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OUR HIGHWAYS

How They Grew: Their Present State; And A Plan For Their Improvement

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The highway system of the United States, as it presently exists, is the result of some fifty years of construction and reconstruction by the Federal Government, States, Counties and cities. Before 1900, with few exceptions, responsibility for the construction and repair of roads and streets was lodged in the counties and cities exclusively. This was not inconsistent with the narrowly local usage of the roads and streets.

The Beginning Of State Administration

Prefaced by action in a few States during the last decade of the preceding century - action limited generally to the extension of advisory and financing aid to the local governments - the assumption of constructive responsibility by the States occurred, State by State, between 1900 and 1920. The responsibility initially assumed was invariably limited to the construction of rural highways. State interest was generally occasioned by realization of the need for consistency and continuity of improvement of intercity routes to serve the increasing range of automobile travel and by the incapacity of the counties to support the larger costs of such improvements.

Systems of State highways, embracing the principal routes joining the larger cities and county seats, were designated and State highway departments were created to build the roads designated. Maintenance of the roads constructed remained for a time in some States a responsibility of the counties. To pay for the work performed by the State highway departments State highway funds were created, often by appropriation from general State revenues, but increasingly by dedication of the yield of motor vehicle license fees.

Simultaneously with the undertaking of initial advisory responsibility by the first of the States, the Federal Government created, in the Department of Agriculture, an Office of Road Inquiry to investigate methods of road building and maintenance and render a similar advisory and demonstrational service to the county road-building authorities of all States.

From the earlier years of the century Congress debated the advisability of an extension of more substantial financial aid predicated upon the power to establish postoffices and post roads assigned to it by the Constitution. The first concrete result of these debates occurred in the inclusion of an appropriation of $500,000 in the Post Office Appropriation Act for the fiscal year 1913 to be expended by the Secretary of Agriculture in cooperation with the Postmaster General for the improvement of post roads to be selected by them. Detailed administration of the expenditure fell to the Office of Public Roads (originally Office of Road Inquiry) of the Department of Agriculture.

The Inception Of Federal Aid

This early experiment in Federal participation in the actual construction of roads was followed in July 1916 by passage of the Federal-Aid Road Act which marks the inception of the plan of Federal aid for highway construction by the States which has continued with changes in form, method and amount, but without interruption to the present time.

The Act of 1916 appropriated $75,000,000 to be expended in five years in amounts increasing annually by increments of $5,000,000 from $5,000,000 for the first year to $25,000,000 for the fifth. It provided that the total sums appropriated would be apportioned among all States in accordance with a formula based upon the area and population of the several States and the mileage of post roads in each as certified by the Postmaster General. The apportioned sums were to be expended in the respective States for the construction of roads "over which the United States mails are now or may hereafter be transported," and could be so expended only if the Federal contribution were matched in at least equal amount from funds of the States. Maintenance of the roads constructed would remain a responsibility of the States.

Federal Aid As A Factor In The Strengthening Of State Administration

A most important provision of the 1916 Act was one requiring the creation of a State highway department of adequate powers by a State, as a condition precedent to the State's participation in the Federal aid to be provided. This requirement resulted quickly in the creation of State highway departments in 7 States in which no such department had previously existed, and in a strengthening of the powers of existing departments in 9 other States to fit them for the performance of functions required by the Federal Act. Of these required functions the more important were the initiation of improvement projects to be undertaken and the planning and immediate supervision of the construction involved subject to the approval of the Secretary of Agriculture, acting through the Office of Public Roads.

Prior to the passage of the Federal-Aid Road Act the principal executive officers of most of the then existing State highway departments had joined in the formation of the American Association of State Highway Officials. This organization, representing in large measure the views and desires of State governments, had been influential to a considerable degree in the Congressional shaping of provisions of the Act. The influence thus exerted by the States through their State highway departments and the Association at the inception of the Federal program, has been continuously and effectively exerted in all subsequent modifications of the program.

The Designation Of Primary Highway Systems

As previously remarked, the designation of particular systems of primary highways for construction at State expense had been a feature of the assumption of State responsibility in many States in the years between 1900 and 1920. This principle was not given effect in the 1916 Federal Act. The post roads to which the aid proferred by that Act was applicable totaled to a substantial percentage of the country's entire rural road mileage, and included roads of all functional classes, from those of recognizably primary character down to roads of tertiary and lesser significance. A similar lack of systematic limitation continued in the operations of some of the States as late as 1920.

This defect of the Federal law was corrected by passage of the Federal Highway Act in 1921. The new law required the designation of a system of highways, mainly interstate in character, including not more than 7 percent of the total highway mileage of each State; and confined to the improvement of the designated system the expenditure of all Federal funds to be appropriated. The Act required the designation of the system to be made in each State by its highway department, subject to the authority of the Secretary of Agriculture to approve in whole or in part or to require modifications or revisions of the systems initially designated by the State agencies.

In this manner the Federal-aid highway system came into being. In some States, the designation of this system constituted the first selection of a system of highways of primary characteristics. In many States, all or the major part of the previously identified State highway systems was included in the Federal-aid system. On the part of the Federal Government, the Bureau (formerly Office) of Public Roads requested the War Department to indicate such roads as it should consider to be of primary strategic importance and desirable of inclusion in the system to be designated. To this request the War Department responded by supplying a map, approved by General John J. Pershing, then Chief of Staff. All of the highways so indicated were included in the Federal-aid system as it was designated.

