

# THE FEDERAL-AID HIGHWAY PROGRAM: PRESENT AND FUTURE

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## INTRODUCTION

### *Vehicles and Mileage More Than Doubles—'55-'77*

The total number of motor vehicles has increased from 63 million in 1955 to 144 million in 1977 or an increase of 129%. Highway travel has increased from 606 billion vehicle miles in 1955 to 1,466 trillion miles in 1977 or an increase of 142%. During this same period the number of miles of highways has only increased 13%. Nearly 91% of all miles traveled by all U.S. transportation modes is by highway.

### *Needs of Federal-Aid Primary System*

We do not have time to discuss the needs on all systems so let's address the needs on the federal-aid primary system only:

- (1) 256,000 mi. carries 29% of all traffic,
- (2) 85% of the primary system is still only two lanes,
- (3) Over 10,000 mi. have land widths of 9 ft. or less,
- (4) There are over 10,000 deficient bridges on the primary system.

### *Highway Usage, Needs, and Revenue*

I believe this shows that the usage and needs suggest the continuation of an effective highway program. The actual amount of revenues directed to these needs must of course be weighed against overall budget priorities and other aspects such as inflation. Consider, also, the trends in revenue, cost increases, and greater demands for maintenance and operations as they affect the availability of funds for capital improvements.

### *Make Effective Use of Short Highway Dollars*

There is a tremendous need to make the most effective use of the precious few dollars that are going to be available for capital improve-

ments. There is a great need to implement modern maintenance management to keep maintenance costs at an absolute minimum. Most capital improvements in the future have to be primarily 3R type of improvements since heavy construction on new alignment will be just too expensive.

## CURRENT AND FUTURE 3R PROGRAMS

Consider now the current and speculate on the future of the 3R program. The 1976 Federal-aid Highway Act made two major changes in the legislation to further the 3R program. First, it changed the definition of construction (which governs the type of work eligible for federal aid reimbursement) to include restoration, rehabilitation, and resurfacing. Secondly, it provides special funding for 3R work on the interstate system. This congressional action plus the previously described funding dilemma leads us to predict that in the near future 70% or more of the federal program will be for 3R type of work. This is exclusive of the work necessary to complete the interstate system.

### *FHWA Developing Standards for 3R Programs*

What sort of problems or changes has this emphasis on 3R work developed? One very controversial aspect is determining what standards should be used for this work. Ever since the 1976 act was passed, FHWA has been addressing this problem. Our interim guidelines to our field offices advised them to permit exceptions to the present AASHTO standards where warranted. This procedure is still in effect. Several months ago we published an advance notice of proposed rulemaking in the Federal Register to secure comments on three alternative proposals. One was to continue as provided above, one was to adopt the so-called "Purple Book" (which contained 3R standards proposed by AASHTO) and one was to let the states each develop their own standards. The comments received contained considerable opposition to all three proposals. As a result FHWA is currently developing 3R standards taking into account all data available including the "Purple Book" and the comments received in the docket.

We are confident that we will be able to soon issue standards that will be effective in administering the 3R program.

### *The 55 MPH Program*

The 55 mph program is still considered extremely important in regard to saving fuel and saving lives. It is our judgment that most of the reduction in fatalities, amounting to approximately 9,000 lives per year since the program was implemented, is due to reduced speeds.

Also, we are experiencing a savings of approximately three million gallons of gasoline per day because of reduced speeds. If everybody were to comply with the 55mph limit we could save 8.4 million gallons per day.

Many problems have arisen in regard to monitoring the 55 mph program. It is evident that some states do not have an effective monitoring program. Legislation is being considered that would set specific milestones for achieving greater compliance and also establish specific penalties for not reaching those milestones. The ultimate goal would be to have no more than 15% of the motor vehicles exceeding 55 mph. We are concerned with increased monitoring, because the average speed climbed approximately 5% last year and fatalities have risen about 1,000 per year for each of the last 2 years.

## BRIDGE REPLACEMENT PROGRAM

The special bridge replacement program had its beginning on December 15, 1967, when the Silver Bridge at Point Pleasant, West Virginia, plunged into the Ohio River killing 46 people.

