

CRITICAL ASPECTS OF THE CURRENT HIGHWAY PROGRAM

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The mounting highway traffic, the deficiencies of highway and street capacities, and the higher cost levels have forced upward the over-all financial support for highway construction and maintenance. The increased State and local funds have reduced the Federal participation relatively. For the calendar year 1949 Federal funds carried 14 per cent of the total expenditures for all highway purposes. For 1950 the Federal share was about 12 per cent, and for the current year, if the planned program as estimated is completed, the Federal participation will be slightly under 11 per cent.

Delayed Construction

The number of projects under construction which are delayed by the failure of steel deliveries has grown from 319 for the week ended August 15th, to 680 for the week ended October 5th. For this latest week, the immediate shortage of steel was 122,507 tons, and the total estimated cost when completed was \$305,859,000 plus. The failure to complete the Federal-aid projects will reduce the Federal expenditures for these projects within the calendar year, but will necessitate higher maintenance costs

on the part of the States and the local government units. The direct loss to the public purse of delayed or deferred reconstruction of highway projects when needed is inevitable without considering the waste of time and loss of productive capacity.

A Recapitulation of the Recent Federal-aid Program

One of the criticisms leveled against the estimated steel requirements for the highway program is that the total exceeds the established pattern of use in previous years. Until the State highway departments made the estimates for 1951 which were consolidated by the committee of engineers, appointed by President Anderson to represent the American Association of State Highway Officials, and the Bureau of Public Roads, there were no adequate or accurate statistical data available reflecting the use of steel for highway purposes. As an interim indication only of the range of steel requirements, the Bureau had computed a use factor of tonnage based on dollar expenditures. The American Iron and Steel Institute reports shipments of structural steel in three categories, one of which is for highways, but the two much larger classes are not broken down by uses. The estimated requirements of highway steel for 1951 and 1952 consolidated as stated above and submitted to N.P.A. and D.P.A. are the only reliable estimates that have been made for the whole of the highway program for any year.

But this is only part of the story behind our present critical need for steel. Beginning in 1939, by direction of the Congress, a series of reports based on the studies of the State-wide planning surveys have been issued. These include "Toll Roads and Free Roads" 1939, "Highways for the National Defense" 1941, "Interregional Highways" 1944, and "Highway Needs of the National Defense" 1949. In the gathering and preparation of the source data, and the conclusions of the several reports, there was full collaboration between the State highway departments and the Bureau. Many of the more important recommendations are now incorporated in the Federal highway legislation. Of these, perhaps the most significant is the departure from the historic pattern of limitation of Federal support to the improvement of the rural roads, to give a long over-due recognition of, and substantial assistance to, the critical problem of urban traffic. Federal highway funds dedicated solely to the improvement of urban arterial routes became available first in October 1945. The influence on the Federal-aid construction operations has become increasingly significant.

Current Status of the Federal-aid Improvement Program

There is appended a schedule (Federal Aid Highway Construction) showing the volume of Federal-aid highway projects completed during each of the fiscal years 1946 to 1951, and the volume of projects under construction as of July 1st of each year 1946 to 1951. The volume of projects under construction as of September 1, 1951 also is shown.

For projects financed with primary funds, the largest mileage occurred during the fiscal year 1949, when 6,753 miles were completed. The mileage dropped to 5,321 for the fiscal year 1951. Dollarwise, the peak occurred in the fiscal year 1950 when primary projects were completed at a total cost of more than \$426 million. The mileage of primary projects under construction as of July 1 was greatest in 1948, but the dollar volume of such projects was greater as of July 1, 1951 than in any prior year.

For secondary projects, the largest mileage occurred in the fiscal year 1951, when 13,863 miles were completed. The largest total dollar volume of completed secondary projects occurred in 1950 (nearly \$254 million, compared with \$237 million for 1951). The \$213 million for secondary projects under construction as of July 1, 1951, is considerably less than the corresponding figure of over \$240 million on July 1, 1948.

