116TH CONGRESS
1ST SESSION

S. _____

To direct the Secretary of Transportation to establish the Strengthening Mobility and Revolutionizing Transportation (SMART) Challenge Grant Program to promote technological innovation in our Nation's communities.

IN THE SENATE OF THE UNITED STATES

Ms. CORTEZ MASTO (for herself, Mr. BURR, Mr. GARDNER, and Ms. SINEMA) introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To direct the Secretary of Transportation to establish the Strengthening Mobility and Revolutionizing Transportation (SMART) Challenge Grant Program to promote technological innovation in our Nation's communities.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLES.

This Act may be cited as the ''Moving and Fostering Innovation to Revolutionize Smarter Transportation Act'' or the ''Moving FIRST Act''.

SEC. 2. FINDINGS.

Congress makes the following findings:

(1) Beyond Traffic 2045, a comprehensive assessment of the national transportation system recently published by the Department of Transportation, identified transportation trends that need to be proactively addressed, including—

(A) the population of the United States will increase by 70,000,000 during the 30-year period ending in 2045;

(B) emerging megaregions could absorb 75 percent of the United States' population by 2050;

(C) freight volume will increase by more than 40 percent by 2045;

(D) Americans are currently stuck in traffic for more than 42 hours each year, on average;

(E) the current annual cost of congestion in delays and lost fuel amounts to $160,000,000,000;

(F) 96 people die in motor vehicle crashes in the United States every day, on average, and nearly 6,700 are injured per day; and

(G) connected vehicles and new crash avoidance technology could potentially address

81 percent of crashes involving unimpaired drivers.

(2) According to the Department of Transportation, in 2015—

(A) traffic crash-related deaths increased by more than 7 percent compared to 2014;

(B) pedestrian fatalities increased by more than 9 percent compared to 2014; and

(C) pedalcyclist fatalities increased by more than 12 percent compared to 2014.

(3) In 2015, the Secretary of Transportation created the Smart City Challenge to assist cities in addressing the challenges facing our Nation's transportation system through innovative and creative means, utilizing both the public and the private sectors.

(4) By asking American cities to use emerging transportation technologies to address their most pressing problems, the Smart City Challenge aimed to spark and spread innovation through a mixture of collaboration, competition, and experimentation.

(5) The following outcomes were expected from the original Smart City Challenge and are expected to result from the SMART grants awarded under this Act:

(A) Improved safety from the use of advanced technologies, including connected vehicle technologies, to reduce the number of collisions, fatalities, and injuries for vehicle occupants and nonvehicle occupants.

(B) Enhanced mobility by providing realtime traveler information and emerging mobility services to improve personal mobility for all citizens including people with lower incomes, people with disabilities, and older adults.

(C) Enhanced ladders of opportunity by—

(i) providing access to advanced technology and its benefits for underserved areas and residents;

(ii) increasing connectivity to employment, education, and other services; and

(iii) contributing to revitalization by incentivized reinvestment in underserved communities.

(D) Reduction in pollution by implementing advanced technologies and policies that support a more sustainable and cost-effective relationship between transportation and the environment through more efficient fuel use and emissions reductions.

SEC. 3. DEFINITIONS.

In this Act:

(1) LARGE COMMUNITY.—The term ''large community'' means a beneficiary community with a population between 400,000 and 1,000,000, according to the Census Bureau's most recent annual estimates of resident population.

(2) MID-SIZED COMMUNITY.—The term ''mid-sized community'' means a beneficiary community with a population between 75,000 and 400,000, or a beneficiary community with a population between 10,000 and 75,000 that is located within an urbanized area or cluster, according to the Census Bureau's most recent annual estimates of resident population.

(3) MULTI-JURISDICTIONAL GROUP.—The term ''multi-jurisdictional group'' means a beneficiary composed of 2 or more combination of States, tribal governments, local governments, public transit agencies, public toll authorities, or metropolitan planning agencies, each of which is eligible to apply for a SMART grant under section 4.

(4) REGIONAL PARTNERSHIP.—The term ''regional partnership'' means a group of 2 or more jurisdictions with a combined population between 10,000 and 75,000, according to the Census Bu-

reau's most recent annual estimates of resident population, which have entered into a partnership to apply for a SMART grant under section 4.

(5) RURAL COMMUNITY.—The term ''rural community'' means a beneficiary jurisdiction with a population between 10,000 and 75,000 people, not located within an urbanized area or cluster, according to the Census Bureau's most recent annual estimates of resident population.