After designation of the Federal-aid system, all appropriations authorized by the Congress and the required matching funds of the States were expended exclusively on that system.

The Apportionment Of Federal Aid

The original formula governing apportionment of the Federal authorizations has remained unchanged in its application to the primary Federal-aid system, except by the slight modification that no State shall receive less than one-half of one percent of the total authorized. But the original requirement of at least equal matching with State funds of the Federal contribution to the cost of roads built was modified by the Federal Highway Act, in respect to roads built in any State containing unappropriated public

lands exceeding 5 percent of the total area of all lands in the State, to permit payment of a Federal share of the cost up to 50 percent plus a percentage equal to one-half of the percentage of unappropriated public lands in the State.

Federal appropriations continuously authorized through the decade of the twenties and into the succeeding decade, together with the required matching funds of the States, were expended on the Federal-aid highway system, under the Federal Highway Act, of which the foregoing were the principal provisions.

Independent Activity Of The States

Simultaneously, the States, in various degrees independently and without Federal aid, were making improvements on the Federal-aid system and on their own State highway systems which in some States were of larger extent than the Federal-aid system. Progressively, the State revenues for this purpose were raised by special taxes payable by the owners and users of motor vehicles. After its first application by Oregon in 1919, the gasoline tax, rapidly adopted and collected in all States by 1930, became, in consequence of the rapid increase of motor vehicle travel, the principal source of State highway revenue.

Accelerated by State borrowing in substantial amounts, amortized generally with road-user revenues, construction of the Federal-aid and State highway systems progressed rapidly during the twenties, and by the early thirties an initial improvement of these primary systems as they had then been designated, was nearing completion.

In the improvement of the Federal-aid system and all of the State highway systems as originally provided for, the construction of routes into and through the cities was deliberately restricted, even prohibited. Effort was purposely concentrated on the construction of primary rural, intercity highways on which improvement needs were deemed to be greatest. The results of this singleness of purpose and application were evident in the rapidity with which the initial improvement of the principal rural highways of the country was carried out.

Rising Demands For City And Local Road Improvement

The first departures from this policy of concentration on the improvement of the primary rural highways, so far as the Federal-aid program was concerned, occurred during the depression of the 1930's, motivated primarily by the desire to provide work for the unemployed. The National Industrial Recovery Act in 1933 removed the restrictions which had theretofore operated virtually to precluded expenditure on connections of the Federal-aid system through cities. The Federal-aid Authorization Act of 1936 made provision for expenditure in the fiscal years 1938 and 1939 of relatively small sums ($25,000,000) for "secondary or feeder roads, including farm-to-market roads, rural free delivery mail roads, and public school bus routes."

In the States, the yield of road-user taxes which had been devoted in large part to the primary roads, came to be distributed in increasing proportions to other purposes. Mainly, this diversionary tendency was due to the depression-borne difficulties of revenue collection. There was, however, a lesser tendency to increase the amounts of the road-user revenue assigned to the improvement of local roads and streets. Whereas, for example, in 1925 more than 76 percent of the $394,000,000 yield of the road-user taxes was distributed for use on the primary roads as compared with 22 percent for local roads and streets, and a diversion to non-highway purposes of less than 2 percent; by 1936, the percentage of the $1,020,000,000 yield allotted to primary roads had dropped to less than 58, the percentage for local roads and streets had risen to 26 percent, and more than 16 percent was diverted to non-highway purposes.

But, notwithstanding these tendencies, the sums available for primary roads remained relatively large and, because of the lower prices prevailing during the depression, accomplished much toward the further improvement of the principal highways.

Value Of The Statewide Highway Planning Surveys

The Federal-aid Authorization Act of 1934, better known as the Hayden-Cartwright Act, contained two provisions which were destined to have pronounced effects in the planning and financing of the future course of the country's highway program. First, by attaching a Federal-aid penalty to the further diversion of State road-user revenues to non-highway purposes, it halted the tendency in that direction which had strongly set in. Second, it authorized expenditure of not to exceed 1½ percent of the annual Federal-aid authorizations for engineering and economic investigations of projects for future construction. This latter provision made possible the undertaking of Statewide highway planning surveys in all States, through which, as never before, the States were enabled to assemble all of the facts essential to the planning of a balanced program for the further improvement of all roads and streets in proportion to determined needs.

State Of The Highways In The Mid-Thirties

At the time of the passage of the Hayden-Cartwright Act the status of the country's highway program could be described approximately as follows:

> The primary rural network had been improved to substantial adequacy for the then existing traffic, largely with two-lane surfaces, many of which were of low-type and relatively short life, but much of the mileage improved in the earlier years was approaching the need of major reconstruction. Further, it was becoming evident that the two-traffic lanes, which had earlier been ample on all roads, would progressively be overtaxed in their capacity by the heavier traffic volumes being generated on a considerable mileage, especially near the large cities. Need for a considerable program of road widening could be foreseen.

