SUMMARY OF

HOUSE PASSED INVEST IN AMERICA ACT

JULY 1, 2021

On July 1, 2021, the U.S. House of Representatives approved H.R. 3684, Investing in a New Vision for the Environment and Surface Transportation in America Act, or the INVEST in America Act. The bill passed largely along party lines in a 221-201 vote, with two Republicans voting for the package, even though the bill included funding for specific projects — known Member Designated Projects — that both Democrats and Republicans had requested for their districts.

INVEST in America is now a $760 billion surface transportation and water infrastructure bill, with more than $44 billion added during the amendment process, including an amendment from Representative Bobby Rush (D-IL) that would authorize $36.6 billion over five years for electric vehicle production and deployment.

ITS America is focused on the surface transportation portion of the bill, which is $592 billion over five years (FY22-26), including $336 billion for roads, bridges, and research programs. The bill would authorize a total of $290.3 billion over five years from the Highway Trust Fund for the core federal-aid highway programs.[1] It provides $11 billion for safety programs, including $5.51 billion for highway safety programs under the National Highway Traffic Safety Administration (NHTSA) and $4.5 billion for motor carrier safety programs under the Federal Motor Carrier Safety Administration (FMCSA). The bill includes $109 billion for transit and $100 billion for rail programs. As noted, the bill now includes $36.6 billion for electric vehicle production and deployment. Fixing America's Surface Transportation (FAST) Act provided $305 billion for FY2016-20.

The bill does not include new revenue proposals to offset its costs. It does include $148 billion transfer from the General Fund to the Highway Trust Fund, including $109 billion to the Highway

[1] FY22-26 funding levels for federal-aid highway programs that are critical to technology deployment: National Highway Performance Program: **$140 billion**, Surface Transportation Program: **$65 billion,** Highway Safety Improvement Program: **$15 billion**, Safe Streets for All: **$2 billion**, Congestion Mitigation & Air Quality Improvement Program: **$14 billion**, National Highway Freight Program: **$8.6 billion**, Railway Crossings: **$1.2 billion**, Predisaster Mitigation Program: **$6.2 billion,** Carbon Pollution Reduction Program: **$8.3 billion**, and Clean Corridors Program: **$3.6 billion**

Account and $39 billion to the Mass Transit Account. The Committee on Ways and Means told ITS America that because conversations related to revenue to fund a reauthorization have not yet begun in the Senate, the House bill would address the revenue questions in a more comprehensive setting with the Senate; this also includes the excise taxes from the federal gasoline, diesel, new trucks and trailers, and heavy truck tires.

The FAST Act required $70 billion in General Fund transfers to the Highway Trust Fund for FY16 through FY20. Every year since 2008, there has been a gap between the dedicated tax revenues flowing into the Highway Trust Fund and the cost of the surface transportation spending authorized by Congress.

The bill includes many ITS America priorities from "Moving People, Data, and Freight: Safer. Greener. Smarter.", starting with maintaining the Fixing America's Surface Transportation (FAST) Act technology eligibilities. The bill significantly expands technology eligibilities to new programs including, but not limited to:

- Gridlock Reduction Grant
- Projects of National and Regional Significance
- Community Transportation Investment Grant
- Predisaster Mitigation Program
- Community Climate Innovation Grant
- Carbon Pollution Reduction Program
- Third-Party Data Integration Pilot Program
- Third-Party Planning Integration Pilot Program
- Safe Streets for All

All told, this is potentially billions of dollars for new technology investments.

ITS AMERICA'S STATEMENT ON HOUSE PASSAGE OF INVEST IN AMERICA ACT

"The INVEST in America Act's technology investments will power our country toward a safer, greener, smarter, and more equitable future.

"The bill's infrastructure technology investments will allow the United States to achieve a 21st century transportation system that helps protect all road users. It improves safety by making Vision

Zero and vehicle-to-pedestrian technologies eligible for funding as pedestrian and cycling deaths continue to increase.

"It includes other significant wins for our transportation system, for which ITS America and our members have advocated, including making cybersecurity eligible under highway and transit programs and establishing Mobility on Demand under transit programs, which will provide more access to mobility options for all Americans, in urban and rural communities.

"It also provides billions of dollars for research, development, and deployment of technologies that will lead to a greener transportation system, including electrifying our transportation infrastructure and public transit fleet, and significantly expands technology to new congestion relief and climate programs.

"ITS America has also long advocated for two auto safety measures not covered in this bill, both of which are critical to saving lives on our roadways: establishing a federal regulatory framework for autonomous vehicles and ensuring the 5.9 GHz spectrum is preserved for transportation safety use, which is critical for the safe deployment of autonomous vehicles as well as the safety and efficiency of the transportation system. We stand ready to work with Congress on these long overdue measures.

"We appreciate the House's investments in infrastructure technology and look forward to working with the Senate to complete its process."

