

MAP-21 ITS Outline

Division A—Federal-Aid Highways and Highway Safety Construction
Programs

Title I—Federal-Aid Highways
Subtitle A—Authorizations and Programs

Definitions

Sec. 1103 (page 19)

- (30) Transportation Systems Management and Operations
 - o (b) Inclusions:
 - (i) actions such as traffic detection, ITS;
 - (ii) coordination of implementation of regional transportation system management;
- (32) Truck Stop Electrification System;

National Highway Performance Program

Sec. 1106 Section 119 (page 30)

- (d) Eligible Projects:
 - o (J) traffic and traveler information;
 - o (K) State asset management plan including data collection;
 - o (L) ITS capital improvement;

Surface Transportation Program

Sec. 1108 (page 38)

- (a) Eligible Projects:
 - o (19) Projects designed to support congestion pricing;
 - o (24) Development of a State assessment management plan;

National Bridge and Tunnel Inventory and Inspection Standards

Sec. 1111 Section 144 (page 42)

- (2) Declarations:
 - o (B) to use data-driven, risk-based approach and cost-effective strategy;

Highway Safety Improvement Program

Sec. 1112 Section 148 (page 47)

- (4) Highway Safety Improvement Projects
 - o Inclusions:
 - (i) and intersection safety improvement program;
 - (xi) installation of a priority control system for emergency vehicles at signalized intersections;
 - (Xii) installation of a traffic control or warning device at locations with high crash potential;
 - (xv) planning integrated interoperable emergency communications equipment, operational activities, traffic enforcement activities;
- (12) State Strategic Highway Safety Plan
 - o (C) addresses interoperable emergency communications;
- (13) Systematic Safety Improvement
 - o (c) Eligibility:

- (2) Identification and Analysis of Highway Safety Problems and Opportunities
 - (A) have a safety data system in place;
 - (iii) to link State data systems, include traffic records;
 - (iv) to improve the compatibility and interoperability of safety data with other State transportation related data systems;
 - (B) based on the analysis required by paragraph A
 - (iv) identify safety improvement projects on the basis of crash experience or other data supported means;
 - (D) advance the capabilities of the State for safety data collection, analysis, integration in a manner that—
 - (E)(i) determine priorities for the correction of hazardous road locations, sections, and elements;
- (i) State Performance Targets:
 - (2)submit annually to the Secretary an implementation plan that—
 - (B) identifies highway safety improvement projects on the basis of crash experience, crash potential, or other data supported means;

CMAQ

Sec. 1113(page 58)

- (a) Eligible Projects:
 - (2) in paragraph--
 - (B) including improvement of mobility through programs such as real-time traffic and traveler information;
 - (7) if the project shifts traffic demand to nonpeak hours or other transportation modes, increases occupancy rates, or reduces demand for roads through telecommuting, ridesharing, or other alternatives;

National Freight Policy

Sec. 1115 Section 167 (page 66)

- (b) Goals:
 - (B) reduce congestion;
 - (C) increase productivity;
 - (4) to use advanced technology to improve safety and efficiency;

Prioritization of Products to Improve Freight Movement

Sec 1116 (page 70)

- (a) In General—Secretary may increase the Federal share payable for any project to 95 percent for projects on the Interstate System and 90 percent for any other project if the Secretary certifies that project meets the requirements of this section;
- (c) Eligible Projects:
 - (2) intelligent transportation systems;
 - (9) real time traffic, truck parking, transportation information systems;

State Freight Plans

Sec 1118 (page 71)

- (b) Plan Contents:
 - (4) evidence of intelligent transportation systems or innovation;

Subtitle B—Performance Management

Metropolitan Transportation Planning

Sec 1201 Section 134 (page 99)

- (a) Policy
 - (1) to encourage safe and efficient management, operation and development of surface transportation systems;
- (h) Scope of Planning Process
 - (1) In General
 - (F) enhance the integration and connectivity of transportation system;
 - (G) promote efficient system management and operation;
 - (3) Failure to consider factors
 - (i) Development of Transportation Plan
 - (2) Transportation Plan
 - (F) Operational and management strategies;