The arterial streets of cities, particularly those which formed the trans-city connections of the primary rural network, were becoming seriously congested. Need for the widening of these streets, and possibly more radical improvements designed to increase their traffic capacity was apparent.

Farmers and others concerned over the condition of rural secondary and feeder roads, including the county authorities responsible for local road administration, were claiming a larger share of the road-user revenues and other forms of aid for the improvement of these lesser roads. Many of such roads were already subjected to substantial volumes of traffic which earlier were carried only on the primary highways. The county authorities were encountering increasing difficulty in financing the needed improvements with real property taxes which historically had been the principal source of revenue for local road work.

The facts of road condition and traffic demand quickly gathered by the highway planning surveys gave dimension to these various needs, which in their sum transcended the total of financial means available, and severally competed for larger shares of the limited means.

The First Modern Turnpike

In 1937, the State of Pennsylvania, seeking additional means for the better accommodation of traffic between Harrisburg and Pittsburgh, decided to return to the toll principle of financing which earlier had been completely abandoned. It created a special State turnpike authority which issued revenue bonds and, in two years, completed the construction of the Pennsylvania Turnpike - a high-type, four-lane divided highway, 160 miles in length.

This resort to toll financing as a means of quickly accomplishing the more expensive improvements required on the most heavily traveled highways, inspired an increasing advocacy of the wider, even the general use of toll financing.

The Congress in 1938 directed the Bureau of Public Roads to investigate and report upon the feasibility of building a toll system of transcontinental highways, three in number, from east to west, and three from north to south. In its report, returned in 1939, the Bureau advised that while it doubtless would be feasible to finance with tolls the improvement of some of the country's major intercity arteries, the toll financing of a country-wide system of roads of the extent and character indicated would be impossible. The Bureau recommended as an alternative that detailed investigations be undertaken leading to the designation of a system of reasonably direct interregional highways, with appropriate connections through and around cities, limited in total extent to not more than 1 percent of the total mileage of rural highways in the United States. To the construction of such a system, because of its predominantly national

importance, the Bureau suggested, the Federal Government could reasonably contribute in a proportion materially larger than that in which it had contributed to the improvement of Federal-aid highways generally.

Inception Of The National System Of Interstate Highways

Acting upon this suggestion, the President in 1941 appointed a National Interregional Highway Committee of seven members to review all existing data and surveys and recommend a limited system of national highways designed to provide a basis for improved interregional transportation. On January 1, 1944, the Committee recommended and defined a system of main intercity connections constituting such an interregional system which, with the addition of not more than 5,000 miles of city circumferential routes to be selected after more detailed study, it proposed for adoption.

In the Federal-Aid Highway Act of 1944, in pursuance of these recommendations, the Congress directed that:

> "There shall be designated within the continental United States a National System of Interstate Highways not exceeding forty thousand miles in total extent so located as to connect by routes, as direct as practicable, the principal metropolitan areas, cities, and industrial centers, to serve the national defense, and to connect at suitable border points with routes of continental importance in the Dominion of Canada and the Republic of Mexico. The routes of the National System of Interstate Highways shall be selected by joint action of the State highway departments of each State and the adjoining States, as provided by the Federal Highway Act of November 9, 1921, for the selection of the Federal-aid system. All highways or routes included in the National System of Interstate Highways as finally approved, if not already included in the Federal-aid highway system, shall be added to said system without regard to any mileage limitation."

The process of designation defined by this Act was carried out, and on August 2, 1947 the resulting National System of Interstate Highways was approved by the Administrator of the Federal Works Agency, of which the Bureau of Public Roads was then a constituent part. The system as then designated embraced a total of 37,800 miles of which 3,778 miles consisted of streets in urban areas including cities of 5,000 or more population and the remaining 34,022 miles was made up of rural intercity connections and roads in the smaller cities and towns.

Thus, through the years of the Second World War, the original concept of an interregional highway system grew to the designation of the National System of Interstate Highways as we now know it. Its selection was informed by the fullest array of facts ever assembled for such a purpose and finally determined by the highway authorities of the States and Federal Government most competent to act in such a matter. There is no doubt that this system embraces those parts of our entire highway network which in their totality

constitute a systematic integration of the most important highway routes of the nation - most important for the service of peacetime travel and transportation and equally important in their strategic uses in case of war.

The State Of The Highways Post-War

While the selection of the interstate system was in process, much was happening to the highways of the country but very little was done to advance their improvement. The total volumes of highway traffic receded slightly from the prewar maxima; but the removal of normal restrictions on the size and weight of vehicles encouraged a marked increase in the gross and axle loading of trucks and trailer combinations, in many cases exceeding the physical capacity of the roadways to support the loads. By national policy, highways were stamped as expendable, and they were expended. There was widespread damage which, by reason of existing restrictions on the use of materials and manpower, it was possible to repair only in part and with the greatest difficulty. Accomplishment of the large task of highway reconstruction and modernization foreseen as a number one necessity before the war was held in abeyance. We emerged from the war with a highway system badly depleted in its physical condition and wholly robbed of what should have been the substantial increase of its traffic capacity during the years of the conflict.