SUMMARY

The bill makes **cybersecurity eligible** under the under the Mobility Through Advanced Technologies (MTAT) Program (formerly the Advanced Transportation and Congestion Management Technologies Deployment Program). It includes language that makes the employment of forensic consultants, cybersecurity experts, or third-party penetration testers to identify, evaluate, test, and patch ransomware attack vulnerabilities an eligible expense for mass transit grants. It directs the United States Government Accountability Office (GAO) to study and report to Congress the vulnerabilities that the United States transportation system has from ransomware and other cybersecurity threats. ITS America and our members have strongly advocated for cybersecurity eligibility under federal surface transportation law.

The bill also makes **Mobility on Demand and vehicle-to-pedestrian technologies eligible** under the MTAT Program and removes the funding set-aside in Highway Research and Development

Program and Intelligent Transportation Systems Program, increases funding to $70 million per year from the Technology Innovation Deployment Program, and expands the federal share of the program to 80 percent—all priorities for ITS America. The bill **establishes Mobility on Demand** under Urbanized Area Formula Grants, Formula Grants for Rural Areas, and Enhanced Mobility of Seniors & Individuals with Disabilities transit programs, which ITS America and our members have long advocated for. It also makes shared micromobility eligible under the Congestion Mitigation and Air Quality Improvement Program and makes the **Mobility on Demand Sandbox permanent**. The bill establishes the Multimodal Transportation Demonstration Program for the demonstration of advanced transportation technologies for surface transportation modes, for local transportation organizations, and transit agencies serving populations of 200,000 or less.

The bill includes significant funding for **alternative fuel vehicle charging infrastructure**, allows **EV charging stations in Interstate rest areas, Interstate fringe or corridor parking facilities, and Interstate park and ride facilities** and supports renewable energy generation, electrical transmission facilities and distribution infrastructure, and broadband infrastructure and conduit in the right-of-way of a federal-aid highway—all ITS America priorities. It also invests $4.1 billion in zero-emission buses.

It **maintains congestion pricing programs** to reduce congestion, provides **significant funding for research programs**, and increases investment in research on automated vehicle technologies under the emerging technologies section of the bill.

The bill did not include two auto safety measures for which ITS America has long advocated and are critical to saving lives on our roadways: establishing **a federal regulatory framework for autonomous vehicles** and ensuring the 5.9 GHz spectrum is preserved for transportation safety use, which is critical for the safe deployment of autonomous vehicles as well as the safety and efficiency of the transportation system. ITS America noted in its press statement that "We stand ready to work with Congress on these long overdue measures."

AMENDMENTS

The news here is the amendment from Representative Bobby Rush (D-IL) that provides $36.6 billion for electric vehicle production and deployment. Funding would be used to install charging stations, establish an electric vehicle supply equipment rebate program, model building code for electric vehicle supply equipment, and assessment of the state of, challenges to, and opportunities

for the deployment of electric vehicle charging infrastructure in underserved or disadvantaged communities, among other requirements. Included over the life of the INVEST in America Act is —

- $500 million for the EV Supply Equipment Rebate Program
- $500 million for State Energy Conservation Plans
- $125 million for State Energy Transportation Plans
- $10 billion for Plug-In EV Grants
- $12.5 billion for Near-Term Transportation Sector Electrification
- $480 million for EV Charging Equity Program
- $12.5 billion for Domestic Vehicle Manufacturing Conversion

The amendment requires all federal light-duty vehicles to be 100% zero-emission by 2050. It states that beginning in fiscal year 2025, 100 percent of the total number of light-duty vehicles acquired by a federal entity for a federal fleet shall be alternative fueled vehicles, of which at least 50 percent shall be zero-emission vehicles or plug-in hybrids in fiscal years 2025 through 2034; at least 75 percent shall be zero-emission vehicles or plug-in hybrids in fiscal years 2035 through 2049; and 100 percent shall be zero-emission vehicles in fiscal year 2050 and thereafter. The amendment requires the Secretary of Energy to accelerate efforts related to domestic manufacturing that are directed toward the improvement of batteries, power electronics, and other technologies for use in plug-in electric vehicles.

ITS America supported several amendments that were adopted during the floor debate. The first was an amendment from Representative Debbie Dingell (D-MI), which expresses the sense of the House of Representatives that Congress, in broad consultation with labor, safety groups, industry, and other stakeholders, should begin establishing a federal regulatory framework for the safe deployment of autonomous vehicles nationwide that will support existing jobs and grow the United States workforce of the future, including good union jobs, keep the United States on the forefront of this technology, and keep the United States competitive around the globe.

ITS America noted in our letter expressing support for this amendment that "Autonomous vehicles are on our roads today. This is why we need a federal regulatory framework – a framework that puts in place safety rules for autonomous vehicles. There are no federal regulations specifically governing the safety of autonomous vehicles. Our nation is on the cusp of a safer future transformed by automated transportation and autonomous vehicles. These technologies have the potential to eliminate the 94 percent of crashes caused by human error."

