

MAP-21
DIVISION E—RESEARCH AND EDUCATION

TITLE I—RESEARCH, TECHNOLOGY, AND EDUCATION and TITLE III—INTELLIGENT TRANSPORTATION SYSTEMS RESEARCH				
Section	Program/Topic	Funding	Major Changes from SAFETEA-LU	Implications for Minnesota
51001	Authorization of Appropriations	TECHNOLOGY AND INNOVATION DEPLOYMENT PROGRAM: \$62,500,000 each year for FY 2013 and 2014 INTELLIGENT TRANSPORTATION SYSTEMS PROGRAM: \$100,000,000 each year for FY 2013 and 2014 to carry out sections 512 through 518 of title 23		The USDOT may use some of these funds for programs or projects that MnDOT could compete for.

TITLE II—RESEARCH, TECHNOLOGY, AND EDUCATION				
Section	Program/Topic	Funding	Major Changes from SAFETEA-LU	Implications for Minnesota
52001	Research, technology, and education		Added definition for incident, innovation lifecycle, intelligent transportation infrastructure, intelligent transportation system, national architecture.	
52002	Surface transportation research, development and technology		Defines how competitive award cash prizes will be handled: topics, advertising, requirements, registration, eligibility, selection, funding, award limits, notice and annual reporting.	
52003	Research and technology development and deployment	FY13 & FY14 allocate \$12M to accelerate the deployment and implementation of pavement technology	Lifecycle cost analysis study due one year from bill enactment. Infrastructure needs report due of July each year; reports on and describes future highway and bridge needs and makes recommendations the on highway performance monitoring system. Technology and Innovation deployment program significantly accelerating the adoption of innovative technologies	Infrastructure needs report could change system performance measures.
52004	Training and education		LTAP - federal share of cost 50% and non-federal share up to 100%; Federal share is 100% for Tribal LAP; Secretary to make grants to establish and maintain centers for surface transportation excellence.	MnDOT State Aid provides the match to LTAP Center at U of MN.

52005	State planning and research		<p>MAP-21 continues the SP&R as a 2% takedown of four core programs: NHPP, STP, CMAQ, and HSIP. At least 25% of these funds have to be used for research purposes.</p> <p>Requires states to make a percentage of funds apportioned to the state (as agreed to by ¾ of states) available to the Secretary to fund SHRP2 in fiscal years 013 and FY 2014.</p>	<p>SHRP2 is taken off the top of the SPR program before the funds are distributed.</p> <p>MnDOT will assess options for SHRP2 demonstration and participation in workshops. The percentage required for SHRP2 is not yet known. MnDOT is assessing options for addressing the impact of this funding change.</p>
52006	International highway transportation program		Repeals the international highway transportation program.	
52007	Surface transportation environmental cooperative research program		Repeals the Environmental Cooperative Research program.	
52008	National cooperative freight research		Repeals the National Cooperative Freight Research program.	
52009	University transportation centers program		UTC competitive process for National, Regional and Tier 1 centers. Five National centers will be selected with \$3M per recipient with 100% match requirement; one regional UTC will be located in each of the ten federal regions at \$2.75M per recipient with 100% match requirement; grants of \$1.5M each to not more than 20 Tier 1 recipients wit 50% match requirement.	A state match will be required if the U of MN is selected as UTC.
52010	University transportation research		<i>To be determined.</i>	<i>To be determined.</i>
52011	Bureau of Transportation Statistics		Mandatory response authority for freight data collection, with fine for responding or providing data (up to \$500) or providing false data (up to \$10k).	
52012	Administrative authority		Administrator is authorized to expend 1½ % of the amounts authorized for necessary expenses for administration and operations of the RITA; the Federal share of the cost of an activity carried out by federal laboratories shall not exceed 50%; if the Secretary determines the activity is of substantial public interest or benefit, the Secretary may approve a greater Federal share.	
52013	Research and development strategic planning		Describes the program purpose.	

TITLE III—INTELLIGENT TRANSPORTATION SYSTEMS RESEARCH

Section	Program/Topic	Funding	Major Changes from SAFETEA-LU	Implications for Minnesota
53001	Use of funds for ITS activities		Requires the Secretary to encourage the deployment of ITS technologies that will improve the performance of National Highway System traffic operations, emergency response, incident management, network management, freight management, traffic flow information, and congestion management by accelerating the adoption of innovative technologies through the use of demonstration programs; grant funding; incentives to eligible entities; and other tools, strategies, or methods that will result in the deployment of innovative ITS technologies.	Federal funds may be used for ITS activities.
53002	Goals and purposes		<p>Requires the Secretary to:</p> <ul style="list-style-type: none"> • Expedite deployment and integration of ITS for consumers of passenger and freight transportation; • Ensure Federal, state and local transportation officials have knowledge of ITS in the transportation planning process; • Improve regional cooperation and operations planning for ITS deployment; • Promote the innovative use of private resources in support of ITS development; • Facilitate, in cooperation with the motor vehicle industry, the introduction of vehicle-based safety enhancing systems; • Support the application of ITS to increase the safety and efficiency of commercial motor vehicle operations; • Develop a workforce capable of developing, operating and maintaining ITS; • Provide continuing support for operation and maintenance of ITS; • Ensure a systems approach that includes cooperation among vehicles, infrastructure, and users. 	The USDOT may use some of these funds for programs or projects that MnDOT could compete for.
53003	General authorities and requirements		<p>Requires the Secretary to conduct an ongoing ITS program to research, develop and test ITS and provide technical assistance in the nationwide application of those systems.</p> <p>Provides that these ITS research projects and operational tests encourage and not displace public-private partnerships or private sector investment in those tests and projects.</p>	The USDOT may use some of these funds for programs or projects that MnDOT could compete for.

53004	Research and development		<p>Requires the Secretary to carry out a comprehensive program of ITS research and development, operational tests of intelligent vehicles, intelligent infrastructure systems, etc.</p> <p>Requires higher funding priority for projects that:</p> <ul style="list-style-type: none"> • Enhance mobility and productivity through improved management of traffic, incidents, transit, freight and road weather; toll collection; traveler information or highway operations systems and remote sensing products. • Use interdisciplinary approaches to develop traffic management strategies and tools to address multiple impacts of congestion concurrently. • Incorporate research on the potential impact of environmental, weather, and natural conditions on ITS, including the effects of cold climates. • Enhance intermodal use of ITS for diverse groups, including for emergency and health related services. • Enhance safety through improved crash avoidance and protection, crash and other notification, commercial motor vehicle operations, and infrastructure-based or cooperative safety systems . • Facilitate the integration of intelligent infrastructure, vehicle, and control technologies. 	The USDOT may use some of these funds for programs or projects that MnDOT could compete for.
53005	National architecture and standards		<i>To be determined.</i>	<i>To be determined.</i>
53006	Vehicle-to-vehicle and vehicle-to-infrastructure communications systems deployment		<p>Requires the secretary (within 3 years) to report to congress on:</p> <ul style="list-style-type: none"> • The status of dedicated short-range communications technology and applications developed through research and development; • Known and potential gaps in short-range communications technology and applications; • An implementation path for dedicated short-range communications technology and applications that is based on the assessment and analysis described above; • Guidance on the relationship of the proposed deployment of dedicated short-range communications to the National ITS Architecture and ITS Standards and • Ensures competition by not preferencing the use of any particular frequency for vehicle to infrastructure operations. 	The USDOT will have to report to Congress on the status of DSRC, which is the main communications technology used for Connected Vehicles. MnDOT is monitoring the progress of this technology, which, if adopted in new vehicles, could provide opportunities for enhanced traffic management and data collection.