



ASSESSMENT OF
HOUSE PASSED H.R. 2 - INVEST IN AMERICA ACT
[MOVING FORWARD ACT]

The House of Representatives approved on July 1 the [H.R. 2 - INVEST in America Act \[Moving Forward Act\]](#). The Investing in a New Vision for the Environment and Surface Transportation in America [INVEST in America] Act is the centerpiece of the Moving Forward \$1.5 trillion infrastructure bill. The INVEST in America Act incorporates numerous priorities from the ITS America FAST Act reauthorization platform [Moving People, Data, and Freight: Safer. Greener. Smarter.](#)

The INVEST in America Act provides \$494 billion over five years for surface and rail transportation investments. Included is \$411 billion over five years from the Highway Trust Fund for highway, transit, safety, and research programs, a 46 percent increase over current investment levels. It provides \$319 billion for the Federal-aid highway program under the Federal Highway Administration, \$105 billion for transit programs under the Federal Transit Administration, \$4.6 billion for highway safety programs under the National Highway Traffic Safety Administration, and \$5.3 billion for motor carrier safety programs under the Federal Motor Carrier Safety Administration.

The bill **maintains FAST Act ITS eligibilities and expands those eligibilities to new programs** including the Gridlock Reduction Grant, Projects of National and Regional Significance, Community Transportation Investment Grant, Pre-disaster Mitigation Program, Community Climate Innovation Grant, Carbon Pollution Reduction Program, Safe, Efficient Mobility through Advanced Technologies program, Parking for Commercial Motor Vehicles program, Pre-disaster Hazard Mitigation program, and the Third-Party Data Integration Pilot Program.

Senate vs. House Highway Bills

(INVEST in America Act
Approximate Funding Levels)

Formula:

- ATIA: \$259 Billion
- INVEST: \$284 Billion

Competitive Grants:

- ATIA: \$13 Billion
- INVEST: \$17 Billion

Research:

- ATIA: \$2.8 Billion
- INVEST: \$3.1 Billion

Totals:

- ATIA: \$287 Billion
- INVEST: \$320 Billion

Intelligent Transportation Systems are eligible under the following programs:



EMERGENCY ASSISTANCE: EXTENSION OF FEDERAL SURFACE TRANSPORTATION PROGRAMS

Section 101 of the bill **provides \$83.1 billion at a 100 percent federal share in FY21** to ensure states, cities, and transit agencies can administer programs, advance projects, and preserve jobs in the aftermath of the COVID-19 crisis by extending FY20 enacted levels for Federal-aid highway, transit, and safety programs through FY21. The bill provides additional administrative expenses out of the Highway Trust Fund for FHWA and NHTSA and out of the General Fund for FTA. Highway, transit, and safety funds are made available at 100 percent federal share to eliminate the need for a match in FY21. No new policy for FY21. The first year is, in many ways, an extension of the FAST Act with all programs at existing levels. This is an ITS America priority.

ITS America Policy: Urgent flexible COVID-19 relief funding to offset the loss in revenues for state, county, and city transportation agencies, transit agencies, and public authorities.

Section 102 of H.R. 2 authorizes an additional **\$14.742 billion in contract authority from the Highway Account above FY20 levels**, provides an equal amount of obligation authority to be distributed with these funds, and distributes these amounts according to existing formulas. Funds made available under this section may be used for the broadest construction eligibilities under the Federal-aid highway program, as well as for transportation-related administrative expenses, including salaries and benefits. Allows any highway funds obligated in FY21 to be up to 100 percent federal share, except for obligations under the Nationally Significant Freight and Highway Projects (INFRA), the TIFIA program, or advanced construction. Distributes the funds among states in the proportion to their share of total FY20 authorized funds. H.R. 2 suballocates the funds made available to the states in the same proportion as the total funds apportioned to the States in FY20 were suballocated.

