Moving Beyond Prevailing Design Standards: Assessing Legal and Liability Barriers to More Efficient Street Design and Function

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The City Streets Project at Berkeley Law

- How must we change the way we design, construct, regulate and use city streets?
- What are the policy, legal and institutional barriers to making this happen?
- How can we remove the barriers?

We want more walking, peddling, and transit use:

- Calm, narrow streets
- Wide sidewalks
- Shade trees
- A sense of safety for pedestrians and bikes
- Reasons to walk (mixed use, etc.)

Perceived barriers:

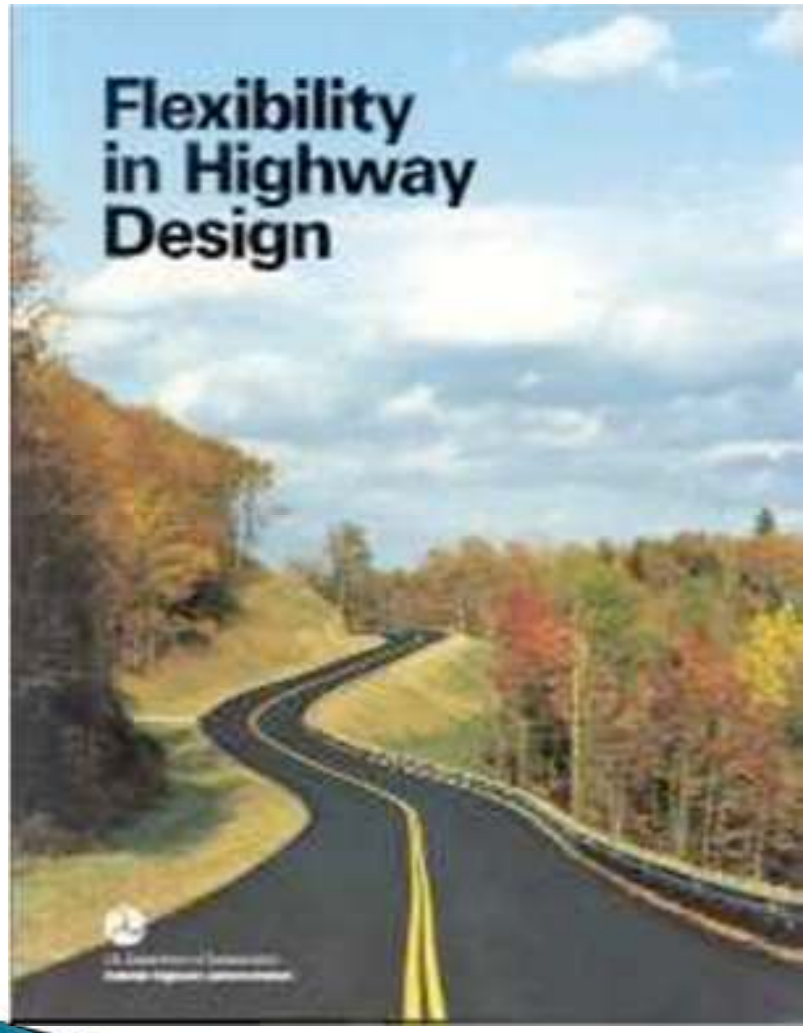
- Over-reliance on industry standards that are usually discretionary
- Federal and state laws and rules that may push engineers and planners in the wrong direction

Part One:

Design Standards and the Law

When are AASHTO standards mandatory?

