Lead the Way

APTA Transit Standards Development
To develop, implement and maintain standards, recommended practices and design guidelines to achieve safety, reliability and efficiency in transit system design and operation.
What are Standards? How are they developed?

Standards use collective wisdom to provide a path to a desired outcome with a means to measure success.

Standards are developed using a consensus based process patterned after the process required by the American National Standards Institute to certify Standards Development Organizations.

APTA’s Standards include:

• Standards
• Recommended Practices
• Guidelines
• White Papers
APTA Standards Program is recognized by:

- American National Standards Institute (ANSI)
- Department of Transportation (DOT)
  - Joint Program Office (JPO)
  - Federal Transit Administration (FTA)
  - Federal Railroad Administration (FRA)
- Department of Homeland Security (DHS)
  - Transportation Security Administration (TSA)
- Transport Canada
- Canadian Urban Transport Association (CUTA)
- Other SDO’s, e.g., IEEE, SAE, ITE, AASHTO
Standards Development & Oversight Council (SDOC)

Divided equally between business and transit

Responsibilities

- Set Priorities and Allocate Funds for New Transit Standards Program
- Outreach and Awareness Activities
- Monitor Activities of Other Standards Development Organizations
- Partner with Federal Agencies
Developing Standards

• Standards Policy & Planning Committees:
  • Report to the SDOC
  • Individual Program oversight
  • Identify standards priorities
  • Work plan development

• Standing APTA committees and/or relevant industry experts provide technical oversight

• Work groups develop standards
• Voluntary Consensus Standards Process

• Over 500 Volunteer Participants

• Over 20 Active Standards Development Committees

• 250 Standards, Recommended Practices and Guidelines Completed, Approved and Posted on APTA’s Web Site – www.apta.com
APTA Standards are developed using a consensus based process patterned after the process required by ANSI

– a balanced representation of interested parties;
– a required public comment period;
– a formal process to respond to comments;
– an appeal procedure;
– a balloting group broadly representative of the industry;
– a consensus, defined as a super-majority of the balloting group; and
– a formal way to respond to requests for interpretations of or changes to the standard
Publishing a Document

- Working Group vote
- Public Comment period & Technical Oversight review
- CEO’s review
- Policy and Planning approval
- PUBLISHED
# Current Standards Efforts

## Commuter Rail (PRESS)
- Vehicle Construction
- Vehicle Maintenance
- Inspection & Maintenance Training
- Passenger Emergency Systems
- Mechanical Systems

## Rail Transit
- Operating Practices
- Fixed Structures
- Grade Crossings
- Vehicle Inspections
- Crash Worthiness
- Standard Rail Technical Specifications

## Bus
- Brake/Chassis
- Passenger Environment
- Training
- Operations/Safety
- Specifications

## IT
- TCIP: (Transit Communication Interface Profiles)
- Technology Specifications
- Control System Security

## Sustainability
- Climate Change
- Urban Design Guidelines

## State of Good Repair
- Asset Management
Current Standards Efforts

**Security**
- Fixed Infrastructure
- Security Risk
- Emergency Management
- Cyber Security

**Procurement**
- Terms & Conditions
- Risk Management
- Technology Procurement

**Accessibility**
- Demand Responsive: Call Center Standards
- Fixed Route: Stop Announcement Standards
- Rail Gap

**Farecard**
- Farecard reader interface
- Farecard data configuration
Industry Benefits

• Minimize Government Regulation
  – Effective Means of Self-Policing
  – Generally Much Less Costly than a Regulation
  – Reduce the Public/NTSB Pressure for Regulatory Action
• Industry Influences Final Outcome
  – Considers the Impact on Operations
• Promote Market Competition (performance standards)
  - Reduce proprietary design and intellectual property problems
  - Define interfaces and data formats
• Assist New Transit Starts and New Market Players (they know the rules)
• Improve Safety
Agency Benefits

- Improve Safety & Security
- Shared Risk Across Industry, not just Agency
- Use of Collective Wisdom – save on labor
- Provides a Basis for Specifications for Procurements
- Reduces Proposal and Design/Development Costs
- Promote Systems Integration
- Reduces Capital and Operating Costs
- Enhances Service Reliability
High Return on Investment

Crashworthiness Standards:
- Locomotives derailed at 68 mph
- Both built to APTA Structural Standards
- One struck a concrete building
- One rolled over
- Crew walked away
- Fatalities likely in previous designs

Return On Investment:
- Two lives saved ($2.6 m each)
- Two $4 m locomotives repaired rather than scrapped
High Return on Investment

Controlling Tort Risks - Reducing Transit Liability:

<table>
<thead>
<tr>
<th>No Standard Exists</th>
<th>No Guidance for Court</th>
<th>At the Mercy of the Court</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Exists</td>
<td>Not Followed</td>
<td>Maximum Liability. Toast!</td>
</tr>
<tr>
<td>Standard Exists</td>
<td>Followed</td>
<td>Court almost always finds due diligence obligation met. Liability greatly reduced</td>
</tr>
</tbody>
</table>

Los Angeles Area: Grade Crossing Collisions with Fatalities/Injuries

• System Safety Program Plan
• Emergency Responder Training
• Vehicle Crashworthiness
• Vehicle and Signal System Inspection and Maintenance