The bill authorizes an additional **\$5.79 billion under Section 103 in contract authority from the Mass Transit Account above FY20 levels** and allows funds obligated in FY21 to be up to 100 percent federal share. Distributes funds through the 5307, 5310, and 5311 programs in the same ratio as such funds were provided in FY20. Allows funds to be used for both capital and operating expenses, including the purchase of personal protective equipment, and paying for administrative leave costs due to reductions in service.

Section 104 provides an additional **\$244.5 million in contract authority in FY21 for the National Highway Traffic Safety Administration (NHTSA)** highway safety programs. Provides obligation authority to be distributed with the funds authorized under this section and additional administrative expenses provided in Section 101. Increases the federal share to 100



percent for activities carried out in FY21 and extends the period of availability for funds that would otherwise expire in FY21 by one year.

Section 105 provides an additional **\$209.9 million in contract authority FY21 for the Federal Motor Carrier Safety Administration (FMCSA)** motor carrier safety programs. Allows FMCSA to provide financial assistance to States for carrying out motor carrier safety activities in FY21 at a federal share of up to 100 percent, to waive maintenance of effort requirements in FY21, and to extend the period of availability for grant funds by one year.

INNOVATION

Section 5001 authorizes \$2.2 billion in contract authority for FY22 through FY25 for research programs.

Section 5101 increases funding to **\$144 million for FY22 through FY25 for the Highway Research and Development Program and removes set-asides** that previously took funding away from critical research activities, including ATCMTD. The program is funded at \$125 million per year under the FAST Act.

Sec. 5104 **increases funding to \$96 million for FY22 through FY25 bringing the total over the five years to \$461.5 million for the University Transportation Centers (UTC) Program.**

Adds FTA to the administration of the program. Increases Federal share and increases maximum grant amounts. Adds focused research on transit, rail, connected and automated vehicles, bicyclist and pedestrian safety, surface transportation workforce issues, planning, and climate change. The UTC program is funded at \$377.5 million over the five years of the FAST Act.

ITS America Policy: Increase investments in research and deployment of Intelligent Transportation Technologies.

ITS America Policy: Reauthorize the ITS Program Advisory Committee.

Sec. 5105 establishes a new **Unsolicited Research Initiative Program** through which local governments, universities, and nonprofits may, at any time, propose research projects to the Secretary. Of the funds made available to carry out the UTC program under section 5505, \$2 million shall be available for each of fiscal years 2022 through 2025 to carry out this section.

Section 5201 more than doubles funding to \$152 million for FY22 through FY25, bringing the total over five years to \$675 million for the **Technology and Innovation Deployment Program.** Adds greenhouse gas emissions reduction to the objectives. The program is funded at \$67 million per year under the FAST Act.



The **Intelligent Transportation Systems Program** (Sec. 5302) would receive \$100 million for FY21 through FY25 bringing the total funding to \$500 million. It reauthorizes the ITS Program Advisory Committee and removes set-asides that previously took funding away from intelligent transportation activities.

H.R. 2 includes a **National Highly Automated Vehicle and Mobility Innovation Clearinghouse** (Sec. 5303) to research the impacts of highly automated vehicles and mobility innovation (Mobility on Demand and Mobility as a Service) on land use, urban design, transportation systems, real estate, accessibility, municipal budgets, social equity, availability and quality of jobs, air quality and climate, energy consumption, and the environment.

It establishes a **Study on Safe Interactions Between Automated Vehicles and Road Users** (Sec. 5304). The bill directs the U.S. DOT to study how automated vehicles will safely interact with general road users, including vulnerable road users such as bicyclists and pedestrians.