With the unexpectedly quick growth of postwar traffic these deficiencies became glaringly evident. Federal-aid authorizations were increased above any amounts previously provided, with funds earmarked for primary, urban and secondary highways. The importance of the interstate highway system was recognized by the Congressional dedication, at first, of annual sums of $25,000,000, increased by the latest Act to $175,000,000. The State highway departments, armed in the beginning with wartime accumulations of unexpended revenue, have been favored by the substantial increase of road-user revenues consequent upon the rapid growth of vehicle registration and usage. But increased prices for construction and maintenance work have offset the larger revenues, so that the best that can be said generally is that it has been possible to halt the relative regression of highway sufficiency. Some notable advances have been made in the construction of modern expressways in a few cities, and less ambitious improvements have been made in the capacity of the arterial streets of many cities. Needed relocation, widening and strengthening of the primary rural arteries, especially those included in the interstate system is progressing slowly. The larger Federal-aid appropriations for secondary roads are a material factor in the accomplishment of substantial improvement of roads of that class.

Insufficient Revenue The Cause Of Present Highway Deficiency

For the fact that progress in the modernization of the primary highways is disappointingly slow, the insufficiency of financial means is solely responsible. The regularly constituted highway authorities of the States

and Federal Government have the capacity to plan and execute the much needed improvements as rapidly as they can be effected by any other agencies.

The readiness with which proposals for the construction of new turnpikes are accepted is proof of the public understanding of the immediate need for large improvement of major routes of intercity travel. The large diversion of traffic to these turnpikes when they are constructed and the substantial volumes of new movement which they generate, evidence the willingness of road-users to pay at high mileage rates for the convenience and safety of truly adequate highways. An unfortunate consequence of the resort to the toll method of financing the construction of such facilities lies in the severance of highway administration which results when small segments of the highway system are set apart for construction and operation by special turnpike authorities from the general administration of the far larger remainder of the system by the regularly constituted State and Federal authorities.

The Present Problem Graphically Depicted

The four charts attached tell in a concise way the whole story of the rise of the present-day highway problem. They picture the rapidly increasing numbers of vehicles requiring accommodation, the lack to this day of a consistent and commensurate financial provision for the construction of highways, the degree of the highway deficiency that has resulted, the nature of the relation that has existed between highway transportation and the general economy of the country, and the probable continuance of highway inadequacy in the absence of a substantial increase in the rate of capital investment in the highway plant.

Motor-Vehicle Registrations - 1920-1954

The chart so captioned shows how the numbers of motor vehicles have increased over the years, and the relative numbers of autos, trucks and buses in each year. The numbers of trucks and buses alone now exceed the total of all vehicles in 1920, and the substantial increases in these larger and heavier vehicles now annually recorded are significant beyond their numerical values in the increase of traffic demand upon the highways.

Our roads are built to serve the movement of the vehicles here enumerated. Count something less than 10,000 miles a year for each vehicle, an average annual amount that tends slightly to increase from year to year, and you add up to the stupendous totals of vehicular movement our streets and highways are now required to accommodate. The total has risen from 302 to 540 billion vehicle-miles between 1940 and 1954.

Now see the chart captioned:

FEDERAL AID HIGHWAY CONSTRUCTION PUT IN PLACE

Here we see year by year the total cost of Federal-aid highway construction. While this is only part of the total of all highway

construction it reflects accurately what has been occurring in the entire road-building program.

The heights of the shaded bars represent the actual costs in dollars of changing purchasing power. The heights of the adjacent black bars represent the dollars that would have been required to do the same amount of work at the average prices prevailing during the period 1925-1929. Thus the black bars afford a true comparison of the actual physical volumes of construction involved in the Federal-State cooperative program from year to year.

From 1928 through 1941 bid prices were lower than the average for the base period. So the adjusted values (black bars) are higher than the actual dollar values (shaded bars). Price increases since 1942 have reversed the relative heights of the bars. Since that year the adjusted values (black bars) have been the smaller. The black bars thus reflect the post war shrinkage in purchasing power of the dollar.

Notice that 1953's actual expenditure of more than a billion dollars, which more than doubled the 1936 expenditure of less than 450 million dollars, produced a construction volume which in adjusted value exceeded the 1936 volume by only about 20 percent. Between these two years the registration of vehicles increased by just about 100 percent.

The vehicles, increasing at a rate so far beyond the rate of highway construction and reconstruction made possible by highway dollars provided, have made demands upon the highway plant to which the condition of the plant has become increasingly inadequate. An increasing deficiency has accumulated varying in degree from State to State, but of substantial proportions in all States.

On the vitally important routes of the nation's backbone highway system the varying degrees of these deficiencies are shown in the chart captioned:

SUFFICIENCY ANALYSIS OF RURAL PORTIONS OF
THE NATIONAL SYSTEM OF INTERSTATE HIGHWAYS

The rural highways included in this system of interstate routes - the segment of our entire highway system of greatest significance for service of the nation's transportation needs both in peace and war - are shown to be variously deficient from State to State. In national summary, only 24 percent of the rural mileage of the system is rated as completely sufficient in its present condition for the service of the traffic it carries. Seventy-six percent of the mileage is found in need of reconstruction and improvement to correct existing inadequacies, and on 16 percent of the total mileage the need of reconstruction is critical.