For projects financed with urban funds, 293 miles were completed during the fiscal year 1950 at a total cost of \$180 million. This volume of urban work completed during 1950 exceeded that of any prior year, and also exceeded the 180 miles completed during the fiscal year 1951 at a total cost of about \$154 million. The 378 miles of urban projects under construction as of July 1, 1951, at a total cost of \$433 million, exceeded the volume of urban work under construction on July 1 of any prior year.

For the three classes of funds combined, the mileage of projects completed during a fiscal year reached a peak during the fiscal year 1949,

and the dollar volume reached a peak during the fiscal year 1950. The mileage of all projects under construction as of July 1 was greatest in 1948, but the dollar volume was greater as of July 1, 1951 than for any prior year.

Measured by the dollar volume then, about 30 per cent of the total completed projects for the six fiscal years ended July 1, 1951, have been urban projects, and more than 70 per cent of this total has been in the fiscal years 1950 and 1951. The implications of the urban project acceleration upon steel use are apparent from the following:

Expenditures for Structures in Dollars per
100 Dollars of Highway Construction

<u>Federal-aid Highway System</u>	<u>1949</u>	<u>1950</u>	<u>1951</u>
Primary	9.3	9.8	8.5
Secondary	6.4	6.2	5.6
Urban	4.4	8.2	17.1

As of July 1st, 378 miles (estimated cost 433 million dollars) of urban projects under construction in the Federal-aid program alone, plus large additional undertakings with similar steel demand, bring the critical situation of the steel squeeze into sharp reality.

The volume of work under way of projects interrupting the traffic movements on the arterial routes will easily reach from one-half to one billion in dollar value. Every highway engineer knows the nightmare of confusion attendant upon construction operations on heavy traffic routes.

Every effort is made to shorten the time while provisional detours are forced upon the traffic flow lines. Deferred completion of projects in the heart of our industrial centers resulting from denial of the necessary steel defeats the very objective sought.

The Impact of the Policy of Accelerated Amortization for Tax Purposes

As released on August 17th, of a total of tax amortization certificates of 8,883 million dollars, nearly one-half, 4,206 million dollars, were for industrial expansion in nine States. For expansion of production in the State of Pennsylvania alone, 1,068 million dollars in such certificates have been approved. The Governor of the State, in a letter of August 28th, which was incorporated in the recent hearings by the Senate Sub-Committee on Highways, Senator Spessard L. Holland, Chairman, concludes as follows:

"Unless a better understanding is reached and the highway industry, especially in Pennsylvania, is provided with the proper allocations of steel and at the proper time, the highway programs in the Nation and in Pennsylvania, which are so vital to the existing wartime economy, will result in little more than a wish."

Relation of Highways to the Production and Distribution of Steel

Increased production is futile if separated from the fast distribution to critical needs. Here are the facts from a major producing company of steel products.

"The first seven months of 1947 is used as an index. Truck movement of our finished steel at that time amounted to 11.8% of the total. In the corresponding period of 1951 it had increased to 29.1% or an index of 323.5. The rail index

in 1948, 1949 and 1950 was actually below that for 1947 and only went above that index in 1951. Out of an increase of 3-1/2 million tons in 1951 as against 1947 the rail increase had been only about 1/2 million tons and trucks have an increased movement of almost three million tons."

The reasons are not obscure.

"Another matter is dispatch. Rail service, in many instances, is slower than highway movement, particularly for distances up to about 300 miles. Trucks normally cover such distances overnight and goods that are loaded on trucks today will be delivered 200 or 300 miles away the next morning. In many such instances movement by rail car would consume several days. This type of service is of particular value in production line operations as it assures a continual flow to production machines, reduces materially the necessity for inventory at rest and in transit."

Accumulated Deficiencies of Highway Rehabilitation

We are also contending with a concept that the highway rehabilitation program can be administered on a mile-by-mile scale with final decision as to essentiality at the Washington level. Here are the facts related to the 344,458 miles of principal highways under the jurisdiction of the State highway departments which were reported as surfaced roadways on January 1, 1950. The analysis of the experience extending over 28 years since World War I reveals that reconstruction has been on the average at 12-year intervals. The rate of rehabilitation of the highway plant has for the past ten years averaged far less than the annual rate required to keep the plant in even reasonably adequate condition. The accumulated deficiency is now 74,000 miles, and is increasing by 5,000 to 6,000 miles per year.

