Research, Technology, and Education Provisions of Moving Ahead for Progress in the 21st Century Act (MAP-21)

August 2012
MAP-21 Overview
MAP-21 Themes

- Strengthens America’s highway and public transportation systems
- Creates jobs and supports economic growth
- Supports the Department’s aggressive safety agenda
- Simplifies and focuses the Federal program
- Accelerates project delivery and promotes innovation
- Establishes a performance-based Federal program
Two years of funding at current levels

- Authorizes program through FY14
  - Current law through end of FY12
  - Most new provisions go into effect on October 1st

- Avg. annual funding at FY12 levels (plus minor inflation)
  - $40.4 billion in FY13 from Highway Trust Fund (HTF)
  - $41.0 billion in FY14 from HTF

- Ensures two years of solvency for Highway Trust Fund
Focuses the Federal role

- Substantial programmatic consolidation
  - Fewer formula programs
  - Most discretionary programs eliminated
  - No earmarks

- Redefines (and increases emphasis on) the NHS

- Accelerates project delivery

- Larger (and modified) role for TIFIA program
  - >700% growth in TIFIA ($1B in FY14 vs. $122M in FY11)
  - Reforms to make TIFIA attractive to wider range of projects
Apportioned programs
# Program structure

<table>
<thead>
<tr>
<th>MAP-21</th>
<th>Current Law</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Highway Performance Program (NHPP)</td>
<td>NHS, IM, &amp; Bridge (portion)</td>
</tr>
<tr>
<td>Surface Transportation Program (STP)</td>
<td>STP, ADHS &amp; Bridge (portion)</td>
</tr>
<tr>
<td>Congestion Mitigation &amp; Air Quality Improvement Program (CMAQ)</td>
<td>CMAQ</td>
</tr>
<tr>
<td>Highway Safety Improvement Program (HSIP)</td>
<td>HSIP (incl. High Risk Rural Roads)</td>
</tr>
<tr>
<td>Railway-Highway Grade Crossing <em>(takedown from HSIP)</em></td>
<td>Railway Highway Grade Crossing</td>
</tr>
<tr>
<td>Metropolitan Planning</td>
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</tr>
<tr>
<td>Transportation Alternatives <em>(setaside from NHPP, STP, HSIP, CMAQ, and Metro Planning)</em></td>
<td>TE, Recreational Trails, and Safe Routes to School</td>
</tr>
</tbody>
</table>
$37.7 billion/year in formula funding

- National Highway Performance Program ($21.8)
- Surface Transportation Program ($10.0)
- Highway Safety Improvement Program ($2.2)
- Congestion Mitigation Air Quality ($2.2)
- Transportation Alternatives ($0.8)
- Railway-Highway Crossing ($0.2)
- Metro Planning ($0.3)

Note: Amounts in $ billions; individual program amounts do not add exactly to total due to rounding
Other Programs

- TIFIA
- Emergency Relief Program ($100 M)
- Federal Lands & Tribal Transportation Programs ($1 B)
- Ferry Program ($67 M)
- Territorial and Puerto Rico Program ($250 M)
- Research, Technology, and Education
Research, Technology, and Education programs
Research, Technology, and Education Philosophy and Principles

- Continue principles of Competition and Peer Review
- Emphasis in Technology Deployment: separate funding
- Funding level reduced by about 17% overall
- Flexible program – no earmarks
- Training and Education program continues
  - Adds Centers for Excellence to Title 23
- RITA programs continue
## Authorized Funding for RT&E Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>FY-2013</th>
<th>FY-2014</th>
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<tr>
<td><strong>FHWA-Administered Programs:</strong></td>
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<td><strong>RITA-Administered Programs:</strong></td>
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<td>University Transportation Centers</td>
<td>$72.5M</td>
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<td>Intelligent Transportation Systems Research</td>
<td>$100.0M</td>
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<tr>
<td><strong>Total:</strong></td>
<td>$400.0 M</td>
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<td><strong>State-Administered Funds:</strong></td>
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<td>State Planning &amp; Research (SPR Research) – Title I Funds</td>
<td>$183.0 M</td>
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*Note: SHRP2 Implementation to be funded from TIDP and as set-aside of SPR funds*
Funding Comparison SAFETEA-LU vs. MAP-21

- **SAFETEA-LU (FY 2012):**
  - STRDD, $196.4 M
  - SHRP2 (Title I), $52.0 M
  - Highways for Life (Title I), $20.0 M
  - RITA (ITS, UTC, BTS), $220.0 M
  - Training and Education, $26.7 M

- **MAP-21 (FY 2013):**
  - STRDD (HRD), $115 M + TIDP ($62.5 M) (Including SHRP2 and HfL), $177.5 M
  - RITA (ITS, UTC, BTS), $198.5 M
  - Training and Education, $24.0 M
  - SP&R-Research (Title I set-aside; Including SHRP2), $177.0 M
  - HRD ($115 M) + TIDP ($62.5 M) (Including SHRP2 and HfL), $177.5 M

The diagram visually compares the funding levels for each category between the two periods.
FHWA-Administered Research, Technology, and Education programs
Research, Technology, and Education

- No earmarks
  - Minimal sub-allocations; e.g., $12M set-aside for pavement technology transfer program
- State planning and research (SPR) funded by 2% set-aside from NHPP, STP, CMAQ and HSIP
- SHRP2 Implementation funds from SPR
  - IF 75% of States agree to a percentage of funds for this use
- Centers for Excellence continued
  - Now in U.S. Code, and funded under Training & Education
- International Highway Transportation Outreach Program repealed; however, some international research & collaboration is built into core R&D program
# Authorized Funding for FHWA-Administered RT&E Programs