ITS America also supported two amendments from Representatives Andy Levin (D-MI) and Alexandria Ocasio-Cortez (D-NY). The first requires the Department of Transportation to submit to Congress a report on the plans submitted by states on their intended use of the charging allocation funds under the Clean Corridors Program, including details on how this makes progress towards a national network of EV chargers. The second amendment amends project considerations under the Clean Corridors Program to include considerations for promoting efficient dwell times and amends the program to include requirements for the provision of information on charging station placement through mapping applications.

The third amendment came from Kathy Castor (D-FL), which expands the Congestion Mitigation and Air Quality Improvement (CMAQ) program to allow funding to be used to offset the incremental cost of zero-emission medium- and heavy-duty vehicles, related zero-emission operations equipment, battery electric charging or fuel cell electric refueling infrastructure, and related infrastructure investments.

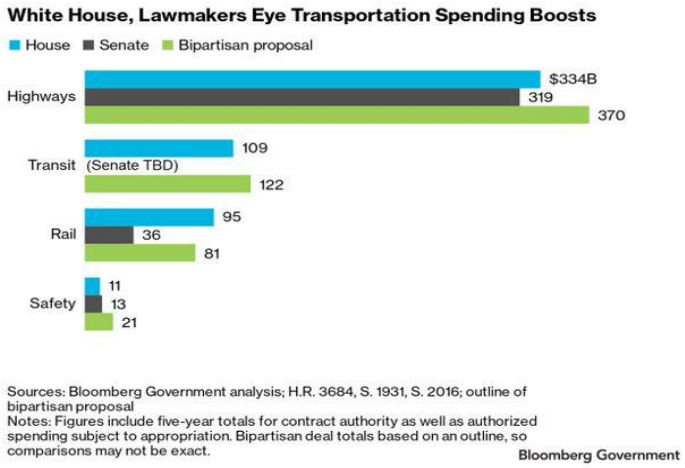
The fourth amendment came from came from Representatives Jason Crow (D-CO), Ritchie Torres (D-NY), and Gwen Moore (D-WI). It would ensure underserved communities are considered in the expansion of electric vehicle charging infrastructure deployment.

Regarding cybersecurity, ITS America supported an amendment from Bryan Steil (R-WI), Jake Auchincloss (D-MA), and Chrissy Houlahan (D-PA) that directs the GAO to study and report to Congress the vulnerabilities that the United States transportation system has from ransomware and other cybersecurity threats.

The sixth amendment came from Representative Haley Stevens (D-MI). It adds research and development on vehicle sensor data solutions such as employing vehicle-to-infrastructure communications in combination with on board sensor data to enhance roadway safety to the Vehicular Data Analytics Pilot Program to combat wrong way driving.

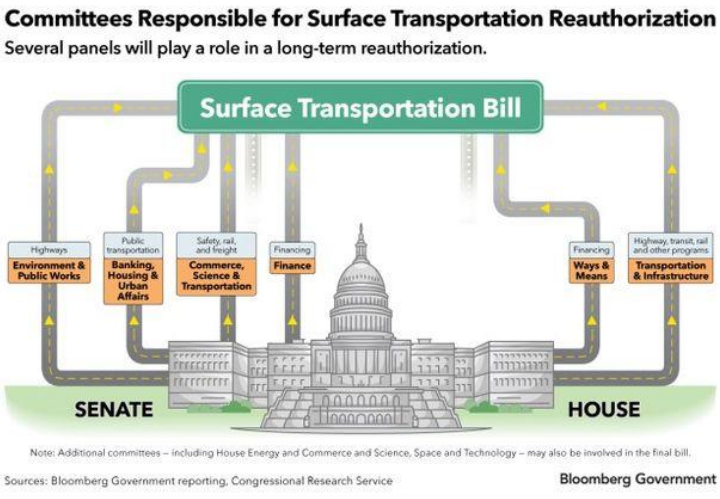
An amendment from Representative Scott Perry (R-PA) that would have struck the Clean Corridors program was defeated during the floor debate. ITS America opposed the Perry Amendment.

NEXT STEPS FOR THE REAUTHORIZATION OF THE FAST ACT



The passage of the bill in the House of Representatives is a significant milestone for completing a reauthorization of the nation's surface transportation programs before the current extension expires on September 30, 2021. With the passage of the INVEST in America Act in the House, the Surface Transportation Reauthorization Act of 2021 in the Senate Committee on Environment and Public Works covering highway, bridge, research, bike/ped, and environment programs on May 26, 2021, and the Surface Transportation Investment Act in the Senate Committee on Commerce, Science, and Transportation covering rail, freight, technology, research, and safety programs on June 16, 2021, the focus is squarely on the Senate Committees on Banking, Housing, and Urban Affairs, the transit title, and Finance. The FAST Act expired on September 30, 2020. Congress passed a one-year extension that will expire on September 30, 2021.

This document is a summary of INVEST in America Act technology programs and eligibility within programs. Please find a statement from House Democrats here, House Republicans here, ITS America's statement here, bill text here (Rules), and ITS America's FAST Act Reauthorization Platform Moving People, Data, and Freight: Safer. Greener. Smarter.



