TESTIMONY OF RAY A. BARNHART
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BEFORE SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT
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Good afternoon, Mr. Chairman and members of this Subcommittee. I am pleased to be here today to address the Federal Highway Administration's (FHWA) nonfreeway design standards for resurfacing, restoration, and rehabilitation (3R) projects.

As our Nation has grown and developed, local planners and builders have been linking our cities, providing farm to market roads, and establishing overland postal carrier routes. With this growth and with the advent of the automobile, our road networks provided a personal mobility and freedom of travel that had never been envisioned in centuries past.

The many State and local road agencies have over the years had the responsibility of preserving this vast network of thousands of miles of roads. Indeed, they have done a good job in applying their engineering expertise, molded to the special conditions and requirements of their States and local areas.

As these roads have approached their design life, State and local governments have endeavored to stretch their limited transportation revenue to meet preservation needs. As this burden increased beyond normal maintenance and deteriorated roads became a national problem, Congress responded beginning in 1976 by providing funding to aid the States in renewing their roads. Prior to that time, Federal funding had generally been limited to new construction of roads which were included on the Federal-aid system.

In 1975, the Administration proposed legislation addressing the mounting deterioration problem by recommending a redefinition of the term "construction" in section 101(a) title 23, U.S.C. Former Secretary Coleman and former Highway Administrator Tiemann testified before the Senate Public Works Committee in July 1975, indicating that there was a Federal responsibility to rehabilitate the highway system, and maintaining that it would mean resurfacing, not filling potholes, mowing weeds, or plowing snow.

The Conference Report, reconciling differences in bills passed by the Senate and House, recommended a redefinition of the term "construction" to include resurfacing, restoration and rehabilitation, or 3R. This change became part of Public Law 94-280, the Federal-Aid Highway Act of 1976. After passage of this Act, the States began to utilize more of their apportioned Federal-aid funds for 3R construction on the Federal-aid systems.

Over the years the FHWA and State and local road builders have developed methods of practice--standards and guides--which represent a high degree of engineering skill and expertise. The majority of the standards used in the construction of roads both on and off the Federal-aid system are those formulated by AASHTO, the American Association of State Highway and Transportation Officials, in cooperation with FHWA. This organization represents highway officials from all States. Their standards represent a compilation or consensus of engineering judgments which are accepted for use by many transportation and highway agencies.

The FHWA has adopted many AASHTO publications and incorporated them by reference in title 23 of the Code of Federal Regulations. By doing so, they have taken on the aura of "national standards" simply because they are approved for use on Federal-aid projects. Quite frankly, AASHTO has indeed provided a service to the highway industry by formulating these standards which have wide use and acceptance. In adopting AASHTO standards, guides, references, and standards from other professional organizations, the FHWA has brought together the best available tools for use on Federal-aid projects.

With 3R projects now being eligible for Federal funding, the FHWA published an advanced notice of proposed rulemaking on August 25, 1977 (42 FR 42876). This advance notice solicited suggestions and proposals on how to establish nonfreeway 3R geometric design standards. As one alternative, the FHWA suggested using a 1977 AASHTO publication, "Geometric Design Guide for Resurfacing, Restoration, and Rehabilitation (RRR) of Highways and Streets" known as the purple book.

Comments were received on the advance notice severely criticizing the specific criteria in the purple book. It is interesting to note that in 1977, AASHTO in the purple book's introduction stated that "It had become apparent that for the

foreseeable future funds available will be insufficient to improve existing highways and streets to the geometric standards desirable for major reconstruction and new construction at a rate equal to that at which pavements are deteriorating." It also pointed out that the intent of the 1976 3R legislation was to permit the use of Federal funds to extend the useful life of highways without necessarily improving geometrics. Also, that it was important that designers be provided guidelines to permit realistic decisions and that flexibility was essential. It was noted that an innovative approach to design was essential if limited resources were to be "stretched" to meet the pressing need of improving the function and safety of highways in a cost effective manner.

While the purple book may have proven to be a workable guide, it was rejected by FHWA for nationwide use because of some of the severe comments on its specific design criteria. However, it is used by some road builders today for roads off the Federal-aid system.

The FHWA then decided that by using the comments received, it would develop its own geometric design criteria for Federal-aid nonfreeway 3R projects. In the interim those projects would be carried out using existing procedures. Design criteria set forth in 23 CFR 625 would be applicable with design exceptions granted on a project-by-project basis, as needed. To this day, we are continuing to operate under this system. But to continue would mean prolonging this inconsistent and cumbersome process. A more flexible approach is necessary to achieve the efficiencies important to controlling escalating costs.