Statewide and Nonmetropolitan Transportation Planning

Sec. 1202 Section 135 (page 113)

- (d) Scope of Planning Process
 - (G) promote efficient system management and operations;

National Goals and Performance Management Measures

Sec. 1203 Section 150 (page 124)

- (b) National Goals
 - (1) safety;
 - (2) infrastructure condition;
 - (3) congestion reduction;
 - (4) system reliability;
 - (5) freight movement and economic vitality;
 - (6) environmental sustainability;
 - (7) reduced project delivery delays;
- (c) Establishment of Performance Measures
 - (3) National Highway Performance Program
 - (A) In general
 - (i) standards for bridge and pavement management;
 - (ii) measures for states to assess—
 - (I) condition of Interstate System pavements;
 - (II) condition of National Highway System pavements;
 - (III) bridge condition of National Highway Systems;
 - (IV) performance of the Interstate System;
 - (V) performance of the National Highway System;
 - (iv) data elements necessary to collect and maintain standardized data for a performance-based approach;
 - (4) Highway Safety Improvement Program
 - (A) serious injuries and fatalities per vehicle mile traveled;
 - (B) the number of serious injuries and fatalities;
 - (5) CMAQ Program
 - (A) traffic congestion;
 - (6) National Freight Movement

- (e) Reporting on Performance Targets
 - o (1) the condition and performance of the National Highway System in the State;

Subtitle C—Acceleration of Project Delivery

Declaration of Policy and Project Delivery Initiative

Sec. 1301 (page 126)

- (b) Project Delivery Initiative
 - o (2) Purposes
 - (A) to develop and advance the use of best practices to accelerate project delivery and reduce cost while expediting deployment of technology and innovation;

Innovative Project Delivery Methods

Sec. 1304 (page 132)

- (a) Declaration Policy
 - o (1) It is the national interest to promote the use of innovative technologies and practices;
 - o (2) Inclusions—state of the art intelligent transportation systems technologies;
 - o (3) Innovative Project Delivery
 - (A) may be up to 100 percent of any such project, program, or activity the Secretary determines;
 - (ii) contains innovative technologies, manufacturing processes, financing or contracting methods that improve quality or extend life of highways and bridges;
 - (iv) reduces congestion related to highway construction;

Programmatic Agreements and Additional Categorical Exclusions

Sec. 1318 (page 150)

- (c) Additional Actions
 - o (2) Highway safety or traffic operations improvement projects, including the installation of ramp meter control devices and lights;

Subtitles D and E—Highway Safety and Miscellaneous

Jason’s Law

Sec. 1401 (page 154)

- (b) Eligible Projects
 - o (D) Promoting the availability of private or public motor vehicle parking on National Highway system using ITS;

Real-time Ridesharing

Sec. 1501 (page 160)

- Designating existing facilities for use for preferential parking for carpools and real-time ridesharing projects;

Tolling

Sec. 1512 (page 167)

- (a) Basic Program
 - o (1) Authorization for Federal participation
- (10) Definitions:
 - o (b) Electronic Toll Collection Interoperability Requirements

Prohibition on Use of Funds for Automated Traffic Enforcement

Sec.1533 (page 184)

- (a) Definition—any camera that captures an image of a vehicle for the purposes of traffic law enforcement;
- (b) Use of Funds—except as provided in subsection (c) for fiscal years 2013 and 2014, funds may not be used for any program to purchase, operate or maintain automated traffic enforcement systems;
- (c) Exception—shall not apply to automated traffic enforcement systems used to improve safety in school areas;

Public-Private Partnerships

Sec. 1534 (page 184)

