

REVIEW OF NATIONAL AUTOMATED HIGHWAY SYSTEM RESEARCH PROGRAM

New TRB Special Report

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The National Automated Highway System Research Program was begun in 1992 in response to a legislative mandate for the development of an automated highway system prototype and test track by 1997. For assistance in carrying out this mandate, the U.S. Department of Transportation created the National Automated Highway System Consortium (NAHSC), enlisting the participation of nine leading organizations from academe and the motor vehicle, highway, electronics, and communications industries.

Envisioning a fully automated, "hands-off, feet-off" system that could enhance both automotive safety and highway traffic capacity, U.S. DOT charged the NAHSC with staging a demonstration of automation concepts and technologies within 3 years. The public demonstration of automation technologies was held in San Diego, California, in August 1997. This demonstration was to be followed 4 years later by the identification and testing of a preferred automated highway system specification that could be the focus of future development and deployment efforts.

In June 1997, just prior to the San Diego demonstration, U.S. DOT asked the Transportation Research Board to review the overall vision and mission of the National Automated Highway System Research Program, and to offer an independent assessment of the initial findings, performance, and future role of the NAHSC. TRB convened a committee of 15 experts to undertake this review under the leadership of Arden L. Bement, Jr., Basil S. Turner Distinguished Professor of Engineering, Purdue University, and Herbert H. Richardson, Director, Texas Transportation Institute, and Vice Chancellor for Engineering, Texas A&M University System.

While the committee was conducting its review, U.S. DOT announced its intention to stop funding

the NAHSC. This decision was apparently driven by budgetary constraints and the Department's desire to shift its priorities in favor of encouraging the development and deployment of nearer-term, safety-oriented intelligent vehicle technologies. Although the TRB study committee did not critically examine these future plans, it ultimately concurred with U.S. DOT's decision to withdraw support for the National Automated Highway System Research Program for the following reasons:

- ◆ The task assigned to the NAHSC of developing, evaluating, and selecting a preferred specification for a fully automated highway system in only 7 years was unlikely to be achieved because daunting technical, social, and institutional issues would have to be addressed and resolved.

- ◆ The NAHSC was given dual but conflicting responsibilities to promote a shared vision of automated highways and to evaluate objectively the prospects for addressing and overcoming the many complicated challenges involved in realizing this vision.

- ◆ The consensus-based management and decision-making structure of the NAHSC made it difficult for the consortium to respond to changing government funding levels and priorities, as well as the results of some of its own research indicating the need for changes in direction.

While agreeing that the National Automated Highway System Research Program should not be continued, the study committee praised the NAHSC as a bold and innovative attempt to meet the nation's growing transportation capacity and safety needs. Among the recommendations contained in the committee's report are that U.S. DOT continue to collaborate with the private sector in exploring and advancing automated vehicle and highway technologies, and that particular attention be given to

the many social and human factors issues associated with these technologies.

Special Report 253, National Automated Highway System Research Program: A Review, is available from the Transportation Research Board (see Publications Order Form in this issue).

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A Bold National Safety Initiative

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While it is difficult to quantify the lives that might be saved through the above efforts, there is strong consensus that these strategies are an essential part of the plan.

Implementation

Highway safety is the shared responsibility of federal, state, and local governments. The federal government is best suited to providing national leadership, direction, and development and demonstration of new safety programs. Safety management procedures must be in place if the safety products and services developed through these programs are to be put into effective practice at the state and local levels.

Summary

The AASHTO plan provides a comprehensive roadmap for substantial near-term reductions in highway deaths and injuries. The plan identifies areas in which transportation officials need to work with other agencies to achieve the goal of safer highways, as well as opportunities for partnering ventures within and between the private and public sectors. Moreover, the plan provides a benchmark agencies can use to assess their current safety agenda, determine where they are doing an effective job, and identify areas in which more effort may be necessary. Finally, the plan provides a basis for adjusting priorities in capital funding and research. It makes the case for devoting more resources to safety and for considering safety explicitly in all aspects of highway planning, design, operations, and maintenance.

Committee for a Review of the National Automated Highway System Consortium Research Program

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