

# UNITED STATES DEPARTMENT OF COMMERCE

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## THE INTERSTATE HIGHWAY PROGRAM MOVES AHEAD

ADDRESS BY F. C. TURNER, DEPUTY COMMISSIONER AND CHIEF ENGINEER, BUREAU OF PUBLIC ROADS, U. S. DEPARTMENT OF COMMERCE, PREPARED FOR DELIVERY AT THE JOINT SESSION OF THE NATIONAL SAND AND GRAVEL ASSOCIATION AND THE NATIONAL READY MIXED CONCRETE ASSOCIATION, THURSDAY AFTERNOON, FEBRUARY 13, 1958, CHICAGO, ILLINOIS

Your organizations and mine have many common interests and objectives and a long background of shared experience in highway improvement. You are contemporaneous with the Federal-aid Road Act of 1916, which laid down many of the basic principles that have governed the Federal-State partnership in highway construction and improvement during the last four decades.

There is indeed a symbolic permanence, a continuity about your industries like the materials which you produce. Back in 1916, when the slip scraper and other horse-drawn equipment were so much in evidence, the chief highway materials were sand and gravel, crushed stone, asphalt, tar and cement. Today these same materials still dominate the highway scene -- with every likelihood that they will continue and grow in that role.

Today motor vehicles and the ever-increasing importance of highway transportation lend an entirely new meaning to the phrase "better roads." That is why it would be hard to exaggerate the significance of the Federal-Aid Highway Act of 1956 -- it marks the beginning and formative stages of the greatest concentrated highway improvement program in our history. And that means one of our greatest forward steps in a program of better living.

In its broadened scope the 1956 Act is new, but this bill is actually the 29th amendment of the original Act passed into law nearly 42 years ago!

The 1956 Act not only preserves the original framework but strengthens it by adding certain new provisions which rest upon the same principles so capably and wisely established in the 1916 Act.

One very important feature involves much greater stress on the highway system concept which was originally established in 1921.

More than half of the program provided for by the 1956 Act is aimed at completion, in a 13- to 16-year period, of a designated Interstate System of specified length and built to prescribed standards-- standards which will handle traffic types and volumes of the year 1975. We are forecasting that by that year motor vehicle registrations will pass 100 million -- up 50 percent from present totals -- with yearly vehicle travel well over a trillion vehicle miles!

This particular feature of the 1956 Act, the legislatively stated forward look is distinctly new. It marks the first time that we have been required by the law to set out to build a specified highway system in a given time interval to a given standard. Necessarily the overall economic impact of this long-range undertaking will be tremendous. Moreover, the program is nationwide, its cumulative effects will be felt throughout the country.

The 41,000-mile Interstate System will pass through 37 percent of all the counties in the nation although it constitutes only 1 percent of total highway mileage. These counties hold over half of the population and market nearly 50 percent of all farm products sold. In terms

of such basic materials as sand and gravel and cement this is very much a local program with supplies and manpower necessarily drawn from nearby local sources.

The multi-billion dollar Interstate program is certainly the most publicized feature of the 1956 Act, but it is by no means the only important item. Just as significant is the fact that the Act continues and increases in amount the so-called regular program for the Federal-aid primary and secondary systems and their urban extensions, without which the Interstate System would be of little value. Thus there is established a well-balanced highway improvement program. And such a balance is imperative if we are to realize the full potential of all our highway transport systems. They are mutually interdependent with traffic switching back and forth from one to the other in endless interchange.

What sort of progress has been made since President Eisenhower signed the bill on June 29, 1956? Are we moving ahead as planned? The answer is emphatically yes. By any standard the results are encouraging. At the end of the first full year we are right on schedule and right now we are still on schedule.

We had set a goal for that first fiscal year of \$2.25 billion in Federal obligations for construction and the surveys, plans, and right-of-way acquisition, which of course must precede actual construction contracts. At the year's end, June 30, 1957, actual obligations totaled a few million dollars in excess of this target; in other words, slightly more than 100 percent of our established schedule.

Of this overall sum, about two-thirds was committed to the Interstate System and the remainder went to the regular program for primary, urban, and secondary road improvements. When State matching funds are added, you can see that the two programs to date are of about equal size--and both rather large.

The long-established regular program is ahead of its normal rate and is running at the highest level in history. Thus it is clear that there is no tendency to advance the Interstate System at the expense of the regular program.

