

FUTURE HIGHWAY PROGRAM

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There are many subjects sufficiently important to receive joint State and Federal consideration at this time. The deterioration of highways and bridges caused by the increased frequency of use by the heavier units, and curtailment of replacements and adequate repairs too drastic for anything but all out war conditions, is currently the most acute problem. We must have more materials and equipment, if we are to keep our highways in operating condition through the coming winter and next spring. When the history of this war period is carefully reviewed, I am convinced serious students will certainly question why such meagre provision has prevailed for the maintenance and replacement of the facilities and plants of land transportation which is so essentially a part both of war production and war operations, disregarding the added factor of preserving the civilian economy. I believe that rail transportation, like highway transportation, has greatly suffered from lack of understanding of the need for materials and equipment essential to keep roadbed and equipment safe and efficient for fantastically increased operations. There is an ever increasing tempo in the demand for transportation of all forms. For this reason, and because of a deterioration of both equipment and roadbed, the next months must produce increased allocations of the requirements to serve land transportation, both rail and highway. We are facing a period of even more intensive maintenance. An immediate necessity already current in some sections, is preparedness for snow removal. Normally 534,452 miles are thus maintained, and a recent canvass of the States of their immediate needs, aggregates estimates of 2,551 trucks and 3,768 other pieces of equipment, totaling approximately \$13,000,000 in value. In addition, a most critical need is an adequate supply of repair parts to keep existing equipment in reasonably continuous operation. Such an adequate supply, only to June 30, 1944, is estimated at \$9,000,000.

The Procurement Division of the Treasury is taking over all surplus equipment from Federal Agencies and will extend to the States the first choice of such equipment at agreed prices. A representative of the Procurement Division will be in attendance at this meeting to confer with the members of the State highway departments.

During the summer months conferences were called by the Highway Traffic Advisory Committee to the War Department in all of the nine Service Commands. These were well attended by the high officers of the Service Commands, the Zone Transportation Officers, the Highway Traffic Advisory Committees of the States composing each Service Command and representatives of the Headquarters Staff, Transportation Corps. The purpose of these meetings was to bring military and civil authorities into direct contact and to set up decentralized methods of dealing with problems as they arise in each Transportation Zone. The decentralized operations are now functioning in a way to give considerable assurance

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that local problems can be worked out more effectively. This effort has been augmented greatly by the increased freedom of action in approving requisitions, given by the War Production Board to their regional representatives.

Recently a communication has been addressed to General Somervell in command of the Army Service Forces by the Highway Traffic Advisory Committee requesting the assistance of the Zone Transportation Officers in passing upon and supporting the needs for winter maintenance equipment. Already considerable help has been given in this respect by these officers of the Transportation Corps, and we believe that this assistance is only at its beginning. It is with considerable assurance, then, that the recommendation is made that the State highway departments avail themselves, through the liaison representatives of the Highway Traffic Advisory Committee, of the sympathetic assistance of the Zone Transportation Officers in meeting problems of equipment and supplies.

The rapidly dwindling construction program is indicated by the following figures showing the comparative highway system mileage placed under construction with cooperative Federal funds, in the first ten months of this and the previous three years:

Year	<u>Mileage placed under construction</u>
1940.....	11,842.6
1941.....	8,645.4
1942.....	1,869.2
1943.....	722.4

This year, the rate of new project inception is but 39 per cent of that in the first war year and only 6 per cent of a normal peacetime rate. Mileage of projects completed has held up a little better as shown by the following data for the same periods:

Year	<u>Mileage completed</u>
1940.....	8,849.6
1941.....	7,911.2
1942.....	5,631.8
1943.....	2,376.8

The 1943 completion rate is about 42 per cent of that in the previous year and some 27 per cent of the normal rate. The higher completion rate in relation to the very low rate of starting new projects has substantially reduced the reservoir of mileage under construction. As of the end of October, in each of these years, the following mileage was under construction:

Year	<u>Mileage under construction</u>
1940.....	9,082.6
1941.....	8,471.2
1942.....	3,903.2
1943.....	1,512.9

If this situation continues, the reservoir will soon be dry.

While no comparable mileage figures are available for State highway construction, exclusive of Federal-aid work, comparative employment data indicate that such work has been reduced in even greater degree.

In the first nine months of 1943, construction employment on Federal-aid work was 69 per cent of that in the same period of 1942. The corresponding percentage for State construction is 59 per cent. In spite of the drop in needed replacement construction, State maintenance activity has been further reduced, employment in 1943 being but 85 per cent of that in 1942.