(6) SECRETARY.—The term ''Secretary'' means the Secretary of Transportation.

(7) STRENGTHENING MOBILITY AND REVOLUTIONIZING TRANSPORTATION GRANT; SMART GRANT.—The terms ''Strengthening Mobility and Revolutionizing Transportation grant'' and ''SMART grant'' means a grant awarded to an eligible applicant under section 4.

SEC. 4. SMART GRANT PROGRAM.

(a) GRANTS AUTHORIZED.—During each of the fiscal years 2020 through 2024, the Secretary is authorized to award—

(1) 1 SMART grant of not less than $30,000,000 or more than $50,000,000 to an applicant on behalf of a large community to carry out an eligible project;

(2) 1 SMART grant of not less than $30,000,000 or more than $50,000,000 to an applicant on behalf of a mid-sized community to carry out an eligible project; and

(3) 2 SMART grants, totaling not more than the greater of $20,000,000 or 20 percent of the amount appropriated pursuant to section 6(a) for the fiscal year, to applicants on behalf of rural communities or regional partnerships to carry out eligible projects.

(b) ELIGIBLE ENTITIES.—The following entities are eligible to receive a grant under this section:

(1) A unit of local government, including counties.

(2) A tribal government.

(3) A public transit agency or authority.

(4) A public toll authority.

(5) A metropolitan planning organization.

(6) A multijurisdictional group applying through a single lead applicant listed in paragraphs (1) through (5).

(c) APPLICATION PROCESS.—

(1) IN GENERAL.—An eligible applicant may apply for a grant under this section by submitting an application to the Secretary at such time, in such

manner, and containing such information as the Secretary may reasonably require to evaluate the merits of the proposed project in accordance with the selection criteria set forth in subsection (d).

(2) TECHNICAL ASSISTANCE.—

(A) STATE DEPARTMENTS OF TRANSPORTATION.—Eligible rural and regional partnership applicants are strongly encouraged to seek technical assistance from the department of transportation in their respective States during the application process and during the implementation of a project that is awarded a SMART grant, as applicable.

(B) FEDERAL DEPARTMENT OF TRANSPORTATION.—The Secretary, after reviewing all of the applications for SMART grants submitted in a fiscal year under paragraphs (1), (2), and (3) of subsection (a), shall—

(i) provide not fewer than 2 applicants from each of the 3 groups of applicants that submitted applications deemed superior by the Secretary with limited technical assistance to improve their respective applications; and

(ii) allow such applicants to resubmit their improved applications before determining which applicants will receive a SMART grant in such fiscal year.

(3) MULTIPLE GRANTS.—An eligible applicant may not be awarded more than 1 SMART grant during the duration of the SMART Grant Program.

(d) SELECTION CRITERIA.—

(1) IN GENERAL.—A panel of experts from the Department of Transportation, including representatives from the applicable subagencies within the Department, shall evaluate applications for SMART grants based on the applicable criteria described in paragraphs (2) through (4).

(2) APPLICANT READINESS.—The panel referred to in paragraph (1) shall determine the extent to which the applicant or beneficiary community—

(A) has a dense urban population typical for a large or mid-sized American city;

(B) represents more than 15 percent of the population of the census-designated place in which it is located, according to the Census Bureau's most recent annual estimates of resident population;

(C) has a public transportation system or other transit options committed to integrating with the sharing economy, and is considering options to reduce the frequency of single occupancy vehicles;

(D) has an environment that is conducive to demonstrating proposed strategies;

(E) has continuity of committed leadership and capacity to carry out the proposed project;

(F) is committed to making open, machine-readable data accessible, discoverable, and usable by the public, in a secure fashion, to fuel entrepreneurship and innovation; and

(G) is likely to successfully implement the project, including technical and financial commitments from public and private sectors, and its functional capability to perform.