All of these indices of the problem that faces us are brought together in the chart captioned:

SIGNIFICANT TRENDS IN HIGHWAY DEVELOPMENT

Here, in the section labeled HISTORICAL, are shown by the black bars the annual totals of highway expenditure on all of the nation's roads and streets, from 1930 to 1954, the actual dollar expenditures of each year adjusted to the common base of 1953 road construction prices.

The depreciated value of the highway plant in each year, resulting from these and earlier expenditures (not shown on the chart) is represented historically from 1920 to 1954 by the dashed line.

A solid line, appropriately labeled, traces the growth of total vehicle-mileage (the total of travel on all roads and streets) through the same historical period.

And there is added another line (solid with dots) which represents the changing, and generally increasing, value of the country's Gross National Product, a measure of the nation's total economy.

The construction values are represented to a dollar scale appearing at the right of the chart. The curves of VEHICLE-MILES, GROSS NATIONAL PRODUCT, and DEPRECIATED INVESTMENT, represent index values of these different quantities referred to the value of each in the year 1940 represented as 100.

Note that the curve of increasing vehicle-mileage, starting low in 1920, soon catches up with the curve of gross national product and continues in close parallel with it through the decade of the thirties. The increasing use of motor vehicles, starting in earlier obvious immaturity, had by then reached a stage of mature growth closely geared to the growth of the general economy.

The curve of depreciated highway investment, rising from early low values in the years when the highway system was still largely unimproved, also approaches the other two curves and runs with them through the thirties. This decade, it should be remarked, was the period when our highways were recognizably most adequate to their task. The concentrated and accelerated road building effort of the two preceding decades had by 1933 produced a system of, largely, two-lane highways. However inadequate this system would be rated by the measure of today's needs and standards, it bore a close relation to the needs of its day, and through the later years of the decade it remained in that fortunate relation as a result of a sustained large volume of reconstruction and new construction. This high level of construction activity in large measure raised to the then necessary standard of adequacy not only the pioneer improvements of the earlier decades but also most of the previously unimproved mileage of more important highways.

With the onset of World War II the hitherto parallel trends of the three curves abruptly diverge. The curve of gross national product mounts upward with the War generated heightened productive activity; the curve of vehicle-miles drops precipitately under the compulsion of gasoline

rationing. The curve of depreciated investment soon follows downward the lessening input of construction effort that had already set in as early as 1938. In this latter decline there began an arrearage of highway adequacy which, first seriously felt immediately after the War, has continued and increased to this day.

In the close juxtaposition of the three index curves which existed during most of the decade of the thirties, we see a condition that probably must subsist in any period of appropriate balance between road usage and the facility provided and between both and the state of the general economy.

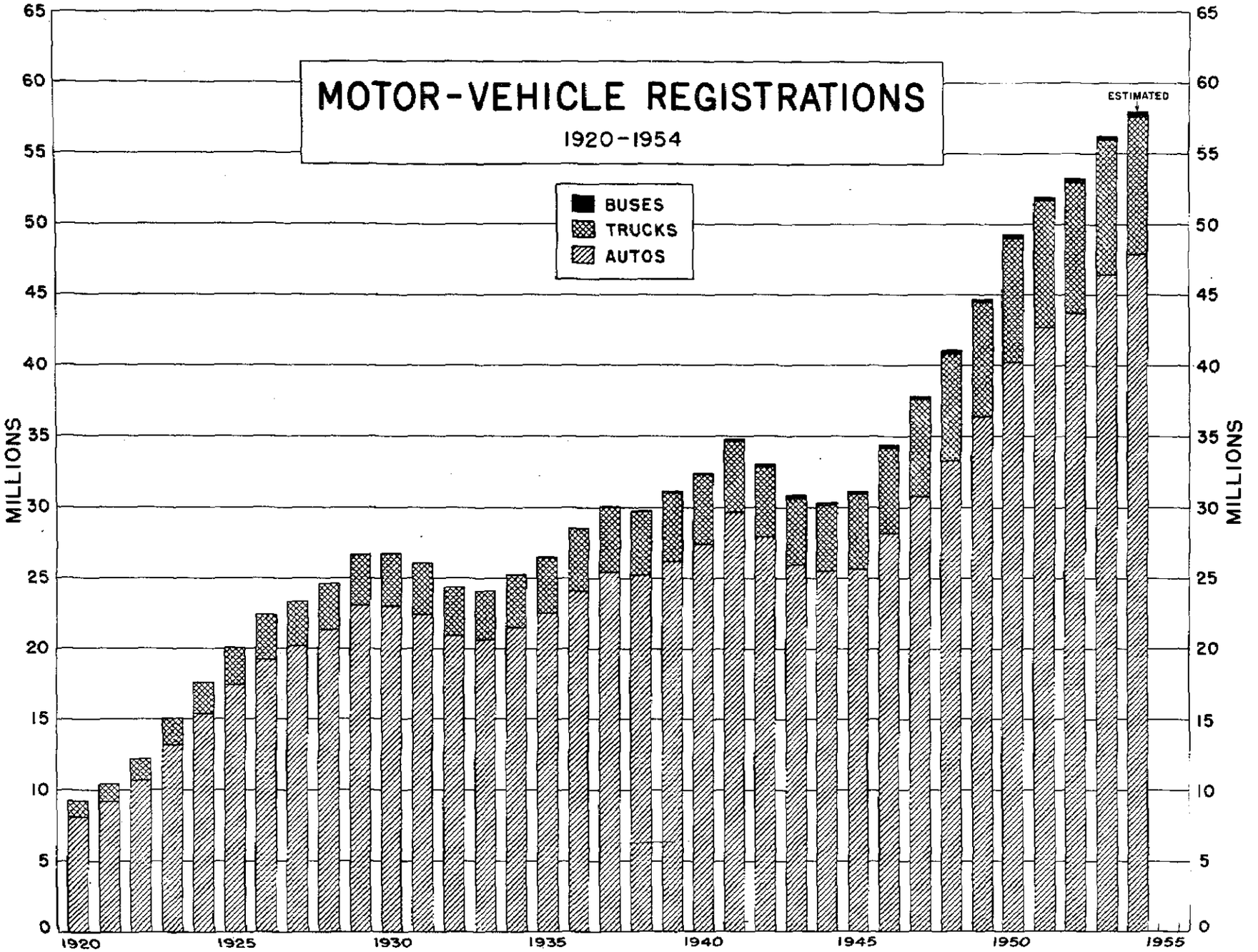
In an economy such as ours, so large a part of which is bound up with the manufacture, servicing and use of motor vehicles, relative changes in the general economy result in considerable part from corresponding relative changes in the numbers and uses of vehicles, and vice versa. And if, in some not yet foreseeable future period, a constant level of the depreciated or serviceable value of the highway plant can be accepted as the reasonable requirement of a then unchanging maximum level of highway usage, it is fairly apparent that the upward climb of highway usage or vehicle-mileage should most appropriately be matched by a parallel augmentation of the depreciated value of the highway plant.