ITS AMERICA

INVEST IN AMERICA ACT

INNOVATION

Section 5001 authorizes approximately **$2.2 billion in contract authority for FY22 through FY26 for innovation programs.**

Section 5101 increases funding to **$144 million for FY23 through FY26 for the Highway Research and Development Program** from the Highway Trust Fund (HTF) 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 and FY22.

Sec. 5104 **increases funding to $96 million for FY22 through FY26 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. Directs the Secretary to consider cybersecurity in making grants under the program. 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. FY22 funding is $77.5 million.

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 2023 through 2026 to carry out this section.

The bill establishes a **Metropolitan Planning Research Pilot Program** (5111) to provide financial awards to metropolitan planning organizations to carry out research activities. Goals of the program will include enhancing surface transportation metropolitan planning practices to improve the ability of MPOs to meet performance measures and targets, including preparing for the impact that emerging technologies, such as connected and automated vehicles. The Federal share is up to 100 percent.

The bill establishes an **Advanced Transportation Research and Innovation Program** (5116) to support research that addresses the long-term scientific barriers to development of multimodal

advanced transportation technologies and to support high-risk research and development to accelerate transformational transportation innovations. In particular, the program would support:

- Research that addresses the long-term barriers to development of advanced transportation technologies with the potential to meet the Nation's long-term safety, competitiveness, and transportation goals
- Support high-risk research and development to accelerate transformational transportation innovations and emerging technology development
- Advance research and development that improves the resilience of regions of the United States to natural disasters, extreme weather, and the effects of climate change on modal and multimodal transportation and infrastructure
- Leverage Federal interagency research mechanisms and the academic research enterprise; educate and train students in science, technology, engineering, and mathematics fields to conduct research and standards development relevant to transportation technologies, materials, systems, operations, processes, and policies
- Foster collaboration among federal researchers and academic researchers

Section 5201 more than doubles funding to $152 million from the HTF for FY23 through FY26 (FY22 is $67.5 million), bringing the total over five years to $675.5 million for the **Technology and Innovation Deployment Program**. The bill adds greenhouse gas emissions reduction to the objectives. The program is funded at $67 million per year under the FAST Act. FY22 $67.5 million.

EMERGING TECHNOLOGY

Section 5301 renames the **Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Program to Mobility through Advanced Technologies (MTAT) Program.** It expands eligible uses of funds to safeguard surface transportation system technologies from cybersecurity threats, vehicle-to-pedestrian technology, vulnerable road user safety systems, Mobility on Demand (MOD) activities, and retrofitting dedicated short range (DSRC) communications technology deployed as part of an existing pilot program to cellular vehicle-to-everything (C-V2X) technology.

The bill 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. MTAT is no longer a set-aside in Highway Research and Development Program and Intelligent Transportation Systems Program.

The **Intelligent Transportation Systems Program** (Sec. 5302) would receive $100 million from the HTF for FY22 through FY26 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. The program was funded at $100 million per year under FAST Act.

The bill establishes a **National Highly Automated Vehicle and Mobility Innovation Clearinghouse** (Sec. 5303) at a university to research to collect, conduct, and fund research on the second impacts of highly automated vehicles and mobility innovation; make such research available on a public website; and conduct outreach and dissemination of the information described in this subsection to assist communities.

Key definitions: A Highly Automated Vehicle means a motor vehicle that is designed to be operated by a level 3 or level 4 automated driving system for trips within its operational design domain or a level 5 automated driving system for all trips according to the recommended standards published in April 2021, by the Society of Automotive Engineers International (J3016l9 202104) or, when adopted, equivalent standards established by the Secretary under chapter 301 of title 49, United States Code, with respect to automated motor vehicles. The term Mobility Innovation means an activity described in section 5316, including mobility on demand and mobility as a service (as such terms are defined in such section). Section 5316: Mobility on Demand means an on-demand transportation service shared among individuals, either concurrently or one after another. Mobility as a Service is the integration of mobility on demand services and public transportation that are available and accessible to all travelers, provide multimodal trip planning, and a unified payment system.

It establishes a **Study on Safe Interactions Between Automated Vehicles and Road Users** (5304). The bill states that "the purpose of this section shall be to ensure that the increasing deployment of automated vehicles does not jeopardize the safety of road users." The USDOT shall initiate a study on the ability of automated vehicles to safely interact with other road users. In carrying out the study, the USDOT shall:

- Examine the ability of automated vehicles to safely interact with general road users, including vulnerable road users;

- identify barriers to improving the safety of interactions between automated vehicles and general road users; and
- issue recommendations to improve the safety of interactions between automated vehicles and general road users, including, at a minimum technology advancements with the potential to facilitate safer interactions between automated vehicles and general road users, road user public awareness; and improvements to transportation planning and road design.