Total allotments of Federal funds for the Interstate System since June 1956, through January 1958, amount to almost \$2.5 billion including obligations for preliminary engineering, right-of-way acquisition, and actual construction contracts advertised or awarded. As of January 31, an additional \$1.1 billion of work was in the program stage; as you know, this is the initial step in launching Federal-aid projects.

In the 19 months since June 1956, 3,323 miles of construction have been advertised, put under way or completed on the Interstate System, at an estimated cost of \$1.8 billion including nearly \$1.6 billion of Federal funds. This involves 1,186 construction projects and the construction of 3,039 bridges and grade separation structures. Surely there is no need to remind this audience that neither mileage figures nor money can begin to measure the preparatory work required before dirt begins to move and concrete and base courses go into place; included are the location and design of bridges, multi-lane freeways, ramps, and the complex interchanges that make up this essential network.

Title II of the 1956 Act puts the multi-billion dollar road program on a pay-as-you-go basis, for it is being financed from excise taxes on gasoline, tires, trucks, and other so-called highway user levies, all of which go into a Highway Trust Fund.

The Bureau is specifically required by the law to gear its yearly authorizations to the Trust Fund receipts as estimated by the Secretary of the Treasury. We are progressing the program just as fast as this feature of the law will permit and to move any faster will require legislation to amend the present law.

In a long-range program of this sort which requires so much advance planning by highway officials and engineers, a program which involves land acquisition, removal and disturbance of families and businesses, relocation of public and private utilities, all of which demand close cooperation and coordination between many groups, including contractors, manufacturers of equipment, and those who supply materials, a steady, predictable flow of projects over a period of several years' time is essential.

Such a large, nationwide activity cannot proceed in an efficient manner if it progresses in spurts of unknown and erratic amount with large fluctuations.

To achieve this steady flow, a big task being worked on in the Bureau and the States is to have each project which is to be built on the Interstate System during each of the next five years scheduled into our production line, with the remaining work grouped into two or three similar schedules for the ensuing periods of 4 or 5 years each.

Thus the work will be lined out progressively, step by step, year by year, for every mile of the system. This will permit the States to balance their work load and carry the program forward, putting high priority projects first to achieve a usable component of the system at the earliest possible time. It will enable the States to make the best use of their working forces, whatever the stage of development of a project.

This kind of detailed programing will also facilitate more efficient, better planned production of the needed materials such as aggregates, bituminous materials, cement and steel, which are so widely used. Industry--particularly you contractors, equipment manufacturers, and suppliers--will be able to schedule your own manufacturing, distribution, and sales operations much more effectively.

In this connection, it is quite important to understand one of the provisions written into the Act to which I referred a few moments ago.

Section 209(g) of P.L. 627 - 81st Cong., (the Federal-Aid Highway and Revenue Acts of 1956) will require that the apportionment of Interstate funds for the fiscal year 1960 to be apportioned in December 1958 be reduced to \$1.6 billion from the \$2.2 billion authorized for that fiscal year. It also is expected that in the following year of 1961 the \$2.2 billion authorized must be reduced to \$1.2 billion. Reductions will also be required for each of the fiscal years through 1967. In each of these years \$2.2 billion has been authorized but the amounts that can actually be apportioned range from the \$1.2 billion for fiscal year 1961 referred to above to

\$1.7 billion for fiscal years 1966 and 1967. At no time during the remaining years of the original 13-year authorization period ending in fiscal year 1969 will it be possible to reach the \$2.2 billion maximum authorized rate. This will mean that the Interstate improvement will advance during the next several years at only 55 percent to 77 percent of the rate contemplated by the authorizing legislation, and these reduced rates will be only 60 to 80 percent of the rate at which the program is progressing at the present time.

The original bills, H. R. 9075 and H. R. 10660 as passed by the House in 1956, provided that should the full authorized amounts cause overruns of the Trust Fund in any year, repayable advances could be made from the General Fund to cover these overruns and that Congress would enact legislation to bring about a balance between receipts and expenditures. The law as it now stands was the result of an addition in Section 209(g) made by the House-Senate Conference reported as House Report #2436 of June 25, 1956. The conferees, however, did not delete the provision for advances from the General Fund nor the policy declaration in Section 209(b)(1) to bring about a balance between Trust Fund receipts and expenditures.