(3) EFFECTIVE USE OF TECHNOLOGY AND PROJECT BENEFITS.—The panel shall determine the extent to which the proposed project will use advanced data and intelligent transportation systems technologies and applications to provide significant benefits to a local area, a State, a region, or the United States, including the extent to which the project will—

(A) reduce congestion and delays for commerce and the traveling public;

(B) improve the safety of transportation facilities and systems for pedestrians, bicyclists, and the broader traveling public;

(C) provide access to jobs, education, and essential services, including health care;

(D) connect underserved populations and reduce their transportation costs;

(E) contribute to medium- and long-term economic competitiveness;

(F) improve the condition, reliability, and user experience of existing transportation facilities and systems;

(G) promote connectivity between connected vehicles, roadway infrastructure, pedestrians, bicyclists, the public, and transportation systems;

(H) use innovative strategies or technologies to pursue any of the primary selection criteria;

(I) demonstrate strong collaboration among a broad range of participants, including the private sector, or the integration of transportation with other public service efforts, in-

cluding working with existing mobile and fixed telecommunication service provides whenever possible;

(J) improve the environment, improve energy efficiency, reduce dependence on oil, or reduce pollution;

(K) promote or improve positive public health outcomes for a community;

(L) increase resiliency of the transportation system;

(M) incorporate relevant security solutions and address emergency situations based on the scope and necessity;

(N) includes sufficient technical, physical, and administrative measures to ensure security of information and protection of individuals' privacy; and

(O) address issues identified by the Department of Transportation in the Beyond Traffic 2045 report.

(e) USE OF GRANT FUNDS.—

(1) VISION ELEMENTS.—A SMART grant may be used for a project that demonstrates a sound, innovative, integrated, and holistic approach and in-

corporates many aspects of the applicable vision elements set forth in this paragraph.

(A) COORDINATED AUTOMATION.—The use of automated transportation and autonomous vehicles, which offer tremendous possibilities for enhancing safety, mobility, accessibility, equity, and the environment, while working to minimize the impact on the accessibility of any other user group or mode of travel.

(B) CONNECTED VEHICLES.—Connected vehicles, which send and receive information about their movements in the network, use vehicle-to-vehicle, vehicle-to-infrastructure, and vehicle-to-pedestrian communications to provide connectivity that will enable countless safety, mobility, and environmental applications.

(C) INTELLIGENT, SENSOR BASED INFRASTRUCTURE.—The use of a collective intelligent infrastructure allows sensors to collect and report real-time data to inform every day transportation-related operations, performance, and trends of a community, ensuring that data collection and dissemination is conducted in a safe, secure manner.

(D) ARCHITECTURE AND STANDARDS.—The explicit use of architectures, which—

(i) are governed by rules, documentation, and standards;

(ii) may be extended to a nationwide or broader deployment;

(iii) are defined and demonstrate integration of intelligent transportation systems with other systems which comprise a smart community; and

(iv) include a description of the required interfaces to other systems that utilize existing networking or other standards, if available, and any new standards that may be needed.

(E) LOW COST, EFFICIENT, SECURE, AND RESILIENT INFORMATION AND COMMUNICATIONS TECHNOLOGY.—Strategies and practices that advance information and communications technology that is affordable, adaptable, efficient, secure and resilient, including integrated telecommunications platforms, enterprise software, storage, and visualization systems.

(F) SMART LAND USE.—Strategies and practices that ensure land use is efficiently opti-

mized through a combination of planning and innovation deployments designed to lead to a better connected community that incorporates new modes of shared and sustainable transportation into its existing infrastructure, expanding the range of transportation choices and access to employment, housing, education and health services, which may include—

(i) the establishment of value capture programs and value capture districts to use a portion of the increase in value resulting infrastructure investments as part of a mixed package of funding for the infrastructure and other public benefits; and

(ii) planning updates and policy changes to increase the supply of housing located in proximity to public transportation services.

(G) COMPREHENSIVE ANALYTICS.—The development of platforms for understanding and analyzing data to address complex challenges, including personal safety and mobility, network efficiency, and environmental sustainability, and measuring the performance of a transportation network.

(H) USER-FOCUSED MOBILITY SERVICES AND CHOICES.—Strategies, initiatives, and services, including connected vehicles, automated vehicles, and ride, bicycle, and scooter share innovations that increase transportation choices and options by supporting and improving mobility for all travelers, including aging Americans and persons with disabilities and advanced traveler information systems that provide real-time traffic, transit, parking, and other transportation-related information to travelers.

(I) COMMERCE DELIVERY AND LOGISTICS.—Innovative solutions supporting efficient goods movement in ways that use data or deploy technology, such as connected vehicle probe data, road weather data, or GPS, to create opportunities for a more efficient supply chain approach that delivers safer logistics management, improved on-time pickups and delivery, improved travel time reliability, reduced fuel consumption, and reduced labor and vehicle maintenance costs.

(J) LEVERAGE THE USE OF INNOVATIVE AVIATION TECHNOLOGY.—Leveraging the use of innovative aviation technologies, such as un-

manned aircraft systems, to support transportation safety and efficiencies, including traffic monitoring and infrastructure inspection.