It requires the U.S. DOT to take into consideration whether automated vehicles can safely operate within the surface transportation system, including the degree to which ordinary human behaviors make it difficult for an automated vehicle to safely, reliably predict human actions; unique challenges for automated vehicles in urban and rural areas; the degree to which an automated vehicle is capable of uniformly recognizing and responding to individuals with disabilities and individuals of different sizes, ages, races, and other varying characteristics; for bicyclist, motorcyclist, and pedestrian road users— the varying and non-standardized nature of bicyclist and pedestrian infrastructure in different locations; the close proximity to motor vehicles within which bicyclists often operate, including riding in unprotected bike lanes and crossing lanes to make a left turn, and the risk of such close proximity; and roadways that lack marked bicyclist infrastructure, particularly in midsized and rural areas, on which bicyclists often operate; for motorcyclist road users, the close proximity to other motor vehicles within which motorcyclists operate, including operating between lanes of slow or stopped traffic; and depending on the level of automation of the vehicle, the degree to which human intervention remains necessary to safely operate an automated vehicle to ensure the safety of general road users in circumstances including— dangerous weather; an electronic or system malfunction of the automated vehicle; and a cybersecurity threat to the operation of the vehicle.

The bill establishes a **Surface Transportation Workforce Retraining Grant Program** (5307) for surface transportation workers whose jobs have been or will be affected by automation. The program will award grants to eligible entities to test new roles for existing jobs, to develop degree or certification granting programs, and for direct worker training or train-the-trainer programs.



The bill establishes **Automated Commercial Vehicle Reporting** (5311). The U.S. DOT will establish a repository for motor carriers, shippers, technology companies, and other entities to submit information to the Secretary on testing, demonstrations, or commercial operations of an automated commercial motor vehicle on public roads. Prior to the performance of any tests, demonstrations, or commercial operations of automated commercial motor vehicles on public roads, the Secretary shall require an entity performing such tests, demonstrations, or commercial operations to provide the name of the entity responsible for the operation of the automated commercial motor vehicles to be used in the test, demonstration, or commercial operation; the make and model of such vehicle or vehicles; the level of automation of such vehicle or vehicles; the expected weight of such vehicle during the test, demonstration, or operation; the Department of Transportation number or operating authority assigned to the entity, if applicable; the location of the testing, demonstration, or commercial operation, including the anticipated route of such vehicle, planned stops, and total anticipated miles traveled; any cargo or passengers to be transported in such vehicle or vehicles, including whether the entity is transporting such cargo or passengers under contract with another entity; documentation of training or certifications provided to any drivers, monitors, or others involved in the operation or control of the vehicle; any fatigue management plans or work hour limitations applicable to drivers or monitors; notices provided to local law enforcement, State departments of transportation, and related entities, if applicable; and proof of insurance.

Upon submission of the information, the Secretary shall provide written notification acknowledging receipt of the information and acknowledging that the submitting entity will perform tests, demonstrations, or commercial operations on public roads, as applicable.

The bill requires the U.S. DOT to require entities to submit information regarding safety incidents which occur during the testing, demonstration, or commercial operation of an automated commercial motor vehicle on public roads, including injuries and fatalities involving the automated commercial motor vehicle; collisions or damage to persons or property as a result of an automated commercial motor vehicle test, demonstration, or commercial operation; any malfunction or issue with a safety critical element of an automated commercial motor vehicle which compromises the safety of the automated commercial motor vehicle or other road users; and the mode of transportation used by any road users involved in a safety critical incident.

Section 5401 nearly doubles funding for **State Surface Transportation System Funding Pilots** to \$160 million over five years. It adds cybersecurity to the scope of the pilot programs and establishes a **National Surface Transportation System Funding Pilot** as well as a new five-year national VMT pilot program funded at \$40 million over the five years. Under the National Surface

ITS America Policy: Expand the existing State Pilot Program.

ITS America Policy: Support a National Vehicle Miles Traveled Program.



Transportation System Funding Pilot (Sec. 5402), the final bill includes language to require that the national pilot program's advisory board include consumer advocates, and also include data experts with expertise in personal privacy, and to require that the final report to Congress include an analysis of how the personal privacy of volunteers was maintained.