Unless either the fund advances provision or the additional revenue policy declaration (or both) are brought into operation by legislative action before December 1958, it will become necessary for the Secretary of Commerce to cut the Interstate construction rate back from its present rate by as much as a 45 percent reduction within the next two-year period of time. If such a cutback is made in the annual rates now

it will mean a stretch-out in the original construction program of about 3 years. The recently reported cost increase would require an additional construction stretch-out of another four years.

In judging the status and progress of the new program several factors should be borne in mind. For some time before the 1956 Act was passed a number of estimates and reports had dealt with various aspects of the highway needs problem and a good many people were somewhat confused by these different approaches. Probably the best known example was a 10-year estimate of highway needs totaling \$101 billion in construction and improvement.

This was a report, let me emphasize, which discussed the total needs of all highway systems. It was in no sense a construction program for Federal aid. Undoubtedly, however, people in the highway field, including some contractors and equipment manufacturers, used this \$101 billion figure in making forecasts of the expected impact on their own operations.

Their expectations also tended to overlook the fact that highway construction programs develop slowly, with a lead time which ranges from three to as much as 6 or 8 years for complicated urban improvements and freeways.

It is probable, too, that a number of contractors and manufacturers followed custom in assuming that each contract dollar would require 50 cents worth of additional machinery in the near future--neglecting the fact that equipment already on hand would wear out gradually and be



replaced over a period of years. Not to mention the further fact that on a nationwide basis highway contractors were then equipped to handle about twice the volume of work they had in hand.

We also know that when the 1956 Act was passed all of the States did not start from "scratch". Some were far better prepared to launch the new program than most. Others had done a certain amount of planning but engineering and right-of-way acquisition remained to be done. A number of States had few if any plans that could be fitted into the Interstate program.

Inevitably, the program forged ahead fastest in the States that were best prepared. And, generally speaking, this resulted in the greatest amount of work going to the very States that also had large concentrations of well-equipped contractors and engineering firms.

In addition, during these early stages a sizeable proportion of the funds for the Interstate System have necessarily and wisely gone into engineering and right-of-way costs. This is in line with the Bureau's expectations and the 1955 and 1956 schedules given to the Congress. A lag in solving these "first things first" problems could hold up later progress.

The importance of these preparatory moves is shown by the fact that during the first 19 months of the new program 37 percent of the Federal funds obligated for the Interstate System went for right-of-way and engineering--the totals were \$659 million and \$253 million, respectively. Of course, these percentages are declining rapidly and will decrease in later years to about half this percentage.

Under these circumstances it is easy to see why the new program has not had an equal impact, State by State, even though we are "on schedule" for the country as a whole. Progress is now tending to even up as more and more States bring their early programs and plans to the point where bids can be asked.

As of January 31, 1958, this was the picture nationwide for the Interstate System:

Eight States had committed all of their Federal funds authorized for the fiscal year 1958 and were utilizing 1959 funds to cover contracts advertised for bids. Thirty-four States were utilizing current 1958 funds and only seven States had failed to commit all of their Interstate funds for the fiscal year 1957.

For the country as a whole the States had utilized 76 percent of the 1958 fiscal year Interstate monies with only 58 percent of the time gone. This should be a clear enough demonstration that the program is not lagging. Because the national total is right at the statutory maximum rate, any increase in speed in one State would need be counter-balanced by an equivalent cutback in another.

In a long-range program of the magnitude which we have undertaken, progress will take place on many fronts--and vast amounts of study and research are required.

The 1956 Act deals specifically with this problem under five separate headings, or study assignments.

The first calls for a continuing series of estimates of the cost of completing the Interstate System. As you probably know, the first results of this study will provide the basis for apportionment of Federal funds to the States for the fiscal years 1960 through 1962--later re-estimates for this purpose are to be submitted at intervals through 1968. This first report submitted on January 7, 1958, is now before the Congress for consideration. It has been printed as House Document No. 300.

Here a word of explanation is in order. Section 108(1) of the 1956 Act increased the authorized length of the Interstate System from 40,000 to 41,000 miles and the latter is the figure commonly used in referring to the Interstate System. However, Section 108(1) specifically requires that this 1,000 miles be excluded from the cost estimates made as just described. In addition, as the States developed detailed estimates for this report, they found that by more accurate measurement and by selection of better locations for the routes already designated, their previously estimated length would be reduced to approximately 38,548 miles. This is the mileage which is covered by the present cost study, but is the same system of routes that was covered by the previous estimate.