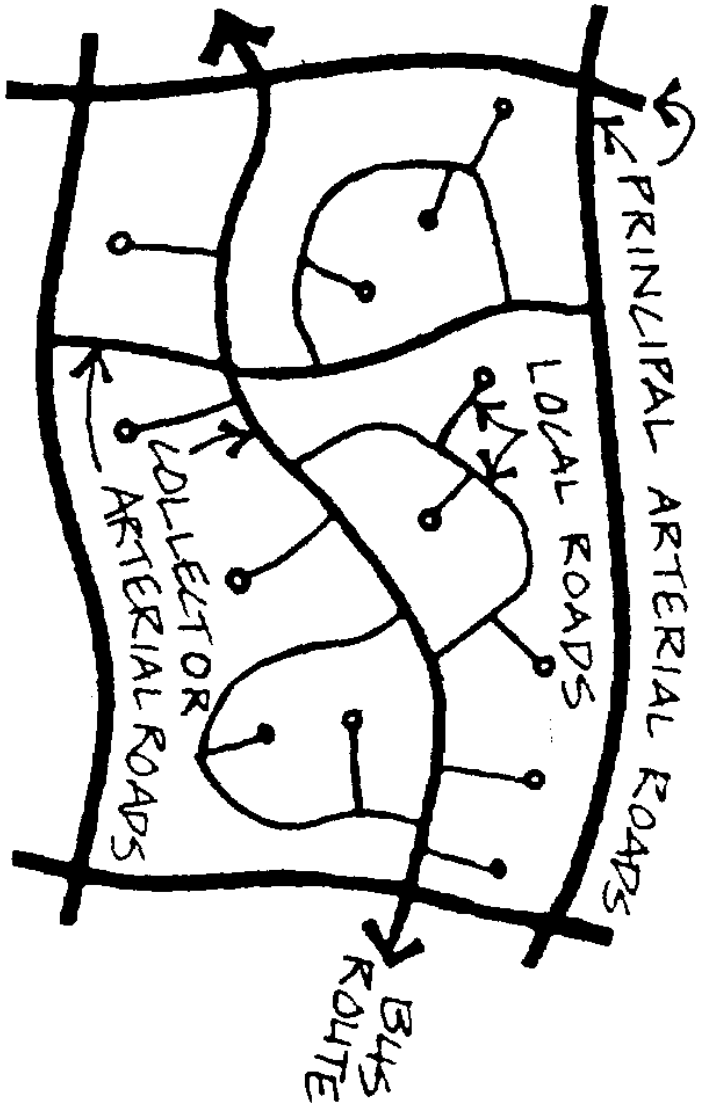
Standards and Federal Law



- Federal law mandates standards only for the NHS
- Requires AASHTO *Green Book* on NHS but:
  - Allows flexibility and exception process
  - Urges consideration of environmental, scenic, aesthetic, historic, community, and preservation impacts
- States are required to develop own standards for federal aid projects off NHS but they need not be consistent with the *Green Book*

Federal Law: Functional Classification

- Functional classification requirement preserves hierarchical system of arterials, collectors, and local roads
- Road class determines design speed, which determines geometry (e.g. lane widths, shoulder, etc.)
- Result: roads designed primarily to serve autos



Other Federal Requirements

- Americans with Disabilities Act (ADA)
- CA law requires sidewalks, curbs, and related facilities that use public funds be built to ADA standards

Standards and State Law

- Caltrans Highway Design Manual (HDM) is based largely on AASHTO
- HDM does not establish a legal standard, and its guidelines apply only to NHS and SHS projects
- Caltrans delegates design authority to local governments for federal-aid projects off NHS and SHS

State Law: Minimum Street Widths

- CA Streets and Highways Code § 1805
  - Requires 40’ right of way for all city streets built after 1935
- CA Fire Code
  - Requires 20’ unobstructed travel way

Standards and Local Law

- Municipalities are generally free to develop and apply their own standards for local roads and streets
- Yet, lack of funds or expertise often means FHWA, AASHTO, or HDM guidance is followed
- LOS requirements can preclude resource efficient designs

Key Findings

- There are no federally or state mandated design standards for streets and roads off of the National or California State Highway Systems
- Two California statutes set minimum street widths that can conflict with resource efficient designs, but exceptions are possible

Key Findings

- A federal requirement to functionally classify all roads can constrain street geometry and design
- Level of Service (LOS) requirements in municipal codes or general plans are often at odds with pedestrian and bike-friendly designs

Key Findings

- The biggest barriers to deviating from professional design standards are often non-legal and can include a lack of municipal resources, and a general adherence to “common” engineering practice

Part Two:

Design Standards and Case Law

Case Law Pertaining to Local Government Liability Arising from Deviation from Accepted Design Standards

How Do Design Standards Pertain to Case Law?