In carrying out the study, the USDOT shall take into consideration whether automated vehicles can safely operate within the surface transportation system, including:

A. the degree to which ordinary human behaviors make it difficult for an automated vehicle to safely, reliably predict human actions;
B. unique challenges for automated vehicles in urban and rural areas;
C. 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;
D. for bicyclist, motorcyclist, and pedestrian road users—
    a. the varying and non-standardized nature of bicyclist and pedestrian infrastructure in different locations;
    b. the close proximity to motor vehicles within which bicyclists often operate, including riding in unprotected bike lane and crossing lanes to make a left turn, and the risk of such close proximity; and
    c. roadways that lack marked bicyclist infrastructure, particularly in midsized and rural areas, on which bicyclists often operate;
E. 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
F. 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—
    a. dangerous weather;
    b. an electronic or system malfunction of the automated vehicle; and
    c. a cybersecurity threat to the operation of the vehicle.

The USDOT shall establish a working group to assist in the development of the study. Membership shall include representatives from:

A. National Highway Traffic Safety Administration
B. State departments of transportation
C. Local governments (other than metropolitan planning organizations)
D. Transit agencies
E. Metropolitan planning organizations
F. Bicycle and pedestrian safety groups
G. Highway and automobile safety groups
H. Truck safety groups
I. Law enforcement officers and first responders
J. Motor carriers and independent owner operators
K. Road construction industry
L. Labor organizations
M. Academic experts on automated vehicle technologies
N. Manufacturers and developers of both passenger and commercial automated vehicles
O. A motorcyclist rights group
P. Other industries and entities as the Secretary determines appropriate.

The bill establishes a **Surface Transportation Workforce Retraining Grant Program** (5305) 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.
Section 5306 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 5307 establishes a **Third-Party Data Planning Integration Pilot Program** to leverage anonymous crowdsourced data from third-party entities to improve transportation planning.
The bill establishes **Automated Commercial Vehicle Reporting** (5308). The USDOT 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. The purpose is to ensure automated commercial motor vehicle safety and transparency in developing and maintaining a repository. the

Secretary shall develop a process for submitting entities operating automated commercial motor vehicles in interstate commerce to provide the following information:

A. The name of the submitting entity responsible for the operation of an automated commercial motor vehicle or vehicles.
B. The make, model, and weight class of such vehicle or vehicles.
C. The intended level of automation of such vehicle or vehicles.
D. (A list of States in which the operation of such vehicle or vehicles will occur and a list of Federal-aid highways on which the operation will occur, as well as total miles traveled in the previous year on a biannual basis.
E. Any cargo classifications or passengers to be transported in such vehicle or vehicles, including whether the submitting entity is transporting such cargo or passengers under contract with another entity.
F. Documentation of training or certifications provided to any drivers, or other individuals directly involved in the performance of the dynamic driving task or fallback during operation of the vehicle, if any.
G. Any fatigue management plans or work hour limitations applicable to drivers, if any, consistent with such standards of the USDOT regarding automated commercial motor vehicle drivers.
H. Law enforcement interaction plans for automated commercial motor vehicles submitted to State transportation agencies or State and local law enforcement agencies.
I. Proof of insurance coverage.

The USDOT shall require submitting entities to submit information regarding collisions which occur during the operation of an automated commercial motor vehicle on public roads while the vehicle's automated driving system is engaged, including—

A. fatalities or bodily injury to persons who, as a result of the injury, immediately receive medical treatment away from the scene of a collision involving the automated commercial motor vehicle;
B. collisions or damage to property involving an automated commercial motor vehicle that results in an automated commercial motor vehicle or a motor vehicle being transported away from the scene by a tow truck or other motor vehicle;
C. a full description of how the collision or damage to property occurred, including, if applicable, the role of the automated driving system; and

D. the mode of transportation used by any road users involved in the collision, including general road users.

Key definition: The term "Automated commercial motor vehicle" means a commercial motor vehicle (as such term is defined in section 31132 of title 49, United States Code) that is designed to be operated by a level 3 or level 4 automated driving system for trips within its operational design domain or a level 5 automated driving system for all trips according to the recommended taxonomy published in April 2021, by the Society of Automotive Engineers International (J3016l202104) or, when adopted, equivalent standards established by the Secretary under chapter 301 of title 49, United States Code, with respect to automated motor vehicles.

INVEST in America Act establishes a **Heavy Freight Automated Trucking Research Corridor Program** (5311) to support research and development on automated and connected freight trucking and to establish a heavy freight automated trucking research and development corridor and related pilot programs. Activities include analyzing, modeling, and piloting the feasibility, benefits, and risks of dedicated automated trucking corridors, including any impact on—

- Long distance freight movement
- Supply chains
- Fuel economy and emissions
- Transportation infrastructure
- Vehicle miles traveled
- Small business concerns
- The trucking industry workforce, such as any impact on pay, benefits, and working conditions in both long-haul trucking and any related driving jobs safety, including interactions with non-automated motor vehicles and other road users and surrounding communities
- Deployment guidance, including for cyber-physical security and human factors, such as human-machine interfaces, psychological impacts, driver training, and strategies to address any impacts on the workforce, such as impacts on driver retention, wages, benefits, and working conditions within the trucking industry

Section 5401 nearly doubles funding for **State Surface Transportation System Funding Pilots**. It adds cybersecurity to the scope of the pilot programs in increases the federal share to 80%. The bill directs the GAO to complete a **Study on Per-Mile User Fee Equity (1630)** impacts of per-mile

user fee systems, including their impact on underserved communities, access to jobs and services, effects on both urban and rural areas, and impacts on passenger and commercial vehicles.

