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He began his career with the Bureau of Public Roads in 1929 serving in various capacities throughout the United States, Canada, the Yukon in connection with the construction of the Alaska Highway and in the Philippines. He was appointed Deputy Commissioner and Chief Engineer of the Bureau of Public Roads in January, 1957, and February 24, 1967, the Senate confirmed his nomination to be Director of Public Roads.

Mr. Turner holds prominent professional memberships in all engineering and official groups in the highway field. He is named in *Who's Who in America*; *Who's Who in Engineering*; and *Who's Who in the Southwest*. He holds many meritorious awards and honors including the Philippine Legion of Honor (Officer), Government of the Philippines in 1951.

WHAT IS HIGHWAY PROGRESS?

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A short while ago, as this is being written, the new U.S. Department of Transportation issued what we call our quarterly progress report on the Federal-aid highway program. Actually the report is compiled by the Bureau of Public Roads on the basis of information supplied to us by the State highway departments, our partners in the program.

In any case, this latest scorecard, reflecting physical progress as of June 30, 1967, showed that more than 24,000 miles of the National System of Interstate and Defense Highways were open to traffic. In other words, 59 percent of the 41,000-mile System was in daily use by passenger and commercial traffic. Moreover, 5,852 miles were under construction, and engineering or right of way acquisition was in progress on another 9,676 miles. Thus, some form of work was under way or completed on 39,590 miles, or about 97 percent of the total projected System.

That leaves about three percent of the mileage which has not advanced beyond the preliminary stage. Remember that three percent; I'll come back to it.

The less glamorous but equally important ABC Program does not lend itself to such precise measurements. But the report showed that since July 1, 1956, when the expanded and accelerated Federal-aid program got under way, construction contracts involving 212,564 miles of primary and secondary highways and their urban extensions had been completed; and contracts involving another 16,832 miles were in progress as of June 30.

That, in a nutshell, was our progress report as of the end of fiscal 1967. But when I began thinking over some ideas that might be of interest to such a highly specialized and knowledgeable group as the American Right of Way Association, it suddenly occurred to me that we aren't actually reporting highway progress at all. This is no criticism of the public announcement of the status of the Federal-aid highway program. We report in terms of the hard facts of physical accomplishment, in terms of mileages and dollars, because these are the measurements that are visible or tangible and lend themselves to comparison.

~ On the other hand, they are a throwback in a

sense to the early years of the accelerated program when physical accomplishment appeared to be the only thing that mattered. Those of you who have followed the Interstate program closely — and that includes most of you — will recall that the Bureau and the States were almost constantly on the defensive in the late fifties to demonstrate that physical progress was being made.

It seems to me in retrospect that we were devoting most of our time to producing maps and charts for some individual or group to show what was actually being accomplished in terms of lane miles or some other physical measurement. And as a corollary, the same individuals and groups were strenuously objecting to “frills” and the “diversion” of Highway Trust Fund dollars to any purposes other than providing minimal, utilitarian pavement and structures on the Interstate System.

I recall that capsule of history because it seems incredible today. In recent years the official, as well as the public attitude toward the highway program has changed considerably, in some cases executing a complete about-face. Today the highway official is less likely to be criticized for lack of speed as for moving too fast to make the highway fulfill its complete potential as an instrument of social progress. Too often the highway engineer is pictured as a nerveless, heartless automaton, attached to but not necessarily in control of a juggernaut aimed at cutting the widest and most destructive possible swath across America.

Speed has been subordinated, and quite properly so, to the preservation of the many social and human values which are so intimately wrapped up with the highway construction program. Safety, esthetics, conservation, preservation of natural scenery, of neighborhoods — these and many other similar considerations are in the forefront of official and public consciousness, rather than laying pavement and building bridges.

I might say in passing that the great majority of highway engineers and officials have always been concerned about these values. In the field of esthetics, for example, as early as 1932 a joint committee of the Highway Research Board and the American Association of State Highway Officials officially stated that “Roadside development must conserve, enhance and effectively display the natural beauty of the landscape through which the highway passes . . .” Unfortunately the concern of the highway official about the fringe values of highways has too often been blunted by lack of funds or by an official admonition that he stick to his roadbuilding.

But we are well into a changed era of the highway program, with new or intensified goals, in

which progress cannot be measured in miles and dollars, nor in terms of cement, bitumens, aggregates, steel, lumber, tile and all the other materials of road construction. It happens that some of the most important advances in these intangible areas of progress have been made in fields related to the acquisition of right of way, especially in the urban areas.

Some of the humanizing actions taken either by law or by administrative action of the Bureau of Public Roads to ease the plight of those displaced by highway construction were described in some detail by Lowell K. Bridwell, the Federal Highway Administrator, in the June-July issue of *Right of Way*. I won't cover the same ground except to the extent necessary to the understanding of important new developments that have occurred since, in this difficult and sensitive area.

The Bureau submitted to Congress this year two reports bearing upon the problem of highway location impact. One is known as the Advance Acquisition Study, the other as the Highway Relocation Assistance Study.