As pointed out last year before this Association, new construction over a long period - particularly those projects permitted during the war years - very largely only replaces worn-out sections of existing highways which are a national liability in terms of operating time, depreciation of vehicles and tires, which we cannot afford. It is impossible now to recapture time lost in essential war transportation, to replace worn-out vehicles, or to stand wasteful use of rubber. It is not impossible to do a limited amount of new construction that will avoid a material amount of these losses. Too high commendation cannot be given the administrative heads and the personnel of the State highway departments in continuing to expend every effort to keep highway transportation operating in the face of inexplicable limitations. This spirit augurs well for the future. The spirit of service devoted to the country's interest emanating from the highway organizations can and will be carried into the post-war period. Future problems can only be met by the attack of many agencies on many fronts. In the highway field the State and local agencies retain traditionally the initiative, and this initiative must be preserved and enlarged. What is actually accomplished in the highway field during the reconstruction period will be an integration of the activities of all the separate units of government. It is important that the objectives be agreed upon by those important agencies and that their initiative be protected and stimulated. There is no substitute for American initiative in the individual or in the primary groups. The State highway department must necessarily be our reliance for carrying the responsibility of leadership. This means that the departments must engage in broader fields than they have heretofore largely occupied, and enlarge their activities to include coordination in the municipal and the secondary road improvement programs. The role of the Federal authorities must necessarily remain to take responsibility for use of Federal funds to fit the national economy and to stimulate local initiative. In the future program for which we should be prepared there are two logical main divisions. The first of these is to take up the lag of replacement of our seriously depreciated highway facilities by construction and by heavy maintenance. The second is to be ready to furnish employment through the contract procedures in an undetermined amount on needed highway projects as a "stand-by" program. This is necessary to avoid the consternation and inefficiencies that are products of a lack of preparedness. These programs will be accepted as a necessary and sound public policy, since the one is designed dimensionally upon the actual operations of more than a decade, and the second is designed as a stand-by or emergency program, again, dimensionally only reaching the number employed in the highway field on public works and relief projects during the years when private employment failed to provide sufficient jobs. The dimensions of a desirable program, limited to restoration and reduction of accumulated lag in replacements of existing highway mileages now obsolete, are indicated roughly by the previous comparison of the annual programs of State and Federal-aid mileages improved during the four-year period, 1940-1943.

Employment in man-years for State and Federal-aid construction and maintenance from the actual records over the period of the past twelve years, rather than expenditures, is the most accurate yardstick
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to measure the normal reconstruction highway program. There is less accuracy in the reports of employment in municipal and local work, but the estimates available are usable for the purpose of determining the total of employment necessary. This yardstick of employment reasonably measures the construction, including maintenance, operations as they have existed over a period sufficiently long to acquire permanency in our national economy. The number of men employed avoids the inaccuracies inherent in the use of actual expenditures due to the fluctuating price ranges. To this program, which is realistic and represents only what has been done through a period of diminishing rather than increasing adequacy of highways, has been added an increment of one-third to make up for the lag which we are now suffering and the accelerated depreciation of the highways which is ensuing under the present policies of denial of adequate equipment and supplies to hold their condition reasonably constant. Even with a one-third increment, rehabilitation will require longer than a three-year period. Construction of useful enduring projects, multiplies the number of men directly on the job by, the number employed in industrial production and transportation, - the ratio from year to year dependent upon prices, wage scales, and other conditions. The ratio of this industrial employment to direct employment on the job is shown as follows:

Ratio of Job Employment to Industrial Employment
in Highway Construction

Period	Ratio (man-years)
1931-1933.....	1 : 1.70
1940-1941 ^{1/}	1 ; 2.23
1942-1943.....	1 : 1.89

^{1/} Post-war equipment

These figures indicate the relationships between job employment and contributory industrial employment on State and Federal-aid highway projects for construction and for maintenance. Municipal and local road operations will add to the total employment, but the ratios of industrial employment have been taken at a lower rate and are believed conservative.

The restoration of highway facilities to a condition comparable to that which would have been achieved without the incidence of war will require, over a substantial period, an increase in employment which conservatively will require at least one-third more workmen. Because we have gone through a long period where highway facilities were not keeping up with the demands for highway transportation, as evidenced by automobile registration, and particularly by the amazing increase in gas consumption, arguments might well be advanced for a larger increment of labor to catch up with current needs.

In the second phase, in the "stand-by" program there will be more question as to the type and condition of useful highway projects which should be given priority in case it is necessary to provide additional employment in this construction field. Very frequently competent agencies are now actively engaged in pioneering and planning far-reaching programs of industrial conversions and expansion. Mr. Paul G. Heffman, the able Chairman of the Board of Trustees of the Committee for Economic Development, outlines the purposes of this Committee well in this manner:

"The Committee for Economic Development is a private, independent, non-profit organization. It is neither an official nor a semi-official Agency of the Government. It is financed by contributions from business.