MOBILITY ON DEMAND

The bill **establishes rules that integrate Mobility on Demand (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 of the net cost for MOD and Mobility as a Service (MaaS) is up to 70%. This section has a considerable amount of new language, which is bolded red.

The MOD section has new **Insourcing Incentive Language** and **Zero Emission Incentive Language**. The federal share for MOD operated exclusively by personnel employed by the recipient is up to 80% (as opposed to 90% in HR 2 116) and up to 80% (as opposed to 90% in HR 2 116) if the project involves a vehicle that produces zero carbon dioxide or particulate matter.

Under the Eligible Uses MOD section requires the Secretary to publish guidance describing eligible activities that are demonstrated to:

A. increase transit ridership;
B. be complementary to fixed route transit service;
C. 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;
D. traffic congestion;
E. compliance with the requirements under the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.);
F. low-income service to increase access to employment, healthcare, and other essential services;
G. service during times of the day when regular transit service is not operating, as long as regular transit service hours are not reduced;
H. new service that operates in areas of lower density that are unserved or underserved by regular transit service;
I. or rural service;
J. and improvement in paratransit service quality.

The **Fare Collection Modernization** MOD section makes all costs associated with installing, modernizing, and managing fare collection, including touchless payment systems eligible expenses. Prohibition on Use of Funds MOD section includes:

A. single passenger vehicle miles (in a passenger motor vehicle, as such term is defined in section 32101, that carries less than 9 passengers), unless the trip meets the definition of public transportation; and begins or completes a fixed route public transportation trip;
B. deadhead vehicle miles;
C. or any service considered a taxi service that operates under an exemption from testing requirements under section 5331.

The **Open Data Standards** MOD section requires the USDOT to initiate procedures to develop an open data standard and an application programming interface necessary to carry out this section. The regulations shall require public transportation agencies, mobility on demand providers, mobility as a service technology providers, other nongovernment actors, and local governments the efficient means to transfer data to—

A. foster the efficient use of transportation capacity;
B. enhance the management of new modes of mobility;
C. enable the use of innovative planning tools;
D. enable single payment systems for all mobility on demand services;
E. establish metropolitan planning organization, State, and local government access to anonymized data for transportation planning, real time operations data, and rules;
F. prohibit the transfer of (as opposed to safeguard) personally identifiable information;
G. protect confidential business information;
H. enhance cybersecurity protections; and
I. allow data governance, including but not limited to licensing and terms of information sharing, periodic risk assessments, policies regarding data retention and information handling policies, and anonymization techniques.

The **Prohibition on for Profit Activity** states that any data received by an entity under this subsection may not be sold, leased, or otherwise used to generate profit, except for the direct provision of the related mobility on demand services and mobility as a service.

A negotiated rulemaking committee established pursuant to section 565 of title 5 to carry out Open Data Standards subsection shall have a maximum of 17 members limited to representatives

of the Department of Transportation, State and local governments, metropolitan planning organizations, urban and rural covered recipients, associations that represent public transit agencies, representatives from at least 3 different organizations engaged in collective bargaining on behalf of transit workers in not fewer than 3 States, mobility on demand providers, and mobility as a service technology providers.

Key definitions: Mobility on Demand means an on-demand transportation service shared among individuals, either concurrently or one after another. Mobility as a Service is the integration of mobility on demand services and public transportation that are available and accessible to all travelers, provide multimodal trip planning, and a unified payment system.

Innovation **Workforce Standards** (Sec. 2603) prohibits the use of funds 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.

Transit agencies considering transit automated vehicles and mobility on demand services are required to develop a workforce that includes the following:

A. A description of services offered by existing conventional modes of public transportation in the area served by the recipient that could be affected by the proposed automated vehicle providing public transportation or mobility on demand service, including jobs and functions of such jobs.
B. A forecast of the number of jobs provided by existing conventional modes of public transportation that would be eliminated or that would be substantially changed and the number of jobs expected to be created by the proposed automated vehicle providing public transportation or mobility on demand service over a 5-year period from the date of the publication of the workforce development plan.
C. Identified gaps in skills needed to operate and maintain the proposed automated vehicle providing public transportation or mobility on demand service.
D. A comprehensive plan to transition, train, or retrain employees that could be affected by the proposed automated vehicle providing public transportation or mobility on demand service.