- The Government Claims Act § 835

Elements for a claim under § 835:

1) Dangerous condition of public property
2) The injury was proximately cause by the dangerous condition
3) The injury was foreseeable
4) Must show either:
   A)Injury caused by negligence of public employee OR
   B)Public entity had notice of the dangerous condition

How Do Design Standards Pertain to Case Law? (continued)

- Government Immunities
  - § 835.4 Reasonableness

Proving the Defense of Reasonableness:

Weigh the gravity and probability of the potential injury against the cost of removing the dangerous condition

  - § 830.6 Design Immunity

Elements for Defense of Design Immunity:

1) Causal Relationship between design and injury
2) Discretionary approval of the design
3) Reasonableness of design

How Do Design Standards Pertain to Case Law? (continued)

- Loss of Immunity
  - *Baldwin v. State* (1972)
  - 1979 Amendment
  - *Bane v. State* (1989)

Elements for Loss of Design Immunity:

1)Design has become dangerous due to changed condition

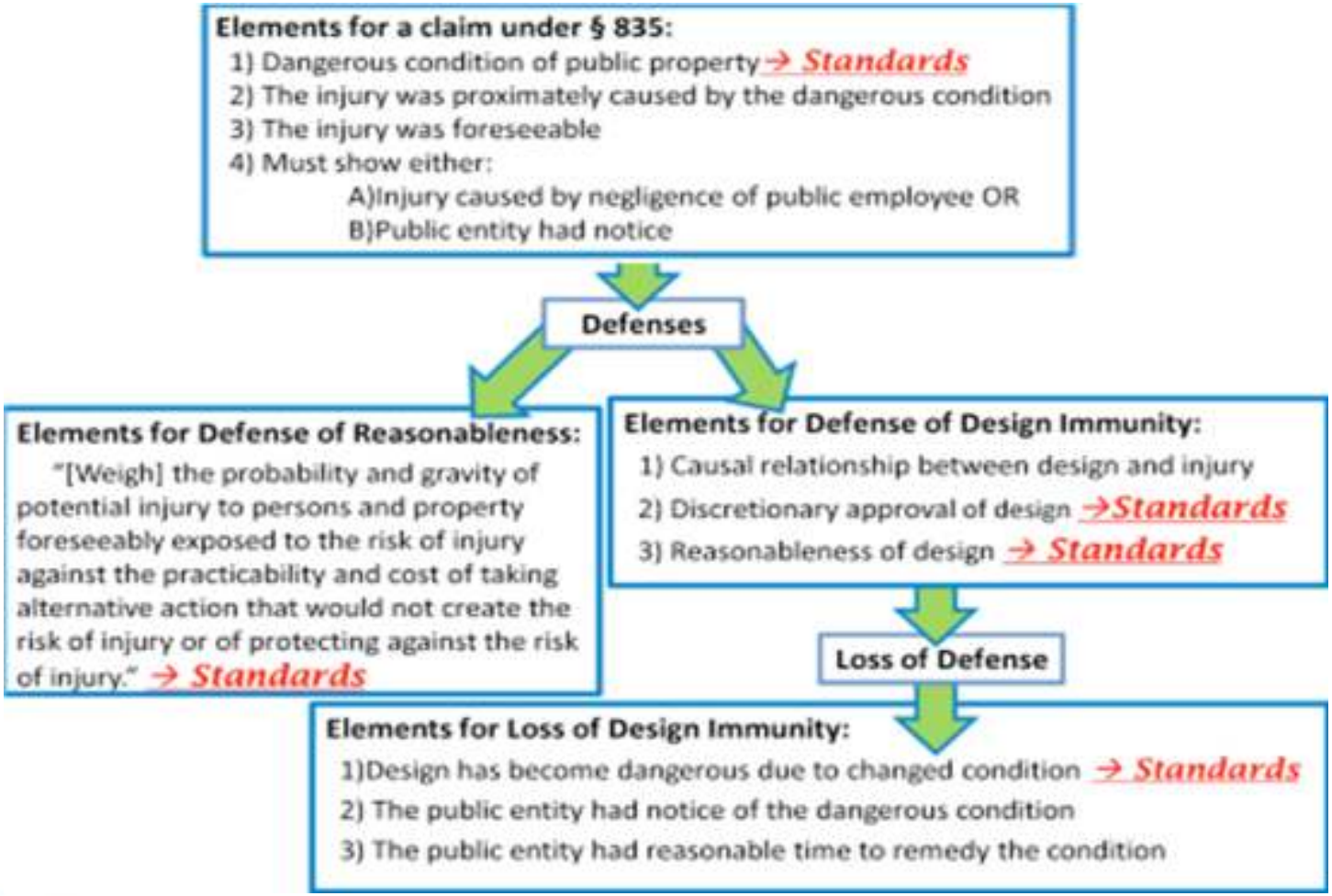
2) The public entity had notice of the dangerous condition

