

(4) incorporate research on the potential impact of environmental, weather, and natural conditions on intelligent transportation systems, including the effects of cold climates;

(5) enhance intermodal use of intelligent transportation systems for diverse groups, including for emergency and health-related services;

(6) enhance safety through improved crash avoidance and protection, crash and other notification, commercial motor vehicle operations, and infrastructure-based or cooperative safety systems, including animal detection systems to reduce the number of wildlife-vehicle collisions; or

(7) facilitate the integration of intelligent infrastructure, vehicle, and control technologies.

(c) **FEDERAL SHARE.**—The Federal share payable on account of any project or activity carried out under subsection (a) shall not exceed 80 percent.

(Added Pub. L. 112–141, div. E, title III, § 53004(a), July 6, 2012, 126 Stat. 902; amended Pub. L. 117–58, div. A, title III, § 13008(b), Nov. 15, 2021, 135 Stat. 641.)

Editorial Notes

AMENDMENTS

2021—Subsec. (b)(6). Pub. L. 117–58 inserted “, including animal detection systems to reduce the number of wildlife-vehicle collisions” after “systems”.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2021 AMENDMENT

Amendment by Pub. L. 117–58 effective Oct. 1, 2021, see section 10003 of Pub. L. 117–58, set out as a note under section 101 of this title.

EFFECTIVE DATE

Section effective Oct. 1, 2012, see section 3(a) of Pub. L. 112–141, set out as an Effective and Termination Dates of 2012 Amendment note under section 101 of this title.

§ 517. National architecture and standards

(a) **IN GENERAL.**—

(1) **DEVELOPMENT, IMPLEMENTATION, AND MAINTENANCE.**—In accordance with section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note; 110 Stat. 783; 115 Stat. 1241), the Secretary shall develop and maintain a national ITS architecture and supporting ITS standards and protocols to promote the use of systems engineering methods in the widespread deployment and evaluation of intelligent transportation systems as a component of the surface transportation systems of the United States.

(2) **INTEROPERABILITY AND EFFICIENCY.**—To the maximum extent practicable, the national ITS architecture and supporting ITS standards and protocols shall promote interoperability among, and efficiency of, intelligent transportation systems and technologies implemented throughout the United States.

(3) **USE OF STANDARDS DEVELOPMENT ORGANIZATIONS.**—In carrying out this section, the Secretary shall support the development and

maintenance of standards and protocols using the services of such standards development organizations as the Secretary determines to be necessary and whose memberships include representatives of the surface transportation and intelligent transportation systems industries.

(b) **STANDARDS FOR NATIONAL POLICY IMPLEMENTATION.**—If the Secretary finds that a standard is necessary for implementation of a nationwide policy relating to user fee collection or other capability requiring nationwide uniformity, the Secretary, after consultation with stakeholders, may establish and require the use of that standard.

(c) **PROVISIONAL STANDARDS.**—

(1) **IN GENERAL.**—If the Secretary finds that the development or balloting of an intelligent transportation system standard jeopardizes the timely achievement of the objectives described in subsection (a), the Secretary may establish a provisional standard, after consultation with affected parties, using, to the maximum extent practicable, the work product of appropriate standards development organizations.

(2) **PERIOD OF EFFECTIVENESS.**—A provisional standard established under paragraph (1) shall be published in the Federal Register and remain in effect until the appropriate standards development organization adopts and publishes a standard.

(d) **CONFORMITY WITH NATIONAL ARCHITECTURE.**—

(1) **In general.**—Except as provided in paragraph (2), the Secretary shall ensure that intelligent transportation system projects carried out using amounts made available from the Highway Trust Fund, including amounts made available to deploy intelligent transportation systems, conform to the appropriate regional ITS architecture, applicable standards, and protocols developed under subsection (a) or (c).

(2) **DISCRETION OF THE SECRETARY.**—The Secretary, at the discretion of the Secretary, may offer an exemption from paragraph (1) for projects designed to achieve specific research objectives outlined in the national intelligent transportation system program plan or the surface transportation research and development strategic plan developed under section 508.¹

(Added Pub. L. 112–141, div. E, title III, § 53005(a), July 6, 2012, 126 Stat. 902; amended Pub. L. 114–94, div. A, title VI, § 6008, Dec. 4, 2015, 129 Stat. 1567.)

Editorial Notes

REFERENCES IN TEXT

Section 12(d) of the National Technology Transfer and Advancement Act of 1995, referred to in subsec. (a)(1), is section 12(d) of Pub. L. 104–113, Mar. 7, 1996, 110 Stat. 783, which is set out as a note under section 272 of Title 15, Commerce and Trade.