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Highway Research and Development

- $115 M per FY (2013-14)
- Program areas:
  - Infrastructure
  - Safety
  - Planning and Environment
  - Operations
  - Policy
  - Exploratory Advanced Research
Technology and Innovation Deployment Program

- $62.5 M per FY (2013-14)
  - SHRP2 Implementation
  - Every Day Counts initiatives
  - Demonstrations
  - Pilots and Testing
  - Accelerated Innovation Deployment
  - Minimum of $12 M for Pavements Technology Deployment
Training and Education

- $24 M per FY (2013-14)
- Current programs continue – no specific funding
  - National Highway Institute
  - Local Technical Assistance Program
  - Garrett Morgan Program
  - Eisenhower Fellowships
  - Transportation Education Development
  - Freight Planning Capacity Building
  - Surface Transportation Workforce Development, Training and Education
- Additional program: Centers for Excellence to address:
  - Project Finance
  - Environment
  - Rural Safety
  - Transportation Safety
State Planning and Research

- A 2% Set-Aside from four Core programs
  - STP *
  - NHPP
  - HSIP
  - CMAQ

- States may agree on percent for SHRP2 Implementation
- At least 25% of 2% set-aside must be used for research, development, and technology transfer
- Eligible as non-federal match for LTAP, UTC
- SP&R – Research Portion Funding:
  - FY 2012: $179 M
  - FY 2013 (est.): $183 M
  - FY 2014 (est.): $184 M

- Due to core program reformulation, some States SP&R set-aside will decrease, while others will increase

* States are allowed to utilize STP funds for State planning and research activities
Other FHWA Programs

- Small Business Innovation Research (SBIR)
  - Continues as 2.6% take-down of Extramural R&D budget
- Authority remains to continue
  - Freight research
  - Environment and planning research
  - Some international highway transportation research
RITA-Administered Research, Technology, and Education programs
Authorized Funding for RITA-Administered RT&E Programs

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University Transportation Centers

- Authorized: $72.5 M per FY (2013-14)

- Funds University Transportation Centers (UTCs) to:
  - advance transportation expertise and technology;
  - provide for a critical transportation knowledge base outside USDOT;
  - address workforce needs

- Establishes and funds
  - 5 National UTCs: $3 M each, per FY ($15 M total per FY)
  - 10 Regional UTCs: $2.75 M each, per FY ($27.5 M total per FY)
  - Up to 20 Tier I UTCs: $1.5 M each, per FY ($30 M total per FY)
Intelligent Transportation Systems Research

- Funded at $100 M per FY (2013-14)
- Continue ITS R&D Program
- Emphasizes Both Research and Deployment
- Defines Goals and Purpose of ITS Program
ITS Research Goals

- Enhance efficiency, facilitate intermodalism and international trade
- Achieve safety goals
- Protect and enhance natural environment
- Accommodate needs of all users of surface transportation
- Enhance national defense mobility
ITS Research Priority Areas

- Enhance mobility and productivity
- Use interdisciplinary approaches to address impacts of congestion
- Address traffic, incident, and transit management, and toll collection traveler information
- Incorporate potential environmental impacts
- Enhance intermodal use of ITS for diverse groups
- Enhance safety through improved crash avoidance and protection, commercial vehicle operations, and infrastructure-based or cooperative safety systems
- Facilitate integration of intelligent infrastructure, vehicle, and control technologies.
Bureau of Transportation Statistics

- Funded at $26 M per year (FY 13-14)
- Focuses on collecting, analyzing and disseminating data to support transportation decision-making
- Maintains National Transportation Library
- Establishes an Advisory Council on Transportation Statistics
- Submits to the President and Congress a Transportation Statistics Annual Report
- Develops the National Transportation Atlas Database
- Establishes National Ferry Database
BTS Core Programs

- **Intermodal Transportation Database (ITD)**
  - Passenger and freight flows by commodity or trip purpose, mode, origin and destination (including Commodity Flow Survey, Trans-border Data Program, and International Freight Data System)
  - Intermodal connections (including the Intermodal Passenger Connectivity Database)
  - Transportation economic accounts for capital stocks, expenditures, and employment

- **National Transportation Atlas Database (NTAD)**
  - Transportation network for analysis of passenger and freight flows by all modes
  - Detailed transportation network for measures of condition and performance
  - Links to social, economic, and environmental data
BTS Core Programs (continued)

- **Transportation Performance and Impacts Program**
  - Compile, analyze, and publish statistics on the extent, connectivity, condition, economic efficiency, safety, and consequences for human and natural environment of the transportation system, and on factors affecting demand for transportation

- **Airline Information**
  - ... collect and disseminate information on civil aeronautics ... including, at a minimum, information on (A) the origin and destination of passengers in interstate air transportation ... and (B) the number of passengers traveling by air between any two points in interstate air transportation ...
  - Products include:
    - Passenger origin-destination and freight volume by segment
    - On-time performance, tarmac delays
    - Financial data on air carriers
BTS Core Programs (continued)

- **Safety Data Program (New)**
  - … on behalf of the Secretary a program—(I) to effectively integrate safety data across modes; and (II) to address gaps in existing safety data programs of the Department”

- **National Transportation Library (NTL)**
  - … acquire, preserve, and manage transportation information and information products and services…
  - Provide a central clearinghouse for transportation data and information …

- **Statistical Coordination**
  - Statistical guidelines
  - Coordination with other federal agencies
  - Improved methods of data collection and analysis
  - Improved statistical quality
Questions?