The FHWA-developed Guide was published as a notice of proposed rulemaking on August 23, 1978 (43 FR 37556). The Guide set forth definitions and provided specific geometric criteria for various aspects of roadway design. In the Introduction, FHWA said that in most cases, minor improvements to highways which were established many years ago would make them serviceable for many more years. The standards set out were the "minimums" considered acceptable and were intended to provide the lower limit for applying engineering judgment in designing nonfreeway 3R projects. It said that minimums were not to be applied automatically, but used only when higher values were not possible or practical. The standards were to provide flexibility in design, appreciable savings in cost, and greater system-wide safety and traffic service without requiring total reconstruction.

While a review of the comments received showed a majority in favor of the proposed guide, certain persons advocating safety interests were adamantly opposed to it. It was charged that the suggested "minimums" would become Federal "maximums" and that safety would be compromised. It was also charged that the standards would allow for what was called "resurfacing only" and that this would increase the accident rate. Some comments which supported the proposal also questioned FHWA's authority to develop such a standard in the absence of objective and reliable data. Others suggested that further research was needed.

In response to the critical comments, FHWA established an internal task force in early 1979, to more fully evaluate the 3R program implementation and make recommendations for further action to the Administrator. The task force summarized the previous notice's docket comments, evaluated those comments and their recommendations for alternate procedures, prepared an extensive regulatory analysis and, based upon all the findings forwarded options to the Administrator for a decision.

As part of the regulatory analysis, a technical report was prepared entitled, "RRR Alternative Evaluations for Non-Interstate Rural Arterial and Collector Highway Systems." The report was an exhaustive evaluation of the application of various levels of 3R standards relative to total system needs and projected funding levels for 15 years from 1975 to 1990 for the rural nonfreeway arterial and collector highway systems. Essentially, this analysis concluded that, given even the maximum expected investment in 3R in future years, greater overall system safety, meaning less total accidents, can be achieved by improving more miles with less costly improvements than fewer miles at full design. It is this conclusion which has aided the development of a policy for our present proposed course of action.

I believe that the 3R analysis, completed by our own FHWA staff, is a fine job and provides a well-reasoned and scientific basis for our 3R proposal. While some people may differ on various aspects of the analysis or may quibble over some of the data, the ultimate conclusions remain the same.

As the task force completed its work, two possible courses of action surfaced, both within the guidelines of the technical analysis. The first would be to adopt nationwide standards for nonfreeway work, which would achieve the system-wide performance desired. The second alternative, unique to FHWA at the time, would involve the utilization of a nationwide policy advocating a flexible approach to nonfreeway 3R projects. This latter approach was selected.

I must give recognition to FHWA for having the foresight to recognize the importance of encouraging States to utilize their own initiatives, instead of demanding uniform Federal standards. It is my policy to return the decision-making function to the States, wherever possible. It is interesting to note that in 1975, when President Ford introduced his highway legislation, which was to become the 1976 Federal-Aid Highway Act, he said that it will provide flexible aid for highway construction in a manner which fully respects State and local decisionmaking roles.

In January 1981, the FHWA withdrew its previous notice and issued a new notice of proposed rulemaking for nonfreeway 3R work based upon the work of the 3R task force (46 FR 1228). Under the new proposal, the FHWA would issue a policy statement establishing a framework for the adoption of nonfreeway 3R design criteria in each State. Thus, FHWA recognized the important role States and local governments have to play in the standards development process. This policy follows the intent of Congress by requiring adherence to section 109(a); 3R projects must conform to applicable provisions of title 23 prior to approval by FHWA. Thus, by incorporating 109(a) within our 3R policy, the FHWA would be following what Congress intended.

I would like to emphasize that in order for a proposed 3R project to be approved, and thus qualify for Federal funds, the policy would require that it must meet the test of 109(a). Especially significant, I believe, to maintaining integrity and quality in all Federal-aid projects is the conscientious application of section 109(a). It is this section which assures that Federal funds are used in a conscientious and frugal manner. It is this section which must be satisfied, prior to the approval of any Federal-aid project; it is the implementation of this section which maintains the integrity and safety of the Federal-aid highway systems.

It is no coincidence that the FHWA, guided by my predecessors, has cooperatively developed a proposed policy for 3R projects which relies so heavily on section 109(a). For that section sets forth the basic guidelines for all projects which include: provision for future traffic needs, safety, durability, economy of maintenance, and use of appropriate standards which meet the particular needs of each locality.