Section 508, referred to in subsec. (d)(2), was repealed by Pub. L. 114–94, div. A, title VI, § 6019(d)(1)(A), Dec. 4, 2015, 129 Stat. 1581, effective Oct. 1, 2015.

¹ See References in Text note below.

AMENDMENTS

2015—Subsec. (a)(3). Pub. L. 114-94 substituted “memberships include representatives of” for “memberships are comprised of, and represent,”.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2015 AMENDMENT

Amendment by Pub. L. 114-94 effective Oct. 1, 2015, see section 1003 of Pub. L. 114-94, set out as a note under section 5313 of Title 5, Government Organization and Employees.

EFFECTIVE DATE

Section effective Oct. 1, 2012, see section 3(a) of Pub. L. 112-141, set out as an Effective and Termination Dates of 2012 Amendment note under section 101 of this title.

§ 518. Vehicle-to-vehicle and vehicle-to-infrastructure communications systems deployment

(a) IN GENERAL.—Not later than July 6, 2016, the Secretary shall make available to the public on a Department of Transportation website a report that—

(1) assesses the status of dedicated short-range communications technology and applications developed through research and development;

(2) analyzes the known and potential gaps in short-range communications technology and applications;

(3) defines a recommended implementation path for dedicated short-range communications technology and applications that—

(A) is based on the assessment described in paragraph (1); and

(B) takes into account the analysis described in paragraph (2);

(4) includes guidance on the relationship of the proposed deployment of dedicated short-range communications to the National ITS Architecture and ITS Standards; and

(5) ensures competition by not preferencing the use of any particular frequency for vehicle to infrastructure operations.

(b) REPORT REVIEW.—The Secretary shall enter into agreements with the National Research Council and an independent third party with subject matter expertise for the review of the report described in subsection (a).

(Added Pub. L. 112-141, div. E, title III, § 53006(a), July 6, 2012, 126 Stat. 904; amended Pub. L. 114-94, div. A, title VI, § 6009, Dec. 4, 2015, 129 Stat. 1567.)

Editorial Notes

AMENDMENTS

2015—Subsec. (a). Pub. L. 114-94, in introductory provisions, substituted “Not later than July 6, 2016, the Secretary shall make available to the public on a Department of Transportation website a report” for “Not later than 3 years after the date of enactment of this section, the Secretary shall submit to the Committees on Commerce, Science, and Transportation and Environment and Public Works of the Senate and the Committees on Transportation and Infrastructure, Energy and Commerce, and Science, Space, and Technology of the House of Representatives”.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2015 AMENDMENT

Amendment by Pub. L. 114-94 effective Oct. 1, 2015, see section 1003 of Pub. L. 114-94, set out as a note under section 5313 of Title 5, Government Organization and Employees.

EFFECTIVE DATE

Section effective Oct. 1, 2012, see section 3(a) of Pub. L. 112-141, set out as an Effective and Termination Dates of 2012 Amendment note under section 101 of this title.

§ 519. Infrastructure development

Funds made available to carry out this chapter for operational tests of intelligent transportation systems—

(1) shall be used primarily for the development of intelligent transportation system infrastructure, equipment, and systems; and

(2) to the maximum extent practicable, shall not be used for the construction of physical surface transportation infrastructure unless the construction is incidental and critically necessary to the implementation of an intelligent transportation system project.

(Added Pub. L. 114-94, div. A, title VI, § 6010(a), Dec. 4, 2015, 129 Stat. 1567.)

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE

Section effective Oct. 1, 2015, see section 1003 of Pub. L. 114-94, set out as an Effective Date of 2015 Amendment note under section 5313 of Title 5, Government Organization and Employees.

§ 520. Transportation Resilience and Adaptation Centers of Excellence

(a) DEFINITION OF CENTER OF EXCELLENCE.—In this section, the term “Center of Excellence” means a Center of Excellence for Resilience and Adaptation designated under subsection (b).

(b) DESIGNATION.—The Secretary shall designate 10 regional Centers of Excellence for Resilience and Adaptation and 1 national Center of Excellence for Resilience and Adaptation, which shall serve as a coordinator for the regional Centers, to receive grants to advance research and development that improves the resilience of regions of the United States to natural disasters and extreme weather by promoting the resilience of surface transportation infrastructure and infrastructure dependent on surface transportation.

(c) ELIGIBILITY.—An entity eligible to be designated as a Center of Excellence is—

(1) an institution of higher education (as defined in section 102 of the Higher Education Act of 1965 (20 U.S.C. 1002)); or

(2) a consortium of nonprofit organizations led by an institution of higher education.

(d) APPLICATION.—To be eligible to be designated as a Center of Excellence, an eligible entity shall submit to the Secretary an application at such time, in such manner, and containing such information as the Secretary may require, including a proposal that includes a description of the activities to be carried out with a grant under this section.