E. An estimated budget to transition, train, or retrain employees impacted by the proposed automated vehicle providing public transportation or mobility on demand service over a 5-year period from the date of the publication of the workforce development plan.

Key definition: The term automated vehicle means a motor vehicle that: is capable of performing the entire task of driving (including steering, accelerating and decelerating, and reacting to external stimulus) without human intervention; and is designed to be operated exclusively by a Level 4 or Level 5 automated driving system for all trips according to the recommended practice standards published on June 15, 2018, by the Society of Automotive Engineers International (J3016l201806) or equivalent standards adopted by the Secretary with respect to automated motor vehicles.

MOD Sandbox (2801) is authorized at $5 million per year.

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.

Key definition: 49 U.S. Code § 5302.Definitions is amended to include charging stations and docks for electric micromobility devices, and bikeshare projects.

New definition:
(1) Associated transit improvement.—The term "associated transit improvement" means, with respect to any project or an area to be served by a project, projects that are designed to enhance public transportation service or use and that are physically or functionally related to transit facilities. Eligible projects are—
(E) bicycle access, including bicycle storage shelters and parking facilities, equipment for transporting bicycles on public transportation vehicles and installation of charging stations and docks for electric mobility devices, and bikeshare projects

The bill makes shared micromobility projects, including bikeshare, shared scooters, and docking Stations eligible under the **Congestion Mitigation and Air Quality Improvement Program** (1210).

Sec. 1214 Recreational Trails clarifies that "motorized recreation" does not include electric bicycles and aligns the definition of e-bikes with 23 USC 217 to reduce potential conflicts on trails between motorized and non-motorized users. 23 USC 217:
"(2)Electric bicycle.—
The term "electric bicycle" means any bicycle or tricycle with a low-powered electric motor weighing under 100 pounds, with a top motor-powered speed not in excess of 20 miles per hour."

Bicycle Transportation and Pedestrian Walkways (1216) aligns the definition of electric bicycle with other existing standards, subject to state and local safety regulations. The term 'electric bicycle' means mean a bicycle equipped with fully operable pedals, a saddle or seat for the rider, and an electric motor of less than 750 watts that can safely share a bicycle transportation facility with other users of such facility and meets the requirements of one of the following three classes:

A. Class 1 Electric Bicycle means an electric bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of 20 miles per hour.
B. Class 2 Electric Bicycle means an electric bicycle equipped with a motor that may be used exclusively to propel the bicycle, and that is not capable of providing assistance when the bicycle reaches the speed of 20 miles per hour.
C. Class 3 Electric Bicycle means an electric bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of 28 miles per hour.

Key definition: The term micromobility device means any wheeled vehicle equipped with a low powered electric motor that is designed primarily for human transport; that weighs not more than 100 pounds; and that has a top speed of 20 miles per hour or less.

The bill requires the Secretary of Transportation to conduct a **Resilient Public Transportation Study** (2607). Requires the Secretary to conduct a study on resilience planning for public transportation and shared mobility. In carrying out the study, the Secretary shall assess best practices for making public transportation more resilient to external shocks, such as pandemics and natural hazards; and new materials and technologies that may improve the resilience of public transportation and shared mobility, including innovative transit vehicles, emerging electric vehicle chassis platforms, and smart air quality control systems.

The bill establishes the **Multimodal Transportation Demonstration Program** (5310) for the demonstration of advanced transportation technologies for surface transportation modes for local transportation organizations and transit agencies serving populations of 200,000 or less. Eligible activities for funding include interoperability traveler support tools and services, active demand management, micro-transit, mobility-on-demand, and micro-mobility projects to demonstrate first-mile and last-mile transportation connections to the broader transportation system, and any

other activity as determined appropriate by the Secretary of Transportation. Funding is $30 million for each of fiscal years 2023 through 2026. The federal share is up to 80%.

The bill includes a new **GAO Study on Fare Free Transit** (2505). It requires a GAO report on the provision of fare-free transit service in the U.S, including an assessment of the prevalence of fare-free transit and its potential impacts. Specifically, the Comptroller General of the United States shall conduct a study on the provision of fare-free transit service in the United States, including an assessment of—

1. the extent to which fare-free transit is available in the United States; and
2. the potential impacts of fare-free transit, which may include—
    a. increased transit ridership;
    b. improved access to transportation for low-income riders and marginalized communities;
    c. improved access to jobs and services;
    d. enhanced equity of the surface transportation system;
    e. reductions in disputes or law enforcement actions related to transit fares;
    f. environmental impacts;
    g. safety considerations; and
    h. the challenges of replacing farebox revenue.

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. The bill directs USDOT to establish standards and guidance on EV charging stations, in consultation with the Secretary of Energy. Such standards include training of technicians, network connectivity, and physical and payment interoperability. The bill also allows EV charging stations in Interstate rest areas, Interstate fringe or corridor parking facilities, and Interstate park and ride facilities.