Section 5301 renames the **Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Program to the Safe, Efficient Mobility through**

Advanced Technology (SEMAT) Program. It expands eligible uses of funds to include vehicle-to-pedestrian technology, vulnerable road user safety systems, and Mobility on Demand (MOD) activities. Requires the Secretary to prioritize programs that will improve mobility, decrease congestion, increase safety, and reduce emissions. The bill increases funding to \$70 million per year from the Technology Innovation Deployment Program and expands the federal share of the program to 80 percent. ATCMTD is funded at \$60 million per year and the federal share is up to 50 percent under the FAST Act. SEMAT is no longer a set-aside in Highway Research and Development Program and Intelligent Transportation Systems Program.

ITS America Policy: Increase funding and federal share to 80% for the Advanced Transportation and Congestion Management Technologies Deployment Program.

ITS America Policy: Support policy that makes Vehicle-to-Pedestrian communications an eligible activity.

The bill includes a new **Strategic Transportation Research Agenda** (Section 5509) that requires the Secretary to enter into an agreement with the National Academies to undertake a study of the research needs of the surface transportation system to fully adapt and integrate advanced technologies and innovation. The focus areas of the study will include connected and autonomous technologies, incorporating safety-related technologies, addressing infrastructure resiliency, multimodal connectivity; data gathering of travel behavior, including the public's short and long-term responses to transformational technologies; impacts of private-sector transportation product development on society and the traditional research enterprise; support for a public-sector culture of transportation innovation and acceleration of federally funded research into practice, codes, and standards; and fostering development of transportation educators and transportation professionals. The funding is \$1,500,000 for FY22.

H.R. 2 establishes a **Multimodal Transportation Demonstration Program** (Section 5511) for the demonstration of advanced transportation technologies for surface transportation modes in small- and mid-sized communities by providing grants to entities to achieve the purposes of the national transportation research and development program described in section 6503. Activities eligible for funding under this section include data interoperability, mobility-on-demand, and micro-mobility projects to demonstrate first-mile transportation, last-mile



transportation, and any other activity as determined appropriate the Secretary. Entities eligible to receive grants under this program include local transportation organizations and transit agencies serving a population of not more than 200,000 individuals, including communities of economic hardship and communities that experience transportation equity and accessibility issues. There is authorized to be appropriated to carry out activities under this section \$30,000,000 for each of fiscal years 2022 through 2025.

ALTERNATIVE FUEL VEHICLE CHARGING INFRASTRUCTURE

Section 1211, **Electric Vehicle Charging Stations**, requires electric vehicle charging stations that receive title 23 funds to be usable by the majority of EV drivers and accessible to all members of the public. H.R. 2 also allows EV charging stations in Interstate rest areas, Interstate fringe or corridor parking facilities, and Interstate park and ride facilities. Section 1303, **Grants for Charging and Fueling Infrastructure to Modernize and Reconnect America For The 21st Century**, provides \$1.4 billion in alternative fuel charging infrastructure. It establishes a \$350 million annual competitive grant program to deploy electric vehicle charging, hydrogen, natural gas, and propane fueling infrastructure along designated alternative fuel corridors that will be accessible to all drivers of electric vehicles, natural gas vehicles, propane vehicles, and hydrogen vehicles. It requires consideration of projects in freight corridors near ports and freight hubs. INVEST in America Section 149 of title 23, USC, is amended to include hydrogen vehicle, natural gas, and propane fueling stations. Prohibits a grant recipient from charging fees for the use of a project assisted with a grant under this section.

ITS America Policy: Establish a grant program to invest in alternative fuel vehicle infrastructure.

MOBILITY ON DEMAND

The bill **establishes rules that integrate MOD with transit** (Sec. 2203). MOD is an eligible activity under Urbanized Area Formula Grants – 5307, Formula Grants for Rural Areas – 5311, and Enhanced Mobility of Seniors & Individuals with Disabilities - Section 5310. The federal share if the net cost for MOD and Maas is 70%. The federal share may not exceed 90 percent for MOD service operated exclusively by personnel employed by the recipient. The Federal share of the net cost of a project shall not exceed 90 percent if such project involves an eligible use that uses a vehicle that produces zero carbon dioxide or particulate matter.