The Advance Acquisition Study went into the whole question of providing adequate time for the disposal of improvements located on rights of way for Federal-aid highways, the relocation of affected persons and businesses, methods of financing advance acquisition, and related matters. Among other recommendations, the report proposed that a Federal-aid revolving fund be established in the amount of \$300 million, to be set up in \$100 million increments over a three-year period. The Highway Trust Fund was suggested as the source of these monies.

The benefits of acquiring rights of way well in advance of need are many and diverse. Not the least of these are cost savings. In the Birmingham, Alabama area, for example, a large undeveloped shopping center site, purchased by the State highway department in 1959, will not be needed for highway purposes until sometime this year. The site was purchased for \$275,000, and this represents a saving of several million dollars in land and improvement costs which would have been incurred had the shopping center been built.

The Highway Relocation Assistance Study was directed specifically at further humanization of the relocation procedure, going into such basic questions as the adequacy of relocation payments and assistance rendered to displaced groups and individuals; the need for additional payments or other financial assistance; the feasibility of constructing facilities within the right of way or upon adjacent real property to aid relocatees; the financing of such relocation accommodations; and related matters.

The report contained a number of recommenda-

tions. It suggested that the level of relocation payments be substantially increased for eligible persons, businesses, farmers and others to be displaced. The nature of relocation assistance would be improved substantially, and made mandatory for both residential and business relocation activities. A project relocation plan would be required. New relocation housing would be encouraged. Every reasonable effort would be made to improve lead-time for State highway department right of way acquisition activities.

The costs of administering the relocation program would be eligible for Federal-aid reimbursement in the same manner as other Federal-aid project costs. Assistance to small business would be improved. And the report stressed the value of the joint use or joint development concept, particularly in the urban areas. This concept, which the Bureau is fostering, offers one of the most effective solutions possible for the relocation of persons and even businesses. Because of the advantages of joint development, these can all be provided in less total space and at a lower total cost.

The economics of joint development provides a solid base upon which to proceed. The urban freeway, on the average, requires approximately 40 percent of a blockwide corridor of land, and this area may cost about 80 percent of the total cost of the entire block when damages to the remainder of the property are considered. Accordingly, the cost imputed to the remaining 60 percent of the blockwide physical area would only be the remaining 20 percent of the cost. Upon this relatively simple economic base can be built urban facilities of great potential to the urban dweller.

Typical slum housing could be replaced, under the joint development program, with an equal number of comparable-cost housing units on about one-third of the land area, with modern high-rise buildings. This would mean that the equivalent of only one block in three would be needed for replacement housing. The equivalent, then, of two blocks, would be available for other developments, such as additional housing, schools, public buildings, outdoor recreation facilities, public parking, private buildings, stores, or open space.

I have devoted considerable space to this joint development concept because we think it holds tremendous potential for the future in savings of both money and space in the crowded urban areas. You will recall my mentioning early in this article that about three percent of the mileage of the Interstate System lacked final location approval. This mileage is spread among 27 States and a number of segments are in urban areas which would lend themselves to the joint development concept. Aside from these presently authorized urban segments of the Interstate System, there are thousands of miles of other urban

freeways that will be built under the regular ABC program or possibly under some new type of program which Congress may authorize. The potential of the joint use or joint development idea, therefore, is almost limitless and the fulfillment of this potential represents the kind of highway progress which I believe is more important than that indicated by the cold statistics in our quarterly report.

Of the total fiscal year 1967 Federal-aid highway construction dollar, 16 cents was spent for right of way. By adding just a little to this, in many cases, we can make a solid contribution to the rebuilding of our cities while providing the necessary arteries for the movement of people and goods.

At this writing Congress has taken no action on the recommendations of the Advance Acquisition Study and the Highway Relocation Study. Regardless of the outcome, however, the Bureau intends to continue encouraging the joint development concept, with the assistance of the States and the cities.

I'm sure that everyone familiar with the Interstate program is aware by now that the 41,000-mile System cannot be completed in 1972 as originally scheduled with available financing. The Bureau will be submitting to Congress in January a revised and more realistic estimate of the cost of completing the System. This will take into account not only increased costs, but changed conditions and revised concepts as to its functions and aims. It will then be a decision by Congress whether to provide additional financing to complete the System on time, to stretch out the program as long as is necessary to complete the 41,000 miles, to build as much as possible with available financing, or to adopt some combination of these alternatives.

I won't be rash enough to predict what Congress may do in this instance. Too many factors are involved in the decision. But I do know this: we must design, locate and build the remainder of the System with even greater attention to safety, esthetics, the preservation of environments and of other social and human aspects, as well as utility and efficiency. If a choice had to be made, I believe it would be better to sacrifice some small amount of Interstate mileage than to build any remaining sections without the fullest consideration to these human values.

This is not a recommendation, certainly. My hope is that we can complete the System almost on schedule. But it's another way of saying that in the final analysis the true assessment of highway progress must be made in terms of what the program contributes to a better way of life for all of our people. And while our quarterly progress reports will appear as usual, using the statistical measurements that we have, the real story of highway progress will continue to lie in the immeasurables, the imponderables and the intangibles of human progress which the program makes possible.