### *Required Bridge Inspections and Inventories*

In the Spring of 1968, Congress enacted the 1968 Federal-aid Highway Act which contained a provision that required bridge inspections and the development of an inventory of all bridges on the federal-aid system. The purpose of these inspections was to detect potential problems so certain bridges could be closed, posted for lighter loads, and also provide a basis for scheduling construction of bridges with the greatest priority for replacement.

### *Money Provided for Bridges*

Congress actually provided money for this program in the Federal-aid Highway Act of 1970 and further funds have been authorized in each subsequent federal-aid highway act since that time. The funding level for 1977 and 1978 was \$180 million per year on a basis of 75% federal and 25% local.

In addition to this special program, 2,000 to 3,000 bridges are constructed each year under our regular federal-aid program.

### *14 Bridge Bills Introduced to Congress*

The magnitude of the bridge problem is staggering. Of the 560,000 existing bridges in the United States (both on and off the federal-aid system) 105,000 are deficient and carry a replacement cost estimated to be \$25 billion. In Indiana there are 5,969 deficient bridges on just

the federal-aid system. To address this problem some 14 bills have been introduced in Congress with annual funding levels of anywhere from about \$400 million to \$2 billion. Also, most of the bills extend the scope to permit the use of some of these funds for bridges off the federal-aid system and also provide for rehabilitation of bridges as well as replacement.

This has been a very popular program and a somewhat expanded program from the present \$180 million is fully expected.

#### *Plan and Be Ready to Use Bridge Aid*

It is my strong recommendation to the states, counties, and cities to start doing the preliminary steps to get plans ready for this program. Steps such as obtaining navigational permits from the Coast Guard, development of an EIS if necessary, and securing the Corps of Engineers 404 Permits could greatly expedite the use of the increased funding expected.

One of the first large efforts that will be necessary will be to make inspections and develop an inventory for the 326,000 bridges not currently on a federal-aid system.

### OVER \$7 BILLION DOLARS FOR FEDERAL AID FOR '77

The overall federal-aid program was active last fiscal year when over \$7 billion was obligated. This was the second highest level in history. Indiana has been aggressive in getting its federal-aid funds obligated. As an example, it has already obligated or put to use nearly all of its FY 1978 interstate funds with less than half the year gone.

### FHWA CUTTING RED TAPE

We are also working hard within our organization to cut red tape. The objective is of course to expedite and simplify the delivery of federal-aid funds to state and local jurisdictions, and to make needed transportation improvements available sooner.

We are proud of the fact that between October and December 1977 we abolished 681 of the approximately 1,800 forms used by the FWHA. Additional elimination, simplification, and consolidation is underway.

We are also in the process of reviewing our some 200 Federal-aid Program Manual directives (2,300 pages) to assure consistency with our October 20, 1977, policy on the minimization of red tape. We expect to make significant progress in this area. We expect that this effort will result in the following changes: minimize the imposition of requirements not contained in law, reduce the directives to only those

requirements clearly necessary for effective implementation of the program, give emphasis in managing the program to the fact that state and local recipients are competent and have skills necessary to carry out the program (without detailed instructions). A special Federal Highway Administration Task Force review of a sample of program directives resulted in a reduction of requirements and pages by about 20%! I think the entire highway fraternity will benefit from these efforts.

#### FHWA ACTIVITIES— COUNTY HIGHWAY DEPARTMENTS

As most of you are aware, we have a county advisor in each of our regions to advise us on program matters primarily related to the secondary program. These are generally county engineers. Working with this group the last two years, much has been done to simplify procedures. Some examples of the suggestions from that group that were implemented are:

- (1) The Safer Off-System (SOS) Program procedures have been patterned closely after the Off-System (OS) Program.
- (2) Adopted a single matching ratio for all categories of work under the SOS Program.
- (3) Prepared the new secondary road plan directive with emphasis on simplicity and flexibility.
- (4) Including a provision for simplified procedures for projects under certification acceptance which are both (1) non-major and (2) estimated to cost less than \$500,000 for physical construction.
- (5) With respect to right-of-way, the following procedures have been formalized:
  - (a) The simplified appraisal policy was increased from \$1,500 to \$2,500 per parcel.
  - (b) Latitude was provided with respect to the qualifications of appraisers and review appraisers.
  - (c) Sample of an abbreviated (short form) appraisal report was developed.
  - (d) A minimum payment procedure was developed to cover acquisitions of minor value up to \$150.
  - (e) In recognition of local political subdivisions personnel limitations we have instituted a provision whereby the person who negotiates with the property owner can also personally deliver the check.