3) The public entity had reasonable time to remedy the condition

How Do Design Standards Pertain to Case Law? (continued)

- Where there is a dangerous condition of a roadway, design standards can serve an evidentiary function to prove a claim brought under § 835 and relevant immunities…

Issues Where Design Standards Arise in a Claim Brought Under Cal. Gov. Code § 835



Alternatives to Design Standards in Preventing Liability

Element	How Standards Matter	Alternative to Standards
Dangerous Condition of a Roadway	Noncompliance is evidence of dangerous condition	-Absence of accident history -Expert testimony
Reasonableness Defense	Noncompliance can be unreasonable	-Improved safety -Improved environment
Design Immunity Defense: Design Approval	If no evidence of approval, prevailing design standards show implicit approval	-Document approval -Write alternative design standards into local law
Design Immunity Defense: "Any Substantial Evidence" of Reasonableness	Noncompliance can be unreasonable	-Absence of Accident history -Expert testimony
Loss of Design Immunity: Dangerous Condition due to Changed Condition	Non-compliance is evidence of dangerous condition	-Absence of accident history

Elements of Energy Efficient Streets and Case Law

Elements of Resource Efficient Streets
Street trees
Cross walks and sidewalks
Street width
Traffic Calming

Conclusion: Case law shows that claims brought under § 835 alleging that design elements associated with resource efficient streets are dangerous are rarely successful.

Key Findings

1. A city may deviate from prevailing design standards for the sake of developing more resource efficient streets without being vulnerable to liability.
2. A city must take proper steps and precautions when designing and approving a roadway in order to prevent liability.
    a. Monitor and modify
    b. Design and document

Part Three:

Design Standards and the Future

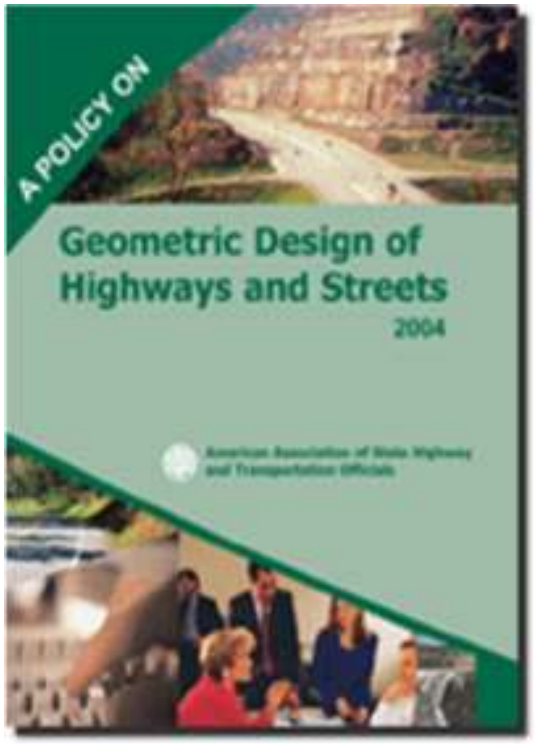
Assessing the Feasibility of Creating Codes that Promote Resource Efficient Street Design

Non-Legal Barriers to Resource Efficient Streets

- Lack of resources
- Resistance to deviation from common practice
- Lack of communication between departments
- Service vehicles
- Lack of progressive studies and standards
- The need for security in numbers

New Models and Their Potential

- Context Sensitive Solutions
- Reforming the *Green Book*
- San Francisco's *Better Streets Plan*



Conclusion

Neither laws nor liability are preventing cities from deviating from prevailing design standards in order to develop resource efficient streets.

Future Research

- Additional interviews with city planners and engineers to uncover barriers not evident in federal, state, or case law

- Improving institutional coordination

Future Research

- The potential for new manuals to become “prevailing standards”
- Identifying funding constraints

Future Research

- Developing mechanisms to help cities develop and implement their own street standards
- Help cities work together to establish new standards
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