Not since the end of the second World War has this condition existed. On the contrary, as the chart shows, the rapid increase of vehicle-mileage has far exceeded the slight increase in the depreciated value of the highway system it has been possible to effect with the revenues provided.

The essential objective of a sound highway program in the years ahead is the achievement of a rate of new highway investment which will, as early as possible, return the future trend of depreciated investment to the close parallelism with vehicle-mileage growth that existed in the period of the thirties.

How far short of this desirable goal a continued investment of revenues raised at current rates is likely to fall is indicated in the FORECAST section at the right of the chart. Here the past trend of the curve of vehicle-miles is projected to indicate a possible future growth to 1974. The bars representing the annual investment in road construction through the same period are scaled to indicate the capital outlay to be expected, in terms of 1953 prices, if the collection of highway revenues continues at the current rates of taxation and appropriation. And the index curve of depreciated investment takes the course consequent from the annual investment shown.

It is indicated that the continued investment of revenue yield at the present rates can at best prevent a further lagging of the provision of highway facilities behind the need engendered by increasing traffic demand. To take up this lag and return our highway plant to a condition of adequacy to the traffic demand such as existed during the ten-year period between 1930 and 1940 will call for the investment of capital sums substantially in excess of the normally to be expected future revenues.


MOTOR-VEHICLE REGISTRATIONS
1920-1954
BUSES
TRUCKS
AUTOS
ESTIMATED
MILLIONS
MILLIONS
0
5
10
15
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25
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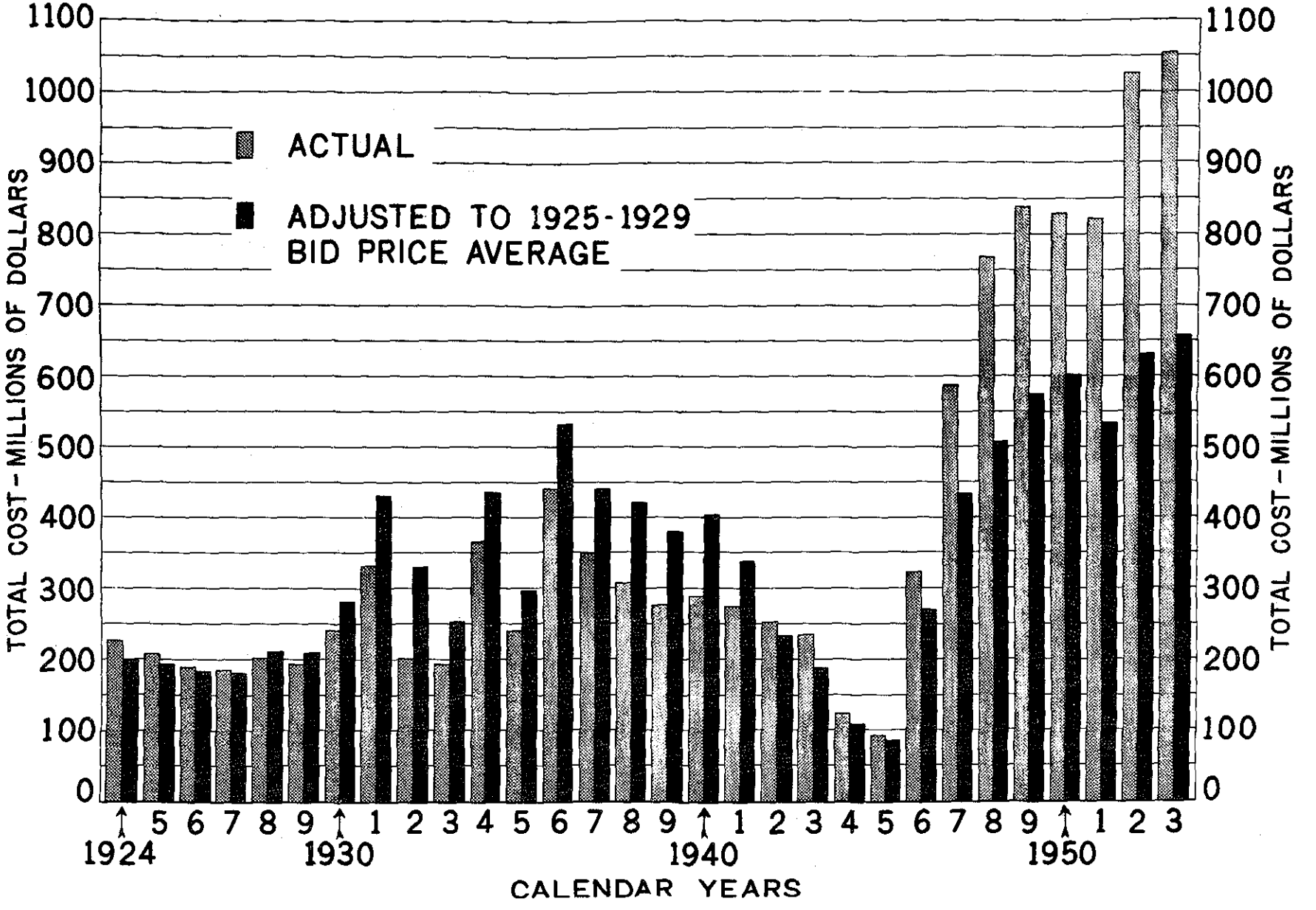
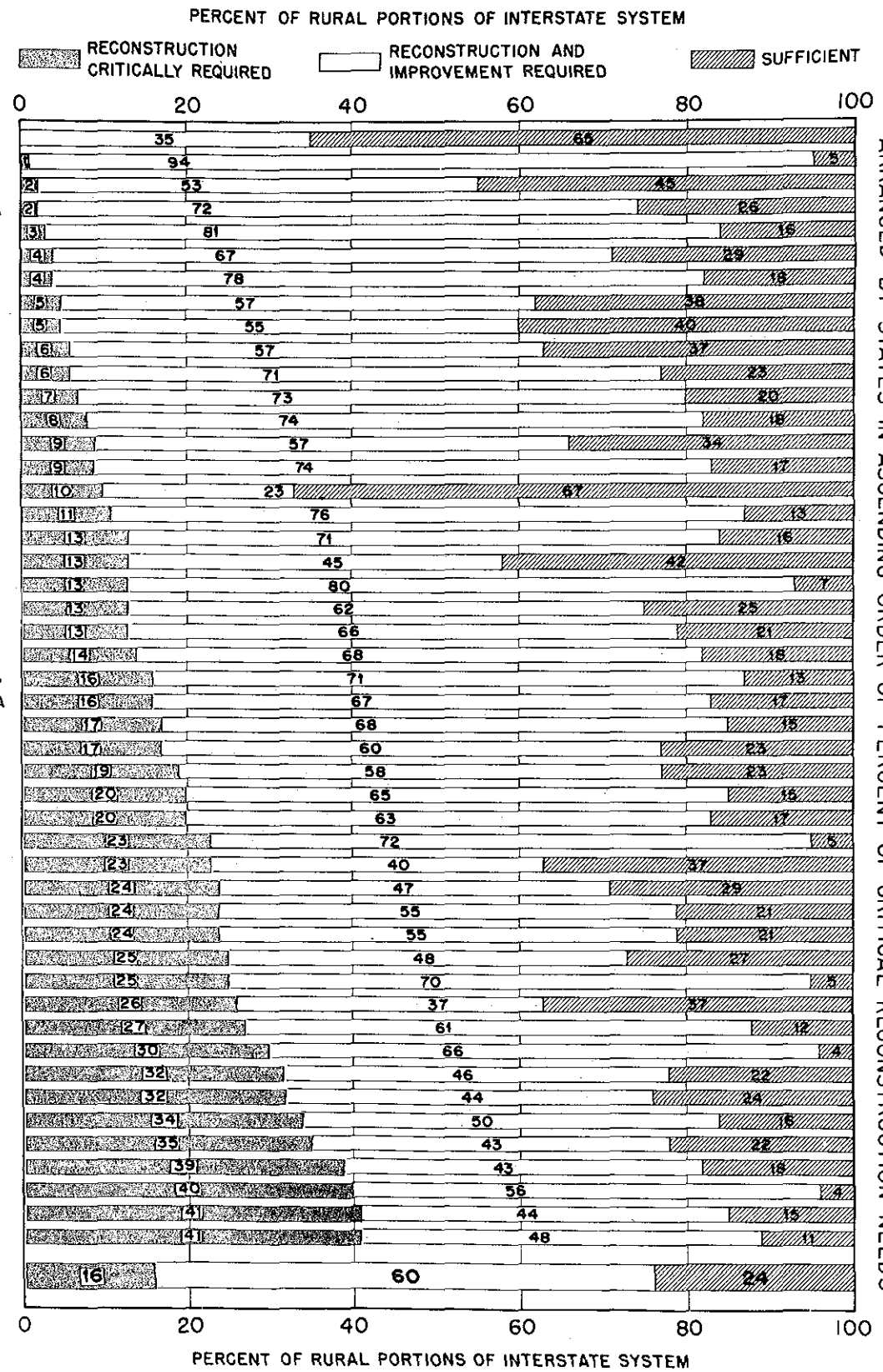
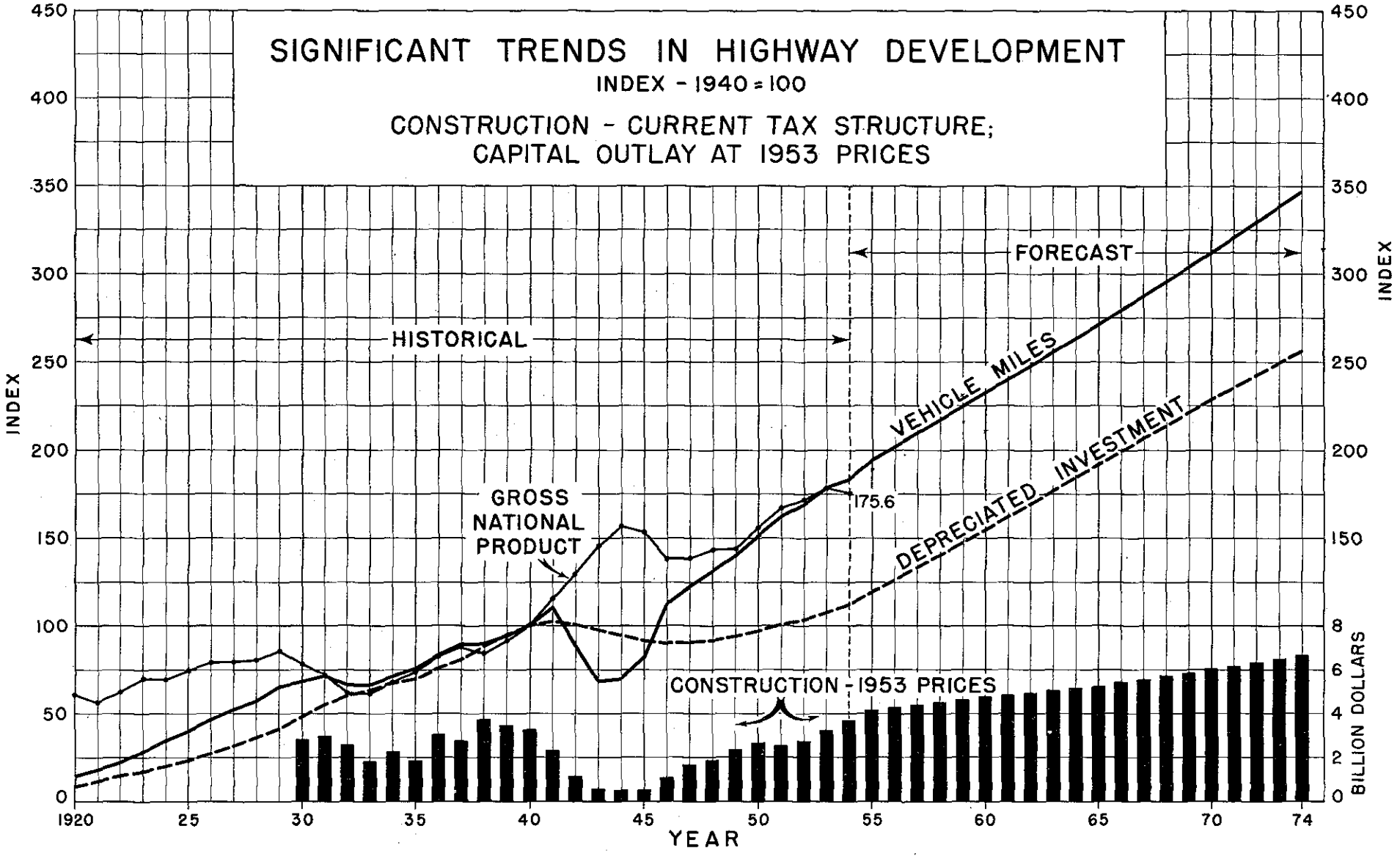
FEDERAL-AID HIGHWAY CONSTRUCTION PUT IN PLACE



SUFFICIENCY ANALYSIS OF RURAL PORTIONS OF THE NATIONAL SYSTEM OF INTERSTATE HIGHWAYS

ARRANGED BY STATES IN ASCENDING ORDER OF PERCENT OF CRITICAL RECONSTRUCTION NEEDS




SIGNIFICANT TRENDS IN HIGHWAY DEVELOPMENT
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CONSTRUCTION - CURRENT TAX STRUCTURE;
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175.6
CONSTRUCTION - 1953 PRICES
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BILLION DOLLARS
YEAR
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