Compiled by the Bureau of Public Roads and the States, the report indicates that the remaining cost of improving the Interstate network indicated above is just over \$32 billion. After deducting \$3 billion of State matching funds, the balance of \$29 billion would represent the Federal Government's share.

Several factors account for the 37 percent increase in estimated costs over the amounts anticipated in the 1956 Act.

1. Nationwide traffic forecasts which were made following the 1956 Act are 15 percent higher than earlier forecasts, requiring an enlargement of the original facility.

2. Local traffic needs will require more interchanges, grade separations and other structures, as well as additional frontage roads, than had been originally provided for. This feature was written into the 1956 Act by Congress and changed the concept from that governing the previous estimate.

3. Some new items such as utility adjustments, lighting, and signing have been added which increased the cost.

4. Highway construction cost indexes have risen 12 percent-- between mid-1954 and the last half of 1956.

The next study called for in the 1956 Act is to determine the economic sizes and weights of vehicles that should be permitted to operate on the Federal-aid systems in the light of considerations involving the National as well as the individual interest. Much of the factual material for this study will be derived from tests on the American Association of State Highway Officials' experimental road between Ottawa and LaSalle, Illinois. We hope that this extensive series of tests will provide a conclusive basis for determining optimum vehicle weights and sizes.

The third study is to provide Congress with information that will aid in making a determination regarding reimbursement to the States for highways, both toll and free, which are part of the Interstate System, were built between 1947 and 1957, and "measure up" to the Interstate standards.

With the cooperation of the State highway departments, the Bureau has completed this study and recently reported its findings to the Congress. The report has been published as House Document No. 301.

It was found that as of September 1957, a total of 1,955 miles had been fully completed to the standards required by the Interstate System. An additional 8,904 miles had partial construction which met Interstate standards. The total mileage included 1,950 miles of toll roads in 26 States, and 8,909 miles of free roads in 47 States.

The cost of highway improvements eligible for possible reimbursement amounted to \$6.09 billion, of which \$2.59 billion represented toll roads and \$3.5 billion free roads--Federal-aid funds made up 32.0 percent of the latter. Under the legislation, the Bureau was not asked to make any recommendations, merely reporting the basic data from which the Congress is to determine a course of action.

The fourth study, which deals with highway safety, seeks to determine what, if any, Federal action can or should be taken in this field.

As a first step, we are examining what has already been accomplished by other safety groups. Research into accident causes, particularly with relation to the human factors as causes of traffic accidents, is being given particular attention.

The fifth study is one of the most complex and difficult jobs we have ever undertaken. It requires an analysis of the cost of providing highway facilities for different classes of vehicles together with a determination of the benefits derived from highway use by all classes of

users. In addition, we must estimate the benefit of highways to other than highway users. The purpose of this intricate study is to give the Congress information that will provide a basis for determining "equitable" rates of taxation on highway users and other beneficiaries.

Apart from such matters, there are other problems of a very different sort. Acquiring rights-of-way, especially in urban areas, is one; securing and retaining competent help in highway agencies is another; maintaining support for the design standards which have been established jointly by the States and Federal Government is still another.

I am sure this audience is well aware of the strong pressures which are exerted for modification and compromise of these design standards, especially those on the Interstate System. There are real dangers here.

Because the Interstate highway concept, including planned access, is new to many motorists, all of us who are concerned with getting the job done properly must pay increasing attention to the effort needed to inform the public about this important design feature being provided for their safety and benefit. In many communities people just do not understand the basic principle involved and so are strongly inclined to regard access control as an arbitrary restriction on their time-honored freedom of movement.

We know that engineering design of access points is the key to safer and more efficient highway travel. We know that it permanently preserves the capacity of heavily traveled routes, thus protecting our huge highway investment.

Let me urge you to pass this knowledge along at every opportunity --at public hearings and at other meetings where highways are discussed. You also can very properly encourage local cooperation with State highway departments regarding proposed road or street improvements. Only full public knowledge can assure support for planned access, adequate rights-of-way and other design features that are essential to preserve these highways of tomorrow and protect their millions of users. Because early availability of these vital facilities will save many an unknown motorist's life and prevent many injuries from ever occurring, we are exerting every effort to move the program ahead as fast as possible. That is why we have put it up to the scheduled rate allowable by the law . We are proud to report that we are on schedule.