ITS America Policy: Establish a Mobility-on-Demand program for the new world of mobility.



The bill requires the Secretary to publish guidance describing eligible activities that are demonstrated to increase transit ridership; be complementary to fixed route transit service; demonstrate meaningful improvements in environmental metrics, including standards established pursuant to the Clean Air Act and greenhouse gas performance targets established pursuant to section 150(d) of title 23; traffic congestion; compliance with the requirements under the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.); low-income service to increase access to employment, healthcare, and other essential services; service outside of transit agency operating hours, provided that the transit agency operating hours are not reduced; new low density service relative to the higher density urban areas of the agency's service area; or rural service.

The bill retains basic requirements for safety, Buy America, and labor. H.R. 2 includes restrictions on single passenger trips and carbon and particulate emissions and requires a negotiated rulemaking on an open data standard.

Workforce planning (Sec. 2603) requirements apply to **automated vehicle transit deployments** as well as Mobility-on-Demand. No financial assistance under chapter 53 of title 49, United States Code, may be used for an automated vehicle providing public transportation unless the recipient of such assistance that proposes to deploy an automated vehicle providing public transportation certifies to the Secretary of Transportation that the deployment does not eliminate or reduce the frequency of existing public transportation service; and the Secretary receives, approves, and publishes the workforce development plan submitted by the eligible entity.

MOD Sandbox at \$5 million per year. Shared micromobility is now eligible under CMAQ. MOD is also eligible under the Safe, Efficient Mobility through Advanced Technology (SEMAT) Program and Multimodal Transportation Demonstration Program.

The bill establishes a **National Advanced Technology Transit Bus Development Program** (Sec. 2805) to facilitate the development and testing of commercially viable advanced technology transit buses that do not exceed a Level 3 automated driving system. The bill makes \$20,000,000 for each of fiscal years 2021 through 2025.

TECHNOLOGY TO ADDRESS CONGESTION

Section 1110 maintains **Congestion Pricing Programs** to reduce congestion and raise revenue to support transportation improvements and improve trip time reliability. It authorizes congestion pricing subject to congestion and air quality impacts, planned investments to improve public transportation, environmental justice, and equity impacts, impacts on freight movement, and economic impacts.

Section 1301 establishes a **Projects of National and Regional Significance Program**, which provides more than \$9 billion over the life of the bill for large highway, transit, and passenger and freight rail projects that reduce congestion on roadways and that cannot be funded through annual apportionments or other discretionary sources. In awarding a grant, the Secretary shall also consider whether the project uses innovative technologies.

ITS America Policy:
Transportation technologies to reduce congestion.

ITS America Policy: Maintain congestion pricing programs to reduce congestion and raise revenue to support transportation improvements and improve trip time reliability.

Section 1302 establishes a \$600 million per year **Community Transportation Investment Grants Grant Program** to support local investments in projects to improve safety, state of good repair, accessibility, environmental quality through infrastructure investments. ITS is an eligible activity.

Section 1306 establishes a \$250 million in FY22 **Gridlock Reduction Grant Program** to reduce traffic gridlock in large metropolitan areas with a population over 1.3 million. The Secretary may award grants to projects to reduce traffic congestion and related adverse impacts, including a project for one or more of the following: (1) Transportation systems management and operations. (2) Intelligent transportation systems. (3) Real-time traveler information. (4) Traffic incident management. (5) Active traffic management. (6) Traffic signal timing. (7) Multimodal travel payment systems. (8) Transportation demand management, including employer-based commuting programs such as carpool, vanpool, transit benefit, parking cashout, shuttle, or telework programs. The dedicates half of program funds for freight-specific projects including first-mile and last-mile delivery solutions, use of centralized delivery points, curb space management, and real-time freight parking and routing. Prioritizes projects in areas that are experiencing a high degree of recurrent congestion. The final bill allows a special purpose district or public authority with a transportation function, including a port authority” to apply for and receive grants.