- (a) Best Practices—the Secretary shall compile, and make available to the public, best practices on how States, public transportation agencies, and other public officials can work with private sector in the development, financing, construction and operation of transportation facilities;
- (d) Standard Transaction Contracts
 - o (1) Development—not later than 18 months after enactment, Secretary shall develop standard public-private partnership transaction model contracts for the most popular type of partnerships for the development, financing, construction and operation of transportation facilities;
 - o (2) Use—Secretary shall encourage States, public transportation agencies and other public officials to use model contracts as a base template when developing their own public-private partnership agreements for the development, financing, construction and operation of transportation facilities;

Title II—America Fast Forward Financing Innovation

Transportation Infrastructure Finance and Innovation Act (TIFIA)

Sec. 2002 Section 601 (page 207)

- (12) Project
 - o (D) a project that—
 - (IV) service improvement for a facility of subclause (I) or (II) for an intelligent transportation system;

Section 602 (page 210)

- (A) Eligibility:
 - o (5) Eligible Project Costs:
 - (B) Intelligent Transportation Systems costs shall be reasonably anticipated to equal or exceed \$15,000,000;

Division B—Public Transportation

Definitions (Bus Rapid transit; Capital Projects)

Sec 20004 Section 5302 (page 223)

- (2) Bus Rapid Transit System
 - o (B) including
 - (ii) traffic signal priority for public transportation vehicles;
- (3) Capital Project
 - (A) transit-related intelligent transportation systems;

- (G) joint development improvement that
 - (II) establishes new coordination between public transportation and other transportation;
 - (v) may include
 - (XI) safety and security equipment and facilities, i.e. ITS;
- (H) the introduction of new technology through innovative and improved products into public transportation;

Metropolitan Transportation Planning

Sec 20005 Section 5303 (page 228)

- (c) General Requirements
 - (1) Development of long-range plans and tips;
- (h) Scope of Planning Process
 - (1) In General
 - (F) enhance the integration and connectivity of transportation system;
 - (G) promote efficient system management and operation;
 - (2) Performance Based Approach
 - (I) each organization shall establish performance targets that address performance measures described above;

Statewide and Nonmetropolitan Transportation Planning

Sec. 20006 Section 5304 (page 243)

- (d) Scope of Planning Process
 - (G) promote efficient system management and operations;

Fixed Guideway Capital Investment Grants

Sec 20008 Section 5309 (page 258)

- (3) Corridor- Based Bus Rapid Transit Project;
- (4) Fixed Guideway Bus Rapid Transit Project;
 - (C) that includes features
 - (ii) traffic signal priority for public transportation vehicles;

Research Development Demonstration Deployment Projects

Sec. 20011 Section 5312 (page 287)

- (b) Research
 - (2) Project Eligibility:
 - (B) mobility management and travel management systems;
 - (C) data and communication system advancements;
 - (F) planning and forecasting modeling and simulation;
 - (H) advancements in vehicle technology;
 - (I) asset management and repair systems advancement
 - (M) safety improvements;
 - (N) any other area the Secretary determines is important to advance interests in public transportation;
- (c) Innovation and Development
 - (2) Project Eligibility:
 - (B) planning and forecasting modeling and simulation;
 - (E) advancements in vehicle technology;

Technical Assistance and Standards Development

Sec. 20012 Section 5314 (page 292)

- (2) Eligible Activities:
 - o (B) Development of standards and practices including ITS;

Division C—Transportation and Surface Transportation Policy
Title I—Motor Vehicle and Highway Safety Improvement Act of 2012
Subtitle A—Highway Safety

Highway Safety Programs

Sec. 31102 (page 336)

- (a) Program Required
 - o (2) Uniform Guidelines
 - (A) to include programs
 - (vi) to reduce accidents resulting from unsafe driving behavior;
 - (D) include provisions for
 - (i) an effective record system of accidents;
- (c) Approved Highway Safety Programs
 - o (4) Automated Traffic Enforcement Systems
 - (A) Prohibition—a State may not use these funds to operate, maintain or purchase an automated traffic enforcement system;
 - (B) Defined—as any camera which captures an image of a vehicle for the purposes of only red light and speed enforcement;
- (k) Highway Safety Plan Reporting Requirements
 - o (5) Review of Safety Plans
 - (i) Approvals
 - (I) the plan and performance targets are evidence based and supported by data;