This analysis is based on past trends and experience. It does not take into account the large amount of obsolescence brought about by the unprecedented increase in traffic. It ignores the more rapid deterioration of highways under a larger volume of heavier loads and the many instances where traffic flow exceeds traffic capacity. If we add to the above figures the mileage of road that is deficient as to such features as width, curvature, and grade, it will be about three times as large.

This same general situation exists on secondary and local rural roads with a more exaggerated lag in the rate of replacement and a constantly higher maintenance expenditure. The single redeeming feature of that situation, which can be credited to the work of the highway departments, is the fact that we have consistently been lowering the cost to the public of keeping the roads in operation - measured by the cost per vehicle-mile.

Organization to Meet Present Limited Material Supply

For the immediate future it is apparent that the highway rehabilitation program will be severely limited principally by the availability of steel, but by other elements also. To meet the situation constructively will require close integration of efforts of the State highway departments and the Bureau, if it remains the claimant agency for highway needs. Under date of September 17, President Anderson of the American Association of State Highway Officials wrote the States as follows:

"In view of the present situation and in order that assistance may be given when necessary to individual States in obtaining their allotted quota of steel on schedule, it is considered highly desirable for each State to appoint sufficient personnel to follow through and report upon each CMP allotment issued for fourth quarter 1951 and subsequent rollings. It would appear desirable to maintain current records through frequent checks with the contractors of the actions taken on each rated order up to the time it is accepted for mill rolling. The contractors should be expected to canvass all reasonably available sources of supply."

So long as the present emergency continues, the Bureau will continue its efforts and increase, to the extent possible, the organization of its personnel to assist the States by presenting their needs to the agencies responsible for the operation of the controlled materials plan. This will require detailed estimates of the requirements of controlled materials and other elements of the construction program, with a close scheduling of delivery times. There is required also a follow-through of any turn-back of approved allotments by the suppliers. It is most important that a detailed report be made of any failure or refusal to meet the fourth quarter, 1951 allotments, since we have assurance these will be substantially filled.

A. Projects completed, by fiscal years

Fiscal year	Federal-aid primary		Federal-aid secondary		Federal-aid urban		Total	
	Miles	Total cost	Miles	Total cost	Miles	Total cost	Total cost	Federal funds
1946	944	\$57,713,209	297	\$7,316,246	--	--	\$65,534,455	\$41,170,720
1947	2,937	134,091,376	4,607	54,619,037	19	\$5,536,022	194,246,435	106,419,478
1948	6,321	331,487,695	11,451	182,199,473	119	46,494,346	560,181,514	291,479,211
1949	6,753	405,945,764	13,620	245,007,599	197	89,448,498	740,401,861	379,823,079
1950	6,377	426,235,620	13,529	253,883,580	293	180,800,675	860,919,875	440,350,293
1951	5,321	331,439,198	13,863	237,111,566	180	153,951,999	722,502,763	363,783,501
Total	28,653	1,686,917,862	57,367	980,637,501	808	476,231,540	3,143,786,903	1,623,026,282

B. Projects under construction

As of July 1, 1946	3,858	\$253,810,137	2,050	\$49,021,279	24	\$11,313,596	5,932	\$314,145,012	\$173,720,019
1947	6,686	466,486,818	7,742	175,742,643	134	80,442,582	14,562	722,672,043	377,638,841
1948	6,725	507,266,299	9,797	240,763,053	253	176,750,632	16,775	924,779,984	477,277,288
1949	5,426	484,264,613	8,005	225,779,440	288	302,196,774	13,719	1,012,240,827	515,345,909
1950	4,969	441,127,729	9,131	216,260,128	278	348,655,493	14,378	1,006,043,350	502,975,040
1951	6,281	547,674,816	7,970	213,395,730	378	433,128,752	14,629	1,194,199,298	599,303,008
Sept. 1, 1951	6,615	569,232,963	8,058	221,567,183	383	427,681,367	15,056	1,218,381,513	610,575,430