- (6) We are providing more time for comments to the Federal Register for a notice of proposed rulemaking as you suggested to accommodate local government.

In addition, FHWA is working with NACO to improve communications with county governments. During the past year, eight statewide or regional workshops have been held dealing with various federal-aid procedures, such as: (1) programming projects, (2) ROW, (3) RRR, (4) Off-System Programs, and (5) consultant agreements. These workshops bring together personnel from the three levels of government: county, state and FHWA.

### LEGISLATION—THREE MAJOR PROPOSALS

Three major highway legislation proposals are under consideration. The House Public Works Committee is considering a four-year highway bill with a \$10.3 billion annual funding level. The Environment and Public Works Committee of the Senate has made available a committee print providing for a two-year bill at about an \$8 billion annual level. The administration bill provides for four years at a funding level of \$6.7 billion per year.

The bills have several similar aspects:

All three provide for extension of the trust fund—but for different periods of time (vary from two to six years).

All three provide measures for expediting the interstate system.

All three provide increased funding for bridge replacement (\$450 million in administration and Senate bills and \$2 billion in the House bill).

In general, the Senate print is very similar to the administration bill. Some of the major objectives of the administration bill are as follows:

It provides for expediting completion of the interstate in several provisions:

1. Revises apportionment formula to give 50% weight to essential gap costs (and that amount must be spent on the gaps).
2. Provides for lapsing of interstate funds after two years and redistribution to states that can move faster.
3. Provides for borrowing on next year's apportionment.
4. Establishes cut off dates of 1982 for completing EIS work, and 1986 for latest date to start construction.

Some other objectives of the administration bill are:

1. To provide greater flexibility, the bill reduces the number of categories from 40 ± to 8 major categories.

2. Makes matching ratios more uniform—nearly all would be 80% federal share except interstate which would stay at 90%.
3. Provides for greater combining of UMTA and FWHA planning efforts.
4. Provides for direct payments to the 25 cities over 1 million population.
5. Eliminate separate funding for urban and secondary systems, but provides funding for urban and rural programs that can be used on all public roads.
6. As mentioned earlier, it provides for a larger bridge replacement program.

The timing of highway legislation is critical since it will not be possible for us to appropriate 1979 funds on October 1 unless legislation is passed by that time. Both the House and Senate were planning markup sessions for this week. To meet schedules provided in the Budget and Impoundment Control Act of 1974, both Public Works Committees must report bills out by May 15.

## THE FUTURE FEDERAL-AID HIGHWAY PROGRAM

In view of the previous comments, we can look into the crystal ball and speculate that the Federal-aid Highway Program in the future would look something like this:

1. Greater emphasis on expediting completion of the interstate program.
2. Increase trend toward 3R type work including much recycling type of work, use of substitutes for petroleum products such as sulphur, wood lignins, and cellulose materials. Also use of techniques to retexture existing surfaces rather than rebuilding them.
3. Greatly increased bridge replacement program.
4. Greater emphasis on promoting high occupancy vehicle concepts. Also more staggered times and improved public transportation.
5. Greater compliance efforts to obtain better observance of the 55 mph program.
6. Stepped up enforcement programs to better control the weight of trucks on our highways.
7. Greater emphasis on managing the transportation system to make it more efficient—computerized signal systems, etc.

8. Greater emphasis on developing and adopting more sophisticated maintenance and construction management programs.

It is going to be a challenge for all members of the highway and transportation fraternity to meet the demands of the future. I am convinced that each one of you will provide your usual full cooperation.