(K) STRATEGIC BUSINESS MODELS AND PARTNERING OPPORTUNITIES.—Creative strategic partnerships that—

(i) draw in stakeholders, including private sector, nonprofit, foundation, philanthropic, academia, and other public agencies, to advance SMART grant solutions; and

(ii) may include collaboration among transit agencies and other transportation providers to integrate multiple transportation services for increased efficiency, reliability, and convenience in first and last mile travel.

(L) SMART GRID, ROADWAY ELECTRIFICATION, AND ELECTRIC VEHICLES.—Strategies and initiatives that—

(i) leverage the smart grid (a programmable and efficient energy transmission and distribution system) to support the adoption or expansion of roadway electrification, energy capture, and electric

vehicle deployment, including electrically-assisted bicycles, or freight or commercial fleet fuel efficiency; and

(ii) explore and utilize interactions between electric vehicles and intelligent transportation systems with the smart grid.

(M) SYNCHRONIZATION OF TECHNOLOGY.—Strategies and initiatives that utilize technology, such as integrated mobile commerce infrastructure—

(i) to enhance public interaction with transportation systems;

(ii) to increase intermodal efficiency; and

(iii) to accelerate the transition to open payment fare systems, broadband, GPS, or Wi-Fi access.

(N) CONNECTED, INVOLVED CITIZENS.—Strategies, local campaigns, and processes to proactively engage and inform citizens at the individual level by deploying hardware, software, and open data platforms in an effort to increase personal mobility.

(2) ELIGIBLE PROJECT COSTS.—A SMART grant may be used for—

(A) development phase activities, including a reasonable amount of funding, as determined by the Secretary, for—

(i) planning;

(ii) feasibility analysis;

(iii) revenue forecasting;

(iv) environmental review;

(v) permitting;

(vi) preliminary engineering and design work;

(vii) systems development or information technology work; and

(viii) other preconstruction activities; and

(B) construction phase activities, including—

(i) construction;

(ii) reconstruction;

(iii) rehabilitation;

(iv) replacement;

(v) acquisition of real property (including land related to the eligible project and improvements to land);

(vi) environmental mitigation;

(vii) construction contingencies; and

(viii) acquisition of equipment, including vehicles.

(3) PROHIBITED USE OF GRANT FUNDS.—SMART grants may not be used—

(A) to reimburse any pre-award costs or application preparation costs under the proposed project application;

(B) for traffic or parking enforcement activities; or

(C) to purchase or lease license plate readers.

(f) TRANSPARENCY.—

(1) IN GENERAL.—The Secretary shall include, in any notice of funding availability, a full description of how applications will be evaluated against the criteria set forth in subsection (c).

(2) CONSULTATIONS ON DECISIONS.—After all SMART grants have been awarded for a fiscal year, the Secretary (or the Secretary's designee) shall be available to communicate directly with and have a debrief with the applicant.

(g) SUBMISSION OF APPLICATION FOR OTHER FEDERAL TRANSPORTATION FUNDING PROGRAMS TO CARRY

OUT PROPOSED SMART GRANT PROJECTS.—Notwithstanding any other provision of law, an eligible applicant for a SMART grant under this section may submit an application for projects outlined in the applicant's SMART grant application to seek Federal financial assistance for the proposed transportation project through—

(1) the Better Utilizing Investments to Leverage Development (BUILD) discretionary grant program;

(2) the Infrastructure for Rebuilding America grant program (commonly known as ''INFRA'');

(3) the Transportation Infrastructure Finance and Innovation program established under chapter 6 of title 23, United States Code (commonly known as ''TIFIA'');

(4) the Railroad Rehabilitation and Improvement Financing Program of the Federal Railroad Administration;

(5) the Capital Investment Grant Program of the Federal Transit Administration;

(6) the Congestion Mitigation and Air Quality Improvement Program of the Federal Highway Administration; or

(7) the Advanced Transportation and Congestion Management Technologies Deployment Program

established under section 503(c)(4) of title 23, United States Code (commonly known as ''ATCMTD'').

(h) CONFORMING AMENDMENT.—Section 117(c) of title 23, United States Code, is amended

SEC. 5. REPORTING REQUIREMENTS.

