DEFINING FHWA’S ROLE

Automated Driving Systems (ADS) have the potential to significantly transform the Nation’s roadways. They offer the possibility of saving lives, expanding access to transportation, and improving the convenience of travel. Yet, these technologies could also introduce new uncertainties for agencies responsible for the planning, design, construction, operations, and maintenance of the roadway infrastructure.

In fall 2016, the Federal Highway Administration (FHWA) established an Automated Vehicle Working Group with representatives from across the agency to develop a FHWA Vision Statement on Automated Driving Technologies. The Vision Statement defines the role of FHWA regarding automated driving technologies and establishes an agency approach to addressing them within FHWA’s programs and areas of responsibility and authority.

To further assist FHWA’s State and local partners:
- FHWA is developing informational resources on ADS and their implications for FHWA programs in order to support engagement with State and local partners.
- FHWA is developing a technology timeline representing multiple scenarios for ADS adoption and use. It will identify key variables, such as shifts in travel demand that may impact planning and construction of the future road network.

HOW COULD AUTOMATED DRIVING SYSTEMS IMPACT THE NATION’S ROADWAY INFRASTRUCTURE?

Agencies responsible for the Nation’s transportation infrastructure must understand the implications of ADS in several areas such as: traffic operations and management, infrastructure planning and investment, land use, and data collection. Owners and operators of the roadway infrastructure (primarily State and local governments) will need to address how ADS can impact the programs that support the planning, design, construction, operation, and maintenance of the road network.

- **Physical Infrastructure**
  - Greater consistency in signage, traffic signals and pavement markings may be necessary to enable safe operation of ADS. ADS may also require changes in infrastructure design, standards and practices. Infrastructure owners and operators will need to consider these issues in road maintenance and infrastructure investment planning decisions.

- **Roadway Operations**
  - Infrastructure owners and operators will need to manage a transition to a mixed-vehicle fleet, as ADS will continue to operate in an environment with manually driven vehicles for many years. This could introduce new challenges for traffic operations, such as harmonizing traffic flow.

- **Digital Infrastructure**
  - ADS will not only be a new source of roadway data, but they may also require updated information on road closures, work zones, and construction projects from infrastructure owners and operators in order to function safely.

- **Programs and Practices**
  - ADS may have implications for the Federal-aid program, the transportation planning process and other programs and policies. State and local agencies may need to modify their planning models to accommodate new travel behavior and consider impacts on land use and society.

INITIAL AGENCY GOALS

As part of its Vision effort, the FHWA Automated Vehicle Working Group identified these initial goals for consideration:
- Prepare the national roadway infrastructure for the future
- Maximize potential benefits through connectivity
- Serve as a resource for transportation agencies
- Adapt programs and policies to meet emerging needs

FOR MORE INFORMATION

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