GOVERNMENT & SUSTAINABLE CONSTRUCTION:
USE OF VOLUNTARY CONSENSUS STANDARDS

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Overview

- Legislative and Policy Framework
- Standards as Fundamental Tool
- Benefits to Government
- Sustainability Elements in Construction
- Government Use of Standards for Sustainable Construction
- Summary
Legislative and Policy Framework

• **Incumbent on Government Agencies:**
  – Laws
  – Treaties
  – Executive Orders from the President
  – Regulations

• **Government Activities:**
  – Regulations & Compliance
  – Guidance
  – Education
  – Voluntary and Incentive Programs

*AREAS WHERE GOVERNMENT USES VOLUNTARY STANDARDS*
Government Reliance on Voluntary Consensus Standards

• National Technology Transfer and Advancement Act of 1995 (NTTAA)
  – Federal agencies directed to use standards developed by voluntary consensus standards organization when possible
  – Federal agencies directed to participate in standards development organizations when possible

• Office of Management & Budget (OMB) Circular No. A-119
  – Implements the NTTAA in Government activities
  – Discourages government-unique standards
  – Requires annual reporting to Congress
Benefits to Government

• Eliminate/reduce costs
• Expert technical underpinning to projects
• Increase confidence, reliability, consistency in construction, mobility from project to projects
• Facilitate safety, health and environmental elements
• Promote efficiency
• Economic competition
• Maximize pool of available experts from all sectors
• Mobility from one authority to another
Sustainable Construction in Government Operations and Programs

• **Procurement of Green and Sustainable Goods and Services**
  – Federal-wide programs for Greening Government acquisitions and services
  – EPA guides for environmentally preferable products based on voluntary standards
  – Green meetings – new ASTM standard

• **Federal Buildings**
  – Environmentally preferable standards for federal building management and construction
  – Voluntary standards for building performance indicators both inside and out that go beyond regulatory requirements
  – Service contracts for low VOC cleaners and degreasers used in buildings
  – Contracts for building construction and maintenance that meet relevant standards (ASTM, LEED, etc.)

• **Incentive Programs and Partnerships**
  – Energy Star
  – Waster Sense
  – Work with Academic institutions: engineering and architectural schools
## RELEVANT AUTHORITIES: EXAMPLES

<table>
<thead>
<tr>
<th>Elements</th>
<th>Relevant Gov Entities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design &amp; Planning</td>
<td>Federal, municipal or local</td>
</tr>
<tr>
<td>Location</td>
<td>State, Municipal, Local, EPA Consumer Product Safety Commission; Other</td>
</tr>
<tr>
<td>Materials &amp; Safety</td>
<td>EPA; Dept. of Energy</td>
</tr>
<tr>
<td>Energy Usage</td>
<td>State; Municipal; Local EPA</td>
</tr>
<tr>
<td>Water Use</td>
<td>EPA; State and Local</td>
</tr>
<tr>
<td>Indoor Quality</td>
<td>Dept. of Energy; EPA</td>
</tr>
<tr>
<td>Lighting</td>
<td>EPA; Municipal; Local</td>
</tr>
<tr>
<td>Waste Management</td>
<td>EPA; Municipal; Local</td>
</tr>
</tbody>
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Element: Design & Planning

- ISO 16813:2006 Building environment design -- Indoor environment -- General Principles
- LEED Reference Guide for Green Building Design and Construction
Element: Location

- ASTM Committee E50 on Environmental Assessment
  - fills the gaps left by agency regulations
  - bridges industry needs while regulation is being developed.
- ASTM E1527, Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process
- ASTM E2247, Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property
Element: Solar, Geothermal and Other Alternative Energy Sources

- ASTM and International Association of Plumbing & Mechanical Officials (IAMPMO) partnership with the heat metering standard framework – recognized by EPA; adopted by state and local authorities
- ISO 23045:2008 Building environment design -- Guidelines to assess energy efficiency of new buildings
- UL 1703 Standard for Flat-Plate Photovoltaic Modules and Panels (energy efficient; intended for building construction)
Element: Materials & Safety

- UL 2840  Standard for Sustainability for Steel for Use in Construction Products

- Safety-related Standards From:
  - International Association of Plumbing & Mechanical Officials (IAPMO)
  - Underwriters Laboratories (UL)
  - ASTM International
  - International Organization for Standardization (ISO) and International Electro-technical Commission (IEC)

- Codes:
  - National Fire Protection Association
  - National Electrical Codes, etc.
Summary

– Participation in the development of and use of private sector standards that support sustainability in the construction sector
– Regulations and voluntary partnership programs
– Contracts and services using voluntary standards that help drive competition and markets for sustainable construction
– Grants programs to help educate engineers and architecture students on standards as essential tools