(a) REPORT TO SECRETARY.—Not later than 2 years after the date on which a SMART grant recipient receives a grant under section 4, and annually thereafter until such grant is expended, the recipient shall submit an implementation report to the Secretary that describes—

(1) the deployment and operational costs compared to the benefits and savings from the project; and

(2) how the project has met the original expectation as projected in the deployment plan submitted with the application, including—

(A) data on how the project—

(i) affected the measurement and improvement of transportation system performance through the deployment of advanced technologies;

(ii) reduced traffic-related fatalities and injuries;

(iii) reduced traffic congestion, improved travel time reliability, and reduced costs;

(iv) reduced transportation-related emissions;

(v) optimized multimodal system performance;

(vi) improved access to all transportation alternatives;

(vii) implemented technological innovation to increase efficiency with regards to intermodal communication, energy consumption, information and communications technology, and personal mobility;

(viii) provided the public with access to real-time integrated traffic, transit, and multimodal transportation information to make informed travel decisions;

(ix) provided cost savings to transportation agencies, businesses, and the traveling public;

(x) provided other benefits to transportation users and the general public;

(xi) reduced barriers or improved access to jobs, education, or various essential services; and

(xii) utilized partnerships with the private sector;

(B) the effectiveness of providing real-time integrated traffic, transit, and multimodal transportation information to the public to make informed travel decisions; and

(C) lessons learned and recommendations for future deployment strategies to optimize transportation efficiency and multimodal system performance.

(b) GAO BIENNIAL REVIEWS.—Not later than 2 years after the date of the enactment of this Act, and biennially thereafter, the Comptroller General of the United States shall conduct a review of the SMART grant selection process and submit a report containing the results of such review to the Committee on Commerce, Science, and Transportation of the Senate, the Committee on Appropriations of the Senate, the Committee on Energy and Commerce of the House of Representatives, the Committee on Appropriations of the House of Representatives, and the Committee on Transportation and Infrastructure of the House of Representatives.

(c) REPORT TO CONGRESS.—Not later than 2 years after the date on which initial grants are awarded under section 4, the Secretary shall submit a report to the Committee on Commerce, Science, and Transportation of the Senate, the Committee on Energy and Commerce of the House of Representatives, and the Committee on Transportation and Infrastructure of the House of Representatives that—

(1) describes all of the grant recipients;

(2) identifies the amount each grant recipient was awarded;

(3) summarizes the intended uses for the grants;

(4) describes the effectiveness of SMART grant recipients in meeting their projected deployment plan;

(5) analyzes how the projects funded by such grants or by other Department of Transportation financial assistance described in section 4(f) have—

(A) affected the measurement and improvement of transportation system performance through the deployment of advanced technologies;

(B) reduced traffic-related fatalities and injuries;

(C) reduced traffic congestion, improved travel time reliability, and reduced costs;

(D) reduced transportation-related emissions;

(E) optimized multimodal system performance;

(F) improved access to all transportation alternatives;

(G) implemented technological innovation to increase efficiency with regards to intermodal communication, energy consumption, information and communications technology, and personal mobility;

(H) provided the public with access to real-time integrated traffic, transit, and multimodal transportation information to make informed travel decisions;

(I) provided cost savings to transportation agencies, businesses, and the traveling public;

(J) provided other benefits to transportation users and the general public;

(K) reduced barriers or improved access to jobs, education, or various essential services;

(L) utilized partnerships with the private sector; and

(M) effectively provided real-time integrated traffic, transit, and multimodal transportation information to the public to make informed travel decisions; and

(6) describes lessons learned and recommendations for future deployment strategies to optimize transportation efficiency and multimodal system performance.

SEC. 6. AUTHORIZATION OF APPROPRIATIONS.

(a) IN GENERAL.—There are authorized to be appropriated to the Department of Transportation $100,000,000 for each of the first 5 fiscal years beginning after the date of the enactment of this Act, of which—

(1) not more than 80 percent shall be used for SMART grants to large communities and mid-sized communities under paragraphs (1) and (2) of section 4(a);

(2) not more than 20 percent shall be used for SMART grants to rural communities or regional partnerships under section 4(a)(3); and

(3) not more than 2 percent shall be used for administrative costs by the Office of the Secretary within the Department of Transportation.

(b) LIMITATION.—A grant recipient may not use more than 3 percent of the grant award each fiscal year to carry out planning and reporting requirements.

(c) AVAILABILITY.—Amounts appropriated for a fiscal year pursuant to this section shall be available for obligation during the 2-year period beginning on the first day of the fiscal year for which such amounts were appropriated.