Section 5308 establishes a **Third-Party Data Integration Pilot Program** to leverage anonymous crowdsourced data from third-party entities to implement integrated traffic

management systems that will improve traffic flow. Section 5309. **Third-Party Data Planning Integration Pilot Program.** Establishes a Third-party Data Planning Integration Pilot Program (Section 5309) to leverage anonymous crowdsourced data from third-party entities to improve transportation planning.

TECHNOLOGY SOLUTIONS FOR CLIMATE CHANGE

H.R. 2 makes climate policy a core feature of highway funding programs in addition to creating new climate change mitigation programs. The bill creates a new \$8.3 billion **Carbon Pollution Reduction Program** (Section 1213) with broad flexibility to fund highway, transit, and rail projects that will reduce greenhouse gases. It allows states to use up to 10 percent of funds for operating costs of public transportation and intercity passenger rail. None of the funds may be used for a project that will result in the construction of new capacity available to single occupant vehicles unless the project consists of a high occupancy vehicle facility. It requires the Secretary to annually evaluate carbon dioxide emissions per capita on public roads in each State and issue an accompanying progress report. States that achieve the most significant reductions in carbon dioxide emissions will receive additional flexibility in project federal share and program transferability. States making the least progress in emissions reduction are required to dedicate additional federal funds to projects that will reduce emissions.

ITS America Policy: Transportation technologies to mitigate climate change.

H.R. 2 provides \$250 million per year for **Community Climate Innovation Grants** (Section 1304) to projects that reduce greenhouse gases. Includes eligibility for intercity passenger rail projects that reduce greenhouse gas emissions and improve mobility on public roads. The bill prioritizes projects that show the most promise in reducing greenhouse gas emissions, and provides further consideration for a project's cost-effectiveness, provision of diverse transportation choices, accessibility, equity and environmental justice impacts, benefits to low-income communities, and use of innovative materials.

The bill establishes a new **Pre-Disaster Mitigation Program within Increasing the Resilience of Transportation Assets** (Section 1202), providing \$6.25 billion to help prepare for and mitigate the impacts of climate change and extreme weather, including through natural infrastructure. Funding may be use for communications and intelligent transportation system equipment and infrastructure.



SMART TRUCK PARKING

Sec. 1308. **Parking for Commercial Motor Vehicles.** H.R. 2 establishes a \$250 million in FY23 Parking for Commercial Motor Vehicles Grant Program (Section 1308) to address the shortage of parking for commercial motor vehicles to improve safety for drivers. Eligible projects include the use of intelligent transportation systems to facilitate access to publicly and privately provided commercial motor vehicle parking. The program would prohibit grant recipients from charging fees for CMV parking facilities created by the grants.

ITS America Policy: Expand investments in advanced mobility Improvements, including smart truck parking.

BROADBAND

H.R. 2 creates a **Dig Once Funding Task Force** to estimate the cost of a nationwide “dig once” requirement, and to propose and evaluate options for funding such a requirement. Ensures Task Force consultation with stakeholders that represent rural communities and communities with limited access to broadband infrastructure. The duties of the Task Force shall be to estimate the annual cost for implementing and administering a nationwide dig once requirement; and propose and evaluate options for funding a nationwide dig once requirement described in this section that includes— a discussion of the role and potential share of costs of— the Federal Government; State, local, and Tribal governments; and (broadband providers; and consideration of the role of existing dig once requirements of State, local, and Tribal governments and private broadband investment, with a goal to not discourage or disincentivize such dig once requirements or such investment.

ITS America Policy: Deploy broadband to support intelligent transportation technologies.

ITS America Policy: Assist states and localities with recovering costs associated with conduit installation, maintenance of conduit, and conduit inventory is critical to increasing broadband installation, especially in rural areas and economically disadvantaged urban areas.

For more information on the INVEST in America Act, please contact ITS America’s Vice President of Legislative Affairs Ron Thaniel at rthaniel@itsa.org.