The proposed policy also defines 3R work and makes clear that such work is an essential part of any highway program. Specifically defined, 3R is work undertaken primarily to extend the service life of an existing facility. This includes placement of additional surface material and other work necessary to return an existing roadway, including shoulders or bridges, the roadside and appurtenances, to a condition of structural or functional adequacy. This work may include upgrading of geometric features, such as minor roadway widening, flattening curves, or improving sight distances.

Most importantly, the policy reiterates the FHWA goal of providing the highest practical and feasible level of safety for people and property associated with highway transportation. The engineers and road builders at the local, State, and Federal levels have the experience and tools at their disposal to provide the high quality facility expected of them.

The proposed 3R policy, if adopted and issued as a final rule, would be implemented by the highway agency in each State. The FHWA Division Administrators would see to it that Federal-aid requirements are followed, but the State would develop and implement its own program, consistent with national policy objectives. Of course, each State would be free to continue operating under the design standards incorporated by reference in Part 625.

Each State which elects to utilize the flexibility that would be provided by the rule would be selecting design criteria or procedures best suited to its own circumstances. I know that many have already done so, because, as I said previously, 3R work is not new to the States. Under our proposal, the ultimate design of nonfreeway 3R projects would not be significantly affected since most

States are currently designing 3R projects on the basis of new construction standards with exceptions. What would be affected is the speed and cost at which 3R improvements can be achieved with accompanying safety benefits.

The design criteria selected by the States under our proposal could include a variety or combination of factors, such as traffic volume, accident history, existing road and topographic characteristics, functional classification, economics, and potential impacts of various improvements. It is not proposed, however, to require each State to set out detailed procedures for the design and processing of 3R projects.

Mr. Chairman you have asked me to address the tort liability aspects of this proposal. As you may know, increasing liability judgments against government at all levels have become a severe problem, in some instances even requiring local governmental entities to increase taxes to pay for liability judgments. The Federal-aid highway program has not incurred any adverse judgments to date because of the unique nature of our program. The Supreme Court and lower courts have held that the Federal reimbursement to the States for highways falls within the discretionary exemption provisions of the Federal Tort Claims Act. We are mindful of the narrowness of such holdings and attempt in all our regulatory issuances to remain within the framework of these legal holdings to ensure that Federal funds are not diverted from their main purpose--which is to assist the States to provide an economical and safe transportation system.

The States do not incur liability judgments as a result of the adoption of standards, whether issued by FHWA, AASHTO, or other groups. Liability is incurred as a result of a failure to implement recommended standards in a reasonable manner. A standard is a guide to the States of the most reasonable requirements under a given set of circumstances. Failure to meet the minimum standards will often result in an adverse court judgment. On the other hand, minimum standards are not maximum standards; thus, where a higher degree of design or construction is necessary to provide for highway safety, the courts will look to the States to provide that higher degree.

Our view of the tort liability aspects of the proposed policy is that the States would develop design criteria which, when properly implemented, would allow the States to defend against liability actions. Not all States will be successful in all circumstances in defending against such actions, particularly where State activities are performed without reasonably adequate forethought and oversight. As a function of the monitoring process under the proposed 3R policy, the FHWA will, at the Division Administrator level, be advising the States of needed adjustments. This, in our view, will aid the States in deflecting adverse findings in tort liability suits.

As stated in the notice, if this 3R policy is adopted, FHWA will monitor its performance and take corrective action if problems arise. The entire Federal-aid highway program is and will continue to be under close evaluation. Thus, maximum adherence to law, safety, strict accounting principles and prudent expenditure of funds can be achieved.

I see this proposed 3R policy as an innovative approach to a Federal-aid highway program which has become more and more cumbersome with age. During my short time as Administrator and previously, as a member of the Texas Highway Commission, I have been impressed with the competence and professional capabilities of the people at FHWA.

If this new procedure is accepted--it must also be approved by the Secretary of Transportation and reviewed by the Office of Management and Budget--I believe that as a final rule, this new policy and accompanying procedures have the capability of achieving State flexibility, eliminating red-tape, and reducing both administration and construction costs. At the same time overall highway facilities will be enhanced, providing a better transportation system.

At this time I would like to introduce Mr. Les Lamm, our Executive Director. Mr. David K. Phillips, Director of the Office of Engineering at FHWA, will further explain this proposal. He will be followed by Dr. Samuel C. Tignor of our Office of Research. Mr. Alvin R. Cowan from the Office of Engineering and Ms. Julie Cirillo from our Office of Research will also be available to aid in our discussion. After their presentation, if you agree, we will address any questions you or the Subcommittee members may have.