"In no sense does the Committee intend to act as an overall post-war planning group. Its activities are keyed to the single purpose of raising the level of useful jobs in industry and commerce.

"Its objectives are to stimulate, encourage and help individual companies in planning programs for products and markets that will enable them to reach and maintain high levels of productive employment in the post-war period . . . and, through national research, to define conditions favorable for expansion of business enterprise when peace comes."

Other groups, such as the National Planning Association, are very seriously attacking the problems of like nature with like purposes. These groups, representing industry, know and without self delusion are squarely facing inevitable issues that must confront industry when the time shall come to convert from total war to a peace-time national economy. In a reasonably balanced over-all program to maintain the national income at a high level, construction has an essential place, but can not be relied upon to carry the major load. Private construction should be given first consideration and encouragement. The difficulties confronting a large private construction program are more than sufficient to rule out a hampering, competitive public works program.

Construction, public and private, is an essential element of national income - certainly of national prosperity - furnishing employment for skilled, intermediate and unskilled workmen. It also provides, and this is highly important, a market for many types of production, particularly power units and materials, through a very wide range. Many large industrial enterprises are totally lacking a market, which makes possible their production that in turn furnishes employment, if construction activities are not on a substantial scale. While the ratio between total yearly national income and income derived from construction has varied, the departure either way from the average is much less than the variations between average income and the year by year total income over a considerable period.

For the period 1915-1942, through 28 years, the average ratio of total construction (including work relief and maintenance) is 14.7 per cent of the total income. Without any thought now of attempting to fix limits upon the desirable national income, the experience of the past indicates that construction, private and public, must account annually for approximately 15 per cent.

After provision is made for immediately needed public works, and that means those which can not be longer deferred, no additional work should be undertaken except to take up marginal unemployment. During an earlier period when employment and national income were at high levels, one important element was private construction of plant facilities. During 1942, private construction of new or the expansion of existing plant facilities was largely supplanted by public financed

construction. For this single year a construction volume which reached 13.5 billion dollars included 3.6 billion of publicly financed industrial plant facilities. Add to this the volume expenditure of preceding and succeeding years for the same purpose and the potentialities of plant facility expansion as an important element in post-war private construction volume largely disappear.

There are fields in which private construction can be enlarged. In rail transportation there has been forced a serious lag in maintenance and replacement. Mr. John J. Pelley, President of the Association of American Railroads, states in a recent article: (*) "****it is not now possible to restore currently the service life of rail and the rest of the railroad plant, which, by reason of the tremendous traffic, is being 'run out' at least 25 per cent faster than it is being restored.****"

Certainly no public works programs should be expanded, beyond the current necessities, to compete for labor or materials with the private construction programs of the railroads or any other industry.

Any exact balance between private and public construction is not possible. The grave danger is that neither will be adequately ready to take up the slack in employment quickly at the critical time.

In the highway field this translates into a normal rehabilitation program as previously stated and an additional "stand-by" public works program should be made ready as insurance, to be used only to the extent private industry, including agriculture, can not absorb all the available employment.

In the period from 1931 to 1942, an annual average of 148,457 man-years of labor were required directly on highway construction projects to sustain the physical volume of facilities essential to the accommodation of highway traffic on the Federal-aid and State controlled highway systems. Similarly, essential State highway maintenance occasioned an average annual employment of 133,759 man-years. Considered as an index of productivity in the post-war provision of highway facilities, the pre-war direct highway labor force provides the basis for the evaluation of a normal program after the war. The job labor requirement calculated, on this basis, has been increased by one-third for the period after the war to permit of catching up with war-deferred construction, at the same time maintaining the normal rate. The pre-war data have been expanded to include appropriate shares of municipal and local highway labor on the same basis. For all categories of highway service in the post-war period, there is indicated an average annual need for the employment of 327,155 man-years on highway construction and 460,501 man-years on highway maintenance. The indicated minimum program necessary to accomplish this objective will require an estimated annual expenditure for construction of 1,690 million dollars and an additional 845 million dollars for maintenance. The total expenditure of 2,535 million dollars is expected to provide employment for approximately 1,743,000 man-years of job and industrial labor. The normal post-war construction expenditure is approximately equal to anticipated highway receipts.

(*) Annals of American Academy of Political and Social Science - November 1943 - Page 26.

The "stand-by" program ready for immediate use should be at least equivalent to that employed on WPA highway projects and PWA road and street projects at the average annual rates attained in the pre-war depression period. This "stand-by" program should be non-competitive in two major respects. It should not compete for construction workmen and materials with private construction and it should primarily produce new facilities supplementary to, rather than competitive with, other types of land transport. This "stand-by" program has been estimated to cost 1,557 million dollars annually and to provide for an additional 301,254 man-years of job employment and a total of 973,050 man-years including industrial labor.