The bill establishes a $1 billion per year ($4 billion FY23-26) from the HTF **Clean Corridors Program** (1303) to provide formula funding to states for electric vehicle charging, hydrogen fueling, propane, and natural gas corridors.

TECHNOLOGY TO ADDRESS CONGESTION

Section 1306 establishes a $500 million in FY23 **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 1301 establishes a **Projects of National and Regional Significance Program**, which provides more than $12 billion from the HTF 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. Sets aside $4 billion for bridge investments, providing a dedicated, multi-year source of funding for some of the largest and most complex bridge projects in the country.

Section 1302 establishes a $600 million per year ($2.4 billion from the HTF FY22-26) **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 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 on both the toll facility and non-tolled routes onto which traffic might be diverted, planned investments to improve public transportation, environmental justice, transportation equity impacts, and equity impacts, impacts on freight

movement, and economic impacts. Ensures that public transportation vehicles and intercity buses can use new toll facilities without paying a toll. Requires that any new toll facilities provide for electronic interoperability with other providers in the region and seeks to facilitate interoperable electronic tolling. The bill requires that any additional funds must be used within the corridor to improve operations or capacity of public transportation, operational improvements, or other alternatives to the tolled facility. The bill sunsets the Value Pricing Pilot Program from accepting new projects.

TECHNOLOGY SOLUTIONS TO FIGHT CLIMATE CHANGE

The bill establishes a new **Pre-Disaster Mitigation Program** within **Increasing the Resilience of Transportation Assets (Section 1202)**, providing $6.3 billion from the HTF (FY23-26) 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.

The bill makes climate policy a core feature of highway funding programs in addition to creating new climate change mitigation programs. It creates a new $8.4 billion from the HTF (FY23-26) **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. 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. 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.

The bill provides $250 million per year from the HTF ($1 billion FY23-26) 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. Project eligible for assistance in those under chapter 53 of title 49, which would include MOD, among other technology projects.

The bill establishes an **Accommodation of Certain Facilities in Right-of-Way** (1118) section that streamlines the requirements for accommodation of certain beneficial facilities, such as renewable energy generation, electrical transmission facilities and distribution infrastructure, and broadband infrastructure and conduit in the right-of-way of a federal-aid highway.

MISCELLANEOUS

TRUCK PARKING

The bill establishes a $1 billion from the HTF (FY23-26) **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.

BROADBAND

The bill 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.

SAFE STREETS FOR ALL

The bill provides an additional $500 million per year for HSIP as a set aside for a **Safe Streets for All Program** (1218) for activities to construct complete streets and other safety initiatives for vulnerable road users. Vehicle-to-infrastructure technology is an eligible activity.

AUTO SAFETY

The House Energy and Commerce title includes a section **Safety Warning for Occupants of Hot Cars** (10101). Directs the National Highway Traffic Safety Administration (NHTSA) to issue a final rule requiring all new passenger motor vehicles with a gross vehicle weight rating of 10,000 pounds or less to be equipped with a system that detects the presence of an unattended occupant in the passenger compartment of the vehicle and engages a warning to reduce death and injury resulting from vehicular heatstroke, particularly incidents involving children. The bill Commissions an independent study on retrofitting passenger motor vehicles introduced into interstate commerce before the rule takes effect with technologies that prevent vehicular heatstroke.

Sec. 10103. **21st Century Smart Cars**: Establishes minimum performance standards for and requires all new passenger motor vehicles to be equipped with advanced driver assistance systems (ADAS), including forward collision warning and automatic emergency brakes, rear automatic emergency brakes, rear cross traffic warning, lane departure warning, and blind spot warning. The Secretary shall issue motor vehicle safety standards for each of the following crash avoidance systems—

1. Forward collision warning and automatic emergency braking that detects potential collisions with vehicles, objects, pedestrians, bicyclists, and other vulnerable road users while the vehicle is traveling forward, provides a warning to the driver, and automatically applies the brakes to avoid or mitigate the severity of a collision;
2. Rear automatic emergency braking that detects a potential collision with vehicles, objects, pedestrians, bicyclists, and other vulnerable roads user while a vehicle is traveling in reverse and automatically applies the brakes to avoid or mitigate the severity of a collision;
3. Rear cross traffic warning that detects vehicles, objects, pedestrians, bicyclists, and other vulnerable road users approaching from the side and rear of a vehicle as it travels in reverse and alerts the driver;
4. Lane departure warning that monitors a vehicle's position in its lane and alerts the driver as the vehicle approaches or crosses lane markers; and
5. Blind spot warning that detects a vehicle, pedestrian, bicyclist , and other vulnerable road user to the side or rear of a vehicle and alerts the driver to their presence, including when a driver attempts to change the course of travel toward another vehicle or road user in the blind zone of the vehicle.

The bill directs NHTSA to conduct a study **to Evaluate the Performance of Crash Avoidance Systems** (10107) at detecting and classifying pedestrians, bicyclists, and other vulnerable road users, including those with different skin tones that are representative of different racial and ethnic groups.

***

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