Return On Investment:
Liability Reduced by tens of millions
Commuter Rail Standards

- Doors
- Cab Seat Revision
- Pushback Couplers
- Passenger Seat Revision
- Tables between facing seats
- Alternative Equipment Standards ETF-I
• Hours of Service Standard

• Roadway Worker Protection Standard

• Vehicle Emergency Features

• Rail Transit Vehicle Standard Technical Specification
Security Standards

• Operational Strategies for Emergency Smoke Ventilation in Tunnels
• Crime Prevention Through Environmental Design (CPTED) for Transit Facilities
• Bus Stop Design and Placement Security Considerations
• Random Inspections of Carry-on Items in Transit Systems
• Identifying Suspicious Behavior in Mass Transit
• Professional Liability Insurance White Paper
• White Paper on Transit Procurement Risks
• Technology Procurement Terms & Conditions
• Creating a Business Case for Information Technology Projects and Procurements with Information Technology Components
• Negotiating Information Technology Contracts
Bus Standards

- Troubleshooting Common Transit Bus S-cam and Air Brake Complaints
- Training/Syllabus to Instruct/Prepare for the ASE Transit Bus Tests in Five Areas
- BRT Branding, Imaging and Marketing
- BRT Stations and Stops
- Maintenance Training
  - HVAC, Brakes, Preventive Maintenance, Electronics
- RP for Employee-Controlled Distractions
GOAL:
A SINGLE bus technical guideline specification document that includes language for:
– multiple fuel types (hybrid, natural gas, diesel)
– Multiple lengths (30 – 60 feet)

What’s New:
• Updated Terms and Conditions
• Addition of Technical Specifications
• Standardize the organization of industry contracts
• Move towards standard industry terms and conditions
• Flexibility for local requirements and agency-specific provisions
Documents in final stages for Publication:

**Fixed Route Stop Announcement:**
- RP for Fixed Route Stop Announcement and Route Identification Program

**Call Center:**
- RP Reservation Hold Times for ADA Complementary Paratransit Call Centers
- RP for Handling ADA Complementary Paratransit “Where’s My Ride?” Calls
- RP for Call Center Agent Recruiting, Training and Retention

**Gap Safety Management (Commuter Rail):**
- Standard for Gap Safety Management
• Quantifying Greenhouse Gas Emissions from Transit

• RP for Transit Agency, Community and Business Partnerships to Promote Transit-Oriented Development and Joint Development

• RP for Defining Transit’s Area of Influence
State of Good Repair/Asset Management

- Condition Assessments
- Asset Inventory
- Facilities and Rolling Stock
- Recapitalizing Funds
IT Standards

• Technology Specifications
  — CCTV Specifications

• Transit Communications Interface Profiles (TCIP)
A Program of the American Public Transportation Association

APTA is a nonprofit international association of over 1,500 public and private member organizations including transit systems and commuter rail operators; planning, design, construction and finance firms; product and service providers; academic institutions, transit associations and state departments of transportation. APTA members serve the public interest by providing safe, efficient and economical transit services and products. Over ninety percent of persons using public transportation in the United States and Canada are served by APTA members.

Standards have become an important program activity at APTA and in the public transportation industry. APTA, through its policy and planning committees, has played a major role in creating active working structures within the organization focused on the development of standards. Hundreds of industry volunteers serving on numerous working committees have developed standards for bus, rail transit and commuter rail operations, maintenance, procurement and ITS. These consensus based standards are making a real difference to the management and operations of these organizations. These standards are now being used to achieve operational efficiencies and safety improvements in services, facilities and vehicles.
The Transit Cooperative Research Program (TCRP) was established in 1992 to provide an ongoing medium for applied research to transit issues. The program is carried out under a three-way agreement among:

- Transportation Research Board
- Transit Development Corporation, Inc.
- Federal Transit Administration
Products

Products of TCRP research are generally published in the form of reports issued by the Transportation Research Board. TCRP reports cover a wide variety of subjects and applications reflecting the diverse nature of project work undertaken on behalf of the transit industry. Reports are also released in the following forms...

Reports
Syntheses
Legal Research Digests
Research Results Digests
Software
Web Documents
Dissemination

To ensure that the program’s research has its desired impact, TCRP established a Dissemination and Implementation Program, which is managed by the American Public Transportation Association (APTA). APTA promotes the research program and distributes reports and other products to the transit industry through the TCRP Website, major conferences, local seminars, and other various transit venues.
You can get involved!

The selection and end result of TCRP research is an unique undertaking. As a transit professional, your input is crucial to the success of TCRP as a cooperative program. On an annual basis, we welcome the submission of *Research Problem Statements*. These statements are the medium for highlighting current issues in transit. Additionally, the program represents an opportunity for qualified contractors and consultants to conduct transit research and to perform studies. Research contractors are selected annually through a competitive process.

For more information on conducting transit research, or the submission of Problem Statements, please visit the TCRP website at www.tcrponline.org.
APTA Standards Development Program

Jeff Hiott
jhiott@apta.com

TCIP
Lou Sanders
lsanders@apta.com

TCRP
Rachelle Jezbera
rjezbera@apta.com