Highway Safety Research and Development

Sec. 31103 Section 403 (Page 341)

- (b) General Authority
 - o (1) Research and Development Activities
 - (A) all aspects and conditions relating to
 - (iii) communications;
 - (B) human behavioral factors
 - (iii) distracted driving;
 - (C) an evaluation of the effectiveness of counter-measures to increase safety;
 - (D) the development of technologies to detect drug impaired drivers;

Subtitle D—Vehicle Electronics and Safety Standards

National Highway Traffic Safety Administration Electronics, Software, and Engineering Expertise

Sec. 31401 (page 376)

- (a) Council for Vehicle Electronics, Vehicle Software, and Emerging Technologies
 - o (1) the Secretary shall establish this council to build, integrate, and aggregate the expertise in vehicle electronics and other technologies;

Electronic Systems Performance

Sec. 31402 (page 376)

- (a) Secretary shall examine need for safety standards with regard to electronics;
 - o (1) consider electronic components, security needs, and environmental effects on systems;

Commercial Vehicle Information Systems and Networks

Sec. 32605 (page 413)

- No later than 6 months after passage, the Secretary shall
 - o (1) establish time frames and milestones for resuming the CVISN program;
 - o (2) a strategic workforce plan for its grant management office to ensure it achieves mission and goals;

Division E—Research and Education

Title I—Funding

Authorization of Appropriations

Sec. 51002 (page 469)

- (a) In General
 - o (2) Technology and Innovation Deployment Program \$62,500,000 for each fiscal year 2012 and 2013;
 - o (4) Intelligent Transportation Systems Program \$100,000,000 for each fiscal year 2012 and 2013;

Title II—Research, Technology, and Education

Research, Technology and Education

Sec. 52001 (page 470)

- (4) Intelligent transportation Infrastructure—means fully integrated public sector ITS components, as defined by the Secretary;
- (5) Intelligent Transportation System—mean electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system;
- (6) National Architecture—common framework for interoperability that defines
 - o (A) the function associated with ITS system users;
 - o (B) the physical entities within which the system resides;
 - o (C) the data interfaces and information flows between physical subsystems;
 - o (D) the communication requirements associated with information flows;
- (9) Standard means a document that—
 - o (B) may support the national architecture and promote:
 - (i) the widespread use and adoption of ITS technology as a component of the transportations systems of the U.S.;
 - (ii) interoperability among ITS technologies implemented throughout the States;

Research Technology Development and Deployment

Sec. 52003 Section 503 (page 477)

- (c) Technology Innovation Deployment Program
 - o In General—program relates to all aspects of highway transportation

- (A) accelerate the adoption of innovative technologies by surface transportation community;
- (B) providing leadership incentives to demonstrate and promote technologies, elevated standards, and new business practices that improve safety, result in faster construction, reduce congestion, and improve quality and use satisfaction;
- (C) construct longer lasting highways through use of innovative technologies;
- (D) improve highway efficiency, safety, and mobility;
- (E) develop and deploy new tools, techniques, and practices;
- (2) Implementation
 - (A) In General the Secretary shall promote, carry out, and facilitate the program to distribute the technologies and other findings;
 - (B) Accelerated Innovation Deployment
 - (i) establish and carry out demonstration programs;

Title III—Intelligent Transportation Systems Research

Use of Funds for ITS Activities

Sec. 53001 Section 513 (page 503)

Goals and Purposes

Sec. 53002 Section 514 (page 504)

General Authorities and Requirements

Sec. 53003 Section 515 (page 505)

Research and Development

Sec. 53004 Section 516 (page 507)

National Architecture and Standards

Sec. 53005 Section 517 (page 508)

Vehicle-to-Vehicle and Vehicle-to-Infrastructure Communications Systems Deployment

Sec. 53006 Section 518 (page 509)