<tr>
<td>Travel demand</td>
<td>Thoroughfare type</td>
</tr>
<tr>
<td>Level of service</td>
<td>Adjacent land use</td>
</tr>
</tbody>
</table>
Features That Create Context

- Land use
- Site design
- Building design

Thoroughfare Types

- Three roadway classifications:
  - Boulevard
  - Avenue
  - Street

- Basis for:
  - Physical configuration
  - Design criteria
Signal Considerations

- More but lower volume major thoroughfares
- Signal spacing

Signal Considerations

- Timing
  - Traffic, transit, pedestrian, bike priority
  - Shorter pedestrian crossings

- Target speeds
Signal Considerations

- Phases
  - Ped, bike protection
  - Cycle length
  - Midblock crossings

- Access management
- Alternatives to signalization
  - Roundabouts
  - Split streets, pairs

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Texas
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Alton Parkway
Minor street
Conclusions

• More complex

• Some signalization advantages

• Some signalization challenges

Please Use and Comment

• Through December 31, 2006

• Comments, suggested changes
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  – …or Brian Bochner: b-bochner@tamu.edu

• Free report download: www.ite.org